



HP PageWide XL Printer Series

Service Manual

Edition 12, June 6, 2019

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Safety

The procedures described in this manual are to be performed by HP-qualified service personnel only.

The Warning symbol calls attention to a procedure, practice, or the like, which, if not correctly performed or adhered to, could result in personal injury. Do not proceed beyond a Warning symbol until the indicated conditions are fully understood and met.

The Caution symbol calls attention to an operating procedure, practice, or the like, which, if not correctly performed or adhered to, could result in damage to or destruction of part or all of the printer. Do not proceed beyond a Caution symbol until the indicated conditions are fully understood and met.

Readership

The primary readers of this service manual are HP service engineers, although secondary readership may include resellers.

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1 Safety

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General safety guidelines

Before servicing the printer, read the following safety precautions to make sure that you can work on the printer safely:

- Before servicing the printer, turn it off, and disconnect electrical power.
- Before removing and replacing parts, see [Removal and installation on page 624](#).

Service personnel are expected to have appropriate technical training and experience necessary to be aware of hazards to which they may be exposed in performing a task, and to take appropriate measures to minimize the risks to themselves and other people.

Electrical shock hazard

 **WARNING!** The internal circuits of the drying system, the built-in power supplies, and the power inlet operate at hazardous voltages capable of causing death or serious personal injury.

The printer uses one power cord. Unplug the power cord before servicing the printer.

The printer should be connected to earthed mains outlets only.


Heat hazard

The printer's drying system operates at high temperatures and can cause burns if touched. To avoid personal injury, let the printer cool down before accessing internal parts of the drying module.

Fire hazard

The printer's drying system operates at high temperatures. To avoid the risk of fire, take the following precautions:

- Check that the power supply meets the requirements specified in the site preparation guide.
- Protect power lines by a branch circuit breaker according to the rating of the wall socket. Do not use a power strip (relocatable power tap) to connect the power cords.
- Do not use aerosol products that contain flammable gases inside or around the printer. Do not operate the printer in an explosive atmosphere.
- Do not use a damaged power cord. Do not use the power cord with other products.
- Do not block or cover the openings of the printer.
- Ensure that the operating temperature of the paper recommended by the manufacturer is not exceeded. If this information is not available, ask the manufacturer. Do not load paper that cannot be used at an operating temperature above 100°C (212°F).
- Do not load paper with an auto-ignition temperature below 250°C (482°F). If this information is not available, printing must be supervised at all times.

 **NOTE:** Test method based on EN ISO 6942:2002: *Evaluation of materials and material assemblies when exposed to a source of radiant heat, method B*. The test conditions, to determine the temperature when the paper starts to ignite (either flame or glow), were: Heat flux density 30 kW/m², copper calorimeter, K type thermocouple.

Mechanical hazard

The printer has moving parts that could cause injury. To avoid personal injury, take the following precautions when working close to the printer.

Best practice

- Keep your clothing and all parts of your body away from the printer's moving parts.
- Avoid wearing necklaces, bracelets, and other hanging objects.
- If your hair is long, try to secure it so that it will not fall into the printer.
- Take care that sleeves or gloves do not get caught in the printer's moving parts.
- Avoid touching fan blades when accessing internal parts of the printer.
- When accessing the platen, make sure that lift brakes are in the brake position.
- Keep clear of the print path when the belts are moving.
- Make sure that there are no tools obstructing the operation of the printer.

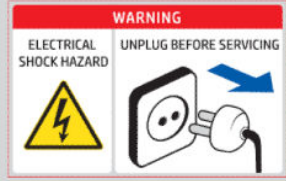
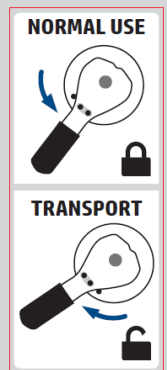
Lifting and handling

Improper handling of heavy materials can lead to serious bodily injury.


Best practice

- When handling rolls of paper, take care to avoid back strain and/or injury.
- Consider using a forklift, pallet truck, or other handling equipment.
- When handling heavy paper rolls, wear personal protective equipment including boots and gloves.
- Follow any manpower instructions included in this service manual when you replace components. Many components require at least two people for removal.

Warning labels

Label	Explanation
	<p>Electric shock hazard. Heating modules operate at hazardous voltages. Disconnect all power sources before servicing.</p> <p>CAUTION: Double pole. Neutral fusing.</p> <p>Before starting, read and follow the operating and safety instructions.</p>
	<p>Electric shock hazard. Disconnect power before servicing.</p> <p>This label is located near the main input, inside the Ee-box, on the internal cover of the drying module, on the cover of the Kappa PCA, and on the cover of the drying module PCA.</p>
	<p>Risk of burns. Do not touch internal parts of drying module: they could be hot.</p> <p>This label is located on the internal cover of the drying module PCA.</p>
	<p>Crush hazard. Keep hands away from the moving service carriage.</p> <p>This label is located on the access route to the service carriage.</p>
	<p>Manual brake on/off positions.</p> <p>This label is located near the printhead motor brake.</p>

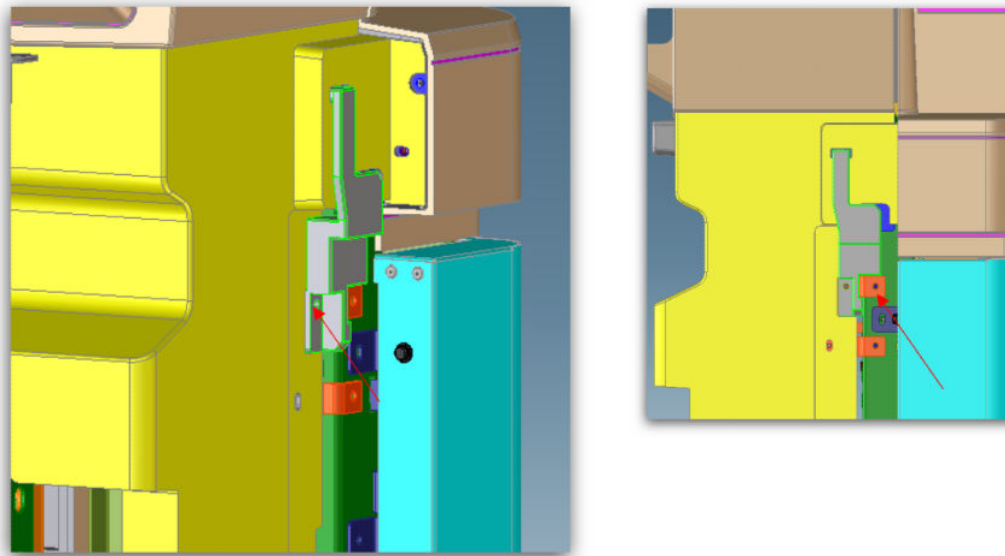
Label	Explanation
	<p>You are recommended to wear gloves for service operations in this area.</p> <p>This label is located on the waste container and on the access route to the service carriage.</p>
	<p>Do not use the drawers as stairs.</p> <p>This label is located on the drawers.</p>
	<p>Fragile part: Do not touch the starwheels.</p> <p>This label is located on both sides of the paper output path.</p>
	<p>Hazardous moving parts. Keep away from rotating fan blades.</p> <p>This label is located internally, near the drying system.</p>
	<p>Do not pull from the tray during transportation.</p> <p>This label is located below part of the tray.</p>

 **NOTE:** The final label position and its size on the printer may vary slightly, but it should always be visible and close to the potential risk area.

Service tool for safety interlock paper-loop door

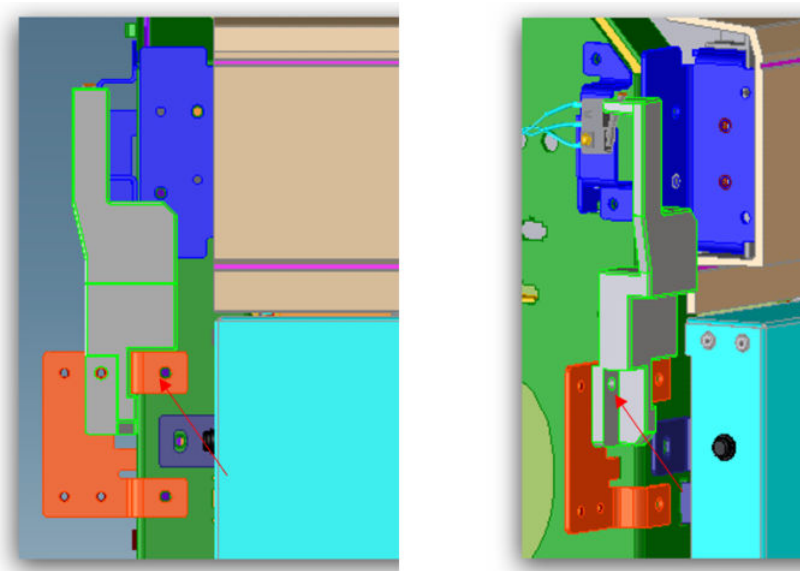
With interior side plate right

1. Remove the paper-loop cover assembly (CZ309-60224) and the paper-loop strap cable (CZ309-00773).
2. Position the tool as shown below, and use the black screw (0515-4862) from the paper-loop strap cable to fix the tool.



Without interior side plate right

1. Remove the paper-loop cover assembly (CZ309-60224), the paper-loop strap cable (CZ309-00773), and the interior side plate left (CZ309-40374).
2. Position the tool as shown below, and use the black screw (0515-4862) from the paper-loop strap cable to fix the tool.



Safe use of the transport tool


The transport tool is used in the [Rotation procedure on page 1112](#). It is composed of the following elements:

- Ratchet jack structure assembly, part number CZ309-60839
- Base frame, part number CZ309-60798
- Puller, part number CZ309-60820

 **WARNING!** Improper handling of the transport tool can lead to serious crushing injury.

Best practice

- It is important to follow any service instructions included in this service manual and to use the above elements only for the purpose of rotating the printer.
- The transport tool should not be used on slopes exceeding 17%.
- When using the tool, take care to wear personal protective equipment, including boots and gloves.

 **NOTE:** Maintenance personnel and the makers of the Rotation tool are the same as those of the printer.

2 Printer fundamentals

- [Other sources of information](#)
- [Front-panel menu map](#)
- [Electronics block diagram](#)
- [Scanner connection to the printer board](#)
- [Scanner controller board layout](#)
- [Paper input](#)
 - [Paper input overview](#)
 - [Drawers](#)
 - [Paper loop](#)
- [Paper output](#)
 - [Paper output overview](#)
 - [Pinch system](#)
 - [Diverter valve](#)
 - [Basket](#)
 - [Top stacker](#)
 - [High-capacity stacker](#)
 - [Folder](#)
- [Print bar](#)
 - [Introduction](#)
 - [Printhead maintenance](#)
 - [Lift mechanism](#)
- [Ink delivery system](#)
 - [Introduction](#)
 - [Ink cartridges](#)

- [Ink cartridge part numbers](#)
- [Ink cartridge maintenance](#)
- [When to replace the ink cartridges](#)
- [Air pressure system](#)
- [Bivalves](#)
- [Ink supply station](#)
- [Print-bar tubing system](#)
- [Empty cartridge detection](#)
- [Backplate assembly](#)
- [Changing cartridges while printing \[5000 and 8000 series only\]](#)
- [Cleaning container](#)
- [Maintenance cartridge](#)
- [Electronic diagram](#)
- [Parts that can be repaired](#)
- [General information about the ink supplies](#)
- [General precautions when handling ink supplies and printheads](#)
- [Page and line accuracy](#)
- [Printer editions](#)
- [Printer specifications](#)
- [Other basic info](#)
 - [Fabrication date](#)

Other sources of information

The end-user manuals for the printer can be downloaded from <http://www.hp.com/go/pagewidexlseries/support/manuals/>.

For the blueprinters, the following URLs may be used:

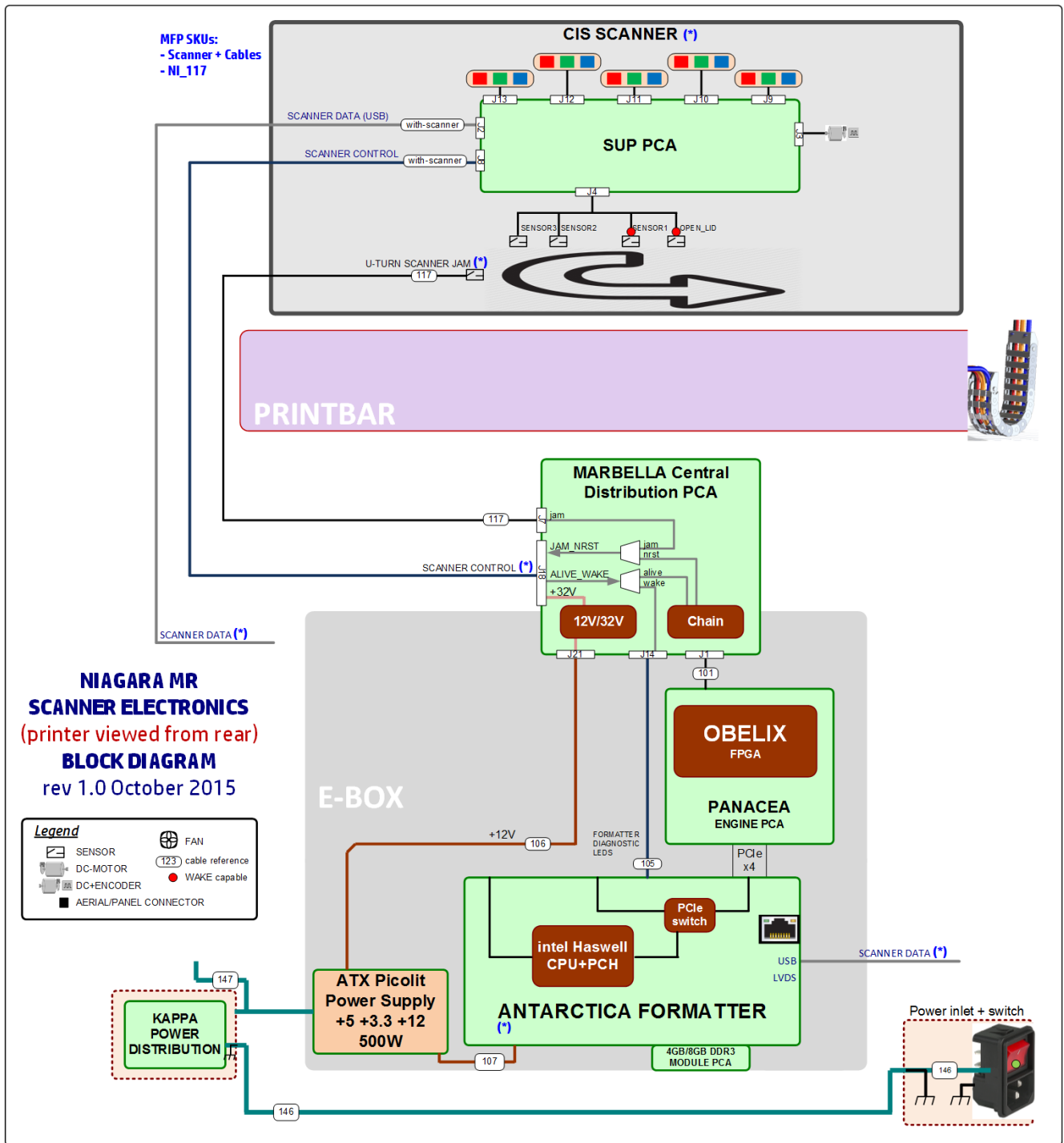
- <http://www.hp.com/go/PageWideXL8000BP/software/>
- <http://www.hp.com/go/PageWideXL8000BP/manuals/>
- <http://www.hp.com/go/PageWideXL8000BP/support/>
- <http://www.hp.com/go/PageWideXL5000BP/software/>
- <http://www.hp.com/go/PageWideXL5000BP/manuals/>
- <http://www.hp.com/go/PageWideXL5000BP/support/>

Front-panel menu map

Apps	App sections	Subsections
Print		
Scan		
Copy		
Job queue		
Paper	Paper source	
	Output destination	Folder
		High-capacity stacker
		Top stacker
	Basket	
Inks	Ink cartridges	
	Printheads	
	Other supplies	Cleaning container
Maintenance cartridge		
Optimize print quality		
Connectivity	Network	
	Advanced connectivity	
	HP Connected	
	Printer services	
About printer	Printer information	
	Firmware update	
Usage	Print category usage	

Apps	App sections	Subsections
	Ink usage	
	Paper usage	
	Scan usage	
Settings	Quicksets	
	Default printing configuration	
	Optimize print quality	
	Optimize scanner	
	Job management	
	Paper source	
	Output destination	
	Connectivity	
	System	
	Security	
	Internal prints	
	Product certificates	
	Service menu	
	Partner menu	
User guide		

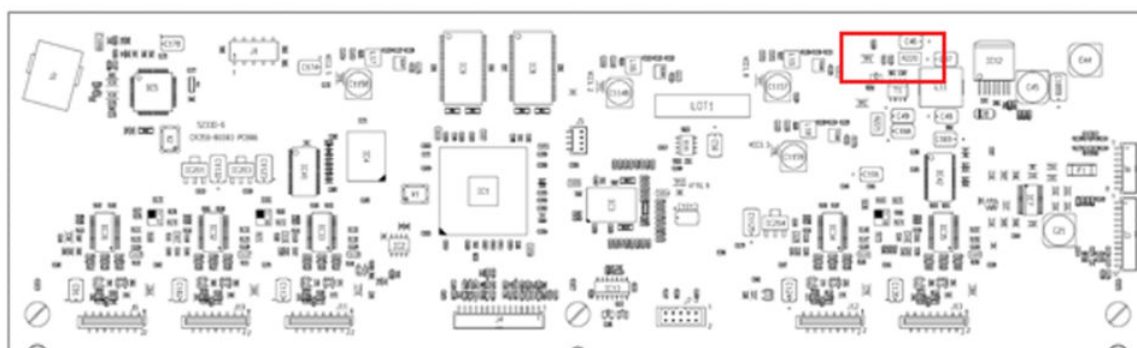
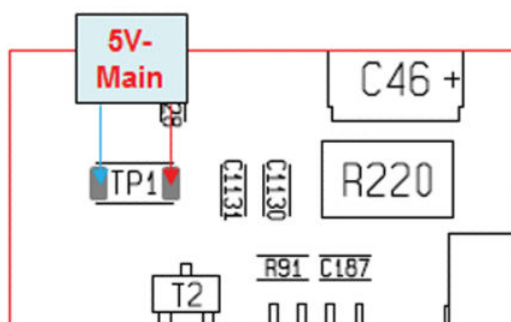
Scanner connection to the printer board



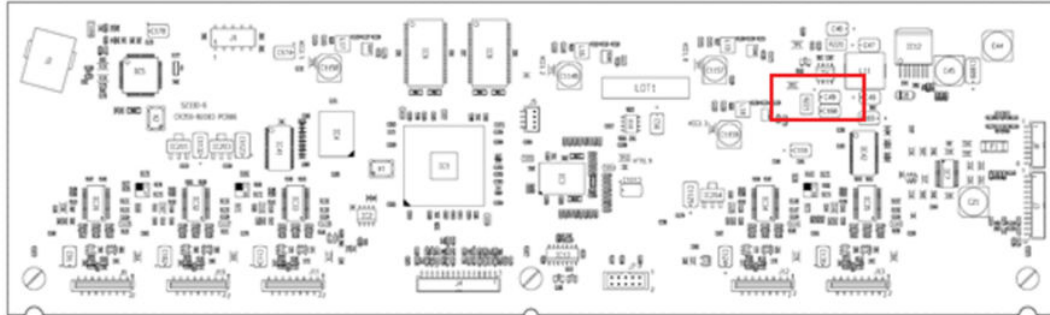
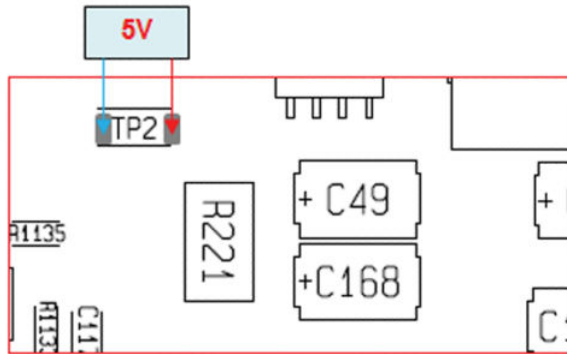
Scanner controller board layout

	Voltage	Min limit	Max limit
TP1	5V-Main (Always on when there is power to the board)	4.75	5.25
TP2	5V	4.75	5.25
TP3	1.2V	1.1	1.3
TP8	3.3V	3.2	3.4
TP6	2.5V	2.4	2.6
TP7	1.8V	1.7	1.9
TP15	0.9V	0.8	1.0
IC201	3.3VLDO	3.1	3.5
IC203	3.3VLDO	3.1	3.5
IC204	3.3VLDO	3.1	3.5

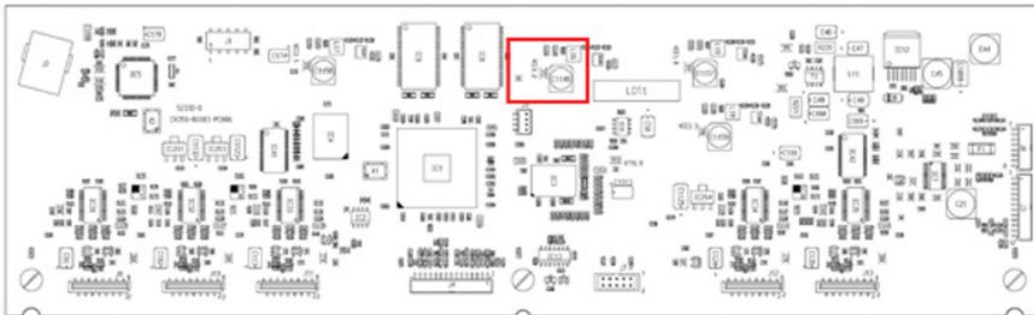
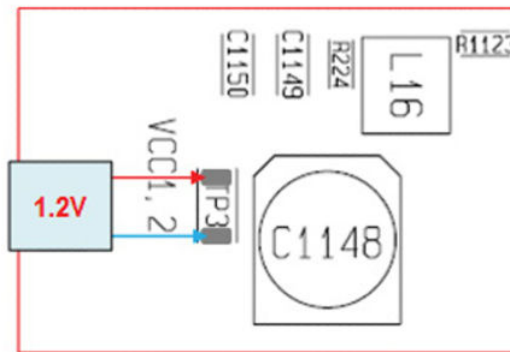
TP1 5V Main (4.75-5.25)



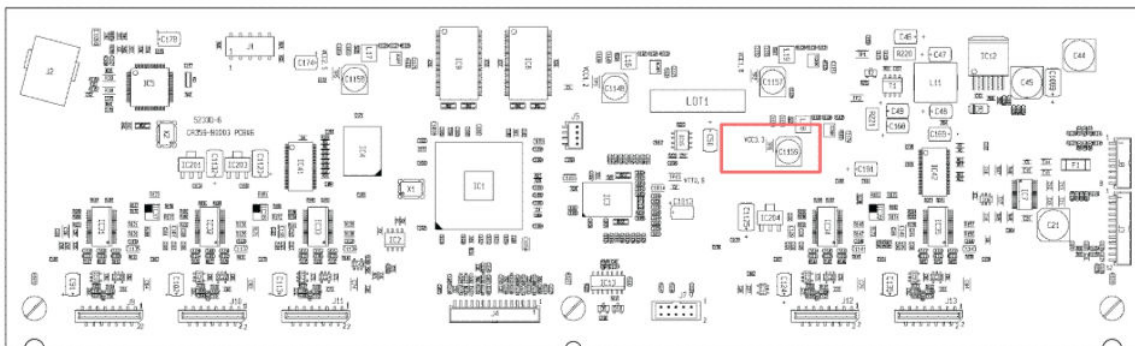
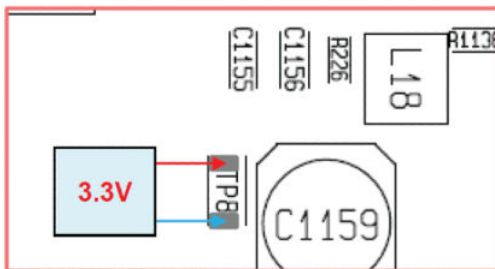
TP2
5V (4.75-5.25)



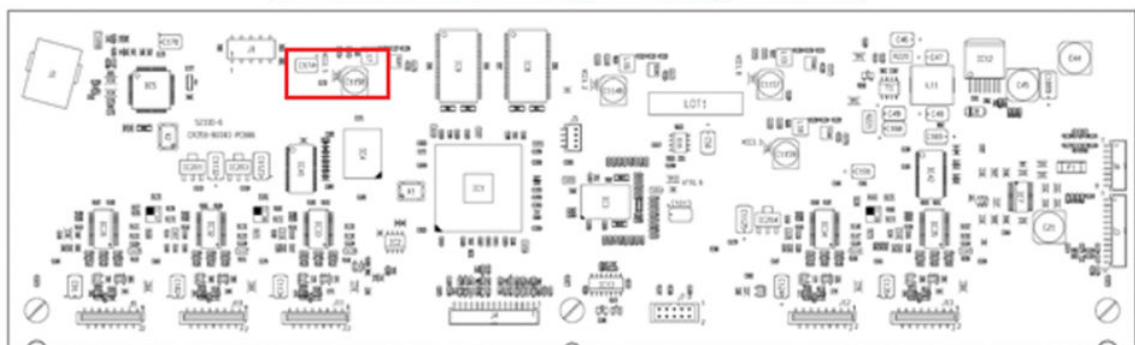
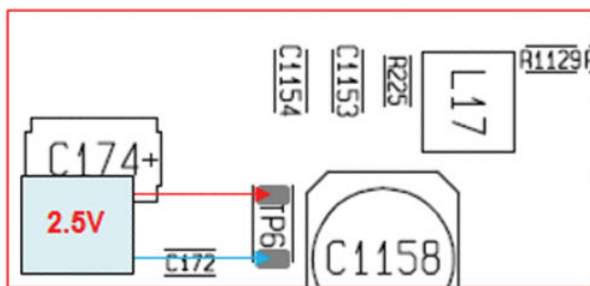
TP3
1.2V (1.1-1.3)



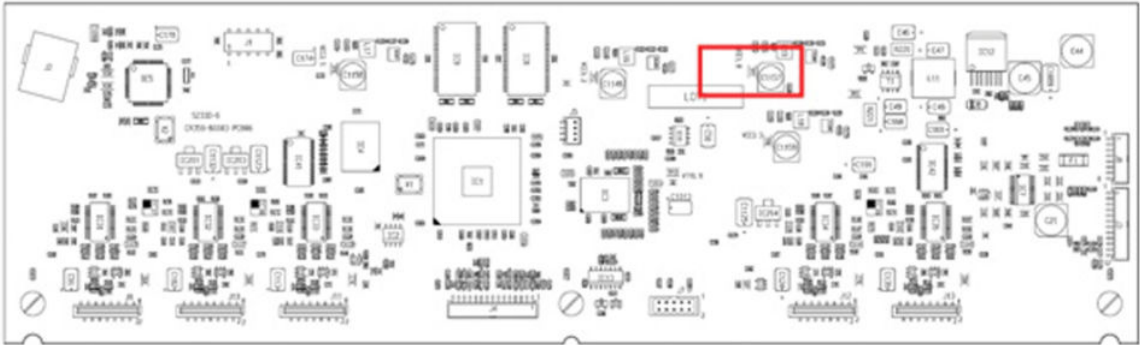
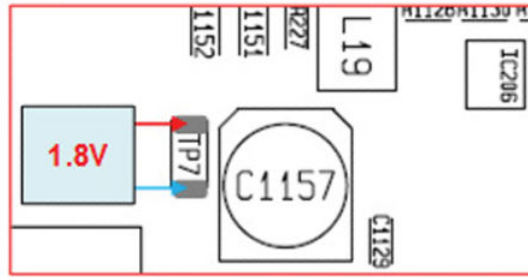
TP8 3.3V (3.2-3.4)



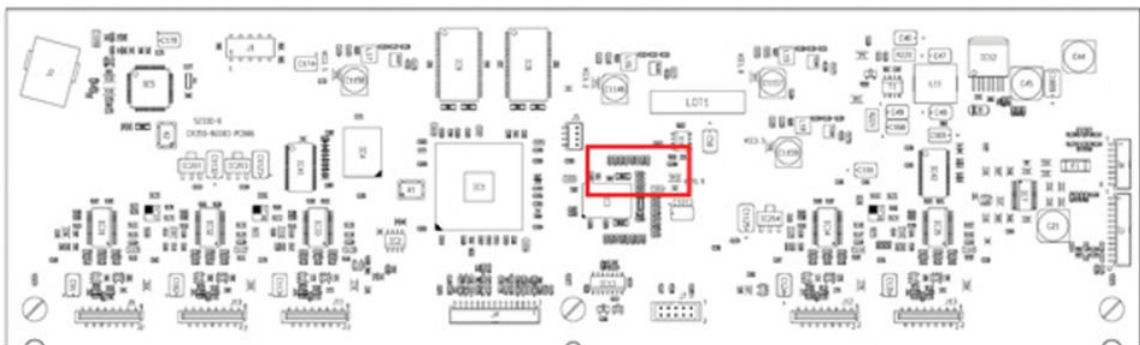
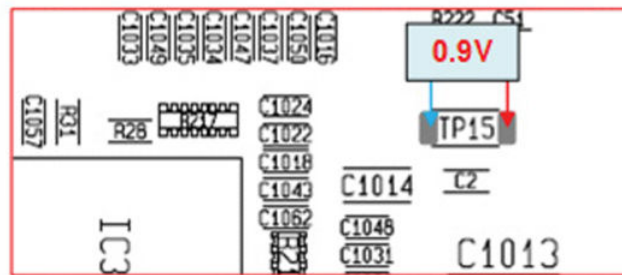
TP6 2.5V (2.4-2.6)



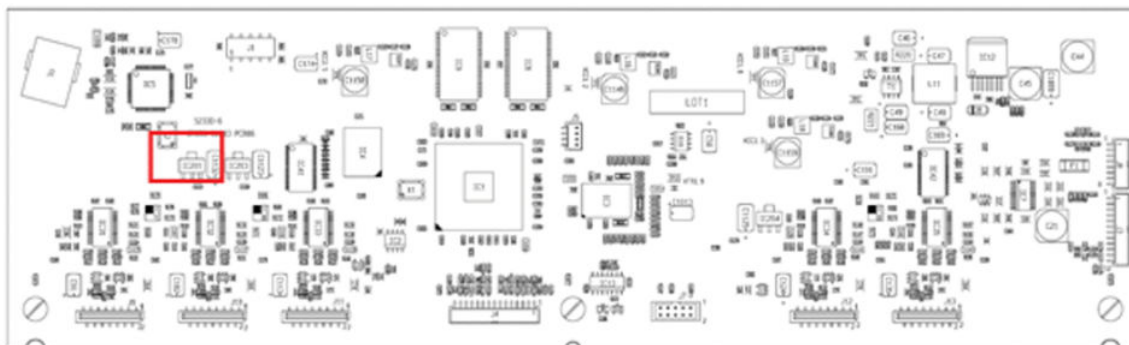
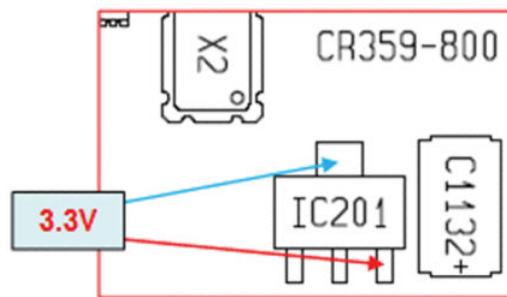
TP7
1.8V (1.7-1.9)



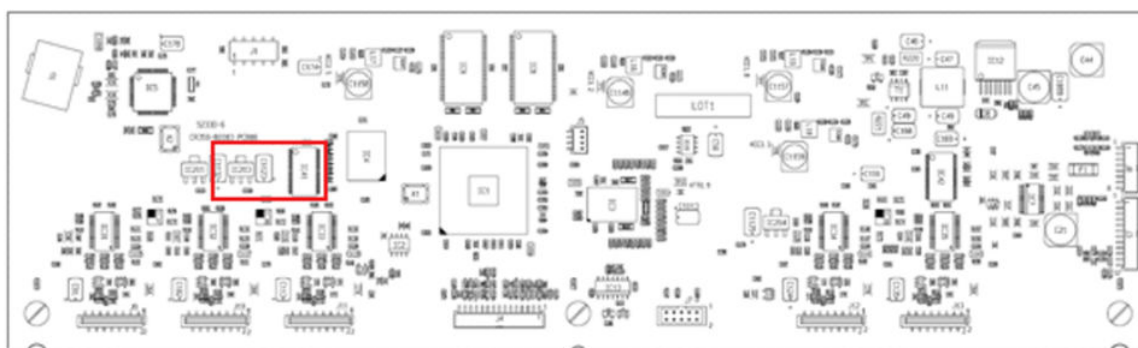
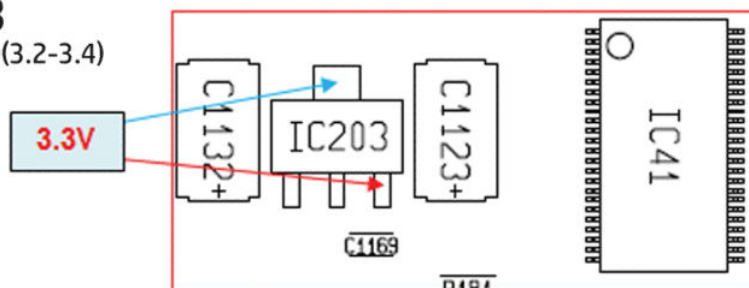
TP15
0.9V (0.8-1.0)



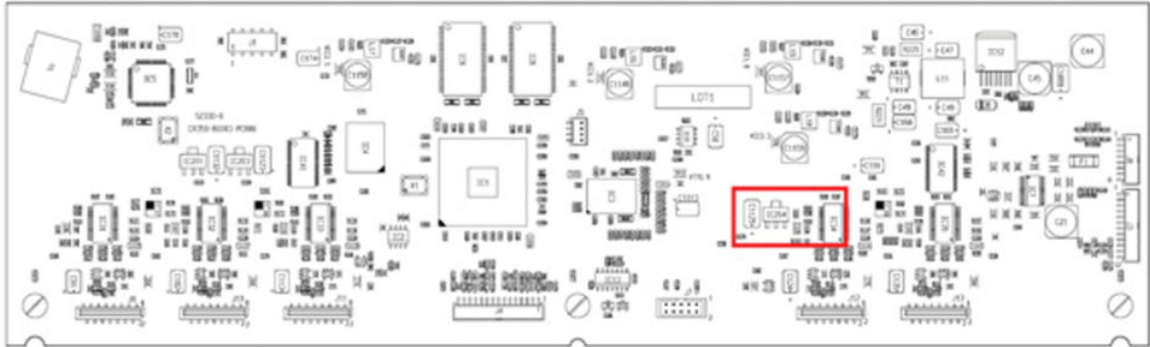
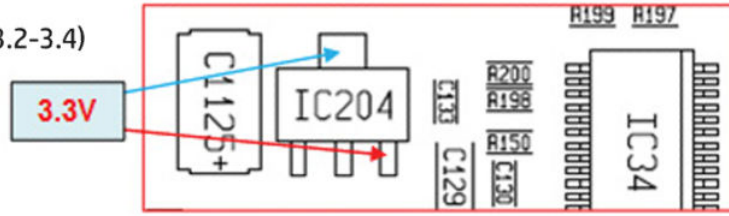
IC201 3.3V LDO(3.2-3.4)



IC203 3.3V LDO(3.2-3.4)

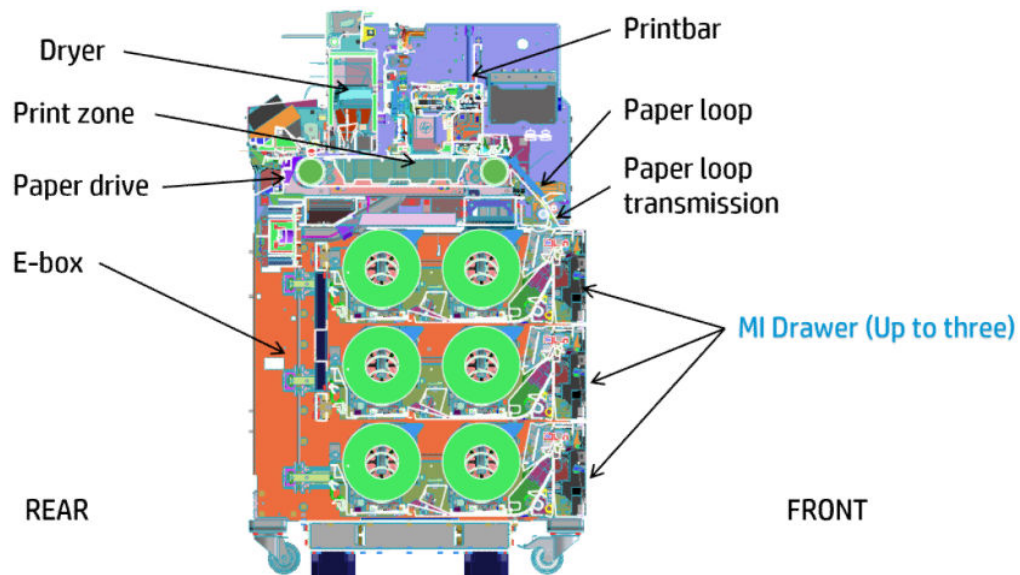


IC204
3.3V LDO(3.2-3.4)



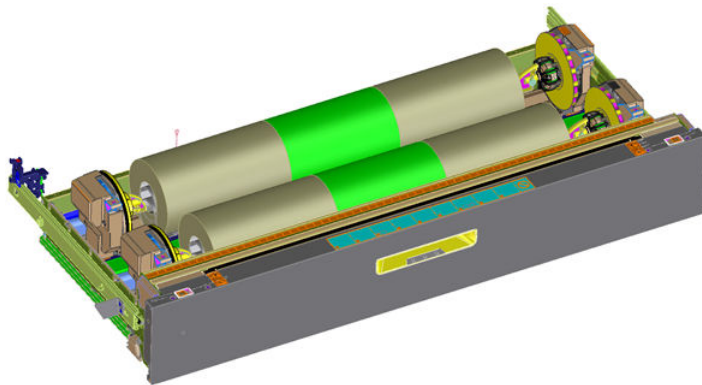
Paper input

Paper input overview



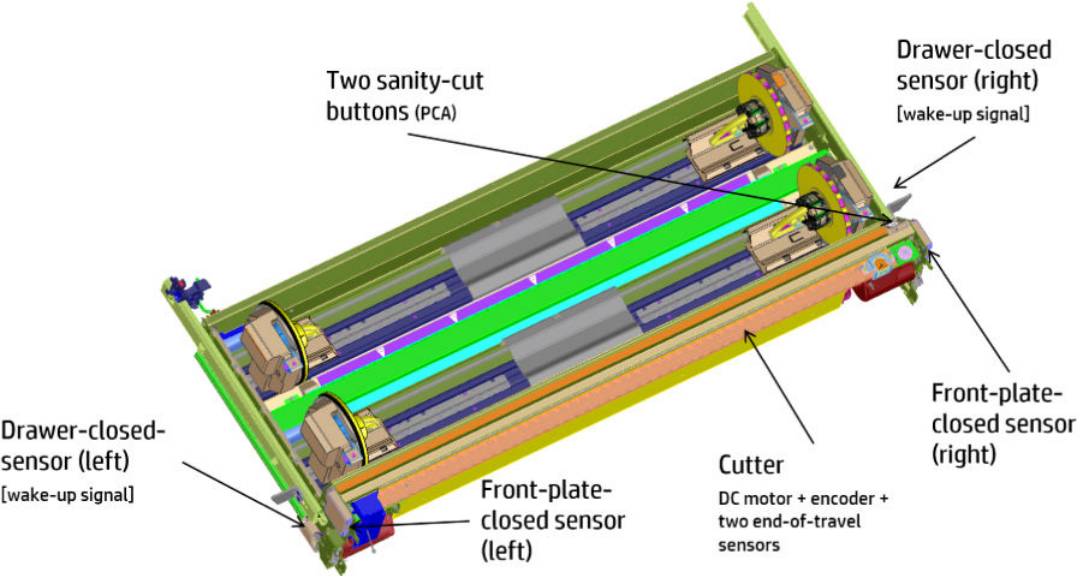
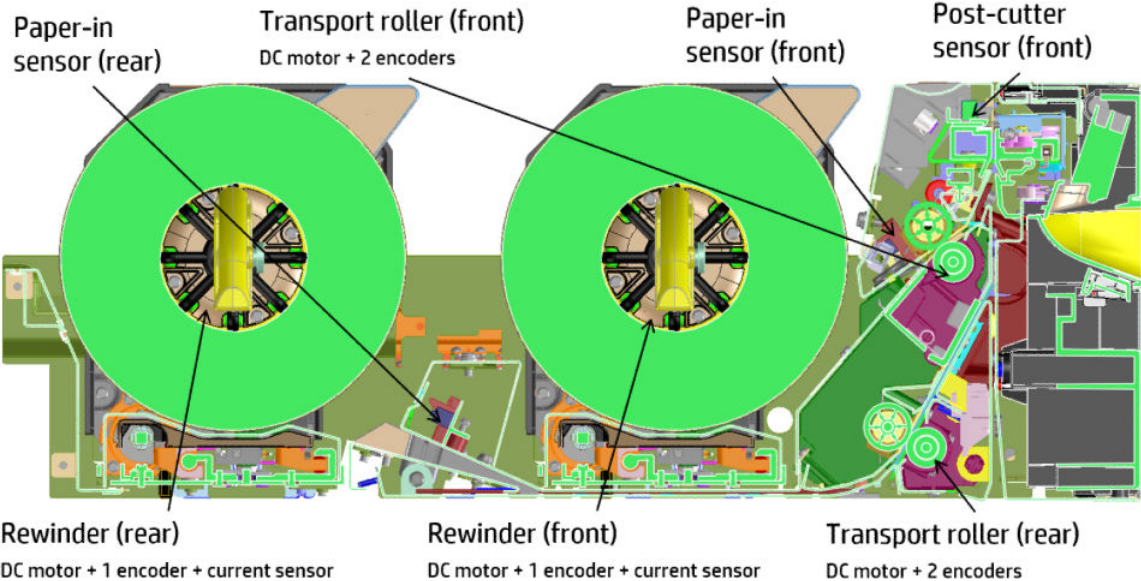
Drawers

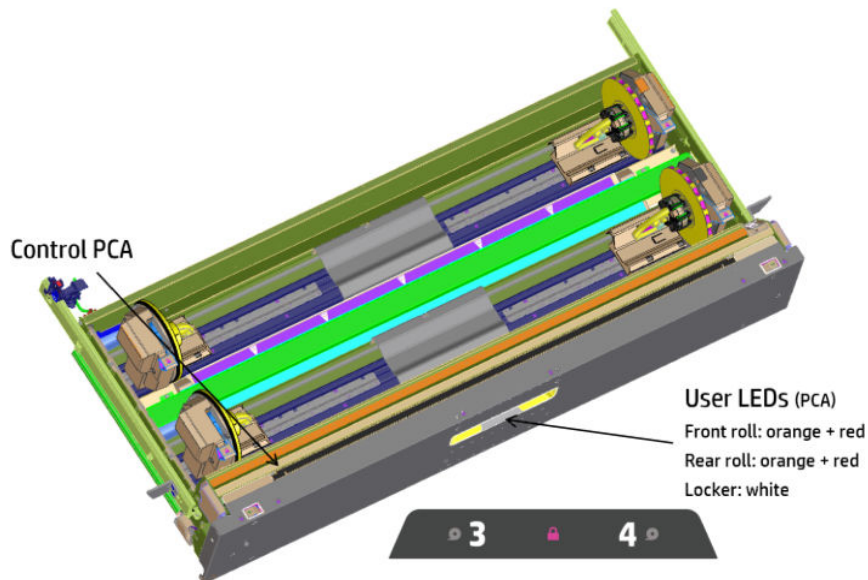
Drawer overview



- Each drawer can hold two rolls of about 177 mm maximum diameter and 1016 mm (40 in) maximum width. The printed image has a maximum width of 1000 mm (39.37 in).
- All PageWide XL printers come with one drawer. 5000- and 4000-series printers can add another drawer as an optional accessory; 8000-series printers can add two more drawers (for a total of six rolls loaded).
- The Roll Assistant mechanism helps users to load rolls. No spindle is required.
- The rolls are centered between the left and right sides of the drawer.
- Rolls must have a core of 76.2 mm (3 in) diameter; no other core size is supported.

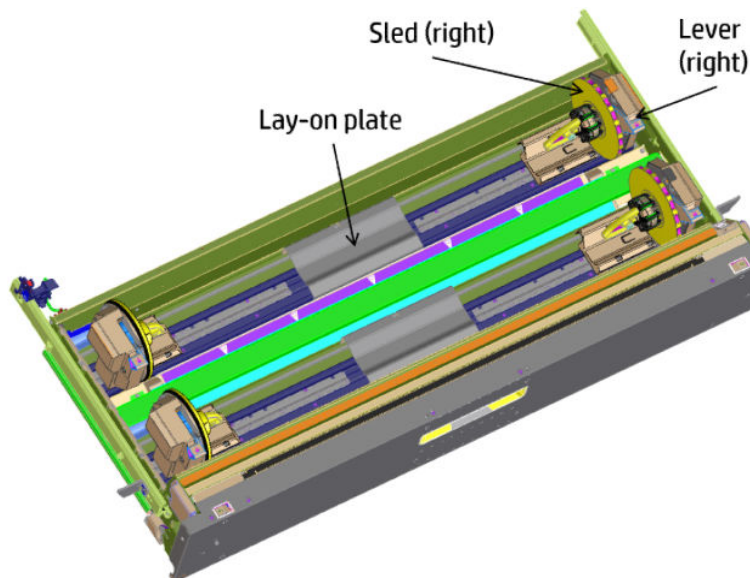
Active components and sensors





- Each roll in a drawer is independently controlled and seen as two devices by the printer.
- The Control PCA has two microprocessors; shared sensors are seen by both of them.
- The code is the same for the two microprocessors.
- The drawer is controlled by the Bulli protocol (CAN)
- All drawers are identical; they are configured on connection to the printer.

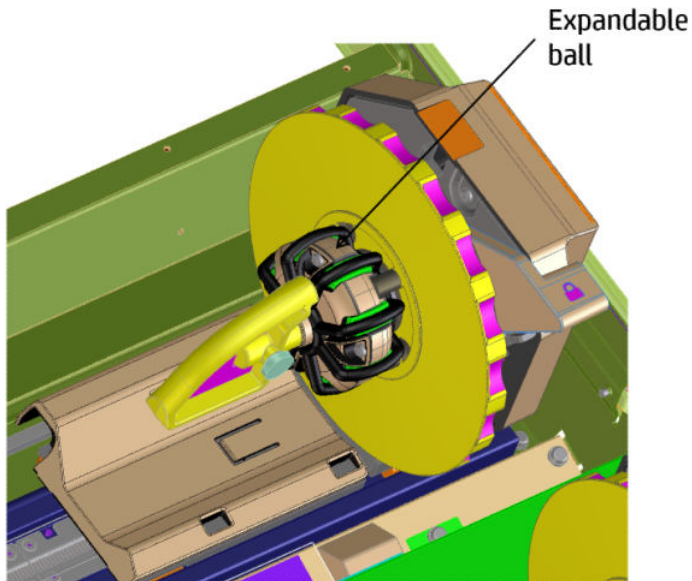
Loading a roll into a drawer



1. Open the sled levers on each sled, and slide out the sleds.
2. Place the roll on the central lay-on plate.
3. Slid in the sleds. A two-cable mechanism keeps them synchronized.
4. Close both sled levers to lock the sleds in place.

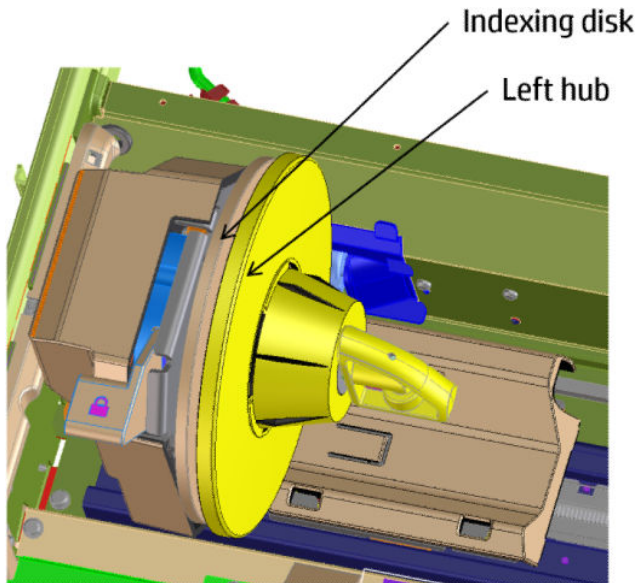
5. Feed the leading edge of the paper into the input channel.
6. The paper transport moves the paper up to the post-cutter sensor.
7. The rewinder applies back tension.
8. The paper is moved back to the park position.
9. You can use the sanity-cut button to cut the paper if you want to ensure that the leading edge is straight. The cutter on each drawer is used.

Right sled



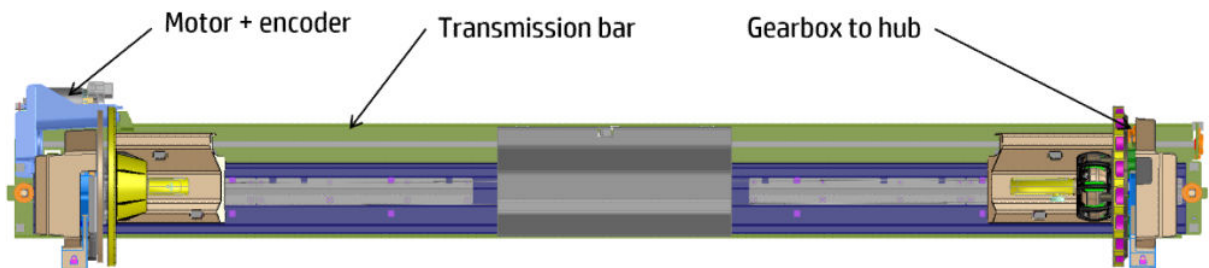
- The right sled is the one that transmits the rewinder torque to the roll.
- Torque is transmitted by a series of rubber cylinders that engage with the roll core.
- The rubber cylinders are retracted when the locking lever is opened.
- The right hub is CSR.
- It has a wedge that help to push the roll up while it is being loaded.

Left sled



- The left sled is the one that indexes the roll ± 5 mm with respect to the center.
- Each time the lever is cycled (open/closed), the indexing disk turns one step by a ratchet-pawl mechanism.
- The indexing disk makes the left hub move right and left.
- In this way, the roll is slightly offset one way or the other whenever a roll is loaded, to prevent particular nozzles being overused.

Rewinder

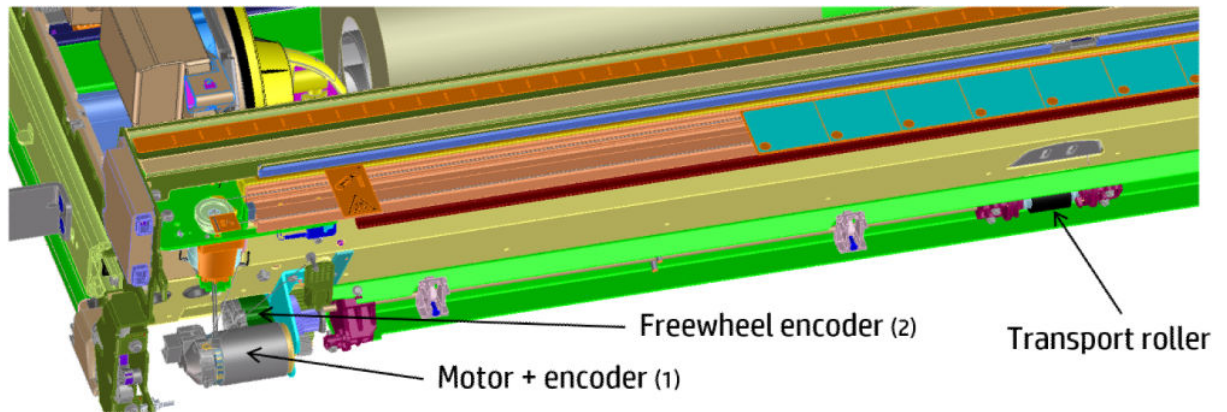


The main function of the rewinder is to apply back tension to the roll so that:

- The paper position is kept stable.
- The paper can be moved backwards.

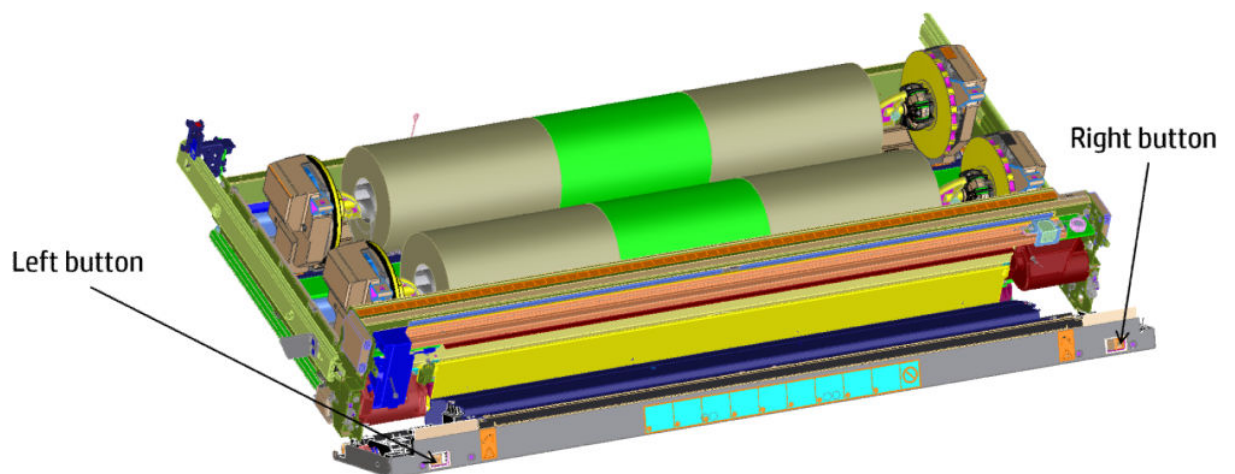
Together with the transport roller, it also estimates the radius of the roll.

Transport roller



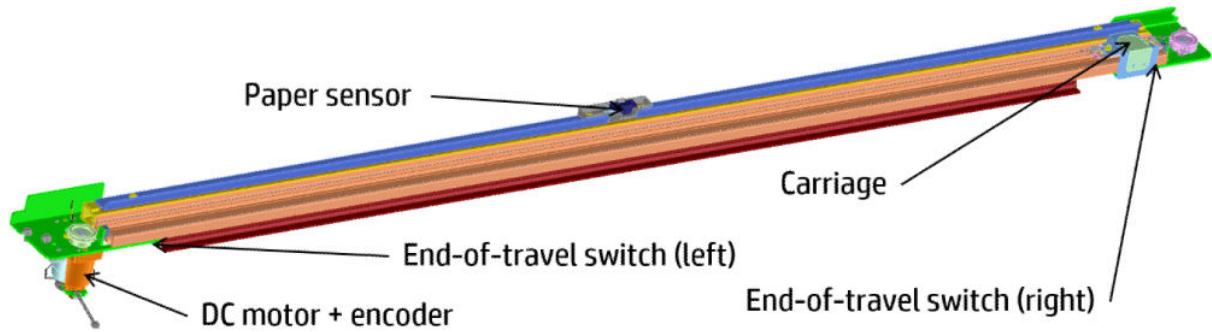
- The main function of the transport roller is to feed paper into the printer.
- Together with the rewinder, it also estimates the radius of the roll.
- It has a one-way clutch that disengages when the paper is pulled by the printer.
- It can move the paper forward only. To move the paper backwards requires the pull of the rewinder.

Paper jam access



- The front plate can be opened by pressing the two buttons at each side, in order to clear paper jams.
- If there is a paper jam in the rear roll path (low probability), a service engineer can remove two screws to open the bottom plate.

Cutter



- The cutter is a maintenance module that will have to be replaced occasionally during the life of the printer.
- A usage model suggests that the printer will make about 1.4 million cuts during its life; however, each cutter is expected to last 200,000 to 300,000 cycles.
- Although the paper sensor attached to the top of it is not a part of the cutter itself, it is proposed to include it in the service module for ease of replacement.
- Each drawer has the same cutter module, but only the one in the first drawer is used for printing. The ones in the other drawers are used only for the sanity cut operation.

Printing

The printing process

1. The printer requests paper from the drawers.
2. The feed roller starts moving, waiting for paper.
3. The drawer transport motor feeds paper to the printer.
4. The paper-loop feed sensor (just after the feed roller) detects paper, and tells the drawer to stop the transport roller.
5. The feed roller moves the paper up to the belts and the print zone.
6. The paper-loop ribs and arms move up.
7. The paper-loop TOF sensor detects the paper.
8. The feed roller moves faster than the belts to accumulate some paper as a buffer in the paper-loop area. This buffer is needed to cut the paper without stopping the belts.
9. The feed roller stops, and asks the drawers to cut. There is a pause until the cut is finished.
10. The paper-loop ribs and arms move down to be ready for the next page.
11. The feed roller and belts eject the remaining paper and wait for the next page.

Notes

- If papers from different rolls are requested, they are threaded simultaneously in most cases, to minimize roll switch time.
- If some time passes without pages in the queue, all papers are parked.

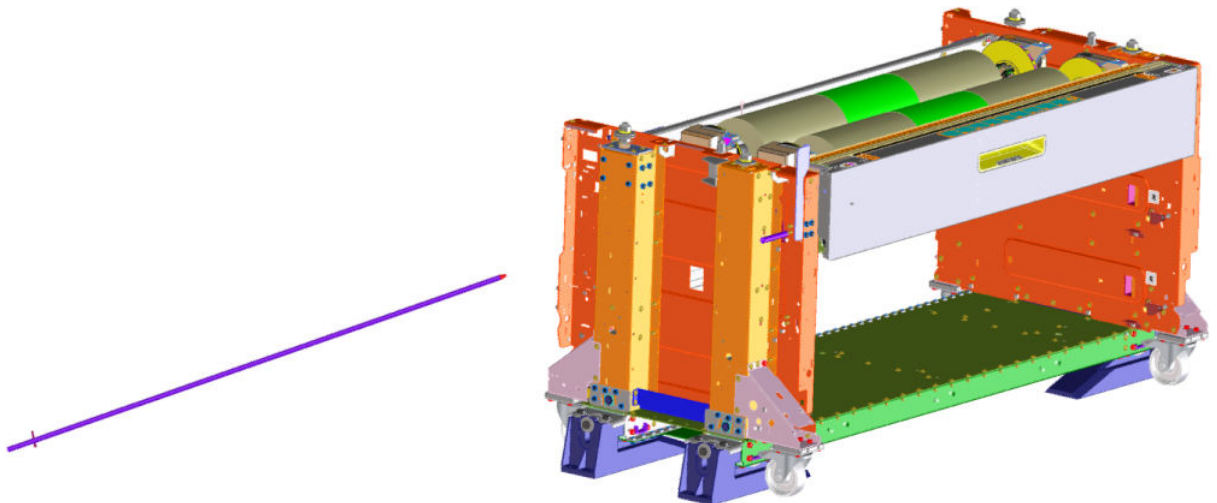
- As paper is threaded through the front of each drawer, drawers cannot be opened during printing. This is indicated by a white lock symbol on the drawer.
- The roll symbol light indicates:
 - Off: No paper loaded, or enough paper
 - Orange: Nearing the end of the roll.
 - Red: End of the roll. This can be reset by opening and closing the drawer.

Installing an extra drawer

1. Remove the cover from the empty drawer compartment.
2. Install the slides. Only the right-hand one is screwed in; the other one is floating.
3. The packaging can be used to position the drawer at the correct height.
4. Secure the drawer to the slides with two screws on each side.
5. Connect the drawer at the rear (only one connector).
6. Depending on the connector, the drawer will configure itself as drawer 1, 2, or 3.
7. If the printer has never been turned on, the front panel detects the new drawer and asks you to confirm the configuration.

If the printer has been turned on before, the drawer is not detected until it is configured from a special service menu.

Treatment of drawers when moving the printer



- The printer can be transported only with one drawer installed. For a long-distance move, drawers 2 and 3 should be removed.
- Drawer 1, left in the printer, should be secured with a drawer transport pole that leaves the drawer partially open.
- To install the pole, you must remove the left side cover and open the drawers about 2 inches.

Paper loop

Operating principles

The paper loop allows the paper to be fed into the print zone without back tension, which improves print quality and also means that the paper can be cut while printing, without halting the paper advance.

Paper loop door



Tools required for repairs



Torx screwdrivers T10, T15, T20



Nut driver 17 mm



Box cutter

Also needed for installation: T30 and T40 flat screwdrivers, 10 mm driver for the stacker, a small nut for the encoder assembly, and a pair of pliers.

How to calculate the loop size

The parameters needed to calculate the loop size are:

- The page length
- The paper type, which determines the time needed to cut it
- The printer model and print mode, which determine printing speed
- The paper output destination, which determines the time required between pages

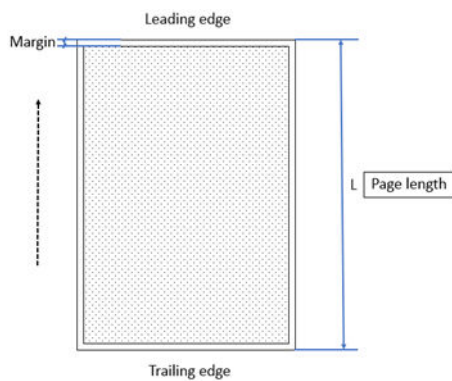
Ribs down, to guide the leading edge to the print zone



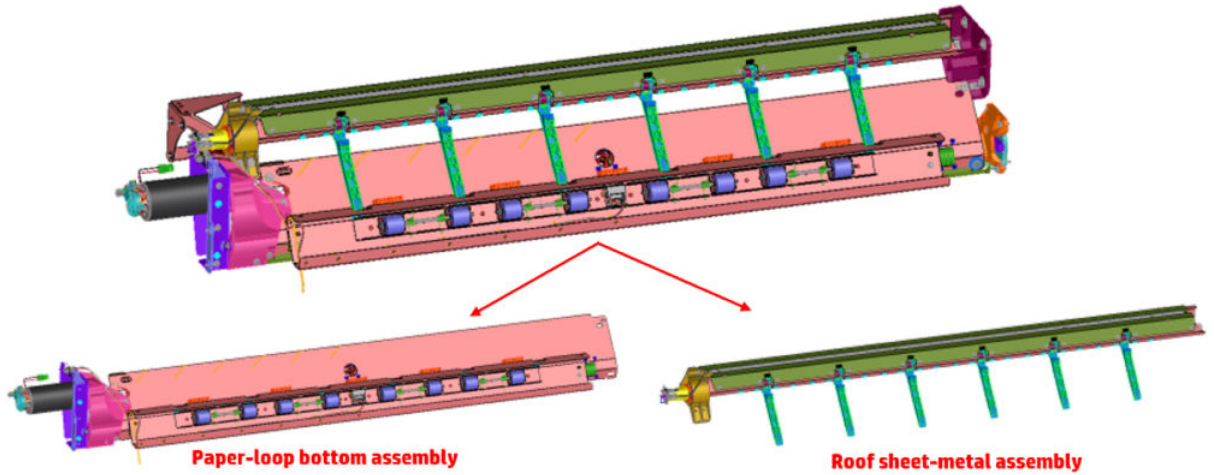
Ribs up, to guide the loop to the print zone



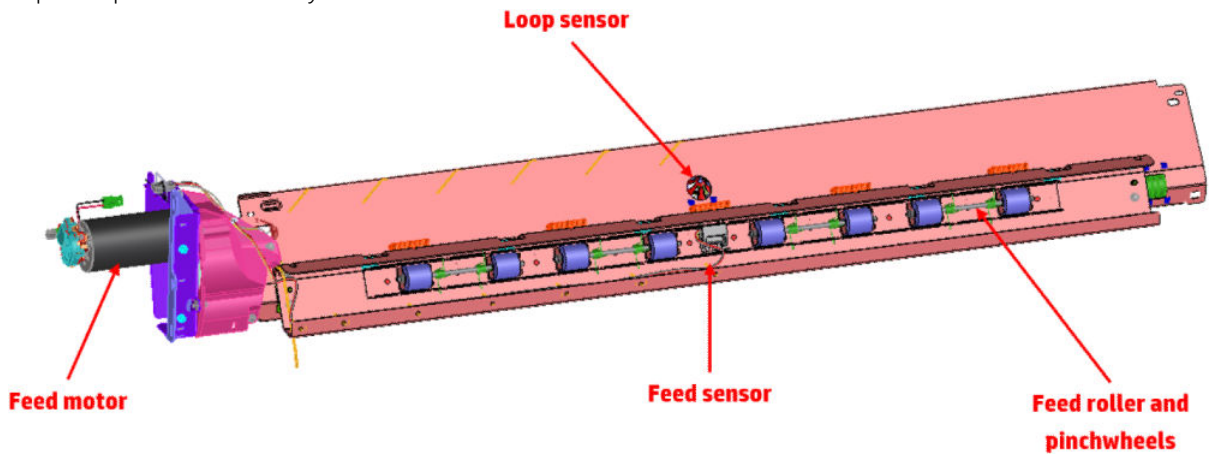
Length of print	Page length	Consequences
Very short	195–250 mm	The belts don't stop. The sheet is short enough to be fed without stopping the belts; the cut is made before printing.
Short	250–415 mm	The belts stop to allow the cut. Not enough length or time to create a loop while printing.
Normal	415–1200 mm	The belts don't stop. A loop is created from the beginning, and progressively.
Long	> 1200 mm	The belts don't stop. The loop is controlled by the loop sensor to keep feeding the paper without back tension.



Main components

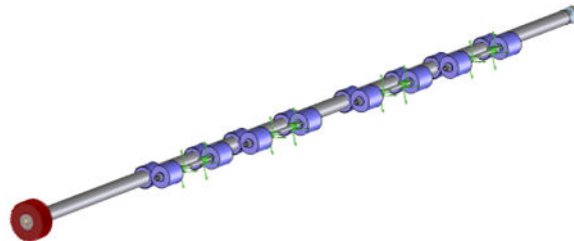
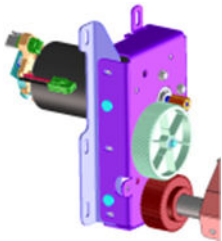


Paper-loop bottom assembly

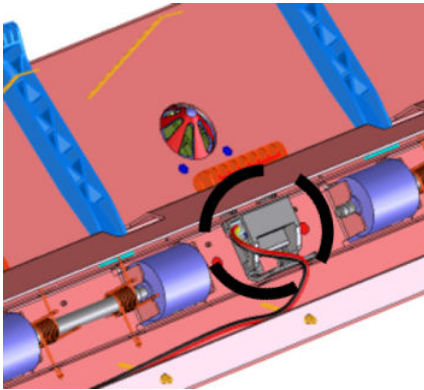


The feed motor moves the feed roller

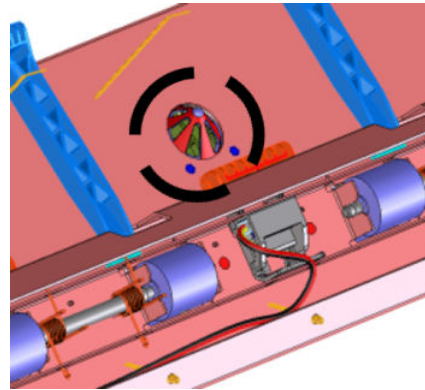
The feed roller gives traction to the paper



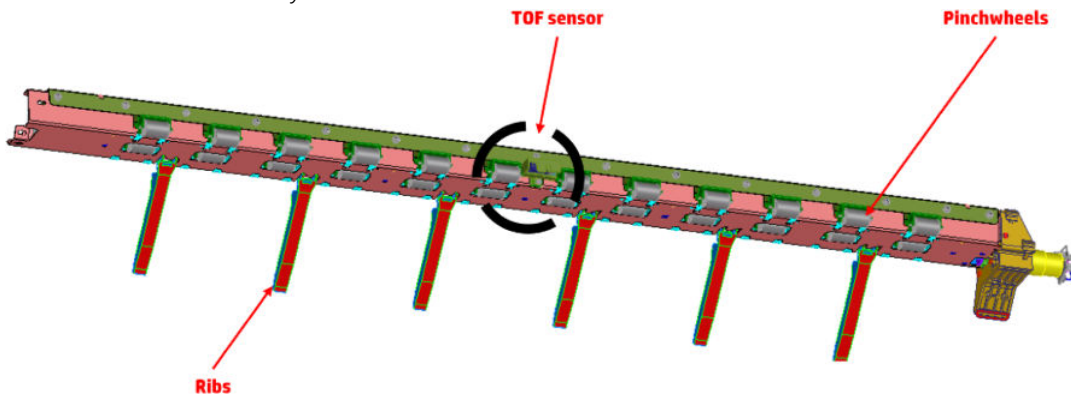
The feed sensor optically detects the leading edge (beginning of page)



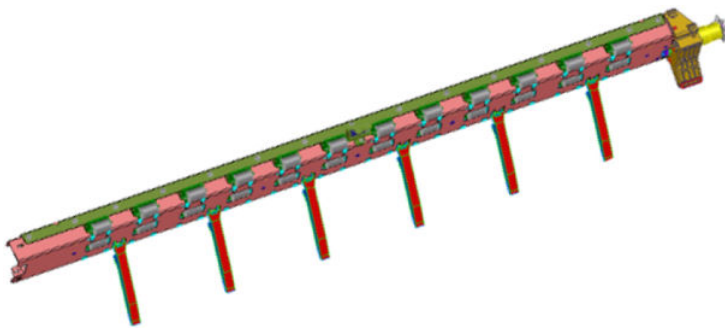
The loop sensor mechanically detects the paper tension to control the loop (long prints only)



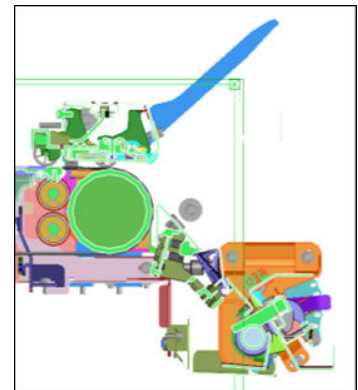
Roof sheet-metal assembly



Ribs down, to guide the leading edge to the print zone

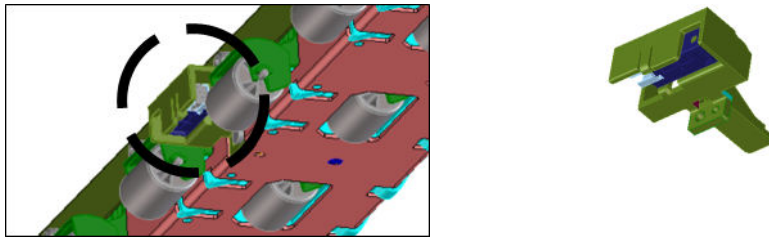


Ribs up, to guide the loop to the print zone



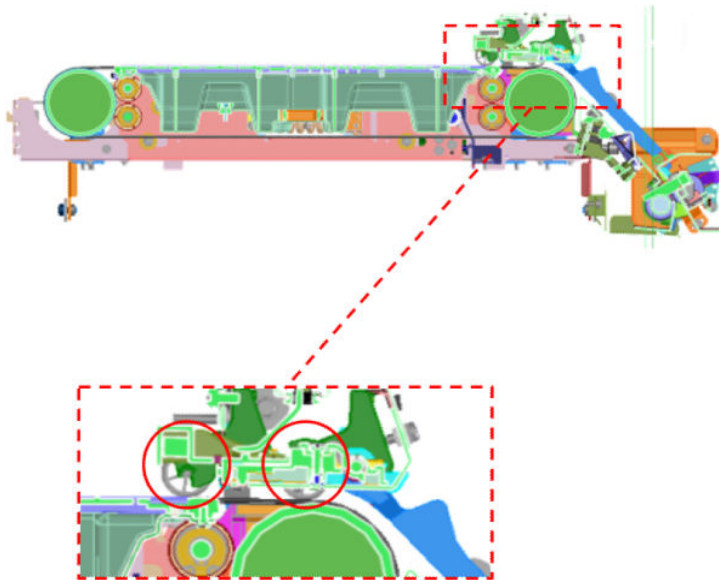
TOF (Top Of Form) sensor

- An optical sensor, to measure the top margin
- Lets the printheads know when to start firing
- Can detect error situations in which the paper is absent when it should be present, or the reverse



Pinchwheels

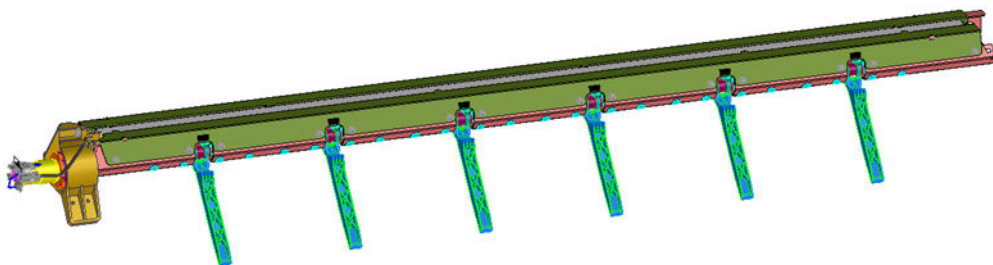
- Provide traction to the paper
- Hold down the paper, and minimize curling in the print zone



Service and repairs

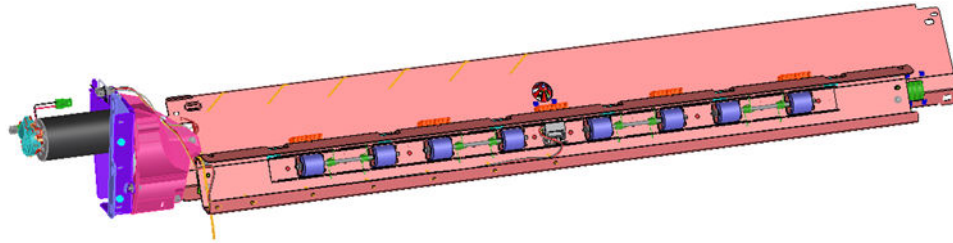
The following parts can be repaired:

- Paper-loop front door and side covers
- Roof sheet-metal assembly

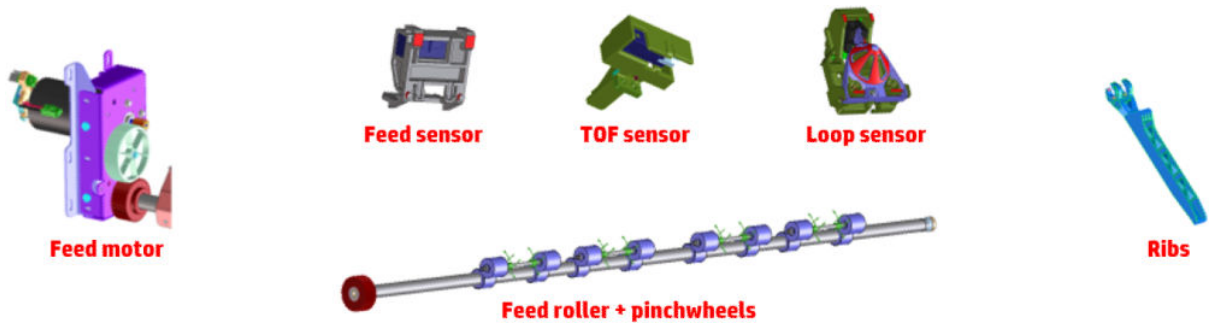


No adjustment is needed after replacement, only calibration of the TOF sensor.

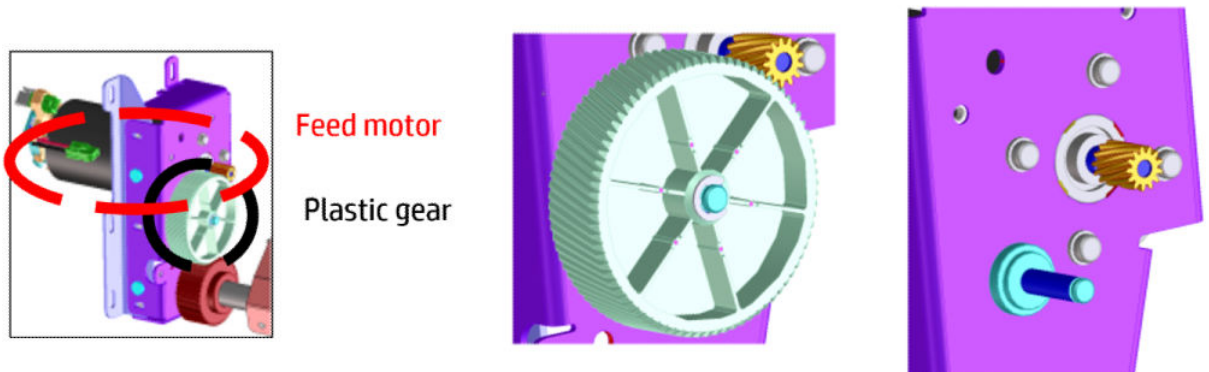
- Paper-loop bottom assembly



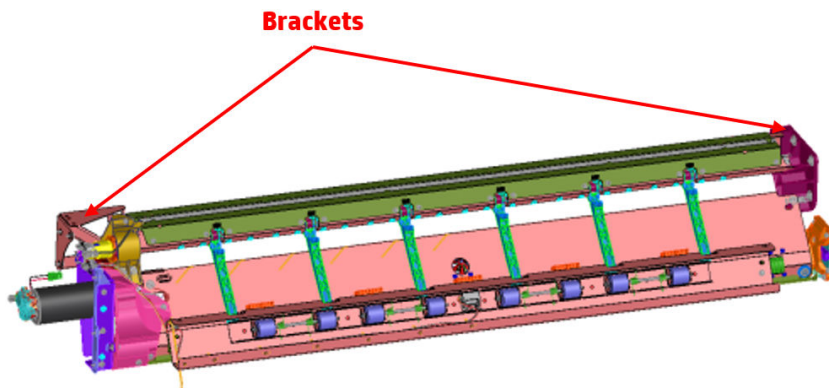
No adjustment is needed after replacement, only calibration of the feed sensor and feed roller.



The feed motor and the plastic gear should be repaired together. First, the plastic gear is removed by releasing the retainer ring; then you have access to the four screws to be removed for feed motor maintenance.



The brackets are designed to last forever, and cannot be repaired. The screws are painted to identify them as non-removable.



Configure long plot handling

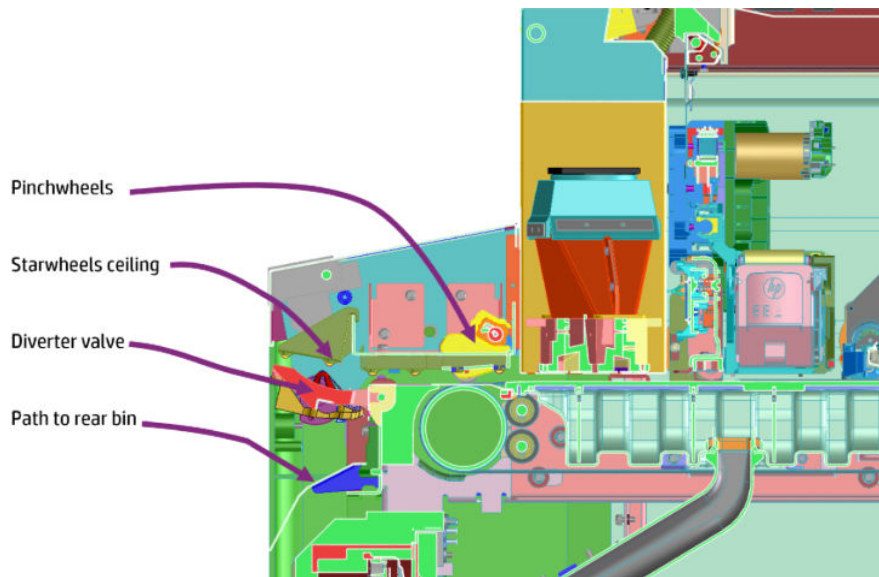
How to access: **Service menu > Hardware utilities > Configure long plot handling.**

- **Show current Long Plot Handling configuration:**
 - Shows the current Loop area bubble control and Patch vacuum control configuration.
- **Change long plot handling configuration (two selectable settings):**
 - **Loop Area bubble control:**
 - **Small** bubble control (will apply to ALL media)
 - **Medium** bubble control (default)
 - **Big:** bubble control
 - **Based on media type:**
 - All plain paper medias will use Short Bubble control **except NTP and Coated media** that will use Medium.
 - **Path Vacuum control:**
 - Media type: **Normal vacuum** (default)
 - **Lower vacuum**

Paper output

Paper output overview

The paper output system detaches the paper from the paper-advance belts and transfers it to the output device (folder, stacker, or rear bin).

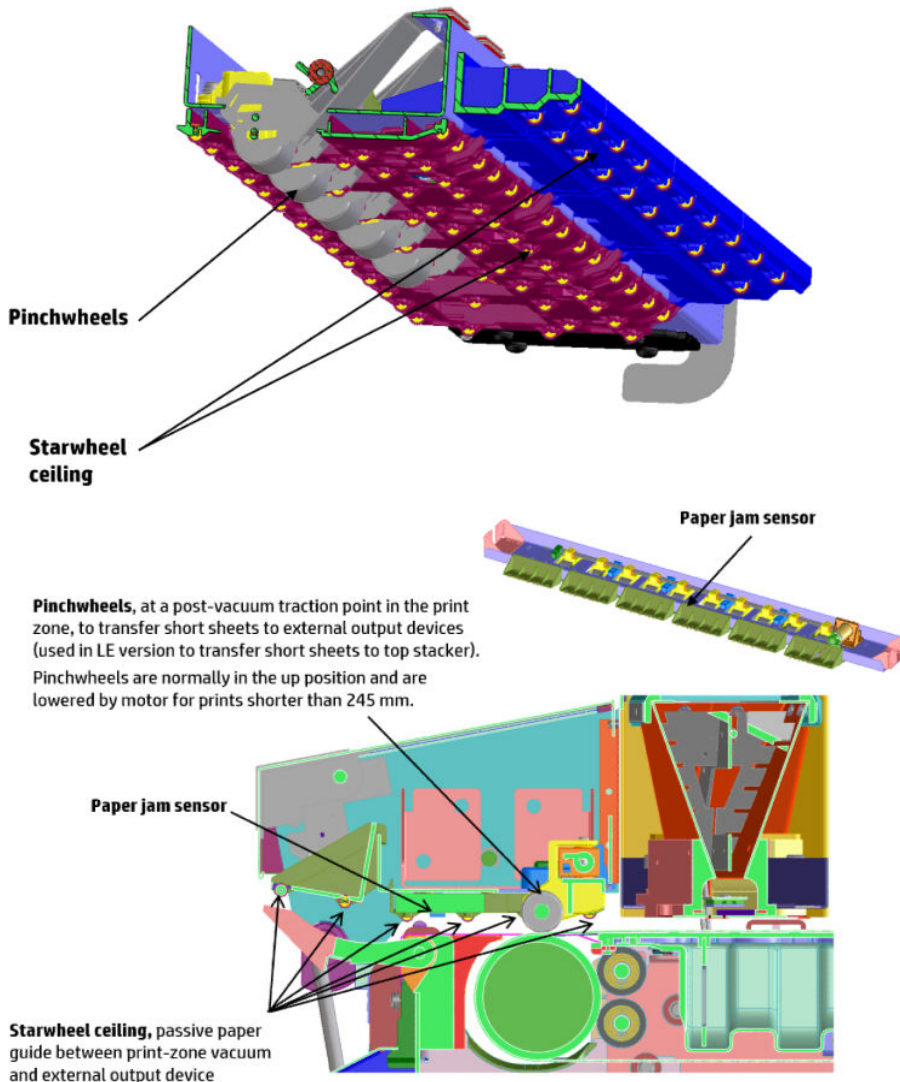


Pinch system

Components

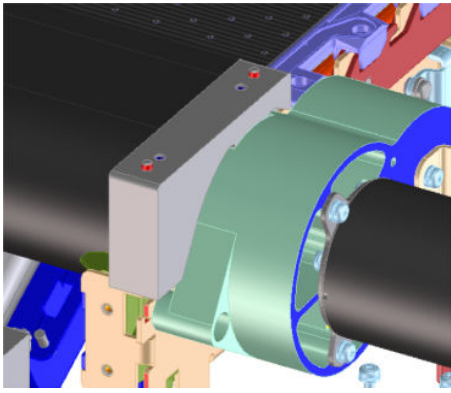
Pinchwheels are used for short prints. They apply weight to the paper so that the belts have enough traction in case the vacuum is not enough.

The starwheels ceiling is designed to avoid damage to prints, preventing them from touching the roof in case of curling or loss of vacuum.

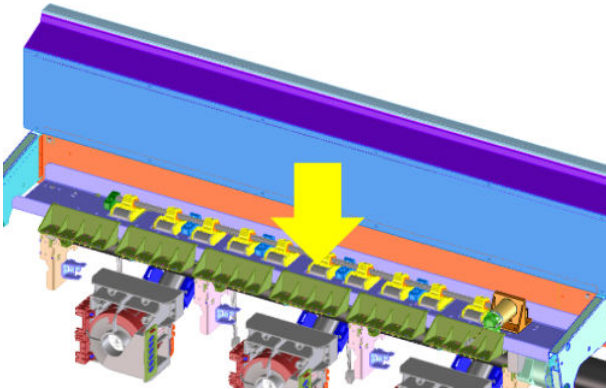


Assembly

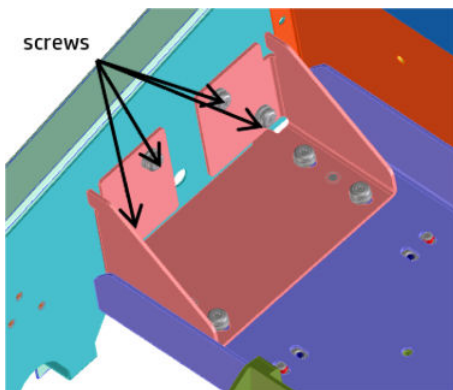
1. Assembly jig referenced to print-zone bearing and Y-rib (both sides).



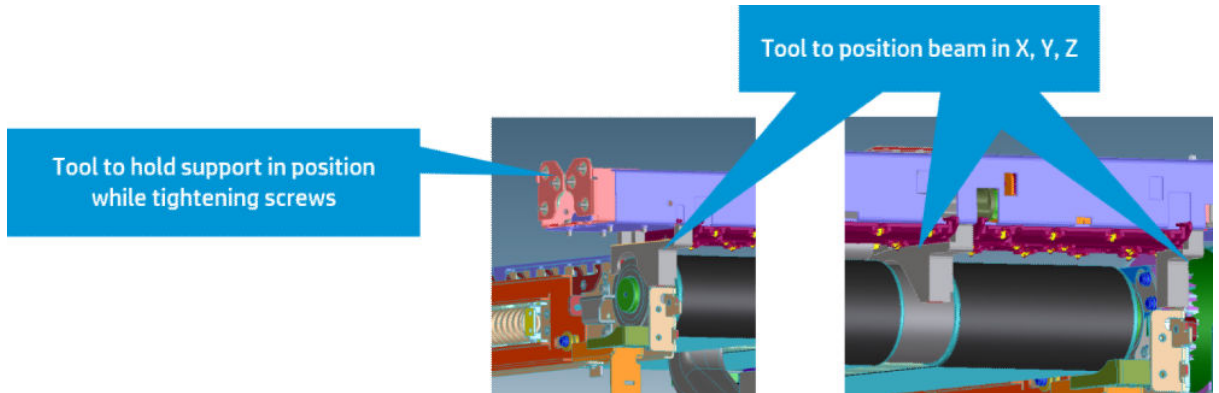
2. Pinchwheel beam assembled on top of the assembly jig.



3. Side supports are attached to the pinchwheel beam and paper output structure (Y, Z freedom). Jigs can then be removed.

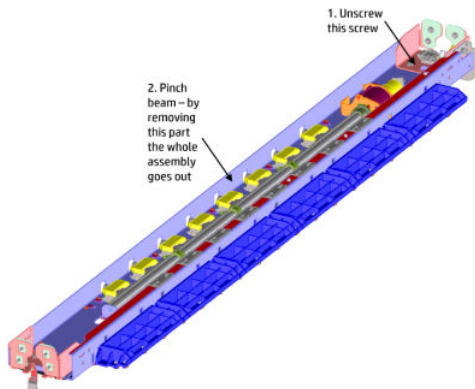


Installation tools

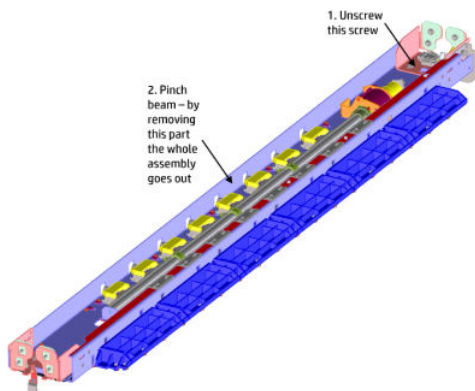


Servicing

Detach the reference part from the pinchwheel beam to remove the whole assembly without losing the calibration.



To change the paper presence sensor, you do not need to disassemble the whole pinchwheel beam. Just remove one screw from the starwheels ceiling.



Replaceable parts

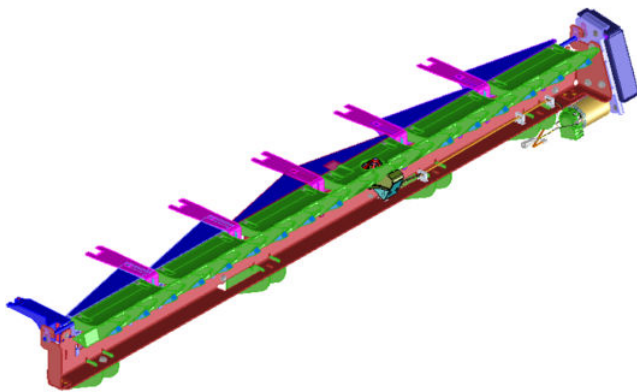
To access the pinchwheel subassembly, you must first remove the pinchwheel top cover (four screws). Parts that could be replaced:

- The complete pinchwheel beam assembly; original references to the print zone are kept in the side supports structure (eight screws)
- The motor assembly (four screws)
- Starwheel brackets can be replaced from the beam independently (clipped)

Divorter valve

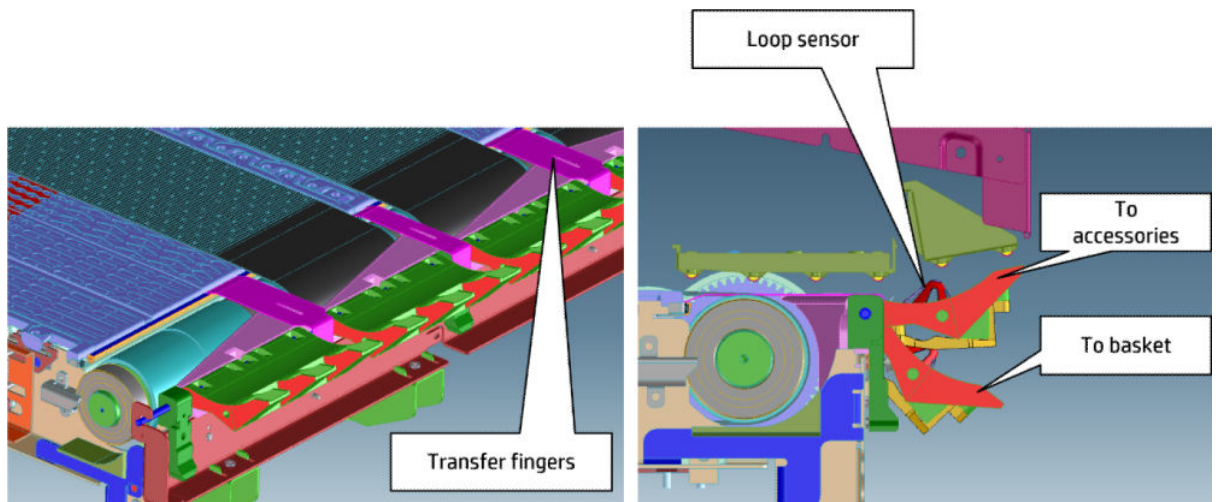
Main functionality

- Transfer paper from the paper advance system to the selected output device.
- When passing the output to a device other than the basket, ensure proper bubble formation to avoid the output device pulling the paper, which could create printing defects.

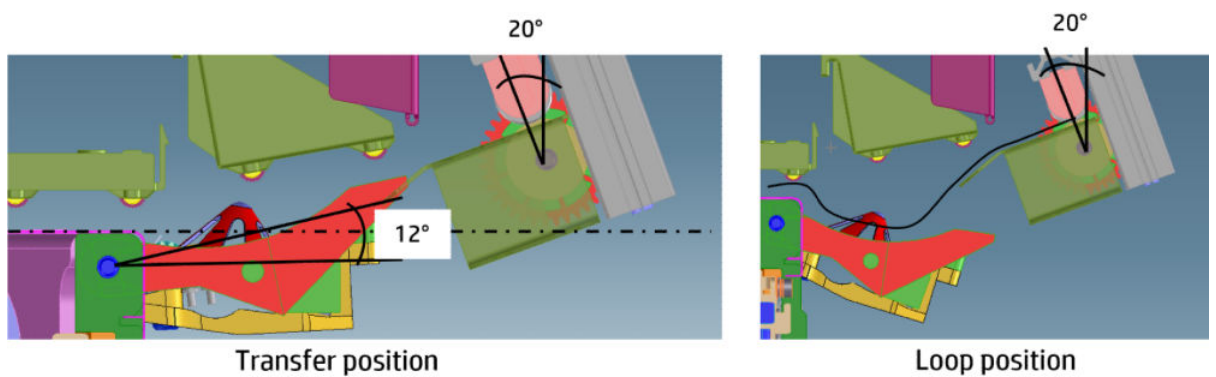


Components

- Transfer fingers across the drive roller
- Divorter flaps
- Loop sensor



Transfer to output devices



Diverter flaps 12° upwards

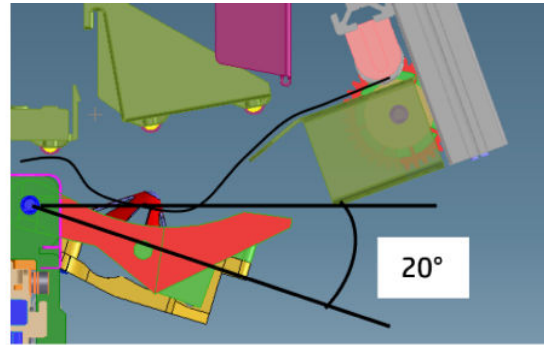
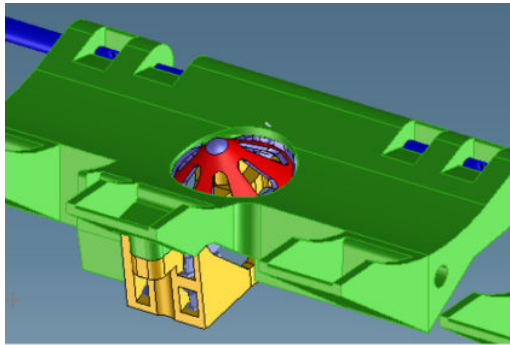
- Smooth transfer of the leading edge on the flaps, without jams.
- The transfer position to most output devices is above the belt, to create an empty space for any paper that goes to the basket.

Output devices 20° on input roller

- This is needed to create a downwards loop with rigid paper.

Loop sensor

The loop sensor controls loop creation, to ensure that the output device does not pull paper from the platen. The loop is created by rotating the output roller at a lower speed than the paper advance in the platen area. Based on loop sensor feedback, the output roller can rotate at a higher or lower speed than the belts.

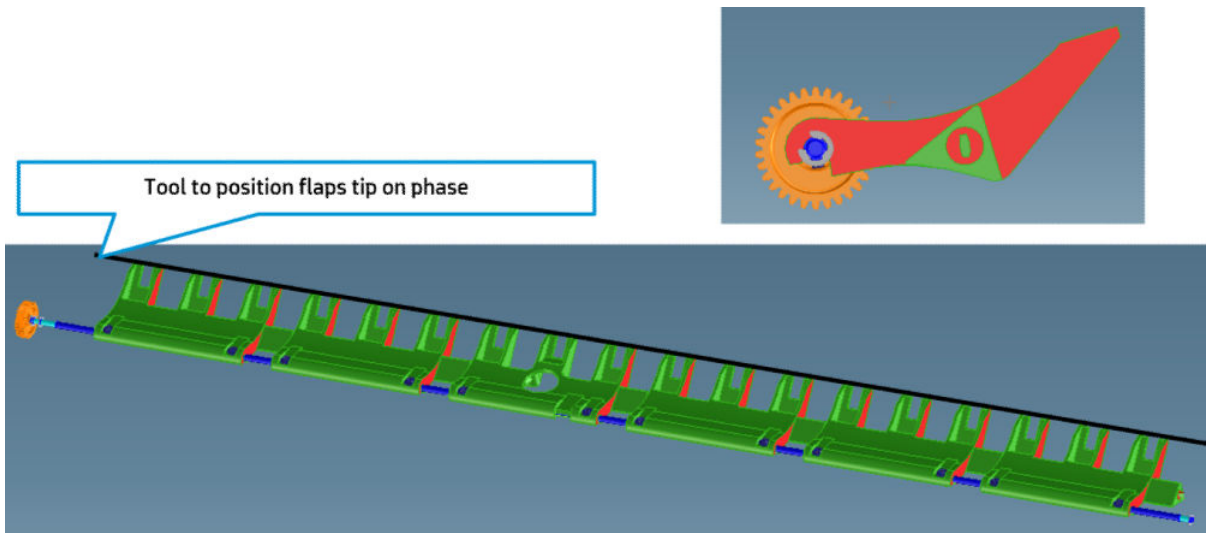


Loop position

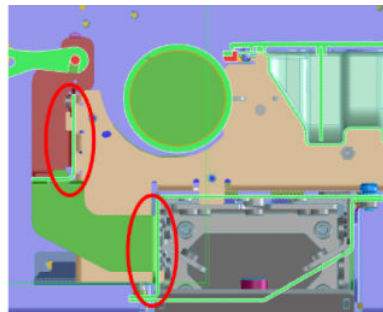
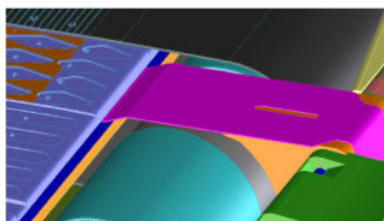
The sensor is reused from the paper input loop. There are two optical sensors with four possible positions, three of which are currently used:

Down position	3% faster than belts	Maximum loop
Middle position	Same speed as belts	Desired loop
Up position	3% slower than belts	Minimum loop

Diverter flaps assembly tool



Servicing



Interfaces

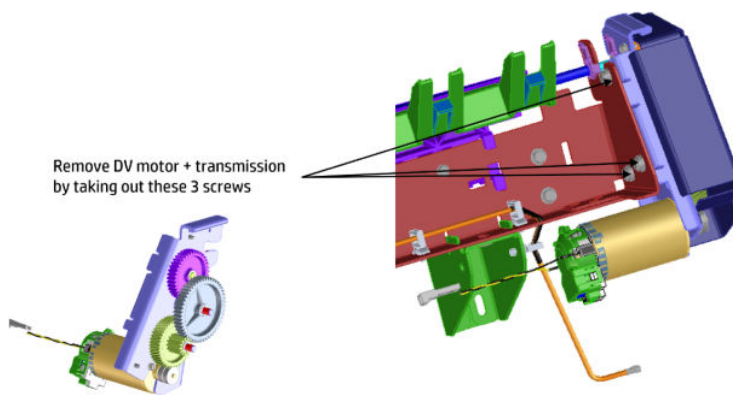
- Y-ribs: Main assembly reference
- Rear beam print engine structure
- Platen
- Drive roller

Assemblability

- Standalone assembly that can be assembled and tested offline

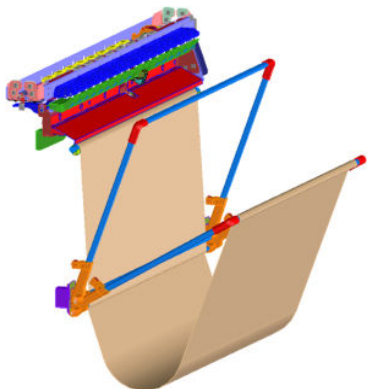
Serviceability

- The diverter valve assembly can be taken out of the printer for servicing.



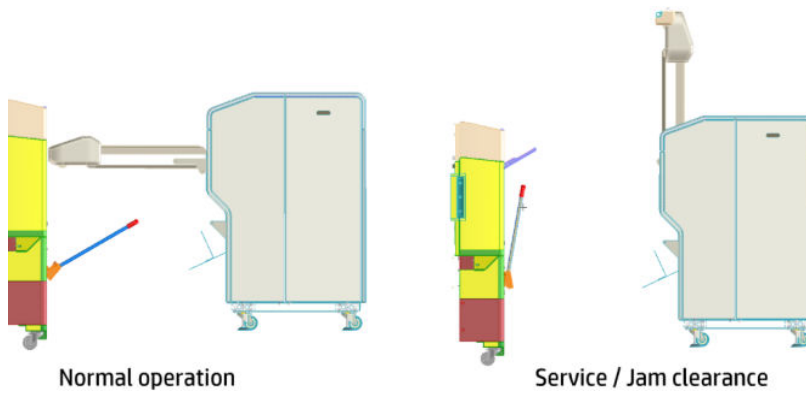
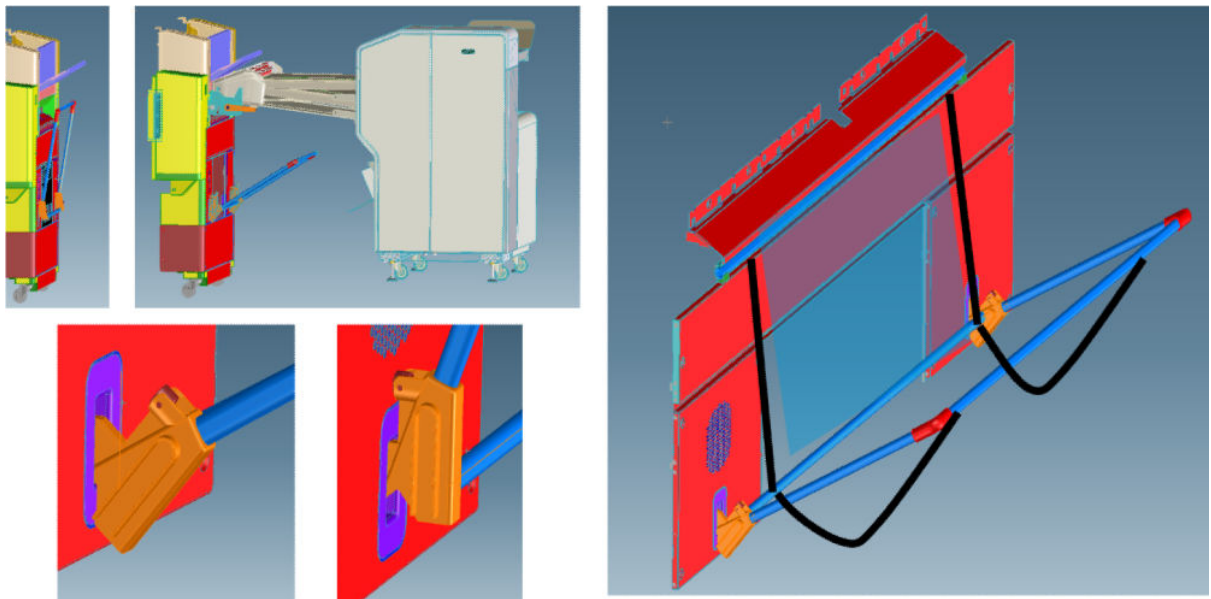
Basket

The basket is intended to be used for ends of rolls, calibrations, and paper types not supported by other output devices (folder, stacker).



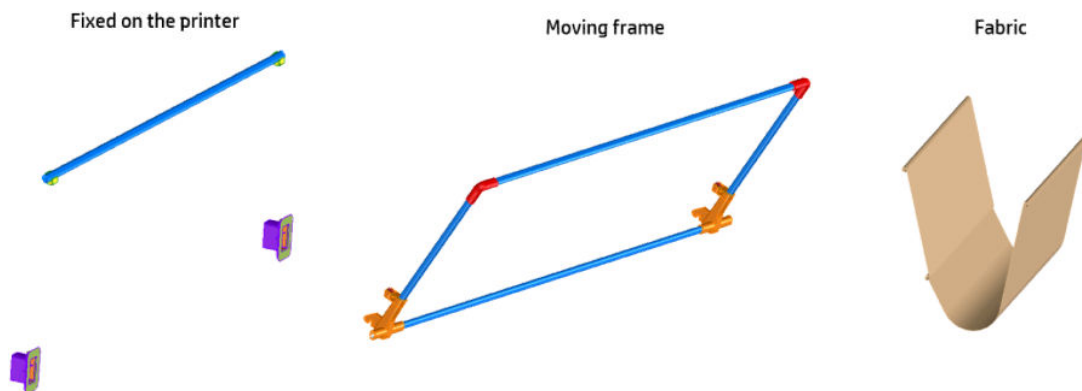
The basket has two positions: open and closed.

- Open (450 mm) is the functional position.
- Closed (90 mm) is the non-functional position, needed for accessibility while clearing paper jams.



Components

The basket is not preassembled: it is assembled at the customer's site.



Top stacker


Introduction



The top stacker is included with the 3900/4000/4100/4500/4600 series printers, and available as an accessory for the 5000/8000 series printers.

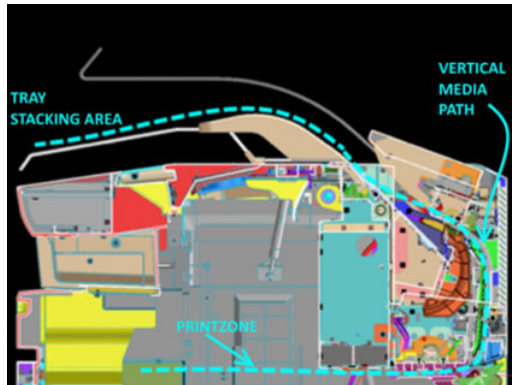
Specifications and limitations

Parameter	Value	Comments
Stacker capacity	100 sheets	To a depth of about 12 mm with plain paper of 80 g/m ² in A0 or A1 sizes. Other paper sizes or types will reduce capacity.
Maximum throughput	12 D/min 17 D/min	Printing speed 6 ips (A model) Printing speed 10 ips (B model)
Supported paper sizes	Minimum A3/B size Maximum width: 40 in (1016 mm) Maximum length on tray: Arch E	
Compatible with other output devices	High-capacity stacker, folder, basket	
Compatible with printer models	All HP PageWide XL printers	Included with 3900, 4000, 4100, 4500 and 4600 models, available as an accessory for other models
Installation time as accessory	About 90–120 min	Two people recommended
Normal operating environment	Temperature: 15–35°C (59–95°F) Relative humidity: 20–80%	
Power supply	DC voltage: 32 V Maximum load current: 3 A, 200 W	

 **NOTE:** See the datasheet for full specifications and limitations.

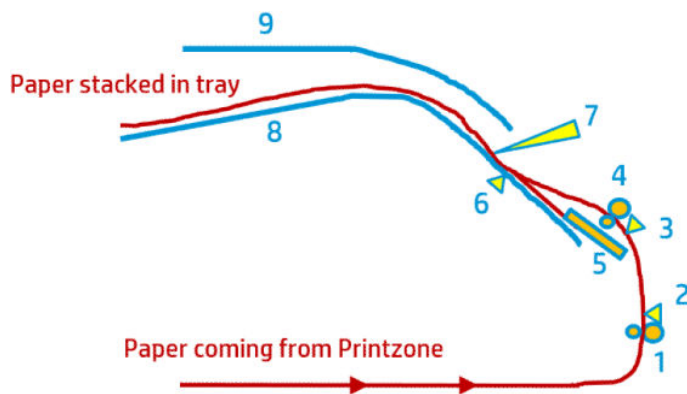
Main functionality

Basic stacking procedure



1. Start both rollers moving:
 - Intermediate roller
 - Paper-advance roller
2. Detect the leading edge with the intermediate roller's optical sensor.
3. Start bubble formation to isolate the print-zone paper advance from the stacker.
4. Move the paper.
5. Detect the trailing edge with the paper-advance roller's optical sensor.
6. Execute the hand-off sequence.

Location of components

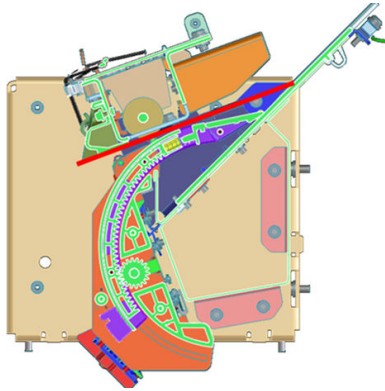


1. Intermediate roller
2. Intermediate roller's optical sensor
3. Paper-advance roller's optical sensor
4. Paper-advance roller
5. Kickers
6. Tray's paper-presence sensor

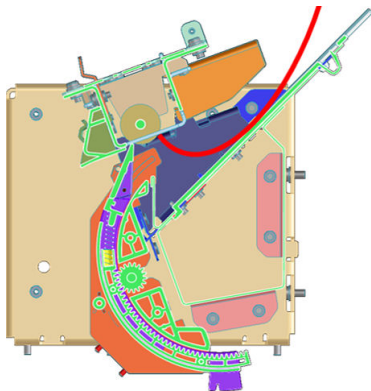
7. Capacity sensor
8. Tray
9. Arms

Kickers and hand-off sequence

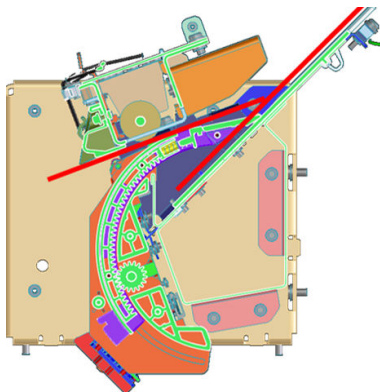
1. The page enters the paper path pushed by the last traction roller in the printer. The kickers are closed.



2. Once the trailing edge of the page leaves the traction roller, the kickers are opened. The curling of the paper tends to close the paper path.



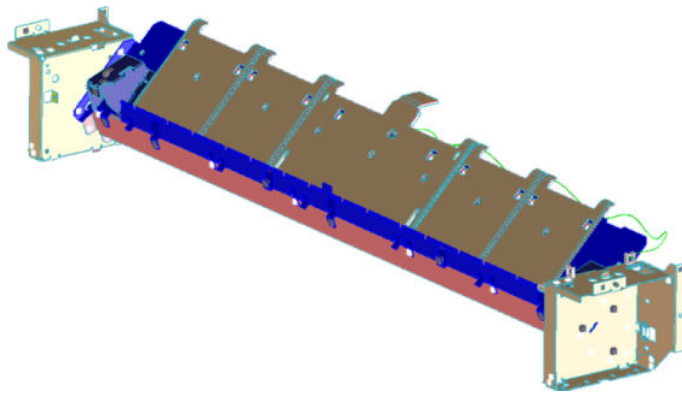
3. The kickers are closed, clearing the paper path for the next page. The next page arrives, and the kickers press the first page to prevent the next page from pushing the already stacked page out of the tray. The cycle is repeated from step 1.



Main components

Structure

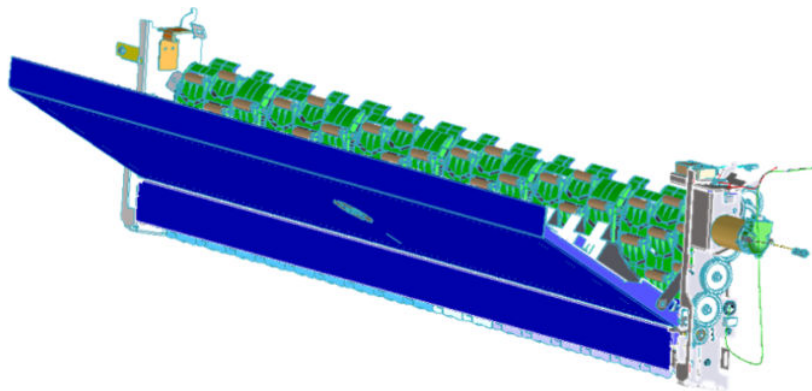
The structure is the main supporting element of the top stacker. It essentially consists of a closed-profile sheet-metal beam with two side-plates at the ends. Plastic trays are attached to the top of the beam in order to support and work as the first part of the paper path and fixed tray system.



Paper path

The paper path transports the paper from the printer's output to the upper tray of the top stacker. It consists of two separate modules:

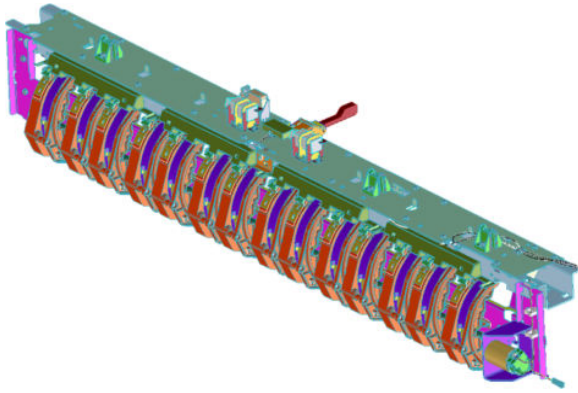
- The inner path, containing the diverter interface, the intermediate roller, the motor and transmission, sensors, and the printer-facing area of the paper path—composed essentially of plastic wheels and starwheels
- The outer path, consisting of the door and the paper-guiding elements attached to it



Hand-off

The handoff is the part of the top stacker that delivers the trailing edge to the top tray. In order to deliver a robust solution and ensure that the paper exit path to the tray is a clean and reliable one, the kickers concept has been developed for the top stacker and reused in the high-capacity stacker. Essentially, the kickers are a system with a rack and a tip that has two basic functions:

- It presses the sheets stacked in the tray, to prevent bulldozing.
- It pushes the trailing edge away from the exit area of the paper-advance roller.

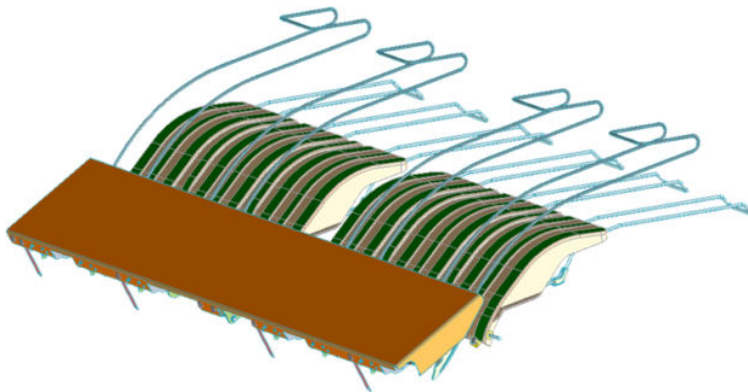


Tray and arms

The tray and arms are passive elements intended to hold the paper on top of the printer once the handoff has been made. They consist of two plastic trays and a wire-frames system to guide the paper and allow users easy and convenient access. The arms were added because of paper curling.

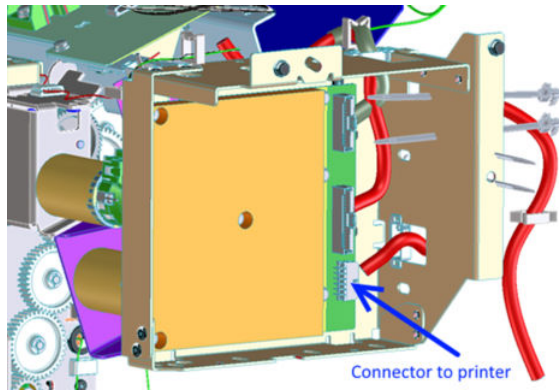
Both arms and tray are hinged, allowing the user to open them. The arms can be opened to clear paper jams or to access short pages. Both arms and trays must be raised in the following cases:

- When there is a paper jam in the scanner.
- When a printhead needs to be replaced.



E-box and Morgana PCA

The electronics board in used in the top stacker is the Morgana PCA, which communicates with the printer through a CAN-Bulli interface. The connection is performed with a single connector as shown below.



The e-box controls:

- Paper advance—speed servo
- Kickers—position servo
- Capacity sensors
- Path flow
- Diagnostic ability
- Jam detection and clearance (timeout)
- Printer events

High-capacity stacker

See [High-capacity stacker on page 1945](#).

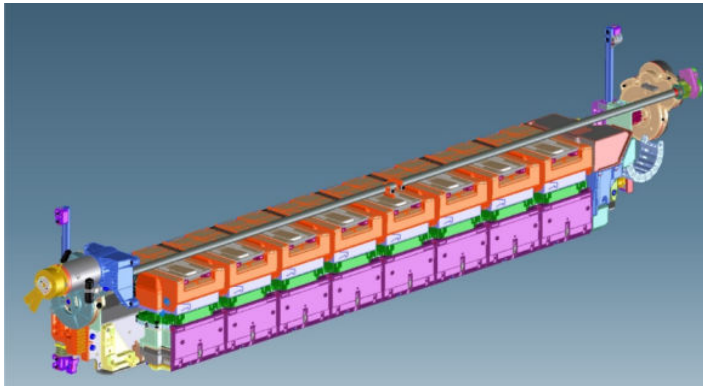
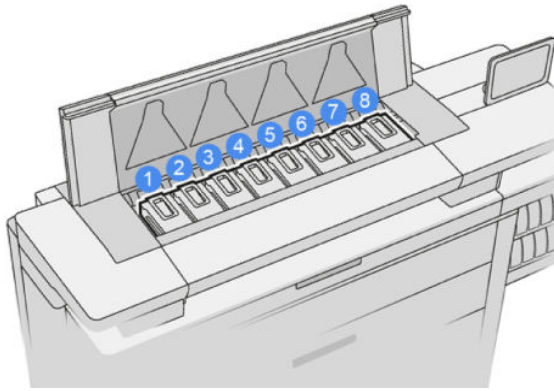
Folder

See [Folder F70/F60 on page 1328](#).

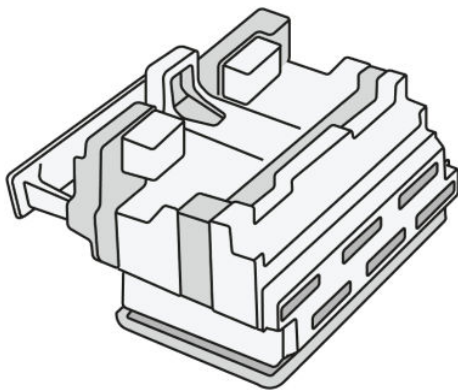
Print bar

Introduction

The key printing element is a fixed 40 inch (1016 mm) print bar, composed of 8 printheads, numbered 1 to 8 from left to right, looking at the printer from the front. The paper advances at high speed underneath the print bar, which ejects pigmented inks in four colors.



The printheads are extremely durable and do not need to be replaced every time an ink cartridge is replaced. They provide excellent results even when the ink cartridges contain a low level of ink.



Printhead maintenance

The printer and the maintenance cartridge clean the printheads automatically.

Avoid removing printheads unnecessarily.

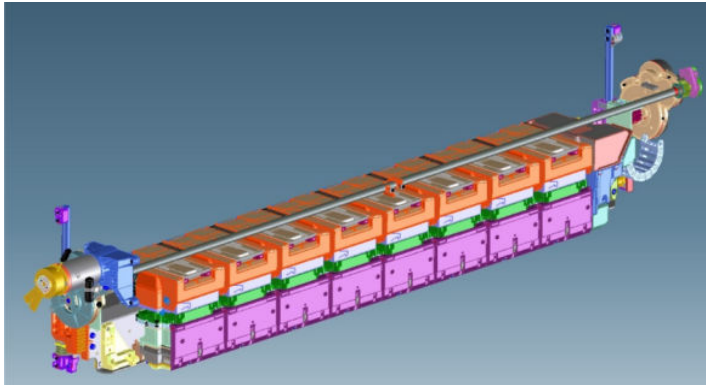
The printheads are extremely durable and do not need to be replaced every time an ink cartridge is replaced. When a printhead eventually needs to be replaced, the front panel will display a message.

Printhead guaranteed life is 10 liters or 12 months.

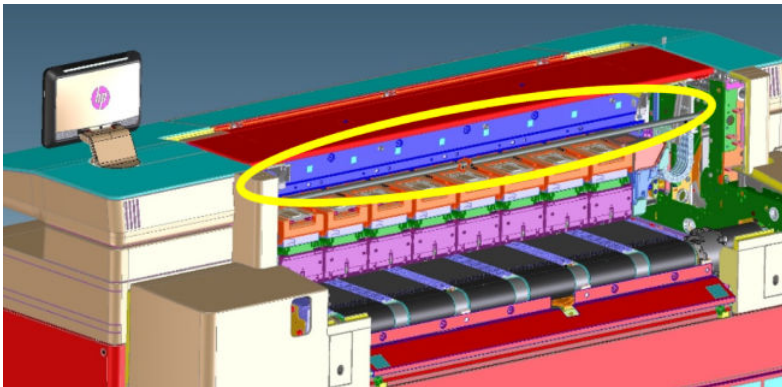
See the user guide for the replacement process.

Lift mechanism

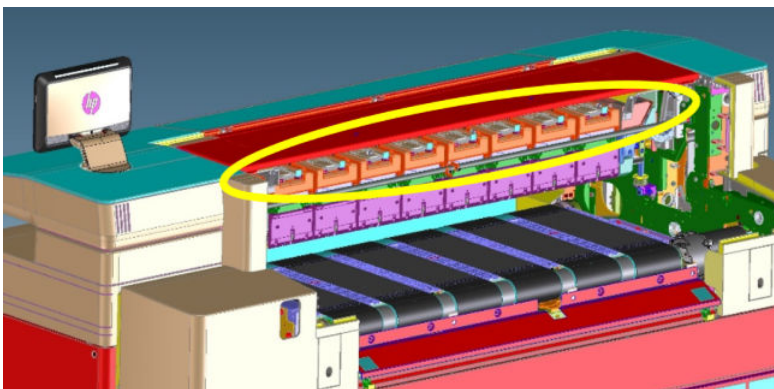
The lift mechanism allows the print bar to be moved into different positions.



- **Printing position** is the lowest; it is used for printing, when printheads are firing ink onto the paper.

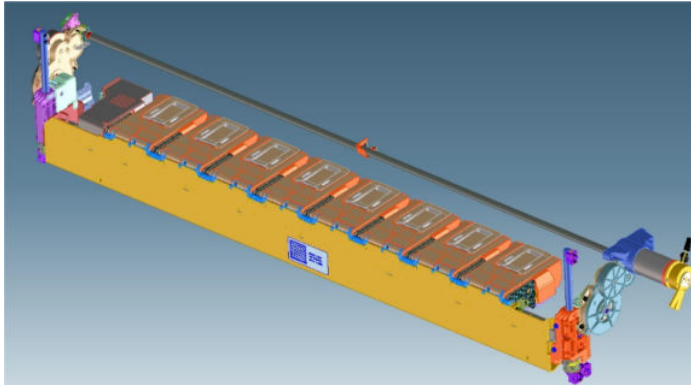


- **Printhead replacement position** is the highest; it is used to remove or insert printheads.



- **Capping position** is used to cap the printheads and protect the nozzles. To achieve this position the print bar lifts up, the capping station moves down into position, and then the print bar moves down onto the capping station.
- **Printhead spitting position** is used when the spittoon is deployed and the print bar places all printheads close to the spittoon to fire ink and refresh the nozzles.
- **Printhead wiping position** is used to wipe the printhead nozzles and remove debris.

Components



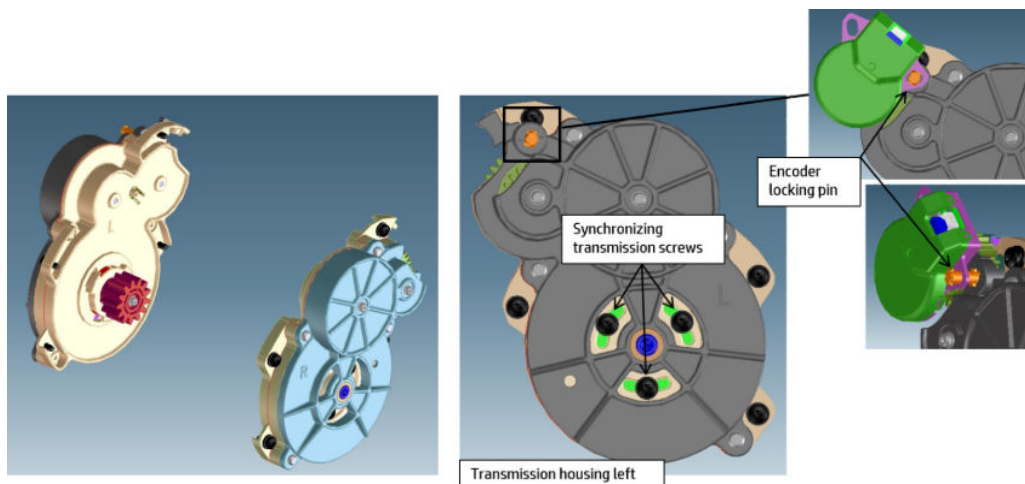
- Left and right gear housings
- Lift motor and brake
- Encoder
- Print-bar guide rod
- Home sensor
- Syncro bar and bushings

The Montjoi PCA controls the lift mechanism. When the print bar needs to move, the motor switches on and the brake is released by applying 24 V DC. Then the motor moves the print bar up to the final position, using the encoder to control the movement in a closed loop. When the print bar ends the movement, then the brake blocks the system by removing the 24 V DC and switching off the motor. At the top of the left guide rod, the home sensor checks when the print bar is completely up.

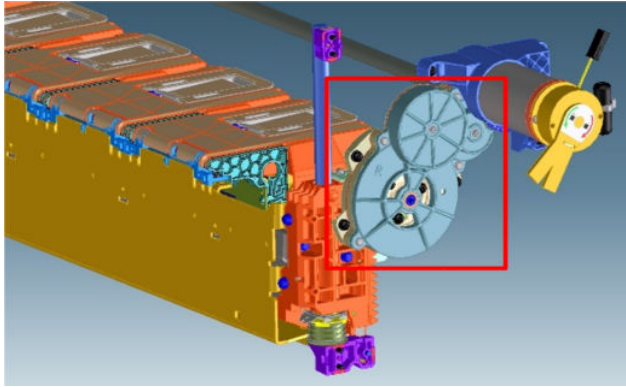
The syncro bar is a shaft that transmits the power from the motor to the left and right gear housings.

Gear housings

The gearboxes transmit power from the syncro bar to the print-bar rack.

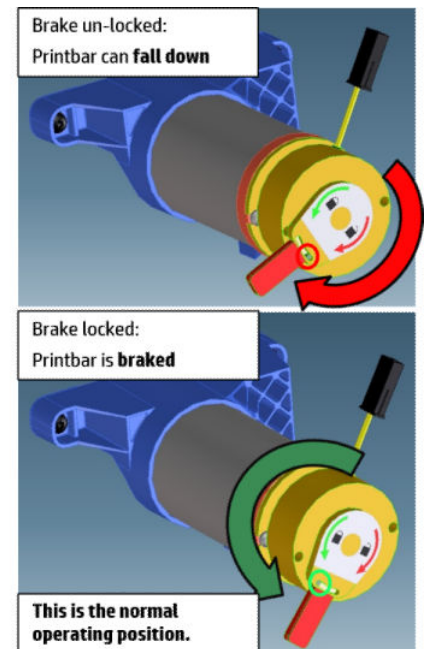
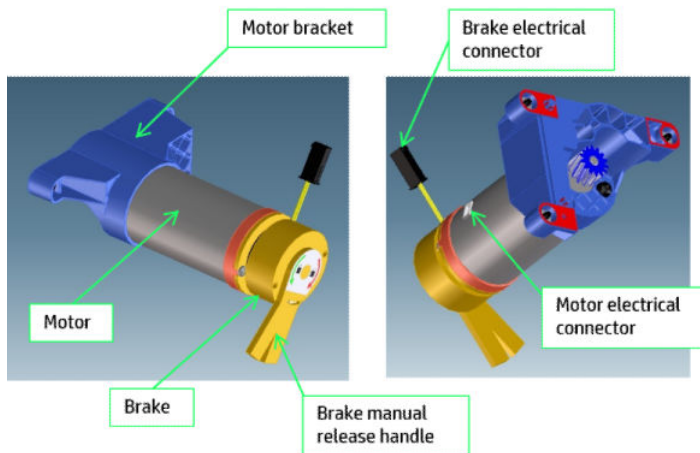
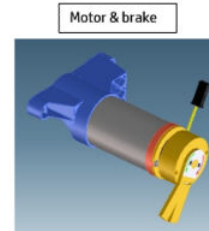
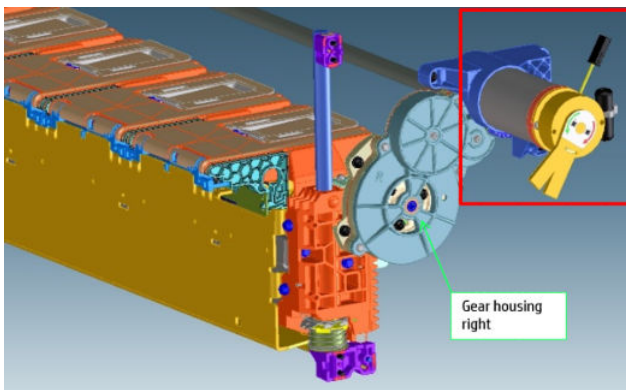


Right gear housing



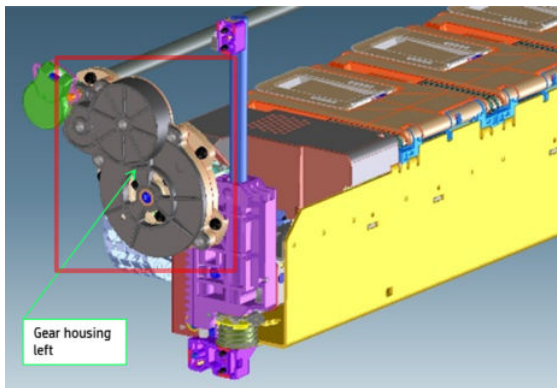
Lift motor and brake

The lift motor and brake are used to move the print bar, and to hold it when it is not moving.



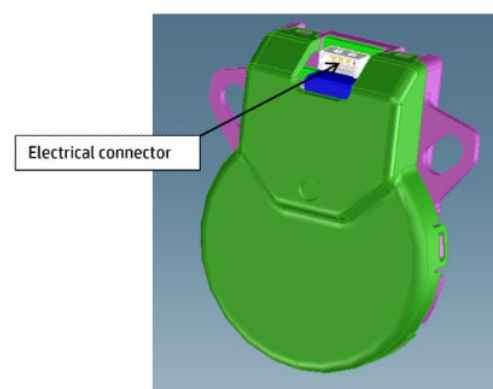
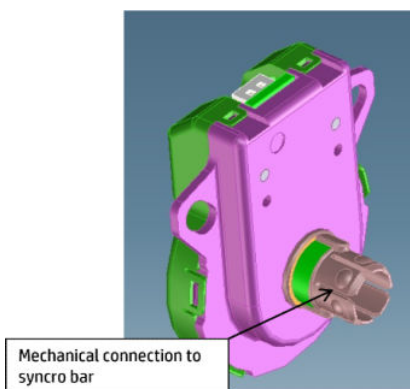
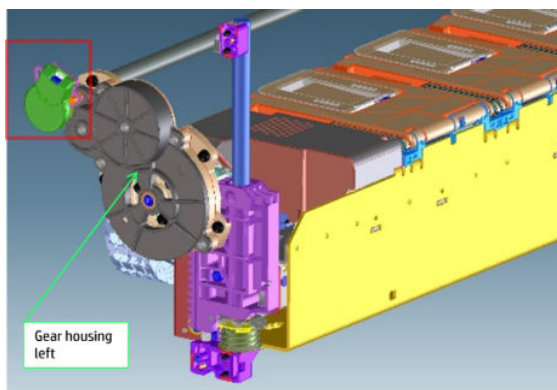
⚠ CAUTION: If you lift the print bar manually, lock the brake to avoid the print bar falling down and damaging the printer or yourself. During the repair period, make sure that nobody touches the brake lever.

Left gear housing



Encoder

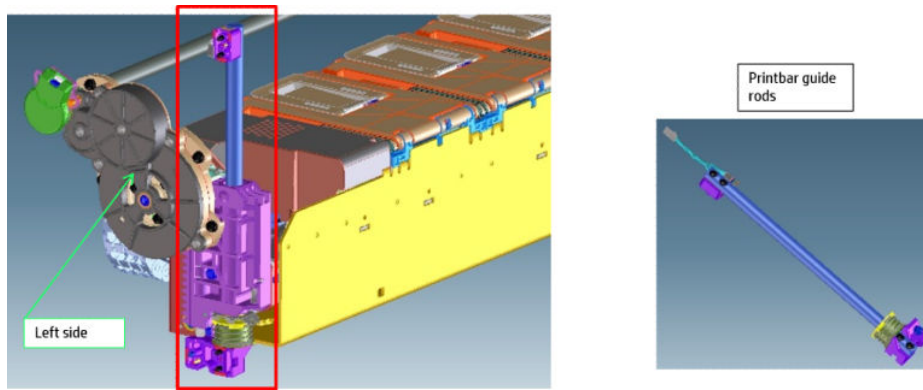
The digital encoder assembly controls the positioning of the print-bar.



Print-bar guide rods

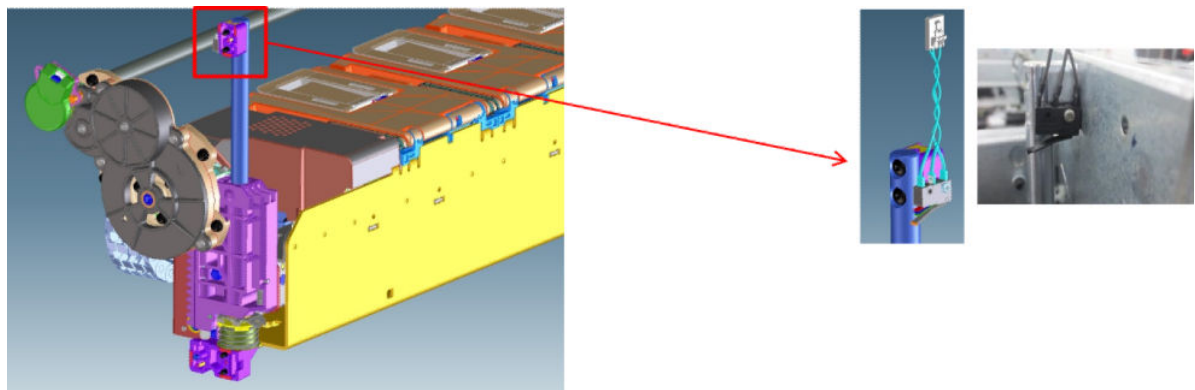
The print-bar guide rods are the guides along which the print bar moves.

For HP-authorized personnel only



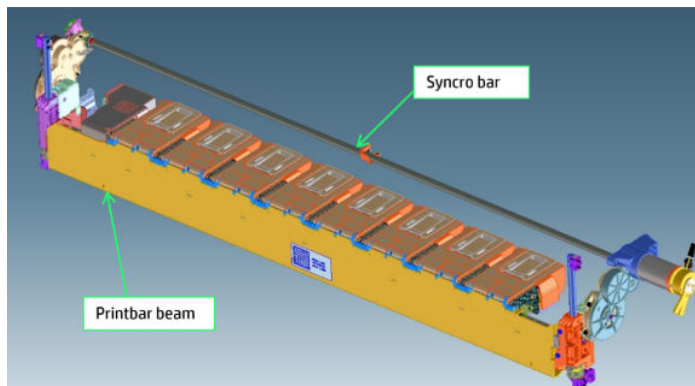
Home sensor

At the top of the left guide rod is the home sensor, which checks when the print bar is completely up.

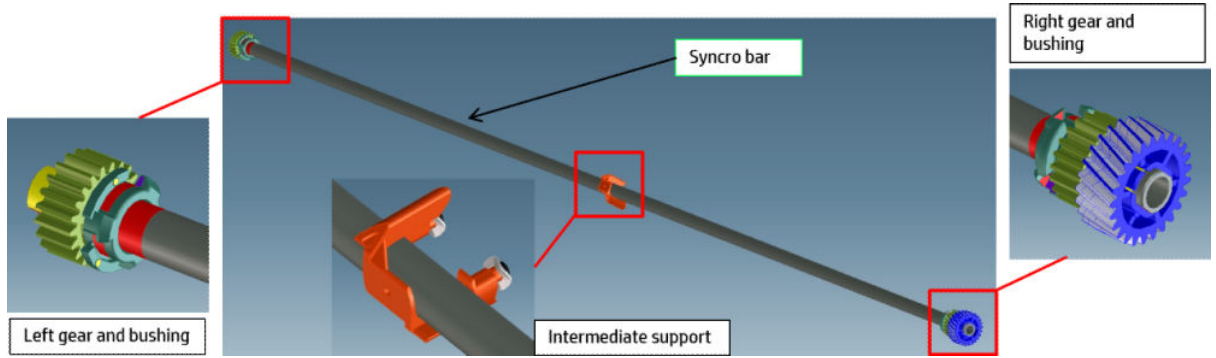



Syncro bar

The syncro bar is a shaft that transmits the power from the motor to the left and right gear housings.



The syncro bar service part includes the bushing and gears, but not the intermediate support.



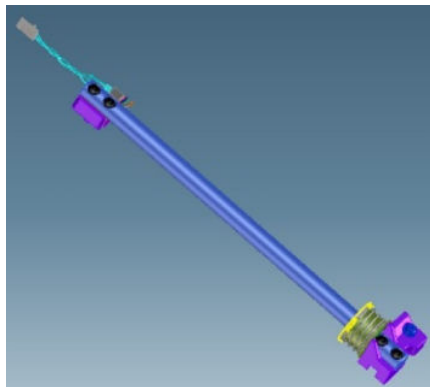
 **NOTE:** After replacing the syncro bar, you must recalibrate the top-of-form sensor.

Parts that can be repaired

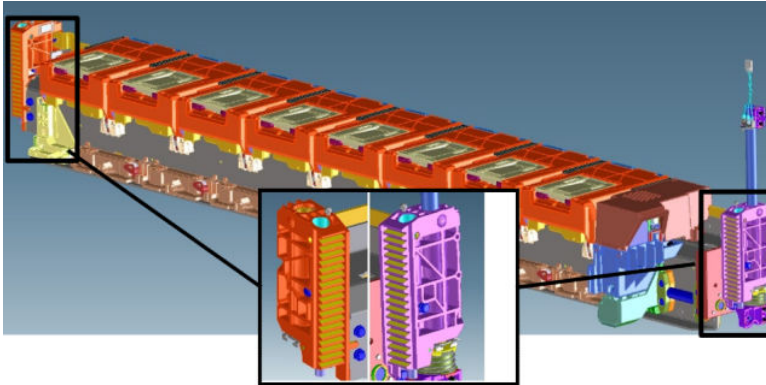
- Lift motor and brake
- Home sensor
- Gears and gear housings
- Syncro bar and bushing
- Encoder

Parts that cannot be repaired

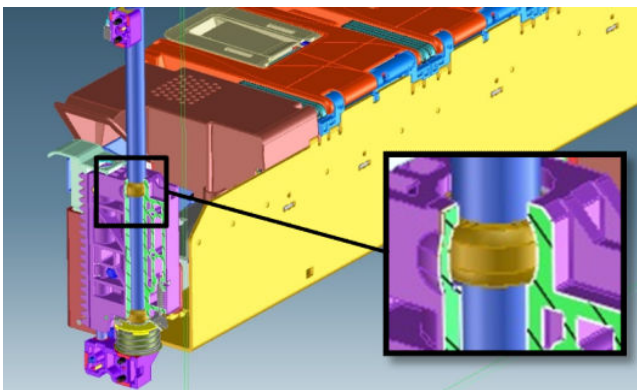
- Print-bar guide rods



- Rack



- Print-bar bushings

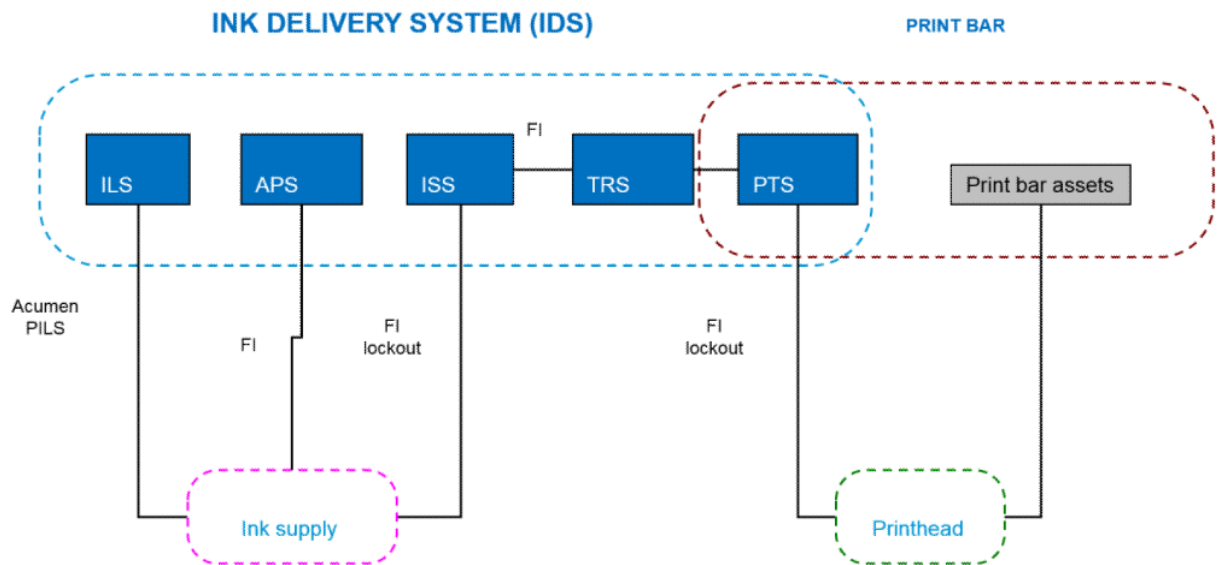


These parts cannot be replaced because the process would be complex, and because removing the part would seriously impact print quality.

Ink delivery system

Introduction

- In order to work correctly, the printheads must not contain air. The various parts of the ink delivery system work together to ensure that no air gets into the printheads.
- The ink cartridges are installed in the Ink Supply Station (ISS), which pumps air into the cartridges in order to force the ink out.
- The sides of the ISS prevent the cartridges from expanding, so that all of the air pressure is used in forcing the ink out.
- The ink tubes deliver the ink to the printheads.
- Continuous ink flow must be maintained at all times from the cartridges to the printheads.
- The 5000 and 8000 printer series allow cartridges to be replaced during printing without interrupting the continuous ink flow to the printheads.



IDS assets

- Ink Level Sensing (ILS)
- Air Pressure System (APS)
- Ink Supply Station (ISS)
- Tube Routing System (TRS)
- Print-bar Tubing System (PTS)

Ink supply interfaces

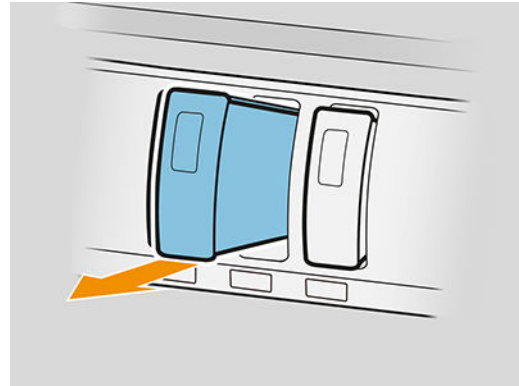
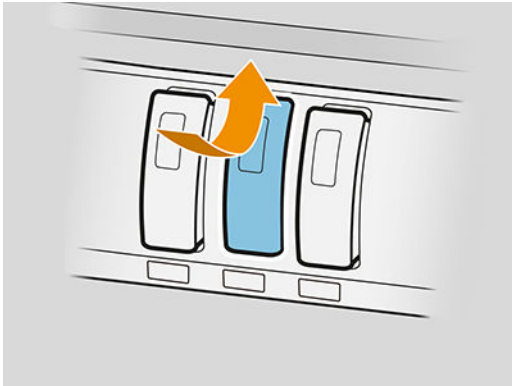
- Acumen
- Pressure Ink Level Sensor (PILS)
- Fluid Interconnectors (FI), air and ink
- Lockouts
- Cartridge housing
- Air pressure

Printhead interfaces

- Fluid Interconnectors (FI)
- Lockouts
- Ink pressure
- Flow rate
- Air ingestion budget

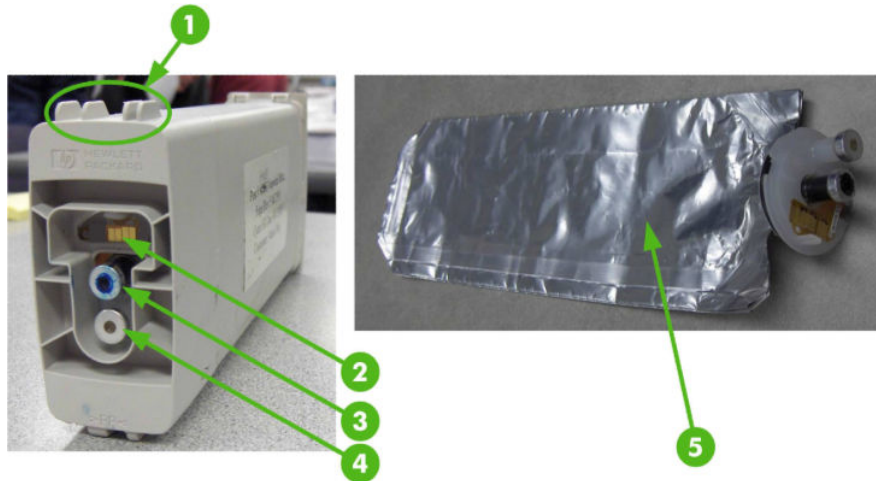
Ink cartridges

The printer's four ink cartridges provide yellow, magenta, cyan, and black ink. Introductory ink cartridges are supplied with the printer. Cartridges hold approximately 400 or 775 ml of ink, depending on the SKU.



The ink cartridges require no maintenance or cleaning. As long as each ink cartridge is inserted correctly into its slot, the ink will flow to the printheads. Because the printheads control the amount of ink transferred to the page, you will continue to see high-quality printing results even when the ink levels are getting low.

The front panel displays the status of the ink cartridges. Using the front panel, detailed information can be checked in the **Ink cartridges** menu.



1. Keyed cartridge
2. Acumen
3. Ink tube connector
4. Air connector
5. Ink bag

Ink cartridge part numbers

PageWide Printer 775 ml 8000 series, non-blueprint	C1Q45A	HP 842A 775-ml Black Ink Cartridge
	C1Q46A	HP 842A 775-ml Cyan Ink Cartridge
	C1Q47A	HP 842A 775-ml Magenta Ink Cartridge
	C1Q48A	HP 842A 775-ml Yellow Ink Cartridge
	C1Q49A	HP 842B 775-ml Black Ink Cartridge
	C1Q50A	HP 842B 775-ml Cyan Ink Cartridge
	C1Q51A	HP 842B 775-ml Magenta Ink Cartridge
	C1Q52A	HP 842B 775-ml Yellow Ink Cartridge
	C1Q53A	HP 842C 775-ml Black Ink Cartridge
	C1Q54A	HP 842C 775-ml Cyan Ink Cartridge
	C1Q55A	HP 842C 775-ml Magenta Ink Cartridge
	C1Q56A	HP 842C 775-ml Yellow Ink Cartridge

PageWide Printer 400 ml 5000/5100 series, non-blueprint	C1Q57A	HP 843A 400-ml Black Ink Cartridge
	C1Q58A	HP 843A 400-ml Cyan Ink Cartridge
	C1Q59A	HP 843A 400-ml Magenta Ink Cartridge
	C1Q60A	HP 843A 400-ml Yellow Ink Cartridge
	C1Q61A	HP 843B 400-ml Black Ink Cartridge
	C1Q62A	HP 843B 400-ml Cyan Ink Cartridge
	C1Q63A	HP 843B 400-ml Magenta Ink Cartridge
	C1Q64A	HP 843B 400-ml Yellow Ink Cartridge
	C1Q65A	HP 843C 400-ml Black Ink Cartridge
	C1Q66A	HP 843C 400-ml Cyan Ink Cartridge
	C1Q67A	HP 843C 400-ml Magenta Ink Cartridge
	C1Q68A	HP 843C 400-ml Yellow Ink Cartridge
	F9J82A	HP 848C 400-ml Black Ink Cartridge (only in USA)
	F9J83A	HP 848C 400-ml Cyan Ink Cartridge (only in USA)
	F9J84A	HP 848C 400-ml Magenta Ink Cartridge (only in USA)
F9J85A	HP 848C 400-ml Yellow Ink Cartridge (only in USA)	

PageWide Printer 400 ml 4000/4100/4500/4600 series	C1Q57A	HP 843A 400-ml Black Ink Cartridge
	C1Q58A	HP 843A 400-ml Cyan Ink Cartridge
	C1Q59A	HP 843A 400-ml Magenta Ink Cartridge

	C1Q60A	HP 843A 400-ml Yellow Ink Cartridge
	C1Q61A	HP 843B 400-ml Black Ink Cartridge
	C1Q62A	HP 843B 400-ml Cyan Ink Cartridge
	C1Q63A	HP 843B 400-ml Magenta Ink Cartridge
	C1Q64A	HP 843B 400-ml Yellow Ink Cartridge
	C1Q65A	HP 843C 400-ml Black Ink Cartridge
	C1Q66A	HP 843C 400-ml Cyan Ink Cartridge
	C1Q67A	HP 843C 400-ml Magenta Ink Cartridge
	C1Q68A	HP 843C 400-ml Yellow Ink Cartridge

PageWide Printer 400 ml	1XB40A	HP 849 400-ml Black Ink Cartridge
3900 series	1XB39A	HP 849 400-ml Cyan Ink Cartridge
	1XB37A	HP 849 400-ml Magenta Ink Cartridge
	1XB38A	HP 849 400-ml Yellow Ink Cartridge

Digital Blue 775 ml	F9J69A	HP 846B 775-ml Black Ink Cartridge
8000 series, blueprint	F9J70A	HP 846B 775-ml B1 Ink Cartridge
	F9J71A	HP 846B 775-ml B2 Ink Cartridge

Digital Blue 400 ml	F9J72A	HP 847B 400-ml Black Ink Cartridge
5000/5100 series, blueprint	F9J73A	HP 847B 400-ml B1 Ink Cartridge
	F9J74A	HP 847B 400-ml B2 Ink Cartridge

Ink cartridge maintenance

During the normal lifetime of a cartridge, no specific maintenance is required. You should replace a cartridge when it has reached its expiry date. You can find the expiry date in the the ink cartridge information on the front panel.

Ink cartridges must be shaken before installation. High-quality printing is maintained even when the ink level is low.

The status of each cartridge is reported in the front panel.

See the user guide for the replacement process.

When to replace the ink cartridges

Below each ink cartridge, the printer has two LED indicators: a padlock and an inkdrop.



- The padlock LED is on when the cartridge is in use.



IMPORTANT: Do not try to remove a cartridge when the padlock LED is on.

- The inkdrop LED turns yellow when the cartridge is almost out of ink, and turns red when the cartridge is empty or faulty.

CAUTION: Avoid touching pins, leads, and circuitry when handling ink cartridges, because these elements are sensitive to electrostatic discharge. Such devices are called ESD-sensitive devices. Electrostatic discharges are one of the main hazards to electronics products. This type of damage can reduce the life expectancy of the device.

The status of each cartridge is reported in the front panel:

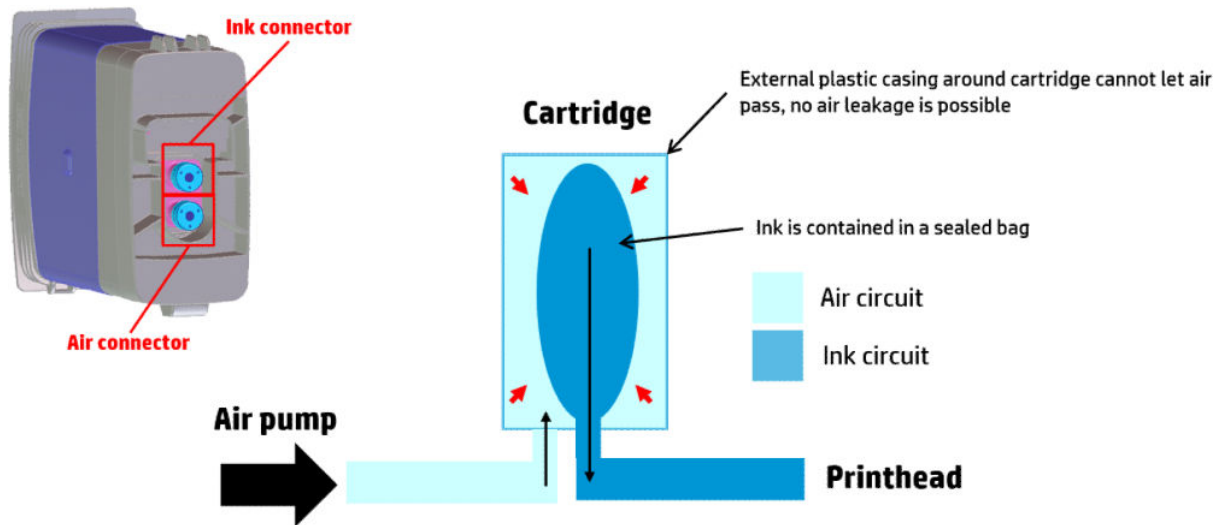
- OK: The cartridge is working normally.
- Reset: The cartridge is not responding, but removing and reinserting it may solve the problem.
- Replace: The cartridge has been identified as faulty. It should be replaced by a functional cartridge.
- Low on ink: The cartridge is low on ink. It should be replaced soon.
- Very low on ink: The cartridge is very low on ink. It should be replaced very soon.
- Empty: The cartridge has no ink. It should be replaced.
- Missing: The cartridge is missing.
- Wrong/Incompatible/Incorrect: The cartridge type is not suitable for this printer.
- Expired: The cartridge has reached its expiration date.
- Altered: The cartridge has been identified as refilled or altered.

When to change the ink cartridges is mostly determined by you with guidance from the front panel. In conjunction with the messages displayed in the front panel and the message explanations in this chapter, you will be able to choose for yourself when is the right time.

The printer also displays the ink level and tells you when the ink supply is low on ink. This means you have constantly updated information about the ink supplies.

Air pressure system

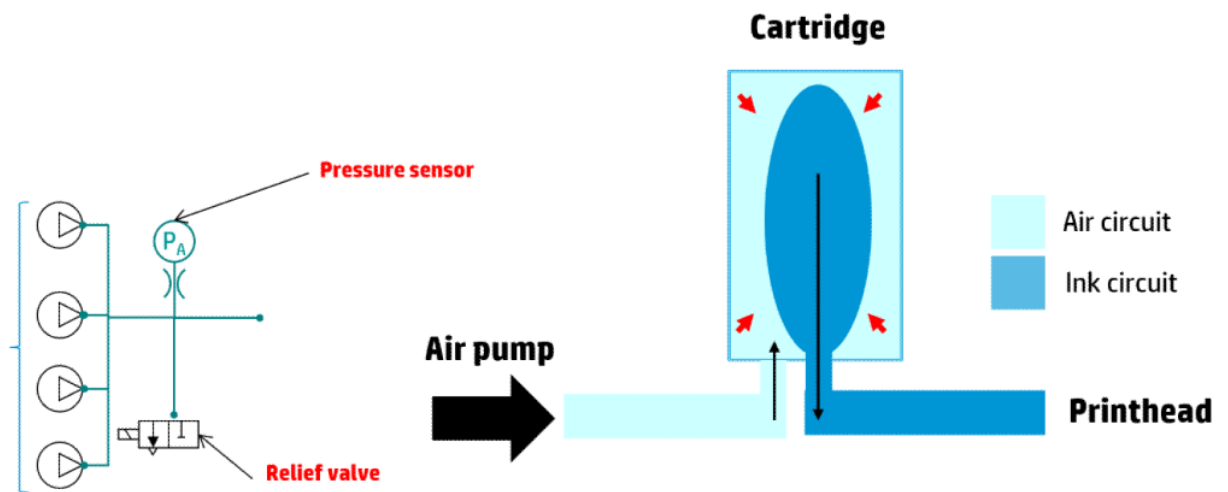
Ink is forced out of the ink cartridge by air pressure on the ink bag within the cartridge.

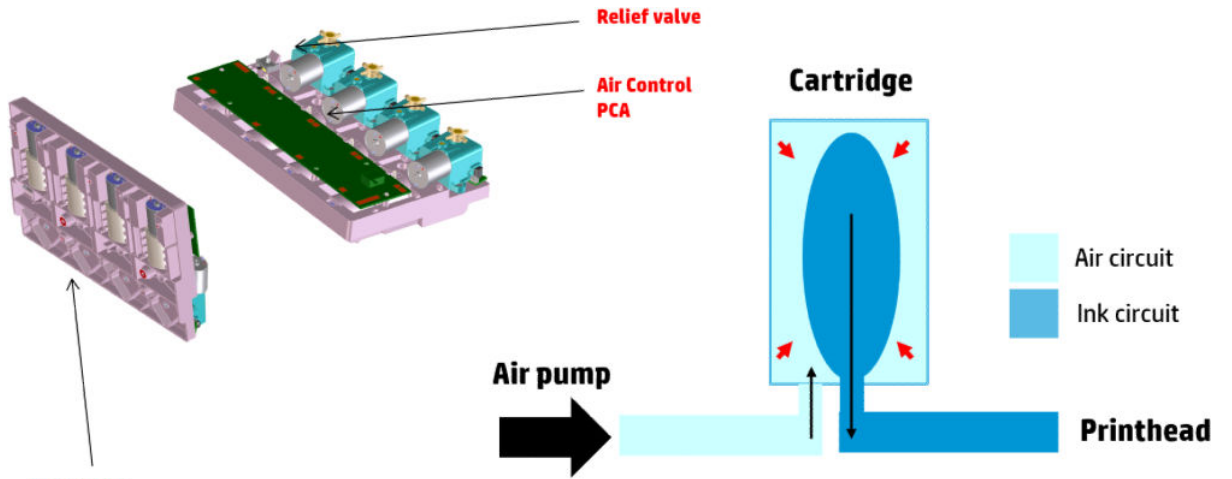


The advantages of this system are low cost and high reliability. The air pump has a longer expected lifespan than an ink pump.

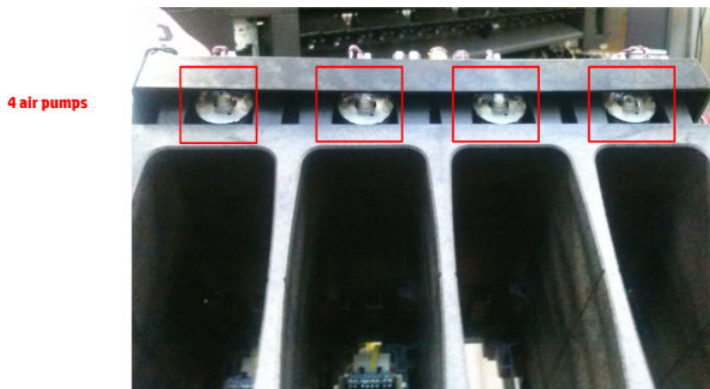
NOTE: If air leaks from the intermediate tank, the pressure on the ink bag drops, so the ink flow to the printheads is reduced.

Air pressure is controlled with an air pressure sensor and an air relief valve.

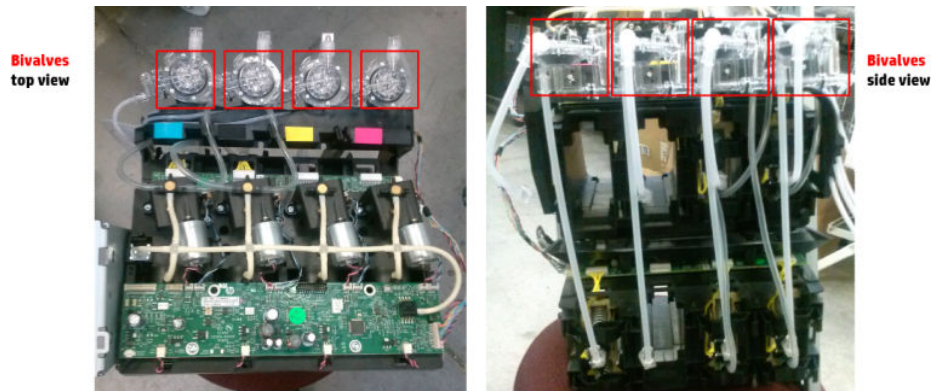




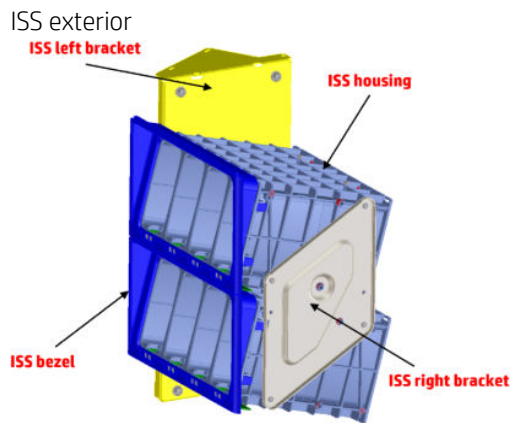
5000 and 8000 series only:



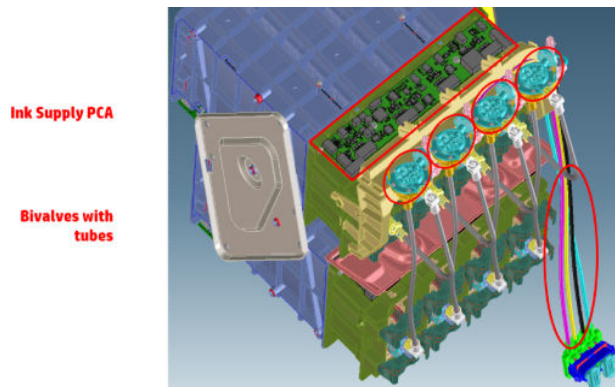
Bivalves



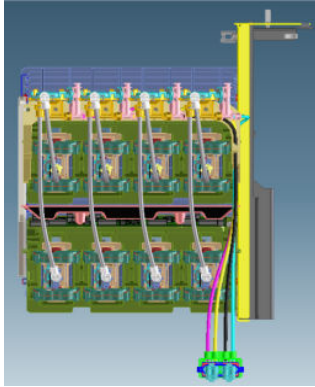
Ink supply station



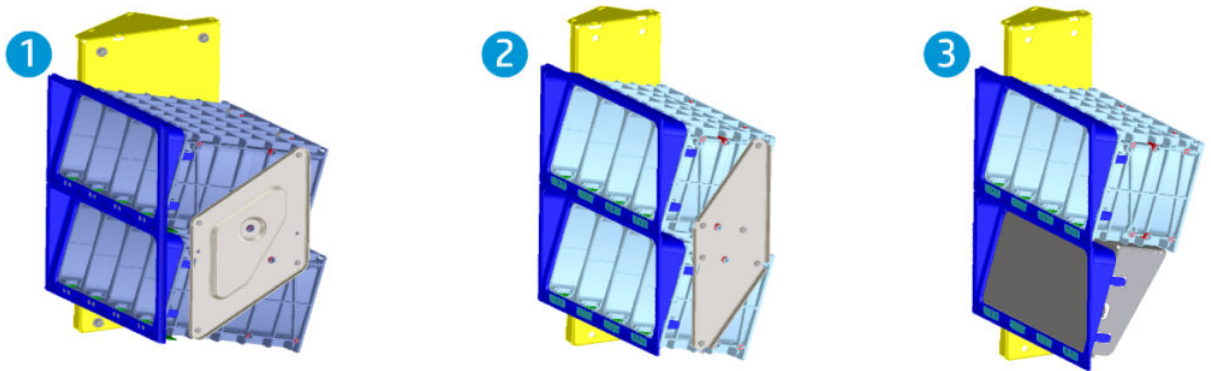
ISS with bivalves



ISS from the rear

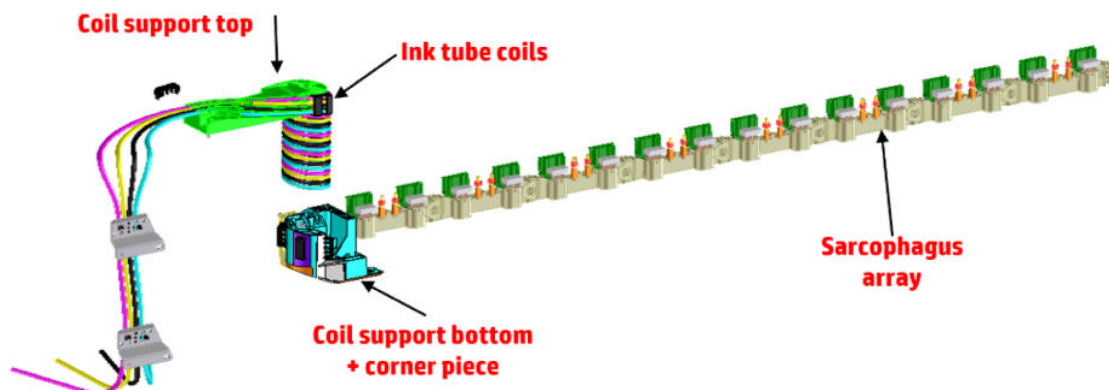


Three versions of the ISS

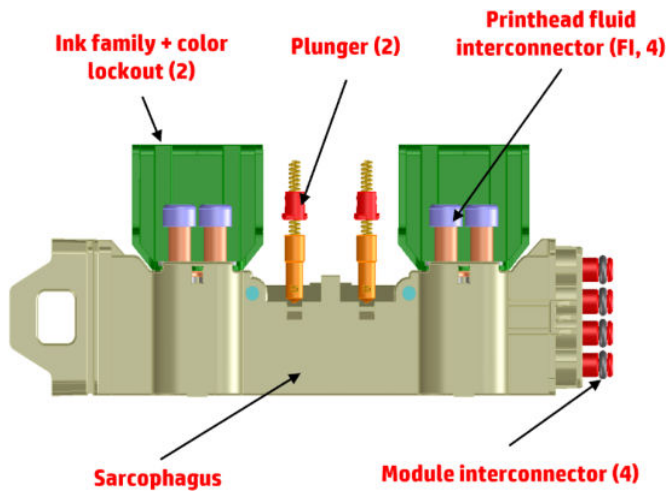


1. CMYK 775 ml ink cartridges (two each): HP PageWide XL 8000
2. CMYK 400 ml ink cartridges (two each): HP PageWide XL 5000, 5100 and 6000 series
3. CMYK 400 ml ink cartridges (one each): HP PageWide XL 3900, 4000, 4100, 4500 and 4600 series

Print-bar tubing system



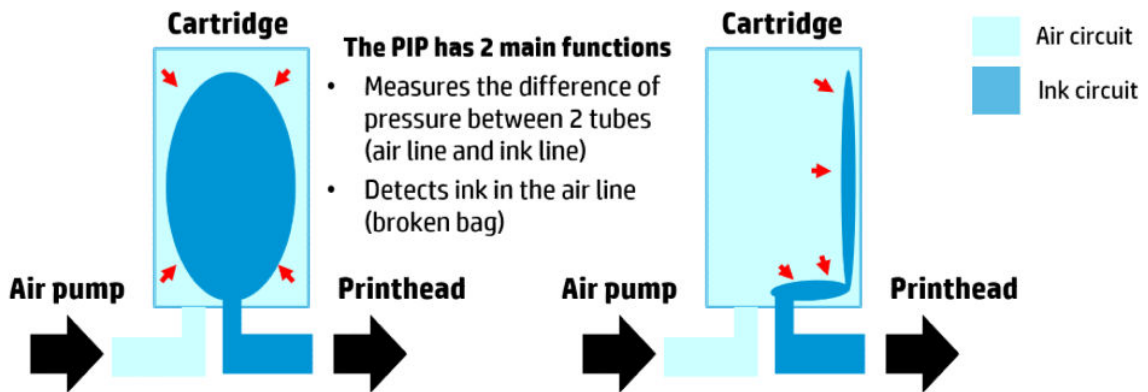
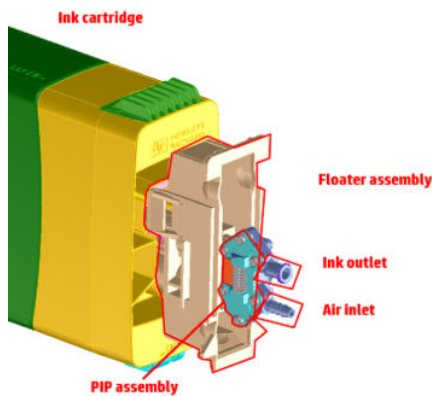
- Ink tubes from the bivalve to the printhead
- Enables the Z movement of the print bar while delivering ink
- Provides ink interconnection interface with the printhead
- Provides lockout interface with the printhead (ink family type, printhead colors)



- Modular system, modules attachable to each other and to the corner piece
- Enables compliance with the thermal expansion of the beam
- Provides ink connection with the printhead (septums)
- Provides the mechanical lockout system (ink family type, color)

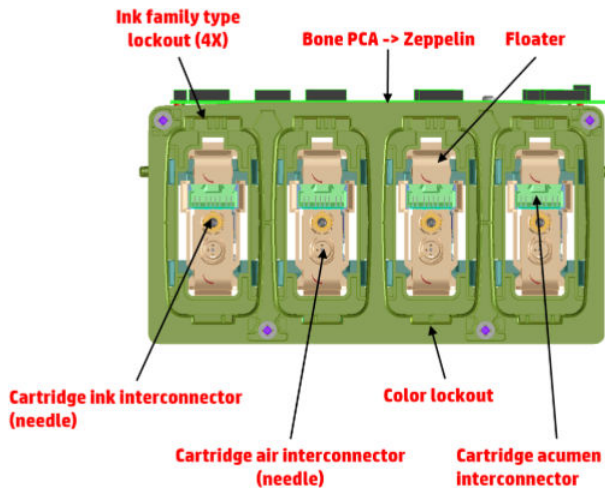
Empty cartridge detection

A pressure sensor (PIP) connected to the ink cartridge through the floater provides information about the amount of ink in the cartridge. It detects when the cartridge has run out of ink and triggers an automatic ink cartridge switch. It also detects ink in the airline (broken bag).



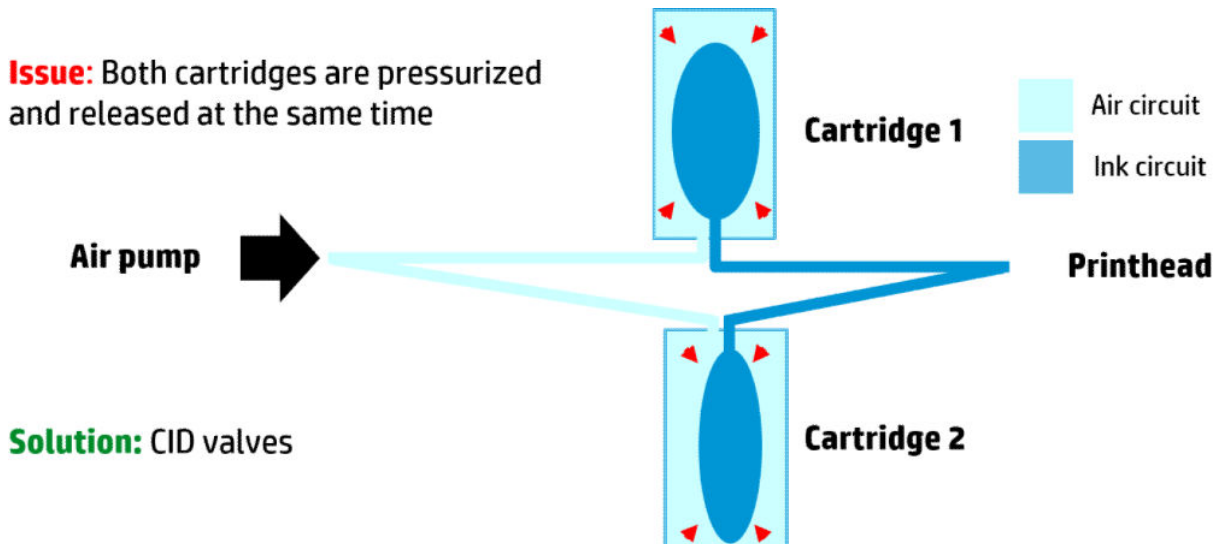
IMPORTANT: Each PIP is calibrated during manufacturing. If a PIP is replaced, the calibration values of the new PIP must be entered.

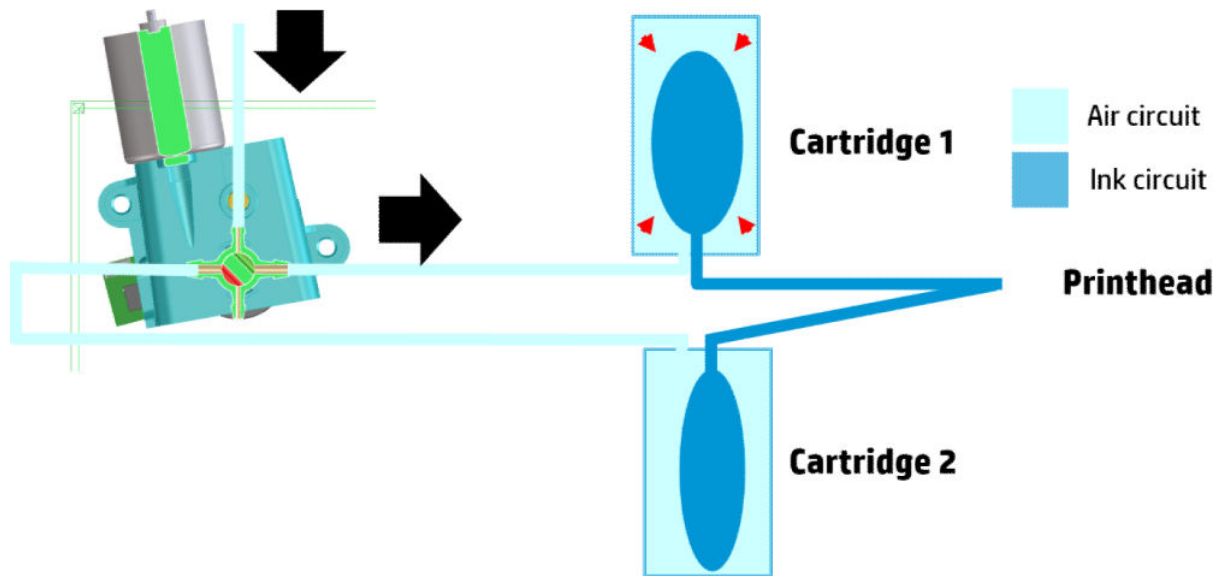
Backplate assembly



- Holds the floaters to provide the interface to the ink cartridges (Ink connection, air connection, presence, acumen)
- Provides the mechanical lockout system (ink family type, color)
- Holds the electrical PCBs (Zeppelin) for ILS, cartridge presence, acumen, and broken bag detection
- Holds bivalve check valves (top backplate only)

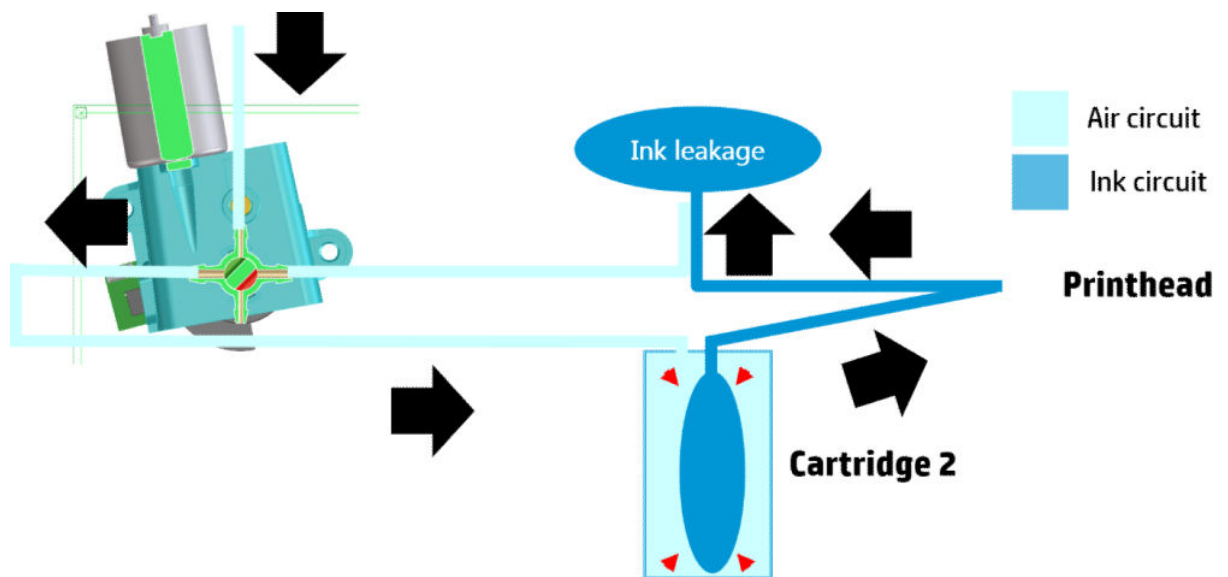
Changing cartridges while printing [5000 and 8000 series only]



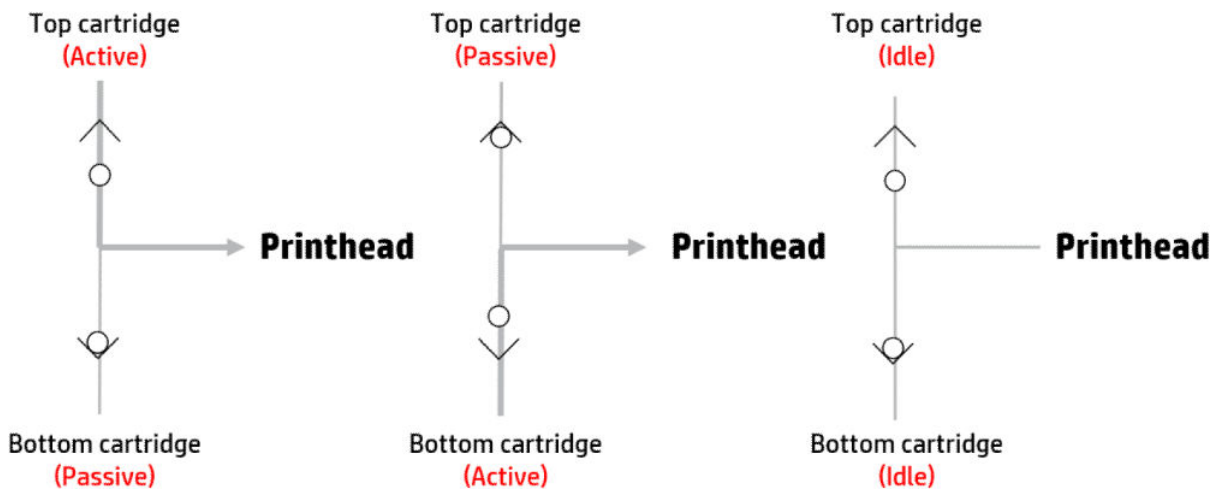
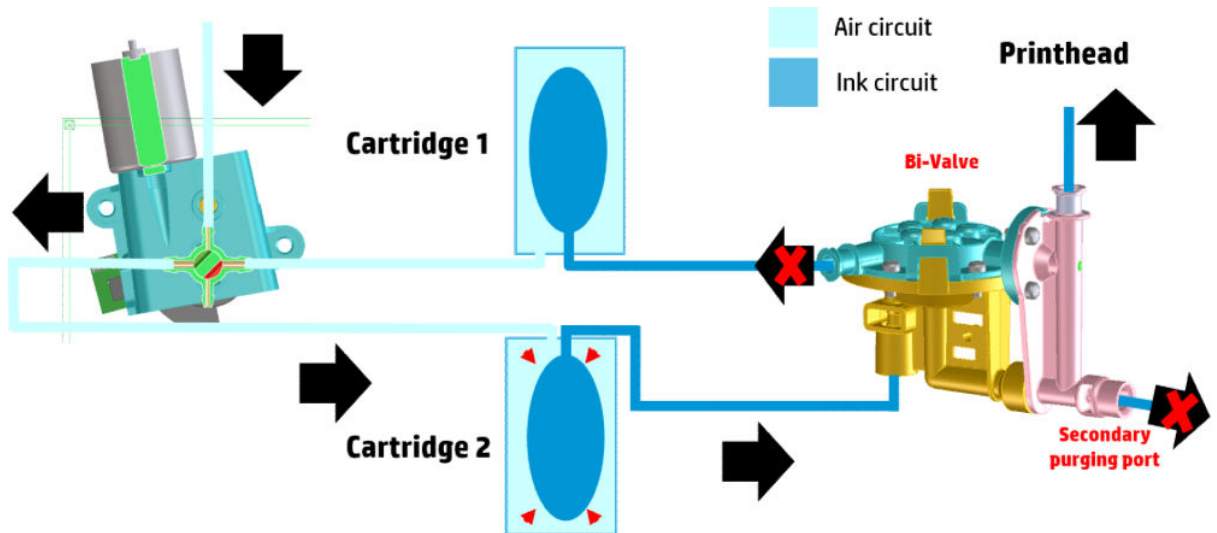


You can now remove the lower cartridge while printing from the upper cartridge.

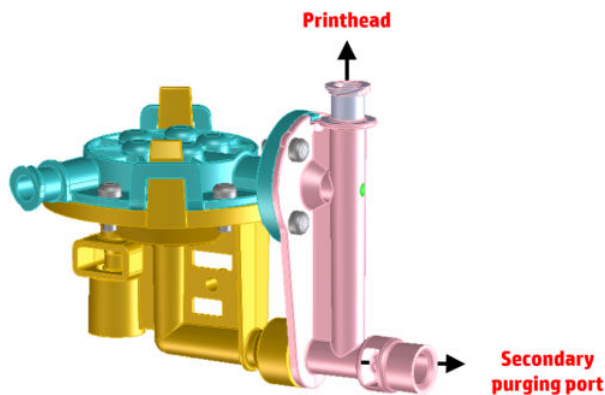
However, if you remove the upper cartridge, ink will leak from the rear of the cartridge support.



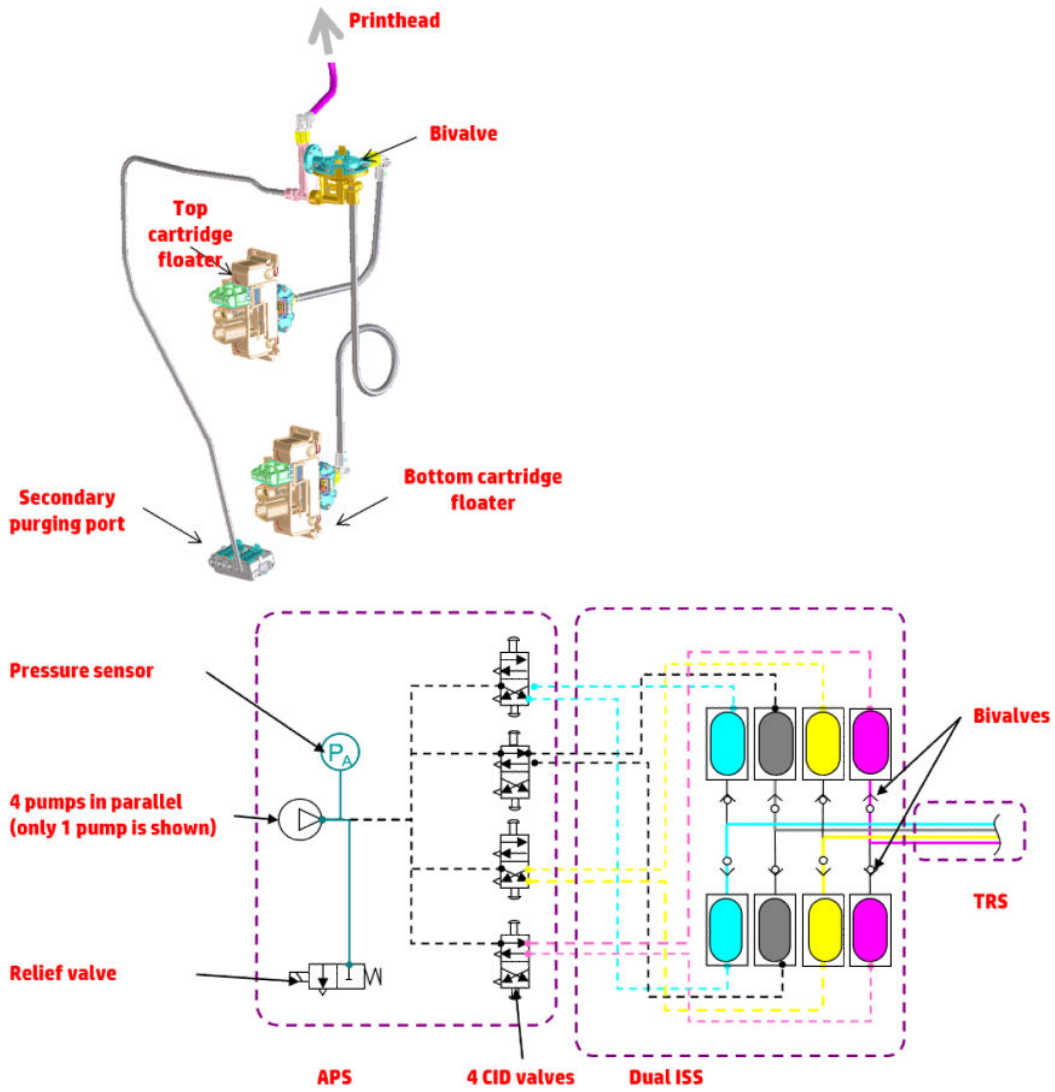
This problem has been solved by adding a bivalve to the system.



The secondary purging port is connected internally to the tube to the printhead, situated after the main internal component of the bivalve. It is used during initial setup, removing the air from the lower cartridge up to the bivalve.



The tube to the secondary purging port cannot be removed: it must remain permanently connected, otherwise there will be an ink leakage.



Cleaning container

The cleaning container is a replaceable part that collects waste ink in liquid form, with a capacity of about 2 liters.



The cleaning container is designed to keep the printer's waste ink from damaging the printer and dirtying its surroundings.

See the user guide for the replacement process.

Maintenance cartridge

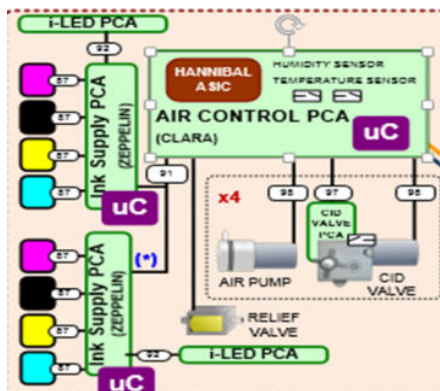
The maintenance cartridge cleans and maintains the printheads, and stores waste ink.

The maintenance cartridge contains a roll of cloth, which is used to clean the printheads. It has a total capacity of 500 wipes (cleaning operations). A heavy user will need to replace it about every 2 months.

The printer will refuse to start a print job if it detects the end of the cleaning roll. You should then replace the maintenance cartridge with a new one.

See the user guide for the replacement process.

Electronic diagram



NOTE: The 3900, 4000/4100 and 4500/4600 series have no CID valve, only one Ink Supply PCA, and only one i-LED PCA.

Parts that can be repaired


All parts of the ink delivery system can be repaired or replaced.

General information about the ink supplies

For optimum results from the printer and modular ink delivery system, always follow these guidelines when handling the ink supplies:

- Install the ink cartridges, printheads, and printhead maintenance cartridge before the warranty ends date, which is printed on the packaging. The expiration for the ink cartridges is the warranty-end date marked on the cartridge plus 6 months.
- Allow the printer and the printhead maintenance cartridge to clean the printheads automatically.
- Follow the instructions on the front panel of the printer during installation.
- Avoid unnecessary removal of the ink cartridges and printheads.
- When turning off the printer, always use the power-off button on the front panel. The printheads are then stored correctly, which prevents them from drying out.
- The ink cartridges should never be removed while the printer is printing. They should be removed only when the printer is ready for you to replace them. The front panel will guide you through the removal and installation procedure.

General precautions when handling ink supplies and printheads

 **CAUTION:** Do not touch, wipe, or attempt to clean the printhead nozzles manually. This can damage the printhead.

- You are recommended to wear gloves.
- Handle the ink supplies with care; in particular, the printhead, which is a high-precision device and must be handled carefully.
- Do not touch the printhead nozzles.
- Do not put the printhead down on the nozzles
- Do not be rough when handling the printheads. Always set them down gently.
- Do not drop the printheads.
- Proper handling will ensure optimum performance throughout the printhead's life.
- The printhead maintenance cartridge should always be handled and stored upright to avoid a potential spillage of ink.
- Do not touch the end of the ink cartridge which is inserted into the printer as there may be a small amount of ink on the connection.
- Avoid storing partially used ink cartridges on their ends.

Page and line accuracy

Page and line accuracy	Value	Adjustment
Page length accuracy ¹	±2 mm/m	Feed roller calibration, Line sensor calibration, Paper advance calibration
Image length accuracy ²	±1 mm/m	Image length calibration
Image registration – vertical ³	±2 mm/m	Feed roller calibration, Line sensor calibration, Paper advance calibration
Image registration – horizontal ⁴	±3 mm	Feed roller calibration, Line sensor calibration, Paper advance calibration
Image skew ⁵	±3 mm/m (shorter than 1 m) ±5 mm (longer than 1 m)	Media loop correction, Drawer skew adjustment

¹Measured on same roll used for calibration.

²Measured with HP Polypropylene media at 25°C and 50½ RH.

³Measured with top margin.

⁴Measured with HP Bond media at 25°C and 50½ RH.

⁵For roll width higher than 420 mm. Maximum ± 3mm for plots shorter than 1 meter. Maximum ±5 mm for plots longer than 1 meter.

Printer editions

Edition	Models
HE	PageWide XL 8000
LE	PageWide XL 5000, 5100, 6000
LE Enterprise	PageWide XL 4500, 4000, 4100, 4600, 3900

Printer specifications

Data sheet | HP PageWide XL 4000 Printer series

Technical specifications

General	Description	Large-format color MFP or printer	
	Technology	HP PageWide Technology	
	Applications	Line drawings, Maps, Orthophotos, Posters	
	Ink types	Pigment-based (cyan, magenta, yellow, black)	
	Ink cartridges	4 (1 x 400-ml per color)	
	Printheads	8 x HP 841 PageWide XL Printheads	
	Average printhead life	32 liters	
	Printhead warranty	10 liters or 12 months from installation	
	Print resolution	1200 x 1200 dpi	
	Minimum line width	0.0008 in (0.02 mm) (HP-GL/2 addressable)	
	Guaranteed minimum line width	0.0033 in (0.085 mm) (ISO/IEC 13660:2001(E)) ⁹	
	Line accuracy	+/- 0.1% ¹⁰	
	Print speed	Maximum print speed	15.65 ft/min (4.8 m/min) ¹¹
		A1/Arch D/ANSI D (long edge first)	8 pages/min
		Warm-up time	No warm up
First page out		30 sec (from Ready mode)	
Media	Media rolls	2 rolls default with auto-switching, expandable to 4 rolls	
	Roll width	11 to 40 in (279 to 1016 mm)	
	Roll length	Up to 650 ft (200 m)	
	Roll diameter	Up to 7 in (177 mm)	
	Roll core diameter	3 in (7.6 cm)	
	Printable width	Up to 39.4 in (1000 mm)	
	Printable length	Up to 295 ft (90 m) for CAD and 98 ft (30 m) for poster ¹²	
	Media weight	19 to 53 lb (70 to 200 g/m ²)	
	Media thickness	15.7 mil (0.4 mm)	
	Media types	Bond and recycled papers, poster papers, polypropylene, tyvek papers, matte film	
	Media output (standard)	Top stacker	
	Scanner¹³	Description	36-in (91-cm) CIS scanner
Speed		Color: up to 3 in/sec (7.62 cm/sec) Grayscale: up to 10 in/sec (25.4 cm/sec)	
Optical resolution		1200 dpi	
Scan width		Up to 36 in (914 mm)	
Original thickness		Up to 0.01 in (0.26 mm)	
Maximum copy length		374.5 in (9512 mm)	
Maximum scan length		708.7 in (18,000 mm) (TIFF, 24-in (610-mm) wide original at 200 dpi), 315 in (8000 mm) (JPEG), 196.9 in (5000 mm) (PDF)	
Scan format		Standard: JPEG, TIFF Optional: PDF 1.4, multi-page PDF 1.4 (with PS/PDF upgrade)	
Scan features		Preview with cropping, scan quicksets, batch scanning	
Scan destination		USB, network folder (SMB), scan to email and to HP SmartStream software	
Embedded controller	Processor	Intel Core i3	
	Memory	8 GB DDR3	
	Hard drive	1x 500 GB HDD, self-encrypted with AES-256	
	Print languages (standard)	HP-GL/2, PCL 3 Win Adobe PostScript 3, Adobe PDF 1.7, TIFF, JPEG (with PS/PDF upgrade) ¹⁴	
	Remote management	HP Partner Link, HP Embedded Web Server, HP Web Jetadmin	
	Connectivity	Interfaces	TCP/IP, BootP/DHCP, USB 2.0 host (certified)
Printing paths		HP SmartStream software (optional) HP Universal Print Driver (HP-GL/2 and PS) HP PageWide XL print drivers (PDF, HP-GL/2, and PS)	
User interface	8-inch capacitive touchscreen		

- ⁹ Based on third-party testing conducted in 2014 and 2015, no ozone was detected.
- ¹⁰ Special ventilation equipment (air filtration) is not required to meet U.S. OSHA requirements. Special ventilation equipment installation is at the discretion of the customer. The need for special ventilation is not anticipated. In case of doubt, customers should consult state and local requirements and regulations.
- ¹¹ EPEAT registered where applicable and/or supported. See epeat.net for registration status and rating by country.
- ¹² Measured on HP Universal Bond Paper.
- ¹³ +/-0.1% of the specified vector length or +/-0.2 mm (whichever greater) at 23°C (73°F), 50-60% relative humidity, on A0/E printing material in Best or Normal mode with HP Matte Polypropylene and Original HP inks.
- ¹⁴ Measured using 36-in (91-cm) print width.
- ¹⁵ For longer plots (up to 656 ft (200 m)), image quality might be affected.
- ¹⁶ Scanning functionality available with the HP PageWide XL 4000 Multifunction Printer only.
- ¹⁷ Adobe PostScript 3, Adobe PDF 1.7, TIFF, JPEG (with PS/PDF upgrade) are optional print languages for the HP PageWide XL 4000 Printer.
- ¹⁸ HP PageWide XL PostScript/PDF Upgrade Kit is standard for the HP PageWide XL 4000 Multifunction Printer.
- ¹⁹ BMG trademark license code FSC®-C115319, see fsc.org, HP trademark license code FSC®-C017543, see fsc.org. Not all FSC®-certified products are available in all regions. For information about HP large format printing materials, please visit HPLMedia.com.
- ²⁰ Can be recycled through commonly available recycling programs.
- ²¹ Program availability varies. Please check hp.com/recycle for details.

Dimensions (w x d x h)	Printer	77.2 x 31.5 x 51.3 in (1960 x 800 x 1303 mm)
	MFP	77.2 x 34 x 51.3 in (1960 x 864 x 1303 mm) Depth: 31.5 + 2.5 in removable scanner input tray to pass through doorways (800 + 64 mm)
	Shipping	86.8 x 42.1 x 69.5 in (2180 x 1068 x 1764 mm)
Weight printer	Printer	915 lb (415 kg)
	Shipping	1149 lb (521 kg)
Weight MFP	Printer	948 lb (430 kg)
	Shipping	1204 lb (546 kg)
Environmental	Operating temperature	5 to 40°C (41 to 104°F)
	Recommended temperature	15 to 35°C (59 to 95°F)
	Operating humidity	20 to 80% RH, depending on media type
Power	Requirements	Input voltage (auto ranging) 100 to 127 / 200 to 240 VAC (+/- 10%), 50/60 Hz (+/- 3 Hz), 7/3.5 A
	Consumption	0.4 kW (typical); 1.2 kW (max printing); 108.4 watts (ready); < 1 watts (< 4.6 watts with embedded Digital Front End) (sleep)
Certification	Safety	IEC 60950-1+A1+A2 compliant; USA and Canada (CSA listed); EU (LVD and EN 60950-1 compliant); Russia, Belarus, and Kazakhstan (EAC)
	Electromagnetic	Compliant with Class A requirements, including: USA (FCC rules), Canada (ICES), EU (EMC Directive), Australia and New Zealand (RCM), Japan (VCCI), Korea (KC)
	Environmental	ENERGY STAR, EPEAT Silver, CE marking (including RoHS, WEEE, REACH). In compliance with WW RoHS materials restriction requirements in China, Korea, India, Vietnam, Turkey, Serbia, and Ukraine
Warranty	90 days	

Ordering information

Product	MOV02A	HP PageWide XL 4000 40-in Multifunction Printer with PostScript/PDF	
	MOV01A	HP PageWide XL 4000 40-in Printer	
Accessories	G6H50B	HP SD Pro 44-in Scanner	
	G6H51B	HP HD Pro 42-in Scanner	
	CZ317A	HP PageWide XL PostScript/PDF Upgrade Kit ¹⁵	
	CZ318A	HP PageWide XL Drawer	
	L3J69AAE	HP SmartStream Preflight Manager	
	L3J76AAE	HP SmartStream Print Controller for HP PageWide XL 4000/4500	
Original HP PageWide XL printheads and consumables	C1Q19A	HP 841 PageWide XL Printhead	
	F9J47A	HP 841 PageWide XL Cleaning Container	
	F9J48A	HP 841 PageWide XL Maintenance Cartridge	
	C1Q57A	HP 843A 400-ml Black PageWide XL Ink Cartridge	
	C1Q58A	HP 843A 400-ml Cyan PageWide XL Ink Cartridge	
	C1Q59A	HP 843A 400-ml Magenta PageWide XL Ink Cartridge	
Original HP PageWide XL ink cartridges	C1Q60A	HP 843A 400-ml Yellow PageWide XL Ink Cartridge	
	Original HP large format printing materials	L4L08A	HP Universal Bond Paper, 3-in Core (FSC® certified) ¹⁶ ♻️
		L5P98A	HP Production Matte Poster Paper, 3-in Core (FSC® certified) ¹⁶ ♻️
	L5Q03A	HP Production Satin Poster Paper, 3-in Core (FSC® certified) ¹⁶ ♻️	
	L5C80A	HP Universal Heavyweight Coated Paper, 3-in Core (FSC® certified) ¹⁶ ♻️	
	L6B19A	HP Matte Polypropylene, 3-in Core 40 in x 150 ft (1016 mm x 45.7 m)	

Enjoy best-in-class support services, knowing HP works with HP PageWide XL Channel Partners to enable them to be properly trained, certified, and equipped to meet your needs. With efficient support and innovative support features, such as printer self-monitoring, predefined resolution paths, and intuitive maintenance wizards, you can work with confidence every day. For more information, please visit hp.com/pagewidecustomerservice.

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Find the media solution that fits your business and your HP PageWide XL printer at hp.com/go/mediasolutionslocator

Eco Highlights

- Save paper with automatic print settings and image nesting
- ENERGY STAR® certified and EPEAT Silver registered²⁰
- Free, convenient HP ink cartridge recycling²¹
- FSC®-certified papers,¹⁸ range of recyclable HP media¹⁹



Please recycle large-format printing hardware and printing supplies.

Find out how at our website hp.com/ecosolutions



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4AA5-9224ENA, May 2016, Rev.5



Data sheet | HP PageWide XL 4100 Printer series

Technical specifications

General	Description	Large-format color MFP or printer	
	Technology	HP PageWide Technology	
	Applications	Line drawings, Maps, Orthophotos, Posters	
	Ink types	Pigment-based (cyan, magenta, yellow, black)	
	Ink cartridges	4 (1 x 400-ml per color)	
	Printheads	8 x HP B41 PageWide XL Printheads	
	Average printhead life	32 liters	
	Printhead warranty	10 liters or 12 months from installation	
	Print resolution	1200 x 1200 dpi	
	Minimum line width	0.02 mm (0.0008 in) (HP-GL/2 addressable)	
	Guaranteed minimum line width	0.0033 in (0.085 mm) (ISO/IEC 13660:2001(E)) ⁷	
	Line accuracy	±0.1% ⁸	
	Print speed	A1/Arch D/ANSI D (long edge first)	10 pages/min (15 pages/min with optional speed upgrade)
		Warm-up time	No warm up
		First page out	30 sec (from Ready mode)
Media	Media rolls	2 rolls default with auto-switching, expandable to 4 rolls	
	Roll width	11 to 40 in (279 to 1016 mm)	
	Roll length	Up to 650 ft (200 m)	
	Roll diameter	Up to 7 in (177 mm)	
	Roll core diameter	3 in (7.6 cm)	
	Media weight	19 to 53 lb (70 to 200 g/m ²)	
	Media thickness	Up to 15.7 mil (0.4 mm)	
	Media types	Bond and recycled papers, poster papers, polypropylene, Tyvek® papers, matte film	
	Media output (standard)	Standard: Top stacker Optional: High Capacity Stacker, online folder (only compatible in conjunction with the optional HP PageWide XL 4x00 Accessory Upgrade Kit)	
	Scanner⁹	Description	36-in (91-cm) CIS scanner
Speed		Color: up to 3 in/sec (7.62 cm/sec) Grayscale: up to 10 in/sec (25.4 cm/sec)	
Optical resolution		1200 dpi	
Scan width		Up to 36 in (914 mm)	
Original thickness		Up to 0.01 in (0.26 mm)	
Maximum copy length		374.5 in (9512 mm)	
Maximum scan length		708.7 in (18 m) (TIFF, 24-in (610-mm) wide original at 200 dpi), 315 in (8 m) (JPEG), 196.9 in (5 m) (PDF)	
Scan format		Standard: JPEG, TIFF Optional: PDF 1.7, multipage PDF 1.7, PDF/A 1.4 (with PS/PDF upgrade)	
Scan features		Preview with cropping, scan quicksets, batch scanning	
Scan destination		USB, network folder (SMB), scan to email and to HP SmartStream software, scan to FTP	
Embedded controller	Processor	Intel Core i3	
	Memory	8 GB DDR3	
	Hard drive	1 x 500 GB HDD, self-encrypted with AES-256	
	Print languages (standard)	HP-GL/2 Adobe PostScript 3, Adobe PDF 1.7, TIFF, JPEG (with PS/PDF upgrade)	
	Remote management	HP Partner Link, HP Embedded Web Server, HP Web Jetadmin	
Connectivity	Interfaces	TCP/IP, BootP/DHCP, USB 2.0 host (certified)	
	Printing paths	HP SmartStream software (optional) HP Click printing software ¹⁰ HP Universal Print Driver (HP-GL/2 and PS) HP PageWide XL print drivers (PDF, HP-GL/2, and PS)	
User interface	8-inch (203-mm) capacitive touchscreen		
Dimensions (w x d x h)	Printer	77.2 x 31.5 x 51.3 in (1960 x 800 x 1303 mm)	
	MFP	77.2 x 34 x 51.3 in (1960 x 864 x 1303 mm) ¹⁰	
	Shipping	86.8 x 42.1 x 69.5 in (2180 x 1068 x 1764 mm)	
Weight printer	Printer	915 lb (415 kg)	
	Shipping	1149 lb (521 kg)	
Weight MFP	MFP	948 lb (430 kg)	
	Shipping	1204 lb (546 kg)	

⁷ Measured on HP Universal Bond Paper.

⁸ ±0.1% of the specified vector length or ±0.2 mm (whichever greater) at 73°F (23°C), 50-60% relative humidity, on A0/E printing material in Best or Normal mode with HP Matte Polypropylene and HP PageWide XL pigment ink.

⁹ For longer plots (up to 656 ft (200 m)), image quality might be affected.

¹⁰ Depth: 31.5 + 2.5-in (800 + 64-mm) removable scanner input tray to pass through doorways.

¹¹ BMG trademark license code FSC®-C115319, see fsc.org. HP trademark license code FSC®-C017543, see fsc.org. Not all FSC®-certified products are available in all regions. For information about HP large format printing materials, please visit HPLMedia.com.

¹² Can be recycled through commonly available recycling programs.

¹³ ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency.

¹⁴ EPEAT® registered where applicable. EPEAT registration varies by country. See epeat.net for registration status by country.

¹⁵ Program availability varies. Please check hp.com/recycle for details.

¹⁶ BMG trademark license code FSC®-C115319, see fsc.org. HP trademark license code FSC®-C017543, see fsc.org. Not all FSC®-certified products are available in all regions. For information about HP large format printing materials, please visit HPLMedia.com.

¹⁷ Recyclable HP papers can be recycled through commonly available recycling programs, or according to region-specific practices. Some HP media are eligible for return through the HP Large Format Media take-back program. Recycling programs may not exist in your area. See HPLMedia.com/hp/ecosolutions for details.



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4AA7-3803ENA, NOVEMBER 2018



Environmental	Operating temperature	41 to 104°F (5 to 40°C)
	Operating humidity	20 to 80% RH, depending on media type
Acoustic	Sound pressure	≤58 dB(A) (printing), ≤35 dB(A) (ready), ≤16 dB(A) (sleep)
	Sound power	≤7.6 B(A) (printing), ≤5.2 B(A) (ready), ≤4.2 B(A) (sleep)
Power	Requirements	Input voltage (auto ranging) 100-127 / 200-240 V (±10%), 50/60 Hz (±3 Hz), 7/3.5 A
	Consumption	0.4 kW (typical); 0.7 kW (max printing); 108.4 watts (ready); < 1 watts (< 4.6 watts with embedded Digital Front End) (sleep)
Certification	Safety	IEC 60950-1+A1+A2 compliant; USA and Canada (CSA listed); EU (LVD and EN 60950-1 compliant); Russia, Belarus, and Kazakhstan (EAC)
	Electromagnetic	Compliant with Class A requirements, including: USA (FCC rules), Canada (ICES), EU (EMC Directive), Australia and New Zealand (RCM), Japan (VCCI), Korea (KC)
	Environmental	ENERGY STAR, EPEAT Silver, CE marking (including RoHS, WEEE, REACH); in compliance with WW RoHS materials restriction requirements in China, Korea, India, Vietnam, Turkey, Serbia, and Ukraine
Warranty	M0C02A, MOV01A	90 days
	MOV02H	3 years

Dynamic security enabled printer. Only intended to be used with cartridges using an HP original chip. cartridges using a non-HP chip may not work, and those that work today may not work in the future. More at: hp.com/go/learnaboutsupplies

Ordering information

Product	J2V01A	HP PageWide XL 4100 40-in Printer with Top Stacker	
	J2V02A	HP PageWide XL 4100 40-in Multifunction Printer with Top Stacker	
Accessories	G6H50B	HP SD Pro 44-in Scanner	
	G6H51B	HP HD Pro 42-in Scanner	
	CZ317A	HP PageWide XL PostScript/PDF Upgrade Kit	
	K5H73A	HP PageWide XL 4100 Speed Upgrade Kit	
	CZ318A	HP PageWide XL Drawer	
	2NH46AAE	HP SmartStream Document Organizer Module	
	2NH47AAE	HP SmartStream Pixel Analysis Module	
	L3J69AAE	HP SmartStream Preflight Manager	
	L3J71AAE	HP SmartStream Preflight Manager One-Year Subscription	
	L3J76AAE	HP SmartStream Print Controller for HP PageWide XL 4x00 Printer series	
	ZB18AAE	HP SmartTracker for HP PageWide XL 4x00 Printer	
	ZB181A	HP SmartTracker USB for HP PageWide XL 4x00 Series	
	ZUE10A	HP Click USB for HP PageWide XL 4x00 Series	
	Original HP PageWide XL printheads and consumables	C1Q19A	HP B41 PageWide XL Printhead
		F9J47A	HP B41 PageWide XL Cleaning Container
F9J48A		HP B41 PageWide XL Maintenance Cartridge	
C1Q57A		HP B43A 400-ml Black PageWide XL Ink Cartridge	
C1Q58A		HP B43A 400-ml Cyan PageWide XL Ink Cartridge	
C1Q59A		HP B43A 400-ml Magenta PageWide XL Ink Cartridge	
C1Q60A		HP B43A 400-ml Yellow PageWide XL Ink Cartridge	
Original HP large format printing materials		L4L08A	HP Universal Bond Paper, 3-in Core (FSC® certified) ¹¹ 36 in x 500 ft (914 mm x 152.4 m)
		L5P98A	HP Production Matte Poster Paper, 3-in Core (FSC® certified) ¹¹ 40 in x 300 ft (1016 mm x 91.4 m)
		L5Q03A	HP Production Satin Poster Paper, 3-in Core (FSC® certified) ¹¹ 40 in x 300 ft (1016 mm x 91.4 m)
	L5C80A	HP Universal Heavyweight Coated Paper, 3-in Core (FSC® certified) ¹¹ 36 in x 300 ft (914 mm x 91.4 m)	
	L6B19A	HP Matte Polypropylene, 3-in Core 40 in x 150 ft (1016 mm x 45.7 m)	

Enjoy best-in-class support services, knowing HP works with HP PageWide XL Channel Partners to enable them to be properly trained, certified, and equipped to meet your needs. With efficient support and innovative support features, such as printer self-monitoring, predefined resolution paths, and intuitive maintenance wizards, you can work with confidence every day. For more information, please visit hp.com/go/pagewidexservice.

HP Financial Services can help you acquire an HP PageWide XL printing solution and accelerate the benefits to your business. Our solutions can help you increase your flexibility by preserving cash, freeing up budgets with a monthly payment structure, and offering an easy option to upgrade to the latest model when your business is ready. For more information, please visit the Programs and Promotions section at hp.com/hpfinancialservices.

Find the media solution that fits your business and your HP PageWide XL printer at hp.com/go/mediasolutionslocator.

Eco Highlights

- Save paper with automatic print settings and image nesting
- ENERGY STAR® certified¹³ and EPEAT® Silver registered¹⁴
- Free, convenient HP ink cartridge recycling¹⁵
- FSC®-certified papers¹⁶, recyclable HP media; some HP media eligible for take-back program¹⁷



Please recycle large-format printing hardware and printing supplies.

Find out how at our website hp.com/ecosolutions

Data sheet | HP PageWide XL 4500 Printer series

Technical specifications

General	Description	Large-format color MFP or printer
	Technology	HP PageWide Technology
	Applications	Line drawings, Maps, Orthophotos, Posters
	Ink types	Pigment-based (cyan, magenta, yellow, black)
	Ink cartridges	4 (1 x 400-ml per color)
	Printheads	8 x HP 841 PageWide XL Printheads
	Average printhead life	32 liters
	Printhead warranty	10 liters or 12 months from installation
	Print resolution	1200 x 1200 dpi
	Minimum line width	0.0008 in (0.02 mm) (HP-GL/2 addressable)
	Guaranteed minimum line width	0.0033 in (0.085 mm) (ISO/IEC 13660:2001(E)) ⁶
	Line accuracy	+/- 0.1% ¹⁰
Print speed	Maximum print speed	23.8 ft/min (7.3 m/min) ¹¹
	A1/Arch D/ANSI D (long edge first)	12 pages/min
	Warm-up time	No warm up
	First page out	30 sec (from Ready mode)
Media	Media rolls	2 rolls default with auto-switching, expandable to 4 rolls
	Roll width	11 to 40 in (279 to 1016 mm)
	Roll length	Up to 650 ft (200 m)
	Roll diameter	Up to 7 in (177 mm)
	Roll core diameter	3 in (7.6 cm)
	Printable width	Up to 39.4 in (1000 mm)
	Printable length	Up to 295 ft (90 m) for CAD and 98 ft (30 m) for poster ¹²
	Media weight	19 to 53 lb (70 to 200 g/m ²)
	Media thickness	Up to 15.7 mil (0.4 mm)
	Media types	Bond and recycled papers, poster papers, polypropylene, tyvek papers, matte film
	Media output (standard)	Top stacker
Scanner¹³	Description	36-in (91-cm) CIS scanner
	Speed	Color: up to 3 in/sec (7.62 cm/sec) Grayscale: up to 10 in/sec (25.4 cm/sec)
	Optical resolution	1200 dpi
	Scan width	Up to 36 in (914 mm)
	Original thickness	Up to 0.01 in (0.26 mm)
	Maximum copy length	374.5 in (9512 mm)
	Maximum scan length	708.7 in (18,000 mm) (TIFF, 24-in (610-mm) wide original at 200 dpi), 315 in (8000 mm) (JPEG), 196.9 in (5000 mm) (PDF)
	Scan format	Standard: JPEG, TIFF Optional: PDF 1.4, multi-page PDF 1.4 (with PS/PDF upgrade)
	Scan features	Preview with cropping, scan quicksets, batch scanning
	Scan destination	USB, network folder (SMB), scan to email and to HP SmartStream software
Embedded controller	Processor	Intel Core i3
	Memory	8 GB DDR3
	Hard drive	1x 500 GB HDD, self-encrypted with AES-256
	Print languages (standard)	HP-GL/2, PCL 3 Win Adobe PostScript 3, Adobe PDF 1.7, TIFF, JPEG (with PS/PDF upgrade) ¹⁴
	Remote management	HP Partner Link, HP Embedded Web Server, HP Web Jetadmin
Connectivity	Interfaces	TCP/IP, BootP/DHCP, USB 2.0 host (certified)
	Printing paths	HP SmartStream software (optional) HP Universal Print Driver (HP-GL/2 and PS) HP PageWide XL print drivers (PDF, HP-GL/2, and PS)

⁶ Based on third-party testing conducted in 2014 and 2015, no ozone was detected.
⁷ Special ventilation equipment (air filtration) is not required to meet U.S. OSHA requirements. Special ventilation equipment installation is at the discretion of the customer. The need for special ventilation is not anticipated. In case of doubt, customers should consult state and local requirements and regulations.
⁸ EPEAT registered where applicable and/or supported. See epeat.net for registration status and rating by country.
⁹ Measured on HP Universal Bond Paper.
¹⁰ +/- 0.1% of the specified vector length or +/- 0.2 mm (whichever greater) at 23°C (73°F), 50-60% relative humidity, on A0/E printing material in Best or Normal mode with HP Matte Polypropylene and Original HP inks.
¹¹ Measured using 36-in (91-cm) print width.
¹² For longer plots up to 656 ft (200 m), image quality might be affected.
¹³ Scanning functionality available with the HP PageWide XL 4500 Multifunction Printer only.
¹⁴ Adobe PostScript 3, Adobe PDF 1.7, TIFF, JPEG (with PS/PDF upgrade) are optional print languages for the HP PageWide XL 4500 Printer.
¹⁵ HP PageWide XL PostScript/PDF Upgrade Kit is standard for the HP PageWide XL 4500 Multifunction Printer.
¹⁶ BMG trademark license code FSC®-C115319, see fsc.org. HP trademark license code FSC®-C017543, see fsc.org. Not all FSC®-certified products are available in all regions. For information about HP large format printing materials, please visit HPLMedia.com.
¹⁷ Can be recycled through commonly available recycling programs.
¹⁸ Program availability varies. Please check hp.com/recycle for details.

User interface	8-inch capacitive touchscreen
Dimensions (w x d x h)	Printer 77.2 x 31.5 x 51.3 in (1960 x 800 x 1303 mm) MFP 77.2 x 34 x 51.3 in (1960 x 864 x 1303 mm) Depth: 31.5 + 2.5 in removable scanner input tray to pass through doorways (800 + 64 mm) Shipping 86.8 x 42.1 x 69.5 in (2180 x 1068 x 1764 mm)
Weight printer	Printer 915 lb (415 kg) Shipping 1149 lb (521 kg)
Weight MFP	Printer 948 lb (430 kg) Shipping 1204 lb (546 kg)
Environmental	Operating temperature 5 to 40°C (41 to 104°F) Recommended temperature 15 to 35°C (59 to 95°F) Operating humidity 20 to 80% RH, depending on media type
Power	Requirements Input voltage (auto ranging) 100 to 127 / 200 to 240 VAC (+/- 10%), 50/60 Hz (+/- 3 Hz), 7/3.5 A Consumption 0.4 kW (typical), 1.2 kW (max printing), 108.4 watts (ready); < 1 watt (e.g. 4.6 watts with embedded Digital Front End) (sleep)
Certification	Safety IEC 60950-1+A1+A2 compliant; USA and Canada (CSA listed); EU (LVD and EN 60950-1 compliant); Russia, Belarus, and Kazakhstan (EAC) Electromagnetic Compliant with Class A requirements, including: USA (FCC rules), Canada (CES), EU (EMC Directive), Australia and New Zealand (RCM), Japan (VCCI), Korea (KC) Environmental ENERGY STAR, EPEAT Silver, CE marking (including RoHS, WEEE, REACH). In compliance with WW RoHS materials restriction requirements in China, Korea, India, Vietnam, Turkey, Serbia, and Ukraine
Warranty	90 days

Ordering information

Product	CZ312A HP PageWide XL 4500 40-in Multifunction Printer with PostScript/PDF
	CZ313A HP PageWide XL 4500 40-in Printer
	CZ312C HP PageWide XL 4500 40-in Multifunction Printer 3-year warranty with PostScript/PDF
	CZ313C HP PageWide XL 4500 40-in Printer 3-year warranty
Accessories	G6H50B HP SD Pro 44-in Scanner G6H51B HP HD Pro 42-in Scanner CZ317A HP PageWide XL PostScript/PDF Upgrade Kit ¹⁵ CZ318A HP PageWide XL Drawer L3J69AAE HP SmartStream Preflight Manager L3J76AAE HP SmartStream Print Controller for HP PageWide XL 4000/4500
Original HP PageWide XL printheads and consumables	C1Q19A HP 841 PageWide XL Printhead F9J47A HP 841 PageWide XL Cleaning Container F9J48A HP 841 PageWide XL Maintenance Cartridge
Original HP PageWide XL ink cartridges	C1Q57A HP 843A 400-ml Black PageWide XL Ink Cartridge C1Q58A HP 843A 400-ml Cyan PageWide XL Ink Cartridge C1Q59A HP 843A 400-ml Magenta PageWide XL Ink Cartridge C1Q60A HP 843A 400-ml Yellow PageWide XL Ink Cartridge
Original HP large format printing materials	L4L08A HP Universal Bond Paper, 3-in Core (FSC® certified) ¹⁶ ♻️ 17 36 in x 500 ft (914 mm x 152.4 m) L5P98A HP Production Matte Poster Paper, 3-in Core (FSC® certified) ¹⁶ ♻️ 17 40 in x 300 ft (1016 mm x 91.4 m) L5Q03A HP Production Satin Poster Paper, 3-in Core (FSC® certified) ¹⁶ ♻️ 17 40 in x 300 ft (1016 mm x 91.4 m) L5C80A HP Universal Heavyweight Coated Paper, 3-in Core (FSC® certified) ¹⁶ ♻️ 17 36 in x 300 ft (914 mm x 91.4 m) L6B19A HP Matte Polypropylene, 3-in Core 40 in x 150 ft (1016 mm x 45.7 m)

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Find the media solution that fits your business and your HP PageWide XL printer at hp.com/go/mediasolutionslocator

Eco Highlights

- Save paper with automatic print settings and image nesting
- ENERGY STAR® certified and EPEAT Silver registered⁸
- Free, convenient HP ink cartridge recycling¹⁸
- FSC®-certified papers,¹⁶ range of recyclable HP media¹⁷




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4AA5-9226ENA, May 2016, Rev.5



Technical specifications

General	Description	Large-format color MFP or printer	
	Technology	HP PageWide Technology	
	Applications	Line drawings, Maps, Orthophotos, Posters	
	Ink types	Pigment-based (cyan, magenta, yellow, black)	
	Ink cartridges	4 (1 x 400-ml per color)	
	Printheads	8 x HP 841 PageWide XL Printheads	
	Average printhead life	32 liters	
	Printhead warranty	10 liters or 12 months from installation	
	Print resolution	1200 x 1200 dpi	
	Minimum line width	0.02 mm (0.0008 in) (HP-GL/2 addressable)	
	Guaranteed minimum line width	0.0033 in (0.085 mm) (ISO/IEC 13660:2001(E)) ⁷	
	Line accuracy	±0.1% ⁸	
	Print speed	A1/Arch D(ANSI D (long edge first))	15 pages/min
		Warm-up time	No warm up
First page out		30 sec (from Ready mode)	
Media	Media rolls	2 rolls default with auto-switching, expandable to 4 rolls	
	Roll width	11 to 40 in (279 to 1016 mm)	
	Roll length	Up to 650 ft (200 m)	
	Roll diameter	Up to 7 in (177 mm)	
	Roll core diameter	3 in (7.6 cm)	
	Media weight	19 to 53 lb (70 to 200 g/m ²)	
	Media thickness	Up to 15.7 mil (0.4 mm)	
	Media types	Bond and recycled papers, poster papers, polypropylene, Tyvek® papers, matte film	
	Media output (standard)	Standard: Top stacker Optional: High Capacity Stacker, online folder (only compatible in conjunction with the optional HP PageWide XL 4x00 Accessory Upgrade Kit)	
	Scanner⁹	Description	36-in (91-cm) CIS scanner
Speed		Color: up to 3 in/sec (7.62 cm/sec) Grayscale: up to 10 in/sec (25.4 cm/sec)	
Optical resolution		1200 dpi	
Scan width		Up to 36 in (914 mm)	
Original thickness		Up to 0.01 in (0.26 mm)	
Maximum copy length		374.5 in (9512 mm)	
Maximum scan length		708.7 in (18 m) (TIFF, 24-in (610-mm) wide original at 200 dpi), 315 in (8 m) (JPEG), 196.9 in (5 m) (PDF)	
Scan format		Standard: JPEG, TIFF Optional: PDF 1.7, multipage PDF 1.7, PDF/A 1.4 (with PS/PDF upgrade)	
Scan features		Preview with cropping, scan quicksets, batch scanning	
Scan destination		USB, network folder (SMB), scan to email and to HP SmartStream software, scan to FTP	
Embedded controller	Processor	Intel Core i3	
	Memory	8 GB DDR3	
	Hard drive	1 x 500 GB HDD, self-encrypted with AES-256	
	Print languages (standard)	HP-GL/2 Adobe PostScript 3, Adobe PDF 1.7, TIFF, JPEG (with PS/PDF upgrade)	
	Remote management	HP Partner Link, HP Embedded Web Server, HP Web Jetadmin	
Connectivity	Interfaces	TCP/IP, BootP/DHCP, USB 2.0 host (certified)	
	Printing paths	HP SmartStream software (optional) HP Click printing software ² HP Universal Print Driver (HP-GL/2 and PS) HP PageWide XL print drivers (PDF, HP-GL/2, and PS)	
User interface	8-inch (203-mm) capacitive touchscreen		
Dimensions (w x d x h)	Printer	77.2 x 31.5 x 51.3 in (1960 x 800 x 1303 mm)	
	MFP	77.2 x 34 x 51.3 in (1960 x 864 x 1303 mm) ¹⁰	
	Shipping	86.8 x 42.1 x 69.5 in (2180 x 1068 x 1764 mm)	
Weight printer	Printer	915 lb (415 kg)	
	Shipping	1149 lb (521 kg)	
Weight MFP	MFP	948 lb (430 kg)	
	Shipping	1204 lb (546 kg)	

⁷ Measured on HP Universal Bond Paper.
⁸ ±0.1% of the specified vector length or ±0.2 mm (whichever greater) at 73°F (23°C), 50-60% relative humidity, on A0/E printing material in Best or Normal mode with HP Matte Polypropylene and HP PageWide XL pigment ink.
⁹ For longer plots (up to 656 ft (200 m)), image quality might be affected.
¹⁰ Depth: 31.5 x 2.5-in (800 x 64-mm) removable scanner input tray to pass through doorways.
¹¹ BMG trademark license code FSC®-C115319, see fsc.org. HP trademark license code FSC®-C017543, see fsc.org. Not all FSC®-certified products are available in all regions. For information about HP large format printing materials, please visit HPLFMedia.com.
¹² Can be recycled through commonly available recycling programs.
¹³ ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency.
¹⁴ EPEAT® registered where applicable. EPEAT registration varies by country. See epeat.net for registration status by country.
¹⁵ Program availability varies. Please check hp.com/recycle for details.
¹⁶ BMG trademark license code FSC®-C115319, see fsc.org. HP trademark license code FSC®-C017543, see fsc.org. Not all FSC®-certified products are available in all regions. For information about HP large format printing materials, please visit HPLFMedia.com.
¹⁷ Recyclable HP papers can be recycled through commonly available recycling programs, or according to region-specific practices. Some HP media are eligible for return through the HP Large Format Media take-back program. Recycling programs may not exist in your area. See HPLFMedia.com/hp/ecosolutions for details.

Environmental	Operating temperature	41 to 104°F (5 to 40°C)
	Operating humidity	20 to 80% RH, depending on media type
Acoustic	Sound pressure	≤58 dB(A) (printing), ≤35 dB(A) (ready), ≤16 dB(A) (sleep)
	Sound power	≤7.6 B(A) (printing), ≤5.2 B(A) (ready), ≤4.2 B(A) (sleep)
Power	Requirements	Input voltage (auto ranging) 100-127 / 200-240 V (±10%), 50/60 Hz (±3 Hz), 7/3.5 A
	Consumption	0.4 kW (typical); 0.7 kW (max printing); 108.4 watts (ready); < 1 watts (< 4.6 watts with embedded Digital Front End) (sleep)
Certification	Safety	IEC 60950-1+A1+A2 compliant; USA and Canada (CSA listed); EU (LVD and EN 60950-1 compliant); Russia, Belarus, and Kazakhstan (EAC)
	Electromagnetic	Compliant with Class A requirements, including: USA (FCC rules), Canada (ICES), EU (EMC Directive), Australia and New Zealand (RCM), Japan (VCCI), Korea (KC)
	Environmental	ENERGY STAR, EPEAT Silver, CE marking (including RoHS, WEEE, REACH); in compliance with WW RoHS materials restriction requirements in China, Korea, India, Vietnam, Turkey, Serbia, and Ukraine
Warranty	CZ312A, CZ313A	90 days
	CZ312H, CZ313H	3 years

Dynamic security enabled printer. Only intended to be used with cartridges using an HP original chip. artridges using a non-HP chip may not work, and those that work today may not work in the future. More at: hp.com/go/learnaboutsupplies

Ordering information

Product	RS312A	HP PageWide XL 4600 40-in Multifunction Printer with Top Stacker
	RS313A	HP PageWide XL 4600 40-in Printer with Top Stacker
Accessories	G6H50B	HP SD Pro 44-in Scanner
	G6H51B	HP HD Pro 42-in Scanner
	CZ317A	HP PageWide XL PostScript/PDF Upgrade Kit
	CZ318A	HP PageWide XL Drawer
	2NH46AAE	HP SmartStream Document Organizer Module
	2NH47AAE	HP SmartStream Pixel Analysis Module
	L3J69AAE	HP SmartStream Preflight Manager
	L3J71AAE	HP SmartStream Preflight Manager One-Year Subscription
	L3J76AAE	HP SmartStream Print Controller for HP PageWide XL 4x00 Printer series
	Z8J18AAE	HP SmartTracker for HP PageWide XL 4x00 Printer
Original HP PageWide XL printheads and consumables	Z8J18A	HP SmartTracker USB for HP PageWide XL 4x00 Series
	2UE10A	HP Click USB for HP PageWide XL 4x00 Series
	C1Q19A	HP 841 PageWide XL Printhead
	F9J47A	HP 841 PageWide XL Cleaning Container
	F9J48A	HP 841 PageWide XL Maintenance Cartridge
	C1Q57A	HP 843A 400-ml Black PageWide XL Ink Cartridge
	C1Q58A	HP 843A 400-ml Cyan PageWide XL Ink Cartridge
	C1Q59A	HP 843A 400-ml Magenta PageWide XL Ink Cartridge
	C1Q60A	HP 843A 400-ml Yellow PageWide XL Ink Cartridge
	Original HP large format printing materials	L4L08A
L5P98A		HP Production Matte Poster Paper, 3-in Core (FSC® certified) ¹¹ ♻️ 12 40 in x 300 ft (1016 mm x 91.4 m)
L5Q03A		HP Production Satin Poster Paper, 3-in Core (FSC® certified) ¹¹ ♻️ 12 40 in x 300 ft (1016 mm x 91.4 m)
L5C80A		HP Universal Heavyweight Coated Paper, 3-in Core (FSC® certified) ¹¹ ♻️ 12 36 in x 300 ft (914 mm x 91.4 m)
L6B19A		HP Matte Polypropylene, 3-in Core 40 in x 150 ft (1016 mm x 45.7 m)

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Eco Highlights

- Save paper with automatic print settings and image nesting
- ENERGY STAR® certified¹¹ and EPEAT® Silver registered¹⁴
- Free, convenient HP ink cartridge recycling¹⁵
- FSC®-certified papers¹⁶, recyclable HP media; some HP media eligible for take-back program¹⁷

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4AA7-3B29ENA, November 2018



Data sheet | HP PageWide XL 5000 Printer series

Technical specifications

General	Description	Large-format color MFP or printer	
	Technology	HP PageWide Technology	
	Applications	Line drawings, Maps, Orthophotos, Posters	
	Ink types	Pigment-based (cyan, magenta, yellow, black)	
	Ink cartridges	8 (2x 400-ml per color) with auto-switch	
	Printheads	8x HP 841 PageWide XL Printheads	
	Average printhead life	32 liters	
	Printhead warranty	10 liters or 12 months from installation	
	Print resolution	1200 x 1200 dpi	
	Minimum line width	0.0008 in (0.02 mm) (HP-GL/2 addressable)	
	Guaranteed minimum line width	0.0033 in (0.085 mm) (ISO/IEC 13660:2001(E)) ¹¹	
	Line accuracy	+/- 0.1% ¹²	
	Print speed	Maximum print speed	27.8 ft/min (9 m/min)
		A1/Arch D/ANSI D (long edge first)	14 pages/min, ³ 600 pages/h
A0/Arch E/ANSI E (short edge first)		7 pages/min, 300 pages/h	
ISO B1 (long edge first)		10 pages/min, 500 pages/h	
Warm-up time		No warm up	
First page out		30 sec (from Ready mode)	
Media rolls		2 rolls default with auto-switching, expandable to 4 rolls	
Roll width		11 to 40 in (279 to 1016 mm)	
Roll length		Up to 650 ft (200 m)	
Roll diameter		Up to 7 in (177 mm)	
Media	Roll core diameter	3 in (7.6 cm)	
	Printable width	Up to 39.4 in (1000 mm)	
	Printable length ¹⁴	Up to 295 ft (90 m) for CAD and 98 ft (30 m) for poster	
	Media weight	19 to 53 lb (70 to 200 g/m ²)	
	Media thickness	Up to 15.7 mil (0.4 mm)	
	Media types	Bond and recycled papers, poster papers, polypropylene, tyvek, matte film	
	Media output (standard)	Basket	
	Media output (optional)	High-capacity stacker, online folder, ⁴ top stacker	
	High-capacity stacker	Maximum page size	40 x 48 in (102 x 122 cm) ¹⁵
		Capacity	Up to 500 pages
		Media weight	19 to 53 lb (70 to 200 g/m ²)
		Dimensions	55.6 x 49.1 x 42.6 in (101 x 125 x 108 cm)
		Weight	308 lb (140 kg)
		Online folder⁴	Page width
Page length			Cross fold: 8.2 ft (2.5 m) Fan fold: 19.7 ft (6 m) (standard), unlimited (optional with HP PageWide XL Folder Upgrade Kit for Long Plots)
Media weight for folding			20 to 24 lb (75 to 90 g/m ²)
Media weight for stacking			20 to 53 lb (75 to 200 g/m ²)
Capacity			Up to 150 (A0)
Dimensions	64 x 49 x 72.5 in (1626 x 1245 x 1842 mm) (1626 x 1245 x 2150 mm with Tab applicator (64 x 49 x 84.6 in))		
Weight	683 lb (310 kg), (772 lb (350 kg) with Tab applicator)		
Tab applicator	Available with HP PageWide XL Folder with Tab applicator only		
Scanner	Description		36-in (91-cm) CIS scanner
	Speed		Color: up to 3 in/sec (7.62 cm/sec) at 200 dpi Grayscale: up to 10 in/sec (25.4 cm/sec) at 200 dpi
	Optical resolution	1200 dpi	
	Scan width	Up to 36 in (91.4 mm)	
	Original thickness	Up to 0.01 in (0.26 mm)	
	Maximum copy length	374.48 in (9512 mm)	
	Maximum scan length	708.66 in (18000 mm) (TIFF, 24-in wide original at 200 dpi), 314.96 in (8000 mm) (JPEG), 196.85 in (5000 mm) (PDF)	
	Scan format (standard)	JPEG, TIFF, PDF 1.4, multi-page PDF 1.4	
	Scan features	Preview with cropping, scan quicksets, batch scanning	
	Embedded controller	Scan destination	USB, network folder (SMB), scan to email, scan to HP SmartStream software
Processor		Intel Core i3	
Memory		8 GB DDR3	
Hard drive		1x 500 GB HDD, self-encrypted with AES-256	
Print languages (standard)		HP-GL/2, PCL 3 Win, Adobe PostScript 3, Adobe PDF 1.7, TIFF, JPEG	
Remote management		HP Partner Link, HP Embedded Web Server, HP Web Jetadmin	
Connectivity		Interfaces	TC/PI, BootP/DHCP, USB 2.0 host (certified)
		Printing paths	HP SmartStream software (optional) HP Universal Print Driver (HP-GL/2 and PS) HP PageWide XL print drivers (PDF, HP-GL/2, and PS)
User interface		User interface	8-inch capacitive touchscreen
		Printer	77.2 x 31.5 x 51.3 in (1960 x 800 x 1303 mm)
Dimensions (w x d x h)	MFP	77.2 x 34 x 51.3 in (1960 x 864 x 1303 mm) Depth: 31.5 x 2.5 in removable scanner input tray to pass through door ways (800 x 64 mm)	
	Shipping	86.8 x 42.1 x 69.5 in (2180 x 1068 x 1764 mm)	

¹¹ Measured on HP Universal Bond Paper.
¹² +/- 0.1% of the specified vector length or +/- 0.2 mm (whichever greater) at 23°C (73°F), 50-60% relative humidity, on A0/E printing material in Best or Normal mode with HP Matte Polypropylene and Original HP inks.
¹³ Print speed while printing to the HP PageWide XL High-capacity Stacker. When printing to the top stacker, the maximum print speed is 12 pages/minute.
¹⁴ For longer plots (up to 656 ft), image quality might be affected.
¹⁵ Long plots with reduced capacity.
¹⁶ BMG trademark license code FSC®-C115319, see fsc.org. HP trademark license code FSC®-C017543, see fsc.org. Not all FSC®-certified products are available in all regions. For information about HP large format printing materials, please visit HPLMedia.com.

Weight	Printer	948 lb (430 kg)
	Shipping	1148 lb (521 kg)
Environmental	Operating temperature	41 to 104°F (5 to 40°C)
	Recommended temperature	59 to 95°F (15 to 35°C)
Acoustic	Operating humidity	20 to 80% RH, depending on media type
	Sound pressure	53 dB(A) (printing), 35 dB(A) (ready), <24 dB(A) (sleep)
	Sound power	7.1 B(A) (printing), 5.2 B(A) (ready), 4.2 B(A) (sleep)
Power	Consumption	0.46 kW (typical), 0.8 kW (max printing), 108.4 watts (ready), < 1 watts (< 4.6 watts with embedded Digital Front End) (sleep)
	Requirements	Input voltage (auto ranging) 100-127/200-240 ± 10% VAC, 50/60 ± 3 Hz, 10/5 A
Certification	Safety	IEC 60950-1+A1+A2 compliant; USA and Canada (CSA listed); EU (LVD and EN 60950-1 compliant); Russia, Belarus, and Kazakhstan (EAC)
	Electromagnetic	Compliant with Class A requirements, including: USA (FCC rules), Canada (ICES), EU (EMC Directive), Australia and New Zealand (RCM), Japan (VCCI), Korea (KC)
	Environmental	ENERGY STAR, EPEAT Silver, CE marking (including RoHS, WEEE, REACH). In compliance with WW RoHS materials restriction requirements in China, Korea, India, Vietnam, Turkey, Serbia, and Ukraine.
Warranty		90 days

Ordering information

Product	CZ310B	HP PageWide XL 5000 40-in Printer with High-capacity Stacker and PostScript/PDF
	CZ310C	HP PageWide XL 5000 40-in Printer with Top Stacker and PostScript/PDF
	CZ311B	HP PageWide XL 5000 40-in Multifunction Printer with High-capacity Stacker and PostScript/PDF
	CZ311C	HP PageWide XL 5000 40-in Multifunction Printer with Top Stacker and PostScript/PDF
Accessories	CZ318A	HP PageWide XL Drawer
	CZ319A	HP PageWide XL High-capacity Stacker
	CZ320A	HP PageWide XL Top Stacker
	6GH50B	HP SD Pro 44-in Scanner
	6GH51B	HP HD Pro 42-in Scanner
	K5H75A	HP PageWide XL Folder
	L3J69AAE	HP SmartStream Preflight Manager
	L3J74AAE	HP SmartStream Print Controller for HP PageWide XL 5000 Printer series
	L3M58A	HP PageWide XL Folder with Tab Applicator
	M0V04A	HP PageWide XL Folder Upgrade Kit for Long Plots
	C1Q19A	HP 841 PageWide XL Printhead
	F9J47A	HP 841 PageWide XL Cleaning Container
Original HP PageWide XL printheads and consumables	F9J48A	HP 841 PageWide XL Maintenance Cartridge
	F9J82A	HP 848A 400-ml Black PageWide XL Ink Cartridge
	F9J83A	HP 848A 400-ml Cyan PageWide XL Ink Cartridge
	F9J84A	HP 848A 400-ml Magenta PageWide XL Ink Cartridge
	F9J85A	HP 848A 400-ml Yellow PageWide XL Ink Cartridge
Original HP large format printing materials	L4L08A	HP Universal Bond Paper, 3-in Core (FSC® certified) ¹⁶ 36 in x 500 ft (914 mm x 152.4 m)
	L5P98A	HP Production Matte Poster Paper, 3-in Core (FSC® certified) ¹⁶ 40 in x 300 ft (1016 mm x 91.4 m)
	L5Q03A	HP Production Satin Poster Paper, 3-in Core (FSC® certified) ¹⁶ 40 in x 300 ft (1016 mm x 91.4 m)
	L5C80A	HP Universal Heavyweight Coated Paper, 3-in Core (FSC® certified) ¹⁶ 36 in x 300 ft (914 mm x 91.4 m)
	L6B19A	HP Matte Polypropylene, 3-in Core 40 in x 150 ft (1016 mm x 45.7 m)

Enjoy best-in-class support services, knowing HP works with HP PageWide XL Channel Partners to enable them to be properly trained, certified, and equipped to meet your needs. With efficient support and innovative support features, such as printer self-monitoring, predefined resolution paths, and intuitive maintenance wizards, you can work with confidence every day. For more information, please visit hp.com/go/pagewidexlservice.

HP Financial Services can help you acquire an HP PageWide XL printing solution and accelerate the benefits to your business. Our solutions can help you increase your flexibility by preserving cash, freeing up budgets with a monthly payment structure, and offering an easy option to upgrade to the latest model when your business is ready. For more information, please visit hp.com/hpfinancialservices.

Find the media solution that fits your business and your HP PageWide XL printer at hp.com/go/mediasolutionslocator

Eco Highlights

- Save paper with automatic print settings and image nesting
- ENERGY STAR® certified and EPEAT Silver registered¹⁷
- Free, convenient HP ink cartridge recycling¹⁸
- FSC®-certified papers,¹⁹ range of recyclable HP media⁴



¹⁷ EPEAT registered where applicable and/or supported. See epeat.net for registration status and rating by country.
¹⁸ Program availability varies. Please check hp.com/recycle for details.
¹⁹ BMG trademark license code FSC®-C115319, see fsc.org. HP trademark license code FSC®-C017543, see fsc.org. Not all FSC®-certified products are available in all regions. For information about HP large format printing materials, please visit HPLMedia.com.
⁴ Can be recycled through commonly available recycling programs.

Please recycle large-format printing hardware and printing supplies.
Find out how at our website hp.com/ecosolutions



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4AA5-9229ENA, April 2016, Rev. 5



Data sheet | HP PageWide XL 5100 Printer series

Technical specifications









General	Description	Large-format color MFP or printer	
	Technology	HP PageWide Technology	
	Applications	Line drawings, Maps, Orthophotos, Posters	
	Ink types	Pigment-based (cyan, magenta, yellow, black)	
	Ink cartridges	8 (2 x 400-ml per color) with auto-switch	
	Printheads	8 x HP 841 PageWide XL Printheads	
	Average printhead life	32 liters	
	Printhead warranty	10 liters or 12 months from installation	
	Print resolution	1200 x 1200 dpi	
	Minimum line width	0.0008 in (0.02 mm) (HP-GL/2 addressable)	
	Guaranteed minimum line width	0.0033 in (0.085 mm) (ISO/IEC 13660:2001(E)) ⁶	
	Line accuracy	±0.1%	
Print speed	Maximum print speed ⁸	50 ft/min (15 m/min)	
	A1/Arch D/ANSI D (long edge first)	20 pages/min	
	A0/Arch E/ANSI E (short edge first)	11 pages/min	
	ISO B1 (long edge first)	17 pages/min	
	Warm-up time	No warm up	
Media	First page out	28 sec (from Ready mode)	
	Media rolls	2 rolls default with auto-switching, expandable to 4 rolls	
	Roll width	11 to 40 in (279 to 1016 mm)	
	Roll length	Up to 650 ft (200 m)	
	Roll diameter	Up to 7 in (177 mm)	
	Roll core diameter	3 in (7.6 cm)	
	Printable width	Up to 39.4 in (1000 mm)	
	Printable length	Up to 650 ft (200 m) for CAD and 98 ft (30 m) for poster ⁹	
	Media weight	19 to 53 lb (70 to 200 g/m ²)	
	Media thickness	Up to 15.7 mil (0.4 mm)	
	Media types	Bond and recycled papers, poster papers, polypropylene, Tyvek [®] , matte film	
		Media output (standard)	Basket
		Media output (optional)	High-capacity stacker, online folder, top stacker
		Maximum page size	40 x 48 in (102 x 122 cm) ¹¹
	High-capacity stacker¹⁰	Capacity	Up to 500 pages
Media weight		19 to 53 lb (70 to 200 g/m ²)	
Dimensions		55.6 x 49.1 x 42.6 in (101 x 125 x 108 cm)	
Weight		308 lb (140 kg)	
Scanner	Description	36-in (91-cm) CIS scanner	
	Speed	Color: up to 3 in/sec (7.62 cm/sec) at 200 dpi Grayscale: up to 10 in/sec (25.4 cm/sec) at 200 dpi	
	Optical resolution	1200 dpi	
	Scan width	Up to 36 in (914 mm)	
	Original thickness	Up to 0.01 in (0.25 mm)	
	Maximum copy length	374.5 in (9512 mm)	
	Maximum scan length	708.7 in (18 m) (TIFF, 24-in (610-mm) wide original at 200 dpi), 315 in (8 m) (JPEG), 196.9 in (5 m) (PDF)	
	Scan format (standard)	Scan format (standard) JPEG, TIFF, PDF 1.7, multipage PDF 1.7, PDF/A 1.4	
	Scan features	Preview with cropping, scan quicksets, batch scanning	
	Scan destination	USB, network folder (SMB), scan to email, scan to HP SmartStream software	
	Embedded controller	Processor	Intel Core i5
		Memory	16 GB DDR3
		Hard drive	1 x 128 GB SSD; 1 x 500 GB HDD, self-encrypted with AES-256
		Print languages (standard)	HP-GL/2, PCL 3 Win, Adobe PostScript 3, Adobe PDF 1.7, TIFF, JPEG
	Connectivity	Remote management	HP Partner Link, HP Embedded Web Server, HP Web Jetadmin
Interfaces		TCP/IP, BootP/DHCP, USB 2.0 host (certified)	
Printing paths		HP SmartStream software (optional) HP Click software (optional) HP Universal Print Driver (HP-GL/2 and PS) HP PageWide XL print drivers (PDF, HP-GL/2, and PS)	
User interface	User interface	8-inch capacitive touchscreen	
	Dimensions (w x d x h)	Printer 77.2 x 31.5 x 51.3 in (1960 x 839 x 1303 mm) MFP 76.8 x 33 x 51.3 in (1960 x 839 x 1303 mm) High-capacity Stacker 55.6 x 49.1 x 42.6 in (101 x 125 x 108 cm) Shipping 86.8 x 42.1 x 69.5 in (2180 x 1068 x 1764 mm)	
Weight	Printer	915 lb (415 kg)	
	MFP	948 lb (430 kg)	
	High-capacity Stacker	308 lb (140 kg)	
	Shipping printer	1149 lb (521 kg)	
	Shipping MFP	1204 lb (546 kg)	
Environmental	Operating temperature	41 to 104°F (5 to 40°C)	
	Recommended temperature	59 to 95°F (15 to 35°C)	
	Operating humidity	20 to 80% RH, depending on media type	

⁶ Measured on HP Universal Bond Paper.
⁷ ±0.1% of the specified vector length or ±0.2 mm (whichever greater) at 73°F (23°C), 50-60% relative humidity, on A0/E printing material in Best or Normal mode with HP Matte Polypropylene and HP PageWide XL pigment inks.
⁸ Measured using 36-in (91-cm) print width.
⁹ For longer plots (up to 656 ft), image quality might be affected.
¹⁰ The HP PageWide XL High-capacity Stacker may be an optional accessory.
¹¹ Long plots with reduced capacity.
¹² Printing to non-HP large format printers is done through specific drivers, each of them covering several printers: Océ Windows Printer Driver (WPD), KIP Windows Driver WHQL, RICOH PostScript Driver, Xerox WHQL Driver. For more information, please visit: hp.com/go/smartstream/trial.
¹³ BMG trademark license code FSC®-C115319, see fsc.org. HP trademark license code FSC®-C017543, see fsc.org. Not all FSC®-certified products are available in all regions. For information about HP large format printing materials, please visit HPLFMedia.com.
¹⁴ Can be recycled through commonly available recycling programs.

Acoustic	Sound pressure	5.6 dB(A) (printing), 3.5 dB(A) (ready), <1.6 dB(A) (sleep)
	Sound power	7.2 dB(A) (printing), 5.2 dB(A) (ready), 3.4 dB(A) (sleep)
Power	Consumption	0.52 kW (typical); 0.9 kW (max printing); 108.4 watts (ready); < 1 watts (< 4.6 watts with embedded Digital Front End) (sleep)
	Requirements	Input voltage (auto ranging) 100-127 / 200-240 V (±10%), 50/60 ±3 Hz, 12/6.5 A
Certification	Safety	IEC 60950-1+A1+A2 compliant; USA and Canada (CSA listed); EU (LVD and EN 60950-1 compliant); Russia, Belarus, and Kazakhstan (EAC)
	Electromagnetic	Compliant with Class A Requirements, including: USA (FCC rules), Canada (ICES), EU (EMC Directive), Australia and New Zealand (RCM), Japan (VCCI), Korea (KC)
	Environmental	ENERGY STAR, EPEAT Silver, CE marking (including RoHS, WEEE, REACH); in compliance with WW RoHS materials restriction requirements in China, Korea, India, Vietnam, Turkey, Serbia, and Ukraine
Warranty	90 days	

Dynamic security enabled printer. Only intended to be used with cartridges using an HP original chip. Cartridges using a non-HP chip may not work, and those that work today may not work in the future.
 More at: hp.com/go/learnaboutsupplies

Ordering information

Product	Product	Description	
2RQ08B	HP PageWide XL 5100 40-in Multifunction Printer with High-capacity Stacker and PostScript/PDF		
2RQ08C	HP PageWide XL 5100 40-in Multifunction Printer with Top Stacker and PostScript/PDF		
2RQ09B	HP PageWide XL 5100 40-in Printer with High-capacity Stacker and PostScript/PDF		
2RQ09C	HP PageWide XL 5100 40-in Printer with Top Stacker and PostScript/PDF		
Accessories	CZ318A	HP PageWide XL Drawer	
	CZ319A	HP PageWide XL High-capacity Stacker	
	CZ320A	HP PageWide XL Top Stacker	
	G6H50B	HP SD Pro 44-in Scanner	
	G6H51B	HP HD Pro 42-in Scanner	
	K5H75A	HP PageWide XL Folder	
	L3M58A	HP PageWide XL Folder with Tab Applicator	
	M0V04A	HP PageWide XL Folder Upgrade Kit for Long Plots	
	L3J60AAE	HP SmartStream Profiling Manager	
	L3J74AAE	HP SmartStream Print Controller for HP PageWide XL 5000/5100 Printer series	
	L3J74A	HP SmartStream Print Controller USB for HP PageWide XL 5000/5100 Printer series	
	T9B46AAE	HP SmartStream Print Controller for non-HP Large Format printers ¹²	
	2NH46AAE	HP SmartStream Document Organizer Module	
	2NH47AAE	HP SmartStream Pixel Analysis Module	
	ZB116AA	HP SmartTracker for HP PageWide XL 5000/5100 Printer series	
ZB116A	HP SmartTracker USB for HP PageWide XL 5000/5100 Printer series		
ZUE11A	HP Click USB for HP PageWide XL 5000/5100 Printer series		
Original HP PageWide XL printheads and consumables	C1Q19A	HP 841 PageWide XL Printhead	
	F9J47A	HP 841 PageWide XL Cleaning Container	
	F9J48A	HP 841 PageWide XL Maintenance Cartridge	
	F9J82A	HP 848A 400-ml Black PageWide XL Ink Cartridge	
	F9J83A	HP 848A 400-ml Cyan PageWide XL Ink Cartridge	
	F9J84A	HP 848A 400-ml Magenta PageWide XL Ink Cartridge	
	F9J85A	HP 848A 400-ml Yellow PageWide XL Ink Cartridge	
	Original HP large format printing materials	L4L08A	HP Universal Bond Paper, 3-in Core (FSC® certified) ¹³   36 in x 500 ft (914 mm x 152.4 m)
		L5P98A	HP Production Matte Poster Paper, 3-in Core (FSC® certified) ¹³   40 in x 300 ft (1016 mm x 91.4 m)
		L5Q03A	HP Production Satin Poster Paper, 3-in Core (FSC® certified) ¹³   40 in x 300 ft (1016 mm x 91.4 m)
L5C80A		HP Universal Heavyweight Coated Paper, 3-in Core (FSC® certified) ¹³   36 in x 300 ft (914 mm x 91.4 m)	
L6B19A	HP Matte Polypropylene, 3-in Core 40 in x 150 ft (1016 mm x 45.7 m)		



Enjoy best-in-class support services, knowing HP works with HP PageWide XL Channel Partners to enable them to be properly trained, certified, and equipped to meet your needs. With efficient support and innovative support features, such as printer self-monitoring, predefined resolution paths, and intuitive maintenance wizards, you can work with confidence every day. For more information, please visit hp.com/go/pagewidexservice.

HP Financial Services can help you acquire an HP PageWide XL printing solution and accelerate the benefits to your business. Our solutions can help you increase your flexibility by preserving cash, freeing up budgets with a monthly payment structure, and offering an easy option to upgrade to the latest model when your business is ready. For more information, please visit hp.com/hpfinancialservices.

Find the media solution that fits your business and your HP PageWide XL printer at hp.com/go/mediasolutionslocator.

Eco Highlights

- Save paper with automatic print settings and image nesting
- ENERGY STAR[®] certified and EPEAT Silver registered¹
- Free, convenient HP ink cartridge recycling²
- FSC[®]-certified papers,³ range of recyclable HP media⁴

¹ EPEAT registered where applicable and/or supported. See epcnet.com for registration status and rating by country.
² Program availability varies. Please check hp.com/recycle for details.
³ BMG trademark license code FSC®-C115319, see fsc.org. HP trademark license code FSC®-C017543, see fsc.org. Not all FSC®-certified products are available in all regions. For information about HP large format printing materials, please visit HPLFMedia.com.
⁴ Can be recycled through commonly available recycling programs.

Please recycle large-format printing hardware and printing supplies.
Find out how at our website hp.com/ecosolutions



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Data sheet | HP PageWide XL 6000 Printer series

Technical specifications

General	Description	Large-format color MFP or printer
	Technology	HP PageWide Technology
	Applications	Line drawings, Maps, Orthophotos, Posters
	Ink types	Pigment-based (cyan, magenta, yellow, black)
	Ink cartridges	8 (2 x 400-ml per color) with auto-switch
	Printheads	8 x HP 841 PageWide XL Printheads
	Average printhead life	32 liters
	Printhead warranty	10 liters or 12 months from installation
	Print resolution	1200 x 1200 dpi
	Minimum line width	0.0008 in (0.02 mm) (HP-GL/2 addressable)
	Guaranteed minimum line width	0.0033 in (0.085 mm) (ISO/IEC 13660:2001(E)) ¹
	Line accuracy	±0.1% ²
Print speed	Maximum print speed ³	55 f/ min (17 m/min)
	A1/Arch D/ANSI D (long edge first)	24 pages/min, 1328 pages/hr
	A0/Arch E/ANSI E (short edge first)	13 pages/min
	ISO B1 (long edge first)	21 pages/min
	Warm-up time	No warm up
	First page out	25 sec (from Ready mode)
Media	Media rolls	2 rolls default with auto-switching, expandable to 4 rolls
	Roll width	11 to 40 in (279 to 1016 mm)
	Roll length	Up to 650 ft (200 m)
	Roll diameter	Up to 7 in (177 mm)
	Roll core diameter	3 in (7.6 cm)
	Printable width	Up to 39.4 in (1000 mm)
	Printable length	Up to 650 ft (200 m) for CAD and 98 ft (30 m) for poster ¹⁰
	Media weight	Up to 53 lb (70 to 200 g/m ²)
	Media thickness	Up to 15.7 mil (0.4 mm)
	Media types	Bond and recycled papers, poster papers, polypropylene, Tyvek [®] , matte film
	Media output (standard)	Basket
	Media output (optional)	High-capacity stacker, online folder, top stacker
	Maximum page size	40 x 48 in (102 x 122 cm) ¹¹
	Capacity	Up to 500 pages ¹²
	Media weight	19 to 53 lb (70 to 200 g/m ²)
	Dimensions	55.6 x 49.1 x 42.6 in (101 x 125 x 108 cm)
	Weight	308 lb (140 kg)
High-capacity stacker¹³		
Scanner	Description	36-in (91-cm) CIS scanner
	Speed	Color: up to 3 in/sec (7.62 cm/sec) at 200 dpi Grayscale: up to 10 in/sec (25.4 cm/sec) at 200 dpi
	Optical resolution	1200 dpi
	Scan width	Up to 36 in (914 mm)
	Original thickness	Up to 0.01 in (0.26 mm)
	Maximum copy length	374.5 in (9512 mm)
	Maximum scan length	708.7 in (18 m) (TIFF, 24-in (610-mm) wide original at 200 dpi), 315 in (8 m) (JPEG), 196.9 in (5 m) (PDF)
	Scan format (standard)	JPEG, TIFF, PDF 1.7, multipage PDF 1.7, PDF/A 1.4
	Scan features	Preview with cropping, scan quicksets, batch scanning
	Scan destination	USB, network folder (SMB), scan to email, scan to HP SmartStream software
Embedded controller	Processor	Intel Core i5
	Memory	16 GB DDR3
	Hard drive	1 x 128 GB SSD; 1 x 500 GB HDD, self-encrypted with AES-256
	Print languages (standard)	HP-GL/2, PCL 3 Win, Adobe PostScript 3, Adobe PDF 1.7, TIFF, JPEG
	Remote management	HP Partner Link, HP Embedded Web Server, HP Web Jetadmin
Connectivity	Interfaces	TCPIP, BootP/DHCP, USB 2.0 host (certified)
	Printing paths	HP SmartStream software (optional) HP Universal Print Driver (HP-GL/2 and PS) HP PageWide XL print drivers (PDF, HP-GL/2, and PS)
User interface	User interface	8-inch capacitive touchscreen
Dimensions (w x d x h)	Printer	77.2 x 31.5 x 51.3 in (1960 x 800 x 1303 mm)
	MFP	76.8 x 33.1 x 51.3 in (1960 x 839 x 1303 mm)
	High-capacity Stacker	55.6 x 49.1 x 42.6 in (101 x 125 x 108 cm)
	Shipping	86.8 x 42.1 x 69.5 in (2180 x 1068 x 1764 mm)
Weight	Printer	915 lb (415 kg)
	MFP	948 lb (430 kg)
	High-capacity Stacker	308 lb (140 kg)
	Shipping printer	1149 lb (521 kg)
	Shipping MFP	1204 lb (546 kg)

¹ Measured on HP Universal Bond Paper.

² ±0.1% of the specified vector length or ±0.2 mm (whichever greater) at 73°F (23°C), 50-60% relative humidity, on A0/E printing material in Best or Normal mode with HP Matte Polypropylene and HP PageWide XL pigment inks.

³ Measured using 36-in (91-cm) print width

¹⁰ For longer plots (up to 656 ft), image quality might be affected.

¹¹ The HP PageWide XL High-capacity Stacker may be an optional accessory.

¹² Long plots with reduced capacity.

¹³ Printing to non-HP large format printers is done through specific drivers, each of them covering several printers: Océ Windows Printer Driver (WPD), KIP Windows Driver WHQL, RICOH PostScript Driver, Xerox WHQL Driver. For more information, please visit: hp.com/go/smartstream/trial.

¹⁴ BMG trademark license code FSC®-C115319, see fsc.org. HP trademark license code FSC®-C017543, see fsc.org. Not all FSC®-certified products are available in all regions. For information about HP large format printing materials, please visit HPLMedia.com.









¹⁵ Can be recycled through commonly available recycling programs.

Environmental	Operating temperature	41 to 104°F (5 to 40°C)
	Recommended temperature	59 to 95°F (15 to 35°C)
	Operating humidity	20 to 80% RH, depending on media type
Acoustic	Sound pressure	57 dB(A) (printing), 35 dB(A) (ready), <16 dB(A) (sleep)
	Sound power	7.3 B(A) (printing), 5.2 B(A) (ready), 3.4 B(A) (sleep)
Power	Consumption	0.55 kW (typical); 1.0 kW (max printing); 108.4 watts (ready); < 1 watts (< 4.6 watts with embedded Digital Front End) (sleep)
	Requirements	Input voltage (auto ranging) 100-127 / 200-240 V (±10%), 50/60 ±3 Hz, 12/16.5 A IEC 60950-1+A1+A2 compliant; USA and Canada (CSA listed); EU (LVD and EN 60950-1 compliant); Russia, Belarus, and Kazakhstan (EAC)
Certification	Safety	Compliant with Class A requirements, including: USA (FCC rules), Canada (ICES), EU (EMC Directive), Australia and New Zealand (RCM), Japan (VCCI), Korea (KC)
	Electromagnetic	Compliant with Class A requirements, including: USA (FCC rules), Canada (ICES), EU (EMC Directive), Australia and New Zealand (RCM), Japan (VCCI), Korea (KC)
	Environmental	ENERGY STAR, EPEAT Silver, CE marking (including RoHS, WEEE, REACH), in compliance with WW RoHS materials restriction requirements in China, Korea, India, Vietnam, Turkey, Serbia, and Ukraine

Warranty

90 days
Dynamic security enabled printer. Only intended to be used with cartridges using an HP original chip. Cartridges using a non-HP chip may not work, and those that work today may not work in the future.
More at: hp.com/go/learnaboutsupplies

Ordering information

Product	2RQ10B	HP PageWide XL 6000 40-in Multifunction Printer with High-capacity Stacker and PostScript/PDF
	2RQ11B	HP PageWide XL 6000 40-in Printer with High-capacity Stacker and PostScript/PDF
Accessories	CZ318A	HP PageWide XL Drawer
	CZ319A	HP PageWide XL High-capacity Stacker
	CZ320A	HP PageWide XL Top Stacker
	G6H50B	HP SD Pro 44-in Scanner
	G6H51B	HP HD Pro 42-in Scanner
	KSH75A	HP PageWide XL Folder
	L3M58A	HP PageWide XL Folder with Tab Applicator
	MOV04A	HP PageWide XL Folder Upgrade Kit for Long Plots
	L3168AAE	HP SmartStream Print Controller for HP PageWide XL 6000 Series
	L3168A	HP SmartStream Print Controller for HP PageWide XL 6000 Series
	T9B46AAE	HP SmartStream Print Controller for non-HP Large Format printers ¹³
	2NH46AAE	HP SmartStream Document Organizer Module
	2NH47AAE	HP SmartStream Pixel Analysis Module
	Z819AAE	HP SmartTracker for HP PageWide XL 6000 Series
	Z819A	HP SmartTracker USB for HP PageWide XL 6000 Series
Original HP PageWide XL printheads and consumables	C1Q19A	HP 841 PageWide XL Printhead
	F9147A	HP 841 PageWide XL Cleaning Container
	F9148A	HP 841 PageWide XL Maintenance Cartridge
Original HP PageWide XL ink cartridges	F91B2A	HP 848A 400-ml Black PageWide XL Ink Cartridge
	F91B3A	HP 848A 400-ml Cyan PageWide XL Ink Cartridge
	F91B4A	HP 848A 400-ml Magenta PageWide XL Ink Cartridge
	F91B5A	HP 848A 400-ml Yellow PageWide XL Ink Cartridge
Original HP large format printing materials	L4L08A	HP Universal Bond Paper, 3-in Core (FSC® certified) ¹⁴  
	L5P98A	HP Production Matte Poster Paper, 3-in Core (FSC® certified) ¹⁴  
	L5Q03A	HP Production Satin Poster Paper, 3-in Core (FSC® certified) ¹⁴  
	L5C80A	HP Universal Heavyweight Coated Paper, 3-in Core (FSC® certified) ¹⁴  
	L6B19A	HP Matte Polypropylene, 3-in Core 40 in x 150 ft (1016 mm x 45.7 m)

Enjoy best-in-class support services, knowing HP works with HP PageWide XL Channel Partners to enable them to be properly trained, certified, and equipped to meet your needs. With efficient support and innovative support features, such as printer self-monitoring, predefined resolution paths, and intuitive maintenance wizards, you can work with confidence every day. For more information, please visit hp.com/go/pagewidelxservice.

HP Financial Services can help you acquire an HP PageWide XL printing solution and accelerate the benefits to your business. Our solutions can help you increase your flexibility by preserving cash, freeing up budgets with a monthly payment structure, and offering an easy option to upgrade to the latest model when your business is ready. For more information, please visit hp.com/hpfinancialservices.

Find the media solution that fits your business and your HP PageWide XL printer at hp.com/go/mediasolutionslocator.

Eco Highlights

- Save paper with automatic print settings and image nesting
- ENERGY STAR® certified and EPEAT Silver registered¹
- Free, convenient HP ink cartridge recycling²
- FSC®-certified papers,³ range of recyclable HP media⁴



¹ EPEAT registered where applicable and/or supported. See epeat.net for registration status and rating by country.
² Program availability varies. Please check hp.com/recycle for details.
³ BMG trademark license code FSC®-C115319, see fsc.org. HP trademark license code FSC®-C017543, see fsc.org. Not all FSC®-certified products are available in all regions. For information about HP large format printing materials, please visit HPLMedia.com.
⁴ Can be recycled through commonly available recycling programs.

Please recycle large-format printing hardware and printing supplies.

Find out how at our website hp.com/ecosolutions



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4AA7-1171ENA, April 2018



Data sheet | HP PageWide XL 8000 Printer

Technical specifications

General	Description	Large-format color printer	
	Technology	HP PageWide Technology	
	Applications	Line drawings, Maps, Orthophotos, Posters	
	Ink types	Pigment-based (cyan, magenta, yellow, black)	
	Ink cartridges	8 (2x 775-ml per color) with auto-switch	
	Printheads	8x HP 841 PageWide XL Printheads	
	Average printhead life	32 liters	
	Printhead warranty	10 liters or 12 months from installation	
	Print resolution	1200 x 1200 dpi	
	Minimum line width	0.0008 in (0.02 mm) (HP-GL/2 addressable)	
	Guaranteed minimum line width	0.0033 in (0.085 mm) (ISO/IEC 13660:2001(E)) ¹²	
	Line accuracy	+/- 0.1% ¹³	
	Printspeed	Maximum print speed ¹⁴	75 ft/min (23 m/min)
		A1/Arch D/ANSI D (long edge first)	30 pages/min ¹⁵
		A0/Arch E/ANSI E (short edge first)	18 pages/min
ISO B1 (long edge first)		24 pages/min	
ISO B0 (short edge first)		15 pages/min	
A0 NTP media (short edge first)		6 pages/min	
A1 NTP media (long edge first)		11 pages/min	
Warm-up time		No warm up	
First page out		20 sec (from Ready mode)	
Media		Media rolls	2 rolls default with auto-switching, expandable to 6 rolls
	Roll width	11 to 40 in (279 to 1016 mm)	
	Roll length	Up to 650 ft (200 m)	
	Roll diameter	Up to 7 in (177 mm)	
	Roll core diameter	3 in (7.6 cm)	
	Printable width	Up to 39.4 in (1000 mm)	
	Printable length ¹⁶	Up to 295 ft (90 m) for CAD and 98 ft (30 m) for poster	
	Media weight	19 to 53 lb (70 to 200 g/m ²)	
	Media thickness	Up to 15.7 mil	
	Media types	Bond and recycled papers, tyvek papers, poster papers, polypropylene, matte film	
Media output (standard)	Basket and high-capacity stacker		
Media output (optional)	Online folder and top stacker		
HP HD/SD Pro Scanners	Scan speed ¹⁷	Color: up to 6 in/sec (15 cm/sec) Grayscale: up to 13 in/sec (33 cm/sec)	
	Scan resolution	1200 dpi	
	Maximum scan width	44-in (1118-mm) with the HP SD Pro 44-in Scanner 42-in (1067-mm) with the HP HD Pro 42-in Scanner	
	Copier settings	Batch; multipage PDF generation; invert; collate copy with reprint; type of original; image crop and align preview; background removal; lightness; saturation and RGB controls; white point and black point adjust; sharpen/blur; mirror copy; enlarge/reduce; paneling; tiling; nesting; accounting	
High-capacity stacker*	Maximum page size	40 x 48 in (102 x 122 cm) ¹⁸	
	Capacity	Up to 200 pages	
	Media weight	19 to 53 lb (70 to 200 g/m ²)	
	Dimensions	55.6 x 49.1 x 42.6 in (141 x 125 x 108 cm)	
Online folder*	Weight	308 lb (140 kg)	
	Page width	11 to 36 in (28 to 91.4 cm)	
	Page length	Cross fold: 8.2 ft (2.5 m) Fan fold: 19.7 ft (6 m) (standard), unlimited (optional with HP PageWide XL Folder Upgrade Kit for Long Plots)	
	Media weight for folding	20 to 24 lb (75 to 90 g/m ²)	
	Media weight for stacking	20 to 53 lb (75 to 200 g/m ²)	
	Capacity	Up to 150 (A0)	
	Dimensions	64 x 49 x 72.5 in (1626 x 1245 x 1842 mm)	
	Weight	683 lb (310 kg), (772 lb (350 kg) with tab applicator)	
	Tab applicator	Available with HP PageWide XL Folder with Tab Applicator only	
	Embedded controller	Processor	Intel Core i7
Memory		16 GB DDR	
Hard drive		1x 128 GB SSD; 1x 500 GB HDD, self-encrypted with AES-256	
Print languages (standard)		HP-GL/2, PCL 3 Win, Adobe PostScript 3, Adobe PDF 1.7, TIFF, JPEG (with PS/PDF upgrade)	
Connectivity	Remote management	HP Partner Link, HP Embedded Web Server, HP Web Jetadmin	
	Interfaces	TCP/IP, BootP/DHCP, USB 2.0 host (certified)	
	Printing paths	HP SmartStream software (optional) HP Universal Print Driver (HP-GL/2 and PS) HP PageWide XL print drivers (PDF, HP-GL/2, and PS)	

¹¹ Adobe PDF Print Engine 3 is the next-generation rendering platform, optimized for end-to-end PDF workflows. Adobe PDF Print Engine 3 combines performance optimizations with a new scalability framework to power high-speed digital presses, large-format printers, and CTP plate setters. Adobe PDF Print Engine 3 is the fastest rendering platform for reliable reproduction of complex, graphically rich content. To learn more, visit adobe.com/products/pdf/printengine.html

¹² Measured on HP Universal Bond paper.

¹³ +/-0.1% of the specified vector length or +/-0.2 mm (whichever greater) at 23°C (73°F), 50-60% relative humidity, on A0/E printing material in Best or Normal mode with HP Matte Polypropylene and HP PageWide XL pigment ink.

¹⁴ Measured using 91-cm (36-in) print width.

¹⁵ Print speed while printing to the HP PageWide XL High-capacity Stacker. When printing to the top stacker, the maximum print speed is 12 pages/minute.

¹⁶ For longer plots (up to 200 m (656 ft)), image quality might be affected.

¹⁷ Monochrome scanning: A1/D image with black text graphics at 200 dpi; color scanning: A1/D fully-inked color image at 200 dpi, 24-bit RGB.

¹⁸ Long plots with reduced capacity.

¹⁹ BMG trademark license code FSC®-C115319, see fsc.org. HP trademark license code FSC®-C017543, see fsc.org. Not all FSC®-certified products are available in all regions. For information about HP large format printing materials, please visit HPLFMedia.com.

User interface	User interface	8-inch capacitive touchscreen
Dimensions	Printer	77.2 x 31.5 x 60.1 in (1960 x 800 x 1527 mm)
	Shipping	86.8 x 42.1 x 69.5 in (2180 x 1068 x 1764 mm)
Weight	Printer	1054 lb (478 kg)
	Shipping	1290 lb (585 kg)
Environmental	Operating temperature	41 to 104°F (5 to 40°C)
	Recommended temperature	59 to 95°F (15 to 35°C)
	Operating humidity	20 to 80% RH, depending on media type
Acoustic	Sound pressure	58 dB(A) (printing), 36 dB(A) (ready), <20 dB(A) (sleep)
	Sound power	7.4 B(A) (printing), 5.2 B(A) (ready), 3.8 B(A) (sleep)
Power	Consumption	0.59 kW (typical), ≤ 1.2 kW (max printing), 108.4 watts (ready), < 1 watts (< 4.6 watts with embedded Digital Front End) (sleep)
	Requirements	Input voltage (auto ranging) 200 to 240 VAC (+/- 10%), 50/60 Hz (+/- 3 Hz), 8 A
Certification	Safety	IEC 60950-1+A1+A2 compliant; USA and Canada (CSA listed); EU (LVD) and EN 60950-1 compliant; Russia, Belarus, and Kazakhstan (EAC)
	Electromagnetic	Compliant with Class A requirements, including: USA (FCC rules), Canada (ICES), EU (EMC Directive), Australia and New Zealand (RCM), Japan (VCCI), Korea (KC)
	Environmental	ENERGY STAR, EPEAT Silver, CE marking (including RoHS, WEEE, REACH). In compliance with WW RoHS materials restriction requirements in China, Korea, India, Vietnam, Turkey, Serbia, and Ukraine.
Warranty	90 days	

Ordering information

Product	CZ309B	HP PageWide XL 8000 40-in Printer with High-capacity Stacker and PostScript/PDF
Accessories	G6H50B	HP SD Pro 44-in Scanner
	G6H51B	HP HD Pro 42-in Scanner
	K5H75A	HP PageWide XL Folder
	L3M58A	HP PageWide XL Folder with Tab Applicator
	MOV04A	HP PageWide XL Folder Upgrade Kit for Long Plots
	C2318A	HP PageWide XL Drawer
	C2320A	HP PageWide XL Top Stacker
	L3J69AAE	HP SmartStream Preflight Manager
	L3J72AAE	HP SmartStream Print Controller for HP PageWide XL 8000
	Original HP PageWide XL printheads and consumables	C1Q19A
F9J47A		HP 841 PageWide XL Cleaning Container
F9J48A		HP 841 PageWide XL Maintenance Cartridge
Original HP PageWide XL ink cartridges		C1Q45A
	C1Q46A	HP 842A 775-ml Cyan PageWide XL Ink Cartridge
	C1Q47A	HP 842A 775-ml Magenta PageWide XL Ink Cartridge
	C1Q48A	HP 842A 775-ml Yellow PageWide XL Ink Cartridge
Original HP large format printing materials	L4L08A	HP Universal Bond Paper, 3-in Core (FSC® certified) ¹⁹ 914 mm x 152.4 m (36 in x 500 ft)
	L5P98A	HP Production Matte Poster Paper, 3-in Core 1016 mm x 91.4 m (40 in x 300 ft)
	L5Q03A	HP Production Satin Poster Paper, 3-in Core 1016 mm x 91.4 m (40 in x 300 ft)
	L5C80A	HP Universal Heavyweight Coated Paper, 3-in Core (FSC® certified) ¹⁹ 914 mm x 91.4 m (36 in x 300 ft)
	L6B19A	HP Matte Polypropylene, 3-in Core 914 mm x 61 m (36 in x 200 ft)

Enjoy best-in-class support services, knowing HP works with HP PageWide XL Channel Partners to enable them to be properly trained, certified, and equipped to meet your needs. With efficient support and innovative support features, such as printer self-monitoring, predefined resolution paths, and intuitive maintenance wizards, you can work with confidence every day. For more information, please visit hp.com/go/pagewidexl/service.

HP Financial Services can help you acquire an HP PageWide XL printing solution and accelerate the benefits to your business. Our solutions can help you increase your flexibility by preserving cash, freeing up budgets with a monthly payment structure, and offering an easy option to upgrade to the latest model when your business is ready. For more information, please visit the Programs and Promotions section on hp.com/hpfinancialservices.

Find the media solution that fits your business and your HP PageWide XL printer at hp.com/go/mediasolutionslocator

Eco Highlights

- Save paper with automatic print settings and image nesting
- ENERGY STAR® certified and EPEAT Silver registered¹
- Free, convenient HP ink cartridge recycling²
- FSC®-certified papers,³ range of recyclable HP media⁴



¹ EPEAT registered where applicable and/or supported. See epeat.net for registration status and rating by country.

² Program availability varies. Please check hp.com/recycle for details.

³ BMG trademark license code FSC®-C115319, see fsc.org. HP trademark license code FSC®-C017543, see fsc.org. Not all FSC®-certified products are available in all regions. For information about HP large format printing materials, please visit HPLFMedia.com.

⁴ Can be recycled through commonly available recycling programs.

Please recycle large-format printing hardware and printing supplies.
Find out how at our website hp.com/ecosolutions



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4AA5-6959ENU, April 2016, Rev. 6



Other basic info

Fabrication date

It is possible to know the manufacturing date of a printer from the printer itself or from a printer accessory SN.

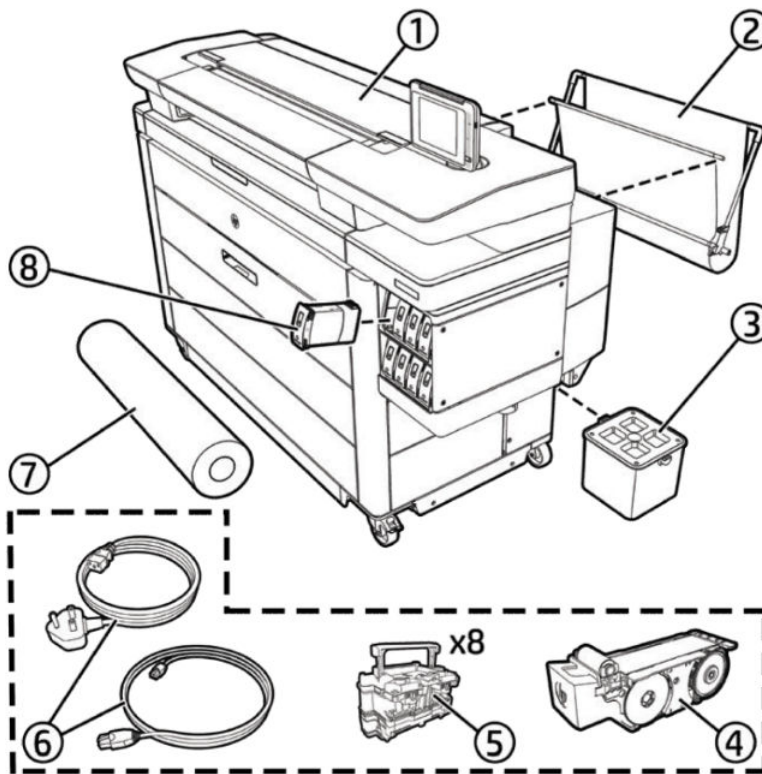
In the generic example SN AABCXXXXXX:

- AA is the code to identify the product
- B is the year (ex: 5=2015, 6=2016)
- C is the month, where 1=January, 2=February, 3=March . . . 9=September, and then for two-digit months: A=October, B=November, C=December

3 Assembly instructions

- [Printer components](#)
- [Size of the crate](#)
- [Tools required](#)
- [Manpower and time](#)
- [Two-phase assembly](#)
- [Unpack the printer](#)
- [Remove the security locks](#)
- [Install extra drawers if required](#)
- [Install the top stacker if purchased as an accessory](#)
- [Install the scanner loading table \[MFP only\]](#)
- [Install the basket](#)
- [Connect the cable](#)
- [Start the printer](#)
- [Install extra ink cartridges \[5000 and 8000 series only\]](#)
- [Install the printheads](#)
- [Load paper and calibrate](#)
- [Connectivity](#)
- [Install accessories](#)
- [Generate an EOI report](#)

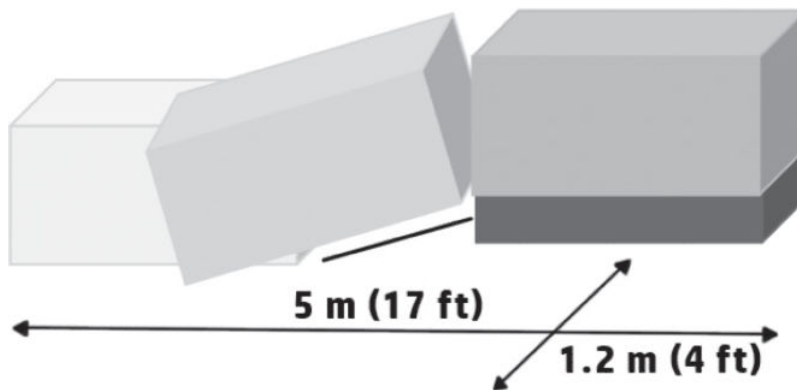
Printer components



1. Printer
2. Basket
3. Cleaning container
4. Maintenance cartridge
5. Printheads
6. Cables
7. Paper
8. Ink cartridges

 **NOTE:** Spare screws are provided with the printer, so some screws may remain unused after assembly.

Size of the crate



- Width: 2.18 m (85.8 in)
- Depth: 1.07 m (42.1 in)
- Height: 1.77 m (69.7 in)

The space required for assembly is 1.2 m (4 ft) at the front and 5 m (17 ft) at the side.

Tools required

These tools are not provided with the printer; ensure that you have them ready before starting the assembly process.

- Electric screwdrivers T10, T15, T20
- Electric nut driver number 17
- Cutter
- Hammer
- LAN cable
- Forklift

Manpower and time



Two people are required for some assembly tasks.



Assembling the printer can be expected to take about 240 minutes (4 hours) in total.

Two-phase assembly

You are recommended to assemble the printer in one phase. However, if you wish to perform the assembly in two phases (starting at one site and finishing at another), skip the steps marked with an asterisk (*) in the first

phase. For the second phase, complete the reshipment procedure as described in [Reshipping procedure on page 1153](#).

Unpack the printer

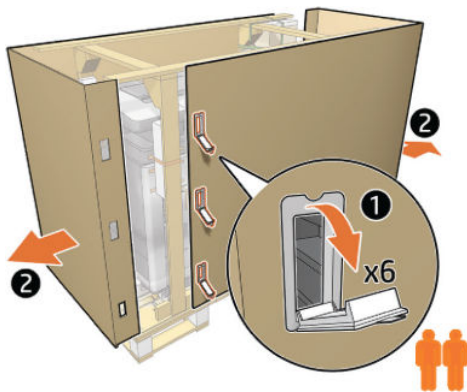


IMPORTANT:

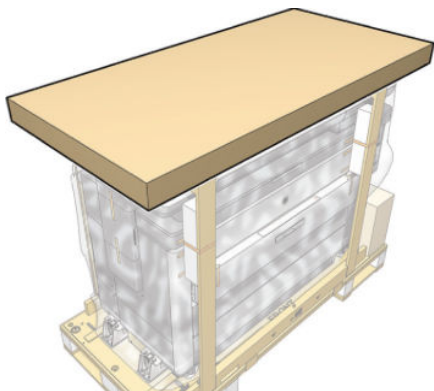
- Make sure to unpack the printer on a flat floor.
- Keep the packaging and the security locks.

 **NOTE:** Keep the area tidy when unpacking the printer, to avoid accidents.

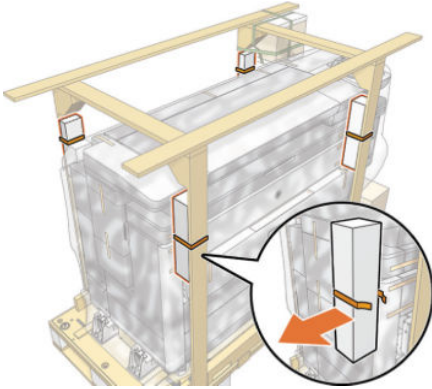
1. Open the six side clips (three at each end) and remove the box.



2. Put the lid over the structure to avoid knocking your head on the wooden frame.



3. Remove the four foams.

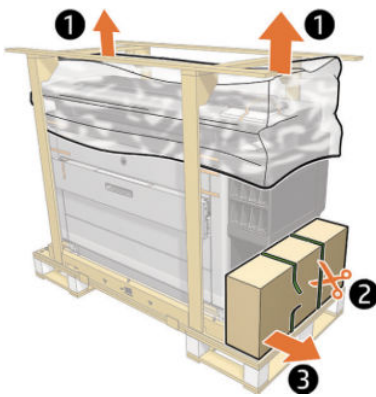


3900/4000/4100/4500/4600 series or two-phase installation: Remove the arch.

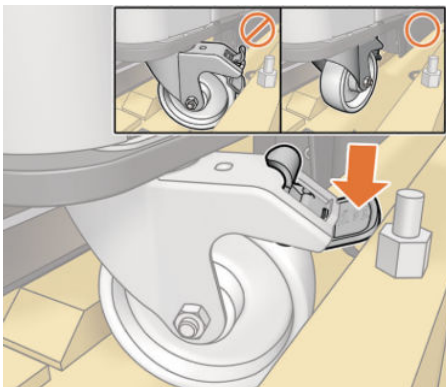
MFP only: Remove the calibration sheet box and keep it separately.

4. Remove the plastic bag, cut the green tapes, and remove the boxes.

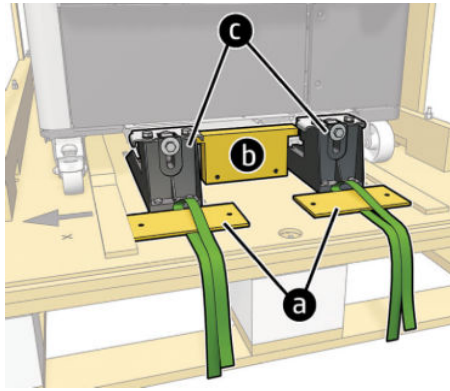
⚠ CAUTION: Take care not to knock your head on the wooden frame.



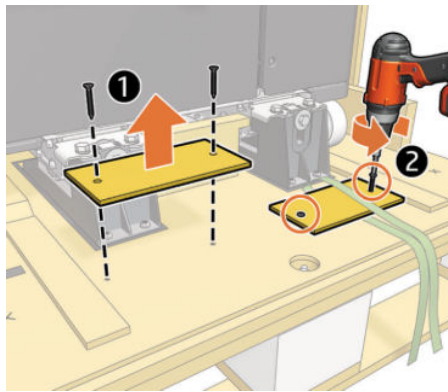
5. * Position the four wheels in the direction of the ramp, then lock the two front wheels.



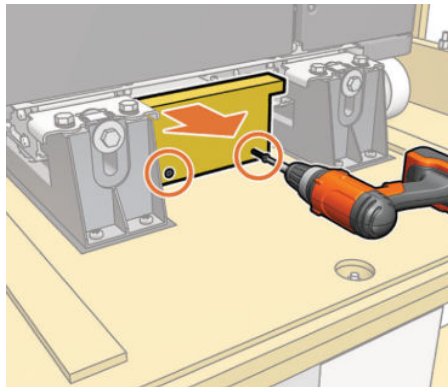
6. * Remove the items shown from the right-hand side (front-panel side), in the order a, b, c (see following steps).




- a. * Remove four Phillips screws (two from each panel), and the two panels.

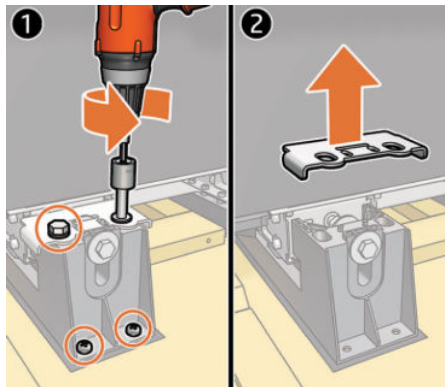


- b. * Remove two Phillips screws and the wood block.

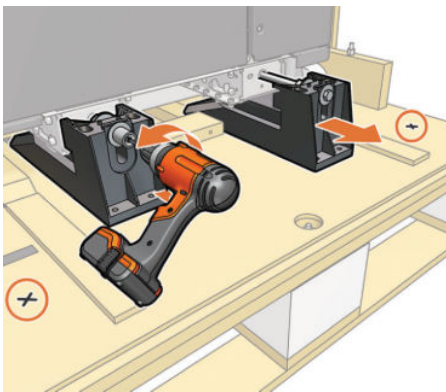


- c. * Remove two Phillips screws and bolts from each retainer to release the plates.

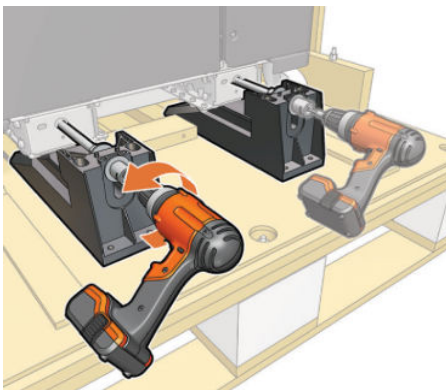
 **NOTE:** Be careful not to drop the washer.



- 7. * Undo the bolts of each retainer until the retainer reaches the mark shown.

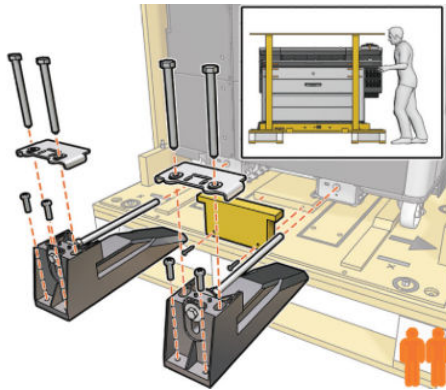


- 8. * Continue removing the bolts little by little on each side until you remove the retainers completely.

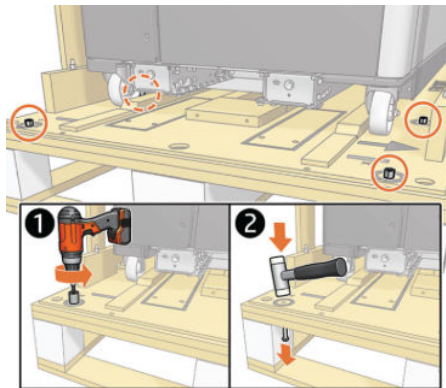


9. * Repeat steps 6b, 6c, 7, and 8 on the left-hand side.

⚠ CAUTION: One person should hold the printer on the right-hand side to make sure that it does not move while the other person removes the retainers.



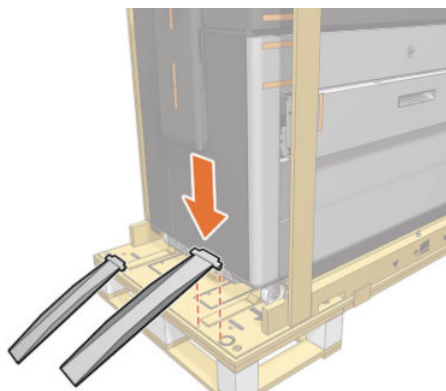
10. * Remove the four bolts on the left-hand side marked with a black circle; use a hammer to release them if necessary.




If you do not have a forklift, use long ramps and go straight to step 15.

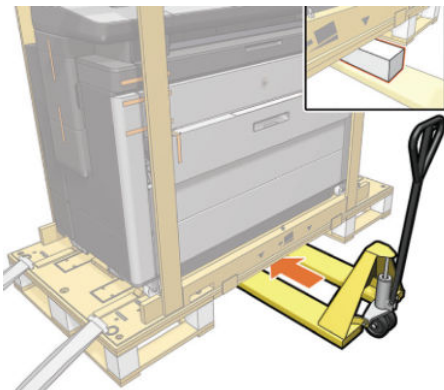
11. * Fix the ramps found in the accessory box to the left-hand side.

📌 IMPORTANT: Make sure there are no obstructions in front, so that you can remove the printer easily.

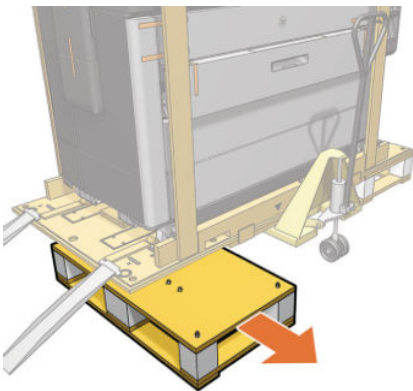


12. * Place the forklift under the pallet as indicated, and raise the printer.


 **TIP:** If the forklift is not high enough to raise the printer over the wood block; use the foams removed earlier (or any suitable block).

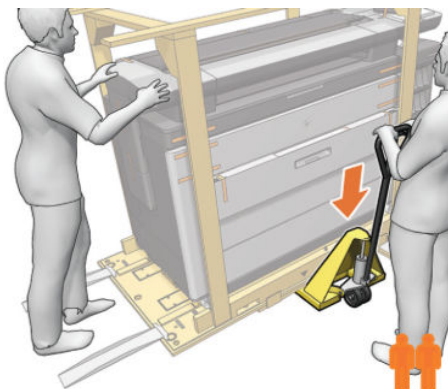


13. * Remove the wood block from the left side.

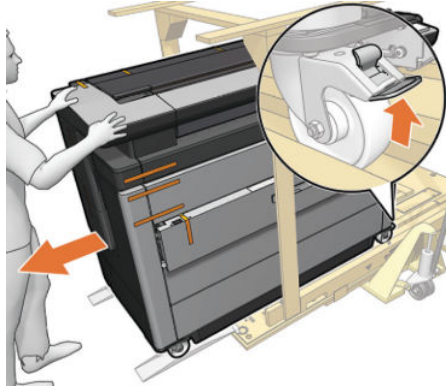


14. * Lower the forklift.

 **CAUTION:** Two people are required: one to lower the forklift, and the other to prevent the printer from sliding down.



15. * Unlock the wheels and carefully slide the printer down.



16. Remove the orange tapes and desiccant bag.

 **NOTE:** You cannot remove the orange tapes from the drawer until the drawer can be opened.

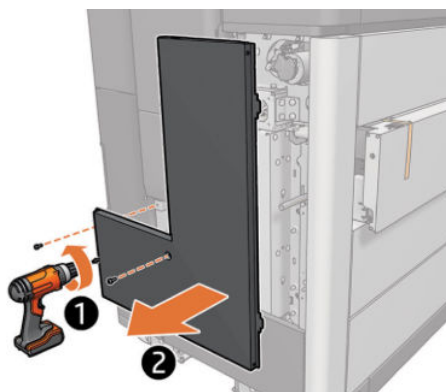


Remove the security locks




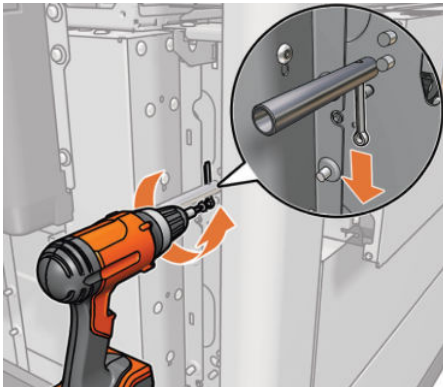
 **IMPORTANT:** Do not press the paper output button before removing all the security locks.

1. Remove the three T20 screws and the left cover.

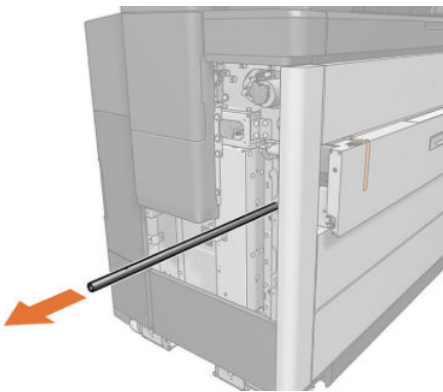


2. Remove the screw from the bar and the pin.

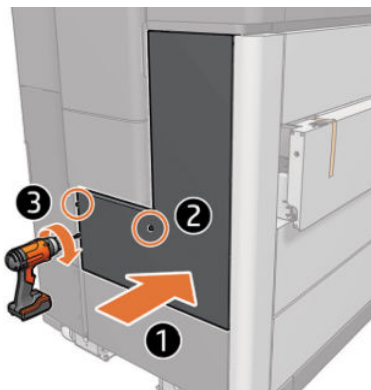
 **NOTE:** Be careful not to drop the pin.



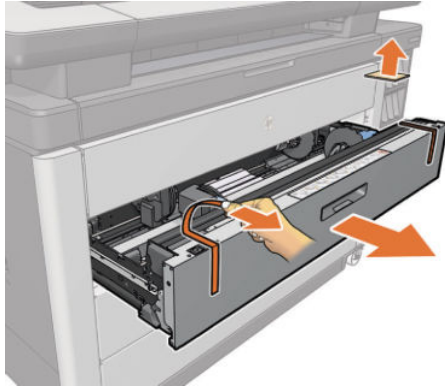
3. Remove the drawer lock bar.




4. If an extra drawer is not required, replace the cover and screws, starting with the center screw.

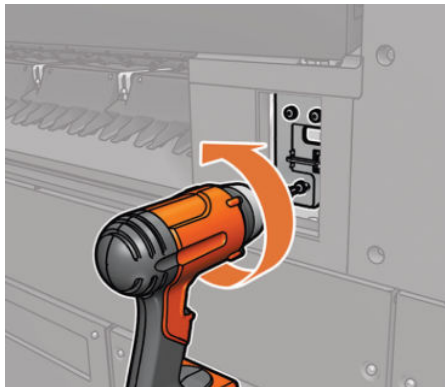


5. Open the drawer, remove the tapes and stopper, then close the drawer again.



6. Remove three screws and the two dryer lock plates on the right and left sides. Be careful not to drop the screws.

 **NOTE:** There is no need to remove the flange.



7. If you plan to install any output accessories, install the hooks (found in the small box); otherwise, install the covers.

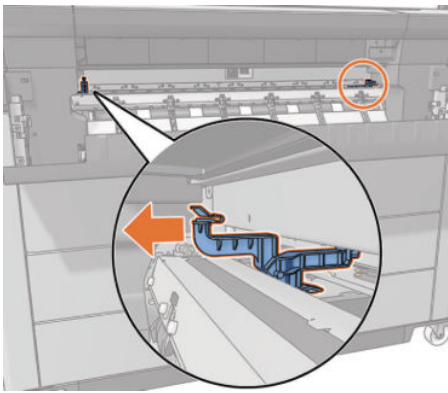


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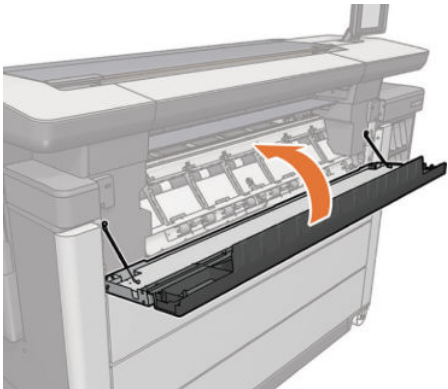
8. Open the paper input cover.



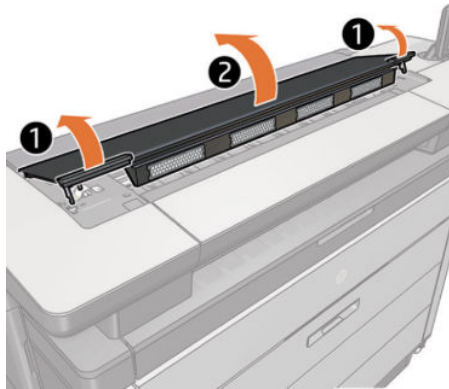
9. Remove the two spittoon lock clips.



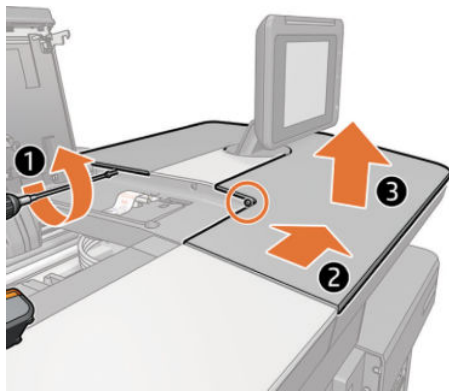
10. Close the paper input cover.



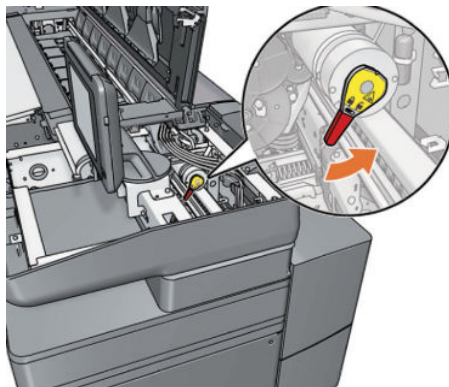
11. Open the top cover.



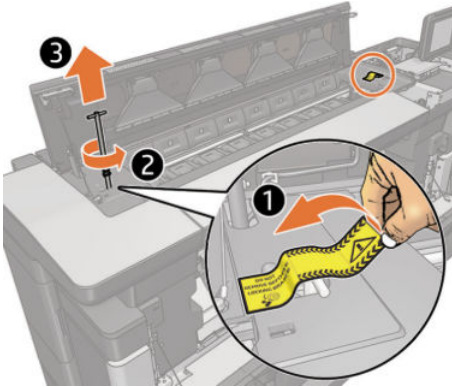
12. Remove two T15 screws and slide the top cover out.



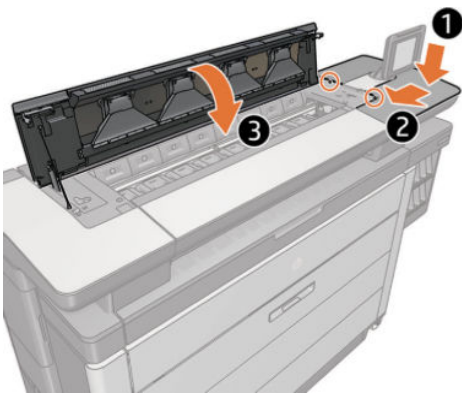
13. Move the lever to activate the brake.



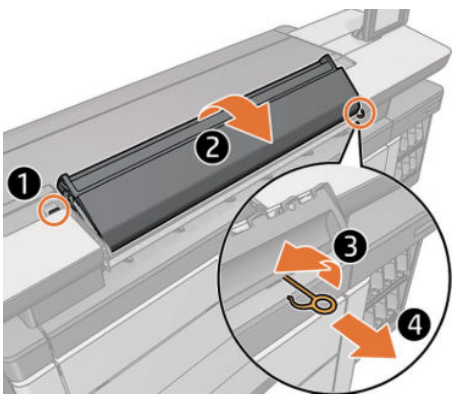
14. Remove the print-bar lock bars by rotating them and pulling up.



15. Replace the cover and close the top cover.



16. MFP only: Pull out the transport lock as far as possible and remove the protective sheet. Open the scanner cover and pull out the transport lock rotating it.

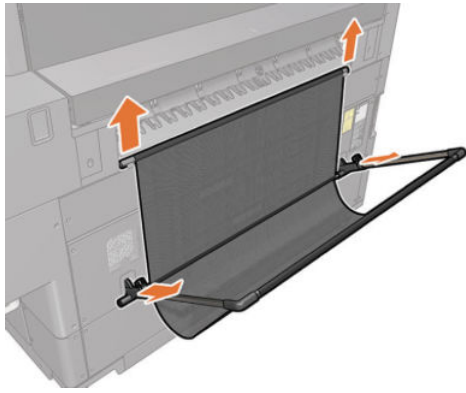


Install extra drawers if required

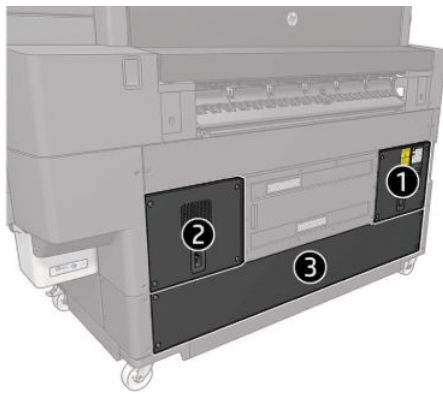
One drawer is supplied in the printer. Extra drawers are available as accessories.



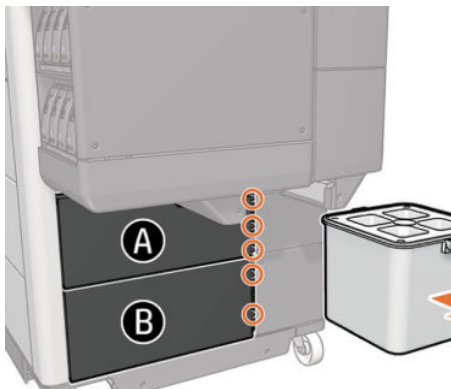
1. If the basket is installed, remove it.



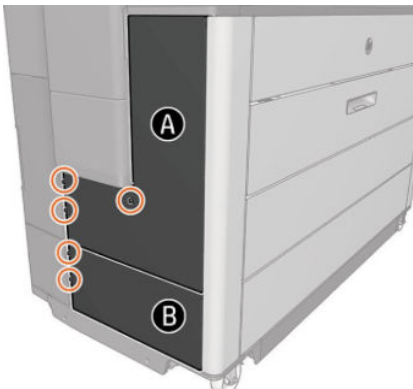
2. Remove the rear printer covers: cover 1 to install the drawer in the second position, and covers 1, 2, and 3 in that order, to install the drawer in the third position (available in the 8000 series only).



3. On the right-hand side (front panel side): Remove the cleaning container, and the side cover corresponding to the drawer to be installed.

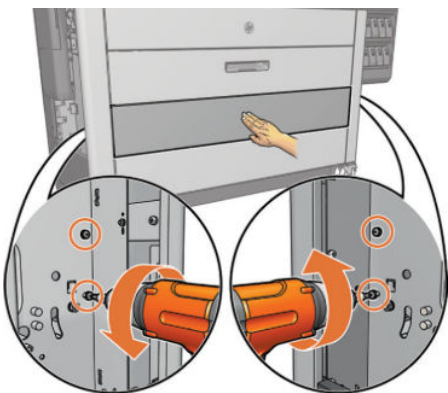


4. On the left-hand side: Remove the side cover corresponding to the drawer to be installed.




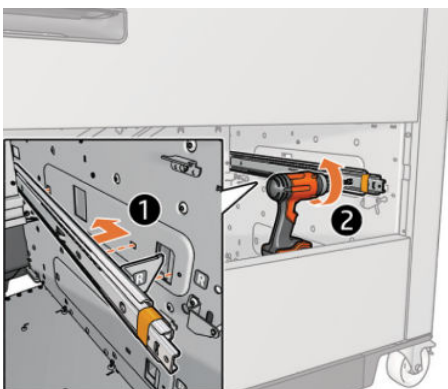
5. Remove the two screws on each side of the drawer (two bottom ones for the bottom drawer), and remove the front cover exposing the drawer slot.

 **IMPORTANT:** Hold the cover while removing the final screw, to prevent it from falling.




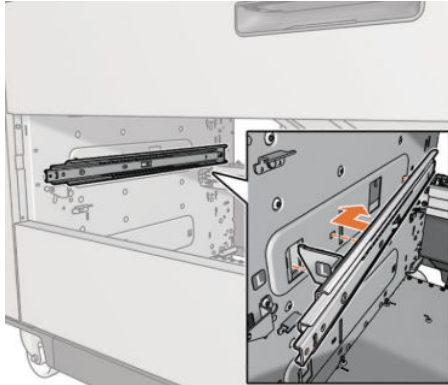
6. Take the right drawer guide (marked with an R) from the top of the box.

 **IMPORTANT:** Do not remove the internal cardboard and tape. Install the drawer guide on the right-hand side. Slide the guide all the way in, and attach it with a screw.

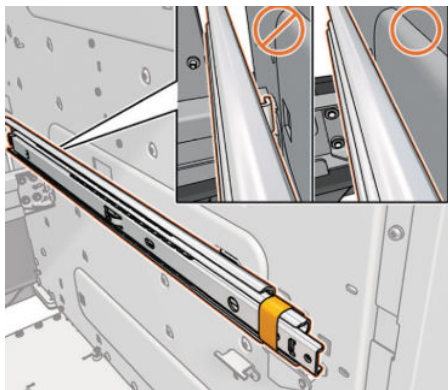


7. Take the left drawer guide (marked with an L) and insert it into the left-hand side of the printer.

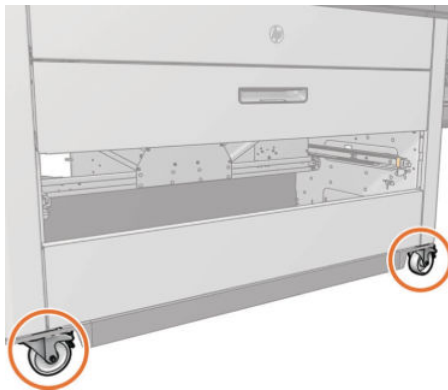
 **NOTE:** No screw is required.



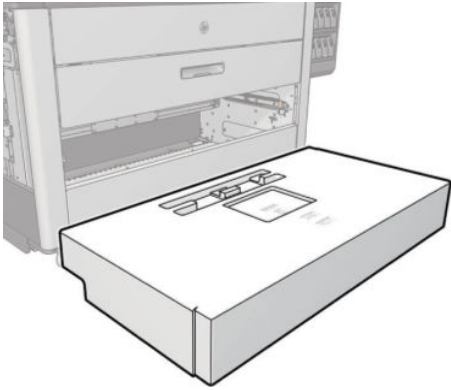
8. Check that both guides are correctly installed in the back slot; they should be difficult to move.



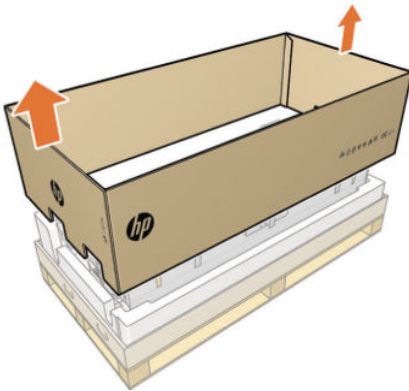
9. Check that the wheels are aligned as shown.



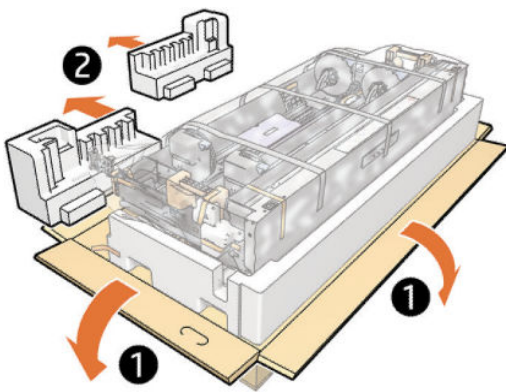
10. 8000 series only: If you do not intend to install the bottom drawer, place the end cap from the packaging in front of the printer.



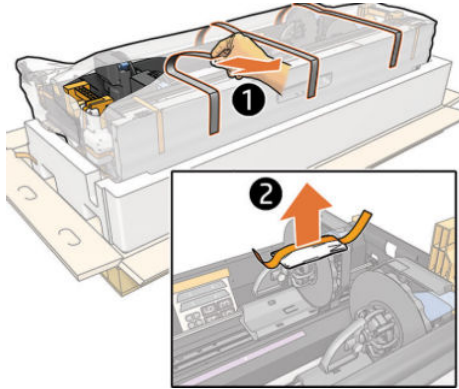
11. Lift the cardboard box up and remove it from the drawer.




12. Open the lower tray's carton flaps, and remove the back portions of the lower end caps.

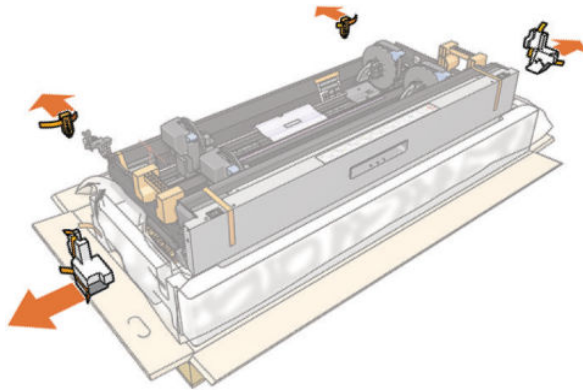


13. Open the bag and remove the desiccant bag.



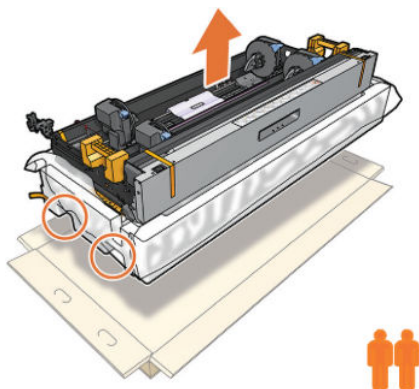
14. Remove the orange tapes and white foams.

 **IMPORTANT:** Do not remove the orange handles.



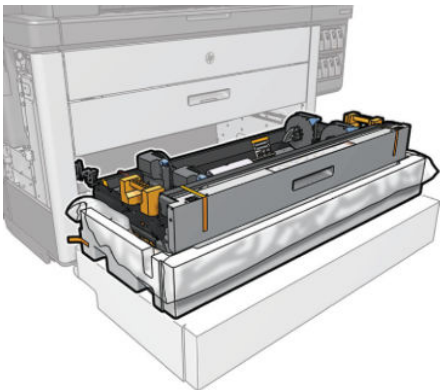
15. Lift up the lower foam together with the drawer by pulling the foam handles.

 **IMPORTANT:** Do not remove the orange handles or hubs.



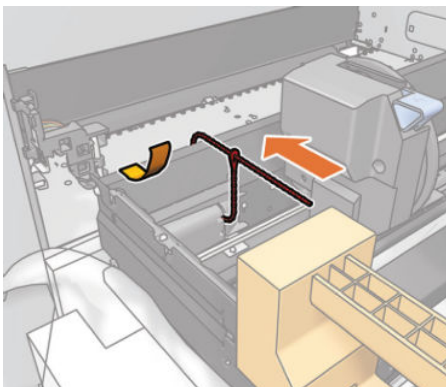
16. Not installing the bottom drawer: Place the drawer and foam on the end cap next to the printer.

Installing the bottom drawer: Place next to the front of the printer.

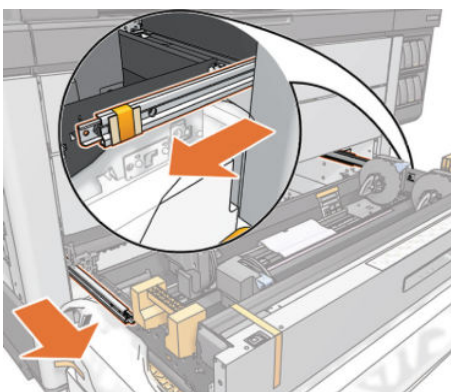


17. Remove the cable protection flange.

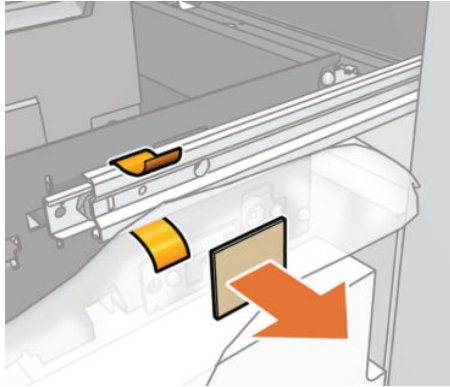
 **IMPORTANT:** Take care when moving the drawer, as the cable can easily be damaged.




18. Pull the guides out onto the drawer.

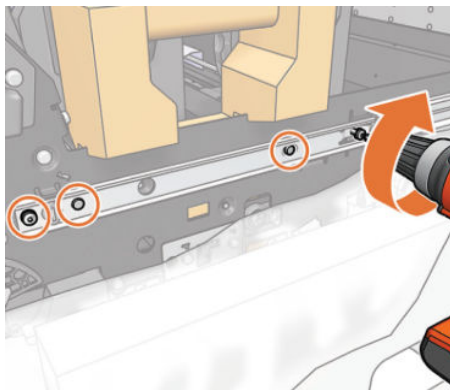


19. Remove the carton piece and tape from the right side.

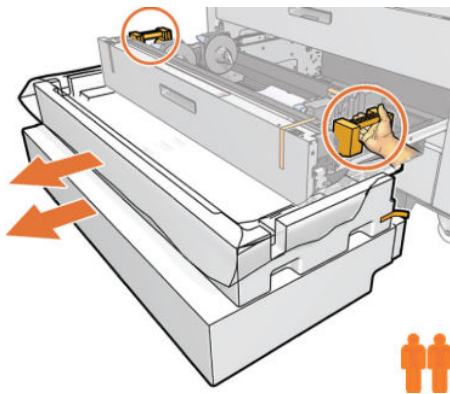


20. Attach the drawer to the guides with two T20 screws on each side.

 **IMPORTANT:** Ensure that the two preinstalled pins match the holes.

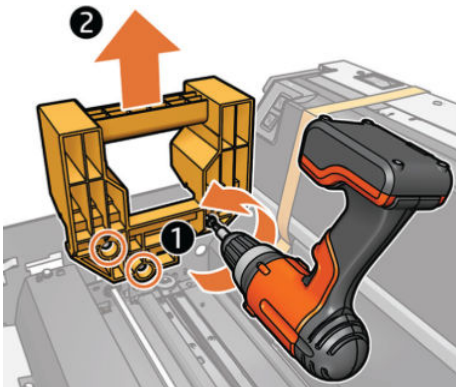


21. Hold the drawer by the orange handles and remove the foam.

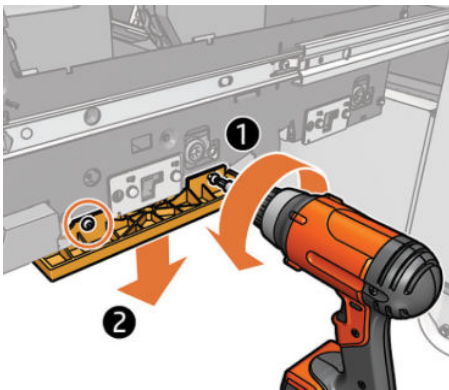


22. Remove the orange handles by removing the screws shown below.

 **NOTE:** The screws are on the inner side.



23. Remove the orange packaging pieces on both sides by removing the two screws.

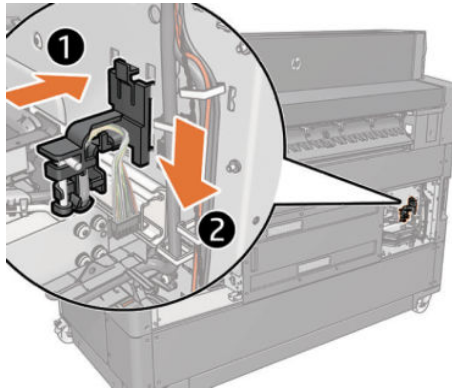


24. Close the drawer.

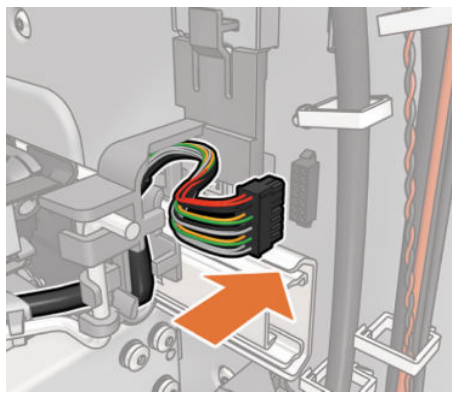
 **IMPORTANT:** Be careful with the cable.



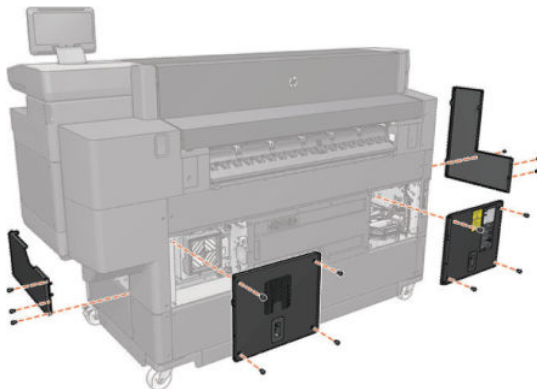
25. Connect the plastic piece to the rear of the printer: slot it into the holes and push down.



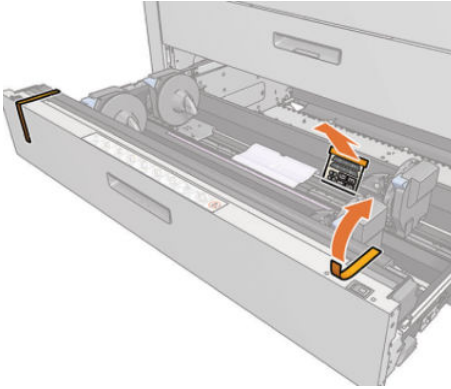
26. Connect the drawer cable to the socket at the rear of the printer.



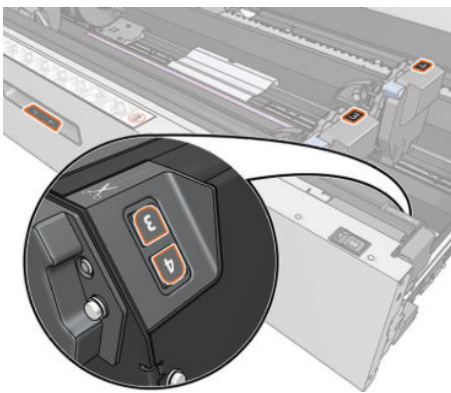
27. Put back all the covers.



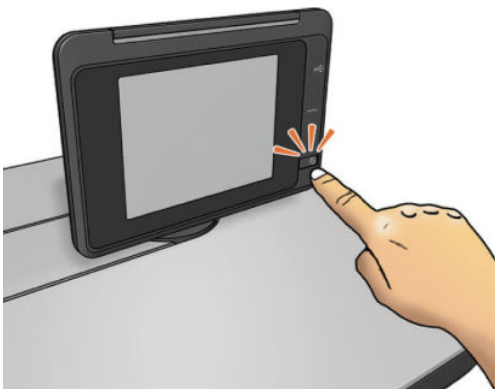
28. Remove the orange tapes and the label set.



29. Stick on the identifying labels for the roll number, at the front, on the hubs, and on the cut buttons.



30. Turn on the printer. It should recognize the installed drawers, and, if installing the printer for the first time, automatically start configuration. If not, go to the Service menu and select **Install/uninstall drawers**.

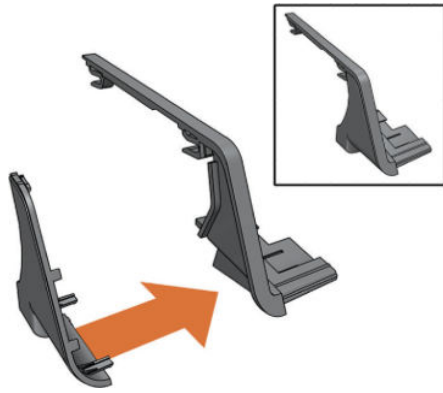


Install the top stacker if purchased as an accessory

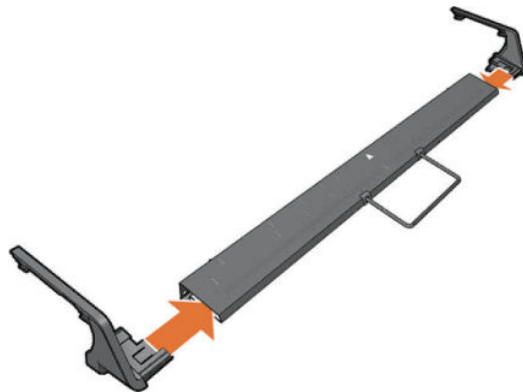
See the instructions included in the accessory box, or [Top stacker assembly instructions on page 1180](#).

Install the scanner loading table [MFP only]

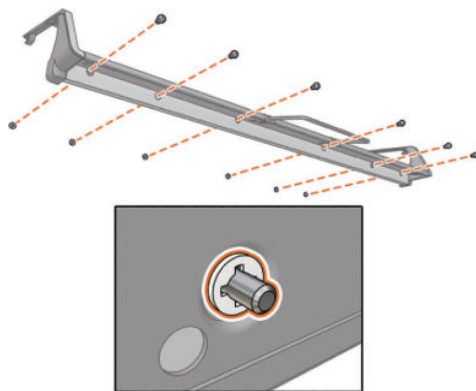
1. Assemble the end pieces by clipping the two parts together.



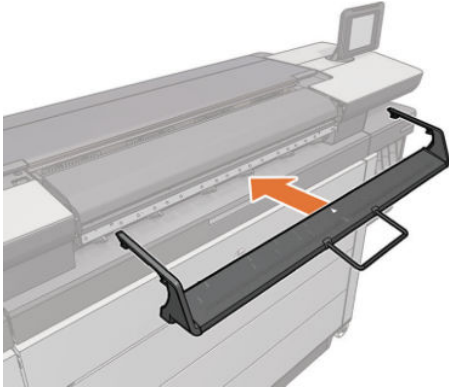
2. Place the two end pieces on the loading table.



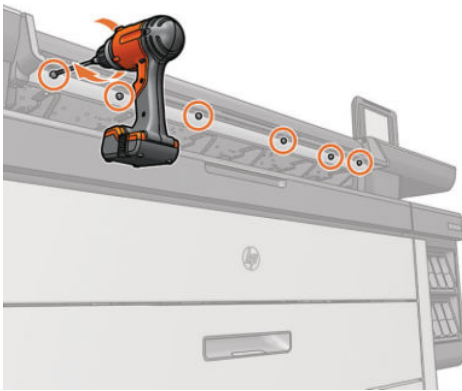
3. Place six screws with washers on the loading table.



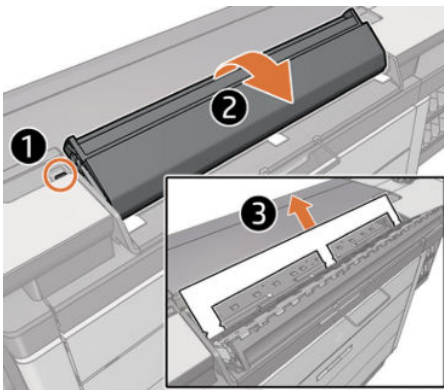
4. Place the loading table onto the scanner.



5. Attach the loading table using six screws with washers.



6. Open the scanner cover and remove the foam. Gently wipe the glass plate and the surrounding area with a lint-free cloth dampened with water.



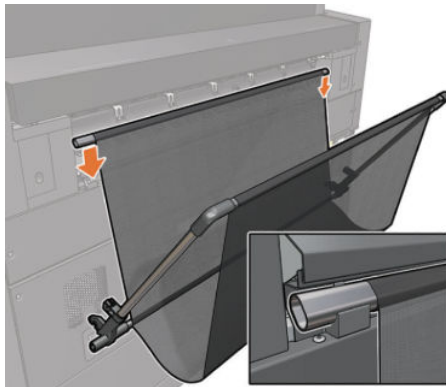
Install the basket



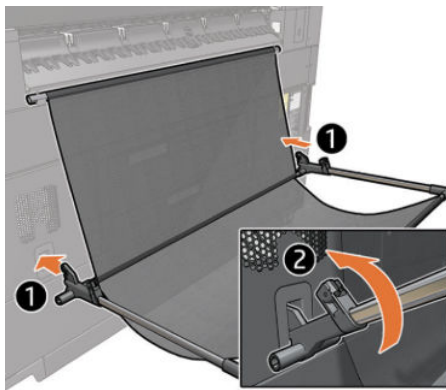
1. * Unfold the basket and insert the two bars into position.



2. * Insert bar number 1 in the printer slot.



3. * Place the basket into the printer slots in the horizontal position, then close it by turning until you hear it clip into place.

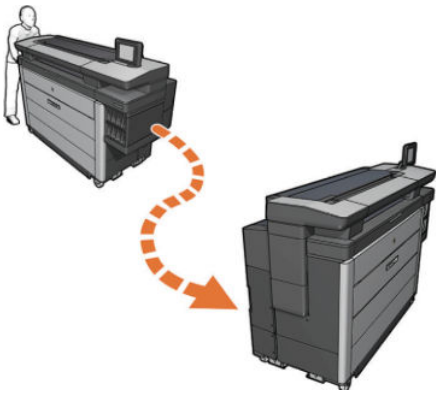


Connect the cable

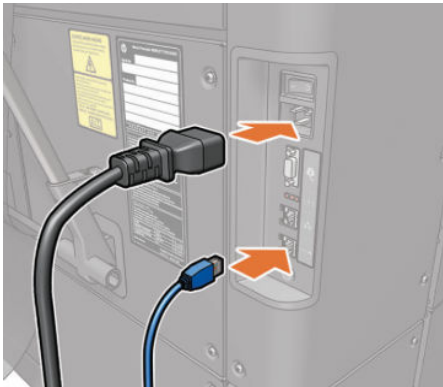


1. Move the printer to its final location.

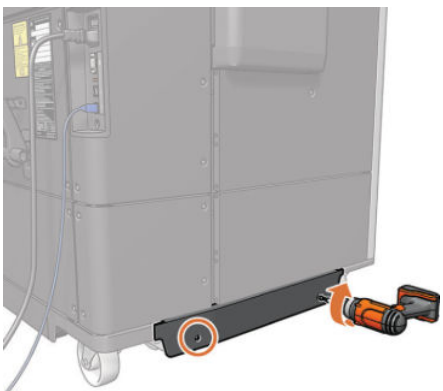
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2. Connect the LAN and power cables.



3. Place the foot cover and attach it, using two screws and washers.

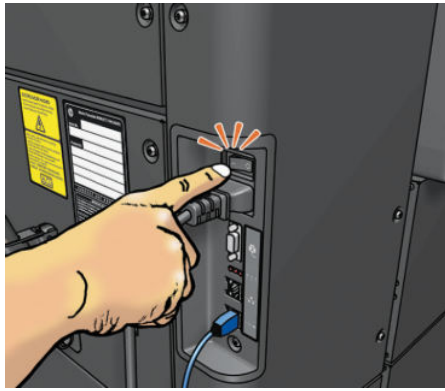


Start the printer

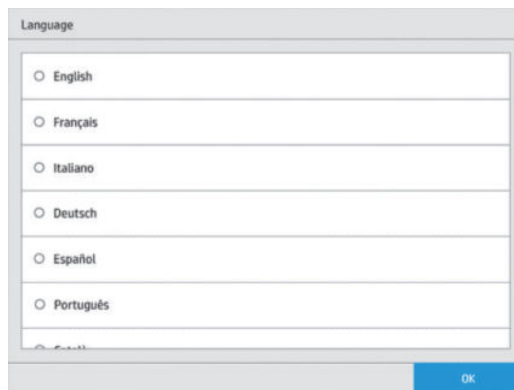


The start-up procedure is guided by the front panel. After the first step, wait until prompted by the printer before performing each action.

1. Turn the printer on, using the switch at the rear.



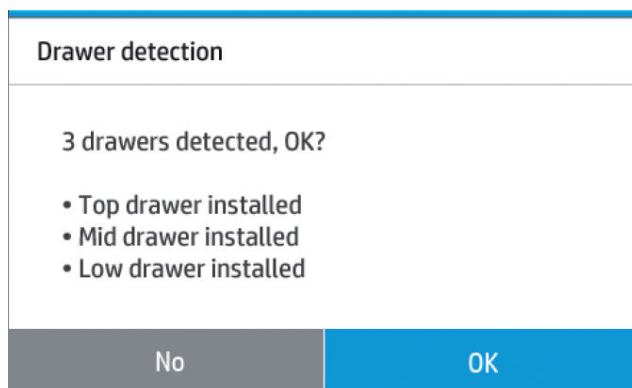
2. Select your language.



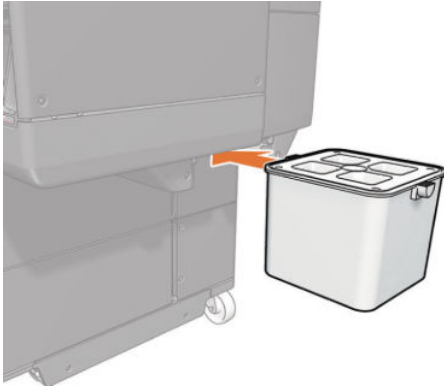
3. If required, perform a firmware update, which takes about 15 minutes.



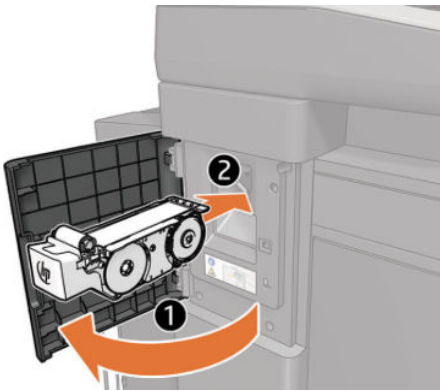
4. If you have installed one or more drawers, the printer should recognize them, and display them in the front panel. If not, turn off the printer, and check the drawer connections.



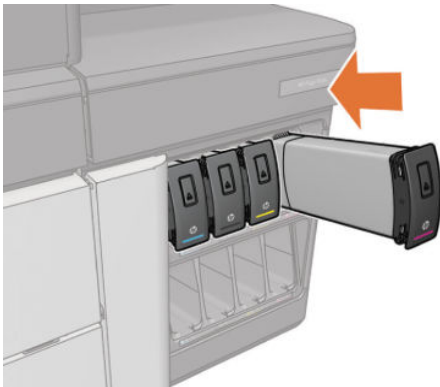
5. At the right-hand side, insert the cleaning container into the guides, and slide it all the way in.



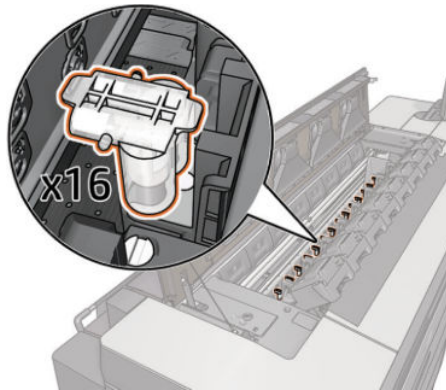
6. Install the maintenance cartridge by opening the cover and sliding it in. Close the cover.



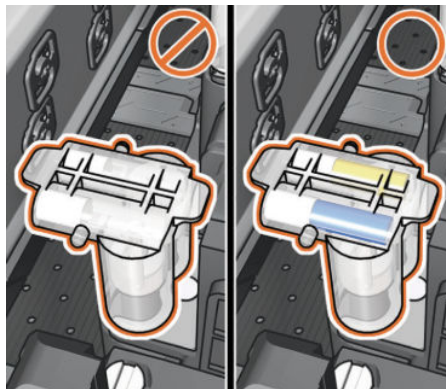
7. Insert four cartridges—in the upper row, if there are two rows.



8. Open the top cover and printhead latches, and check that all setup purgers are in place. Press **Purge** to continue with the purge.

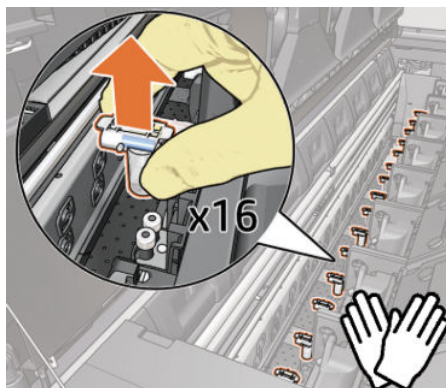


9. Check that all setup purgers have ink.

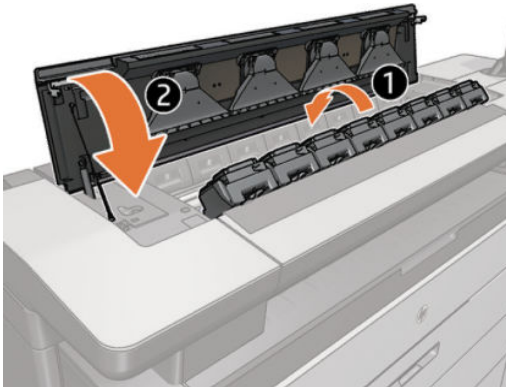


10. Remove the setup purgers.

CAUTION: Wear gloves, and take care when removing the purgers, as they contain ink.



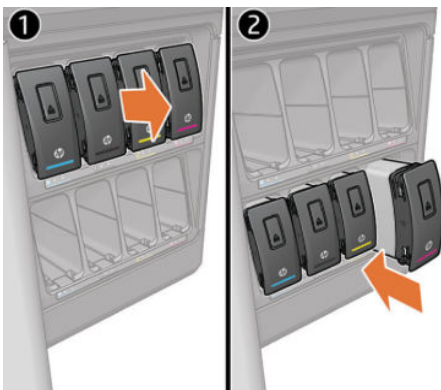
11. Close the printhead latches and top cover.



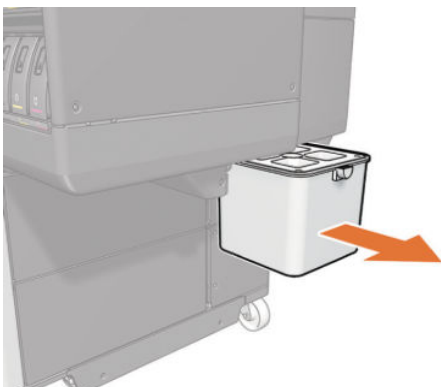
Install extra ink cartridges [5000 and 8000 series only]



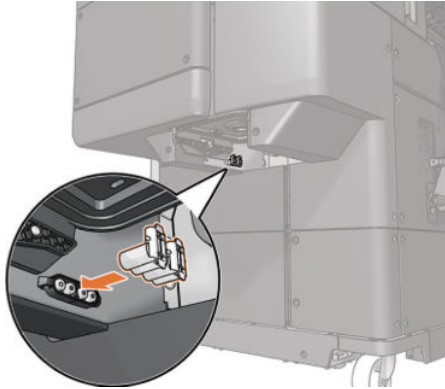
1. Move the cartridges from the upper to the lower row.



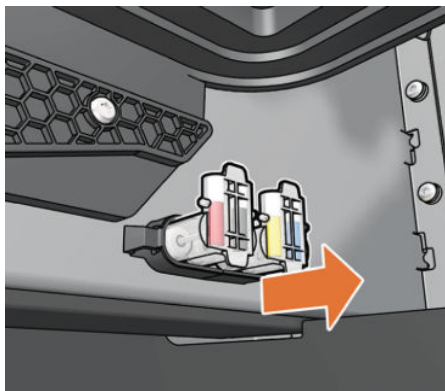
2. Remove the waste container.



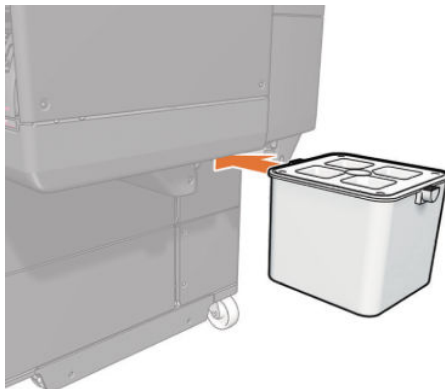
3. Place the two setup purgers found in the box. Press **Purge** to continue.



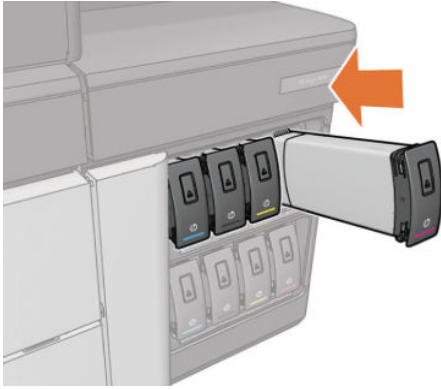
4. Check that the setup purgers have ink; if so, remove them.



5. Replace the waste container that you removed earlier.



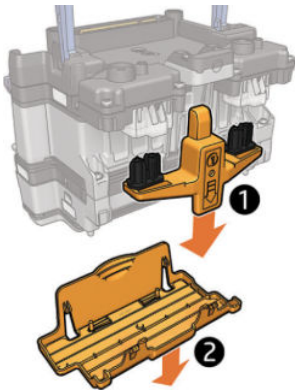
6. Insert the cartridges in the upper row.



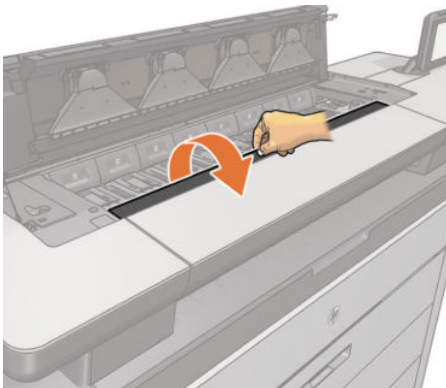
Install the printheads



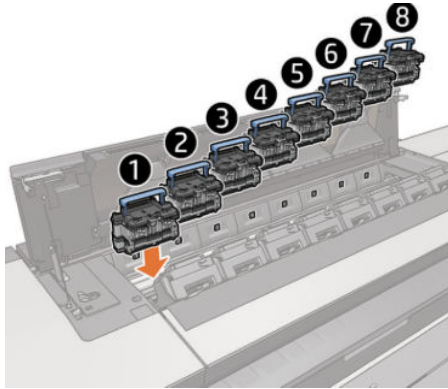
1. Remove the orange packaging from the printhead.



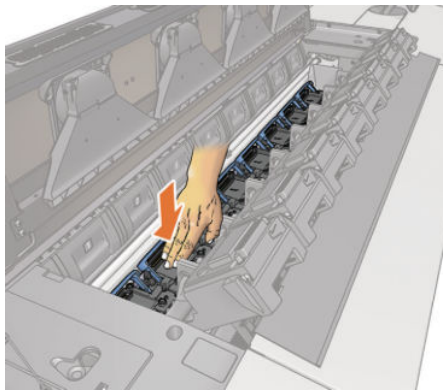
2. Open the top cover.
8000 series: Also open the print-bar cover.



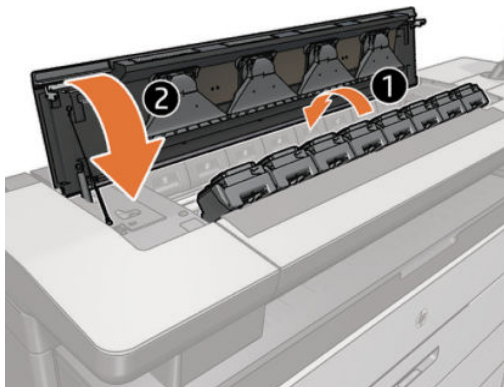
3. Install the eight printheads, from 1 to 8.




4. Press the printheads in firmly until you feel resistance.



5. Close the latch and the top cover.



6. The printheads will now purge for 80 minutes.

 **TIP:** You can take advantage of the time to install accessories.

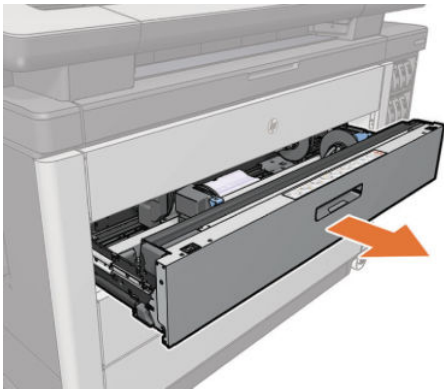


Load paper and calibrate

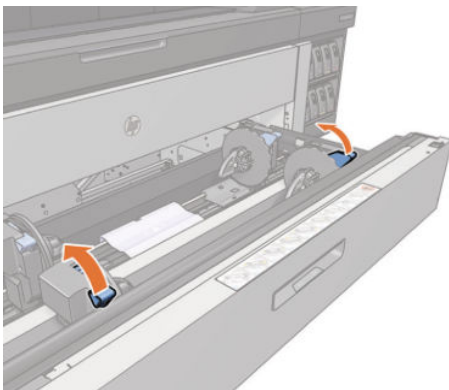


For correct printhead alignment and calibration, a roll of paper must be loaded, preferably 40 inches wide. For proper color calibration, the media to be loaded must be HP Matte Polypropylene, HP Universal Heavyweight Coated Paper, HP Gloss Poster Paper or HP Production Satin Poster Paper.

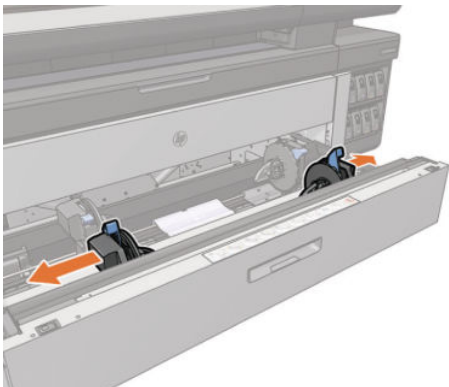
1. Open the drawer.



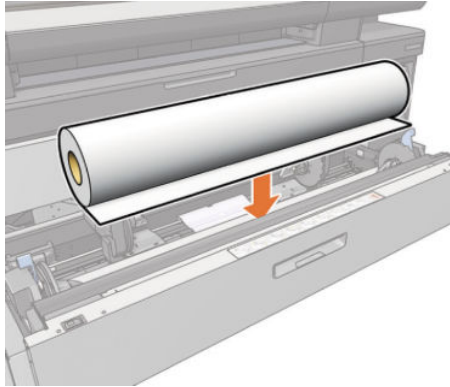
2. Open the left and right hub-locking levers.



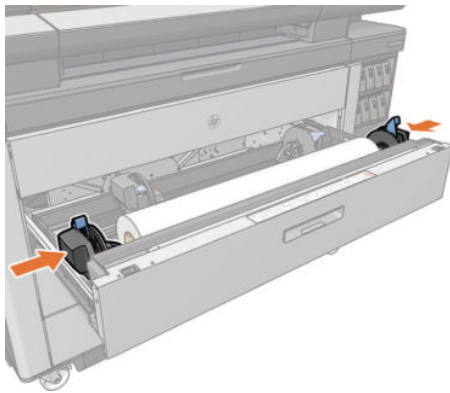
3. Move both hubs to the side to make room for the roll.



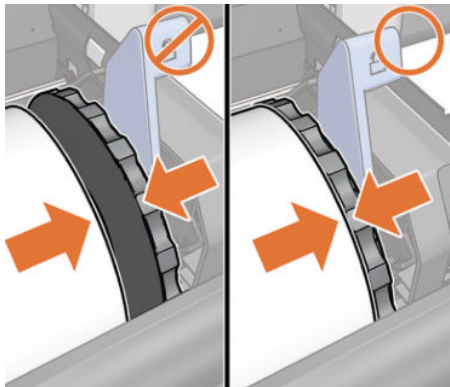
4. Place the roll provided in the box into the drawer between the hubs, with the paper edge as shown.



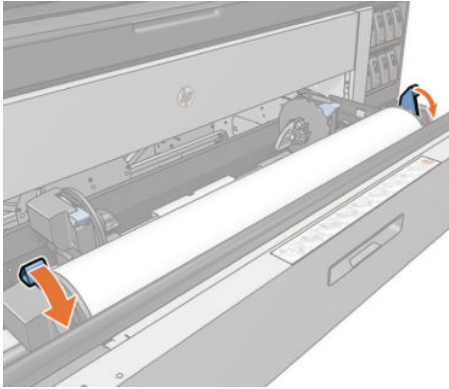
5. Slide the hubs back towards the center so that they engage with the roll.



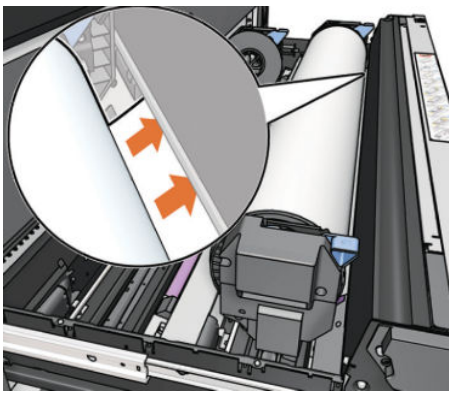
6. Ensure that the hubs are fitted tightly to the roll on both sides.



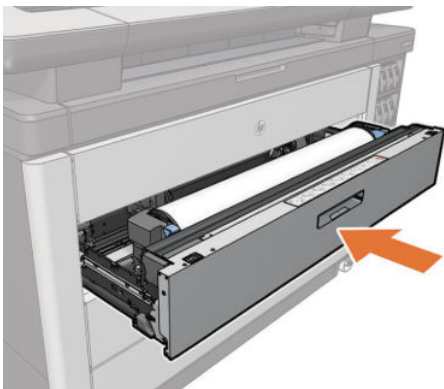
7. Close the locking levers on the left and right hubs.



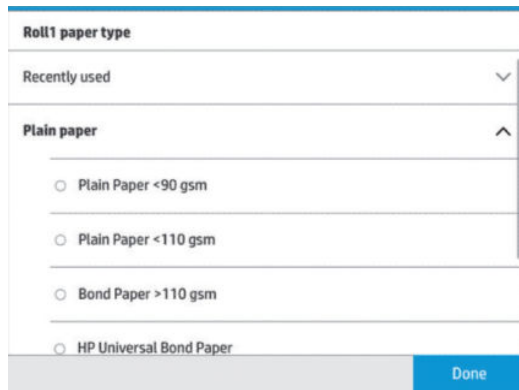
8. Feed the paper into the appropriate slot: the front slot for the front roll, the rear slot for the rear roll.




9. Close the drawer when the rolls are loaded.



10. In the front panel, choose the paper loaded: HP Production Matte Polypropylene, or alternatively HP Universal Heavyweight Coated Paper.



11. Calibration will take about 23–30 minutes, and 3.3 m of paper will be used to print three blank sheets.

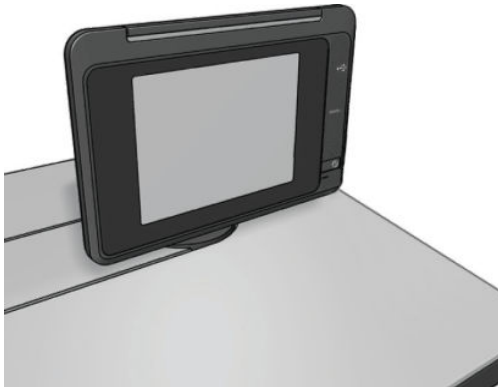
 **IMPORTANT:** Calibration must be performed under normal printing temperature conditions.



Connectivity



To connect the printer to the Internet, follow the instructions on the front panel.



 **NOTE:** The printer may restart if a firmware update is found and installed.



Install accessories

See the instructions included in the accessory box, or [Folder assembly instructions on page 1364](#) or [High-capacity stacker assembly instructions on page 1955](#), or [Top stacker assembly instructions on page 1180](#).

Generate an EOI report

To finish the installation process, you are highly recommended to register the printer by visiting <http://www.hp.com/go/pagewide-install> and completing the End-Of-Installation registration survey.

Registering the printer has a positive impact on the services provided including unit support and warranty entitlement.

4 Troubleshooting

- [Printer startup modes](#)
- [Printer troubleshooting tree](#)
- [Scanner troubleshooting tree](#)
- [Scanner CIS troubleshooting tree](#)
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- [Skew and wrinkle troubleshooting \(for printers with the Small-format speed upgrade activated\)](#)
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 - [Procedure](#)
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- [How to get paper jam history](#)
- [Ink cartridge and printhead problems](#)
 - [Cannot insert an ink cartridge](#)
 - [Cannot insert a printhead](#)
 - [Ink spillage present](#)
 - [The front panel recommends replacing or reseating an ink cartridge](#)
 - [The front panel recommends replacing or reseating a printhead](#)
 - [Warranty information](#)
- [How to remove air bubbles from an ink line using a syringe](#)
- [Print-quality problems](#)
 - [Initial print-quality troubleshooting actions](#)
 - [Print-quality troubleshooting tools](#)
 - [Optimization tools in detail](#)
 - [Diagnostic prints](#)


- [Other tools](#)
- [Print-quality issues by symptom](#)
- [Select optimal print quality](#)
- [Working with other commercially available papers](#)
- [Recommended HP papers](#)
- [Scan-quality problems](#)
 - [Banding problems](#)
 - [Image-quality problems](#)
 - [Dust problems](#)
 - [Stitching problems](#)
 - [Random vertical lines](#)
 - [Wrinkles or folds](#)
 - [Line discontinuities](#)
 - [Grain in area fills when scanning](#)
 - [Small color differences between adjacent CIS modules](#)
 - [Vertical light lines at the intersection between CIS modules](#)
 - [Variable line thickness or missing lines](#)
 - [Inaccurately reproduced colors](#)
 - [Color fringing](#)
 - [Clipping in dark or light areas](#)
 - [The Moiré effect](#)
 - [Flare in the image when scanning glossy originals](#)
 - [Vertical red and green bands over white or black background](#)
 - [Vibration](#)
 - [Horizontal periodical banding](#)
 - [Defocus, blurring and fading colors](#)
 - [Incorrect paper advance, skew during scanning, or horizontal wrinkles](#)
 - [Vertical black band 20 cm wide](#)
 - [The scanner damages some originals](#)
 - [Completely wrong colors](#)
 - [Vertical distortion](#)









- [Object replication \(ghosting\)](#)
- [Incorrect edge detection, mostly when scanning tracing paper](#)
- [A scanned image is very skewed](#)
- [Colors are different when copying an original or when printing a previously scanned original](#)
- [Scanner diagnostic plot](#)
 - [Prepare the product and the paper to print the diagnostic sheet](#)
 - [Visual check for errors while printing the diagnostic sheet](#)
 - [Scan or copy the diagnostic plot](#)
 - [Monitor calibration](#)
 - [Save the diagnostic plot for future use](#)
- [Top-stacker problems](#)
- [Connectivity problems](#)
 - [General network troubleshooting](#)
 - [Printer discovery](#)
 - [Connectivity configuration page](#)
 - [LEDs](#)
 - [Link troubleshooting](#)
 - [Link configuration methods](#)
 - [Reset network parameters](#)
 - [Automatic troubleshooting](#)
 - [Problems with proxy](#)
 - [Security](#)
- [Firmware upgrades](#)
 - [How to upgrade](#)
 - [Embedded Web Server](#)
 - [USB upgrade](#)
 - [Upgrading when booted in diagnostic mode](#)

Printer startup modes

The printer can be started in various special modes that provide access to specific functions not available in normal mode. These startup modes can be activated only when powering the printer on.

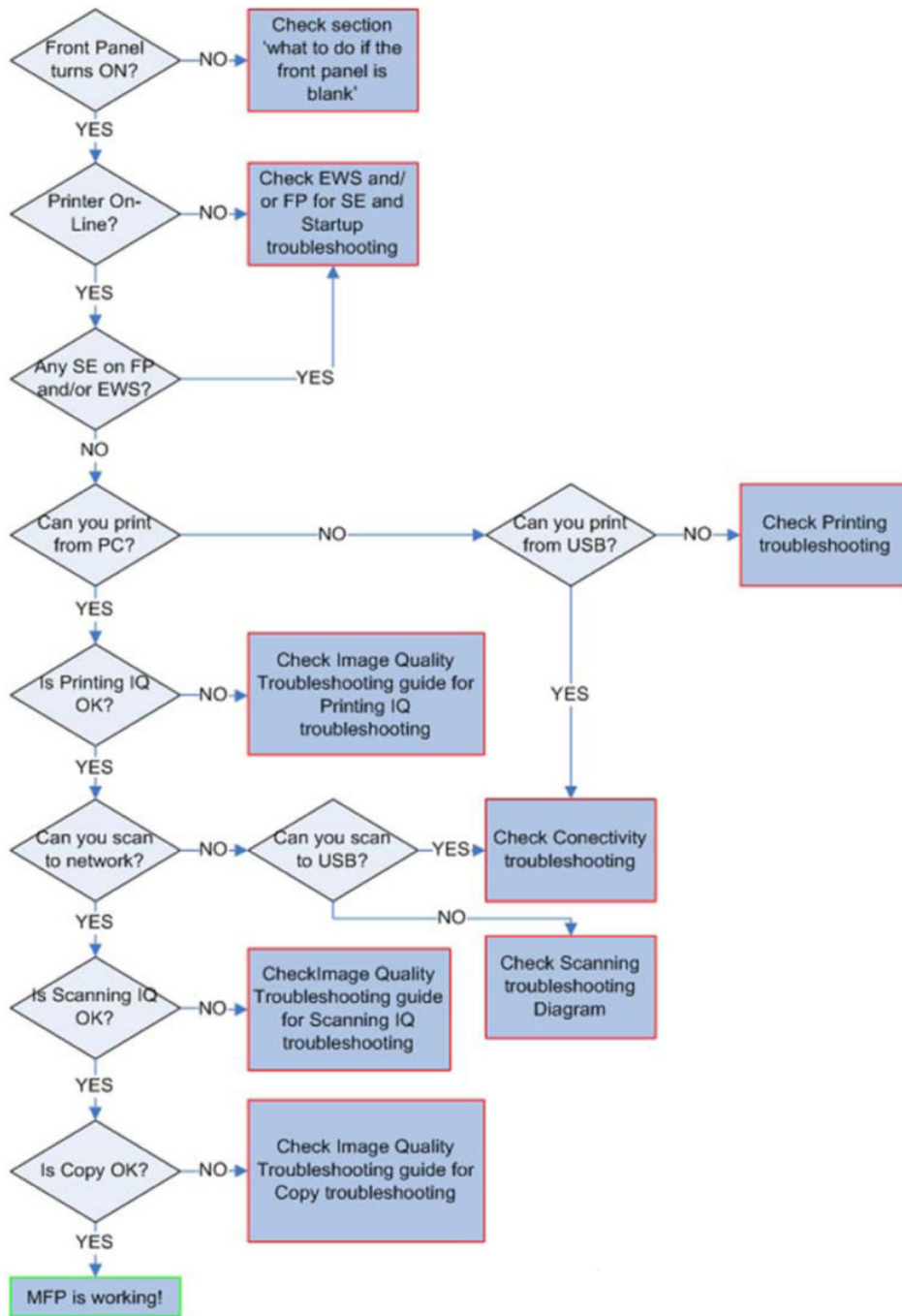
To activate a startup mode:

1. Ensure that the printer is completely turned off (not receiving power).
2. Turn on the printer.
3. When the  icon at the top left of the front panel display is lit, press it.
4. When the other icons at the left and right of the front panel display are lit, press some of them in the correct sequence (see below) to activate the startup mode.
5. The front panel acknowledges the signal by blinking the icons three times, then restarts the printer in the requested startup mode.

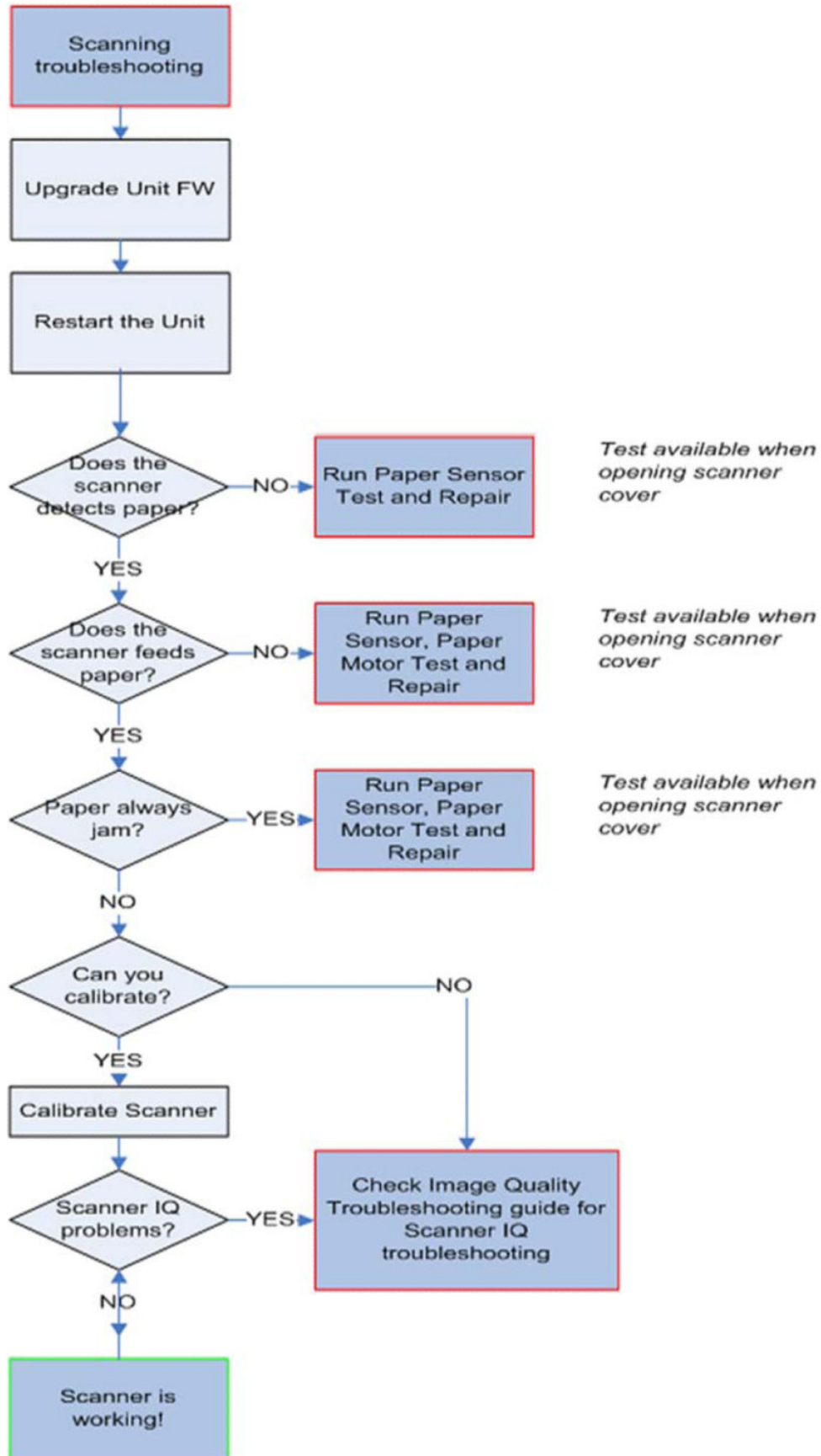
Startup mode	Activation sequence (plus the power key)	Intended user
Front-panel language selection	 	Customer
Diagnostic	  	Service engineer
	  	Customer

See [Entering the Diagnostics menu on page 458](#).

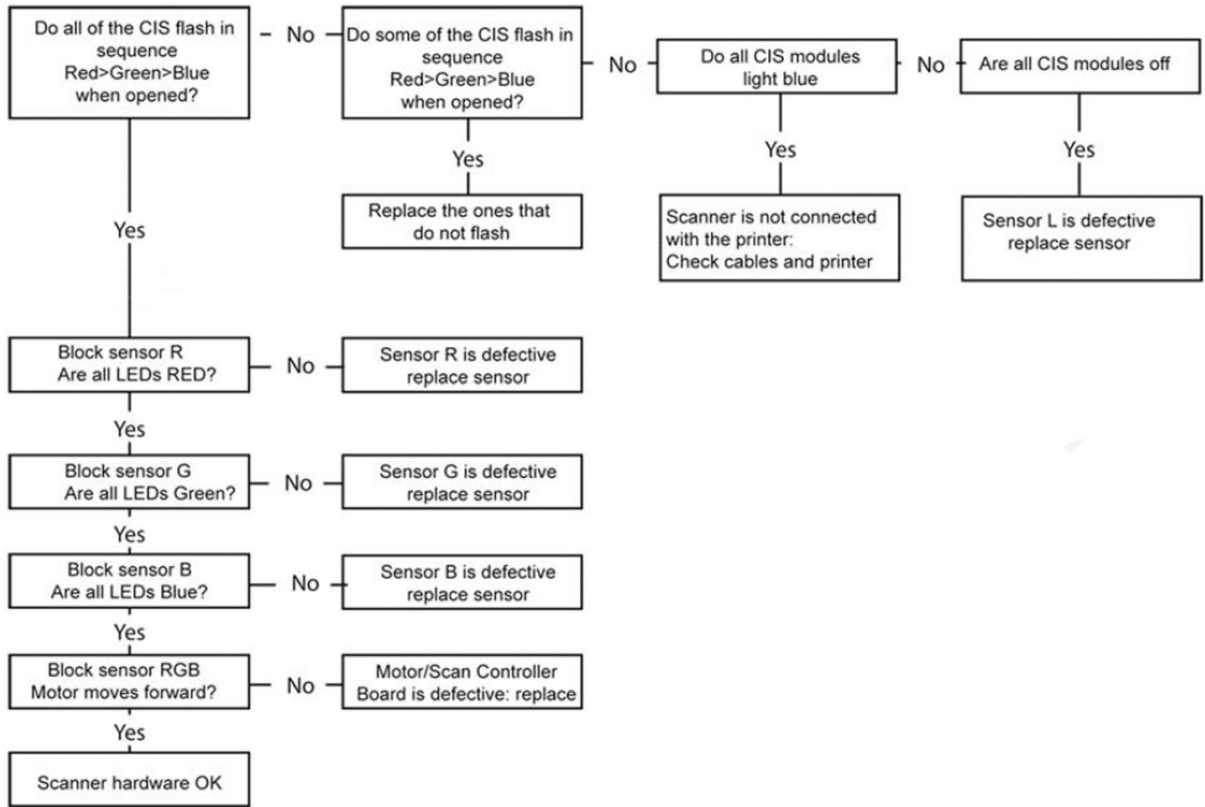
Printer troubleshooting tree



Scanner troubleshooting tree



Scanner CIS troubleshooting tree



Paper-handling problems

Paper-advance problems

Issue	Service part name	Call agent	Service engineer
Alignment between dies is not constant along the print	N/A	If the issue persists after printer restart, your support representative will repair the printer on site.	At the front panel, select Settings > Service menu > Calibrations > Paper advance calibration . After this calibration, align the printheads. NOTE: If alignment is constant along but not across the print, paper advance calibration is not needed: just printhead alignment.
Line accuracy is wrong, printed image is longer or shorter than expected	N/A	If the issue persists after printer restart, your support representative will repair the printer on site.	At the front panel, select Settings > Service menu > Calibrations > Image length calibration .
Horizontal banding in area fills	Belt motor and gears	If the issue persists after printer restart, your support representative will repair the printer on site.	Replace the belt motor and gears.
Belt motor: Noise level higher than expected	Belt motor and gears	If the issue persists after printer restart, your support representative will repair the printer on site.	Replace the belt motor and gears.
Belt motor: Movement blocked	Belt motor	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that there is no paper jam, and the paper path is clear. 2. Check that the belt motor is not blocked by anything restricting its movement. You are recommended to perform the service diagnostics test. 3. Check the encoder cables. 4. Replace the belt motor. 5. Replace the Paper Advance PCA.
Servo shutdown	Belt motor	If the issue persists after printer restart, your support representative will repair the printer on site.	Check that the mobile parts moved by the belt motor are unblocked and able to complete the movement; otherwise, replace the motor.
Belt motor: Direction test fault	Belt motor	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that the encoder is plugged in, unbroken, and undamaged. 2. Check the motor-encoder assembly using service diagnostics; replace it if necessary.
Belt motor: Electrical failure	Belt motor	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that the belt motor assembly cable is undamaged and correctly connected to the Engine PCA. 2. Replace the belt motor. 3. Replace the Paper Advance PCA.

Paper-advance problems (continued)

Issue	Service part name	Call agent	Service engineer
Belt motor: Driver fault	Belt motor	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Connect the feed roller motor to ground. 2. Check that the belt motor assembly cable is undamaged and correctly connected to the Engine PCA. 3. Replace the belt motor. 4. Replace the Paper Advance PCA.
Paper Encoder PCA: Voltage zero or short-circuited	Analog Encoder PCA	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that the Paper Encoder PCA cable is unbroken, undamaged, and correctly connected; replace it if necessary. 2. Check that the Paper Encoder PCA is unbroken and undamaged. 3. Replace the Paper Encoder PCA.
Paper Encoder PCA: Paper sensor calibration failed	Analog Encoder PCA	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Recalibrate the Analog Encoder (also called Print Zone encoder). 2. Replace the Paper Encoder PCA.
Problem finding the drive roller zero	Analog Encoder PCA	If the issue persists after printer restart, your support representative will repair the printer on site.	Replace the Paper Encoder PCA.
Paper Encoder PCA: Direction test	Analog Encoder PCA	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that the Paper Encoder PCA cable is unbroken, undamaged, and correctly connected; replace it if necessary. 2. Check that the Paper Encoder PCA is unbroken and undamaged. 3. Replace the Paper Encoder PCA.
Paper Advance PCA: Safety interlock issue	Merlin	Check that all covers and doors are properly closed. If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check whether the front panel is displaying the close-cover message or a system error related to switch cover. 2. Check that the cable and switch interlock are unbroken and correctly connected; replace if necessary. 3. Check the switch connector on the Central Distribution PCA. 4. Replace the Paper Advance PCA. 5. Replace the Central Distribution PCA.
Paper Advance PCA: 24V open fuse	Merlin	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check the 5V power supply. 2. Replace the Paper Advance PCA.
Paper Advance PCA: Check VCC 5V	Merlin	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check Micci CLK presence. 2. Replace the Paper Advance PCA.

Paper-advance problems (continued)

Issue	Service part name	Call agent	Service engineer
Debug port or spare port short-circuited	Merlin	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Locate the J40 paper output diverter cable. 2. Check that the cable is unbroken and undamaged. 3. Replace the Paper Advance PCA.
Paper jam: Paper arrived earlier or later than expected	TOF sensor	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that the TOF sensor is correctly placed. 2. Check that the cable is unbroken and undamaged. 3. Replace the TOF sensor.
Paper jam: Paper detected for too long	TOF sensor	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that the TOF sensor is correctly placed. 2. Check that the cable is unbroken and undamaged. 3. Replace the TOF sensor.
Paper jam: Paper output too early	TOF sensor	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that the TOF sensor is correctly placed. 2. Check that the cable is unbroken and undamaged. 3. Replace the TOF sensor.
Paper jam: Paper arrived earlier or later than expected	Paper output sensor	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that the TOF sensor is correctly placed. 2. Check that the cable is unbroken and undamaged. 3. Replace the TOF sensor.
Paper jam: Paper detected for too long	Paper output sensor	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that the paper output sensor is correctly placed. 2. Check that the cable is unbroken and undamaged. 3. Replace the paper output sensor.
Paper jam: Paper output too early	Paper output sensor	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that the paper output sensor is correctly placed. 2. Check that the cable is unbroken and undamaged. 3. Replace the paper output sensor.
Paper sensors: Connector or cable issue	Paper sensors	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that the cables and connectors from the paper sensors to the Paper Advance PCA are properly connected, unbroken, and undamaged. 2. Replace cables or connectors as necessary. 3. Replace the paper sensors. 4. Replace the Paper Advance PCA.

Paper-advance problems (continued)

Issue	Service part name	Call agent	Service engineer
Paper sensors: Voltage zero or short-circuited	Paper sensors	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that the paper sensor cables are properly connected, unbroken, and undamaged. 2. Replace cables as necessary. 3. Replace the paper sensors. 4. Check that the Paper Advance PCA is unbroken and undamaged. 5. Replace the Paper Advance PCA.
Paper loop or digital belt encoder: Connector or cable issue	Paper loop or digital belt encoder	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that the cables and connectors from the paper loop encoder to the Paper Advance PCA are properly connected, unbroken, and undamaged. 2. Check that the cables and connectors from the digital belt encoder to the Paper Advance PCA are properly connected, unbroken, and undamaged. 3. Replace cables or connectors as necessary. 4. Replace the paper loop encoder. 5. Replace the digital belt encoder. 6. Replace the Paper Advance PCA.
Paper loop or digital belt encoder: Voltage zero or short-circuited	Paper loop or digital belt encoder	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that the paper loop encoder cable is properly connected, unbroken, and undamaged. 2. Check that the digital belt encoder cable is properly connected, unbroken, and undamaged. 3. Replace cables as necessary. 4. Replace the paper loop encoder. 5. Replace the digital belt encoder. 6. Check that the Paper Advance PCA is unbroken and undamaged. 7. Replace the Paper Advance PCA.

- **Incorrect page length:** Service engineers can perform page-length calibration.
- **Incorrect top margin:** Service engineers can perform top-margin calibration.
- **Paper wrinkles:**
 - At paper-loop input: The back-tension algorithm is not working properly.
 - In the paper-loop roof area: You may find that you can repeat the print with no problems. Otherwise, try printing on a different paper type (such as 90 g/m² bond paper).

- **Phantom paper jam:** If the printer reports a paper jam when there is no jam, one of the sensors or cables should be repaired, depending on the report.
- **Paper jam:** Check that nothing is blocking the paper path, including broken or wrongly-assembled printer parts.

Vacuum problems

Issue	Service part name	Call agent	Service engineer
Ink smears when printing on plain paper with high ink density	N/A	Suggest printing on poster or heavy paper, and increasing margins.	No action
Paper wrinkles in high humidity	N/A	Remove the first layer of paper.	No action
Insufficient vacuum due to clogging with paper fibers and aerosol; could result in ink smears on paper that tends to curl	Cleaning tool	Your support representative will repair the printer on site.	Clean non-belt area of the platen with a service tool.
Wrong altitude setting; could result in ink smears due to insufficient vacuum	N/A	Your support representative will repair the printer on site.	Run the altitude calibration test. If the issue persists, check the altitude defined in the service menu; if the altitude is incorrect, change it manually.
Insufficient vacuum due to fan malfunction; could result in ink smears on paper that tends to curl	Vacuum fan assembly and/or EOLA + Mylar/ banner for vacuum calibration	If the issue persists after printer restart, your support representative will repair the printer on site.	Run the vacuum verification test to identify the affected vacuum module, then replace it and recalibrate.
Vacuum Fan Driver PCA 1 malfunction	EOLA	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check the cable and connectors from Vacuum Fan Driver PCA 1 to the Central Distribution PCA. 2. Replace Vacuum Fan Driver PCA 1.
Vacuum Fan Driver PCA 1 / Vacuum Fan Driver PCA 2 presence	EOLA	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that fans 1 and 2 are clean and unblocked. 2. Check that the Vacuum Fan Driver PCA cable is undamaged, unbroken, and correctly connected to the Central Distribution PCA; otherwise, replace the cable.
Vacuum Fan Driver PCA 2 malfunction	EOLA	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check the cable and connectors from Vacuum Fan Driver PCA 2 to the Central Distribution PCA. 2. Replace Vacuum Fan Driver PCA 2.
Vacuum Fan Driver PCA 3 presence	EOLA	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that the fan spins properly and that nothing is blocking it. 2. Check the cables and connectors to the Vacuum Fan Driver PCA. 3. Replace the Vacuum Fan Driver PCA.
Vacuum Sensor PCA presence	Vacuum Sensor PCA	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that the vacuum sensor to Paper Advance PCA cables and connectors are unbroken, undamaged, and properly connected. 2. Replace cables or connectors as needed. 3. Replace the vacuum sensor. 4. Replace the Paper Advance PCA.

Vacuum problems (continued)

Issue	Service part name	Call agent	Service engineer
Vacuum Sensor PCA: Voltage zero or short-circuited	Vacuum Sensor PCA	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that the Vacuum Sensor PCA cable is unbroken, undamaged, and properly connected; replace it if necessary. 2. Check that the Vacuum Sensor PCA is unbroken and undamaged. 3. Replace the Vacuum Sensor PCA.
Vacuum fan 1 malfunction	Vacuum fan assembly + Mylar/banner for vacuum calibration	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that vacuum fan 1 is clean and unblocked; clean it if necessary. 2. Check that the vacuum fan cable is undamaged and correctly connected to the Vacuum Fan Driver PCA. 3. Recalibrate the vacuum. 4. Replace the vacuum fan.
Vacuum fan 1 overcurrent	Vacuum fan assembly	If the issue persists after printer restart, your support representative will repair the printer on site.	Check the vacuum fan 1 current; replace the fan if necessary.
Vacuum fan 1 pressure	Vacuum fan assembly	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that pipes and tubes are unbroken and undamaged; clean them if necessary. 2. Check that vacuum fan 1 runs properly; if not, replace the fan.
Vacuum fan 2 malfunction	Vacuum fan assembly + Mylar/banner for vacuum calibration	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that vacuum fan 2 is clean and unblocked; clean it if necessary. 2. Check that the vacuum fan cable is undamaged and correctly connected to the Vacuum Fan Driver PCA. 3. Recalibrate the vacuum. 4. Replace the vacuum fan.
Vacuum fan 2 overcurrent	Vacuum fan assembly	If the issue persists after printer restart, your support representative will repair the printer on site.	Check the vacuum fan 2 current; replace the fan if necessary.
Vacuum fan 3 malfunction	Vacuum fan assembly + Mylar/banner for vacuum calibration	If the issue persists after printer restart, your support representative will repair the printer on site.	<ol style="list-style-type: none"> 1. Check that vacuum fan 3 is clean and unblocked; clean it if necessary. 2. Check that the vacuum fan cable is undamaged and correctly connected to the Vacuum Fan Driver PCA. 3. Recalibrate the vacuum. 4. Replace the vacuum fan.
Vacuum fan 3 overcurrent	Vacuum fan assembly	If the issue persists after printer restart, your support representative will repair the printer on site.	Check the vacuum fan 3 current; replace the fan if necessary.

Skew and wrinkle troubleshooting (for printers with the Small-format speed upgrade activated)

Scope

This procedure is intended to guide support engineers to troubleshoot and solve PageWide XL printer skew and wrinkle problems. It includes information on how to run the basic diagnostics as well as how to perform the Small-format speed upgrade and how to use the Media Loop and drawer roll assistant adjustment to improve performance and minimize skew.

This process is specifically for printers with the Small-format speed upgrade ACTIVATED. To troubleshoot printers without the upgrade, please refer directly to [Media feed directional skew adjustment on page 232](#)

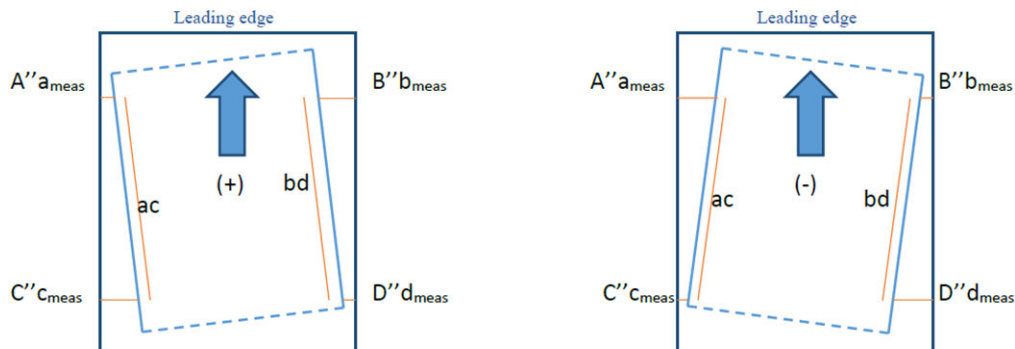
Symptoms

This section applies to printers showing one of the following issues:

- Image skew on printed pages shorter than 1 m long is above $\pm 3\text{mm/m}$; or maximum lateral displacement is above 3mm for longer pages
- Wrinkles (i.e. creases along paper advance) are generated on the printed page to the point that print out is permanently marked

Image Skew is measured as follows:

$$\frac{1}{2} \cdot \left(\frac{C''c_{meas} - A''a_{meas}}{ac} + \frac{B''b_{meas} - D''d_{meas}}{bd} \right) \cdot 1000 \text{ [mm/m]}$$



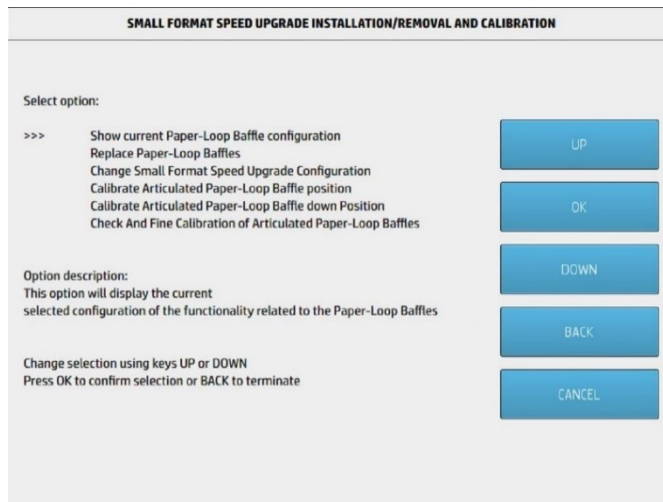
Procedure

As a default process, follow the steps listed below. In case the skew is not solved please contact HP Support for further assistance.

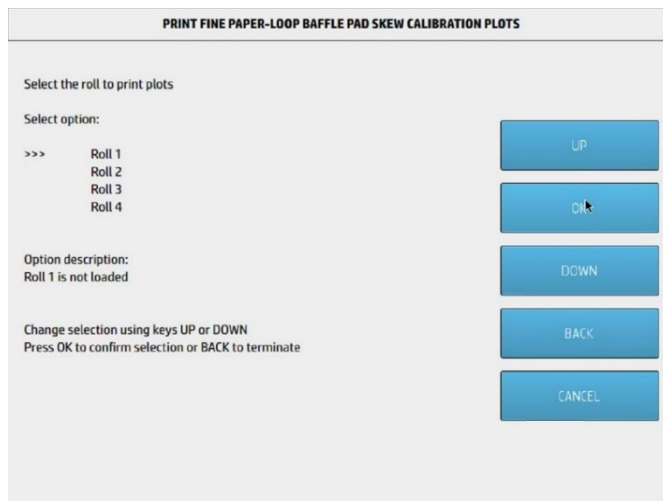
1. Run Check and Fine Calibration of Articulated Paper-Loop Baffle

This check process will detect the root cause of the skew/wrinkle issue by focusing on the Small-format speed upgrade configuration (plots shorter than 700 mm), or Media loop/Drawer configuration (plots longer than 700 mm).

1. Go to: Service Menu >> Hardware Utilities >> Configure Small Format Speed Upgrade >> Check And Fine Calibration of Articulated Paper-Loop Baffles.



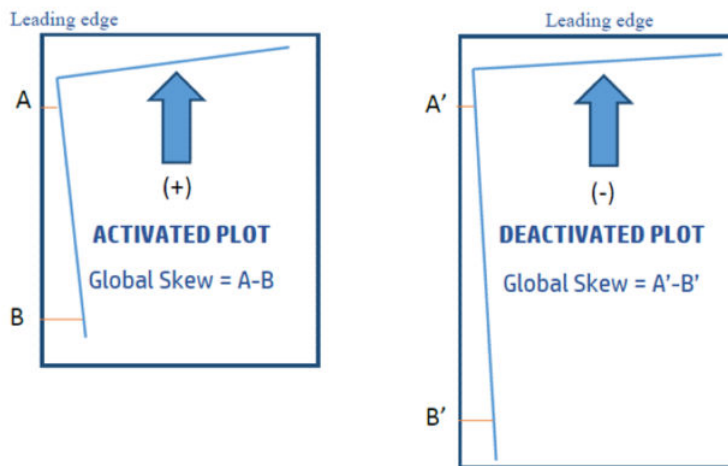
2. Load the media type the customer is complaining about.
3. Select the roll where you have loaded the media.



4. Six pages will come out of the printer (only the 3rd and 6th will be printed on and used to define the root cause of the skew).

- Check the Global Skew of the ACTIVATED plot (the shorter one) and the DEACTIVATED plot (the longer one) by measuring distances A and B, and A' and B', respectively.

Global Skew is defined as the difference between A and B (or A' and B') as shown in the picture below.



A skew issue exists if the value of GLOBAL SKEW is above ± 1.5 mm.

- Depending on which plot has a skew/wrinkle issue, take action according to the instructions in the table below.

ACTIVATED PLOT	DEACTIVATED PLOT	
Plot length < 700 mm (< 27.5 inches)	Plot Length \geq 700 mm (\geq 27.5 inches)	Actions to take
OK	OK	No issue
Skew/wrinkles	Skew/wrinkles	<ol style="list-style-type: none"> Run the 2. Skew Test on page 140 Run the 3. Fine adjustment process (Small-format speed upgrade) on page 143
OK	Skew/wrinkles	<ol style="list-style-type: none"> Run the 2. Skew Test on page 140 Run the 3. Fine adjustment process (Small-format speed upgrade) on page 143
Skew/wrinkles	OK	<ol style="list-style-type: none"> Run the 3. Fine adjustment process (Small-format speed upgrade) on page 143

2. Skew Test

Test allows a check of skew parameters related both to printer and drawer. Test will report the skew the paper is receiving from the belts as well as an estimation of the curvature on the paper advance due to the belts.

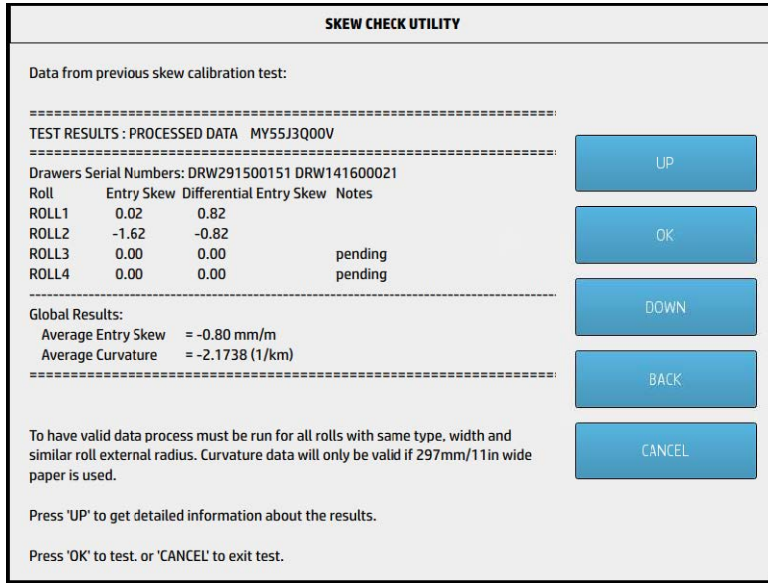
To get valid data for curvature, it is necessary to perform the check with narrow media covering only the two central belts (i.e. 11in, 297mm, or 310mm wide paper).

Test must be run as well for all roll slots available on the printer using the same paper type and a similar roll radius.

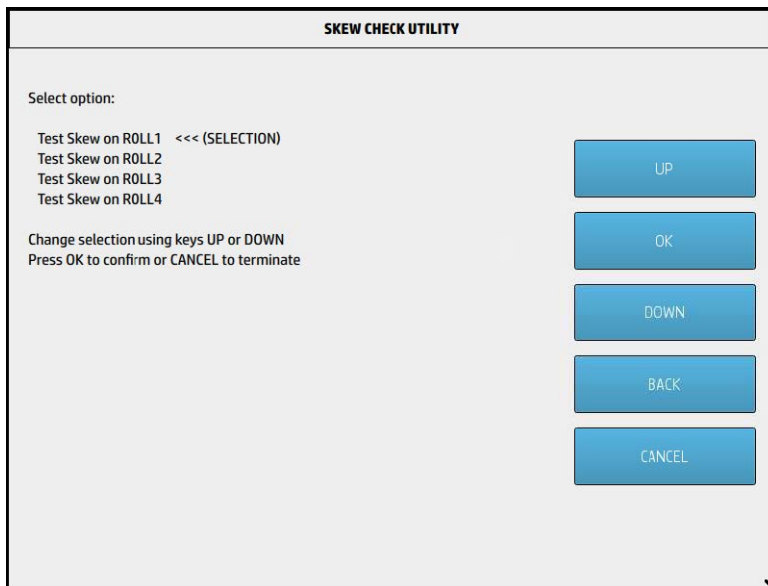
Note that test has some variability; thus, rerunning it will lead to results that may differ slightly from previous executions. This is normal.

To execute the test, proceed as follows:

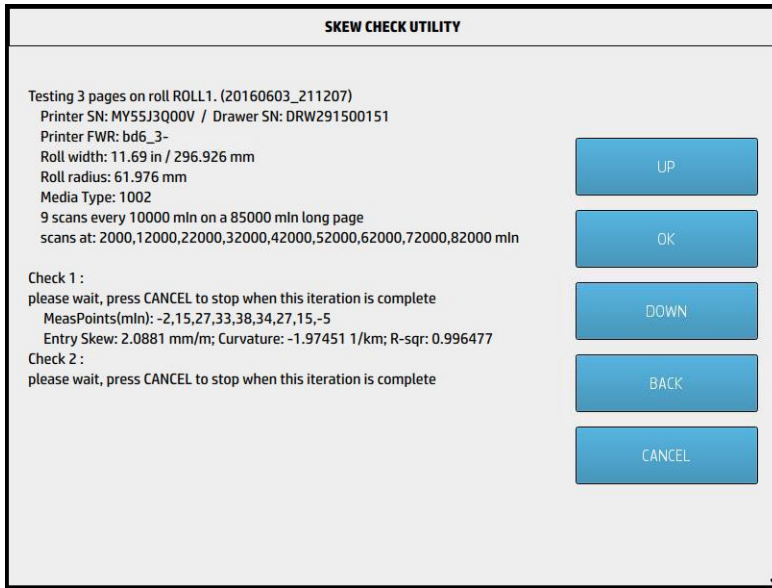
1. Go to the Service Menu > **Calibrations** > **Skew check utility**.
2. The main screen will show the summary of the last tests that were performed. Pressing the 'Up' key will let you see a more detailed summary.



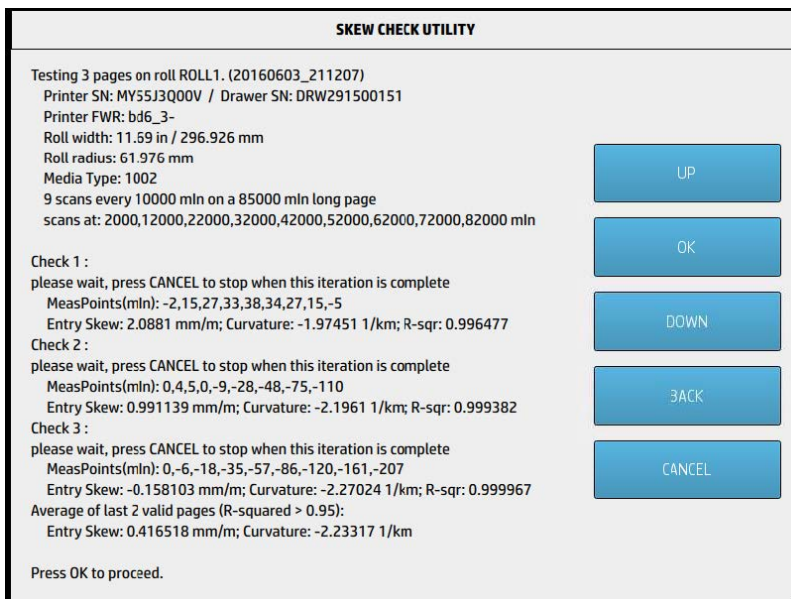
3. Make sure paper is loaded on the roll slot to be tested. If not, this is the right moment to open the drawer and load paper.
4. Press 'OK' to start testing.
5. Select the roll slot to be tested by pressing the 'UP' & 'DOWN' keys. Press 'OK' when done.



6. Test will eject 3 pages and measure them with the Tetris sensor. Note that in case data does not correlate well enough, page measurement will be retried up to 3 times. Test can be cancelled by pressing the 'CANCEL' key while scanning a page. The scan for that page will end and the test will be aborted.



7. Once check is done, averaged values will be shown on the front panel. Press 'OK' when done to go back to the main screen.



8. Repeat steps 3 to 7 for each roll slot available on the printer.
9. Finally, the test summary will be shown on the main screen
Note down the following data from the main screen.

SKEW CHECK UTILITY

Data from previous skew calibration test:

=====

TEST RESULTS : PROCESSED DATA MY55J3Q00V

=====

Drawers Serial Numbers: DRW291500151 DRW141600021

Roll	Entry Skew	Differential Entry Skew	Notes
ROLL1	0.02	0.82	
ROLL2	-1.62	-0.82	
ROLL3	0.00	0.00	pending
ROLL4	0.00	0.00	pending

Global Results:

Average Entry Skew	-0.80 mm/m
Average Curvature	-2.1738(1/km)

=====

To have valid data process must be run for all rolls with same type, width and similar roll external radius. Curvature data will only be valid if 297mm/11in wide paper is used.

Press 'UP' to get detailed information about the results.

Press 'OK' to test, or 'CANCEL' to exit test.

UP

OK

DOWN

BACK

CANCEL

Below the 'Notes' area, comments may appear indicating that test requirements were not fully met for each roll such as:

- "Pending:" when no data available for the roll
- "Not on same date:" when some test data is not from the same day as the last one performed.
- "Not on same media type:" when tested with a media type different from the last roll tested.
- "Not using similar paper width:" when tested with a paper width that differs too much from that of the last roll tested.
- "Not using similar roll radius:" when tested with a roll whose radius differs too much with respect to that of the last roll tested

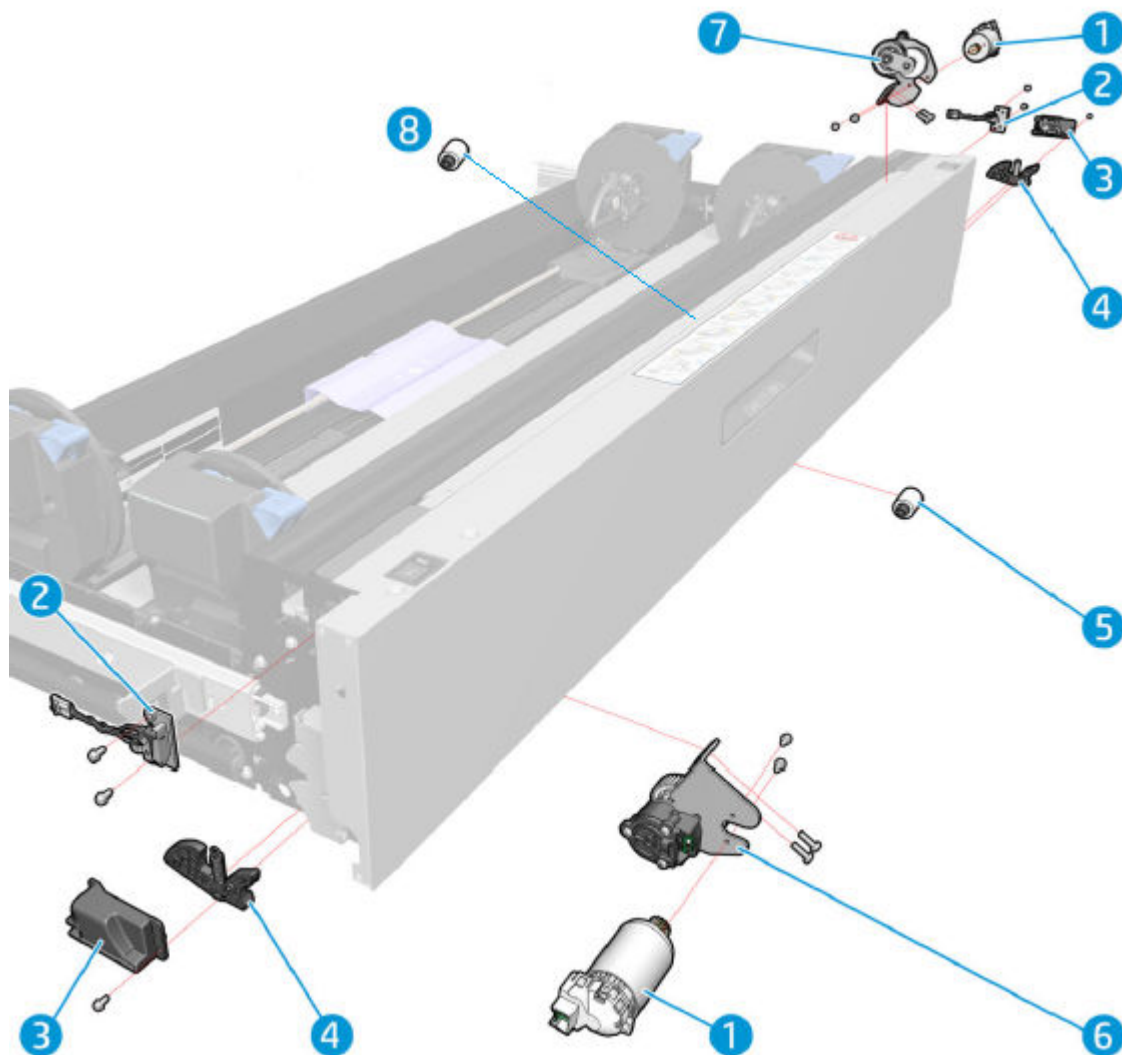
3. Fine adjustment process (Small-format speed upgrade)

See [Fine adjustment process \(only if needed by customer\) on page 261](#).

Drawer media loading problems

Most of the issues with the media loading/unloading can be solved by following the actions below in the order described:

1. Power off the printer.
2. If the issue comes from the front roll:
 - Check the items 7 and 5 shown in the exploded view below (linked with the front transport roller).
3. If the issue comes from the rear roll:
 - Check the items 6 and 5 shown in the exploded view below (linked with rear transport roller).



- Remove/place them back as explained in [Rubber transport roller \(CZ309-67156\) on page 756](#), [Transport roller rear roll \(CZ309-67173\) on page 754](#) and [Transport roller front roll \(CZ309-67172\) on page 751](#). Things to be checked:
 - Item 5 (Rubber transport roller): check that the rubber is not loose against the axis.

- Item 6 or 7 (Transport roller rear or front roll without motor): open the cover of the encoder and check that there is no dust on the encoder. If there is any dust, just clean it and mount back everything.



4. Unplug and plug back all the cables connected to the drawer PCA.
5. Unplug and plug back the cables on each media sensor (mainly the post-cutter sensor).
6. Check that there is a black area at the front of the post-cutter sensor (mainly if you cannot load the roll while all the motors and sensors are working when running the diagnostics).

For most drawers, there is a black tape. In case there is no black tape, take a black pen and paint all the surfaces against the post-cutter sensor (you need to open the front door of the drawers and check on each one).

How to check if there is a black mark:


- a. Open the drawer you are going to check (image below shows view from the top).



- b. Open the front door of the drawer, and focus in the area highlighted by the red rectangle, in particular in the area that faces the post-cutter sensor when the front door is closed.



- c. The 2 images below show 2 views of this black mark.

 **NOTE:** The image shown below is rotated by 180 degrees. You have to rotate your head (top of your head pointing down).



And if you move your head further down:

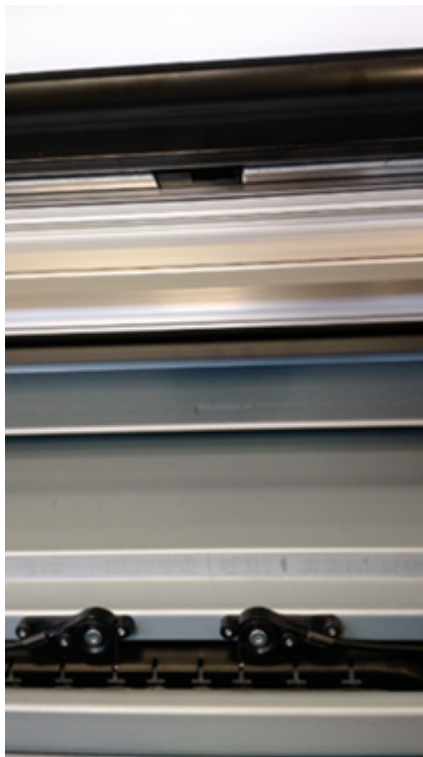


If the black mark is not in place, take a black marker and paint all the zone. See the two images below (the front door of the drawer with paint and without paint):


- Front door with the black mark painted, (image taken from the top of the drawer, with the drawer and its front door open):



- Original drawer unpainted:



7. Check that there is no slippage between the paper and the core (you can add a lateral mark on the roll, on the core and on the beginning of the edge of the paper, and when there is an expected media unload, check that the mark is still aligned, with no slippage between the core and the paper).
8. From the **Diagnostics** menu, run the following tests:
 - [0020-01 Check drawer on page 473](#) (better to unload first each roll of media).
 - [0020-03 Check sensors on page 473](#); mainly the media sensor, pass a paper in front of each of them.
 - [0020-04 Move motors on page 476](#); with the drawer open, check that each motor can turn freely.
 - [0020-08 Roll assist friction calibration on page 481](#) , for each of the rolls with the issue (you need to have a full roll of 841 mm or wider, and an empty core).

 **TIP:** Measure the external diameter of the roll before placing it in the drawer).

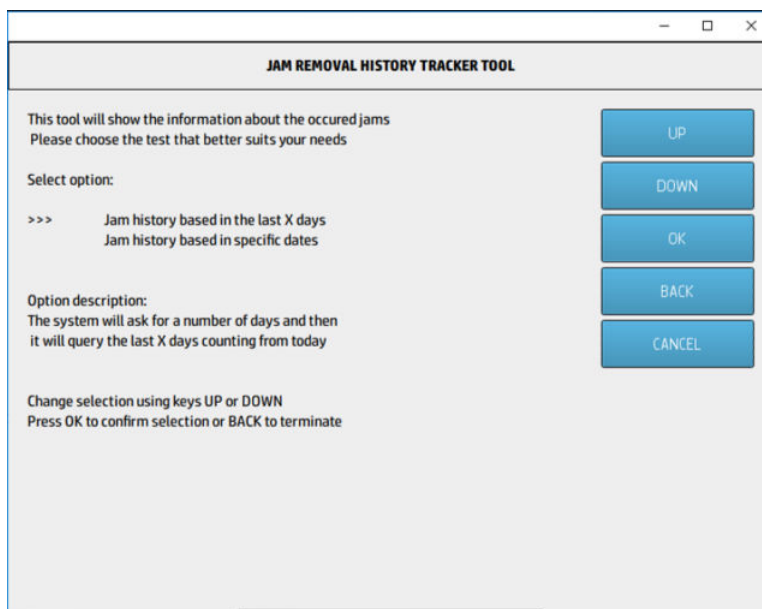
Take pictures of the results of the calibrations (for each roll recalibrated).

At the end of the calibration, do a smooth reboot (press only 1-2 seconds on the **on/off** button, the printer will power off after 1-2 minutes, then start the printer to boot in normal mode).
9. In case the printer fails again, mainly if it can perform the first part of the media loading but gives an error at the beginning of the steps in the second part (when you press **Finish and check** on the front panel):
 - ▲ Swap both media sensors: the post-cutter sensor and the sensor from the rear roll (10 minutes operation) (power off the printer first).
10. If the printer is still failing, please send us the diagnostic package as explained in [Reporting a system error to HP Support on page 294](#).

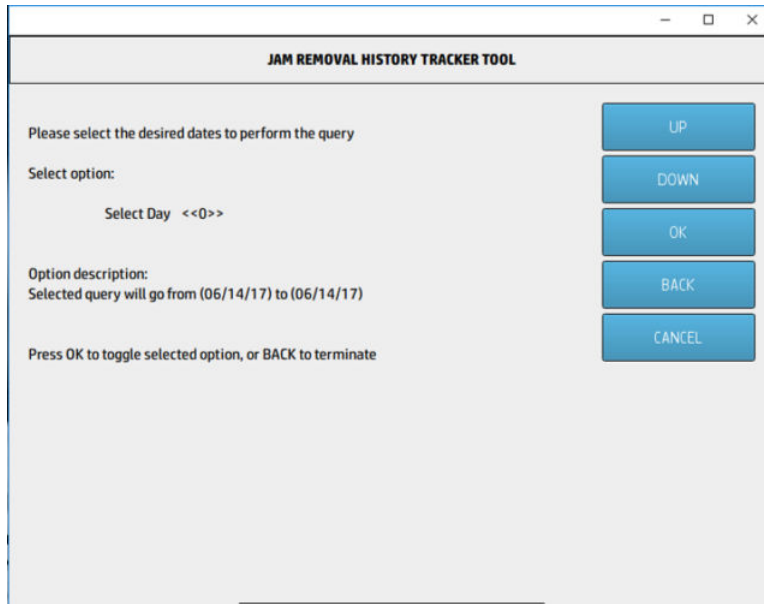
How to get paper jam history

If troubleshooting media jams and you are not able to reproduce them, this option on the service menu will help you to get the history of the paper jams for a certain number of days or a specific period of time. To get this data you need to:

- Go to Settings and insert the Service dongle; you will have access to the Service Menu.
- This option is called the “Jam history utility” and it is under the Hardware utility menu.
- From the first menu, you can choose whether you want to filter by a period of time or by number of days (see first picture below).
- For the option “Jam history based in the last X days,” you need to select how many days you want to go back (see second picture below).
- For the option “Jam history based on specific dates” you need to select the date you want to see data from.
- A list of the jams will be shown on the Front panel with details about when and where the jams were detected.



For HP-authorized personnel only



Ink cartridge and printhead problems

Most of the problems that you may encounter when working with the ink supplies can be solved with guidance from the front panel. A full list of front-panel messages is supplied in the user guide.

Cannot insert an ink cartridge

1. Use the correct procedure to change ink cartridges, through the front panel. See the user guide.
2. Check that there is no obstruction in the ink cartridge connector.
3. Check that the ink cartridge is the correct color. A connector of an ink cartridge will refuse to connect to a cartridge of an incorrect color.
4. Ensure that the ink cartridge is correctly oriented (compare it with the others).

Cannot insert a printhead

1. Use the correct procedure to change printheads, through the front panel. See the user guide.
2. Check that there is no obstruction in the printhead slot.
3. Check that the printhead is correctly oriented.
4. Check that the printhead latch and printhead cover are closed and secured.

Ink spillage present

In case of finding abnormal ink stains on the superior part of the cleaning container, or any other area around the waste management subsystem, perform the following actions:

- Replace the [Waste management tubes \(CZ309-67210\) on page 1007](#).
- Perform the Waste diverter cleaning process described in PMK2 (see [Following the preventive maintenance program on page 1079](#)).

The front panel recommends replacing or reseating an ink cartridge

1. Disconnect the ink cartridge.
2. Reconnect the ink cartridge and check the front panel message.
3. If the problem persists, insert a new ink cartridge.
4. If the problem continues, escalate the issue to division level.

The front panel recommends replacing or reseating a printhead

If there is an error with one of the printheads, the printer displays an error message on the front panel. However, more information about the specific error can be found by looking at the error code in service information. In the Embedded Web Server, go to **Support menu > Service support > Printer information > Event logs > Printhead error log > Error code**.

Printhead Error Log							
Printhead name	Serial Number	Printhead service code	Status	Usage time	% Ink Used	Max Recovery Level	Error Code
1 - Latex Optimizer	4-1-2626176-25-2013	AzUspEbsPclGGDSLEG9IA==	0	0 h	0	1	0
	4-1-1991720-4-2013	LSsVWH2IXFPg4QtPAstIA+Q==	4	0 h	0	1	2
	4-1-1991714-4-2013	c9pGEXU1f6mezTIDEPI4aQ==	2	0 h	0	1	2002
2 - Light magenta-Light cyan	4-1-1991697-4-2013	x9ZA6xOIHaUIXh3KfJGqw==	0	0 h	17	3	80000
3 - Cyan-Black	4-1-1991672-4-2013	IzbcvtqgTxOpSlxpiPzG==	0	0 h	64	3	80000
4 - Cyan-Black	4-1-1991659-4-2013	pWA+B9Hh+DjGMPHG71tw==	0	0 h	64	3	80000
5 - Magenta-Yellow	4-1-1991634-4-2013	b4E3IGokrkSQlONrxNDsxA==	0	0 h	36	3	80000
6 - Magenta-Yellow	4-1-1991617-4-2013	hkj2TAKePkv+2uHIYcbDDw==	4	0 h	33	3	82002
	4-1-2438360-19-2013	AbNkZJFP1H0mEp+MSBXAbg==	0	0 h	12	3	80000
	4-1-1991617-4-2013	/9UKruPBHg9HRKuP+oQ84g==	0	0 h	12	3	80000
	4-1-1991617-4-2013	hkj2TAKePkv+2uHIYcbDDw==	4	0 h	34	3	82002
	4-1-1991634-4-2013	TXG+YCuOgSHHWt8m5xouDw==	0	0 h	35	3	80000

The following table explains the meaning of the different hexadecimal values:

- In the error code you may see some combined numbers, such as 80010. In that case, 80000 means expired and 10 means temperature very high.
- When the value of the error code is displayed as 0, it means that the printhead is working correctly.

Error code	Meaning	Corrective action
0x00000	Working	
0x00001	Fails logical V	Clean the electrical connections between the printhead and the carriage. See the user guide.
0x00002	Fails continuity	Clean the electrical connections between the printhead and the carriage. See the user guide.
0x00004	Shut down	
0x00008	Fails VPP	Clean the electrical connections between the printhead and the carriage. See the user guide.
0x00010	Temperature very high	
0x00020	Temperature very low	Clean the electrical connections between the printhead and the carriage. See the user guide.
0x00040	Temperature too high	
0x00080	Temperature too low	Clean the electrical connections between the printhead and the carriage. See the user guide.
0x00100	Bad Acumen information	
0x00200	No printhead	
0x00400	Bad Acumen access	
0x00800	Wrong model	Replace the printhead. The type of printhead inserted is not supported by the printer.
0x01000	Mismatch	Replace the printhead. The type of printhead inserted is not supported by the printer.
0x02000	CSDATA not responding	Clean the electrical connections between the printhead and the carriage. See the user guide.
0x04000	CSDATA transmit error	
0x08000	Fails energy calibration	

Error code	Meaning	Corrective action
0x40000	End of life	Replace the printhead.
0x80000	Expired	

Warranty information

Ink cartridges

The ink cartridge warranty ends when one of the following occurs (whichever occurs first):

- When the end-of-warranty date on the box and the cartridge label arrives.
- When the advertised volume of ink has been delivered.
- When the customer confirms having used non-HP ink in empty override mode. The end-of-warranty date is also recorded in the smart chip.

Printheads

The printhead warranty ends when one of the following occurs (whichever occurs first):

- When the end-of-warranty date on the box, the plastic pocket, and the printhead label arrives.
- When 10,000 ml of ink has been consumed by the printhead (aggregated consumption of both colors).
- When the customer confirms having used non-HP ink in empty override mode.


How to remove air bubbles from an ink line using a syringe

First off, please be aware that, for any bubble of air less than 10cm / 4 inches long (= 1cc), there is no need for it to be removed; it will be “digested” by the printheads without any negative effects.

Summary

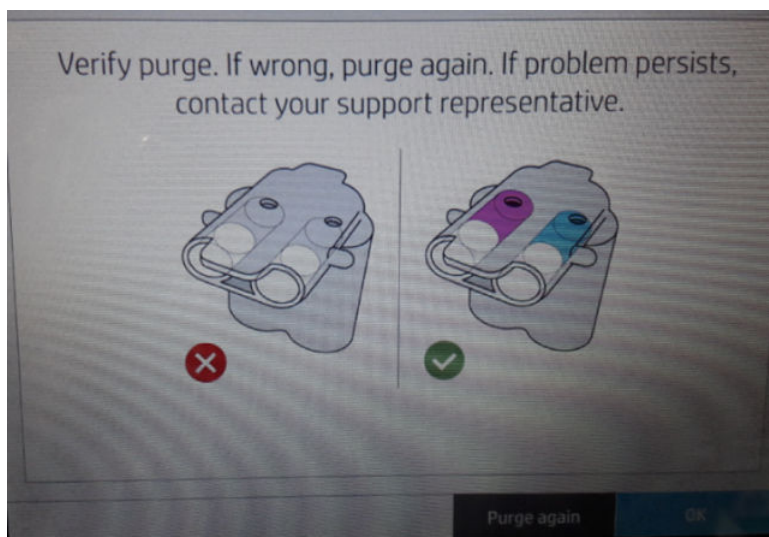
An air bubble can be removed from the ink line by setting the ink tube as “empty” and, during the refill process, when requested, by placing a syringe at PH#8 (or PH#1 if the bubble of air is in the horizontal part of the sarcophagus), then pressurizing the ink system to move the bubble of air towards the syringe.

In case the bubble of air is between the lower cartridges and the bi-valves, the syringe should be placed in the purge port when requested by the front panel and then you must pressurize the ink system in order to cause the bubble to move towards the syringe.

 **NOTE:** There is no need to remove any bubble less than 10cm long in the tube as they can go towards the PHs without damaging them. Otherwise, there is a risk of drops of ink falling outside of the printer.

Important considerations

- The syringe should be inserted and removed **ONLY** when the ink pressure system is **NOT** pressurized. Otherwise, there is a risk of drops of ink depositing outside the printer and spreading around inside the printer. When removing the needle, you need to have a tissue/cloth at all times close to the needle to be able to cover the needle as soon it is removed from ink tube system.
- In case there is a need to remove the syringe while the system is pressurized (for example, the syringe is almost full): just keep pressure on the piston to prevent the syringe to fill up any more, and only when the system is no longer pressurized can you remove the syringe.
- The system can be re-pressurized and depressurized as many times as needed. How to do this: At the end of a pressurization - depressurization cycle, you will see the following message:



- Press **Purge again** when needed to run a cycle of pressurization – depressurization.
- How do you know when the bubble of air has been taken in by the syringe?

There are two ways to know:

- When the air bubble arrives to the syringe, there are small bubbles in it:



- Or, when you have extracted 30 cc of ink from the system, corresponding to the maximum volume of ink between the lower cartridges and PH1, you will have taken up the bubble
- When pressurizing, in most of the cases the piston of the syringe does not lift up: help it by pulling the piston up slightly (but you should not pull out the ink; the bubbles of air are best removed when the ink is *pushed* than when the ink is *pulled* out).
- In case you are using only one syringe for different colors: it is CRITICAL to clean the syringe with clean distilled water when swapping between one color and the other.
- When removing and placing the PH back in the machine, you could get the warning 0040-0014-0884; just press **OK** (a PH replacement will need to be performed anyway, as the PH that is removed will inherit a “REPLACE” status).
- Before beginning the process, as you will most probably need to perform a PH replacement, ensure that there are no errors preventing the printer from recognizing the cartridges, or else the given warning error (from the PIP for example) could prevent you from successfully replacing the PH.

The two different cases mentioned in the following procedure

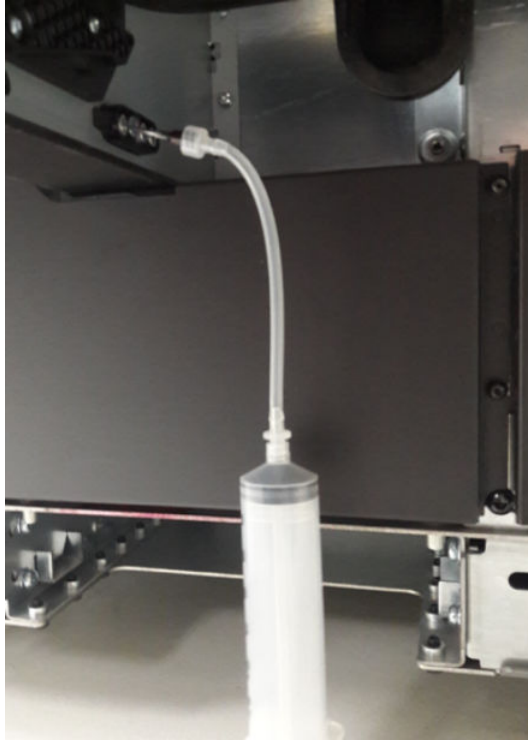
- **Case A:** the bubble of air is between the upper cartridges and the PHs. In this case you will need to remove PH8 and place the syringe in the PH's place instead (as shown in the picture).

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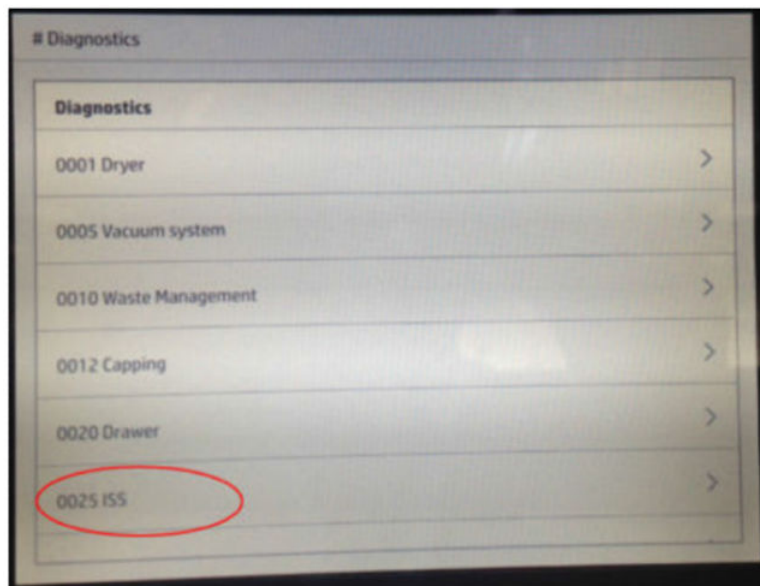
In case the bubble is in the lower part of the sarcophagus, between PH8 and PH1: the syringe will have to be placed at the PH1 spot.

- **Case B:** the bubble of air is between the lower cartridges and the bi-valve (or down near the purge port). In this case, when requested, you will need to remove the maintenance cartridge and place the syringe in the purge port of the color in which the bubble of air has to be removed.

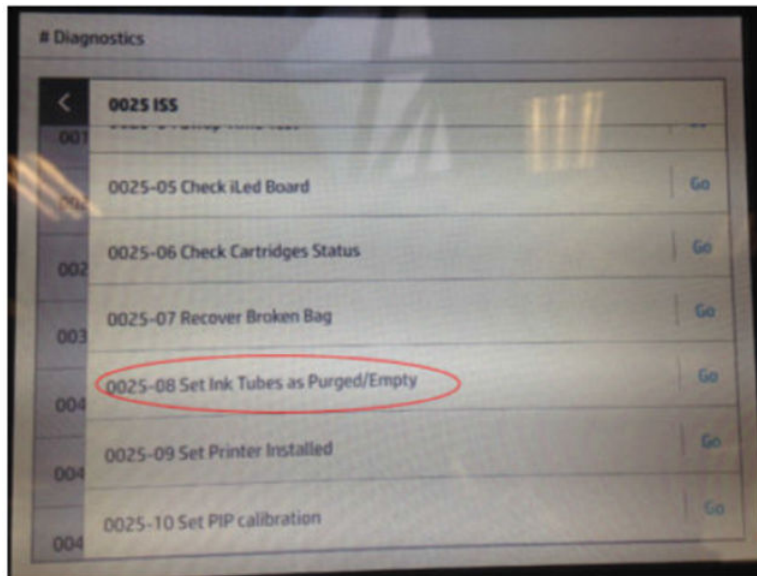


Procedure

1. Enter the Diagnostics Menu through the Front panel (see [Entering the Diagnostics menu on page 458](#)).
2. Tap **0025-IIS**.



3. Tap **0025-08 Set Ink Tubes as Purged/Empty**.



- a. Set the “ink tubes as empty” and confirm that this is what you want.
 - b. No diagnostics will be performed at this point.
 - c. Reboot the machine.
4. During boot-up, the purging of the tubes will be initiated. At this point, the purging process will begin and the Front panel will tell you the steps to perform.

As the sarcophagus is full of ink, there is no need to place the setup PHs on the machine.

5. Insert the 4 supplies in the upper row*.



Insert each supply and push it as far as it will go.

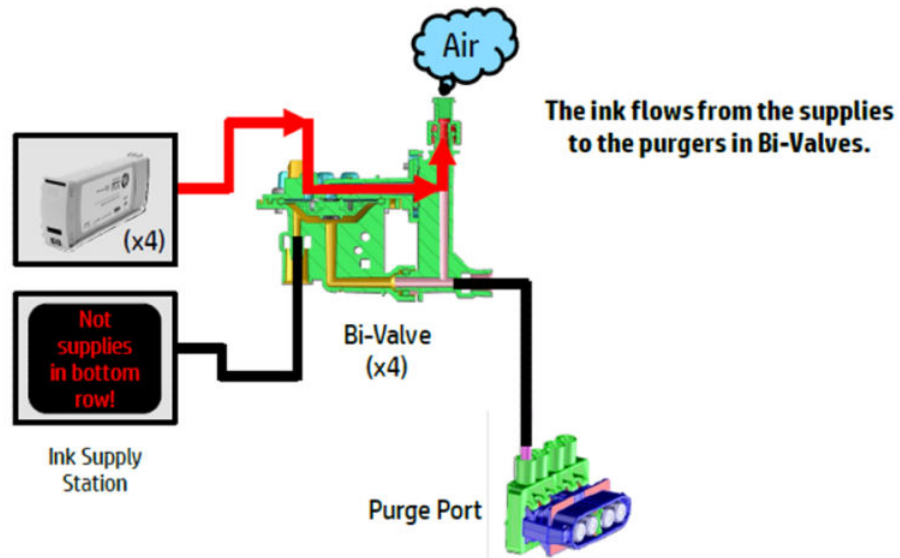


*** VERY IMPORTANT:** Insert the supplies only in the upper row, not in the bottom row. Otherwise, the purge process will fail and the air will not be removed from the circuit.



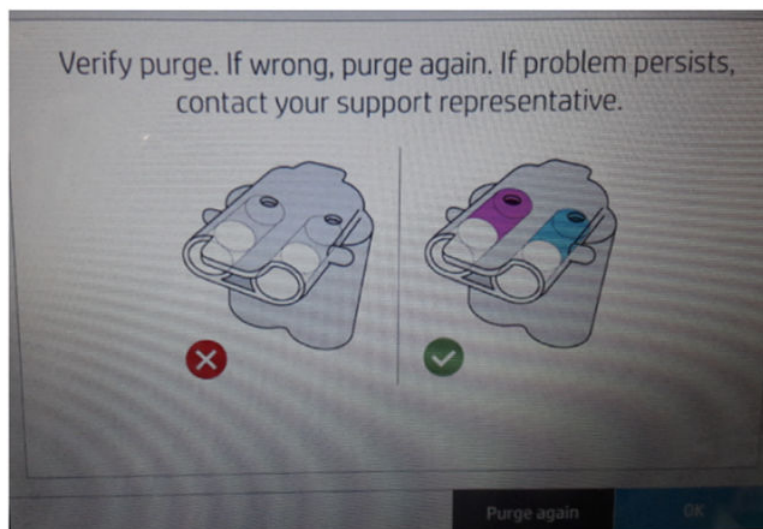
6. When you are requested to check the setup PHs at the level of the PHs:
- Open the Top cover to access the PHs. Then:
- For **Case A** (The syringe must already be placed at the PH1 or the PH8 spot):

- a. Remove the right PH (PH8 or PH1) and place the syringe on the color in which there is a bubble of air to be removed
 - b. Tap Purge
 - For **Case B**: Just press **Purge** to continue
7. The system pressurizes to 1.2 psi.



8. Wait without performing any actions.
9. The system depressurizes.

The message "Upper ink tubes successfully purged" appears. Press **OK**. Then the following message is displayed:

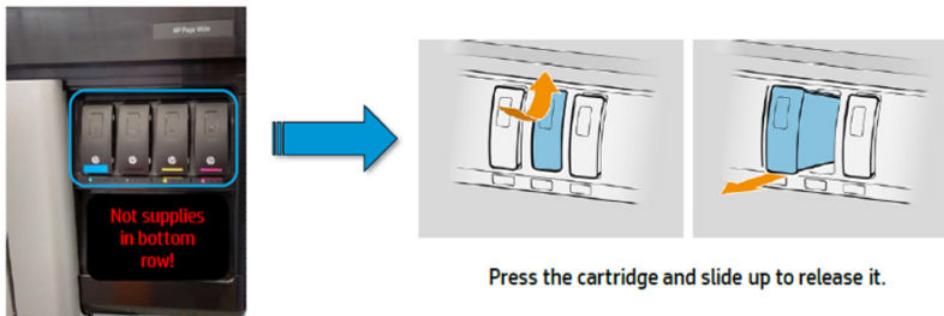


Now:

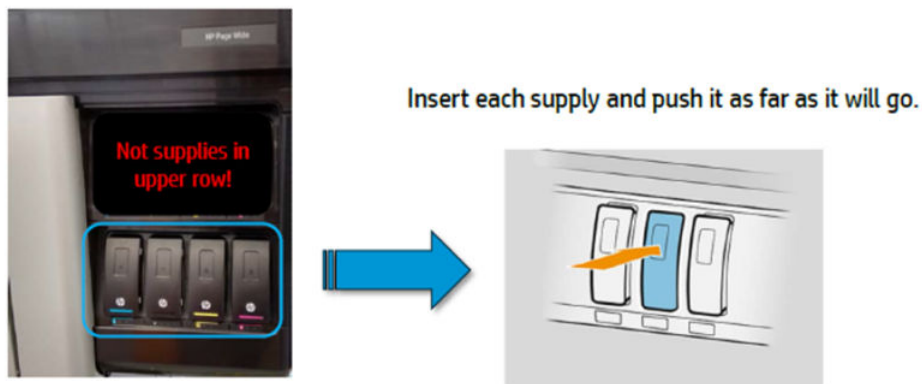
- For **Case A**:



- In case the bubble of air has not been removed or in case the bubble of air has to be removed from another ink line:
 - a. If needed, first place the syringe under the new color to purge (it has to be clean! No ink contamination must occur)
 - b. Tap **Purge** again; the system pressurizes as in step 7
- Otherwise, in case all air bubbles in case A have been removed: Remove the syringe and re-install the PHs. Then tap **OK**
- For **Case B**: Tap **OK**.

10. Remove the upper row or ink supplies.



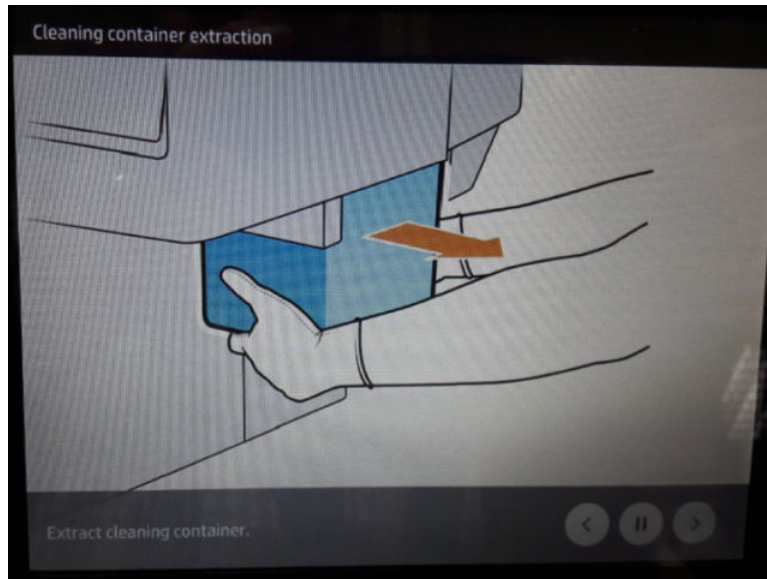
11. Then insert the same 4 supplies in the bottom row*.



 ***VERY IMPORTANT:** Insert the supplies only in the bottom row, not in the upper row. Otherwise, the purge process will fail and the air will not be removed from the circuit. 

Tap **Finish and check** to make the printer detect the 4 lower ink cartridges. Then press **OK** when the printer has detected them.

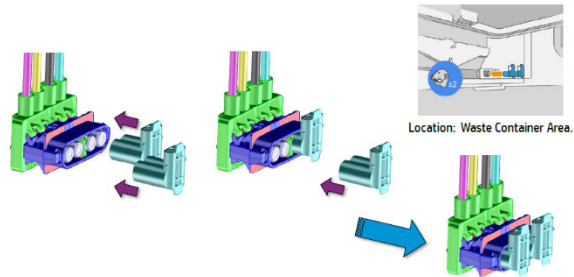
12. The front panel will now ask you to remove the cleaning container.



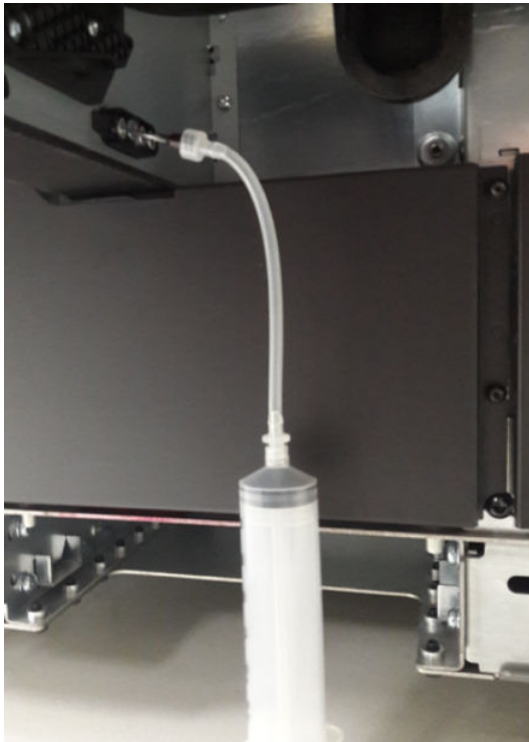
Before removing it, place a piece of paper under the cleaning container as some drops of ink might fall.



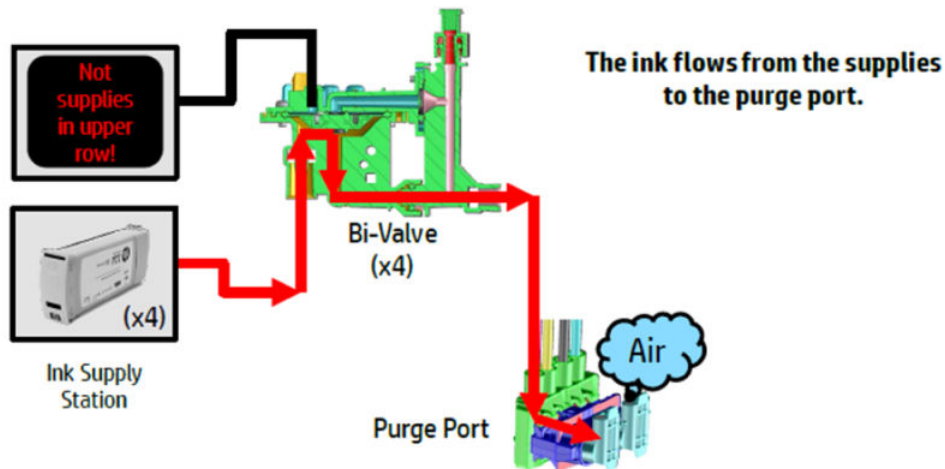
13. When requested to “Insert purgers in the purge port (x2),” the “Purger installation” step:



- For **Case A**: Tap **Purge**.
- For **Case B**: Insert the syringe in the ink line that contains the bubble of air.

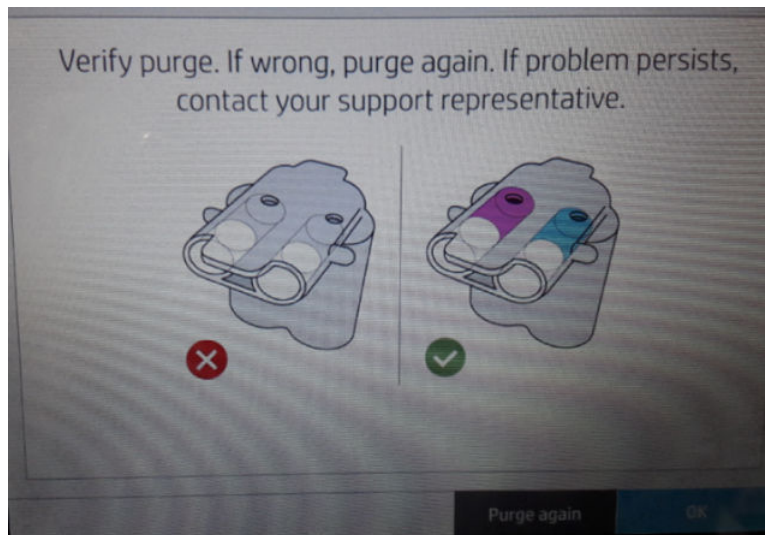


14. The system pressurize to 2.0 psi.



15. The system depressurizes.

This message will appear: “Lower ink tubes successfully purged.” Press **OK**, then you will see the following screen:



Now:

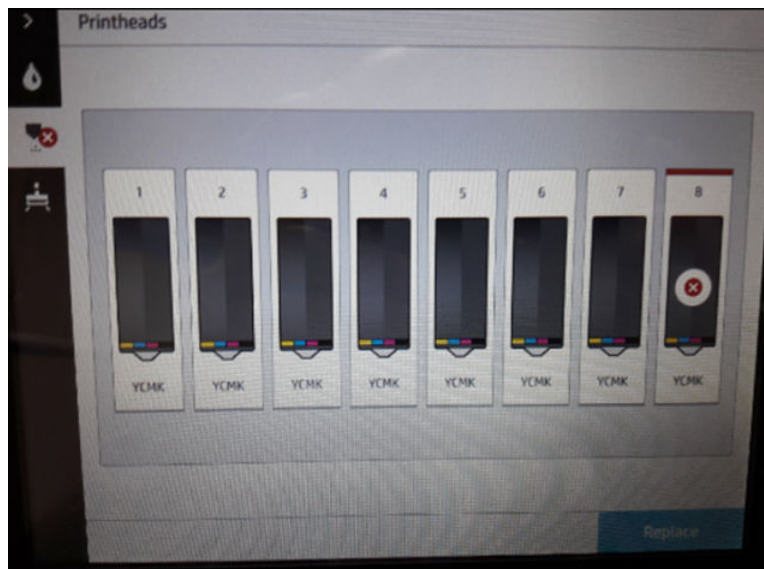
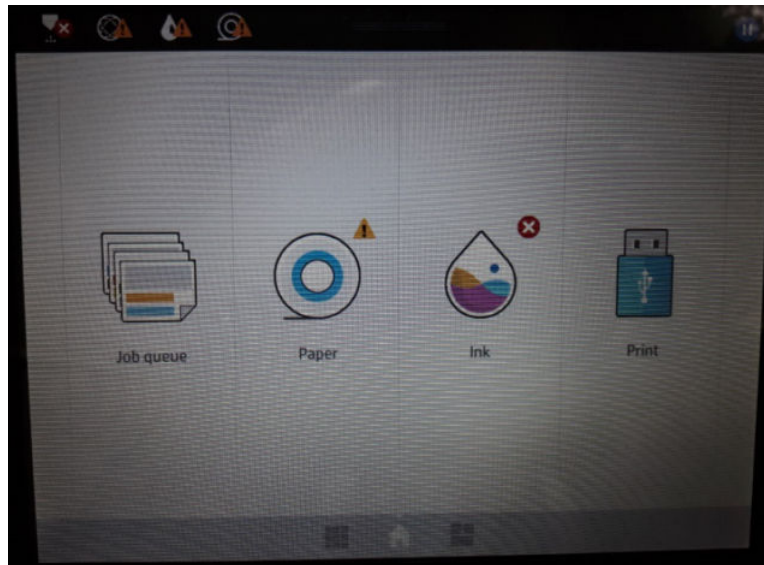
- For **Case A**: Press **OK**.
- For **Case B**:
 - In case the bubble of air has not been removed or in case the bubble of air has to be removed from another ink line, place a clean syringe on the other color to be purged. Click **Purge** again, as in step 13.
 - Otherwise, in case all bubbles of air for Case B have been removed : Remove the syringe and tap **OK**.


16. Follow the instructions on the Front panel in order to complete the process.

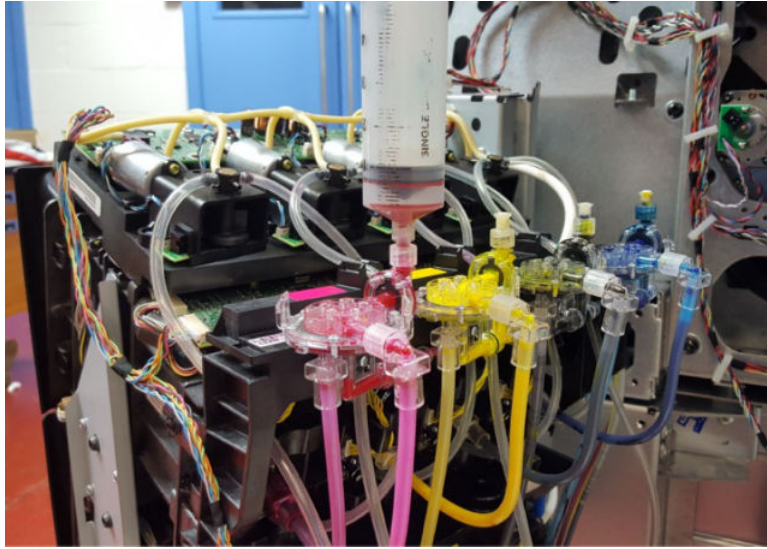
You will need to perform a PH replacement(s) followed by a PH alignment (with a Color Calibration if needed).

However, before performing the PH replacement(s):

- ▲ Tap **Ink**, then **Printhead**, then **Replace**.



 **NOTE:** In case a bubble of air is located between the upper cartridge and the bi-valves, it may be possible to use the body of the syringe and unscrew the top of the bi-valve, but this could damage the bi-valve, therefore it is not recommended.



Print-quality problems

Initial print-quality troubleshooting actions

For the majority of print-quality problems, a Call Agent can try to troubleshoot the printer by asking the customer to perform the following troubleshooting actions. Using this process, most problems can be resolved without the need of an on-site visit.

Perform the following actions in the order described:

1. Ensure that the paper type selected in the front panel and in your software application is the same as the paper type loaded into the printer.
2. Ensure that the paper type has been calibrated.
3. Ensure that the customer is using the most appropriate print-quality settings. See [Select optimal print quality on page 184](#).
4. Ensure that the latest version of the firmware is installed.
5. Ensure that the ink cartridges and printheads have not passed their expiration dates.
6. Check the print bar (see [Optimization tools on page 167](#)).
7. Calibrate the print bar (see [Optimization tools on page 167](#)).
8. Check that the environmental conditions (temperature, humidity) are in the recommended range.
9. Avoid touching the paper while printing is in progress.
10. If the issue is the color difference between the printer and the monitor, ensure that the monitor has been calibrated.
11. If the customer is using low-quality paper, try recommending HP paper. Printer performance can be guaranteed only when using recommended papers.

Print-quality troubleshooting tools

The printer contains various internal diagnostics and tools that can help you to diagnose and troubleshoot print-quality defects. They are available in the front panel, but they are located in different menus.

There are the following categories of tools:

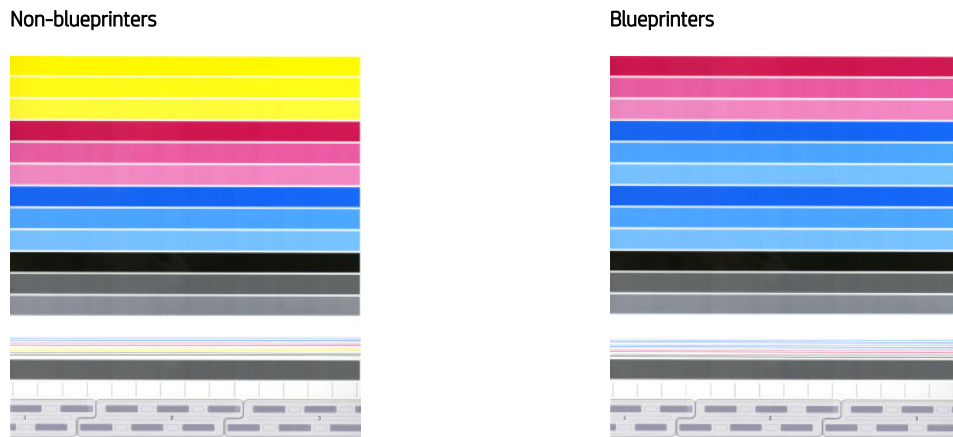
- Diagnostic plot
- Optimization tools
- Service utility tools
- Other tools

Diagnostic plot

The diagnostic plot helps you to differentiate between possible print-quality problems. To access the plot, select the **Optimize print quality** menu in the front panel and press **Print diagnostic plot**.

Use the same paper type that you were using when you detected the problem, and check that the selected paper type is the same as the paper loaded into the printer.

The print is divided into three parts. The top part is about print-bar and color-calibration problems, the center is about alignment problems, and the bottom part is an illustration of the printhead positions that can be used to identify a faulty printhead.




Optimization tools


These calibration tools ensure that printer and supplies are adjusted to deliver optimal print quality. To access the tools, select the **Optimize print quality** menu in the front panel.

- Check and recover print bar
- Calibrate print bar (printhead alignment and color calibration)
- Enhanced printhead recovery
- Page length accuracy

Service utility tools

These tools determine whether various parameters that affect print quality are within specifications.


 **NOTE:** Most of the tools produce plots that should be printed on HP Polypropylene. Ensure that you have some available.

To access the following tools, go to the front panel and press , then **Service menu > Diagnostic prints**.

- Print color calibration check plot
- Print image-quality reference plot
- Print nozzle check plot
- Print printhead alignment check plot

To access the following tool, go to the front panel and press , then **Service menu > Calibrations**.

- PPS check

To access the following tool, go to the front panel and press , then **Service menu** > **IQ troubleshooting**.

- Printhead gauge information

Optimization tools in detail

Calibrate print bar

General instructions

Press **Calibrate print bar**, then **Continue**.


Ensure that you have loaded a roll of HP Matte Polypropylene, 40 in (1016 mm) wide; or, alternatively, HP Universal Heavyweight Coated (other paper types may be permitted in future if announced in the user guide or in a service note).


Printhead alignment takes about 12 minutes and uses about 1.3 m (51 in) of paper. Color calibration takes about 12 minutes and uses about 1 m (39 in) of paper.

After the calibration, the printer uses the results to calculate calibrations for all other paper types.

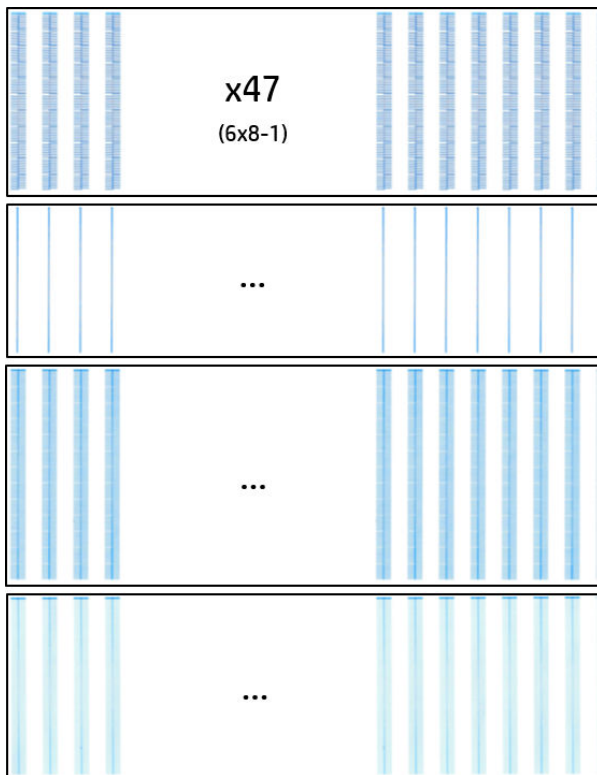
If the print-bar calibration fails with an error message or leaves some dies misaligned, print the Diagnostics Plot and make sure there are no large contiguous groups of missing nozzles. If there are large contiguous groups of missing nozzles, follow the printhead recovery procedure.

For better color uniformity, it is recommended to use ink cartridges that are as new as possible, and to store them away from heat sources.

 **NOTE:** If uniform color is not very important to you (such as when printing CAD drawings), you can skip color calibration to reduce calibration time and paper usage, by pressing and checking the box **Only printhead alignment**. In this case, other papers can be used for the alignment. You should still use the best-quality and widest paper that you have. If the paper is not wide enough, not all the printheads will be calibrated. The printer will select the most appropriate ones.

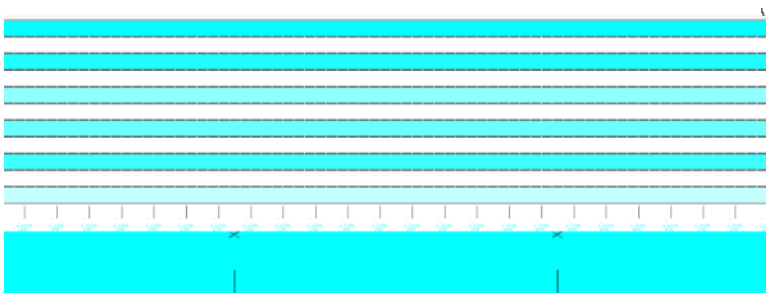
 **NOTE:** By checking the **Select all** box, you can do both basic routines: check and recover the print bar, and calibrate the print bar. This can be useful when these routines have not been done for a while, or if you are unsure which routine is appropriate.

Printhead alignment prints a series of five plots.




(The last of these is printed twice.)

Color calibration prints a series of four plots, one for each of the CMYK inks. The plots look like this:




What to do if print-bar calibration fails

In all cases

1. Check the plots produced during print-bar calibration for any printhead not printing properly (for instance, incomplete patterns due to nozzle-outs). In such cases, recover or replace the printhead.
2. Restore calibrations to default: At the front panel, press , then **Optimize print quality > Restore factory values**.
3. Restart the printer.
4. Retry print-bar calibration.

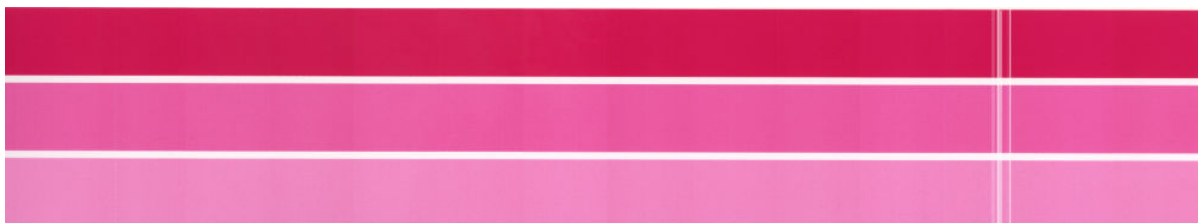
In addition to the recommendations above, consult the following table for recommended actions in particular cases.

<p>Print-bar calibration does not finish correctly (error message in front panel)</p>	<ol style="list-style-type: none"> 1. Ensure that the line sensor is well mounted (tighten the screw if necessary) and the connector is properly connected. 2. Recalibrate the line sensor by going to Service menu > Calibrations > Line sensor calibration. 3. Retry print-bar calibration. 4. If the problem persists, replace the line sensor. 5. Retry print-bar calibration. 6. If the problem persists, replace the Carriage Sensor PCA..
<p>Print-bar calibration finishes, but print quality is still not satisfactory.</p>	<p>If the problem is caused by printhead misalignment, either broken lines or thin vertical dark or white lines will appear in the diagnostic plot. Check that the printer is within specifications: see Printhead alignment check on page 550.</p> <p>If the problem is related to color calibration:</p> <ol style="list-style-type: none"> 1. Ensure that color calibration is done on HP Matte Polypropylene or another supported paper type. 2. Print the color calibration check plot and check the result. <p>If print quality is good on HP Matte Polypropylene but there are color bands on other paper types, this is normal and is a limitation of the printer. Try printing on different kinds of paper, as the effect varies with the properties of the paper.</p> <ol style="list-style-type: none"> 3. Try printing your image in Uniform Areas mode rather than Lines/Fast or High Detail, because the calibration is done in Uniform Areas mode. 4. Ensure that the calibration is not done just after a long idle period (for instance, at the start of the day). In this situation, perform a 'strong' printhead recovery before calibration. 5. Retry print-bar calibration. 6. If the problem persists, try swapping the positions of the printheads. <p>If unsure of the cause of the problem, go to the "Print-quality issues by symptom" section of the diagnostic plot and follow the instructions there.</p>
<p>Print-bar calibration finishes, and print quality is good after the calibration, but degrades with time.</p>	<p>If the problem is caused by printhead misalignment, either broken lines or thin vertical dark or white lines will appear in the diagnostic plot. Check that the printer is within specifications: see Printhead alignment check on page 550.</p> <p>If the problem is related to color calibration, the printheads may need may need frequent recalibrations for a period of time. This may happen if:</p> <ul style="list-style-type: none"> • A new printhead has just been inserted. • The printer has been idle for a long time, or the printheads have been left out of cap for some hours. <p>The frequent-recalibration period may be shortened by intensive servicing.</p> <p>If unsure of the cause of the problem, go to the "Print-quality issues by symptom" section of the diagnostic plot and follow the instructions there.</p>
<p>No paper type suitable for calibration is available.</p>	<p>Calibrations should be done on HP Matte Polypropylene. If it is not available, you are recommended to disable color calibration, in which case print-bar calibration will include only printhead alignment, which can be done on a variety of paper types.</p> <p>To disable color calibration, go to the front panel and press , then Optimize print quality > Print-bar calibration.</p>

Colors from two different printers do not match, or printer cannot print a spot color accurately.	Color calibration performs only a 'smoothing' of the print elements within a printer. It does not compensate for the overall state of a printer with respect to an external reference. In that sense, it is different from the color calibration offered in other HP large-format printers. However, the range of variability between printers is expected to be very narrow and suitable for most applications. If accurate colorimetry is required, a printer can be profiled using a RIP software tool.
A blueprint printer shows dark or light color bands.	Blueprint printers do not have color calibration. Therefore, dark or light bands cannot be compensated.

Check and recover print bar

Choose this option if there is slight print-quality degradation in the form of random (irregular) light and very thin lines. This defect is usually produced by nozzles not working properly.



Press **Check and recover print bar**, then **Continue**.

The recovery procedure is a combination of spit and wipe actions; it can take from 3 to 10 minutes. It is adjusted for each printhead based on internal checking.

If the problem persists, check in the diagnostic plot for which printhead the defects appear. You can identify which printhead has the problem from the numbered printhead image at the bottom of the top part. To clean only that printhead, see [Enhanced printhead recovery on page 171](#).

Enhanced printhead recovery

This procedure aims to recover a printhead that has been degraded by heavy usage, or when other methods have failed. It is an intensive procedure to recover printheads with severe degradation, such as multiple nozzles malfunctioning, or color mixing. It may also be used to optimize printheads for jobs with high ink coverage.

In order to identify which printheads require cleaning, you are recommended to print the diagnostic plot before running this routine. Once you have identified the printhead(s) to be recovered, run the routine.

Press **Enhanced printhead recovery**, then **Continue**.


Select the printhead(s) to be recovered, then **Continue**.

This routine is a combination of spit and wipe actions; it takes 4–5 minutes no matter how many printheads are selected.

Adjust page length

If you find that printed page lengths are slightly incorrect, go to the print quality app and select **Page length accuracy**. The next screen shows the loaded paper types. Select the one you need to correct automatically or manually. If you press **Start** (recommended), the printer makes an automatic correction. The front panel warns you to allow some time and paper for the correction. If you press **Adjust manually**, you must enter the value of the length error.

For example, you may print an A0 (1189 mm) page, but you measure the print and find that its length is 1187 mm. You should select A0 and a measured page length of 1187 mm. The page length correction is automatically updated to +2 mm when you enter the measured value.

 **IMPORTANT:** You could cause a system error or damage to the printer by entering an incorrect error value after **Adjust manually**.

Manual print bar alignment

On the NGRGA 10.xx firmware release, there is new functionality coming. One of these new settings is related to fine tuning the alignment calibration. In other words, it is possible to change some die to die or pen to pen areas to get better image quality.

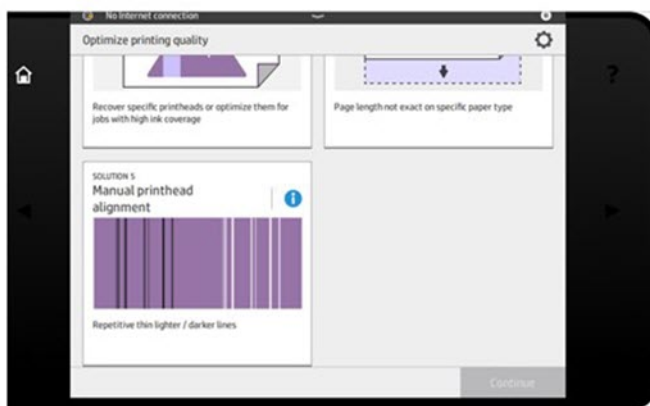
Currently, in terms of image quality, you can calibrate the print bar by going to the Optimize Print Quality menu and selecting Calibrate print bar. Calibrate print bar is an option that can run up to two different calibrations together (Alignment and Color Calibration). After this calibration is done, it is possible that some die to die or pen to pen areas can be improved and that is the purpose of this Manual Alignment Calibration.

Important considerations

- This calibration can be done only on one media and results will be applied to all of them.
- It is recommended to run this calibration on the media that you want to get best performance.
- This calibration is for end users.
- This adjustment will be lost with every printhead replacement or by running again **Calibrate Printbar** on the **Optimize Print Quality** menu.

Procedure

1. Make sure that default calibration is done (this is only a fine tuning).
 - ▲ **Optimize Print Quality** menu > **Calibrate Printbar**
2. Go to **Optimize Print Quality** menu > **Advanced options** > **Manual Printhead Alignment Calibration**.



3. Select the media roll you want to use for the calibration.
4. A sample will be printed on the media selected.

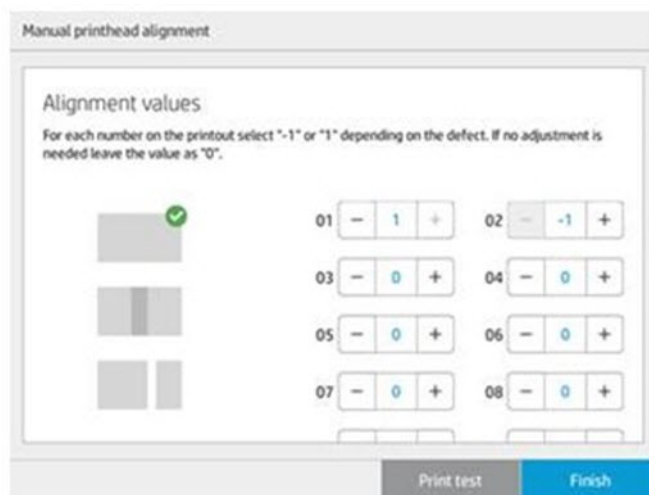
There are three grey bands with some numbers and arrows on the top or bottom of each. The numbers increase from left to right indicating the overlap number.

- ▲ Overlap: limit between two dies or print heads. Place where there is a change between printing areas of the print head.

The arrows mark the exactly position of the overlap. For each overlap, there are three zones, one per grey band. The center band shows the current status of the printer, the result of the last calibration. The top one shows how that overlap will look if you change the current calibration values, decreasing it by 1 (open the overlap). The bottom one shows how that overlap will look if you change the current calibration values, increasing it by 1 (close the overlap).

Look at all the overlaps and choose the option you prefer from the three given.

- Once you have selected your favorite, go to the main window again and look for the number of the overlap you want to change. Modify values using +/-.



Please, note that 0 means do not apply any correction while -1 or 1 applies corrections that you have seen on the Manual Alignment Plot.

Navigate through all the submenus until you have modified all the dies you have selected. The ones that you do not want to change do not need to be overwritten.

- Once you are finished, you can “print test” to check results and modify again any overlap if needed (going back to step 4) or “Finish” to complete the process.

Diagnostic prints

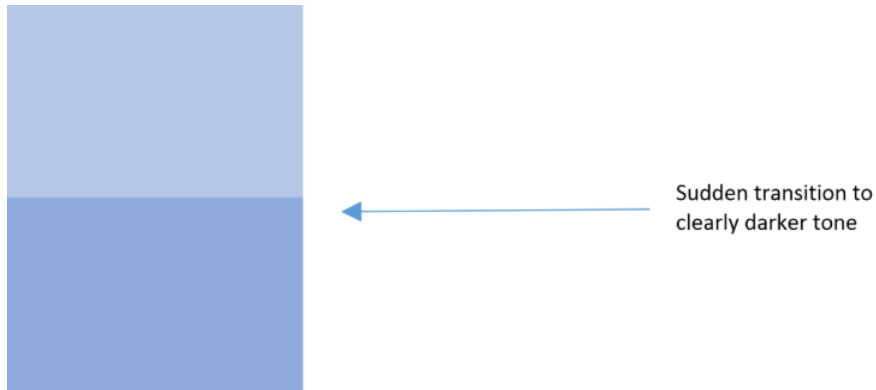
See [Diagnostic prints on page 547](#).

Other tools

Color-specific intensive recovery

At the front panel, press , then **Service menu > IQ recovery > Color-specific intensive recovery**.

Use this routine only for an ink anomaly in terms of optical density or saturation. Due to aging or environmental storage conditions, some part of the ink pigments may concentrate, delivering a much darker density than they should. Should this problem appear, it would appear across the whole print bar and it would show up as a clearly remarkable color change down the page.



Select the colors that are affected. This forces all the selected printheads to spit a substantial amount of ink to clear the problem. One cycle might not be enough; the solution could require several iterations.

Manual print bar alignment

This action is related to fine tuning the alignment calibration. In other words, it is possible to change some die-to-die or pen-to-pen areas in order to get better image quality.

Currently, in terms of image quality, you can calibrate the print bar by going to the **Optimize Print Quality** menu and selecting **Calibrate print bar**. Calibrate print bar is an option that can run up to two different calibrations together (Alignment and Color Calibration). After this calibration is performed, it is possible that some die-to-die or pen-to-pen areas can be improved and that is the purpose of this Manual Alignment Calibration.

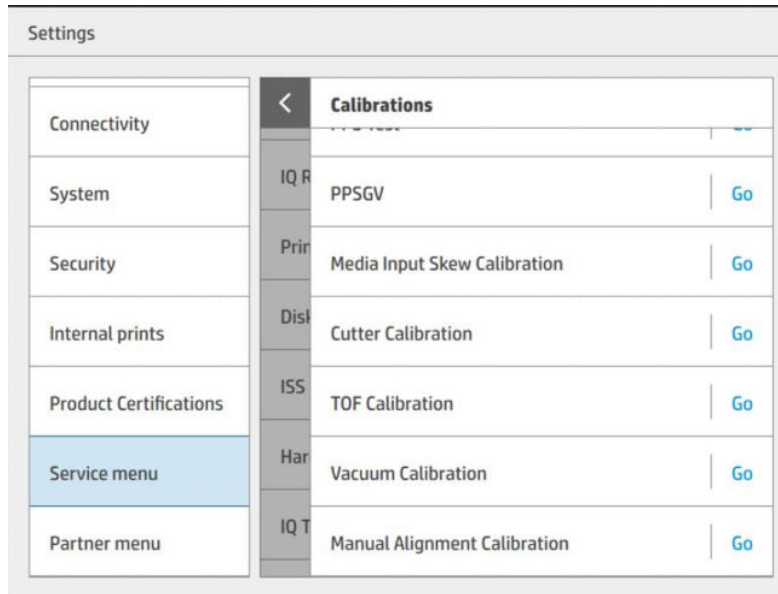
Important considerations

- This calibration can be performed on only one media and the results will be applied to all of them
- It is recommended to run this calibration on the media with which you want to get the best performance
- This calibration is only available for partners, not end users
- This fine tuning will be lost with every printhead replacement and/or by running the Calibrate Printbar option from the Optimize Print Quality menu again.

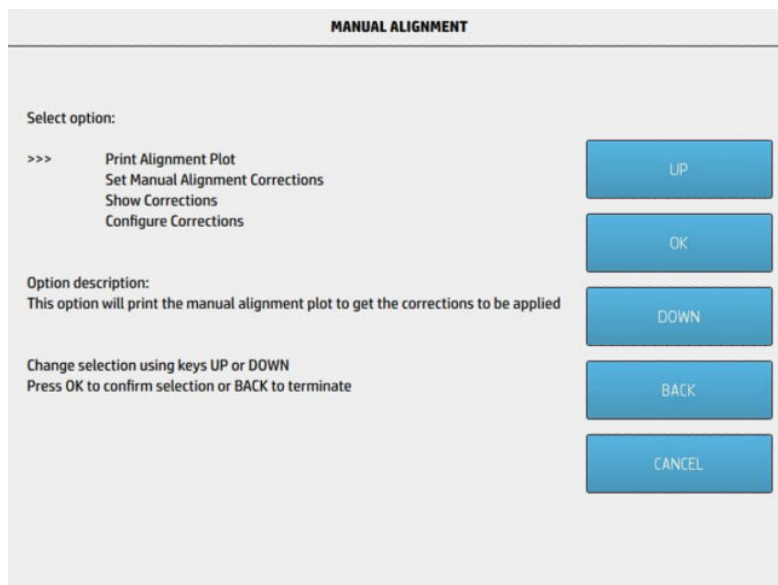
Procedure

1. Prior to the Manual Alignment Calibration, make sure that the default calibration is set (new functionality is only a fine tuning).
 - ▲ **Optimize Print Quality** menu > **Calibrate print bar**.

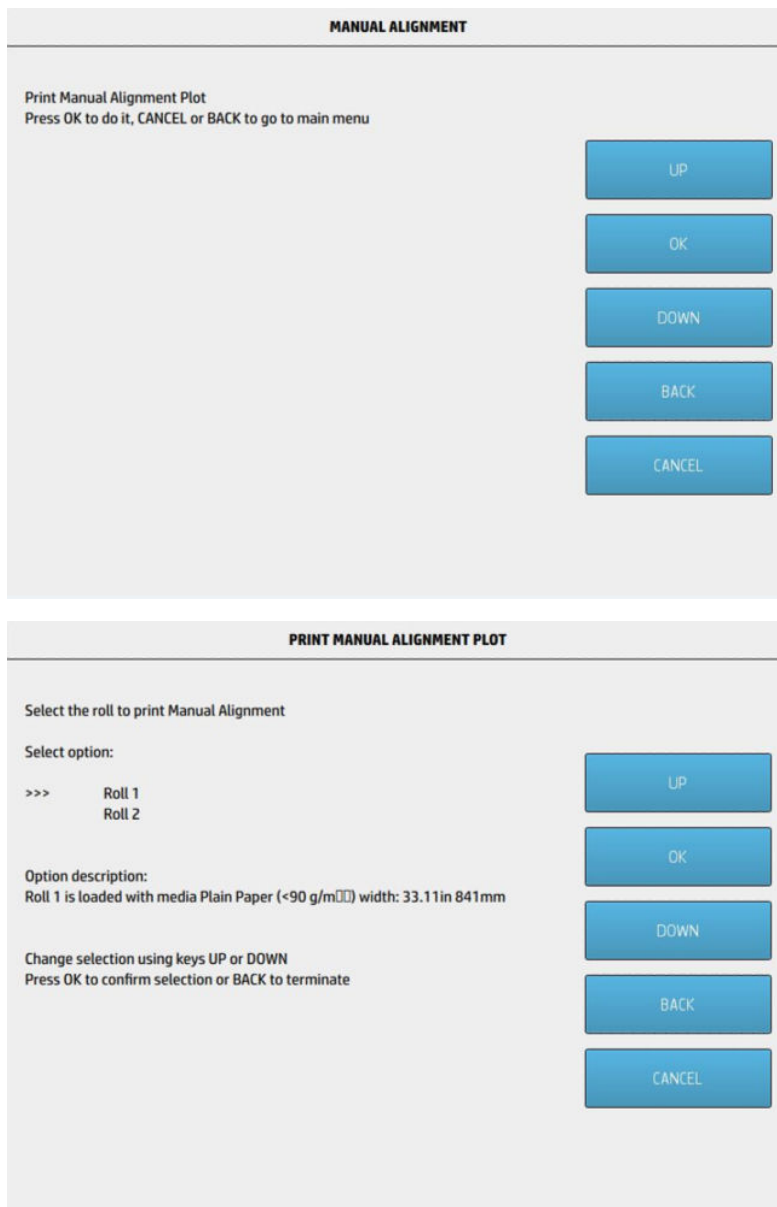
- Go to the **Settings** menu > **Service menu** > **Calibration**, and select **Manual Alignment Calibration**.



- A menu like the following one will appear:



4. Before running the calibration, you will need to navigate the whole menu. First of all, select **Print Alignment Plot**, select **OK** and then choose the roll you want to use for printing the plot.

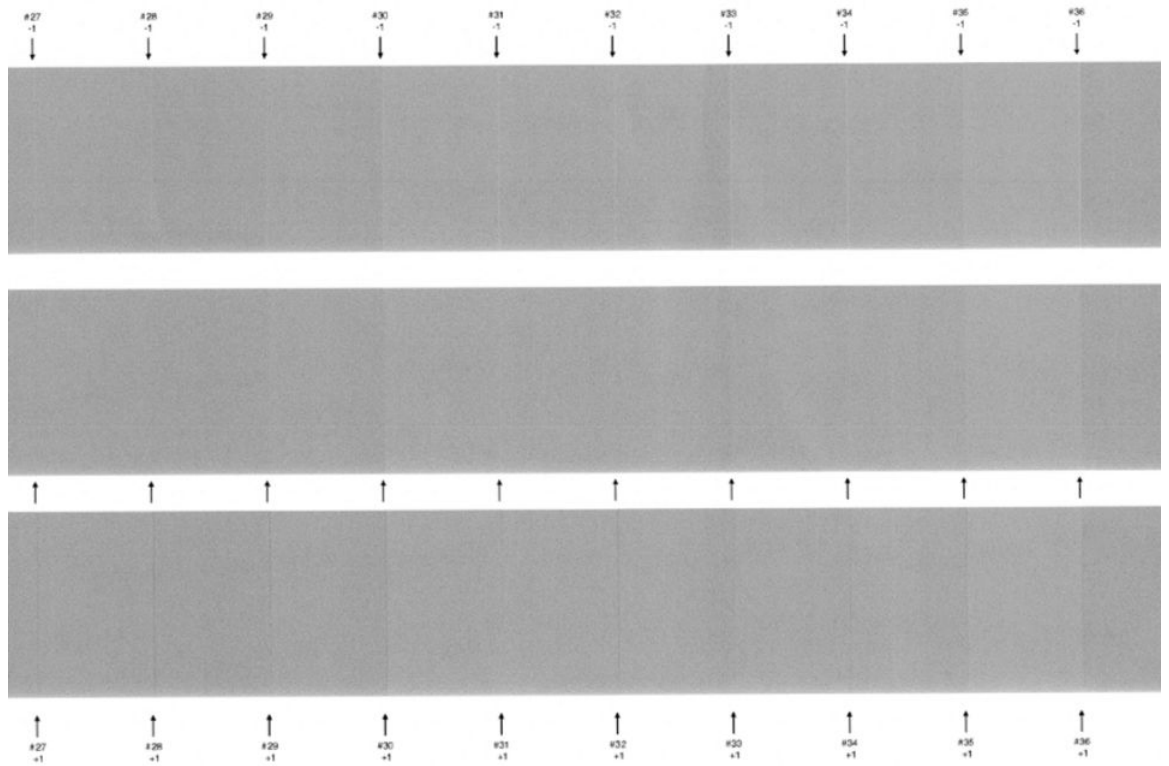


5. The printed plot should look like the following one. There are three grey bands with some numbers and arrows on the top or bottom of each. The numbers increase from left to right, indicating the overlap number

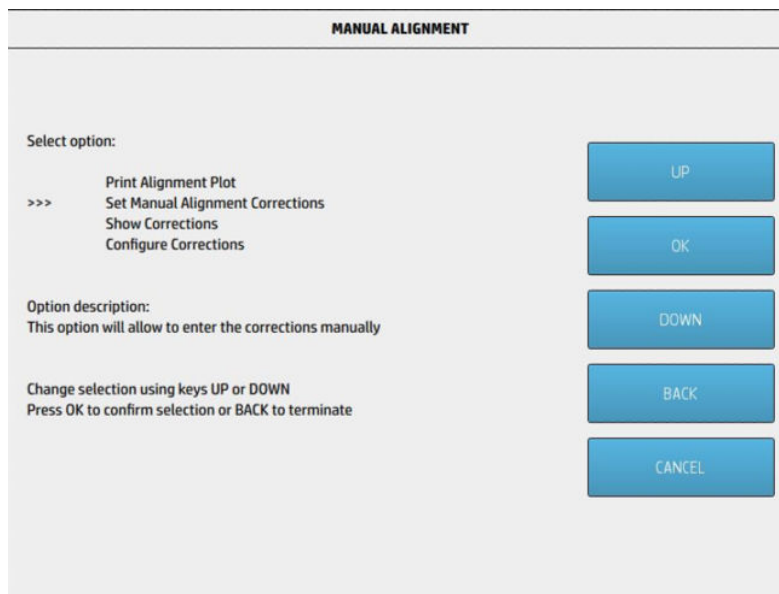
▲ **Overlap:** The limit between two dies or printheads. It is an area where there is a change between the printing zones of the printhead.

The arrows mark the exact position of the overlap. For each overlap, there are three zones: one per grey band. The center band shows the current status of the printer—the result of the last calibration. The top one shows how that overlap would look if you changed the current calibration value, decreasing it by 1 (thus opening the overlap). The bottom one shows how that overlap would look if you changed the current calibration value, increasing it by 1 (thus closing the overlap).

Look at all the overlaps and choose the option you prefer from the three given.

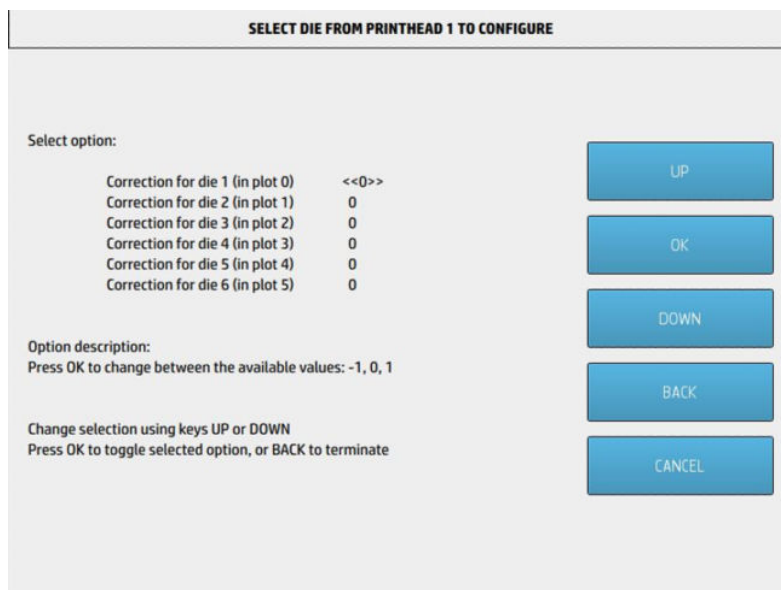
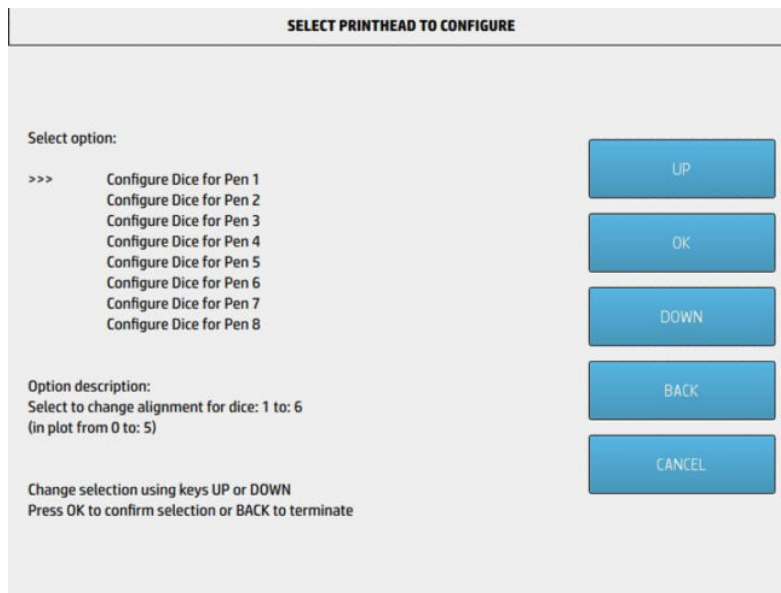


6. Once you have selected an overlap, go to the main window again and select **Set Manual Alignment Corrections**.



7. You will get to a menu that has eight submenus (one per printhead). Inside each you will have 6 correction points (one per overlap). There is a clarification that explains which correction corresponds to which numbers on the plot.

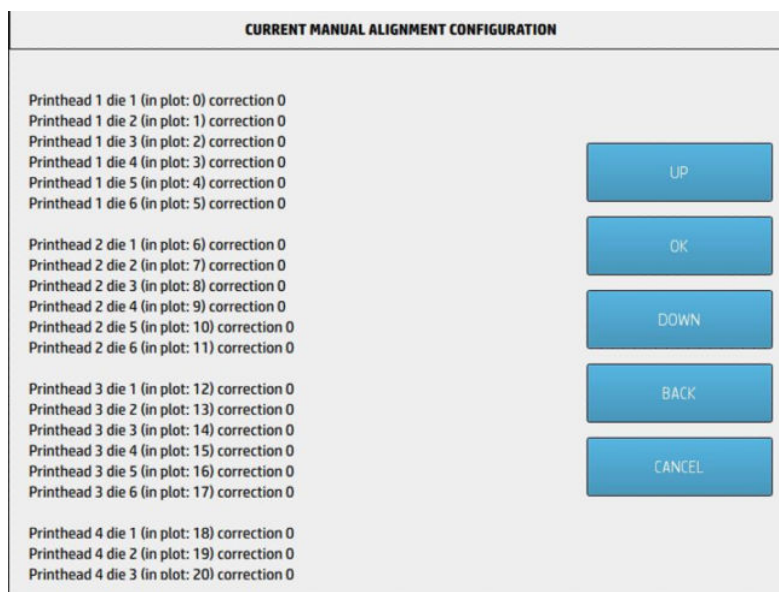
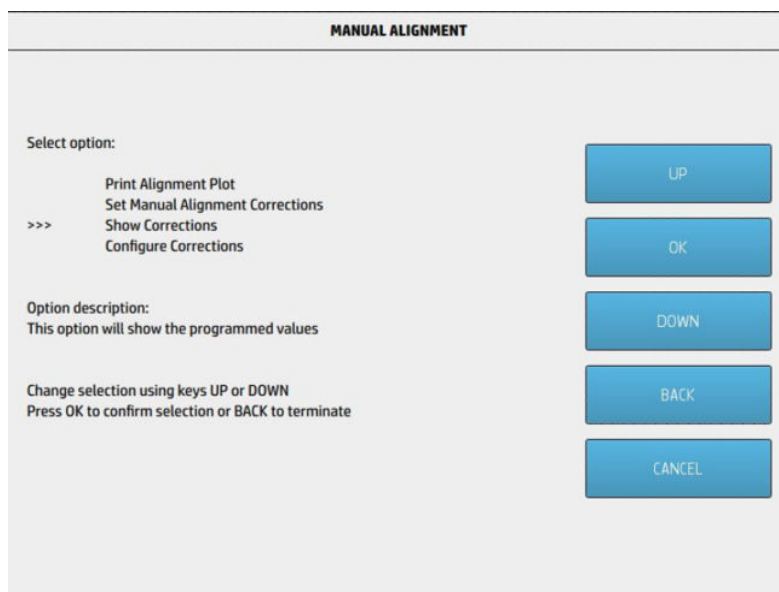
Inside Pen 1 you will find a correction from 0 to 5. Inside Pen 2 the correction ranges from 6 to 11, etc.



8. Follow the instructions in the window to change the values you have already selected on the plot. Please, notice that 0 means do not apply any correction while -1 or 1 applies the corrections that you have seen on the Manual Alignment Plot.

Navigate through the submenu until you have modified all the dies you have selected. The ones that you do not want to change do not need to be overwritten.

9. Once you are finished, go back to the main menu and select **Show Corrections**. All the overlaps will be listed with the correction that will be applied (0, -1 or 1). Check that all the overlaps have the values you have selected. If correct, move to step 10. If there are any numbers that you want to change, go back to step 6



10. Finally, go to the main menu again and select **Configure Corrections**. The corrections will be applied by printing a page, you need to select any media roll (it is not needed to use the one used to calibrate).
11. In order to check the changes, print the Manual Alignment Plot again. If there is an overlap you would like to fine tune again, go to step 5 as many times as you need to to get the results that you want. Once you are satisfied with the results, you can finish by pressing the **Home** button.

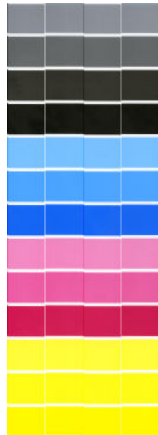
Print-quality issues by symptom

This section describes the most common print-quality issues and how to solve them.

Thin white vertical lines

This issue is caused by misalignment between printheads, nozzles not working, or aerodynamic effects at high speed.

If it occurs in **all** colors, then it is probably a printhead alignment problem.



1. Check that the appropriate print-quality settings are being used.
2. Check that the loaded paper is the same type as that selected in the front panel.
3. Align the printheads using the front-panel option **Calibrate print bar**, using HP Matte Polypropylene, 40 in (1016 mm) wide.
4. Reprint the diagnostic to check whether the problem is fixed.

If the problem persists, try the following:

1. Check that the printer is within specifications; see [Printhead alignment check on page 550](#).
2. If the customer is using low-quality paper, try recommending better-quality paper (preferably HP paper). Printer performance can be guaranteed only when using recommended papers.
3. If the problem appears when printing at high speed (Lines/Fast print mode) with a non-poster paper type, try printing at slower speed (Uniform Areas print mode).

If this type of defect does **not** occur in all colors, then it is probably a printhead nozzle problem.



1. Recover the printheads using the front-panel option **Check & recover print bar**.
2. Reprint the diagnostic; if the problem persists, identify the faulty printhead and perform a more intensive recovery using the front-panel option **Enhanced printhead recovery**.
3. Reprint the diagnostic; if the problem persists but you see an improvement, run the **Enhanced printhead recovery**, selecting the printheads that need recovery.

If there is an improvement in the initial problem, but some degradation appears in another area, wait five minutes without doing anything.

4. Reprint the diagnostic; if the problem persists, check the **Printhead gauge information** (see [Printhead gauge information on page 564](#)). If the status is “Near end of life”, you can replace the faulty printhead. If status is anything else, print the **Nozzle check plot**, and compare the distribution of nozzles out with what you see in the diagnostic plot. If they are not the same, probably the drop detector is malfunctioning. If they are the same, the printhead is within specifications.

Lighter or darker color bands in plain colors

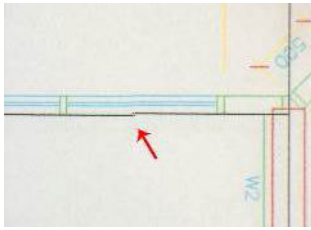
This issue is caused by a difference in drop weight of an entire die or printhead, due to manufacturing variability or usage.



1. Check that the appropriate print-quality settings are being used.
2. Check that the loaded paper is the same type as that selected in the front panel.
3. Ensure that the color calibration option is on.
4. Check that you have loaded a wide enough roll of HP Matte Polypropylene or other supported paper type. After calibration, the printer uses the results to calculate calibrations for all other paper types.
5. Go to the **Optimize print quality** menu and press **Calibrate print bar**.
6. Reprint the diagnostic plot. If the problem persists, check the **Color calibration check plot** (see [Color-calibration check plot on page 547](#)).

Lines are discontinuous

This issue is caused by incorrect printhead positioning or an incorrect paper-advance adjustment.



1. Check that the appropriate print-quality settings are being used.
2. Check that the loaded paper is the same type as that selected in the front panel.
3. If the problem persists, calibrate the paper advance (see [Paper-advance check plot on page 549](#)).
4. Reprint the diagnostic plot.
5. If the problem persists, go to the **Optimize print quality** menu and press **Calibrate print bar**.
6. Reprint the diagnostic plot.
7. If the problem persists, clean the Analog encoder.
8. Perform the Analog encoder calibration (.tpw needed until next official release).
9. Perform the Image length calibration (**Service menu ▶ Calibrations ▶ Image length calibration**).
10. Perform the Paper advance calibration (**Service menu ▶ Calibrations ▶ Paper advance calibration**).
11. Perform the Print bar calibration (**Optimize print quality ▶ Calibrate print bar**).
12. Reprint the diagnostic plot.

Light-colored vertical bands every inch

This issue is caused by aerodynamic effects when the printhead-to-paper distance is too high. It is worse at high speed and in orange or violet colors.

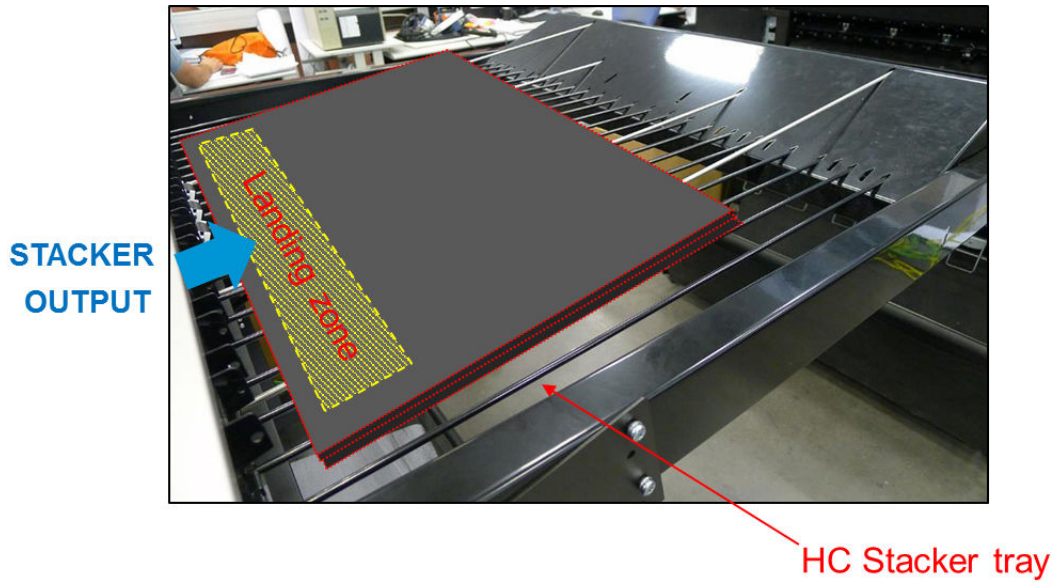


1. Check that the appropriate print-quality settings are being used.
2. Check that the loaded paper is the same type as that selected in the front panel.
3. Run the [PPS test on page 543](#).

If the effect is still visible, try using a lower-speed print mode.

Marks on the print

Under specific conditions, printing with high ink density on certain sensitive poster papers to the high-capacity stacker or Top stacker can result in marks on the landing zone or on the back of the poster. This is a symptom that the ink on the paper is not dry enough. Either select a slower print mode, or a color profile that lays down less ink. A different paper type may also work better.

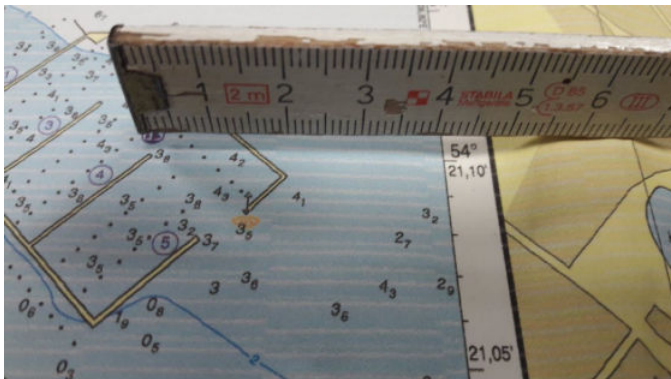
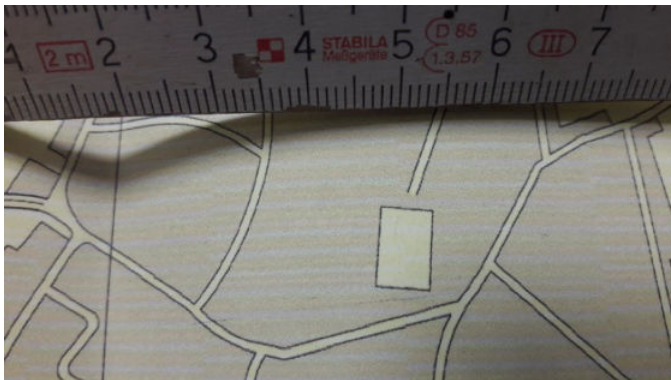


Intermittent horizontal steps of ~2cm - ~0.8 inches in some area fills

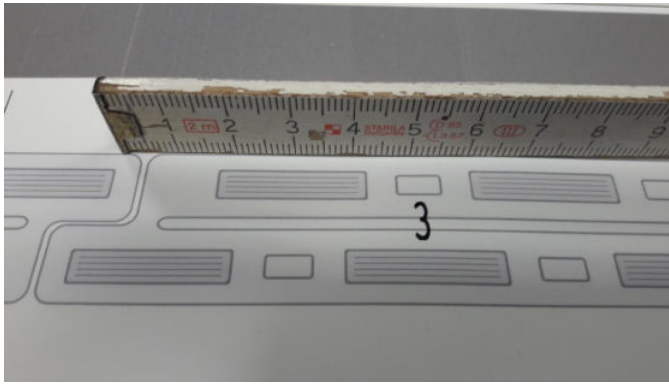
Symptom

Horizontal, staggered thin lines with a width of ~2cm – ~0.8 inches appear intermittently, only visible in some area fills.

Here are some pictures of the defect, only visible in some area fills, intermittently:



When printing the Diagnostic plot, you can place a ruler at the top of the plot, and you can see the defect—a line of 2cm – 0.8in corresponding to the of the printhead dies, as shown in the following picture.



Fix

1. Service menu -> Calibrations -> Image length calibration. This will make the printer print a line which will have to be measured accurately.

As a norm, use a higher number to calibrate if the issue persists.

2. If issue persist, check if the encoder strip of the service station is dirty or not.

Here is an example (from a real case):



The lower part of the encoder strip was too dirty and seemed to be impacting drop detection (even if there was no error/warning message).

By cleaning it, we fixed the intermittent image quality issue.

Service menu -> Calibrations -> Image length calibration. This will make the printer print a line which will have to be measured accurately. As a norm, use a higher number to calibrate if the issue persists.

Select optimal print quality

Print mode	Description	Application
Lines/Fast	Optimized for good lines, productivity, and cost per copy Maximum speed Gray shades are printed using black ink only	Lines and text, GIS, draft posters

Print mode	Description	Application
Uniform areas	Optimized for uniform area fills Medium speed More robustness by adding grain Gray shades are printed using CMY inks	High-density posters
High detail	Optimized for fine detail, such as text over color or small letters Low speed High halftone resolution (1200 dpi) Gray shades are printed using CMY inks	High-detail GIS

Working with other commercially available papers

This section provides a quick reference guide to selecting the correct settings in the printer so that the printer achieves the best possible quality when using a paper type that does not come from HP.

For best results, HP encourages users to use papers officially recommended for this printer. However, they can also use, at their own risk, other papers that they would like to print on. It's essential to check that any paper loaded into the printer is within the required specifications, to avoid damaging the printer.

Specifications

- Paper weight: 70–200 g/m² (18–54 lb)
- Maximum paper thickness: 0.4 mm (0.01574 in)
- Minimum roll width: 11 in (279 mm)
- Maximum roll width: 40 in (1016 mm)
- Maximum printable width: 39.4 in (1000 mm)
- Core diameter: 3 in (76.2 mm)
- Maximum roll diameter: 7 in (177 mm)

When loading a non-HP paper, you are recommended to load it as the generic profile that best matches the paper type. The available generic profiles are listed below:

Category	Paper name
Plain paper	HP Universal Bond Paper, 3-in Core
	HP Bright White Inkjet Paper, 3-in Core
	Plain paper < 90 g/m ²
	Plain paper 90–110 g/m ²
	Plain paper > 110 g/m ²
	Recycled paper
	Coloured paper

Category	Paper name
Blueprint paper	Digital blueprint paper
Technical paper	Natural tracing paper
	Vellum
	Translucent bond paper
Coated	HP Universal Heavyweight Coated Paper, 3-in Core
	Coated paper 90–100 g/m ²
	Heavyweight coated paper > 100 g/m ²
Poster paper	HP Premium Bond Paper, 3-in Core
	HP Production Matte Poster Paper, 3-in Core
	HP Production Satin Poster Paper, 3-in Core
	HP Gloss Poster Paper, 3-in Core
	Poster matte paper
	Poster satin paper
	Poster gloss paper
	Photo semi-gloss
	Blue-back paper
Banner and sign	HP Matte Polypropylene, 3-in Core
	Polypropylene matte
	Tyvek Banner 135 g/m ²
	Plain paper < 90 g/m ²

Recommended HP papers

Name	Dimensions	Product number	Weight	Caliper
HP Universal Bond Paper, 3-in Core	A2 × 500 ft	K6B85A	80 g/m ² (21 lb)	0.106 mm (0.0042 in)
	A1 × 500 ft	K6B86A		
	A0 × 500 ft	K6B87A		
	24 in × 500 ft	K6B88A		
	36 in × 500 ft	L4L08A		
	36 in × 575 ft	M2N06A		
	18 in × 500 ft	M2N04A		
	30 in × 500 ft	M2N05A		
HP Bright White Inkjet Paper, 3-in Core	A2 × 500 ft	L4Z41A	90 g/m ² (24 lb)	0.119 mm (0.0047 in)
	A1 × 500 ft	L4Z42A		

Name	Dimensions	Product number	Weight	Caliper
	A0 × 500 ft	L4Z43A		
	24 in × 500 ft	L4Z44A		
	36 in × 500 ft	L4Z45A		
HP Premium Bond Paper, 3-in Core	A0 × 300 ft	L6B11A	120 g/m ²	0.144 mm (0.0056 in)
	24 in × 300 ft	L6B12A		
	36 in × 300 ft	L6B13A		
	40 in × 300 ft	L6B14A		
HP Universal Coated Paper, 3-in Core	A0 × 300 ft	L5C73A	90 g/m ² (24 lb)	0.124 mm (0.0049 in)
	36 in × 300 ft	L5C74A		
HP Universal Heavyweight Coated Paper, 3-in Core	A0 × 300 ft	L5C79A	131 g/m ² (33 lb)	0.172 mm (0.0068 in)
	36 in × 300 ft	L5C80A		
	40 in × 300 ft	L5C81A		
HP Production Matte Poster Paper, 3-in Core	24 in × 300 ft	L5P96A	160 g/m ²	0.167 mm (0.0066 in)
	36 in × 300 ft	L5P97A		
	40 in × 300 ft	L5P98A		
HP Production Satin Poster Paper, 3-in Core	24 in × 300 ft	L5Q01A	160 g/m ²	0.154 mm (0.0061 in)
	36 in × 300 ft	L5Q02A		
	40 in × 300 ft	L5Q03A		
HP Gloss Poster Paper, 3-in Core	40 in × 200 ft	L5Q08A	190 g/m ²	0.185 mm (0.0073 in)
HP Matte Polypropylene, 3-in Core	40 in × 150 ft	L6B19A	100 g/m ²	0.144 mm (0.0057 in)

Scan-quality problems

In this section the most common defects and failure modes are shown, sorted by relevance and frequency of appearance. A defect is a common image artifact that usually appears when using any CIS scanner. These are due to incorrect settings, product limitations, or easily solvable mistakes. A failure mode is due to malfunctions of some of the scanner components.

Some of the corrective actions proposed here require the use of the Scanner Diagnostic Plot, which you can print and scan as indicated in [Scanner diagnostic plot on page 208](#). Do not use any printed version of this guide to test the scanner, as the resolution of the images included here is insufficient. Use the diagnostic plot when recommended in response to any of the errors described in this chapter.

Banding problems

Bad or no gray-balance calibration (CIS module to module match).



Image-quality problems

Scanning originals that have folds or are crumpled on a CIS scanner is often taken to be a scanner defect, whereas in reality it is a limitation of the technology being used. Because of the very short distance from the sensor to the surface of the original (the focal length), there is also a very short focus depth; meaning that, if the original is not in contact with the glass plate, it is very likely to be out of focus.



Dust problems

There are image-quality problems not related to hardware errors; these can be due to insufficient cleaning, bad calibration, or limitations in the CIS technology.



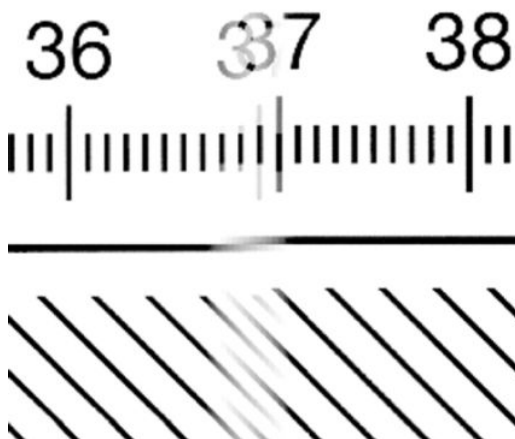
Streaks running in the scan direction that seem to appear and disappear during the scan are probably caused by dust. Clean the scanner and the original. The streaks are often in a darker shade.

Streaks that run in the scan direction, are color-dependent, or are a lighter shade of the color are often related to calibration. Dust may have been present in the scanner during calibration, but has been cleaned away since.

Stitching problems

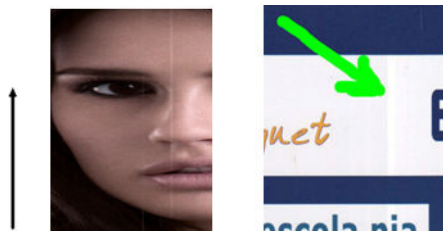
Other issues can be that the scanner simply needs to be calibrated, because the parameter block has been erased or has never been calibrated, or the scanner has been moved around.

Stitching problem between two CIS modules:



Random vertical lines

This is one of the most common issues in sheet-fed scanners. Usually, the vertical streaks are caused by dust particles in the optics of the scanner, or miscalibration of the scanner (in these cases, the problem can be solved). Here are some examples of images suffering from vertical lines or streaks. Note the black arrow indicating the scanning direction in these examples.



Actions

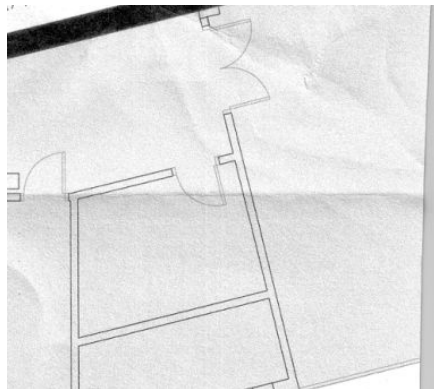
1. Clean the scanner's glass plate and the original to be scanned as described in the user guide. Re-scan your original afterwards.
2. If the streaks remain, recalibrate the scanner as indicated in the user guide. Make sure you clean the calibration sheet before calibrating the scanner, and check that the calibration sheet is not damaged (if so, call your support representative and ask for a new calibration sheet). Re-scan your original after the calibration is completed.
3. If the streaks still remain, check the scanner's glass plates visually. If it is damaged (scratched or broken), call your support representative.
4. If the streaks remain, there may be dust particles inside the glass plates. Carefully take out the glass plate and clean it as described in the user guide.



NOTE: The problem of vertical streaks cannot always be solved, due to the technological limitations of CIS scanners. If the streaks remain after the corrective actions explained above, then no further action can be taken to improve the image quality, except to buy a more expensive CCD scanner.


Wrinkles or folds

Scanners based on CIS technology have a high optical resolution within their focus plane, at the price of a very limited depth of field. Hence, the images are sharp and detailed when the scanned original is perfectly flat against the glass plate. However, whenever the original contains wrinkles or folds, these defects are clearly visible in the scanned image (as shown in the following example).



Actions

1. Re-scan the original, setting the content type to **Image**, and contrast and background removal to zero.
2. If the problem persists, re-scan the original at a lower scanner resolution (low or medium quality if scanning, Fast or Normal if copying). It may also help to flatten the original manually as much as possible before scanning it again.

 **NOTE:** The problem of wrinkles cannot always be solved, due to the technological limitations of CIS scanners. If the wrinkles remain after the corrective actions explained above, then no further action can be taken to improve the image quality, except to buy a more expensive CCD scanner.

Line discontinuities

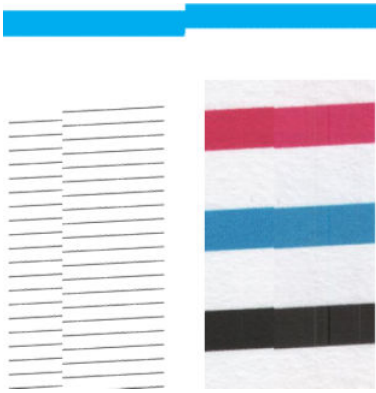
When scanning or copying large originals, you may sometimes find issues such as that shown in the following image, where a straight line (it does not necessarily have to be horizontal) appears with discontinuities or small steps. This is more likely to occur at beginning and end of the scan when using slippery, glossy paper. Note the black arrow indicating the scanning direction in this example.



Actions

1. Repeat the scan, preferably using a higher resolution, and this time make sure that the original is correctly positioned (it is flat on the scanner input and it does not move), and that the printer is not printing while you scan.
2. If the problem persists, check that the original to be scanned is not skewed, and that it does not become skewed during the scan. If so, see [Incorrect paper advance, skew during scanning, or horizontal wrinkles on page 202](#). You might also want to deactivate the automatic de-skew algorithm as indicated in [A scanned image is very skewed on page 207](#).
3. If there is no skew but the problem persists, clean and calibrate the scanner as indicated in the user guide. Take care not to move the product during the calibration (the printer should not be printing during scanner calibration), and check that the calibration sheet is correctly positioned before starting the calibration. Also check that the calibration sheet is not damaged before calibrating the scanner (an old or damaged calibration sheet may cause this problem); if it is damaged, call your support representative and ask for a new calibration sheet.
4. If the problem persists, proceed to analyze the following areas of the diagnostic plot:
 - a. 4 (from module A to E).
 - b. 10, at the intersection between modules.
 - c. 13 in modules A and E, and 14 in modules B, C, and D.

If you see any of these defects in the studied areas, call your support representative and report a “line discontinuities” error after calibration.



The four vertical thin black lines at the beginning and the end of the diagnostic plot show, approximately, the position of the intersection between CIS modules, where this kind of error usually appears. If the error appears outside these areas, call your support representative and report “line discontinuities within a CIS module”.

Grain in area fills when scanning

When an original contains area fills, if the paper used in the printer is plain paper (for instance, HP Universal Bond or HP Bright White Inkjet Bond), some grain may appear in the image. This error may also appear in scanned files of originals that were printed on textured paper. The example below shows the original image on the left and the scanned, grainy image on the right.

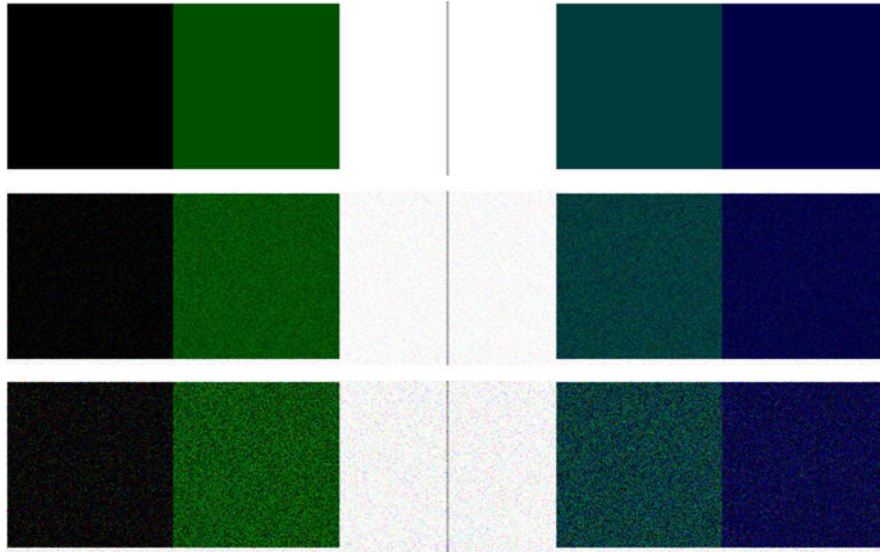


Actions

1. Look at the original and check if it is dirty, has fingerprints on it or if the grain is already present in the print. If not, then proceed to step 2.
2. Repeat the scan/copy, setting the content type to **Image**.
3. If the problem persists:
 - If the problem appears in a scanned file, scan at a higher resolution.
 - If the problem appears when copying, use **High detail** quality. We also recommend using coated or glossy paper in order to avoid grain in copies.
 - If the problem still appears in a scanned file, set a lower value for image sharpening.
4. If the problem persists, clean and calibrate the scanner as indicated in the user guide. Check that the calibration sheet is also clean, and that it is not damaged before calibrating the scanner (an old or damaged

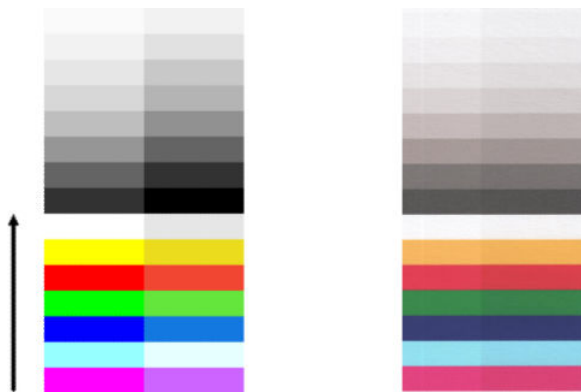
calibration sheet may cause this problem); if it is damaged, call your support representative and ask for a new calibration sheet.

5. If the problem persists, proceed to analyze areas 11 and 12 of the diagnostic plot across modules A to E. In the three examples below, the top example is ideal, the middle example can be regarded as acceptable; but, if you see something similar to the bottom example (or worse), call your support representative and report “grain in area fills”.



Small color differences between adjacent CIS modules

When scanning wide plots, sometimes slightly different colors can be seen at both sides of the junction between two CIS modules. This issue, if present, can be easily seen by analyzing patterns 9 of the diagnostic plot at the intersection between CIS modules. Here are some examples. Note the black arrow indicating the scanning direction in these examples.



Sometimes the color mismatch between adjacent modules can show a serious scanner malfunction, as in the following example. If this occurs, see [Completely wrong colors on page 204](#).



Actions

1. Repeat the scan or copy, setting the content type to **Image**, reducing the background removal to 0 or turning the original 90 degrees before scanning it again.
2. If the problem persists, clean and calibrate the scanner as indicated in the user guide. If calibration ended without errors, proceed to analyze again pattern number 9 and modules A through E of the diagnostic plot.
3. After analyzing pattern 9, if you see some color differences between left and right sides of the bars for neutral and vivid colors, call your support representative and report “small color differences between adjacent CIS modules”. Otherwise, if you see color differences for vivid colors but not for neutral colors, see [Clipping in dark or light areas on page 196](#). If necessary, see also [Grain in area fills when scanning on page 192](#).

Vertical light lines at the intersection between CIS modules

This problem can be found when scanning large uniform area fills which are made of some light color. You sometimes find light vertical bands (around 0.5 cm wide) at the intersection between two CIS modules, as in this example. Note the black arrow indicating the scanning direction in this example.



Actions

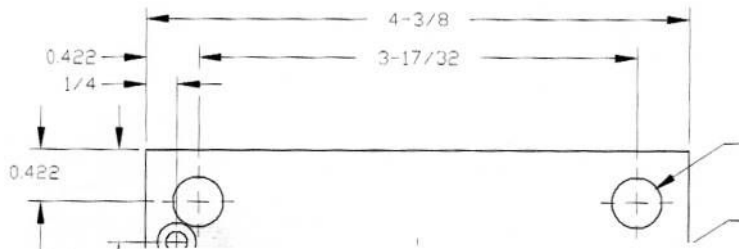
1. Repeat the scan or copy, setting the content type to **Image**, reducing the background removal to 0 or turning the original 90 degrees before scanning it again.
2. If the problem persists, clean and calibrate the scanner as indicated in the user guide. Then proceed to analyze pattern number 2 of the diagnostic plot at the intersections between CIS modules. The example below shows a good result on the left and a bad result on the right: the latter has light vertical banding 0.5 cm wide at the intersection between two CIS modules.



If you see the kind of result shown on the right, call your support representative and report “vertical light bands in area fills at the intersection between CIS modules, after calibrating the scanner”.

Variable line thickness or missing lines

When scanning some CAD plots at Standard resolution, mostly when working with grayscale or black-and-white prints that contain very thin lines, you may see a variation in line thickness, or even some missing lines, in some places:

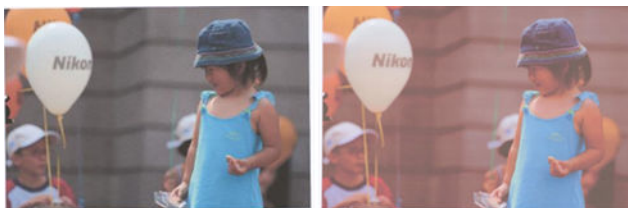


Actions

1. Repeat the scan or copy using a higher resolution (600 dpi). You should also set background removal to 0, or set the content type to **Mixed**. You might also deactivate the automatic de-skew as explained in [A scanned image is very skewed on page 207](#). In case you were working in black-and-white mode, we recommend using grayscale instead.
2. If the problem persists, turn the original plot 90 degrees before scanning it again.
3. If the problem persists, clean and calibrate the scanner as indicated in the user guide.
4. If the problem persists, see [Defocus, blurring and fading colors on page 200](#).


Inaccurately reproduced colors

You have to deal with several variables if you want perfect color matching between the original you are scanning and the copy or scanned file you obtain as a result. If you find undesired colors in cases like the example shown below (original on the left, scanned image on the right), you can follow these guidelines.



Actions

1. Make sure that you choose the correct paper type in the scan settings before scanning.

 **NOTE:** If editing the quickset while scanning, note that this will be valid only for that scanning session.
2. When dealing with copies, you must take into account that good color matching between a given original and its copy can be achieved only if both are printed on the same type of paper. In the case of scanned files, good color matching can be achieved only if your monitor is color-calibrated or compliant with sRGB or AdobeRGB standards.
3. If the above conditions are met, you should also take into account that various scanner settings can affect the final color result, such as contrast, background removal, content type and paper type. To obtain the best possible colors, set contrast and background removal to 0, set the content type to **Image**, and select

the most appropriate type of paper according to the original you are scanning (if in doubt, use photo paper).

4. For optimum color results, clean and calibrate the scanner as indicated in the user guide.
5. Avoid placing the scanner in direct sunlight or near sources of heat or cold.

Color fringing

The problem called “color fringing” occurs when the scanner is affected by incorrect paper advance and/or miscalibration. Nevertheless, some amount of color fringing is unavoidable, especially at high scanning speeds. It can be seen at the borders of sharp black text over a white background, as in the example below (original on the left, scanned image on the right). Note the black arrow indicating the scanning direction.



Actions

1. Repeat the scan after increasing the scanner’s resolution (choose 600 dpi for scanning and copying) and setting the print quality to **High detail** for copying. Turn your original 90 degrees, if possible, before scanning it again.
2. If the problem persists, clean and calibrate the scanner as indicated in the user guide. Repeat the scan at a high resolution (600 dpi) and check whether the problem disappears.
3. If the problem still persists, you can diagnose this issue by analyzing the patterns 6 and 8 (A to E) of the diagnostic plot. The black horizontal lines appear slightly colored at the top and bottom of each end (in the example on the right, below). Normally, they look red at the top and blue or green at the bottom, but it could be the other way around.



If you see this effect, call your support representative and report “color fringing problem after calibration”.

Clipping in dark or light areas

Sometimes you may see that the scanned file or copy of one of your plots has lost detail in light or dark areas (or both), as in the example below: original on the left, scanned image on the right.



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Actions

1. If you are making copies, and the original is printed on photographic paper, while you are copying it onto matte paper, this problem is to be expected. However, you can try to improve the result by reducing contrast and background removal; this also applies if you see this problem in scanned files.
2. If the problem persists, repeat the scan or copy using a higher resolution (600 dpi). Set the content type to **Image**, and make sure that the type of original selected in the front panel really corresponds to the paper type of your original (white, photo, recycled or translucent). If you are not sure, select photo.
3. If the problem persists, recalibrate the scanner as indicated in the user guide. Make sure you clean the calibration sheet before calibrating the scanner, and check that the calibration sheet is not damaged (if so, call your support representative and ask for a new calibration sheet). Re-scan your original after the calibration is completed.
4. If the problem persists, analyze patterns 16 (A to E) of the diagnostic plot. If you can distinguish lightness steps beyond the upper and lower specified thresholds, then the scanner is fine. Here you can see some examples of correct and incorrect functioning.



If your scanned pattern looks like the incorrect one on the right, whether the clipping is in dark and/or light areas, call your support representative and report “Clipping in dark/light areas”.

The Moiré effect

When scanning some original plots that were printed using offset or low resolution halftone machines, you may sometimes find regular patterns where uniform area fills should be, like in the following example:



Original



Scanned image with Moiré

Actions

- ▲ Repeat the scan or copy at a different resolution (quality) until you get the desired effect. The Moiré effect may appear in both high or low qualities, hence you will want to try a different quality from that used first.

Take into account that Moiré effect is intrinsic to any digital imaging system, and may not disappear completely.

Flare in the image when scanning glossy originals

If the scanner is miscalibrated, or if the original plot you are trying to scan is very glossy or reflective, you can sometimes find flare in the scanned image, as in the following example: original on the left, scanned image on the right.



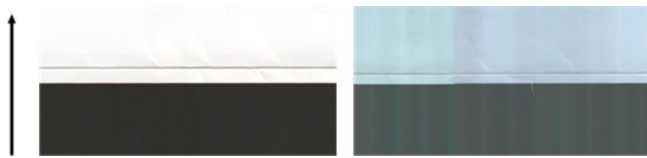
Image © www.convincingblack.com, reproduced with permission.

Actions

1. Clean the original and the scanner's glass plates, then scan again.
2. If the problem persists, recalibrate the scanner as indicated in the user guide. Make sure you clean the calibration sheet before calibrating the scanner, and check that the calibration sheet is not damaged (if so, call your support representative and ask for a new calibration sheet). Re-scan your original after the calibration is completed.
3. If the problem persists, see [Clipping in dark or light areas on page 196](#).

Vertical red and green bands over white or black background

If the scanner has not been calibrated for a long period of time, or if the last calibration failed, you can sometimes see defects like the following. Note the black arrow indicating the scanning direction in this example: original on the left, scanned image on the right.



Actions

1. Clean and calibrate the scanner as indicated in the user guide. If the calibration failed, proceed as stated in the user guide. However, if the calibration ended correctly, scan your original again and check that the colored vertical bands have disappeared.
2. If the problem persists, call your support representative and report "vertical red/green bands after calibration".

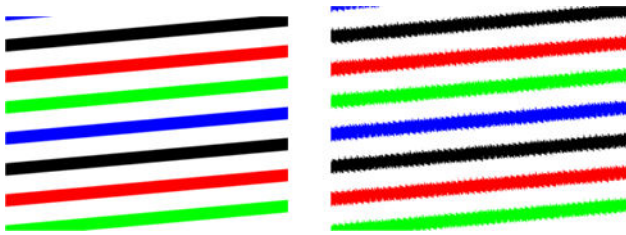
Vibration

If your product is not properly placed on a flat surface, or if the scanner lid does not close correctly, you may sometimes find that the scanned image suffers from vibration, as in the following example: original on the left, scanned image on the right.



1. Make sure that the printer is placed on a flat surface, the scanner lid is correctly closed, and the printer is not working while you are scanning. Scan your original again.
2. If the problem persists, change (increase or decrease) the scanning resolution and re-scan your original. We also recommend turning the original 90 degrees before scanning it again.

3. If the problem persists, analyze pattern 4 of the diagnostic plot. If you see the problem shown on the right, call your support representative and report a “vibration problem”.



Horizontal periodical banding

This problem can be found in scanners with a defective pressure roll in some CIS modules. In this case, you may sometimes find horizontal periodical bands in your scanned images, separated by around 5 cm (2 in), in the area covered by one CIS module, as in this example: original on the left, scanned image on the right. Note the black arrow indicating the scanning direction in this example.



Actions

1. Open the scanner lid. Clean the motor wheels (small black rubber) and the pressure rolls (wide white plastic). Check that all the pressure rolls can move freely. If you find dust particles or objects that obstruct the movement of the rollers, try to remove them, then close the scanner lid and repeat your scan.
2. If the problem persists, clean and calibrate the scanner as indicated in the user guide, and analyze pattern 1 of the diagnostic plot. If you can find horizontal periodical banding inside this pattern, as shown on the right below, call your support representative and report “horizontal periodical banding”. Note the black arrow indicating the scanning direction in this example.



Original Pattern 1 affected by horizontal periodical banding

Defocus, blurring and fading colors

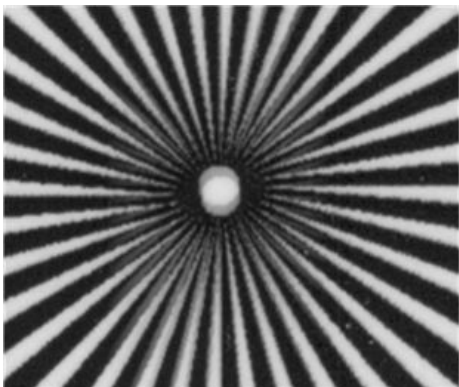
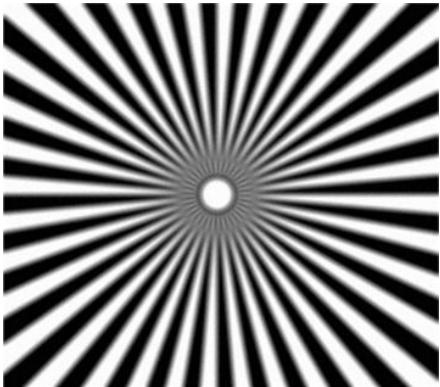
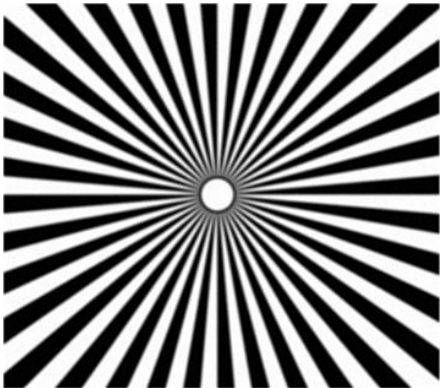
CIS technology scanners are tuned to work at a fixed focal distance, and they are sensitive to small variations in the position of the original with respect to the scanner glass plate. If the scanner lid is not properly closed, or if the original has deep wrinkles or texture, you may sometimes find problems as in the following example (on the right), where the scanned image is blurred and colors are faded.



Actions

1. Check the scanner lid sensor by opening the scanner lid and checking that the five CIS modules show blinking red, green and blue lights alternately. If not, reboot the machine and call your support representative reporting the error appearing at the front panel. If no error is given in the front panel then report “scanner lid sensor failure”.
2. If all the modules lit up correctly in the previous step, close the scanner lid by pushing it down until you hear a click. Then calibrate the scanner as indicated in and repeat your scan.
3. If the problem persists, repeat the scan or copy using a higher resolution (High or Max). You should also set background removal to 0, or set the content type to **Mixed**.

4. If the problem persists, analyze pattern number 7 in modules A through E of the diagnostic plot. A correct example is given below, followed by two incorrect examples. Note that there is a black ring near the center of pattern 7. In this step, you must look at the region near the black ring. If you can see discontinuities in the black and white lines, call your support representative and report a “defocus or blurring” error.



Incorrect paper advance, skew during scanning, or horizontal wrinkles

You may encounter problems with some thick glossy originals being moved through the scanner’s paper path. In some cases, the original may become skewed during the scanning process.

If some of the paper rollers are not working correctly, you may find small horizontal wrinkles in the scanned image, due to the paper being stuck in some regions while not in others.

Actions

1. Turn your original 90 degrees and repeat your scan.
2. If the problem persists, open the scanner lid. Clean the motor wheels (small black rubber) and the pressure rolls (wide white plastic). Check that all the pressure rolls can move freely. If you find dust particles or objects that obstruct the movement of the rollers, try to remove them, then close the scanner lid and repeat your scan.
3. If the problem persists, restart the scanner by turning it off and on again. If you find an error message on the front panel during this operation, call your support representative and report the error message. If no error message appears, try repeating your scan.
4. If the problem persists, analyze patterns 4, 13 and 14 of the diagnostic plot. The plot should look like this:



If you see an image resembling the incorrect examples below, call your support representative and report an “incorrect paper advance” problem.



Vertical black band 20 cm wide

Your scanner contains various different CIS modules, each of which covers an area 20 cm (7.9 in) wide. If one of the modules fails, and the scanner hardware check does not detect the failure, you may see a black vertical band, corresponding to the area covered by a single CIS module, in your scanned image or copy. Here is an example (on the right). Note the black arrow indicating the scanning direction in this example.



Original Scan affected by a CIS failing module

Actions

1. Open the lid of the scanner and check that the five CIS modules show blinking red, green and blue lights alternately. If a module is failing, call your support representative and report a “CIS module illumination” error.
2. If all the modules lit up correctly in the previous step, restart the scanner by turning it off and on again. If you find an error message on the front panel during this operation, call your support representative and report the error message. If no error message appears, try repeating your scan.

3. If the problem persists, try to calibrate the scanner as indicated in the user guide. If this operation fails, call your support representative with the error code given on the front panel. If no error code appears, try to repeat your scan.
4. If the problem persists, call your support representative and report a “vertical black band 20 cm wide”.

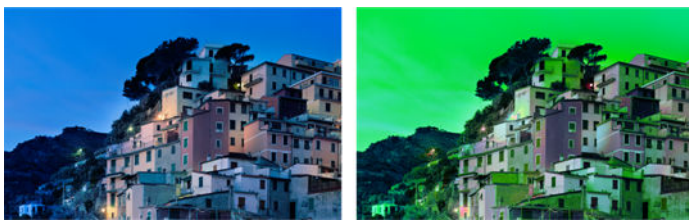
The scanner damages some originals

HP is aware that this scanner may cause vertical scratches on inkjet originals on thick glossy paper. Very thin tracing paper or old originals may also be damaged. This is because CIS technology requires the original to be held down with high pressure to obtain accurate results and avoid blurring and defocus problems.

If the original you intend to scan is valuable, and if it belongs to one of the types described above (inkjet-printed, thick, glossy original or old/thin/tracing paper original), HP recommends using a CCD scanner such as the PageWide XL MFP.

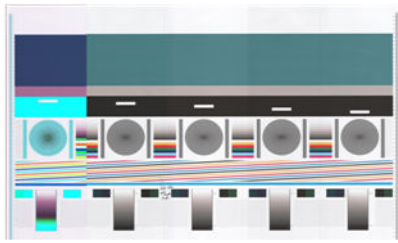
Completely wrong colors

If some of the LEDs used for illumination in the CIS modules are failing, or the last calibration did not work correctly, although no error message was given on the front panel, you may experience some completely wrong colors in your scanned images, as in the example below: original on the left, scanned image on the right.



1. Open the lid of the scanner and check that the five CIS modules show blinking red, green and blue lights alternately. If some module is failing, call your support representative and report a “CIS module illumination” error.
2. If all the modules lit up correctly in the previous step, restart the scanner by turning it off and on again. If you find an error message on the front panel during this operation, call your support representative and report the error message.
3. If no error message appears on the front panel during the restart process, try to calibrate your scanner, as indicated in the user guide, once it is fully functional. If some error message appears on the front panel, call your support representative and report the error, adding that you found it after seeing “completely wrong colors in the scanned image”.
4. If calibration succeeded, repeat your scan and check the colors.

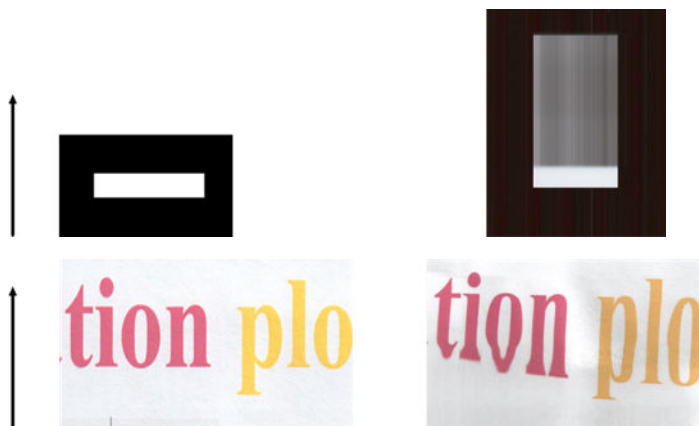
- If the colors are still wrong, analyze the whole diagnostic sheet. Check that you find completely wrong colors in the area corresponding to just one of the CIS modules, as in the following figure. If so, call your support representative and report “completely wrong colors after calibration”, and report the letter of the CIS module that is failing (module A at the example).



If all the modules are failing, call your support representative and report that.

Vertical distortion

If the lid sensor of the scanner fails, the scanner cannot detect when the lid is open. Hence, you can start a scan, and at some point find that the pressure rolls do not move the original through the scanner paper path. You may see images like the following when this happens (original on the left, scanned image on the right). Note the black arrow indicating the scanning direction in these examples.



Actions

- Check that the scanner lid sensor is working by opening the scanner lid and checking that the five CIS modules show blinking red, green and blue lights alternately. If not, call your support representative and report “scanner lid sensor failure”.
- If all the modules lit up correctly in the previous step, close the scanner lid by pushing it down until you hear a click. Then repeat your scan and visually check that the original advances correctly through the scanner path. If not, call your support representative and report an “incorrect paper advance” error. Remember that your scanner is not intended to work with originals thicker than 0.8 mm (0.0315 in).

Object replication (ghosting)

This error very rarely appears in CIS scanners. However, you can occasionally find image defects like the following: original on the left, scanned image on the right.



Image © www.convincingblack.com, reproduced with permission.

Actions

1. Restart your product. Then calibrate the scanner, as indicated in the user guide, and repeat your scan. Turn the original 90 degrees if possible before rescanning.
2. If the problem persists, analyze pattern 3, modules A through E, of the diagnostic plot. Call your support representative and report an “object replication” issue if you see the kind of error shown on the right.



Incorrect edge detection, mostly when scanning tracing paper

Tracing or translucent papers can be scanned with your product with good results, although totally transparent papers are not supported. Nevertheless, the resulting image may have extra margins or some clipping of the content in some situations when detection of the edge of the paper is not accurate, which may also happen when scanning plain paper if the glass plate is dirty. In order to avoid these undesired effects, follow these recommendations:

Actions

1. Carefully clean the scanner’s glass plates and the original to be scanned with a cloth. Turn the original 90 degrees if possible and re-scan it afterwards. Remember to select **Translucent** as the paper type at the scanner if your original is translucent.
2. If the problem persists, calibrate your scanner, and re-scan your original again afterwards.
3. If the problem persists in the case of translucent paper, attach a sheet of white paper to the back of the original to be scanned. Remember to select **White paper** as the paper type for the scanner in this case.
4. Alternatively, you can select the option Full Width (36") = ON to force the scanner to scan the full scanner width even if the loaded paper width is less than 36". Be aware that this option will create a file that will be exactly 36" wide, with some extra gray areas at both sides of the scanned image.

A scanned image is very skewed

Originals are often loaded into the scanner with some degree of skew. In order to correct for this unavoidable problem, the scanner has a built-in automatic de-skew algorithm, which measures the skew in the original and rotates the scanned image so that the result is perfectly straight. However, in some cases the de-skew algorithm may increase the skew rather than correcting it. In other cases, the skew is so bad that it cannot be automatically corrected.

To load the original with minimum skew, grasp the original with the image facing up and your hands at left and right edges. You are recommended to avoid resting your hands or the original on the scanner's input tray. Push the original into the scanner insertion slot until you feel the whole top border of the original pressing against the scanner rubber rolls, which will load the original after a delay of 0.5 seconds. Now you can take your hands off the original. If you are not happy with the way the scanner has grabbed your original, you can press **Release page** and try again.

The action of the automatic de-skew algorithm can be deactivated by editing a quickset while scanning/copying and set **Auto de-skew** to **Off**. If you want to deactivate auto de-skew permanently for a concrete quickset, access quicksets edition, set **Auto de-skew** to **Off** and save the quickset.

 **NOTE:** You can access quicksets edition through the **Settings** application > **Quicksets** or while scanning/copying, pressing  in the quicksets screen.

Colors are different when copying an original or when printing a previously scanned original

You might experience different colors when you scan an original to a file and then print that file through the Embedded Web Server or using a USB pen drive, or if you directly create a copy of the original. These differences are caused by different color settings used when doing both tasks. In order to get the same colors when printing a file that has been previously scanned or copying that original, do the following:

Actions

1. Access the **Settings** application, then go to **Default printing configuration** > **Color Options**.
2. Set the Rendering Intent to Relative Colorimetric.

Scanner diagnostic plot

Prepare the product and the paper to print the diagnostic sheet

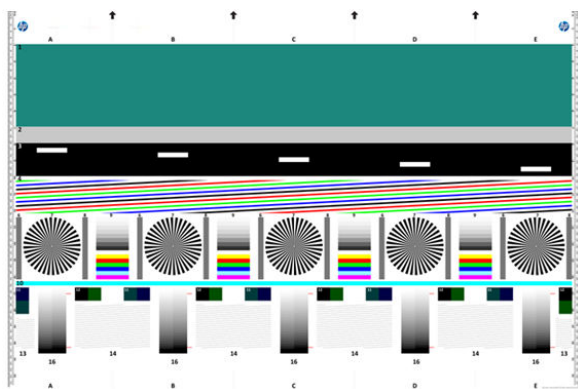
Turn on your product and wait until it is functioning. Then select the paper on which the diagnostic plot is going to be printed (you can reuse the diagnostic plot any time in the future, if it is saved carefully). Ideally, the diagnostic plot should be printed on glossy paper, and you are highly recommended to do that if you use your product mostly for scanning or copying photo originals (posters, pictures printed on glossy paper, etc). If you use your product mostly to scan or copy matte originals, then you can use any matte white paper to print the diagnostic plot. Do not use recycled or tracing paper to print this plot. The size of the diagnostic plot is 610 × 914 mm (24 × 36 in). It can be printed on any 914 mm (36 in) landscape or 610 mm (24 in) portrait paper roll. You can also use a single sheet that is at least 610 × 914 mm (24 × 36 in).

Once the correct paper is loaded, if this paper permits color calibration then we recommend color-calibrating the printer (see the *User's Guide*).

You can print the diagnostic plot from the front panel: press **Settings**, then **Optimize scanner > Scanner IQ plot**.

Visual check for errors while printing the diagnostic sheet

Once the diagnostic plot is printed, the first step is to check that all the patterns included in it are correctly printed. The diagnostic plot, if printed correctly, should look like this:



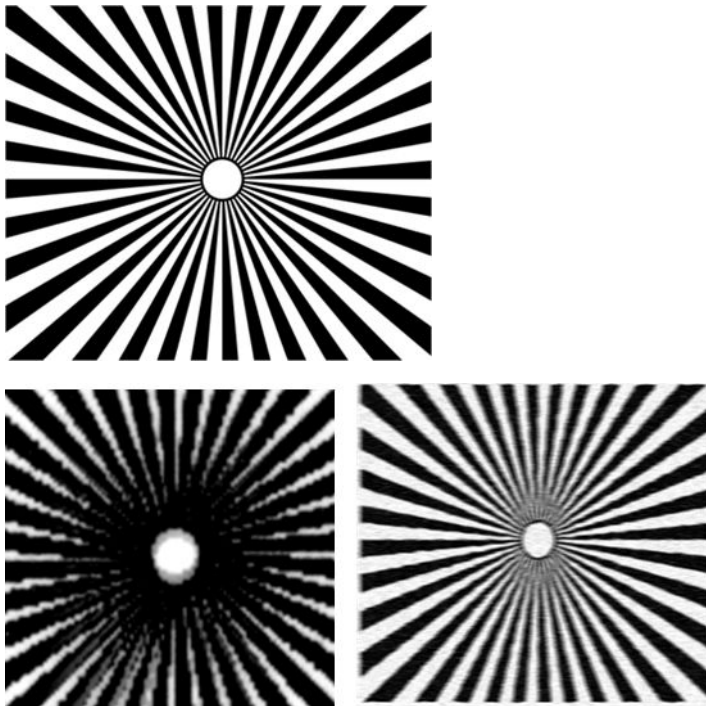
 **NOTE:** The diagnostic image might look slightly different in your printer, but the functionality is the same.

Some of the most common defects that may appear in a printed diagnostic plot are described below. If you find any of these problems, you should follow the recommended recovery procedure, all of which are available using the **Optimize quality** application. Once the printer has been diagnosed and it is working correctly, you can reprint the diagnostic sheet as described in [Prepare the product and the paper to print the diagnostic sheet on page 208](#).

Resolution

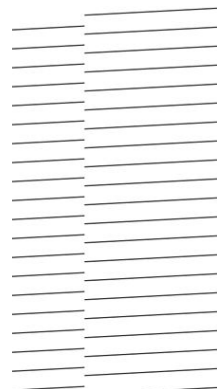
By looking at pattern 7 you may find problems with the printer's resolution for the loaded paper. Usually, this test does not reveal a printer problem, but a defect in the paper, which may not be suitable for printing the diagnostic sheet with the required quality.

Here is what you should see if all is well, followed by two defective examples.

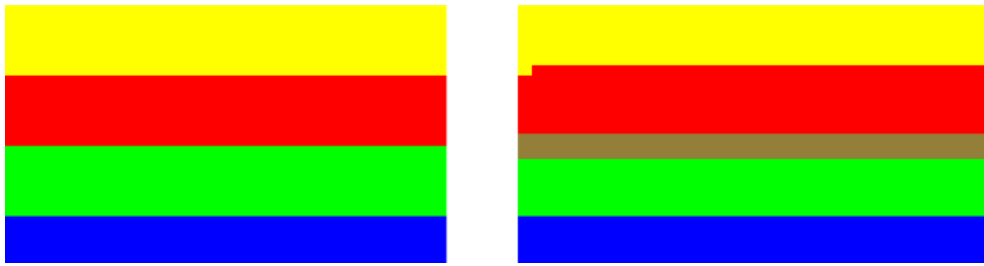


Alignment

Looking at patterns 4, 13, and 14, you may find problems with the printer's printhead alignment, which can cause defects such as the following.



Additionally, misalignment problems can be seen in patterns 4 and 9 in the form of color fringing (which is exaggerated below, on the right). That is, the limits between two strong colors are not well defined or a third color appears between them.

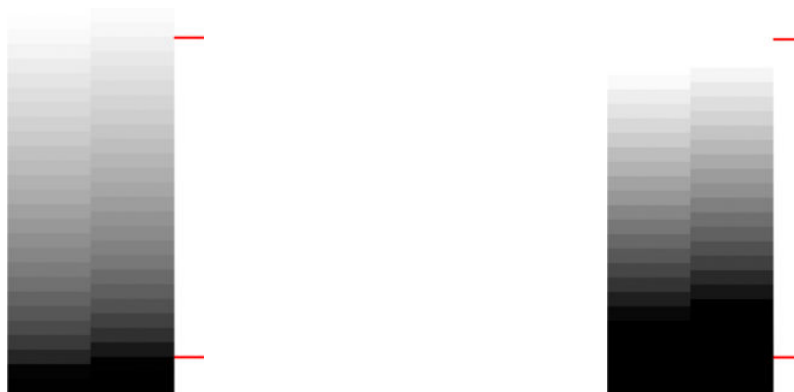


Finally, a special pattern for checking the printer's printhead alignment can be found at the top left of the diagnostic sheet. This pattern has no number as it is not used for scanner checking. It is made of three colored crosses that may be used to identify the problem in question. The correct pattern is shown on the left, an example of misalignment on the right.



Loss of shadow or highlight details

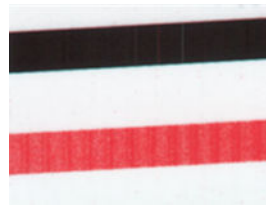
Looking at pattern 16, you may find a problem with the color calibration of the printer (CLC process). If you can distinguish lightness steps beyond the upper and lower specified thresholds, then the printer is fine. Here you can see examples of correct functioning on the left, incorrect on the right.



If the printer does not pass this test, you should run a calibration. From the Home screen launch the **Optimize quality** application and choose **Calibrate print bar** solution.

Printer banding

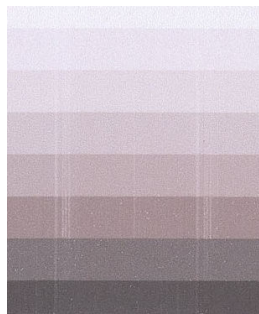
Looking at patterns 1, 2, and 3, you can see vertical banding problems due to a miscalibrated paper advance in the printer.



You can also see some banding in patterns 4, 9, 10, and 11, indicating that the printhead needs to be cleaned. You can launch printhead cleaning from the front panel. From the Home screen launch the **Optimize quality** application and choose **Check and recover the print bar** solution.

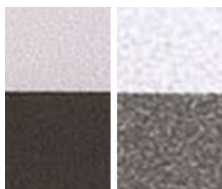
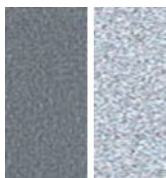
Streaks

Looking at patterns 1, 2, 3, 9 and 16, you may find vertical streaks as in the examples shown below, if the printer's printhead is not working correctly. Replacing the printhead may solve the problem.



Grain

Looking at patterns 1, 2, and 3, you may find problems in the printer's paper advance or the printhead that cause visible grain in area fills. The following examples show this defect: original on the left, printed image on the right. Replacing the printhead may solve the problem.



Scan or copy the diagnostic plot

There are two options for evaluating the diagnostic plot: scanning into a JPEG file, or copying onto paper. We recommend using the scan option, so that the generated file can be analyzed more easily by a remote support engineer if necessary. If you decide to scan the plot, first adjust your computer's monitor as described in [Monitor calibration on page 212](#). Once you have scanned the diagnostic plot, remember to open the scanned file in any image viewer software and select a zoom of 100% for correct visual evaluation of patterns.

If you decide to copy, make sure that a paper roll at least 36 in (914 mm) wide is loaded in the printer. Ideally, the same type of paper used to print the diagnostic plot should be used for copying it.

These are the settings that you should select:

Scan

- Resolution: 600 dpi
- File type: JPG
- Content type: Image
- Original paper type: photo or matte, according to the paper used to print the diagnostic plot. Use photo if in doubt.

Copy

- Resolution: 600 dpi
- Print quality: High detail
- Content type: Image
- Original paper type: photo or matte, according to the paper used to print the diagnostic plot. Use photo if in doubt.

Load the diagnostic plot into the scanner input tray, making sure that the printed side of the plot is facing up. The black arrows on the diagnostic plot indicate the direction of loading. Make sure that the diagnostic plot is loaded without skew, and it is centered (that is, it covers the whole scanner area).

Once you have scanned the diagnostic plot (in case you selected the scan option), remember to open the scanned file in any image viewer software and select a zoom of 100% for correct visual evaluation of patterns.

Monitor calibration

The monitor on which the plot is going to be evaluated should ideally be calibrated. As this is not always feasible, we propose here to follow an easy procedure for adjusting the brightness and contrast of the monitor in order to see the patterns correctly.

Adjust the brightness and contrast of your monitor until you can see a difference in lightness between these two squares:



Now you are ready to check each pattern individually.

Save the diagnostic plot for future use

We recommend saving the diagnostic plot with the calibration sheet, in the solid tube provided.

Top-stacker problems

System errors

<p>Intermediate path out sensor, paper presence sensor, and D-flags sensor: Voltage zero or short-circuited</p>	<p>Intermediate path out sensor, paper presence sensor, and D-flags sensor</p>	<p>Intermediate path out sensor, paper presence sensor, and D-flags sensor</p>	<p>If the issue persists after printer restart, your support representative will repair the printer on site.</p>	<ol style="list-style-type: none"> 1. Check that the intermediate path out sensor cable is unbroken, undamaged, and properly connected; replace it if necessary. 2. Check that the paper presence sensor cable is unbroken, undamaged, and properly connected; replace it if necessary. 3. Check that the D-flags sensor cable is unbroken, undamaged, and properly connected; replace it if necessary. 4. Check that the intermediate path out sensor is unbroken and undamaged. 5. Check that the paper presence sensor is unbroken and undamaged. 6. Check that the D-flags sensor is unbroken and undamaged. 7. Replace the intermediate path out sensor. 8. Replace the paper presence sensor. 9. Replace the D-flags sensor. 10. Check that the Top Stacker PCA is unbroken and undamaged. 11. Replace the Top Stacker PCA.
<p>Intermediate path in sensor, clean-out open sensor: Voltage zero or short-circuited</p>	<p>Intermediate path in sensor, clean-out open sensor</p>	<p>Intermediate path in sensor, clean-out open sensor</p>	<p>If the issue persists after printer restart, your support representative will repair the printer on site.</p>	<ol style="list-style-type: none"> 1. Check that the intermediate path in sensor cable is unbroken, undamaged, and properly connected; replace it if necessary. 2. Check that the clean-out open sensor cable is unbroken, undamaged, and properly connected; replace it if necessary. 3. Check that the intermediate path in sensor is unbroken and undamaged. 4. Check that the clean-out open sensor is unbroken and undamaged. 5. Replace the intermediate path in sensor. 6. Replace the clean-out open sensor. 7. Check that the Top Stacker PCA is unbroken and undamaged. 8. Replace the Top Stacker PCA.
<p>Intermed roller encoder and paper-output kicker encoder</p>	<p>Intermed roller encoder and paper-output kicker encoder</p>	<p>Intermed roller encoder and paper-output kicker encoder</p>	<p>If the issue persists after printer restart, your support representative will repair the printer on site.</p>	<p>TBD</p>

Paper-handling issues

Issue	Recommendation
Paper jam in the stacker (could be in the intermediate roller, the paper-advance roller, or the tray)	The front panel asks you to open the stacker cover or rear door, and clear the jam by pulling out the paper.
Paper jam in the stacker while printing with high ink density	Use thicker paper (more than 80 g/m ²), or print to the basket.
Repeated paper jams in the stacker	Check whether some object is blocking the paper path.
<p>Stacker capacity is lower than expected. Stacker capacity is defined as up to 100 pages of A1/D size, line-drawing prints in landscape orientation on bond paper, but stacker capacity depends on paper thickness and page size.</p> <ul style="list-style-type: none"> • When printing with high ink density, the cockle effect can lower stacker capacity. • When stacking several pages of some paper types, the paper can curl and close the channel. Then a longer print cannot pass through the channel and a jam could occur, reducing the stacker capacity. 	<ul style="list-style-type: none"> • When printing with high ink density, use thicker paper. • Remove papers from the tray, if they are closing the channel, and resume the job.
The stacker permanently claims to be full	Check that the capacity sensor flag is properly assembled.
The stacker permanently claims to be jammed	Check that all the sensors along the paper path are clean and undamaged.

Connectivity problems

General network troubleshooting


Some symptoms are:

- The front panel display does not show the **Receiving** message when an image is sent to the printer.
- Computer displays an error message when trying to print.
- Computer or printer hangs (stays idle), while communication is taking place.
- Printed output shows random or inexplicable errors (misplaced lines, partial graphics, and so on).

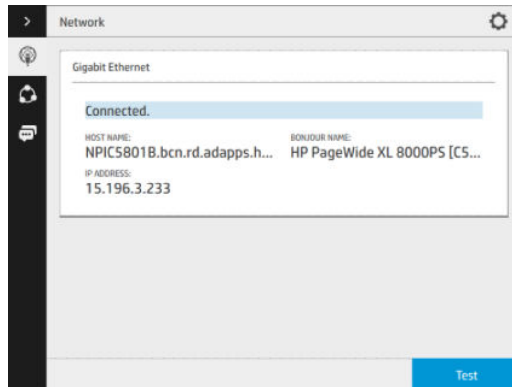
To solve a communication problem:


- Ensure that the correct printer is selected in the application.
- Ensure that the printer works correctly when printing from other applications.
- Remember that very large prints may take some time to receive, process and print.
- If the printer is connected to a network, check the printer connectivity status: the printer should have an IP address and it should match the IP address specified in the printing computer. If the addresses do not match, then configure correctly; if the issue persists, check the network configuration.
- Try another interface cable.
- When a network device automatically configures itself on an IP address from the DHCP service, the IP address may differ from the time the device was last switched off to the time it is next switched on. This can lead to the device being shown as "offline" when driver port settings are configured with the original IP address. There are at least three possible ways to avoid this:
 - Increase the lease time of the DHCP server device.
 - Set a fixed IP address for the printer that will not be changed by DHCP.
 - Configure the printer and driver to refer to the hostname instead of the numeric IP address.

To set a fixed IP address for the printer:

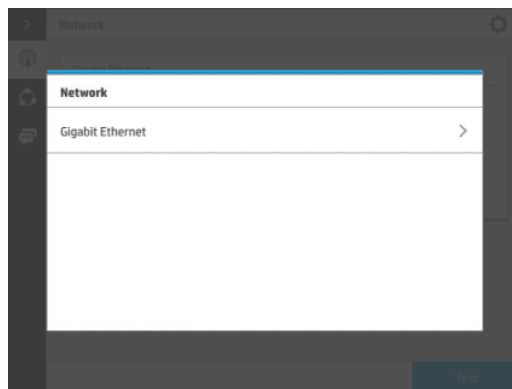
1. Go to the front panel and press the  icon.

2. Select the Network tab.

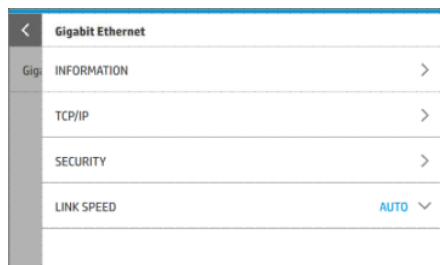


3. Press the  icon.

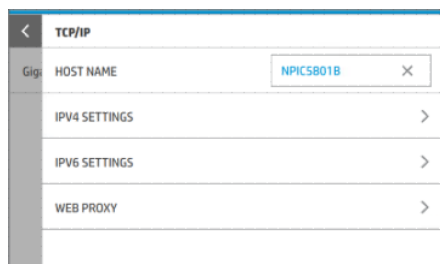
4. Press **Gigabit Ethernet**.



5. Press **TCP/IP**.

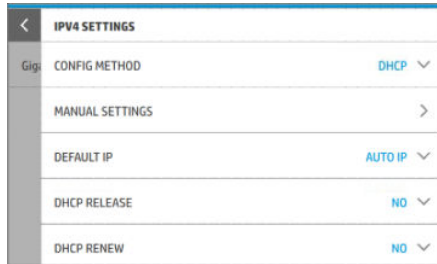


6. Press **IPV4 SETTINGS**.

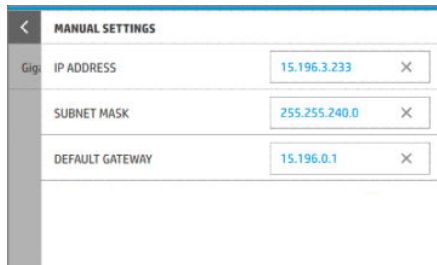


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7. Change the CONFIG METHOD from **DHCP** to **MANUAL**.




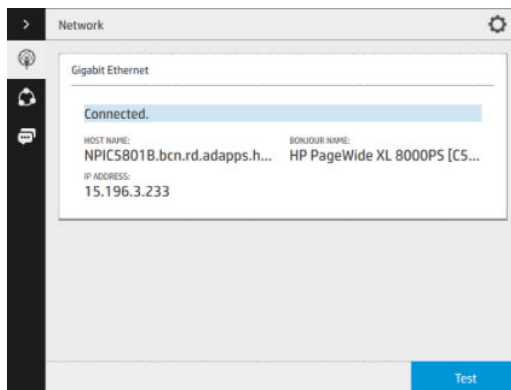
8. Press **MANUAL SETTINGS**.



9. Change the IP address, subnet mask, and default gateway as required.

To see the hostname instead of the numeric IP address:

1. Go to the front panel and press the  icon.
2. Select the Network tab.



3. Take a note of the IP address and the hostname. If the hostname is truncated, press it to see it in full.


To use either a fixed IP address or the hostname from Windows:

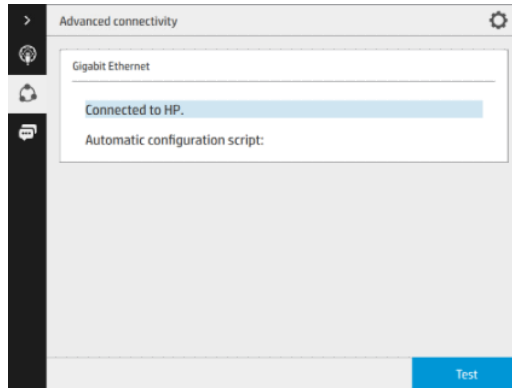
- ▲ At the computer, go to **Control Panel > Printers**, right-click the printer and select **Properties > Ports > Configure Port**, and enter the IP address or Printer name.

Finally, if unexpected printer behavior is experienced, you can restore most of the printer's settings:

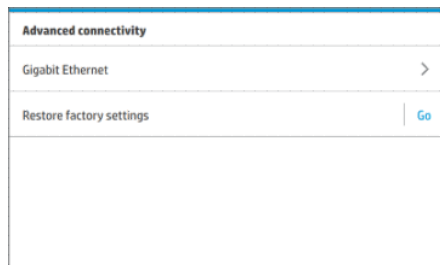
- Basic networking settings can be reset by pressing some icons, then **Connectivity > Network connectivity > Advanced > Restore factory settings**.
- Network security settings can be reset by pressing some icons, then **Connectivity > Network connectivity > Gigabit Ethernet > Modify configuration > Reset Security**.

Restore basic networking settings


1. Go to the front panel and press the  icon.
2. Select the Advanced connectivity tab.



3. Press the  icon.
4. Press **Restore factory settings**.

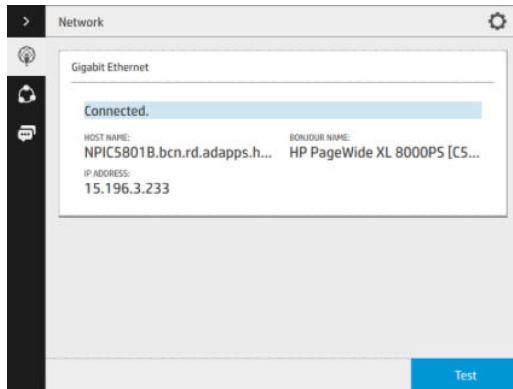



Restore network security settings

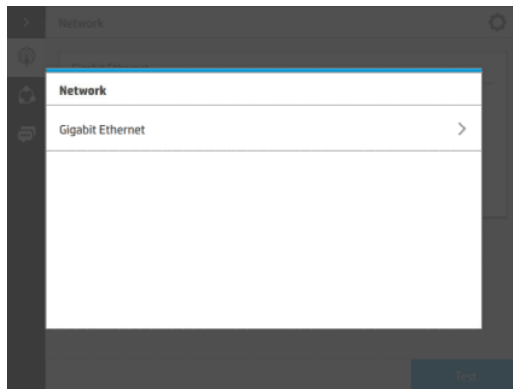
1. Go to the front panel and press the  icon.

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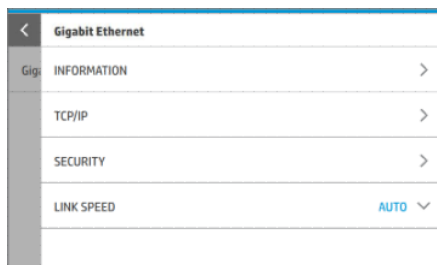
2. Select the Network tab.



3. Press the  icon.
4. Press **Gigabit Ethernet**.



5. Press **Security**.



6. Press **RESET SECURITY**.



Printer discovery


If unable to install the HP software provided with the printer, check that:

- All cable connections to the computer and the printer are secure.
- The network is operational and the network hub is turned on.
- All applications, including virus protection programs, spyware protection programs, and firewalls, are closed or disabled for computers running Windows.
- The printer is installed on the same subnet as the computers that use the printer. If the installation program cannot discover the printer, print the network configuration page, and enter the IP address manually in the installation program.

Though it is not recommended that a static IP address is assigned to the printer, you could perhaps resolve some installation problems (such as a conflict with a personal firewall) by doing so.

Connectivity configuration page

The Connectivity Configuration page provides comprehensive print server status. It is an important diagnostic tool, especially if network communications are not available. For a description of messages that may appear on the Connectivity Configuration page, see the HP Jetdirect Print Servers Administrator's Guide for the print server model.

The connectivity configuration page can be printed by pressing the  icon, then **Connectivity > Print connectivity configuration**.

LEDs

The printer has status lights (LEDs) that indicate the link status and network activity.

- When the green light is on, the printer has successfully linked to the network.
- When the yellow light is blinking, there is network transmission activity.

Link troubleshooting

If the printer does not successfully connect to the network:

- Both LEDs will be off.
- **LAN Error – Loss of Carrier** will be indicated on the Connectivity Configuration page.

If a link failure is indicated, try the following:

- Check the cable connections, or try another cable.
- Manually configure the link setting to match the port configuration of the network hub or switch. Turn the printer off, then on again, to re-initialize the setting.
- Print a Connectivity Configuration page and check link settings.

Item description

Port Config: If the printer is properly linked, this item has one of the following values:

- **10BASE-T HALF:** 10 Mbps, half-duplex
- **10BASE-T FULL:** 10 Mbps, full-duplex
- **100TX-HALF:** 100 Mbps, half-duplex
- **100TX-FULL:** 100 Mbps, full-duplex
- **1000TX FULL**

If the printer is not properly linked, one of the following messages will appear:

- **UNKNOWN:** The printer is in an initialization state.
- **DISCONNECTED:** A network connection has not been detected. Check network cables. Reconfigure the link settings, or restart the printer.



Auto-negotiation indicates whether auto-negotiation for link configuration is on or off:

- **ON (default):** The printer will attempt to configure itself automatically for the network at the proper speed and communication mode.
- **OFF:** Configure the link speed and communication mode manually, using the front panel. The settings must match those of the network for proper operation.

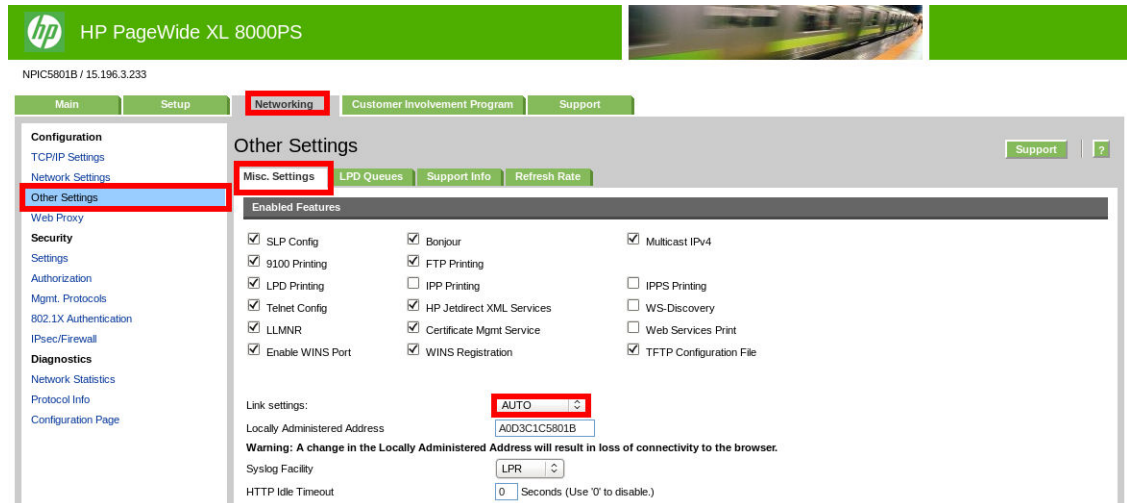
Link configuration methods

The printer supports 10, 100, or 1000 Mbps network link speeds using full-duplex or half-duplex communication modes (a 1000T half-duplex selection is not supported). By default, it will attempt to autonegotiate its link operation with the network. When connecting to network hubs and switches that do not support auto-negotiation, the printer will configure itself for 10 Mbps or 100 Mbps half-duplex operation. For example, when connected to a non-negotiating 10 Mbps hub, the print server will automatically set itself to operate at 10 Mbps half-duplex.

If the printer is not able to connect to the network through auto-negotiation, set the link setting by one of the following methods:


- The front panel:
 1. Press the  icon.
 2. Select the Network tab.
 3. Press the  icon.
 4. Press **Gigabit Ethernet**.
 5. Press **LINK SPEED** and set it as required.


- The Embedded Web Server:



- Telnet interface, through a system command prompt.
- A TFTP (Trivial File Transfer Protocol) configuration file that is downloaded, for example, from a BootP or DHCP server.
- Network management tools such as HP Web Jetadmin.


Reset network parameters


Network parameters (for example, the IP address) can be reset to factory default values: press , then

Advanced connectivity >  > **Restore factory settings**, then turn the printer off and on again. After restoring, print a Connectivity Configuration page to confirm that factory reset values have been assigned.

CAUTION: A factory-installed HP Jetdirect X.509 certificate will be saved over a cold reset to factory default values. However, a Certificate Authority (CA) certificate that has been installed by the user to validate a network authentication server will not be saved.

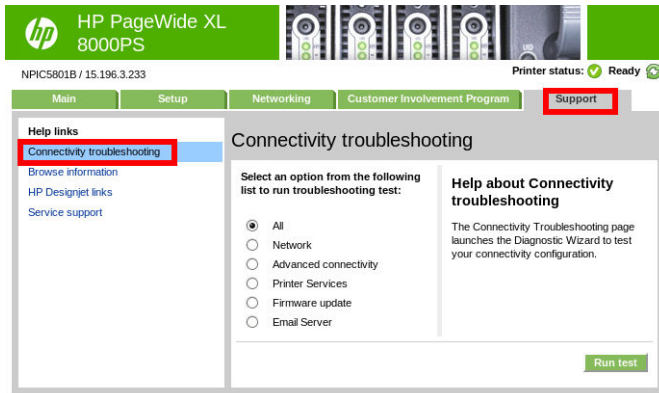
Automatic troubleshooting

There is some automatic connectivity troubleshooting each of the tabs available after pressing the ,

and troubleshooting of firmware upgrades after pressing the  icon.

The tests are run periodically and the test results should be visible when going to the appropriate tabs.

Alternatively, the tests can be launched from the Embedded Web Server: select **Support** > **Connectivity troubleshooting**.



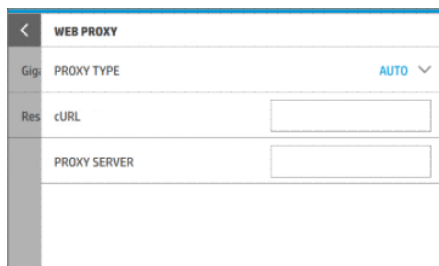
- **All:** Perform all tests.
- **Network:** Check the printer's connection to the local area network.
- **Advanced connectivity:** Check the printer's connection to the Internet.
- **Printer services:** Check the printer's connection to HP ePrint.
- **Firmware update:** Check the printer's connection to HP's firmware update servers.
- **Email server:** Check the printer's connection to the configured email server.
- **Customer Involvement Program:** Check the printer's connection to the CIP.

If any test fails, the printer describes the problem and recommends how to solve it.

Problems with proxy

If an automatic test of advanced connectivity (Internet) fails, you may need to enter the proxy address manually.

To do that, press , then **Advanced connectivity** >  > **Gigabit Ethernet** > **WEB PROXY**. Change the PROXY TYPE to **MANUAL**, and enter your proxy address in the PROXY SERVER field, followed by the single colon character ":" and the port.



A proxy is a server that acts as an intermediary between computers on your local network and servers on the Internet. Before setting up the printer, check whether your network requires a Web proxy.

To check this, open a Web browser on any computer within your network, and browse to <http://hp.com>. If you cannot connect to hp.com, your network does not have Internet access and you need to consult your IT provider about how to configure Internet access. If you can connect to hp.com, you can check the browser settings for proxy configuration as follows:

- For Internet Explorer, go to **Tools** > **Internet Options** > **Connections** > **Local Area Network (LAN) Settings**. In the "Proxy server" part of the window, if the "Use a proxy server" box is unchecked, you do not need a Web

proxy. If it is checked, make a note of the Address and Port settings in the main window, or in the HTTP part of the Advanced settings window.

- For Safari, go to **Preferences > Advanced > Proxies > Change Settings**. If the "Web Proxy (HTTP)" box is unchecked, you do not need a Web proxy. If it is checked, make a note of the Web Proxy Server name (before the ":") and port (after the ":").
- Proxy server names are typically of the form "proxy.mycompany.com", and the proxy port is typically 80, but details are network-dependent.
- In some environments, you are provided with an automatic proxy configuration URL. If this is the case, the proxy type should be cURL and the cURL field should be filled.

If you are unable to determine whether you need a Web proxy or how to configure it, consult your network administrator or Internet Service Provider. If in doubt, you probably do not need a Web proxy.

Security

For security troubleshooting, see the *HP Designjet Security Settings* document at <http://www.hp.com/go/designjet/security>.

Firmware upgrades

How to upgrade

To obtain the latest firmware, go to <http://www.hp.com/go/pagewidexlseries/support/firmware/>.

There are three ways of updating the firmware in the printer:

- Allow automatic firmware upgrades, if Web services are enabled (see the user guide).
- Use the Embedded Web Server.
- Use a USB flash drive.



NOTE: It is possible to do the FW upgrade when the printer is booted in diagnostic mode.

Embedded Web Server

Once the file is downloaded, open the Embedded Web Server with any Web browser and go to **Setup > Firmware update**.

USB upgrade

1. Download the fmw file into an empty USB flash drive.
2. Turn off the printer.
3. Plug in the USB flash drive.
4. Turn on the printer and follow instructions.

Upgrading when booted in diagnostic mode

1. Plug in the USB flash drive while the printer is already booted in diagnostic mode.
2. Follow the instructions. When the USB flash drive is removed, the front panel will display the list of diagnostics, giving the impression that nothing is happening: WAIT FOR 10 MINUTES without touching the front panel.
3. The printer will then reboot alone, and the FW upgrade should then be done.

5 Calibrations

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Table of service calibrations

Part	Relevant service kit		Subsystem	Calibration	Test	Tool	
Full sensor	CZ309-67117	Waste System	Waste	90% container full			
Carriage	CZ309-67105	Service Carriage Assembly	Carriage and impelling	Service carriage backlash			
				Drop detector calibration			
				Line sensor calibration			
Carriage encoder	CZ309-67101	Carriage Encoder Strip					
Impelling system	CZ309-67102	Carriage Impelling Assembly			Service carriage backlash		
Encoder sensor	CZ309-67104	Linear Encoder Sensor			Drop detector calibration		
Carriage motor	CZ309-67106	Service Carriage Motor					
Service belt	CZ309-67108	Service Belt					
Service belt tensioner	CZ309-67107	Service Belt Tensioner		Service carriage backlash			
Vacuum fan	CZ309-67087	Vacuum Fan Assembly	Vacuum				
EOLA PCA	CZ309-67089	Vacuum Fan Driver PCA			Vacuum calibration		
Belts and platen	CZ309-67092	Belts and Platen	Print zone		PWM belts motor test		
					Belts correct grouping		
Analog encoder	CZ309-67082	Print Zone Encoder Assembly			Paper advance calibration		
					Image length calibration		
Belts motor	CZ309-67084	Belts Motor Assembly			PWM belts motor test		
Paper loop bottom	CZ309-67076	Paper Loop Bottom Assembly	Paper loop	Skew calibration	Skew test		
				Feed roller calibration	PWM feed motor test		
Feed motor	CZ309-67080	Feed Motor Assembly			Feed roller calibration	PWM feed motor test	
Paper loop roof	CZ309-67437/ CZ309-67434	Paper Loop Roof Sheet Metal			TOF calibration		
					Feed roller calibration	Baffles test	
Baffles	CZ309-67241	Paper Loop Baffles			Baffles test		

For HP-authorized personnel only

Part	Relevant service kit		Subsystem	Calibration	Test	Tool
Dryer assembly	CZ309-67184	Dryer Assembly	Dryer		Warm-up time test	
Paper output pinches motor	CZ309-67142	Paper Output Pinches Motor	Paper output		Pinches motor servo test	
	CZ309-67144	Paper Output Driver Transmission			Diverter motor servo test	
IS kicker motor	CZ309-67207	Paper Output Kicker Motor	Top stacker		IS kicker servo test	
IS paper path motor					IS paper path mode test	
IS capacity censor	CZ309-67206	Paper Output Continuous Stack Sensor			Sensor test.	Gauges
APS system HE	CZ309-67120	Air Control PCA with APS HE	ISS		Pressurization test	
APS system LE	CZ309-67121	Air Control PCA with APS LE				
Relief valve	CZ309-67129	Relief Valve			Relief valve test	
Ink tubes HE	CZ309-67123	Print Bar Tubing System HE			Purge ink tubes HE	Purgers
Ink tubes LE	CZ309-67124	Print Bar Tubing System LE			Purge ink tubes LE	
Ink tubes LE Ent	CZ309-67125	Print Bar Tubing System LE Ent			Purge ink tubes LE Ent	
Bivalve	CZ309-67131	ISS Support, Bivalve, Purge HE			Purge bivalve Purge ink tubes HE	Purgers Bivalve purgers
Backplate	CZ309-67122	ISS Backplate			Copy PIP values	
CID valve	CZ309-67126	CID Valve			Swap test	
Drawer paper input motor	CZ309-67153	Motor NGR Paper Input		Drawer	Rewinder calibration	
Drawer cutter	CZ309-67155	Cutter Assembly	Feed roller calibration		Cutting time test Cutter PWM test	HP Bond (<90 gr/m2)
Drawer rubber roller	CZ309-67156	Rubber Transport Roller			PWM transport roller test	
Drawer telescopic slides	CZ309-67171	Telescopic Slides			Printer skew test	
Drawer transport front roller	CZ309-67172	Transport Roller Front Roll without Motor			PWM transport roller test	
Drawer transport rear roller	CZ309-67173	Transport Roller Rear Roll without Motor				
Drawer roll	CZ309-67174	Roll Mounting Assembly	Rewinder calibration		Printer skew test	

Part	Relevant service kit		Subsystem	Calibration	Test	Tool
Drawer rewinder motor	CZ309-67175	Motor Block Rewinder Assembly without Motor				
Drawer sled	CZ309-67177	Sled L Internal Parts with Index Out		Rewinder calibration		
Drawer hub	CZ309-67179	Hub Assembly Expandable				
Drawer hooks	CZ309-67183	Drawer Hooks			Printer skew test	

Media feed directional skew adjustment

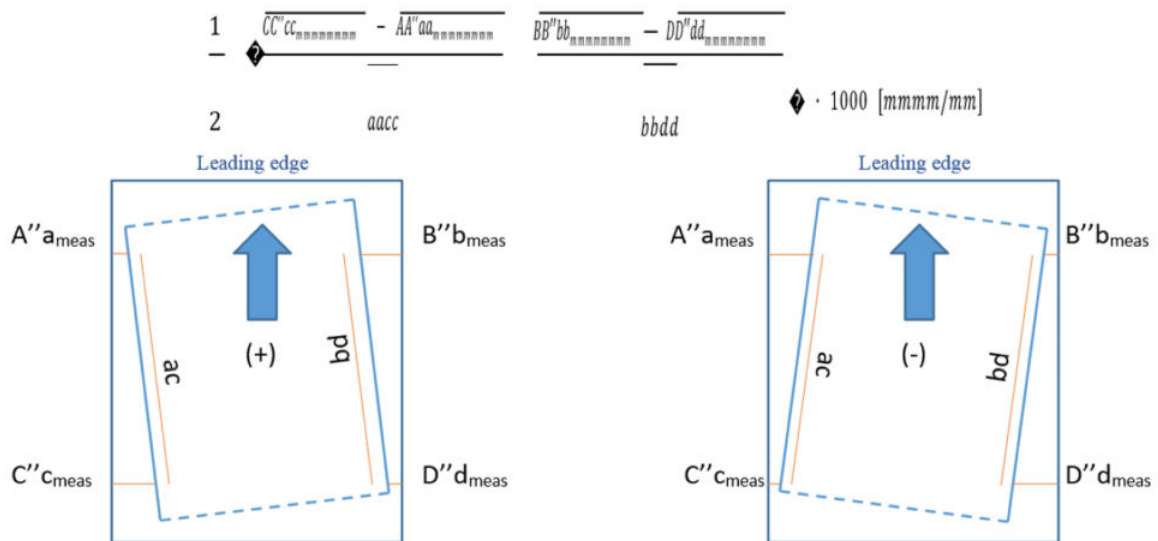
Symptoms

This procedure applies to printers having one of the following issues:

- Image skew on printed pages is shorter than 1m long, is above ± 3mm/m, or maximum lateral displacement is above 5mm for longer pages.
- Wrinkles (i.e. creases along the paper advance) are generated on the printed page to the point where the printout is permanently marked.

Image Skew is measured as follows:

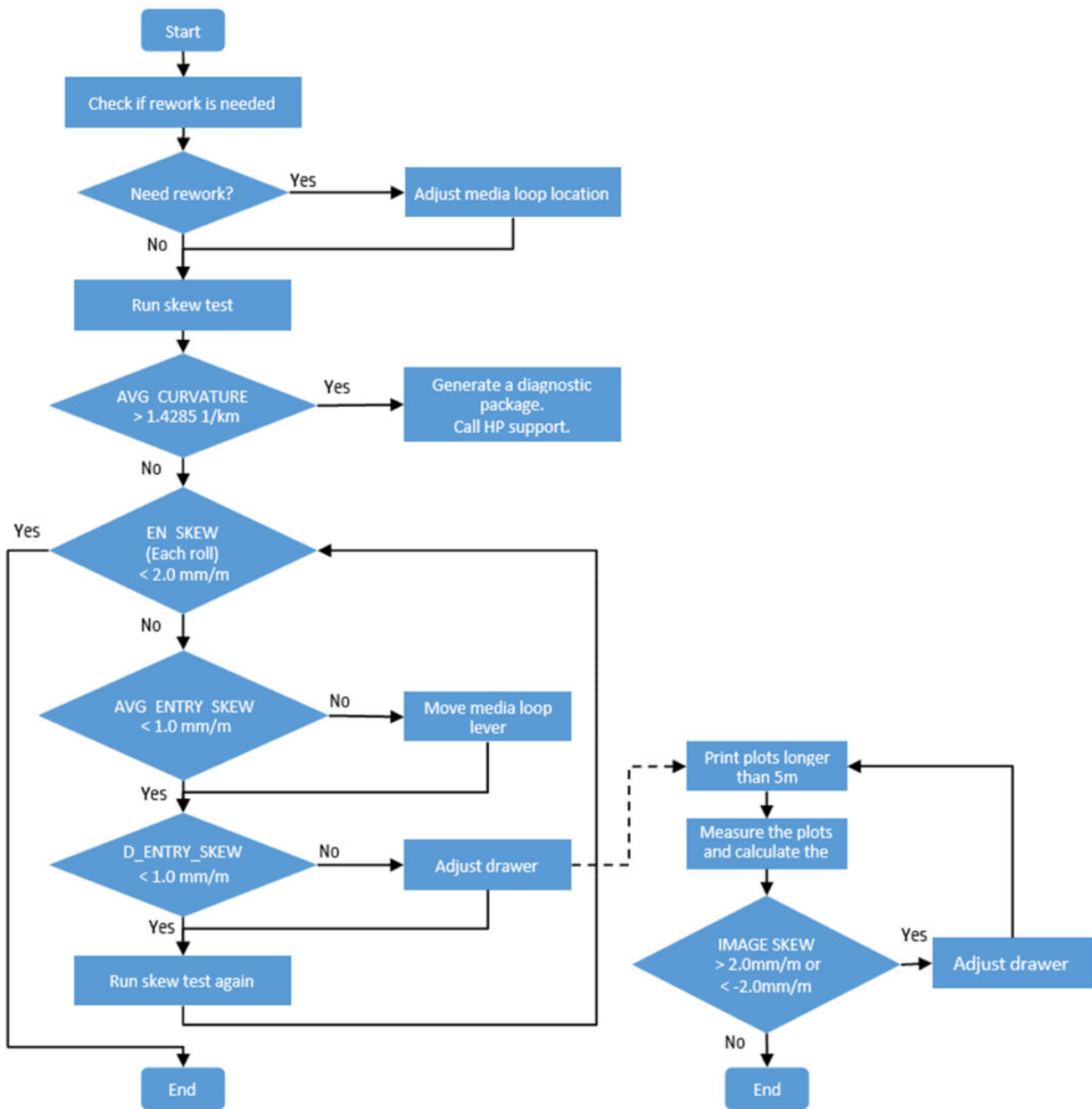
$$\frac{1}{2} \cdot \left(\frac{C''c_{meas} - A''a_{meas}}{\overline{ac}} + \frac{B''b_{meas} - D''d_{meas}}{\overline{bd}} \right) \cdot 1000 \text{ [mm/m]}$$



Procedure

As the default process, follow the prework instructions and the three step-sections numbered below. In case skew is not solved contact HP support for further details on how to proceed.

The flowchart below summarizes the whole process.



Prework

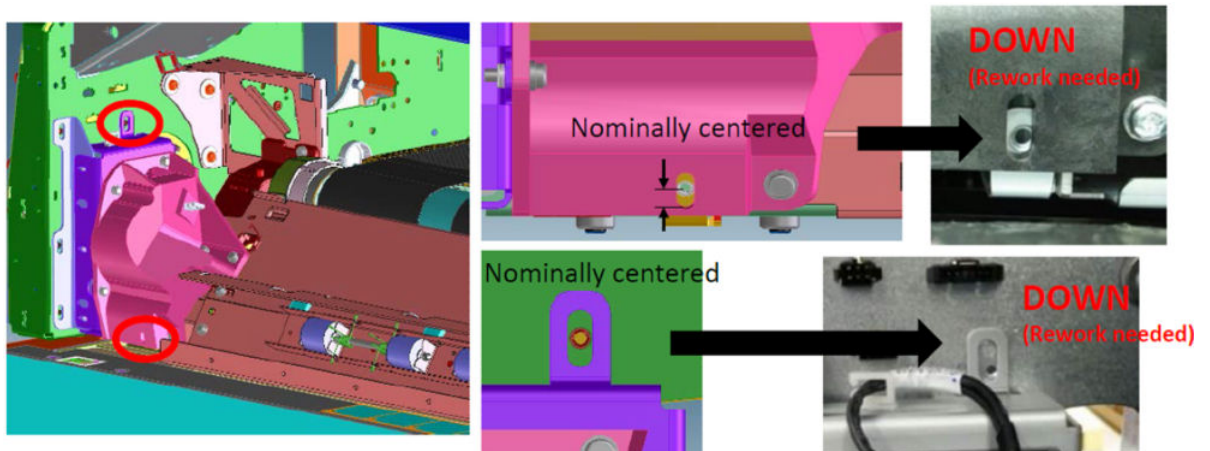
1. First, in the case of media skew with narrow rolls (297mm or 420mm), you have to adjust some settings: Service menu -> Hardware utilities -> Configure long plot handling.
 - **Loop Area bubble:** set this item to “Based on media type.”
 - **Path Vacuum Control:** set this item to “Lower vacuum.”
2. Reboot the printer.
3. Ensure that narrow rolls are placed in roll #1 and roll #2 slots.

Now continue with the procedural steps below.

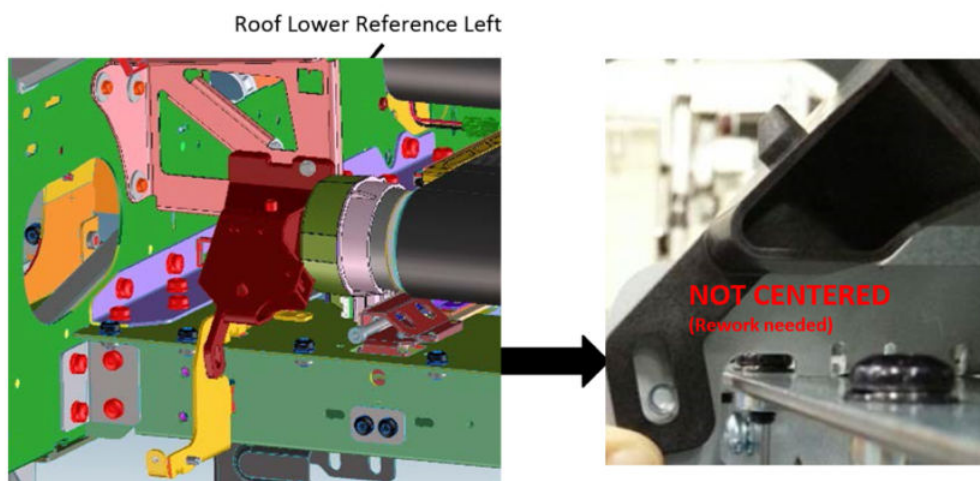
1. Adjust feed motor position on left side

Confirm whether a rework is needed on the media loop feed motor (left side) by checking the following points.

- Machined holes are on the lower end of the slot:

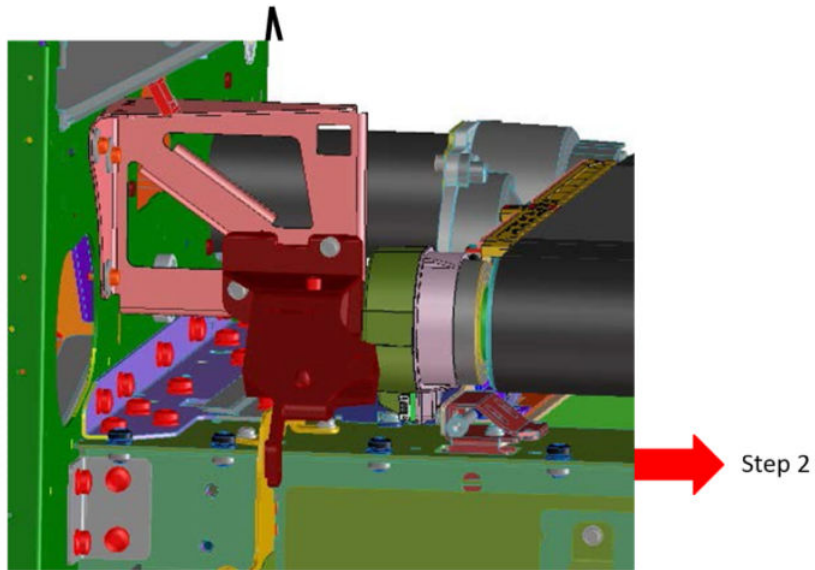


- Remove the Media loop and check the hole below to see if it is also too low or not centered in its slot:

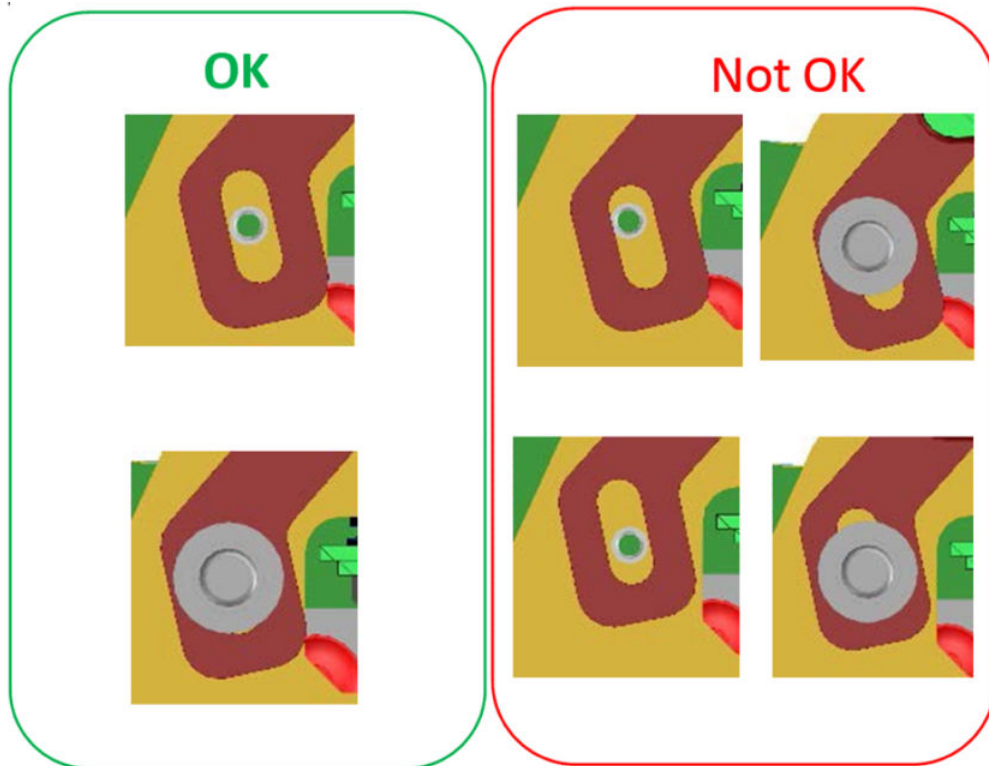


If the above is the case, apply the rework described below.

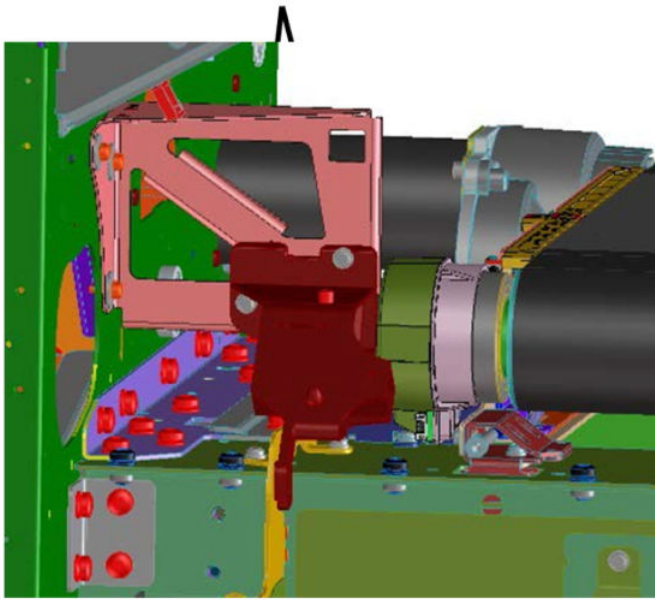
1. Loosen, do not remove, these 2 screws.



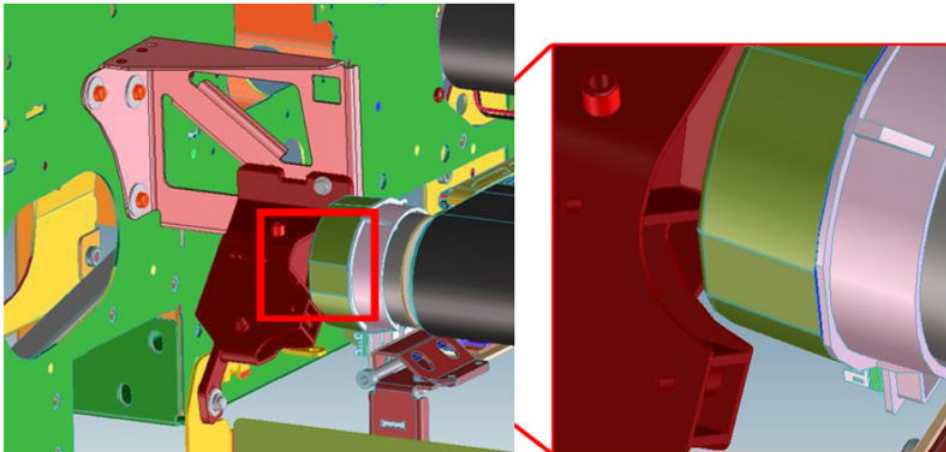
2. Loosen this screw, center the screw hole manually in the slot and tighten the screw and washer.



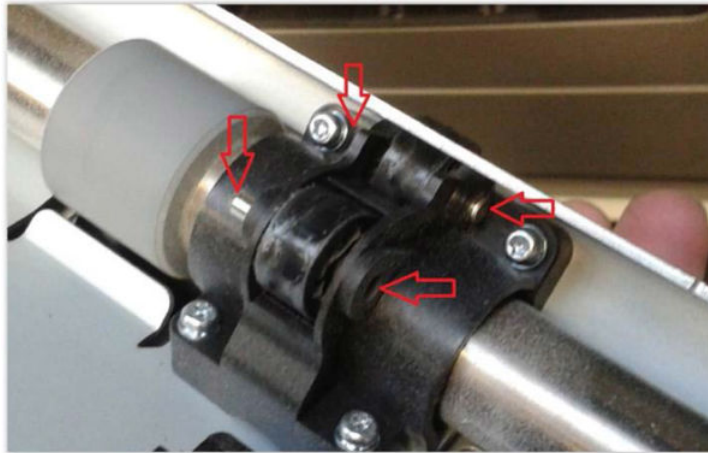
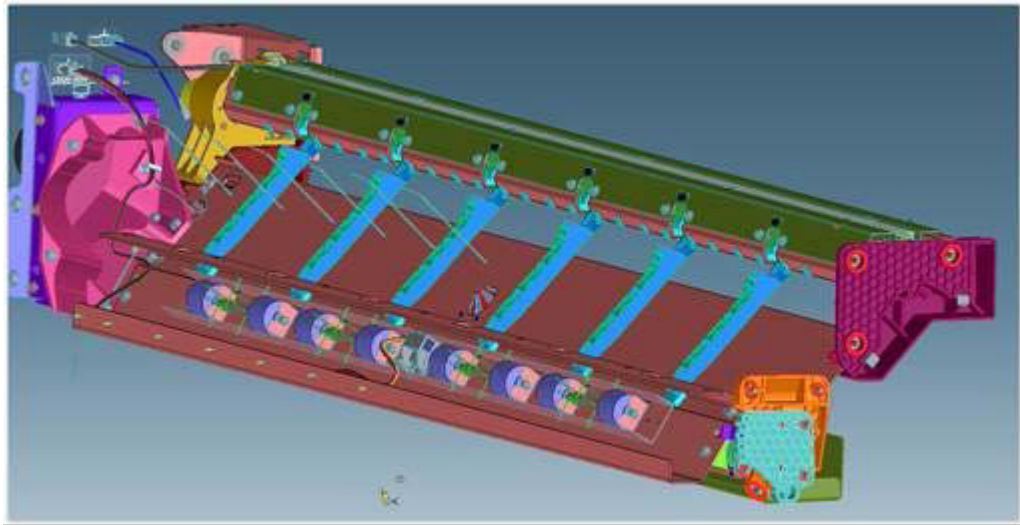
3. Tighten the other 2 screws.



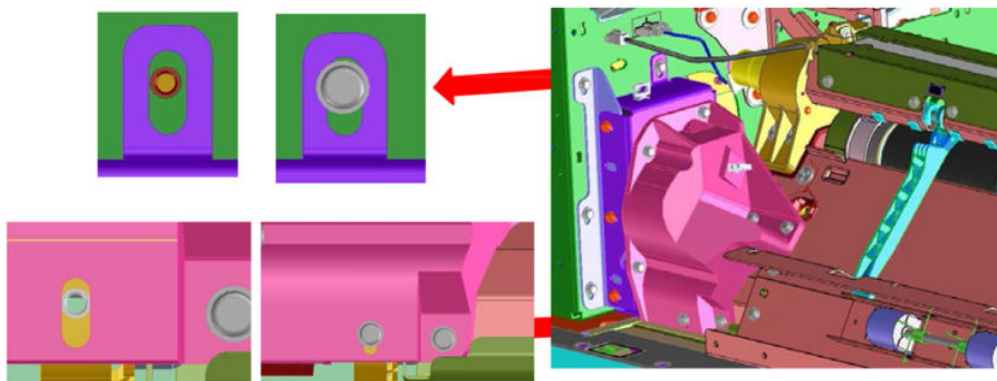
4. Make sure there is no interference between the encoder cover and the idle roller.



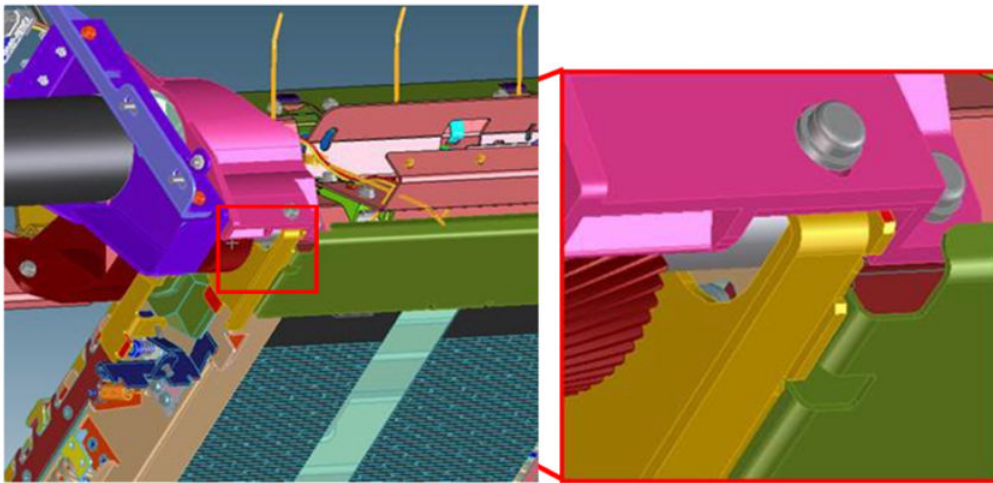
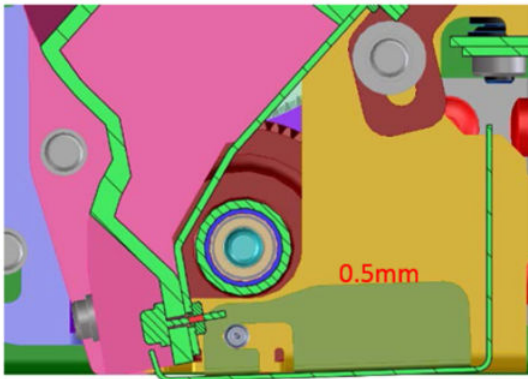
5. Before reinstalling the media loop assembly check that feed roller cam center support wheels are well in place. Wheel axles must go from support side to side.



6. Assemble the rest of media loop parts again checking that new positions are CENTERED as shown in pictures below.

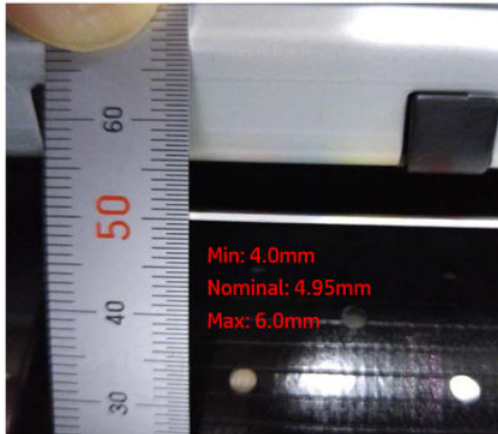
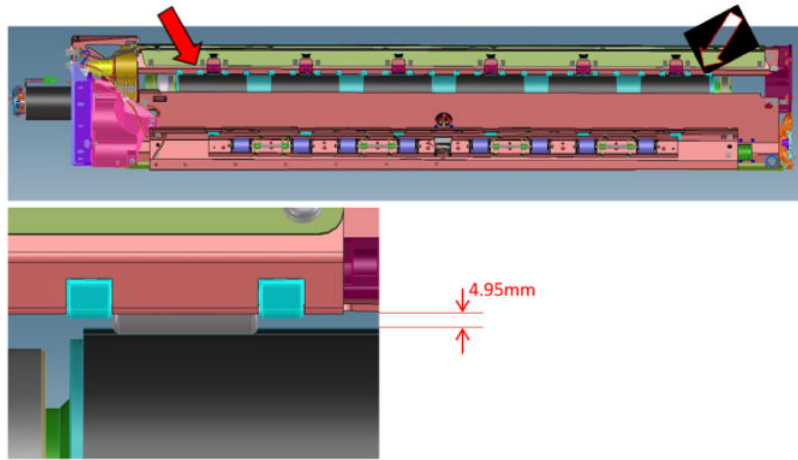


7. Make sure that the Feed roller to sheet metal edge distance is not too low (0.5mm nominal). It can just barely be seen from the bottom with the drawer open.

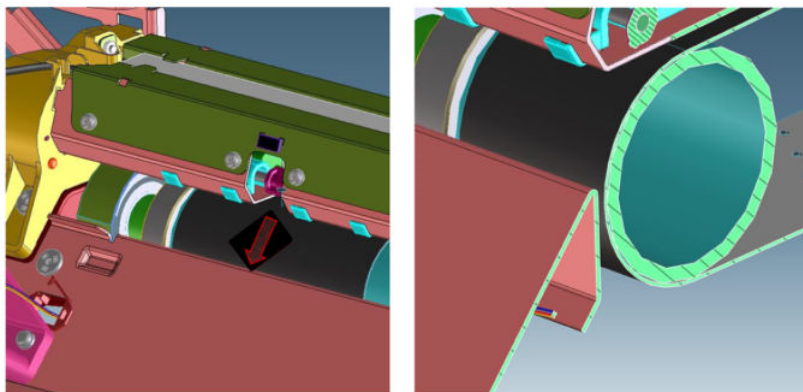


8. Make sure the Roof assembly is not wrongly assembled.

9. Check the gap between the Media loop roof sheet metal and the belts on both side of the printer, ensuring a minimal difference between ends (it is OK as far as it is within specs on each side). The nominal gap is 4.95mm and the maximum allowed limits are 4.0mm and 6.0mm. Use a set of calibrated feeler gauges; but if not available make use of a kind of flat plate placed on top of the belts in order to help you measure easily.



10. Check the gap between the Media Loop Lower Sheetmetal and Belts (specially at the left side as its position will have been modified after rework). You should use a set of calibrated feeler gauges if possible.



2. Run skew test

This test allows for checking skew parameters related to both the printer and the drawer. Test will report the skew by which paper is fed to belts as well as an estimation of the curvature induced on the paper advance due to the belts.

To have valid data for curvature, it is necessary to do the check using narrow media covering only the two central belts (i.e. 11 in, 297mm, or 310mm wide paper).

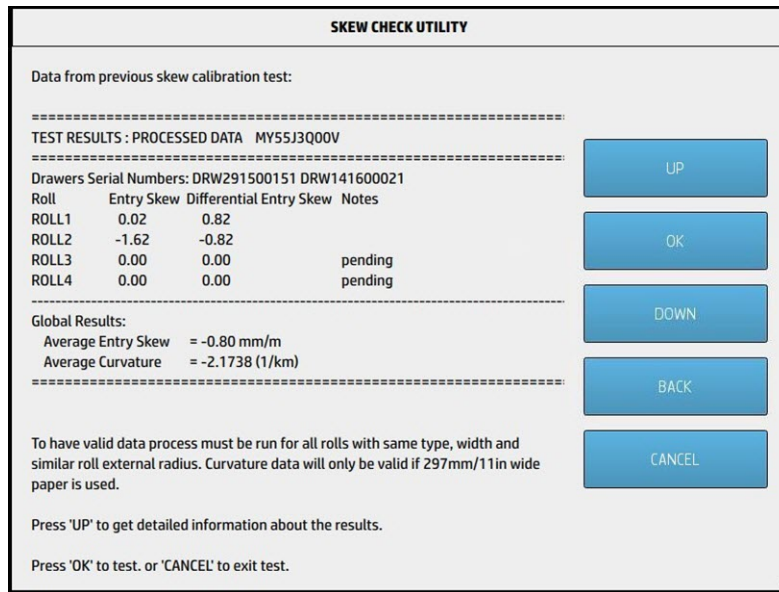
Test must be run for all roll slots available on the printer as well, with the same type of paper and a similar roll radius.

Note that test has some variability; thus, rerunning it will lead to results that may differ slightly from previous executions. This is normal.

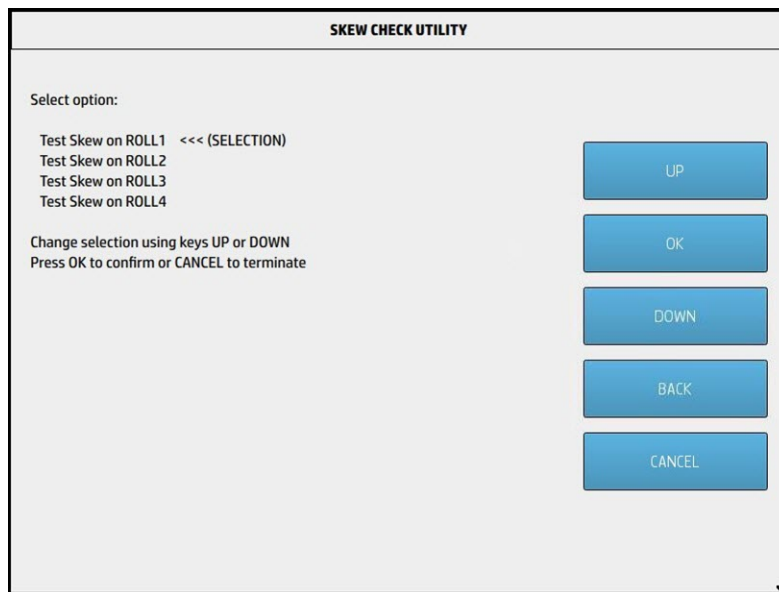
To execute the test, proceed as follows:

1. Go to the Service Menu > **Calibrations** > **Skew check utility**.

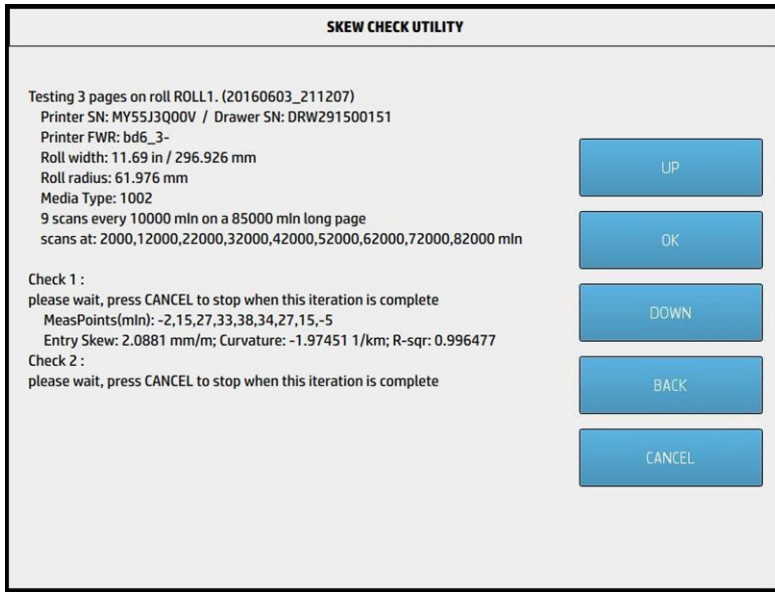
- The main screen will show a summary of the last tests performed. Press the **Up** key to show a more detailed summary.



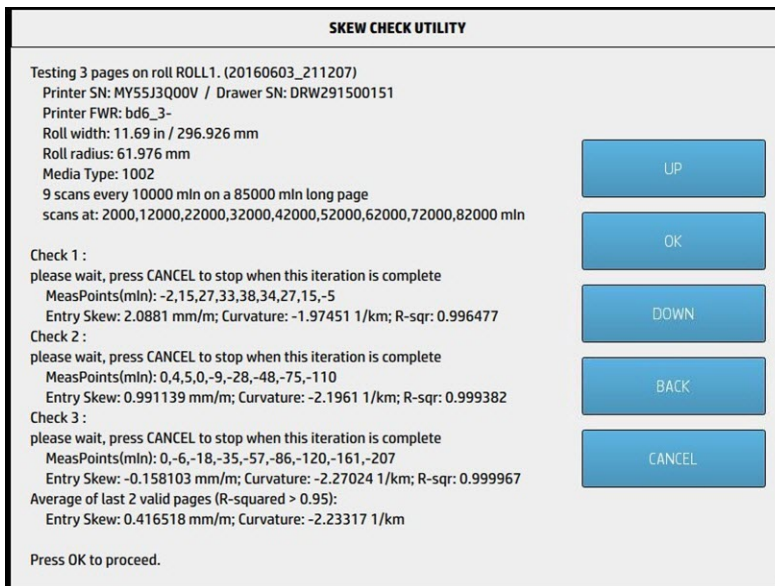
- Make sure paper is loaded on the roll slot to be tested. If not, this is the right moment to open the drawer and load paper.
- Press **OK** to start testing.
- Select the roll slot to be tested by pressing the **UP & DOWN** keys. Press **OK** when done.



6. Test will eject 3 pages and measure them with the Tetris sensor. Note that in case data does not correlate enough, page measurement will be retried up to 3 times. Test can be cancelled by pressing the **CANCEL** key while scanning a page. Scan for current page will end and then test will be aborted.



7. Once check is done, average values will be shown on the front panel. Press **OK** when done to go back to the main screen.



8. Repeat steps 3 to 7 for each roll slot available on the printer
9. Finally, the test summary will be shown on the main screen.

Note down the following data from the main screen.

SKEW CHECK UTILITY			
Data from previous skew calibration test:			
=====			
TEST RESULTS : PROCESSED DATA MY55J3Q00V			
=====			
Drawers Serial Numbers: DRW291500151 DRW141600021			
Roll	Entry Skew	Differential Entry Skew	Notes
ROLL1	0.02	0.82	
ROLL2	-1.62	-0.82	
ROLL3	0.00	0.00	pending
ROLL4	0.00	0.00	pending

Global Results:			
Average Entry Skew = -0.80 mm/m			
Average Curvature = -2.1738 (1/km)			
=====			
To have valid data process must be run for all rolls with same type, width and similar roll external radius. Curvature data will only be valid if 297mm/11in wide paper is used.			
Press 'UP' to get detailed information about the results.			
Press 'OK' to test. or 'CANCEL' to exit test.			

Below the Notes area, comments will appear indicating test requirements that weren't fully met for each roll such as:

- “Pending”, when no data available for such roll
- “Not on same date,” when test data is not from the same day as the last one performed
- “Not on same media type,” when tested with a different media type from the last roll tested
- “Not using similar paper width” when tested with a paper width that differs too much with respect to the last roll tested
- “Not using similar roll radius” when tested with a roll whose radius differs too much with respect last roll tested

3. Adjust skew

If the 'Average Curvature' value is above 1.4285 km⁻¹, please:

- Generate a diagnostics package, and
- Call HP support for further indication on how to proceed. Otherwise, follow the steps listed in this section.

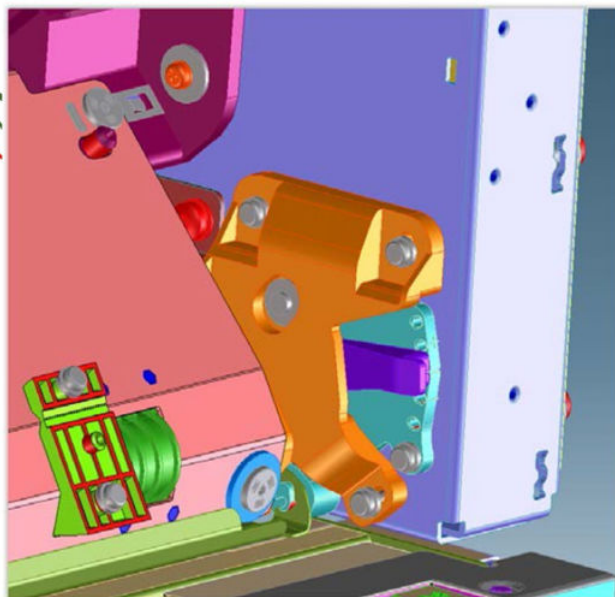
If the absolute magnitude of 'Entry Skew' values for each roll are below 2.0 mm/m, the printer is within specs and no further actions should be performed. Otherwise, move onto the next step.

Adjust the printer media loop based on the value of 'Average Entry Skew:'

- If the absolute magnitude of 'Average Entry Skew' is below 1.0 mm/m there is no need to adjust the media loop. Move to drawer adjustment.

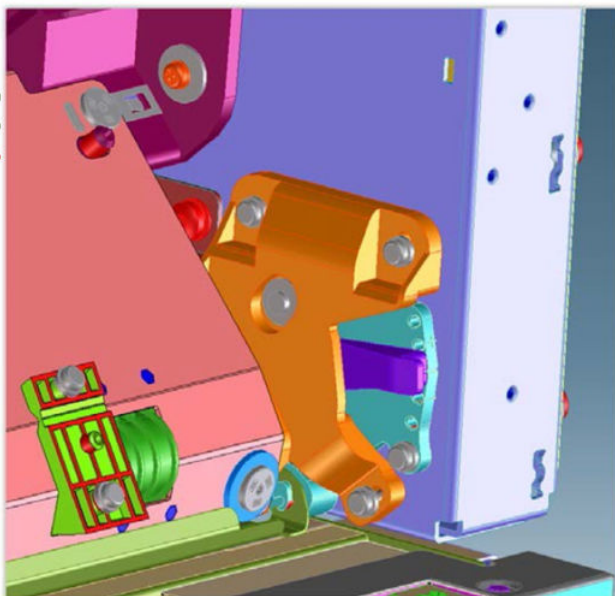
- If the value of 'Average Entry Skew' is bigger than 1.0 mm/m then move the media loop lever downwards (an iteration maybe needed to find the best position)

1. Loosen these 3 screws
2. Move lever downwards
3. Tighten the 3 screws



- If the value of 'Average Entry Skew' is lower than -1.0 mm/m then move the media loop lever upwards (an iteration maybe needed to find the best position).

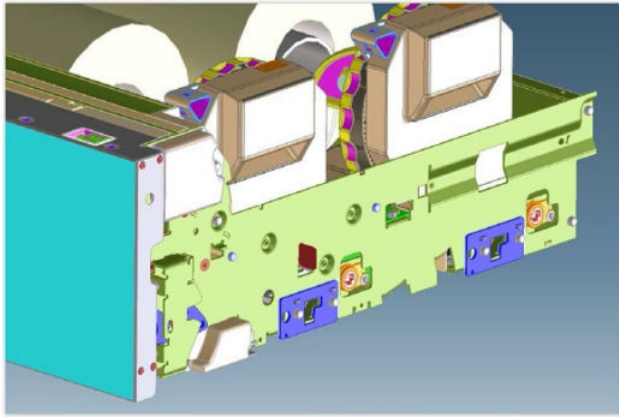
1. Loosen these 3 screws
2. Move lever upwards
3. Tighten the 3 screws



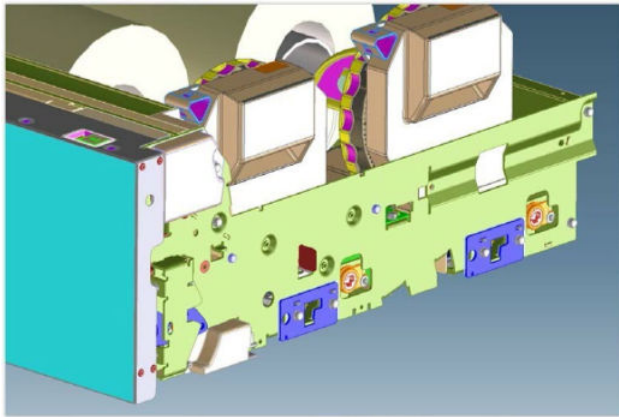
Adjust drawer roll assistant for each roll slot based on the corresponding 'Differential Entry Skew' value:

- If the absolute magnitude of 'Differential Entry Skew' is below 1.0 mm/m there is no need to adjust the drawer

- If the value of 'Differential Entry Skew' is bigger than 1.0 mm/m then move the roll assistant frontwards

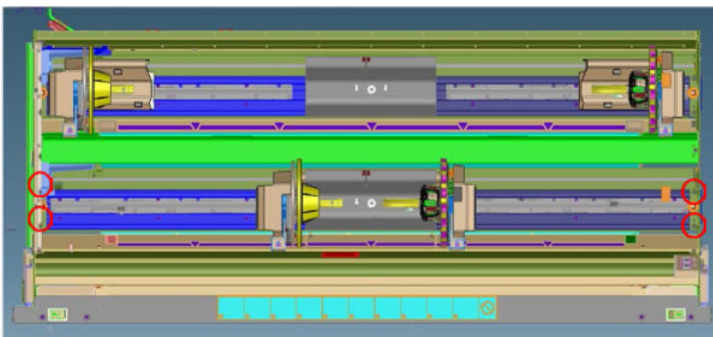


- If the value of 'Differential Entry Skew' is lower than -1.0 mm/m then move the roll assistant rearwards

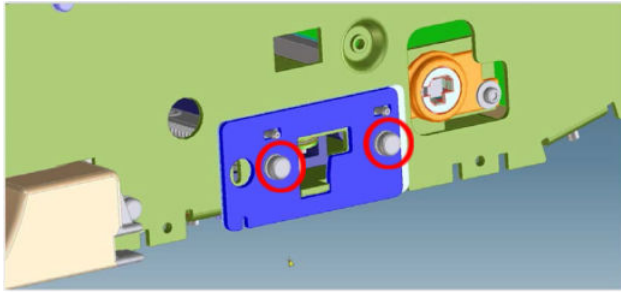


The roll assistant can be adjusted following these steps:

- Loosen the four screws securing the Roll Assistant module to be adjusted:



- Loosen the two screws securing the datum plate:



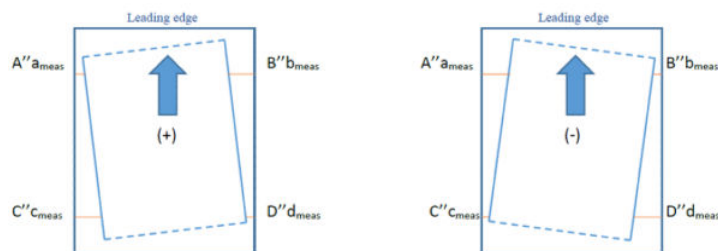
- Move the roll assistant and its datum plate as required.
- Retighten all 6 screws.

Once done, re-run the skew test (step 2) to see whether the adjustment has corrected the skew problems. To fine-tune, some iterations may be needed.

As automatic skew tests have some variability, in order to achieve better accuracy, printing real plots and measuring them could be used as input to adjust the roll assistant. To do so, once the media loop has been adjusted with the automatic skew test data, proceed to print plots longer than 5 meters on the roll to be adjusted. The recommendation is to print at least 3 plots and average the results of the last two, discarding those of the first plot.

Plot must have a frame or reference to allow measuring its distance to the page edge as shown on the picture below. Image skew must be measured as follows, using the correct sign:

$$\frac{1}{2} \cdot \left(\frac{C''c_{meas} - A''a_{meas}}{\overline{ac}} + \frac{B''b_{meas} - D''d_{meas}}{\overline{bd}} \right) \cdot 1000 [\mu]$$



For example, imagine that you print a frame 4980mm long on a 5m-long page. Then, you would measure the distance between the frame and the paper side edges close to each frame corner. If the values you measure are 5mm and 7mm on the left side (i.e. A''a and C''c) and 8mm and 5mm on the right side (i.e. B''b and D''d), image skew will be:

$$\begin{array}{r}
 1 \quad \cdot \quad 7 - 5 \quad 8 - 5 \\
 - \quad \underline{\quad} \quad + \quad \underline{\quad} \\
 \\
 2 \quad 4980 \quad 4980 \quad \cdot 1000 = 0.50 [mmmm/mm]
 \end{array}$$

Then, you can proceed to adjust the roll assistant as commented before based on image skew:

- If the value of image skew is bigger than 2.0 mm/m then move the roll assistant frontwards.
- If the value of image skew is lower than -2.0 mm/m then move the roll assistant rearwards.

If you are still not able to correct the skew, call HP support for further assistance.

Small-format speed upgrade

The new functionality HP PageWide XL Small Format Speed Upgrade is available for PageWide XL 8000s and PageWide XL 8000 BluePrinters.

This new media-loop mechanism works for plots shorter than 700 mm (27.5")* on plain papers < 90 gr and Digital blueprint media.

The following table shows the increase of printer throughput.

PageWide XL 8000 — Pages per minute

Format	Without the Small-format speed upgrade	With the Small-format speed upgrade
A1L & A2P	30	30
A2L	19	34
A3P	19	34
21x15"L	19	37
A3L	20	37
17x11"P	18	33
17x11"L	38	43
12x18 P	24	31
12x18 L	20	35

* Performances with HCS or Basket (not Folder). Only applies to supported papers: plain paper < 90 gr/m² and Digital blueprint media

HP PageWide XL 8000 printers already have this new functionality embedded in them from the factory. The adjustment tools are stored under the cover below the Front panel.

HP PageWide XL 8000 printers that were already installed can be upgraded with this new functionality. Upgrade Kit **CZ309-67396** needs to be purchased in order to get the required hardware parts necessary to install this new functionality.

Documentation:

- Installation and instructions video: MyKnowledge > Small format upgrade video.
- Updated Service Manual.

New service parts:

- **CZ309-67396** - Small sheet speed upgrade kit.
 - Content: (6) Articulated paper-loop baffles, (1) New gear for the Paper-loop roof, (1) Adjustment tool (2 pieces: a checking tool and an adjustment tool), (6) lifters for pinch wheels.
 - Order this part to *upgrade* a printer.
- **CZ309-67397**- Articulated paper-loop baffle (qty 1) + Adjustment tool.
 - Content: (1) Articulated paper-loop baffle, (1) Adjustment tool (2 pieces).
 - Order this part to *repair* a printer.

- New printers will include the adjustment tool (2 pieces: a checking tool and an adjustment tool) from the factory.
- For upgraded printers, the reseller has to keep the adjustment tool (2 pieces) for any further adjustments.

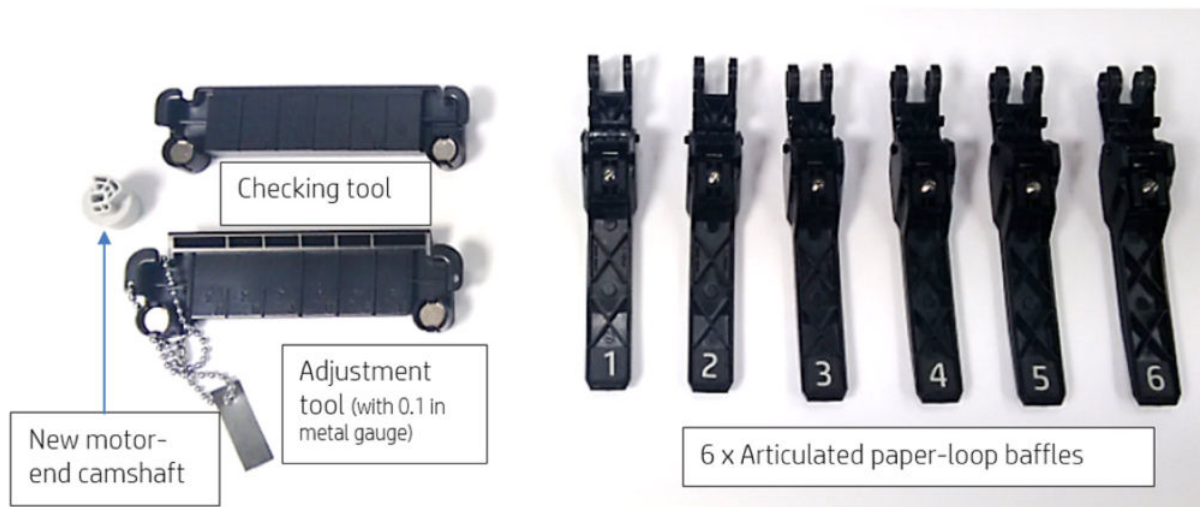
Installation and adjustment:

- Installation and adjustment takes 60 minutes. It is recommended to follow the video the first time you perform them.
- The functionality can be enabled/disabled from the Service menu without removing any hardware parts.
- A fine adjustment may need to be performed if the Paper-loop roof is disassembled or if any skew appears on small pages.
- In case of paper jams, the *Calibrate articulated paper-loop baffle down position* process needs to be followed in order to readjust.

Installation and adjustment instructions

Material required to upgrade

CZ309-67396 - Small sheet speed upgrade kit content:



Not included in the service kit:

- A slotted screwdriver
- The Service menu USB
- The new compatible FW version (NGRGA_11.xx.xx.xx or higher)

Install new FW version (BD11.2)

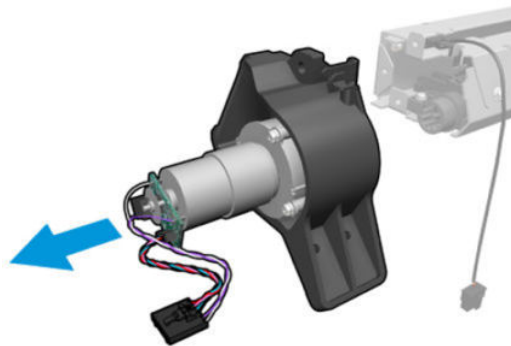
First, please be sure that the proper FW version is installed on the printer (NGRGA_11.xx.xx.xx or higher).

Install new HW for the small-format speed upgrade

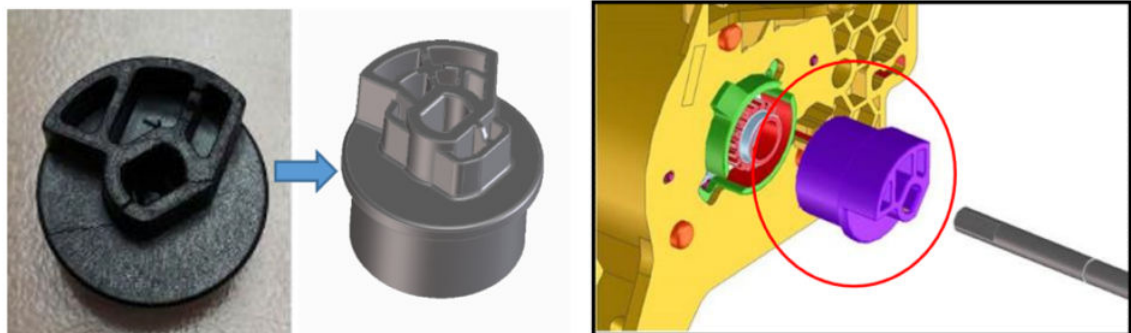
1. Switch off the printer.
2. Remove its covers.
3. Remove the Paper-loop roof (4 cosmetic screws). See [Paper-loop roof sheet-metal \(CZ309-67437/CZ309-67434\) on page 885](#).



4. Open the Paper-loop baffle shaft drive (only 3 screws).

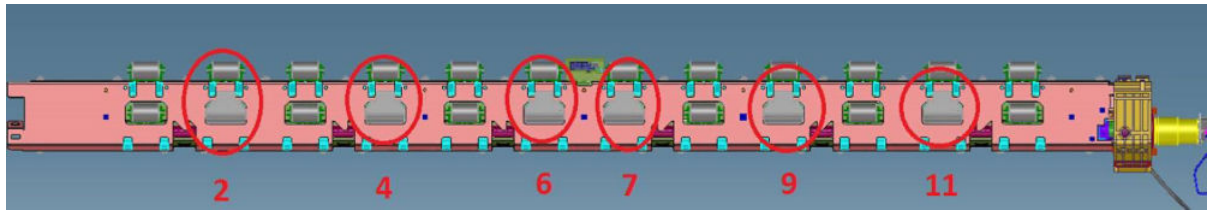


5. Swap the current Motor-end camshaft (the black gear) for the new Motor-end camshaft (the grey gear that comes with the kit).

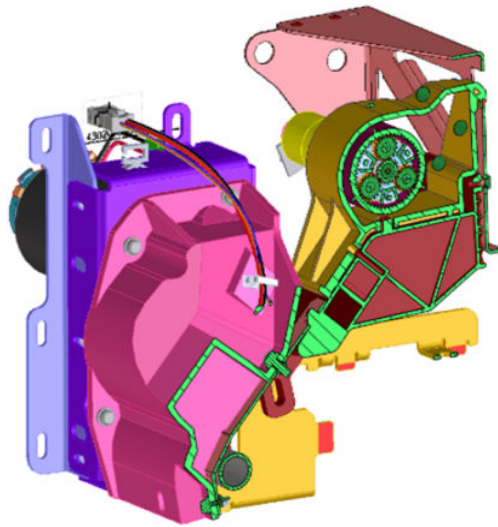


6. Close the Paper-loop baffle shaft drive (only 3 screws) again.

7. Place lifters on the pinch wheels of the Paper-loop roof (pinches on position: 2, 4, 6, 7, 9 and 11) as is shown in the picture).



8. Install the Paper-loop roof (4 cosmetic screws) again.
9. Ensure that the Paper-loop roof is properly placed on both sides. On the left side there is a tab hidden behind the lateral bracket. It is **very important** to place this tab correctly in the metal bracket hole.

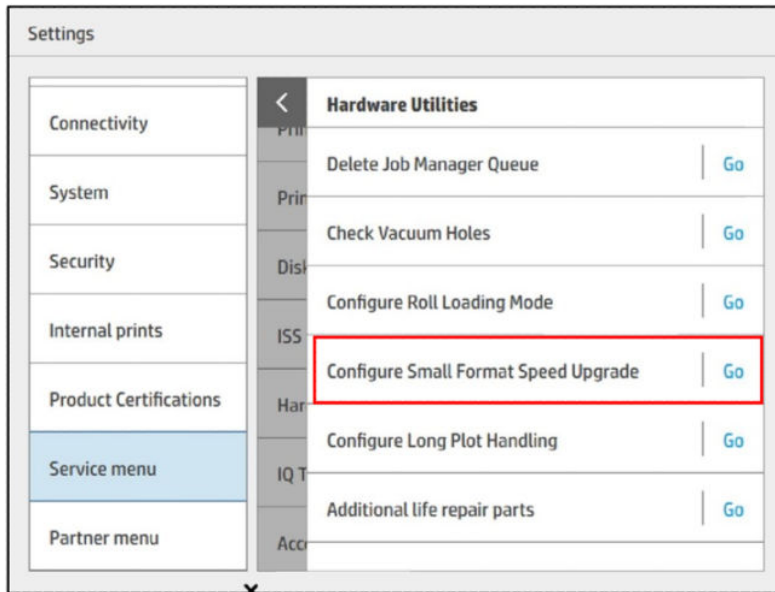


10. Re-install the printer's covers.
11. You can now install the 6 new Articulated paper-loop baffles, or wait for the adjustment process.
12. Switch on the printer.

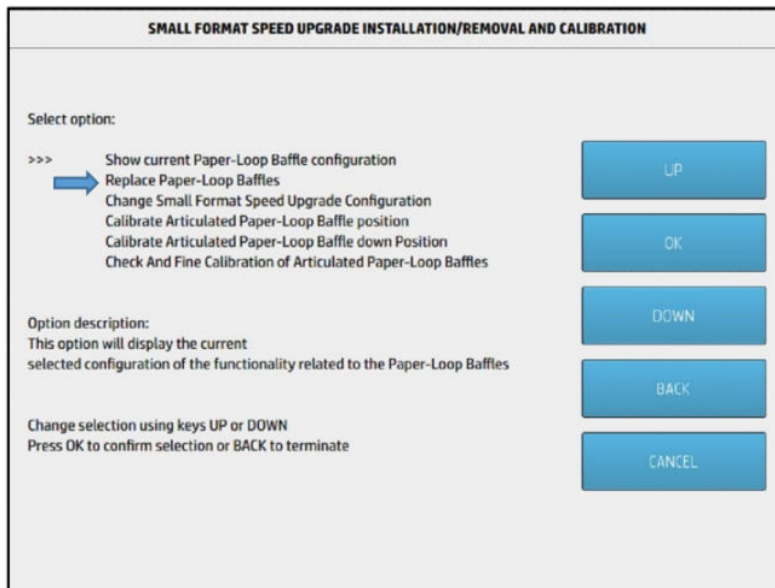
Base adjustment process and check

Adjustment process

1. Go to the Main menu via the Service menu (use the Service menu USB).
2. Service Menu > Hardware Utilities > Configure Small Format Speed Upgrade.



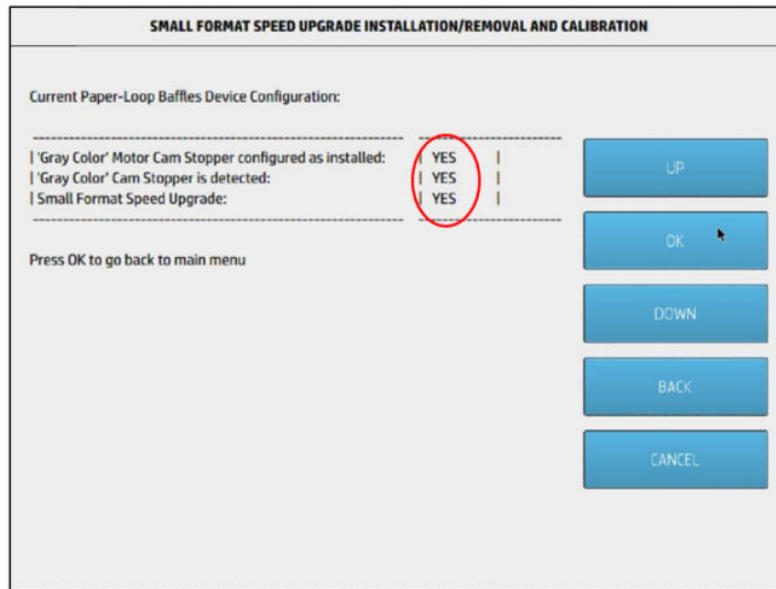
3. The Main menu screen will appear.
4. If you have not installed the 6 new Articulated paper-loop baffles, go to **Replace Paper-Loop Baffles..**



5. Follow the Front panel instructions to install the Articulated paper-loop baffles.

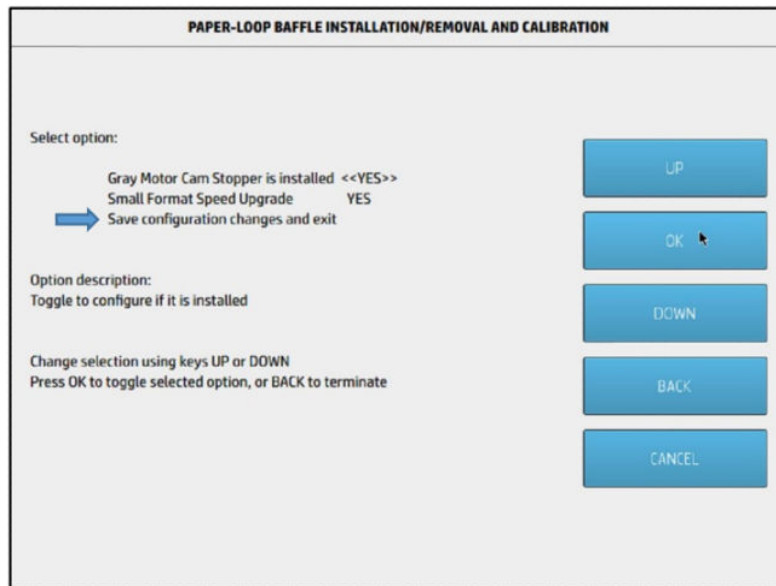
6. Go to **Show current Paper-Loop configuration**.

There are 3 flags. All of them must be set to **YES**. If any of them are set to **NO**, return to the Main menu and go to step 7.



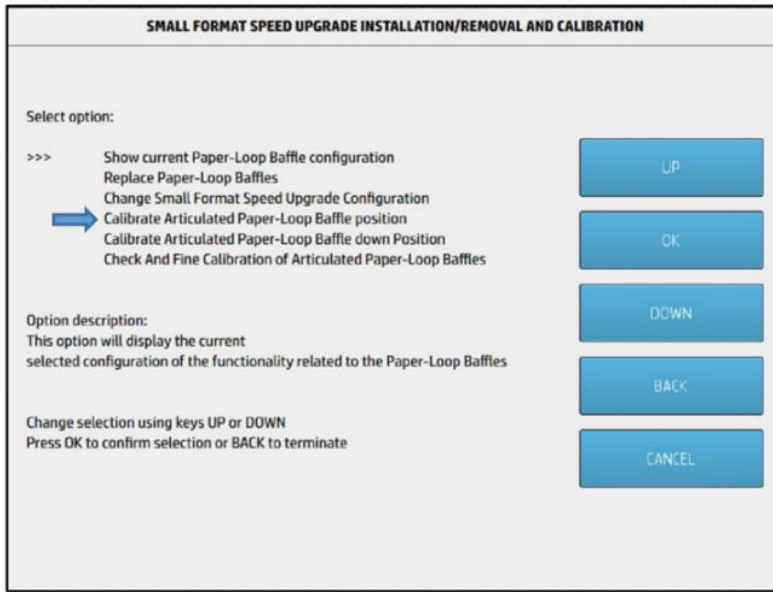
7. Go to **Change Small Format Speed Upgrade Configuration**.

All flags must be set to **YES**. Change them by clicking **OK**, and **Save** before leaving.

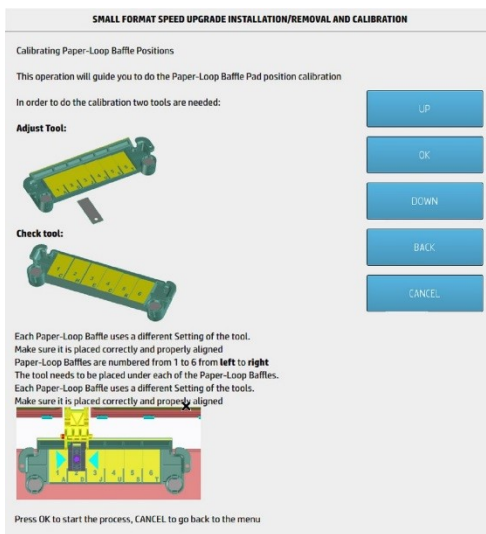


8. Return to the main menu.

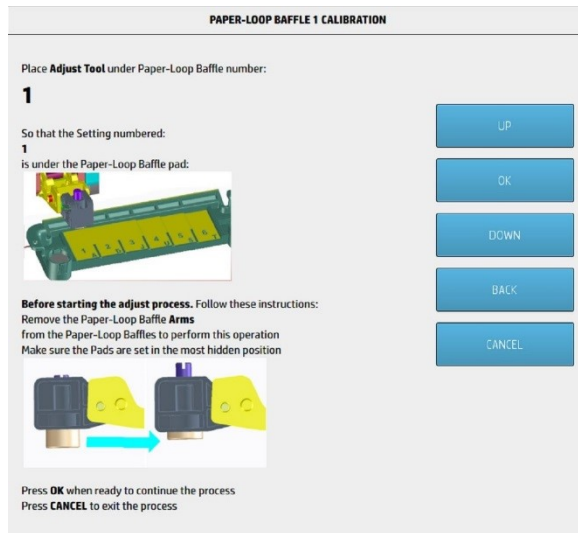
9. To start the adjustment process, go to **Calibrate Articulated Paper-Loop Baffle position**.



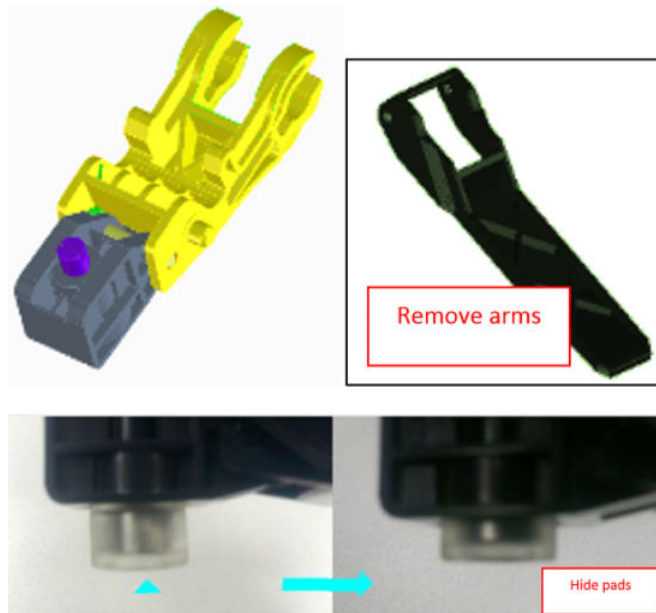
10. The Front panel will guide you through the whole adjustment process. Please follow the instructions given by the Front panel.



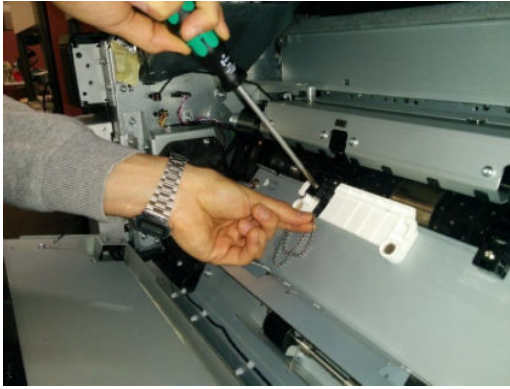
11. Place the Adjustment tool under the first Paper-loop baffle. Ensure that the tool is properly aligned with the baffle.



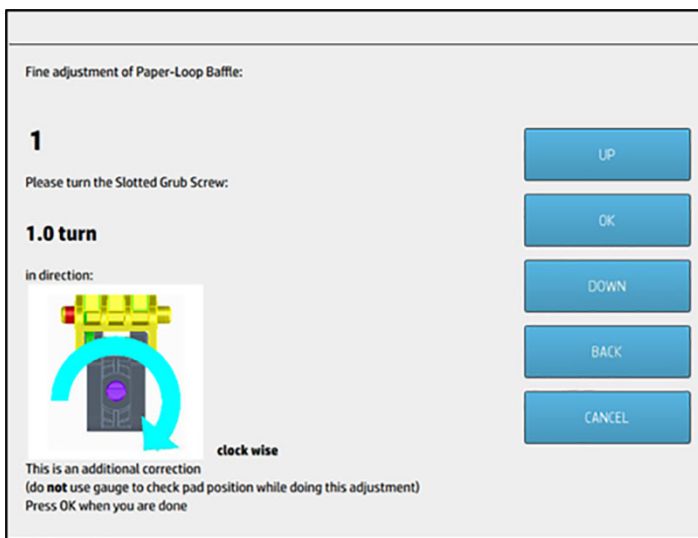
12. Before pressing **OK**, be sure that **all the Paper-loop baffle arms are removed** and that **all the contact pads are set in the most hidden position** possible (by default all pads will be in the correct position).



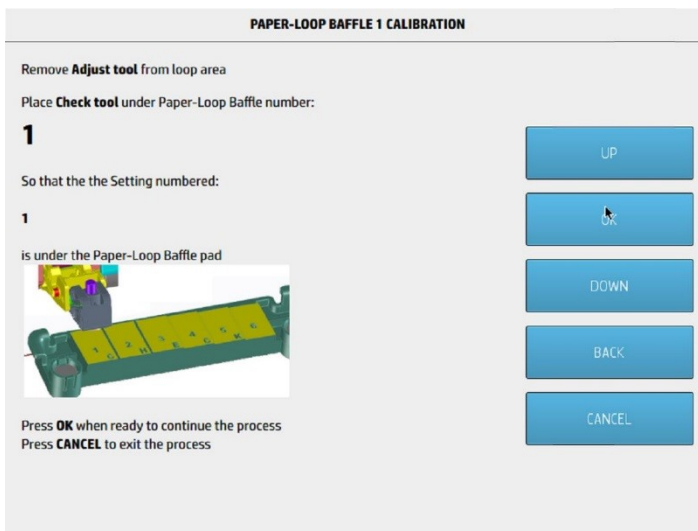
13. Follow the Front panel instructions:
 - a. Place the adjustment tool in the correct position so that baffle 1 is aligned with setting 1 of the tool. Press **OK**.
 - b. The Baffle will perform some movements. Wait until the Front panel notifies you that it is complete with a beep.
 - c. Adjust the contact pad using the slotted screwdriver. The objective is to turn the slotted grub screw up to the position where the metal shim gauge does not pass between the tool and the contact pad. This operation requires some user skills, but do not worry if the *touch-no touch* point is not clear. The important thing is to maintain the same criteria for all 6 baffles.



14. When finished, the front panel may ask you (**not always**) to additionally turn the slotted grub screw (clockwise or counter-clockwise). **This adjustment is an additional correction and the use of the gauge is NOT necessary.**



15. When finished, the Front panel will ask you to place the **check tool**. Be sure to place it properly (baffle 1 aligned with tool setting 1).

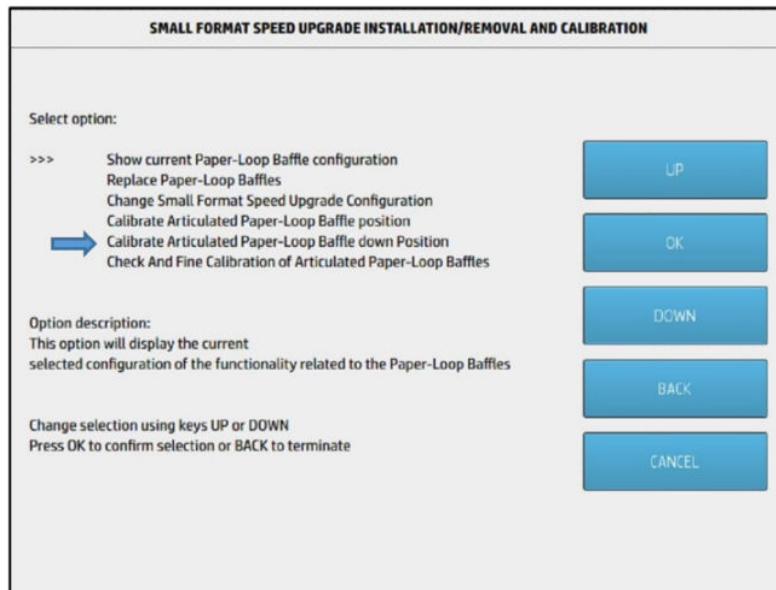


16. Some warnings can show up after this process. You can always **repeat** the whole process (going back to step 13), **cancel** it or **ignore** the warning.
17. If there are no warnings, the process will continue with adjusting the rest of the baffles (one by one). See steps 13-16.
18. After adjusting the Paper-loop baffle 6, the process is complete.
19. Add the arms to the Paper-loop baffles and close the Front door.

Adjust the down position

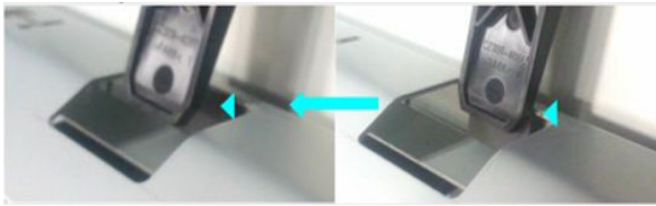
It is possible that the down position of the Articulated paper-loop baffles is a little bit lower than it should be. To adjust this position:

1. Go to **Calibrate Articulated Paper-Loop Baffle down Position**.



2. Follow the Front panel instructions.
3. By pressing the DOWN/UP buttons, the down position will be changed.

4. Press the DOWN/UP buttons until all the Paper-loop baffle arms are clearly NOT touching their black foam sets, but are in a position as low as possible.



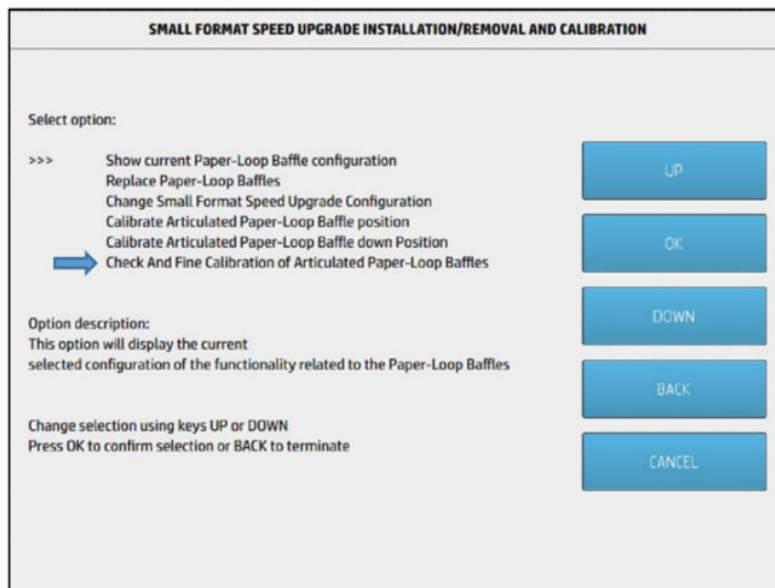
Also ensure that no paper-loop baffles touch the media loop plate.

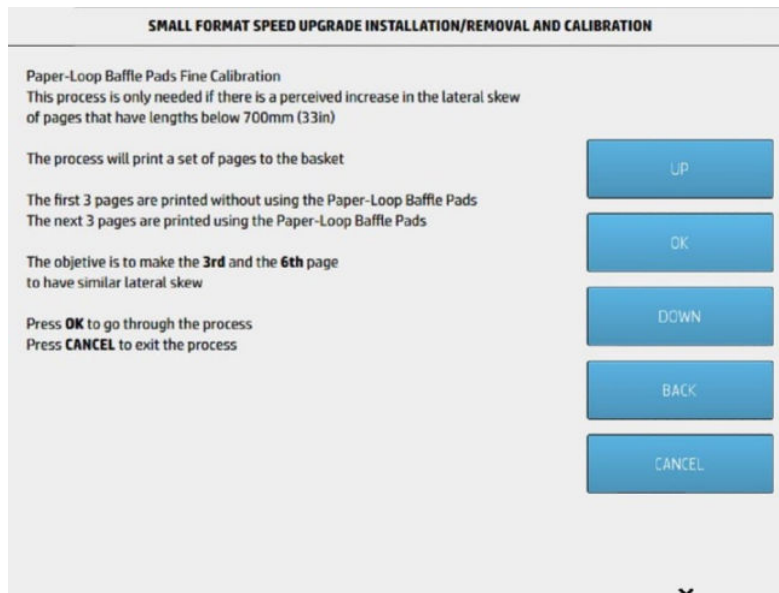


5. Press OK to confirm, and follow the front panel instructions.

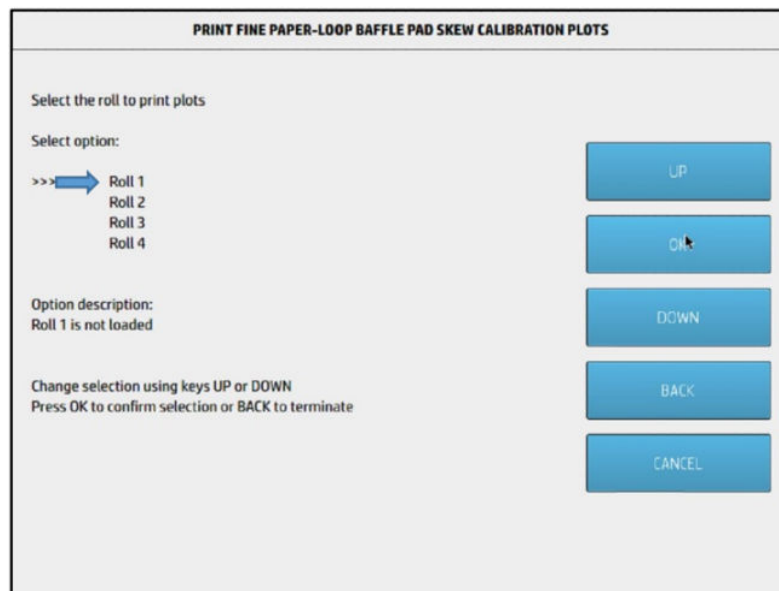
Check skew

1. Go to Check and Fine Calibration of Articulated Paper-Loop Baffles.

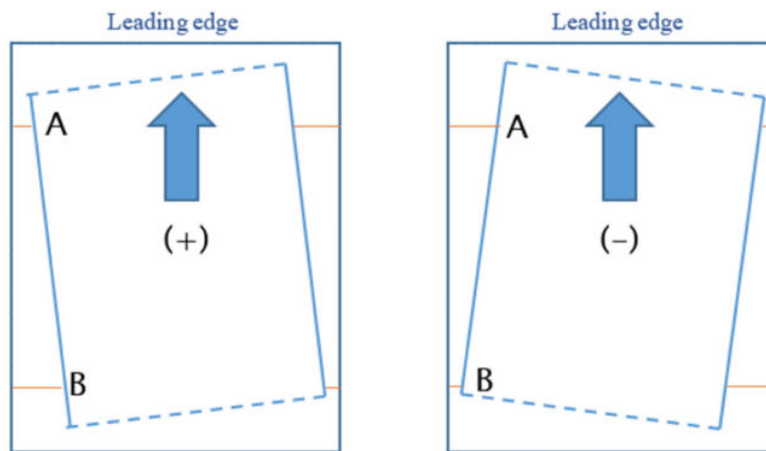




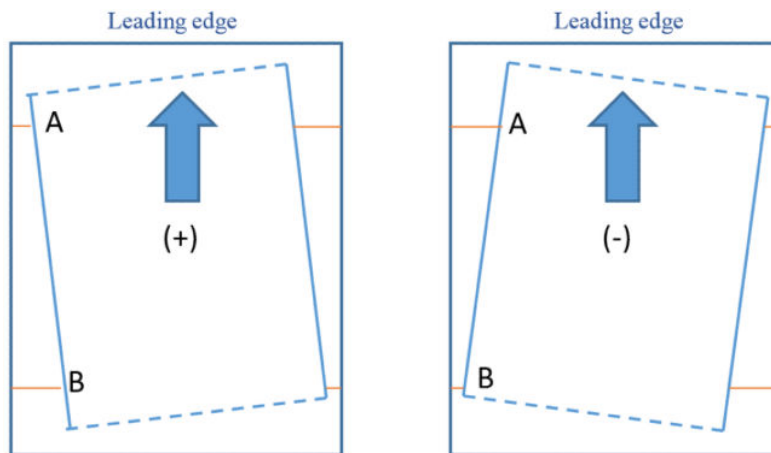
2. Load media from **297-500 mm wide** in Roll 1 (< 20 in).
Use the type of media most used by the customer. In case of several medias, use **Plain Paper < 90 gr**
Standard sizes: **A1, A0, 22 in, 24 in, 30 in.**
3. Select the roll where you have loaded the media.



4. Six pages will come out of the printer (only the 3rd and 6th will be printed on and used for checking).
5. Check the skew of the **ACTIVATED** plot (the shorter one) by measuring distances **A** and **B**.
6. Compare the skew with that of the **DEACTIVATED** plot (the longer one) by measuring distances **A'** and **B'**.
Keep this DEACTIVATED plot for later **as a reference plot**.
7. If the skew of the ACTIVATED plot is not similar to that of the DEACTIVATED plot, follow the plot instructions:



- If $A > B$, turn the slotted screws belonging to **baffles 5 and 6** one whole turn **clockwise**.
 - If $A < B$, turn the slotted screws belonging to **baffles 5 and 6** one whole turn **counter-clockwise**.
8. If you have modified the position of any of the screws, repeat the process with the same roll and check the new ACTIVATED plot again (the first 3 plots will not be printed this time).
 9. When the skew of the ACTIVATED plot and the DEACTIVATED plot is similar, the adjustment of wide plots will be finished.
 10. Go back to the main menu.
 11. Go to **Check and Fine Calibration of Articulated Paper-Loop Baffles**.
 12. Load media **from 550-850 mm wide** in Roll 1 (22 in – 33 in).
Use the type of media most used by the customer. In case of several medias, use **Plain Paper < 90 gr**
Standard sizes: **A3, A2, 11 in, or 8.5 in**.
 13. Select the roll on which to print the Diagnostic plot again (now with the narrow media).
 14. Six pages will come out of the printer (only the 3rd and 6th will be printed on and used for checking).
 15. **Check** the skew of the **ACTIVATED** plot (the shorter one) **by measuring distances A and B**.
 16. **Compare** the skew with that of the **DEACTIVATED** plot (the longer one) **by measuring distances A' and B'**.
Keep this DEACTIVATED plot for later **as a reference plot**.
 17. If the skew of the ACTIVATED plot is not similar to that of the DEACTIVATED plot, follow the plot instructions:



- If $A > B$, turn the slotted screws belonging to **baffle 4** one whole turn **clockwise**.
 - If $A < B$, turn the slotted screws belonging to **baffle 4** one whole turn **counter-clockwise**.
18. If you have modified the position of any of the screws, repeat the process with the same roll and check the new ACTIVATED plot again (the first 3 plots will not be printed this time).
 19. When the skew of the ACTIVATED plot and the DEACTIVATED plot is similar, the adjustment of narrow plots will be finished.
 20. Go back to the main menu.
 21. The process is finished.

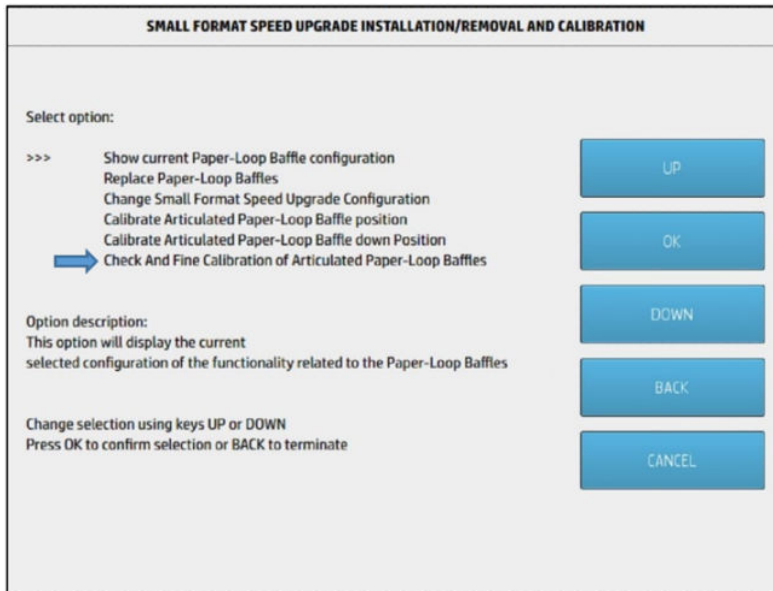
Fine adjustment process (only if needed by customer)

In some cases, customers can complain about the skew seen with some media widths or media types that are not checked in the base adjustment process.

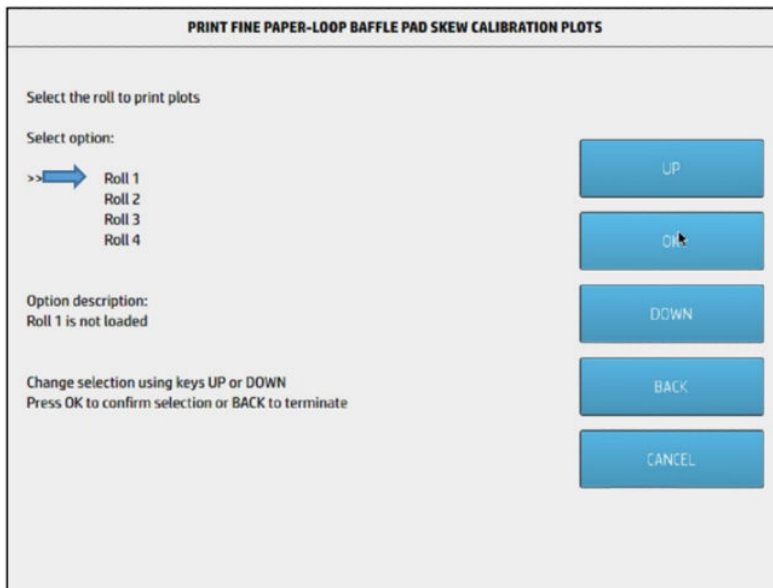
In these cases, a fine adjustment process will be needed.

This fine adjustment process is as follows:

1. Go to **Check and Fine Calibration of Articulated Paper-Loop Baffles**.









2. Load the media type the customer is complaining about (preferably on Roll 1).
3. Select the roll where you have loaded the media.



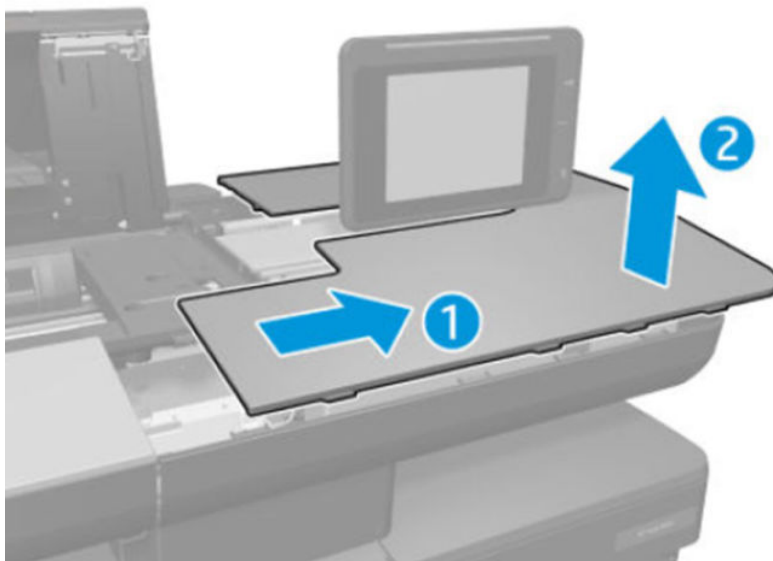
4. Six pages will come out of the printer (only the 3rd and 6th will be printed on and used to fine-adjust).
5. Check the skew of the **ACTIVATED** plot (the shorter one) by measuring distances A and B.
6. Compare the skew with that of the **DEACTIVATED** plot (the longer one) by measuring distances A' and B'.
7. Keep this DEACTIVATED plot for later as a reference plot.
8. If the skew of the ACTIVATED plot is not similar to that of the DEACTIVATED plot, follow the instructions in the following table (for fine adjustment do NOT follow the plot instructions):

Plot width

	Less than 500 mm (8.5 in to 19 in)	550 mm to 850 mm (22 in to 33 in)	More than 850 mm (more than 33 in)
A > B			
	Baffle 4	Baffle 5	Baffle 6
A < B			
	Baffle 4	Baffle 5	Baffle 6

9. If you have modified the position of any of the screws, print again from the same roll and check the new ACTIVATED plot again (the first 3 plots will not be printed this time).
10. When the skew of the ACTIVATED and DEACTIVATED plots is similar, the adjustment of narrow plots will be finished.
11. Go back to the main menu.
12. The fine adjustment process is finished.

Remember to keep the adjustment tools stored under the cover below the front panel for future adjustments.



Optimize print quality

General printing advice

When you have any print-quality problem:

- To achieve the best performance from your printer, use only genuine manufacturer's supplies and accessories, whose reliability and performance have been thoroughly tested to give trouble-free performance and best-quality prints.
- Make sure that the paper type selected in the front panel is the same as the paper type loaded into the printer. At the same time, check that the paper type has been calibrated. Also make sure that the paper type selected in your software is the same as the paper type loaded into the printer.

⚠ CAUTION: If you have the wrong paper type selected, you could experience poor print quality and incorrect colors, and perhaps even damage to the printhead.

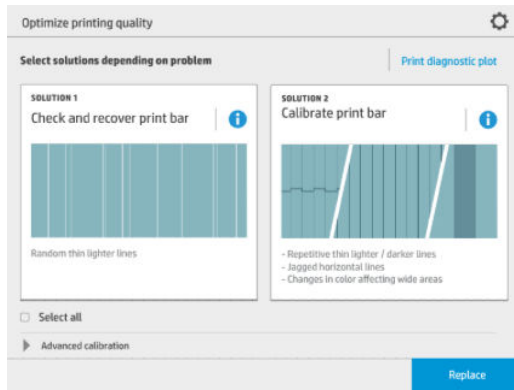
- Check that you are using the most appropriate print-quality settings for your purposes (see the user guide).
- Check that your environmental conditions (temperature, humidity) are in the recommended range for printer and paper.
- Check that your ink cartridges have not passed their expiration dates and are in good condition.
- Check the printhead status.
- If you have any pending calibration for a paper type, press **Calibrate Print Bar**.

If you still experience print-quality problems, you can follow a more hands-on print-quality troubleshooting procedure, by printing, interpreting, and performing corrective actions as follows.



Optimize print quality app

Go to the optimize print quality app in the front panel to see the different options available.



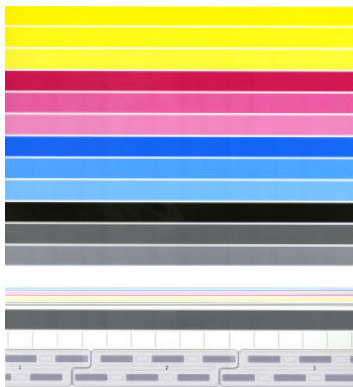
Print diagnostic plot

Press the **Print diagnostic plot** button to identify the problems you may have.

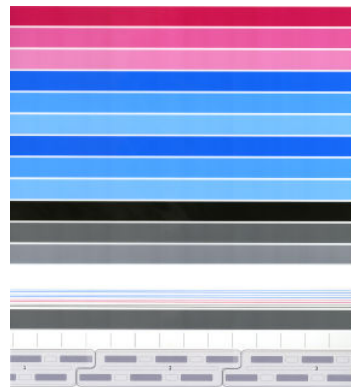
Use the same paper type that you were using when you detected a problem, and check that the selected paper type is the same as the paper loaded into the printer.

The print is divided into three parts. The top part is about print-bar and color-calibration problems, the center is about alignment problems, and the bottom part is an illustration of the printhead positions that can be used as a reference.

Non-blueprinters

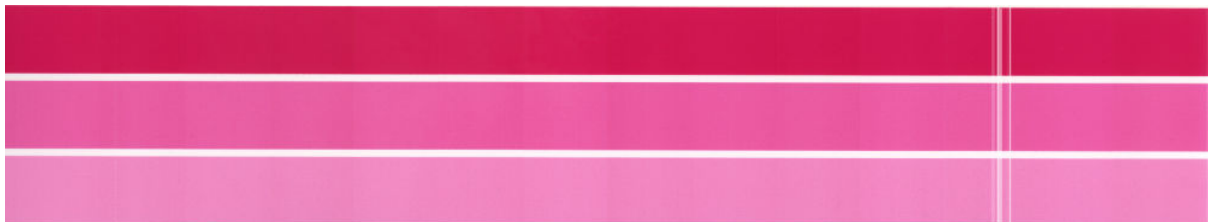


Blueprinters



Check and recover print bar

If you detect problems in the top part of the plot, where there are random (not regular) lighter, very thin lines, some printheads may need cleaning. Press **Check and recover print bar**.

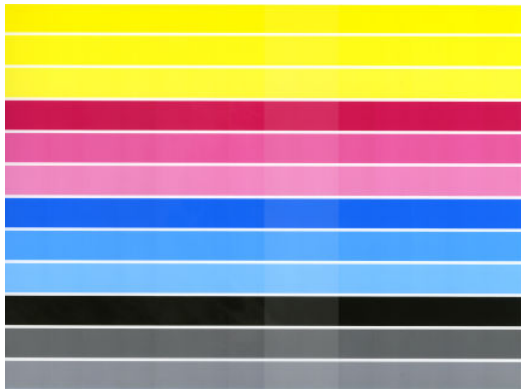


The time required depends on the number of printheads to be cleaned. Once they have been cleaned, reprint the diagnostic plot to check that the problem has been solved. Allow 10 minutes per printhead.

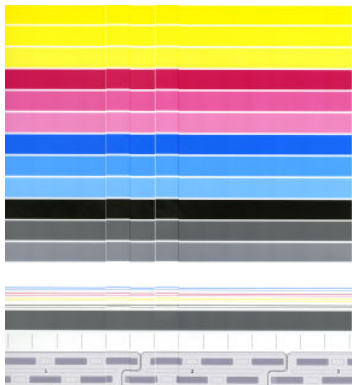
If the problem persists, check in the diagnostic plot for which printhead the defects appear. You can identify which printhead has the problem from the numbered printhead image on the bottom of the top part. To clean only that printhead, press **Enhanced printhead recovery** (see [Enhanced printhead recovery on page 268](#)).

Calibrate print bar (non-blueprinters)

Color variation in the bands in the top part of the plot indicates a possible problem in the color calibration.



The central part of the plot indicates whether the print bar is correctly calibrated. The vertical lines indicate the boundaries of the different print elements within a printhead (die boundaries). In the horizontal gray band, no repetitive white lines or dark lines should be seen above the die boundaries. The horizontal lines of different colors should be continuous and not broken or jagged at the die boundaries; if this occurs, a printhead alignment is required.




If you see defects, you should calibrate the printer by pressing **Calibrate print bar** in the optimize print quality app. You should also calibrate the printer if you are warned that a roll has a calibration pending status.

Print-bar calibration includes printhead alignment and color calibration.

You can check what calibrations have been done in the past by pressing the **Calibration history** button; and you can restore the original factory calibrations at any time.

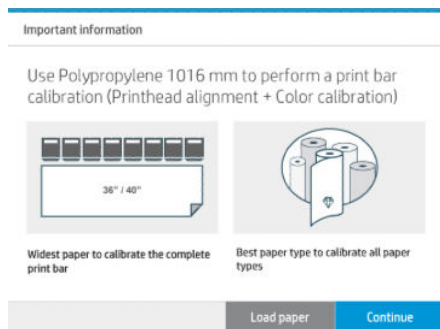
 **NOTE:** Make sure that the room temperature during calibration is similar to the temperature during normal printing. Big temperature differences (> 10°C) can affect the calibrations.

 **NOTE:** Some paper types cannot be calibrated.

Calibration procedure

1. Press **Calibrate print bar**, then **Continue**.

2. Make sure that you have loaded a roll of HP Production Matte Polypropylene, 40 in (1016 mm) wide, for best results and least waste.



NOTE: You are highly recommended to use HP Production Matte Polypropylene, 40 in (1016mm) wide, to calibrate the print bar.

If you don't have this paper type, or uniform color is not very important to you (such as when printing only CAD drawings), you can disable color calibration to shorten calibration time and paper usage, by pressing and checking the box **Only printhead alignment** in the optimize-print-quality settings. Thereafter, the printer will perform only alignment when this routine is launched. In that case, you can run the print-bar calibration using a different paper type.

If do not use the widest roll that you have, some rolls may remain uncalibrated and the printer will ask for extra calibrations later.

3. Color calibration takes about 12 minutes (8000) or 16 minutes (3900/4000/4100/5000) and uses about 1 m (39 in) of paper.
4. Printhead alignment takes about 12 minutes (8000) or 16 minutes (3900/4000/4100/5000) and uses about 1.3 m (51 in) of paper.
5. After the calibration, the printer uses the results to calculate calibrations for all other paper types.

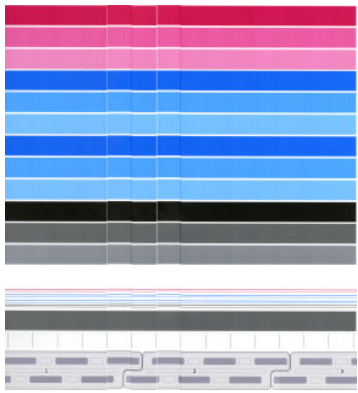
If the print-bar calibration fails with an error message or leaves some dies misaligned, print the Diagnostics Plot and make sure there are no large contiguous groups of missing nozzles. If there are large contiguous groups of missing nozzles, follow the printhead recovery procedure.

Select all

By checking the **Select all** box, you can do both basic routines: check and recover the print bar, and calibrate the print bar. This can be useful when these routines have not been done for a while, or if you are unsure which routine is appropriate.

Calibrate print bar (blueprinters)

The horizontal lines of different colors should be continuous and not broken or jagged at the die boundaries; if this occurs, a printhead alignment is required.



If you see defects, you should calibrate the printer by pressing **Calibrate print bar** in the optimize print quality app. You should also calibrate the printer if you are warned that a roll has a calibration pending status.

Print-bar calibration includes printhead alignment.

You can check what calibrations have been done in the past by pressing the **Calibration history** button; and you can restore the original factory calibrations at any time.

 **NOTE:** Make sure that the room temperature during calibration is similar to the temperature during normal printing. Big temperature differences (> 10°C) can affect the calibrations.

Calibration procedure

1. For calibration, load a roll of the widest and best-quality paper that you have; otherwise the printer may request further calibrations later.
2. Press **Calibrate print bar**, then **Continue**.
3. Printhead alignment takes about 12 minutes (8000) or 16 minutes (3900/4000/4100/5000) and uses about 1.3 m (51 in) of paper.
4. After the calibration, the printer uses the results to calculate calibrations for all other paper types.


If the print-bar calibration fails with an error message or leaves some dies misaligned, print the Diagnostics Plot and make sure there are no large contiguous groups of missing nozzles. If there are large contiguous groups of missing nozzles, follow the printhead recovery procedure.

Advanced options

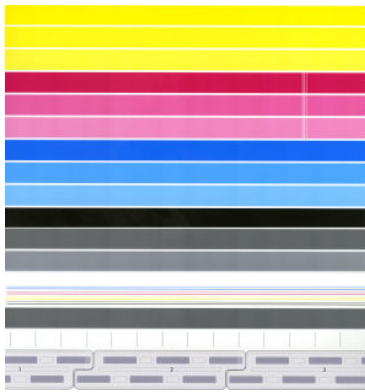
You can go to **Advanced options** to run specific custom calibrations to solve particular kinds of problems.

Enhanced printhead recovery

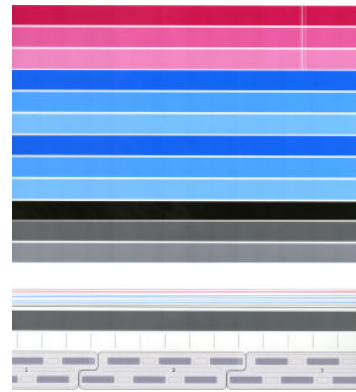
This procedure aims to recover a printhead that has been degraded by heavy usage, or when other methods have failed. It is an intensive procedure to recover printheads with severe degradation, such as multiple nozzles malfunctioning, or color mixing. It may also be used to optimize printheads for jobs with high ink coverage. See [Check and recover print bar on page 265](#).

 **NOTE:** First print a diagnostic plot to identify which printheads require cleaning and thus avoid waste of ink. You can select particular printheads for enhanced recovery. In the example below, the affected printhead would be number 3.

Non-blueprinters




Blueprinters




Page length accuracy

If you find that printed page lengths are slightly incorrect, go to the print quality app and select **Page length accuracy**.

The next screen shows the loaded paper types. Select the one you need to correct automatically or manually. If you press **Start** (recommended), the printer makes an automatic correction. The front panel warns you to allow some time and paper for the correction. If you select **Adjust manually**, you must enter the value of the length error.

 **NOTE:** To optimize the calibration, it is recommended to use the widest possible paper roll for each type of paper.

For example, you may print an A0 (1189 mm) page, but you measure the print and find that its length is 1187 mm. You should select A0 and a measured page length of 1187 mm. The page length correction is automatically updated to +2 mm when you enter the measured value.

 **IMPORTANT:** You could cause a system error or damage to the printer by entering an incorrect error value after **Adjust manually**.

If the above procedures do not solve your problem, call your support representative.


PPSGV test

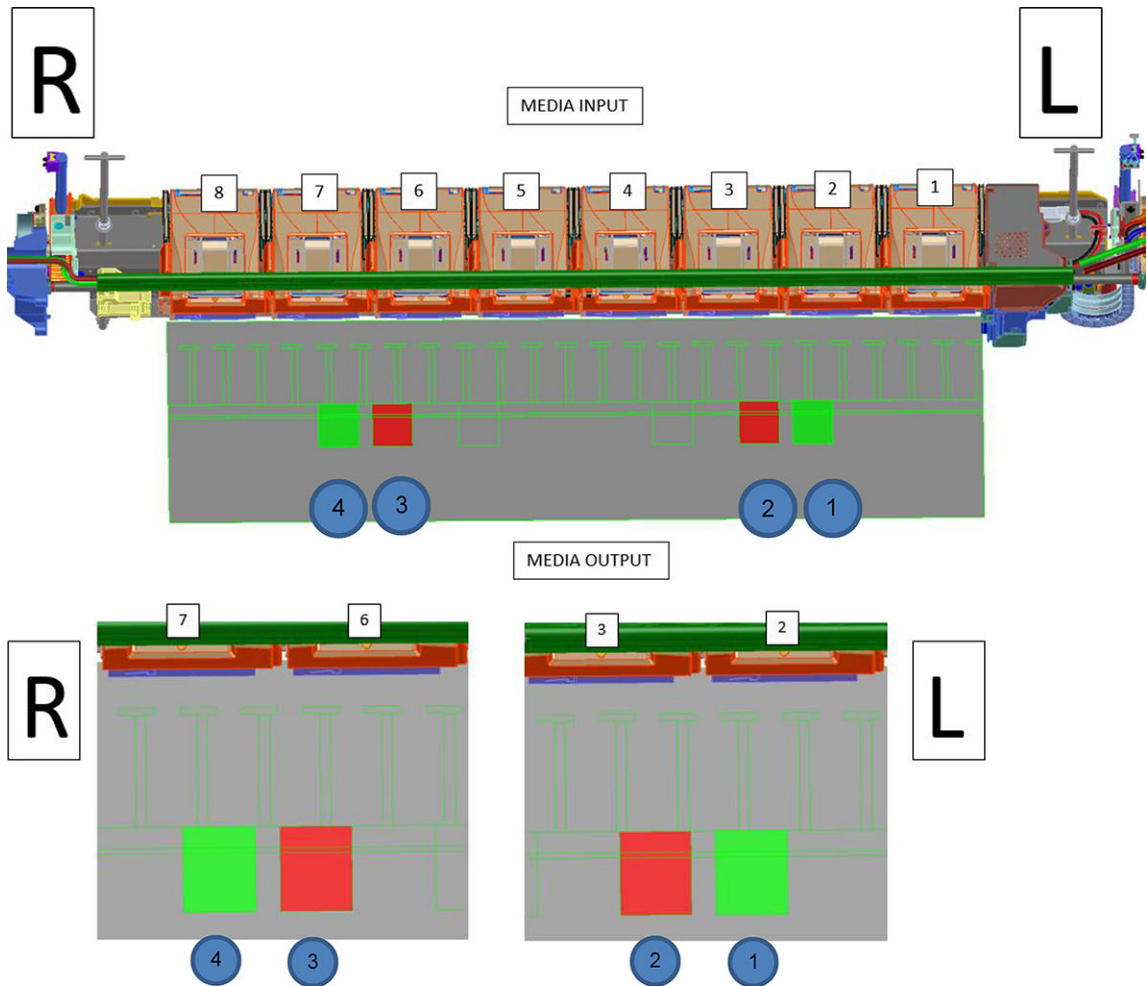
This section explains how to run the test and how to analyze the results.

Material

- Bond paper, 36 in wide
- Two thick gauges (1.32 mm)
- Two thin gauges (0.764 mm)

Procedure

1. Load a roll of bond paper, 36 inches wide, in the printer's first drawer.
2. Go to the front panel and press , then **Service menu** > **Calibrations** > **PPSGV**.
3. Follow the front-panel instructions to run the test. When asked to place the gauge, follow this schema:



Place thin gauges in boxes 1 and 4, and thick gauges in boxes 2 and 3.

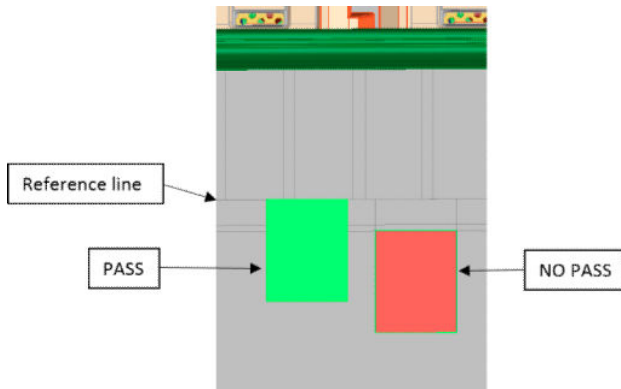
4. When the test asks if the gauges are in the correct position, it means that both thin gauges should pass through the printheads, while the thick gauges do not pass. We call this situation Scenario 1. In any other scenario, the PRS of the printer is not within specifications.

Scenario #	RIGHT		LEFT	
	THIN	THICK	THICK	THIN
1	PASS	NO PASS	NO PASS	PASS
2	PASS	PASS	NO PASS	PASS
3	PASS	NO PASS	PASS	PASS
4	PASS	PASS	PASS	PASS
5	NO PASS	NO PASS	NO PASS	PASS
6	PASS	NO PASS	NO PASS	NO PASS
7	NO PASS	NO PASS	NO PASS	NO PASS
8	NO PASS	NO PASS	PASS	PASS
9	PASS	PASS	NO PASS	NO PASS

- Scenario 1: PRS within specifications (within 1.35 ±0.3 mm)
- Scenario 2 to 9: PRS out of specifications (PRS less than 1.05 or greater than 1.65)

Following the front-panel instructions, you can retry the test by pressing the **Up** button if you are not sure that the measurement has been done correctly. This can happen, for example, if the thick gauge touches and moves the thin gauge.

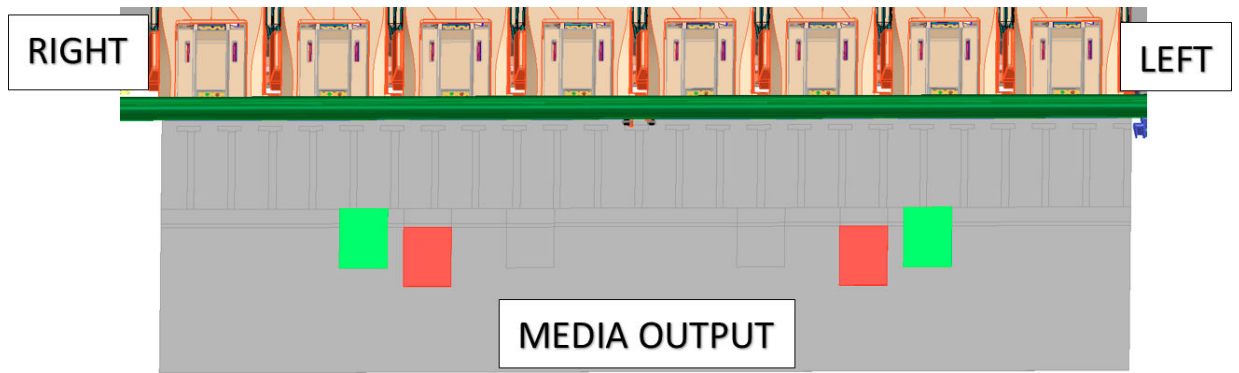
The following illustration shows how to decide between PASS and NO PASS.



- PASS: The gauge remains in place after the belt has moved backwards and forwards.
- NO PASS: The gauge has moved in any direction from its original position.

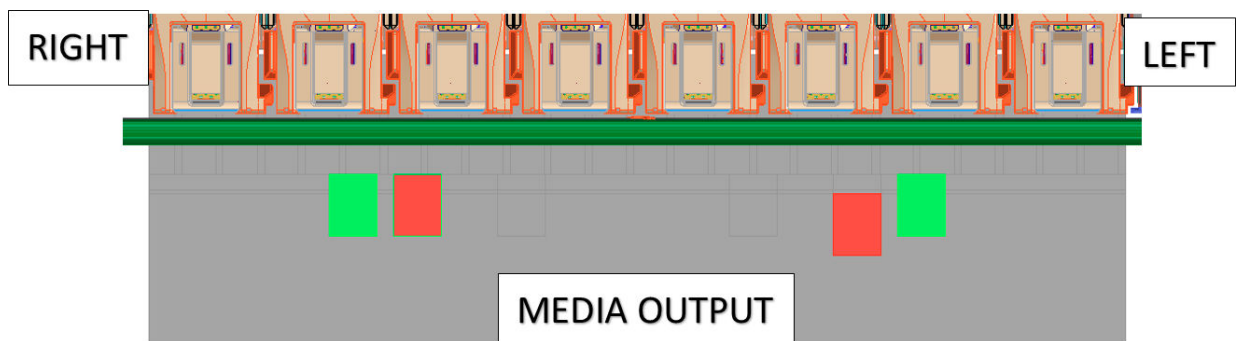
Scenario 1

The following figure shows the final position of the gauges in Scenario 1, when the printer has a PRS within specifications:

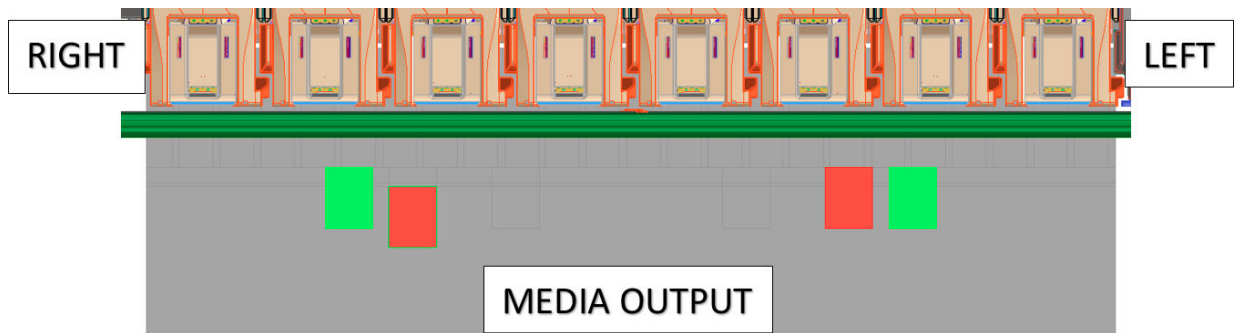


Following the front-panel instructions, you can exit the test by pressing the **OK** button, or launch the PPS gauge adjustment by pressing the **Down** button if the scenario is not Scenario 1, and you want to readjust the PRS.

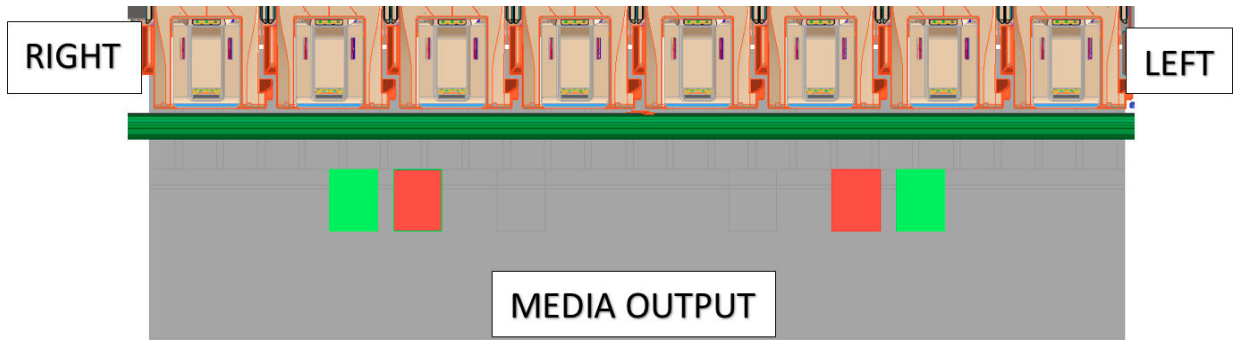
Scenario 2



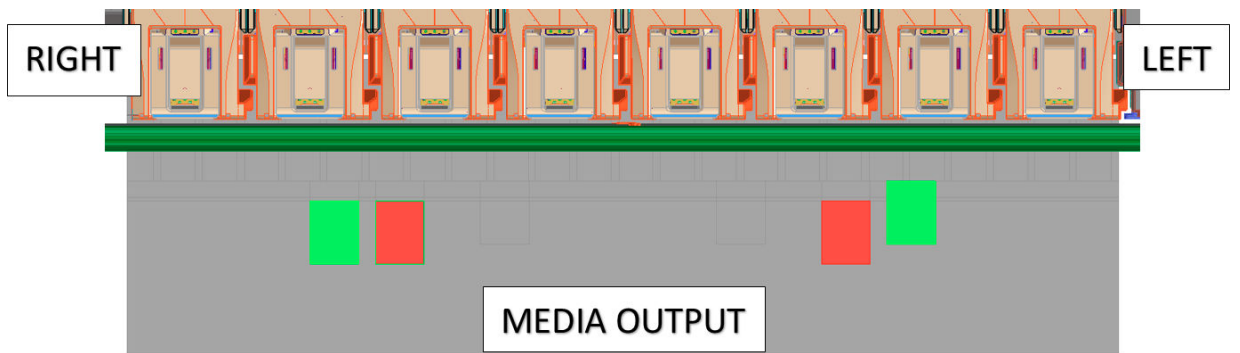
Scenario 3



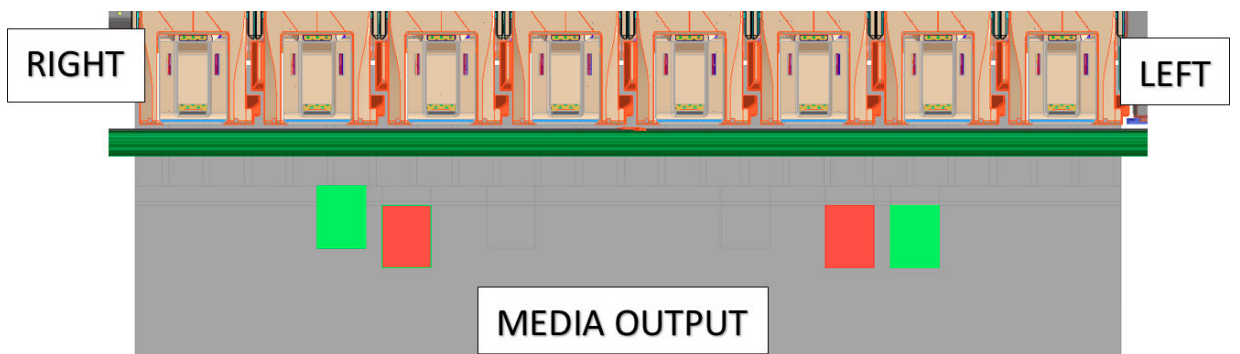
Scenario 4



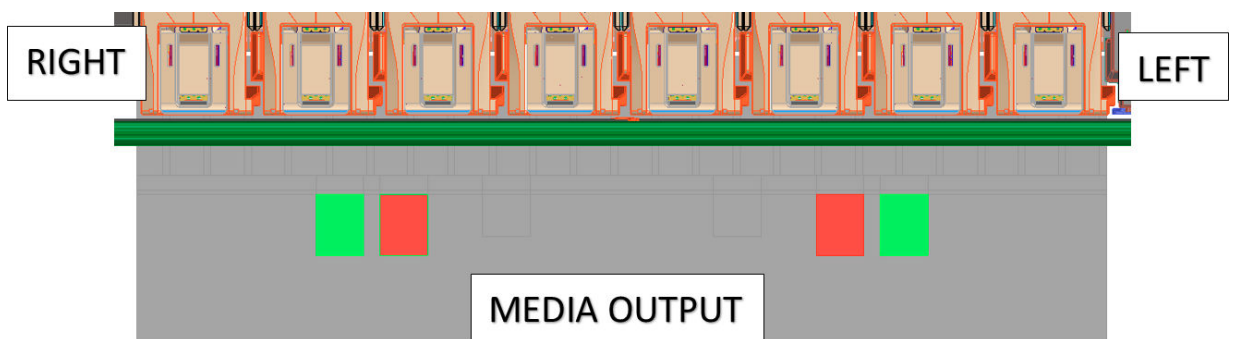
Scenario 5



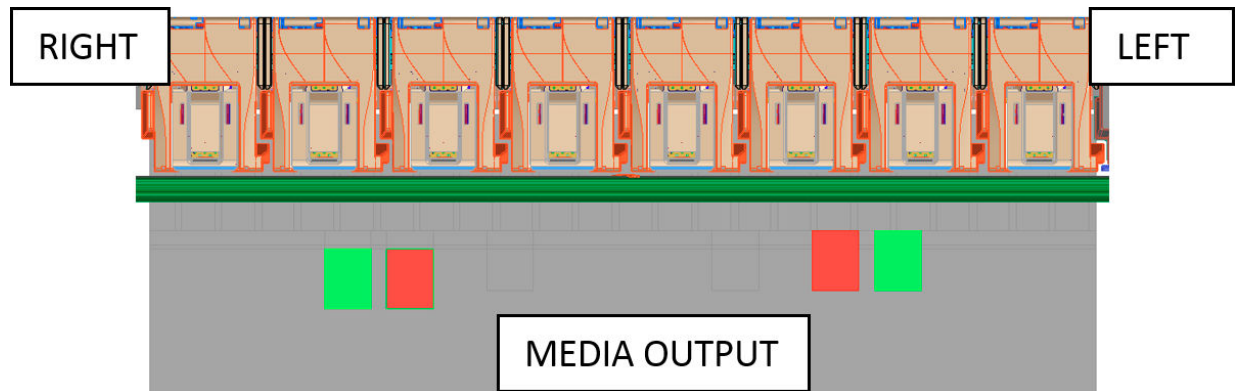
Scenario 6



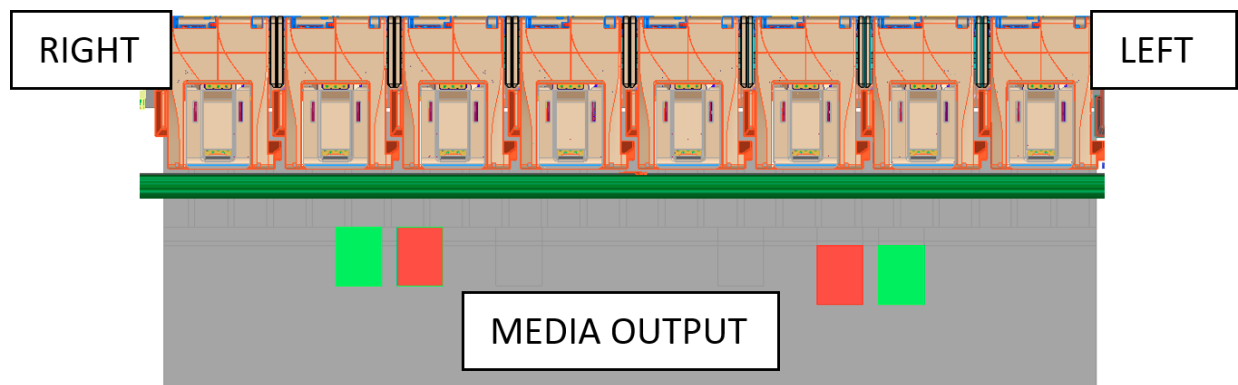
Scenario 7



Scenario 8



Scenario 9



PPS gauge adjustment

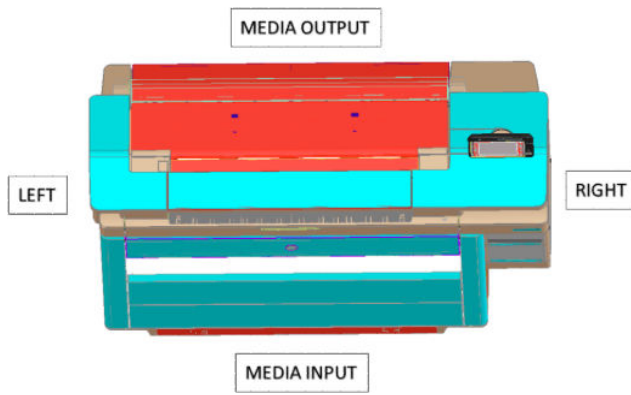
This section explains how and where to place gauges, how to analyze the test results, and what are the actions to be taken.

Material

- Bond paper, 36 in wide
- Two thick gauges (1.32 mm)
- Two thin gauges (0.764 mm)
- One snap TX 25 150 mm
- One driver handle

Procedure

Before starting the measurement or adjustment procedure it is important to identify the right- and left-hand sides of the printer. An easy way to identify the right-hand side is by looking for the front panel.

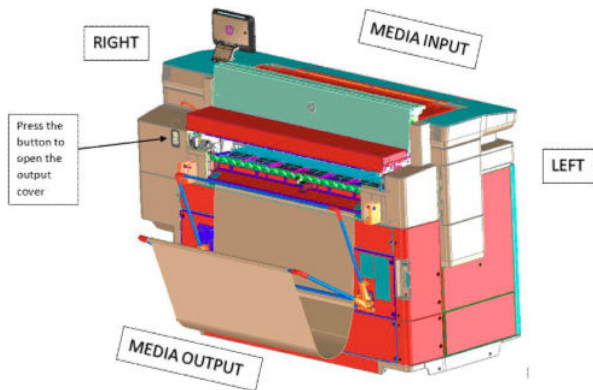


1. Load a roll of bond paper, 36 inches wide.
2. The PPS gauge adjustment is accessible only after the PPSGV test, and only when you have identified an OOS scenario.

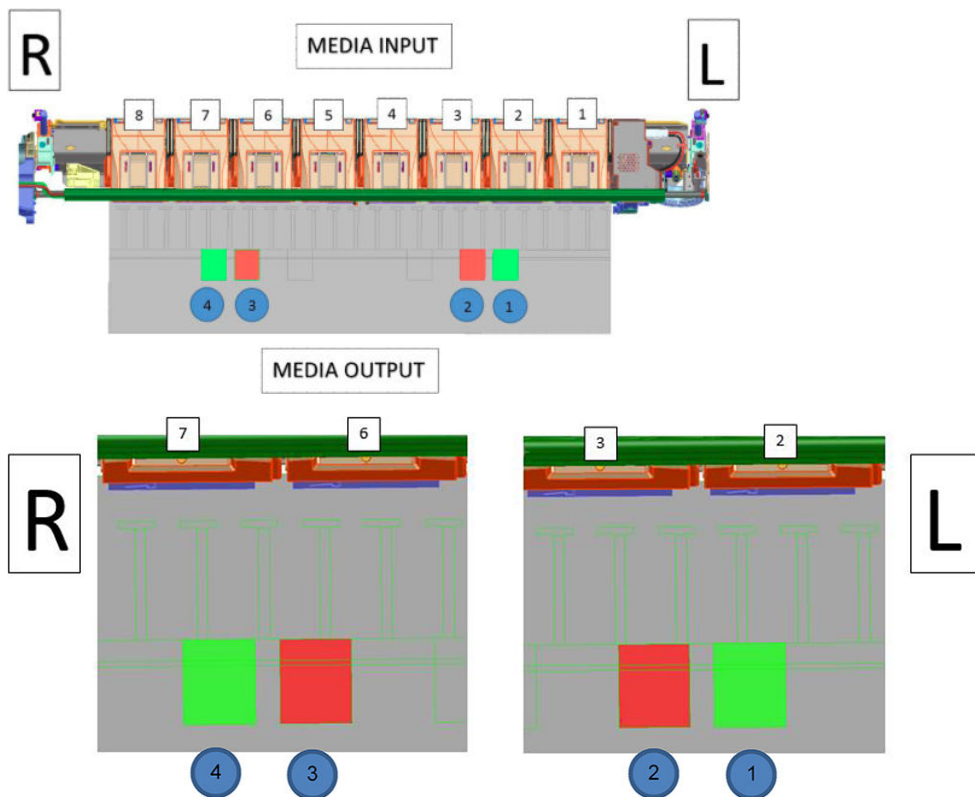
For HP-authorized personnel only

3. Place the gauges into their initial positions.

To place the gauges, you must open the output cover and look for the print in the print zone.



The PPS measurement plot has four bold enumerated boxes in which the gauges should be placed. The next two sketches show the position of each gauge.



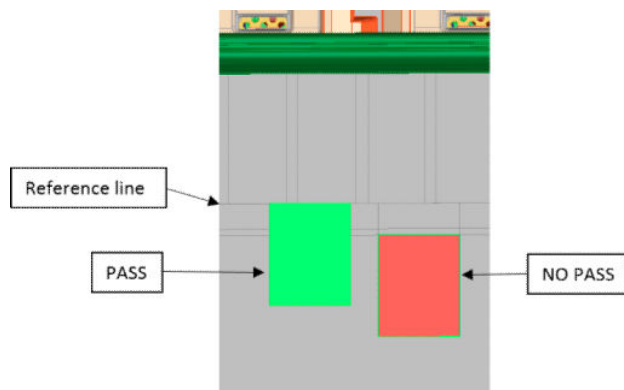
Place thin gauges in boxes 1 and 4, and thick gauges in boxes 2 and 3.

4. Run the PPS gauge adjustment. After opening the dryer, analyze the position of the gauges and follow the instructions for the scenario that best describes the position of the gauges after the test. The procedure for the adjustment proposed in the column **Action to be taken** is explained from page #7.

Scenario #	RIGHT SIDE		LEFT SIDE		CAUSE	ACTION TO BE TAKEN
	THIN	THICK	THICK	THIN		
1	PASS	NO PASS	NO PASS	PASS	PPS WITHIN SPECS	None
2	PASS	PASS	NO PASS	PASS	PPS too high at right printzone area	Turn RIGHT PPS screw 180° counterclockwise
3	PASS	NO PASS	PASS	PASS	PPS too high at left printzone area	Turn LEFT PPS screw 180° counterclockwise
4	PASS	PASS	PASS	PASS	PPS too high in the whole printzone	Turn BOTH PPS screws 180° counterclockwise
5	NO PASS	NO PASS	NO PASS	PASS	PPS too low at right printzone area	Turn RIGHT PPS screw 180° clockwise
6	PASS	NO PASS	NO PASS	NO PASS	PPS too low at left printzone area	Turn LEFT PPS screw 180° clockwise
7	NO PASS	NO PASS	NO PASS	NO PASS	PPS too low in the whole printzone	Turn BOTH PPS screws 180° clockwise
8	PASS	PASS	NO PASS	NO PASS	PPS too high at right printzone area and too low at left printzone	Turn RIGHT PPS screw 180° counterclockwise Turn LEFT PPS screw 180° clockwise
9	NO PASS	NO PASS	PASS	PASS	PPS too low at right printzone area and too high at left printzone	Turn RIGHT PPS screw 180° clockwise Turn LEFT PPS screw 180° counterclockwise

Retry the adjustment if the thick gauge seems to touch and move the thin gauge.

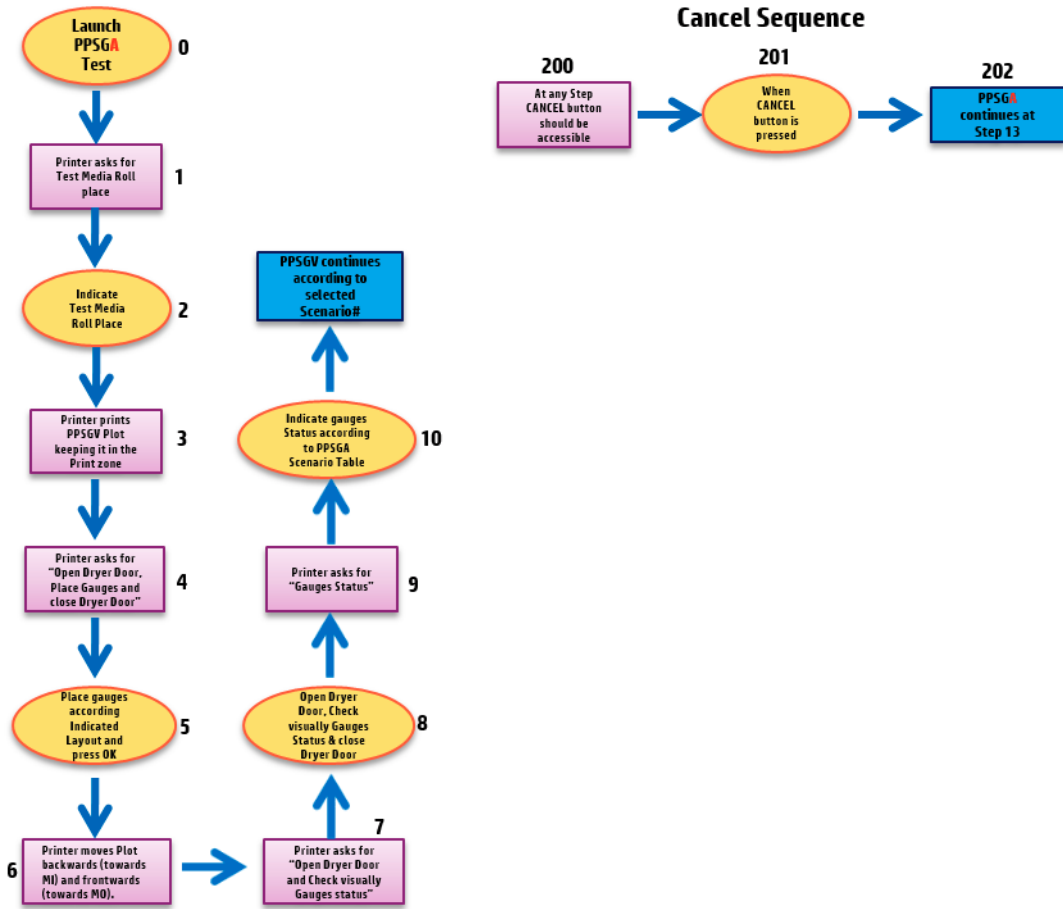
The following illustration shows how to decide between PASS and NO PASS.



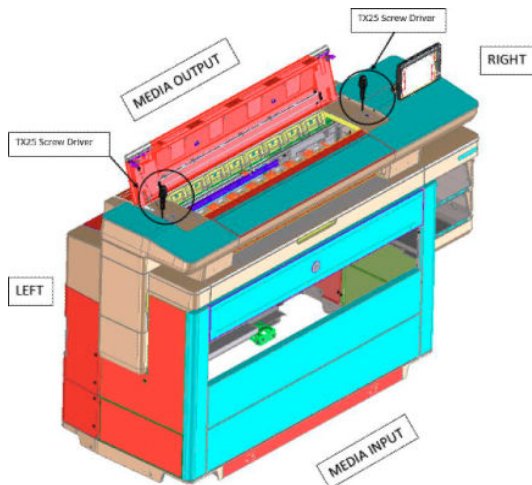
- PASS: The gauge remains in place after the belt has moved backwards and forwards.
- NO PASS: The gauge has moved in any direction from its original position.

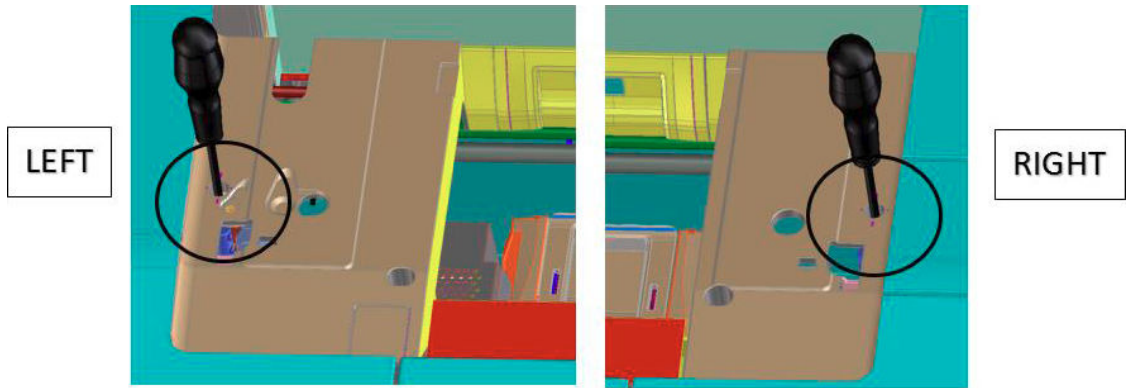
The PPS gauge adjustment follows the flowchart below. The specific flowchart for each scenario is shown later, with the scenario information.

For HP-authorized personnel only

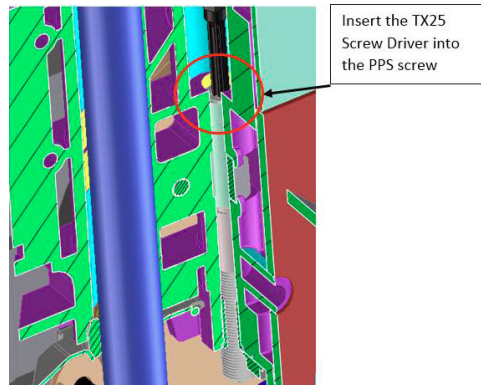
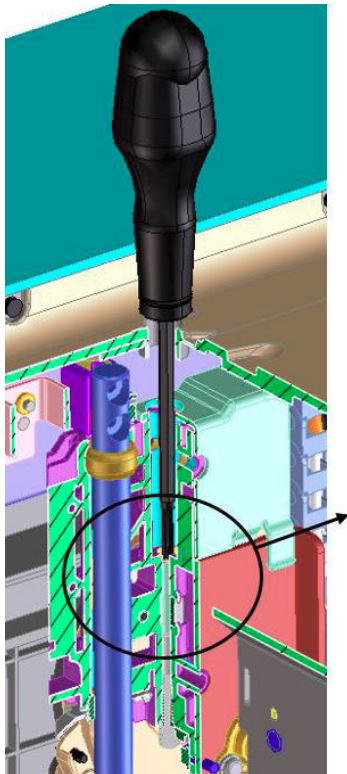


As you have seen in the scenario table, if the printhead beam is not within specifications you must adjust the PPS by turning the PPS screws clockwise or counterclockwise. Now you will see how to place the screwdriver to make the adjustment; this will be needed in scenarios 2 to 9. To access the PPS screws, you must open the ID TOP cover and insert the Torx TX 25 screwdriver through the printhead bezel as shown below.

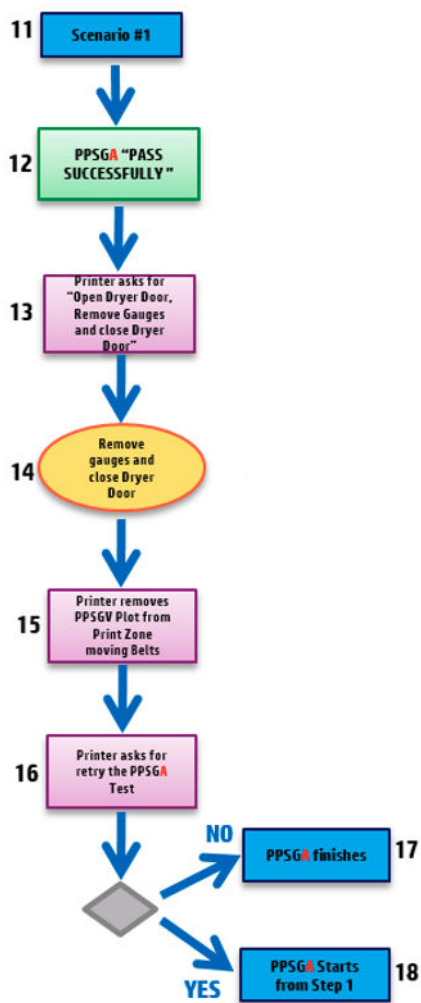
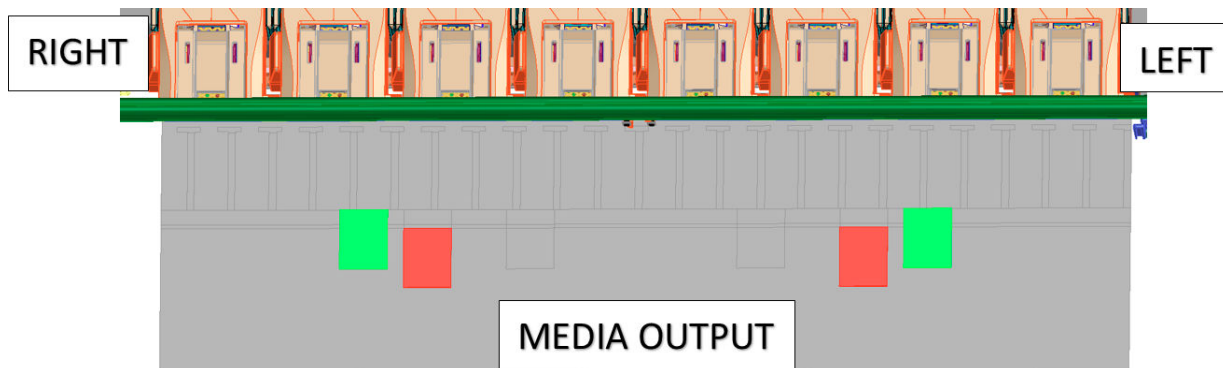




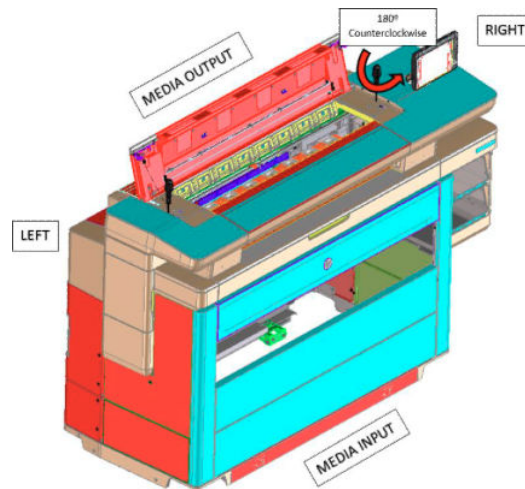
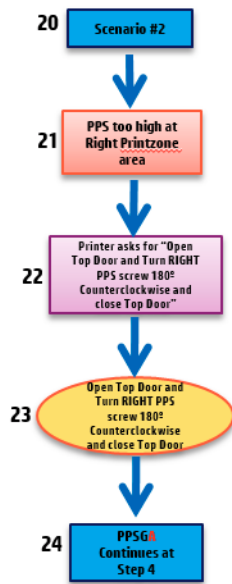
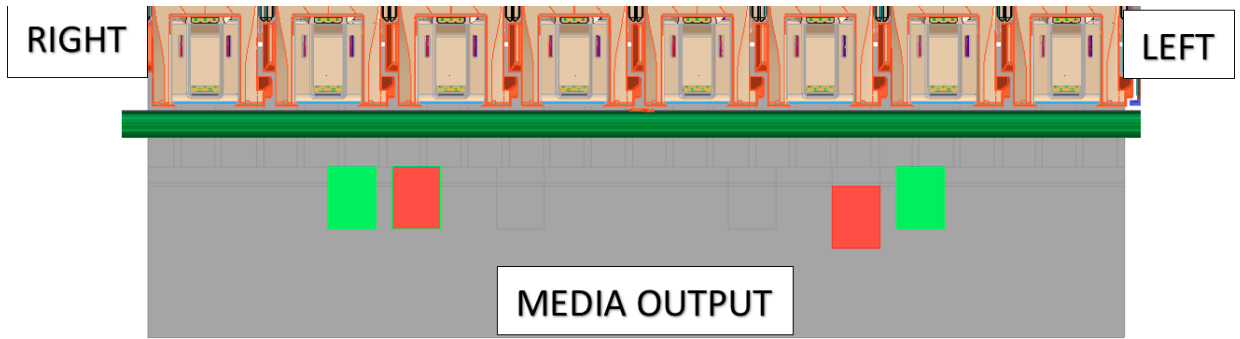
Once the screwdriver is inserted through the printhead bezel cover, look for the PPS screw in the bracket.



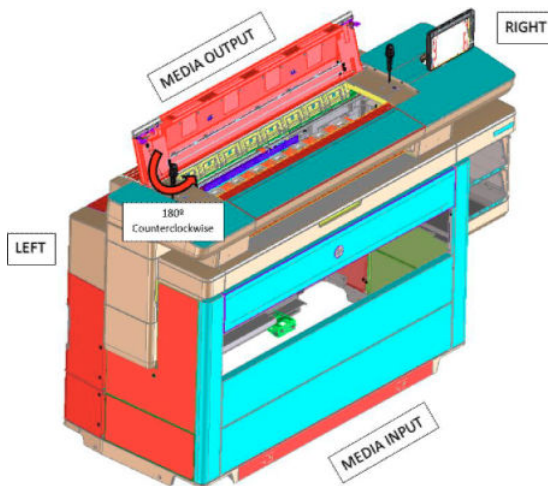
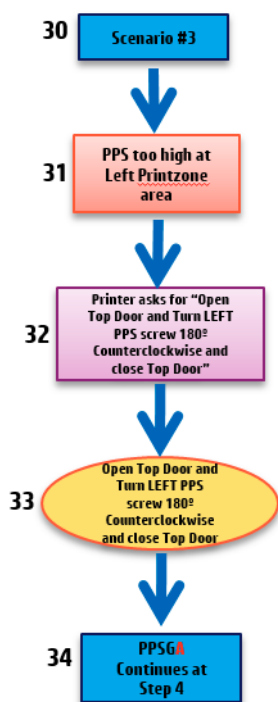
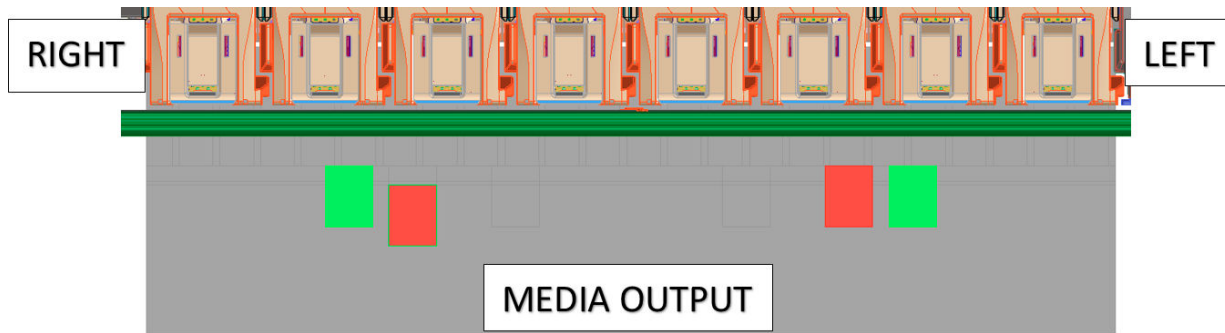
Scenario 1



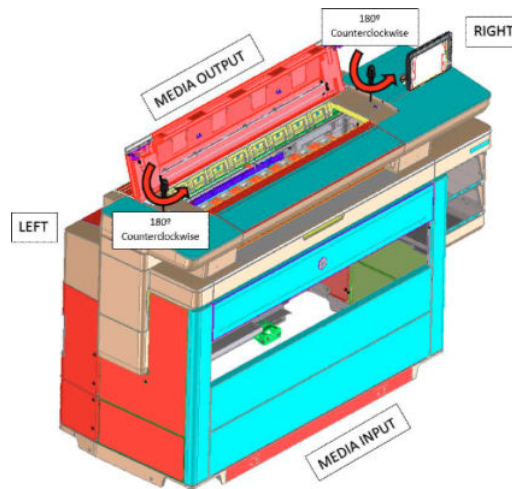
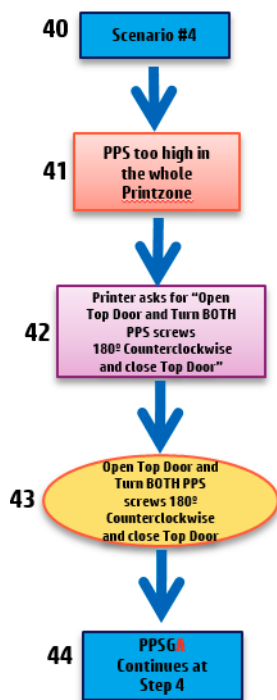
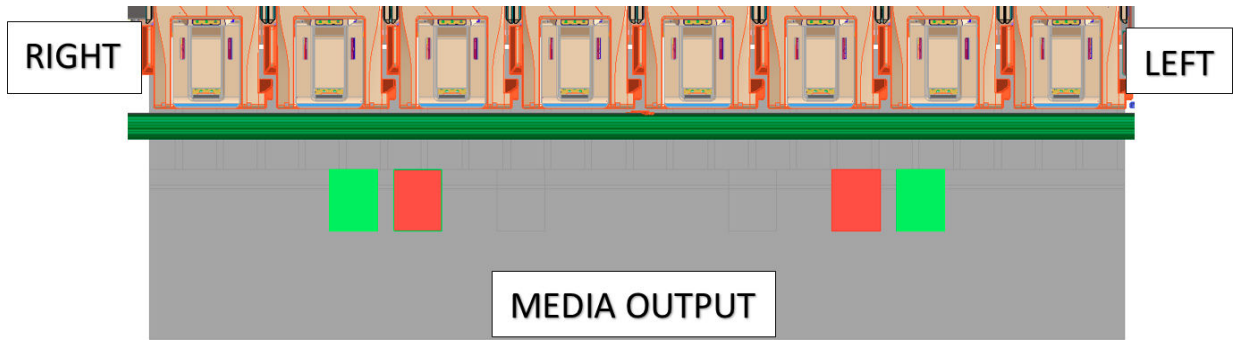
Scenario 2



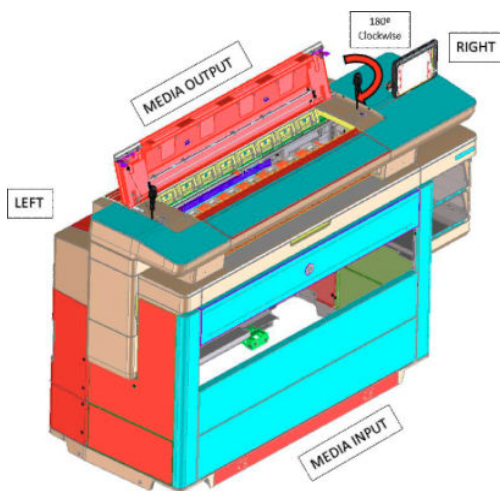
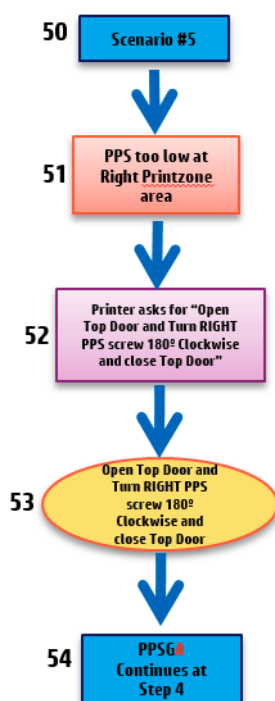
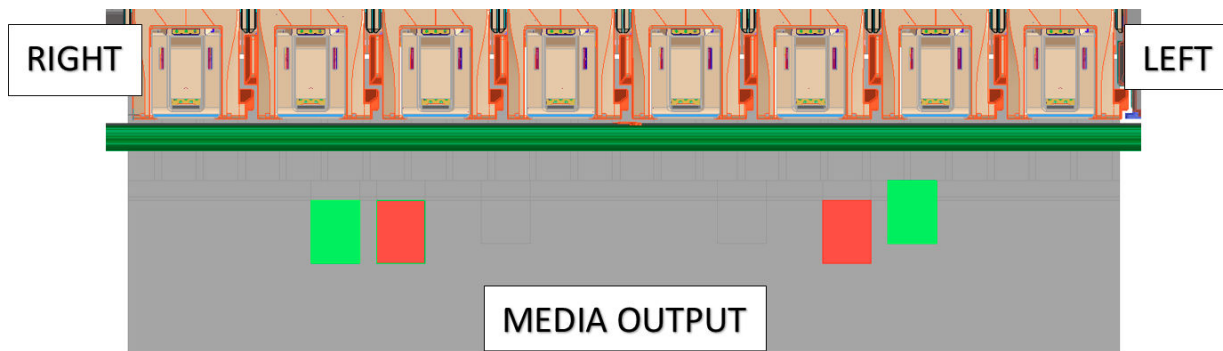
Scenario 3



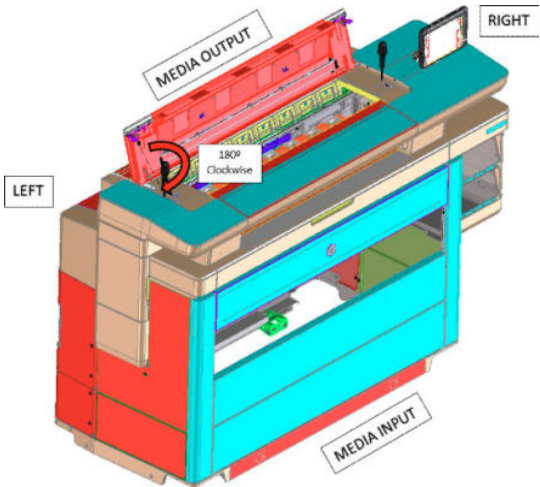
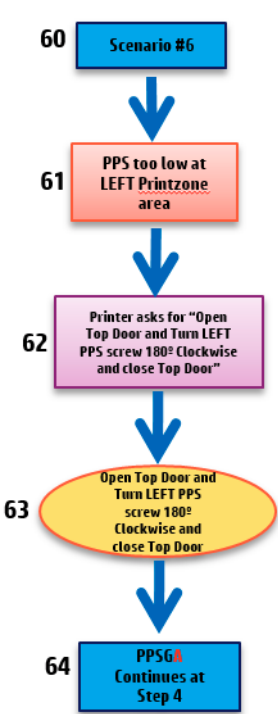
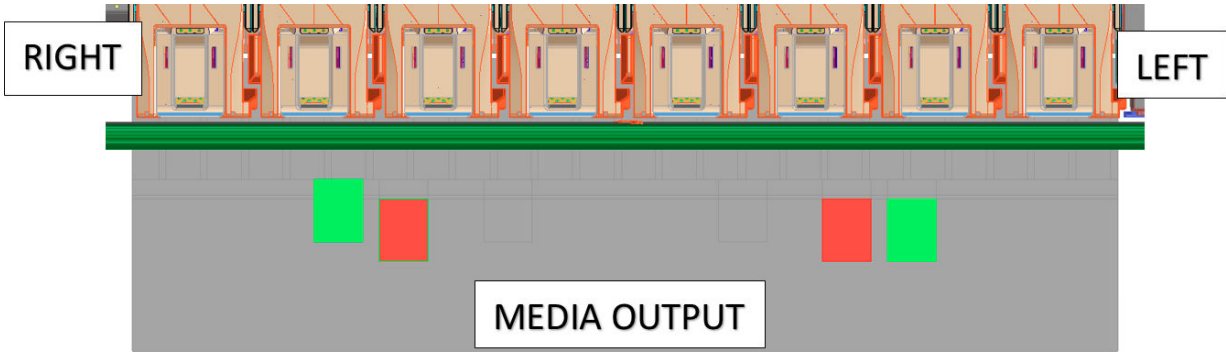
Scenario 4



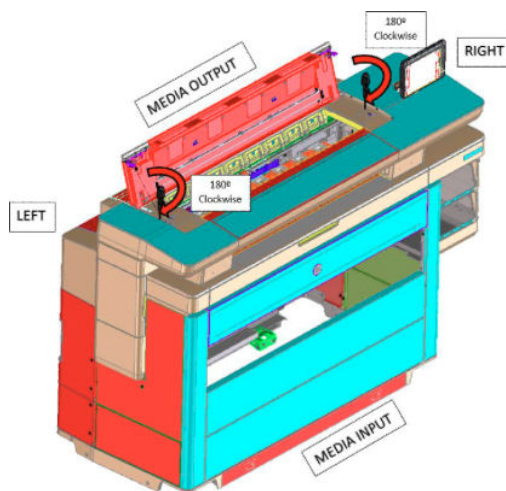
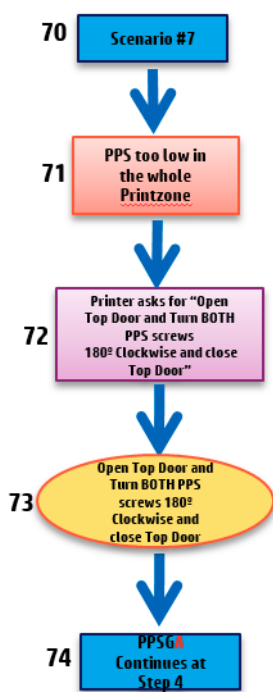
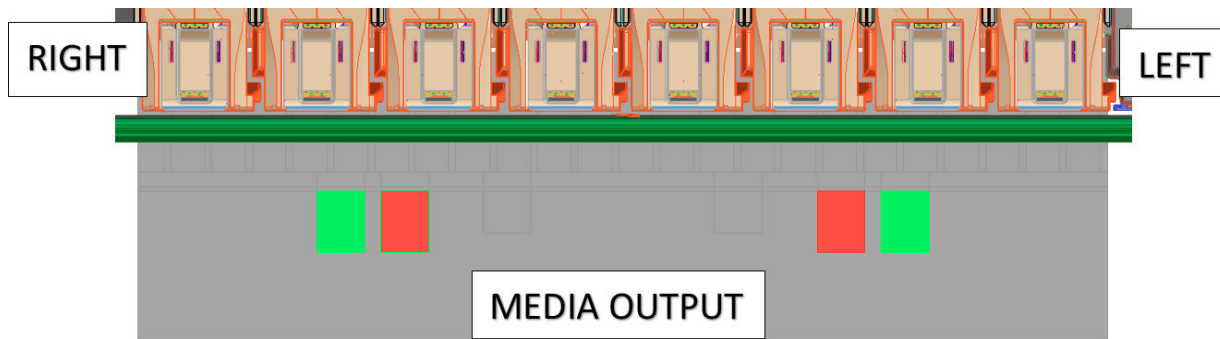
Scenario 5



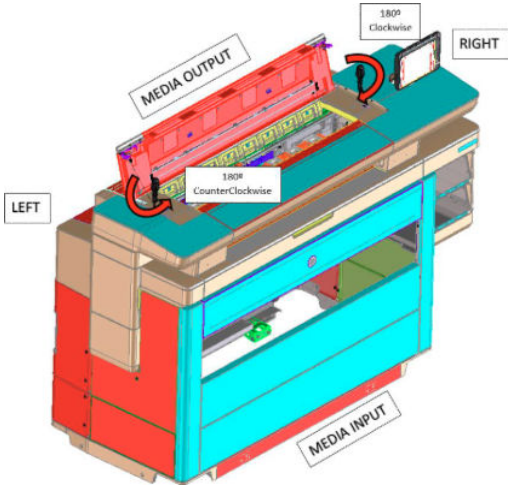
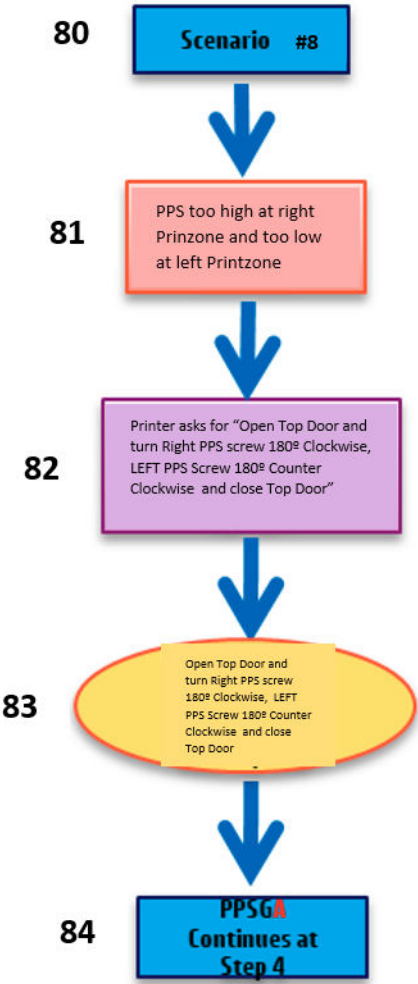
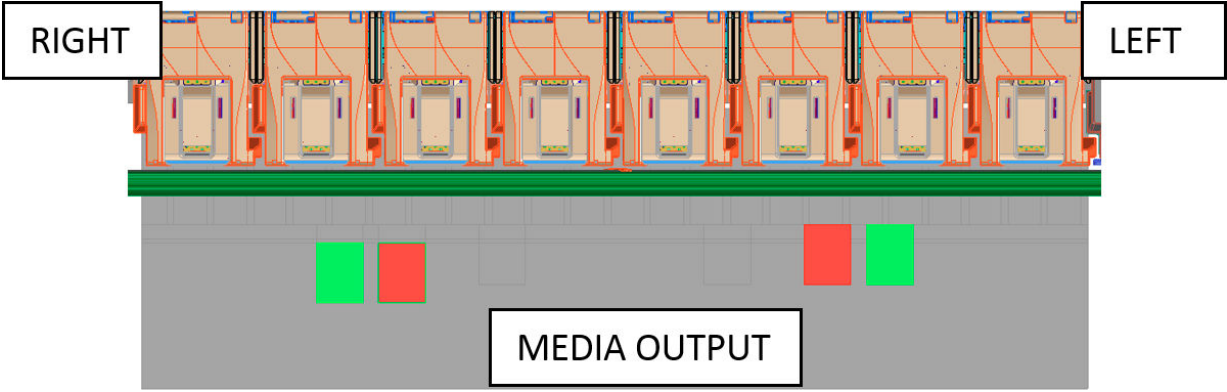
Scenario 6



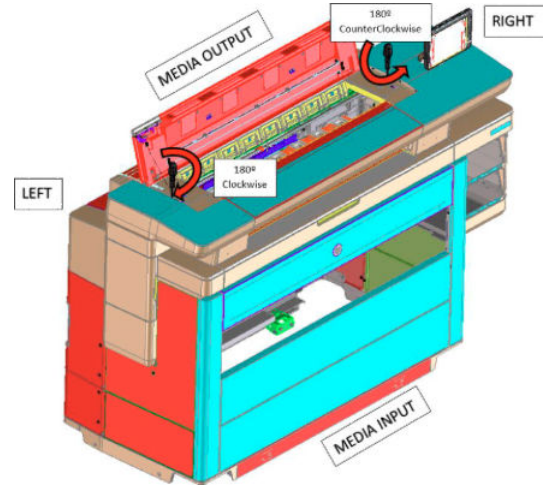
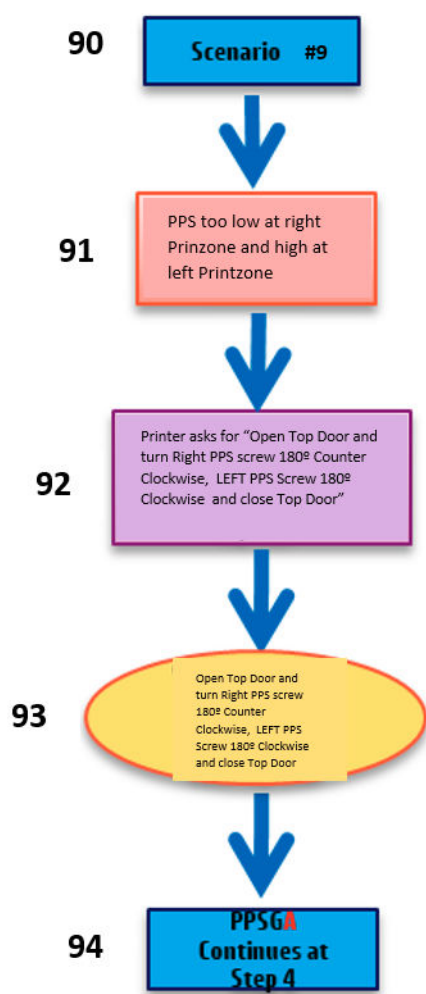
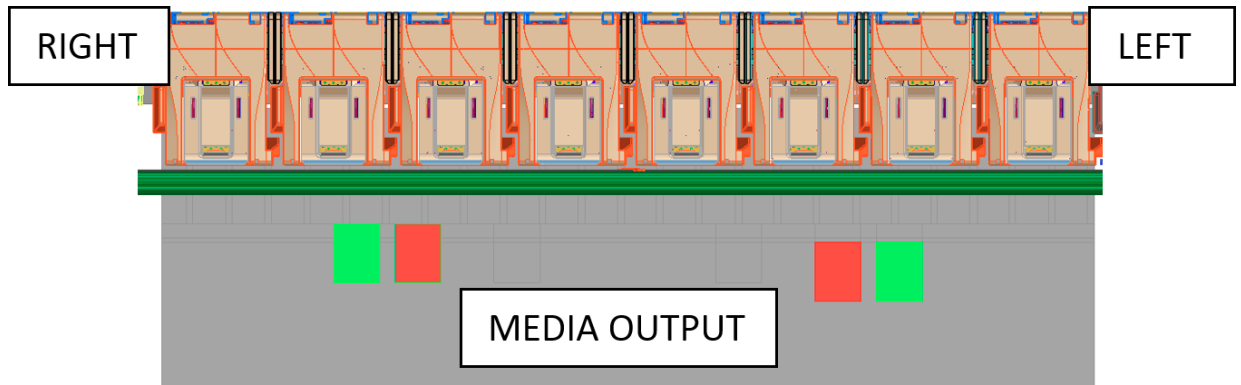
Scenario 7



Scenario 8



Scenario 9



Completing the adjustment

The adjustment procedure is an iterative process until you reach scenario 1, which proves that the PRS is finally within specifications. It then checks the encoder position required to place the printer in the print position.

The printer asks you to accept and overwrite the NVM value where the encoder value for the print position is stored. The first time the PPS gauge adjustment is run, the actual NVM encoder value for the print position is stored in a FACTORY NVM encoder print position variable in order to avoid losing the value from the factory assembly. In any case, you will need to overwrite the value if you are sure that you have achieved a good adjustment.

An indication that the printer is adjusted with reasonable limits is:

- MIN NVM ENCODER for the print position: 4.2513
- MAX NVM ENCODER for the print position: 4.3513

Fine media length calibration

Description and limitations

This calibration is only recommended for a very specific customer workflow. It will save a specific calibration value for a certain use case. Each time the use case is changed, the calibration must be performed again.

In this calibration, the calibration is saved for:

- A specific roll position.
- A specific roll width.
- A specific media type.

After the calibration is performed, the media length will be optimized for that specific roll position, roll width and media type.

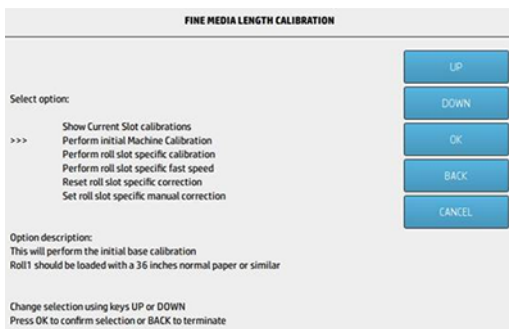
This calibration is only recommended if the customer:

- Always loads the same roll width in the same roll position.
- Always uses the same media type for that specific roll position and width.

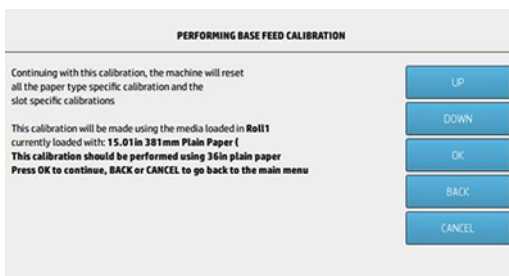
⚠ WARNING! After performing this calibration, **do not use again neither the manual/automatic page length calibration (user menu) or the roll assist friction/feed roller calibration (service menu)**. Once the fine media length calibration is triggered, it should always be the one to use. Otherwise, page length instability will occur.

How to perform the calibration

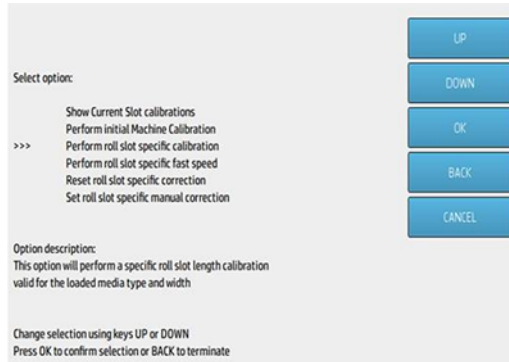
1. Perform the initial calibration.



2. Follow the instructions shown in the image below.

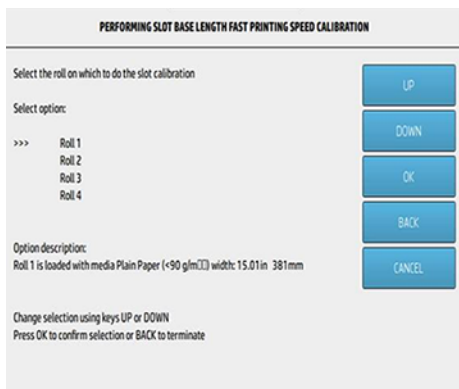


3. Perform the roll slot specific calibration.

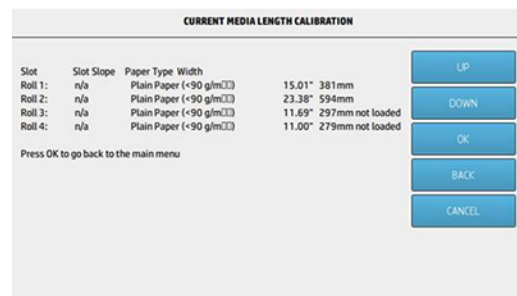
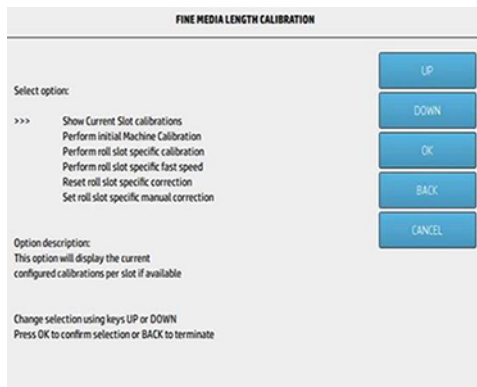


4. Follow the messages on the front panel.

Remember that this option will perform a specific roll slot calibration valid for the loaded media type and width.



After performing the calibration, take a picture of the current slot calibrations. Escalate this information if any issue is raised.



6 System errors

- [Introduction](#)
 - [Errors of three kinds](#)
 - [Reporting a system error to HP Support](#)
 - [Printer logs](#)
- [What to do if the front panel fails to initialize](#)
- [System error codes in brief](#)
 - [Reading a system error code](#)
- [System error codes in full](#)
 - [01 DRYER](#)
 - [02 INTERNAL RIP](#)
 - [05 VACUUM SYSTEM](#)
 - [10 WASTE MANAGEMENT](#)
 - [12 CAPPING](#)
 - [20 DRAWER](#)
 - [25 ISS](#)
 - [30 SERVICE CARRIAGE](#)
 - [40 PRINT BAR](#)
 - [45 E-BOX](#)
 - [46 CRYPTASIC](#)
 - [48 CONNECTION PANEL PCA](#)
 - [50 POWER SUPPLY](#)
 - [60 PAPER INPUT](#)
 - [65 PAPER ADVANCE](#)
 - [67 AEROSOL REMOVAL](#)

- [70 PAPER OUTPUT](#)
- [80 USER INTERFACE \(FRONT PANEL\)](#)
- [90 FIRMWARE](#)
- [99 SYSTEM](#)
- [1000 ACCESSORIES](#)
- [1001 SCANNER](#)
- [8XXX-XXXX-0000 Internal printer firmware error](#)

Introduction

System error codes are generally used to report internal system errors. The following pages contain a list of system error codes with their descriptions and recommended corrective actions. Try only one recommended action at a time, in the order in which they appear in this manual, and restart the printer after each action. If the error code no longer appears, there is no need for any more corrective actions.


Errors of three kinds

- Some system errors are advisory, which means that you can press **OK** on the front panel and continue using the printer.
- Some system errors are continuable, but a hardware issue was found, so the printer will disable the affected functions. For example, scanning could be disabled but the printer could continue working; or the other way around.
- Some system errors are non-continuable, which means that you cannot continue using the printer. In this case, turn the printer off and on again. If the error code reappears, then the printer requires an on-site visit to resolve the problem.

 **TIP:** Printer self-diagnostics work more accurately in on printer start-up. Therefore, when a system error appears, you are recommended to restart the printer and repeat the action that caused the error, to get a more accurate diagnostic.

Reporting a system error to HP Support

If you have an error code that you cannot resolve, then report the error to HP Support. When reporting the error, have the following information ready.


 **NOTE:** If you fail to provide any of this information, HP Support cannot help you properly. Make sure you take time to gather all of the information.

- The serial no. and product no., which can be seen on the HP label next to the connection panel.

- Which firmware version the printer is using, which can be seen in , here: **Main menu > About**

printer > Firmware update. If you cannot use the Front panel, check for FW version in the Embedded Web Server. To connect to the EWS, enter the printer's IP address in a Web browser, go to the **Configuration** window and then the **Firmware Update** menu.


- The complete system error code, which can be seen in the Printer Information Area.


- Please print all the Service information prints. To do so, press , then **Internal prints > Service information prints**. Please print all pages.

- Which software application the customer is using.

- The file, line number, error and error code, which can be found in the **Details** menu, available when a system error is shown on the front panel. To get the internal error code you will have to scroll down to the next printer screen.

- The diagnostic package (see [Obtaining the printer log and the diagnostics package on page 2058](#)).

 **NOTE:** The file and line number fields are important to identify the source of the problem because the same internal error code can be reported in different files and lines. In the File field, supply only the filename: the part after the last slash (/). For example, for a file `/ae/.../elektra/hal/motors/ControlledMotor/Elektra/ControlledMotorElektra.cpp`, you need to provide only the `ControlledMotorElektra.cpp` part to HP Support.

 **TIP:** When investigating a system error, you are recommended to use the diagnostic package to further understand the problem. To obtain the diagnostic package (which takes a few minutes), see [Obtaining the printer log and the diagnostics package on page 2058](#).

Printer logs


It is possible to view all the actions the printer performs collected in a log file. To further understand a system error code, it is useful to have a log showing what the printer was doing at the time when the system error occurred. To get printer logs, see [Obtaining the printer log and the diagnostics package on page 2058](#).

What to do if the front panel fails to initialize

The diagnostic LEDs and the ATX power supply can help you to troubleshoot a problem if the front panel is not working. The diagnostic LEDs are located in the connection panel, between the accessory connector and the LAN connector; and you can find the same LEDs in the Formatter PCA. The equivalence between the connection panel LEDs and the formatter PCA LEDs is as follows: LED1 = lower, LED2 = middle, LED3 = upper.

Follow these steps to troubleshoot the problem:

1. Switch the power off at the rear of the printer and disconnect the power cord. Reconnect the power cord and switch on the printer.
2. Check that the front panel interface cable (NI_128) is undamaged and correctly connected to the Engine PCA. See [Cable identification on page 2062](#).
3. Use the following table to interpret the LEDs and find the source of the problem. Remember that you should read these LEDs when you turn on the printer. Some combinations may require the replacement of more than one component. In this case, always replace one component at a time. Check the LEDs again to see whether the problem has disappeared. If the same LED sequence appears, replace the next component indicated in the table.

 **NOTE:** Once the printer has gone through the Ready state, the LEDs are no longer representative; in particular, you will notice that, when the printer is in Sleep mode, the LEDs are in the following state: LED1 - Off, LED2 - Off, and LED3 - On.

Connection panel LEDs			Situation
1	2	3	
Off	Off	Off	ATX Power Supply 5VSB are not available (standby supply voltage). Check that 5V are present in the purple wire from ATX PS to formatter cable (NI_107). Check cable NI_146 and connectors from power switch to Power Distribution PCA. Check cable NI_147 and connectors from Power Distribution PCA to ATX PS. Check cable NI_107 and connectors from ATX PS to Formatter PCA. Replace cables, connectors, ATX PS, or Formatter PCA if necessary.

Connection panel LEDs			Situation
1	2	3	
Off	Off	On	<p>ATX PS 5V are not available or ATX PS is not switching on supply voltages triggered by PS-ON signal from formatter.</p> <p>Check 5V are present in red wires from ATX PS to formatter cable (NL_107). Replace cables, connectors, or ATX PS if necessary.</p> <p>Check that PS-ON is in high state in the green wire from formatter to ATX PS cable (NL_107). Replace cables, connectors, Formatter PCA, or ATX PS if necessary.</p>
On	Off	On	<p>ATX 3V3 are not available.</p> <p>Check 3V3 are present in orange wires from ATX PS to formatter cable (NL_107). Replace cables, connectors, ATX PS, or Formatter PCA if necessary.</p>
Off	On	On	<p>Formatter PCA is not responding to PG signal from ATX PS, or ATX PS 12V are not available.</p> <p>Check that 12V are present in yellow wires from ATX PS to formatter cable (NL_107). Replace cables, connectors, or ATX PS if necessary.</p> <p>NOTE: Two different connectors have 12V.</p> <p>Check that PG is in high state in the green wire from ATX PS to formatter cable (NL_107). Replace cables or connector if necessary. Then, firstly, replace the Formatter PCA; secondly, replace the ATX PS.</p>
Off	Off	Blinking	<p>Formatter PCA failure, the BIOS can boot but the power-on self-test diagnostic detects a hardware failure not related to the hard disk drive.</p> <p>Check that the RAM cards are properly connected.</p> <p>Replace the Formatter PCA and/or the RAM cards.</p>
Off	Blinking	Blinking	<p>0045-0008-0102. Hard disk drive missing. See 0045-0008-0102 Hard disk drive – Presence on page 388.</p> <p>0045-0008-0102 Hard disk and solid-state drive missing. See 0045-0008-0102 Hard disk drive – Presence on page 388.</p> <p>0045-0008-0240 Solid-state drive missing or empty. See 0045-0008-0X40 Disk X – Empty (no boot loader found) on page 389.</p>
Off	Blinking	Off	<p>0045-0008-0140 Hard disk drive missing or empty. See 0045-0008-0X40 Disk X – Empty (no boot loader found) on page 389.</p>
Off	Blinking	On	<p>Operation system can't load firmware.</p> <p>Replace the hard disk or solid-state drive. Replace the Formatter PCA.</p>
Blinking	On	On	<p>Ready state. The printer was able to boot; if the front panel is not working, check that the front panel interface cable is undamaged and correctly connected to the Engine PCA.</p>

System error codes in brief

Reading a system error code

System error codes explain which component or system is failing, and what action should be taken to resolve the problem.

System error codes are displayed directly on the front panel's home page (they can also be seen on the Information page) and have been defined in the format DOXX-nnYY-mmZZ.

D: Device information (1 digit)

- 0: Printer
- 1: Accessories
- 2: Host software
- 8: Internal printer firmware error
- 9: Internal host software error

Values of XX for device 0 (printer)

- 01: Dryer
- 02: Internal RIP
- 05: Vacuum system
- 10: Waste management
- 12: Capping
- 20: Drawer
- 25: Ink delivery system
- 30: Service carriage
- 40: Print bar
- 45: E-box
- 46: CryptASIC
- 48: Connection Panel PCA
- 50: Power supply
- 60: Paper input
- 63: Input/output through LAN card
- 65: Paper advance
- 67: Aerosol removal
- 70: Paper output
- 75: Top stacker
- 80: User interface (front panel)
- 90: Firmware
- 99: System

Values of XX for device 1 (accessories)

- 00: Generic accessory
- 01: Scanner
- 05: High-capacity stacker
- 10: Folder

Values of XX for device 2 (host software)

- 01: HP SmartStream application software
- 02: HP SmartStream


Depending on the type of device (D), XX gives the module identification and nn gives the module index. If there is only one module, nn is 00.

YY gives the service part identification and mm gives the service part index. If there is only one service part, mm is 00.

ZZ gives the cause of error as identified by self-diagnostics; see the next section for more details.

System error codes in full

This section describes each of the system error codes that may be encountered while using the printer and suggests actions to solve the problem in each case.

 **IMPORTANT:** Try only one recommended action at a time, in the order in which they appear in this chapter, and restart the printer after each action (unless the action was to restart the printer). If the error code no longer appears, there is no need for any more corrective actions.

01 DRYER

0001-0001-0001 Dryer PCA – Triac malfunction

The triac is open.

Call agent:

- ▲ Restart the printer. If after rebooting the same issue persists, it is recommended to wait until your Support representative repairs the printer.

It is recommended to print without using Natural Trace Paper.

Service engineer:

1. Check that thermo metal protection is open due to an excess temperature.
2. Replace Dryer PCA if necessary.

0001-0001-0009 Dryer PCA – Connector or cable issue

Dryer PCA to drying module cable disconnected

Call agent:

- ▲ Restart the printer. If after rebooting the same issue persists, it is recommended to wait until your Support representative repairs the printer.

It is recommended to print without using Natural Trace Paper.

Service engineer:

1. Check that the Dryer PCA to drying module cable (NI_71) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace corresponding drying module.
4. Replace the Dryer PCA.

0001-0001-0010 Dryer PCA – Voltage out of range

5V voltage out of range

Call agent:

- ▲ Restart the printer. If after rebooting the same issue persists, it is recommended to wait until your Support representative repairs the printer.

It is recommended to print without using Natural Trace Paper.

Service engineer:

1. Check 5V voltage in Dryer PCA.
2. Check that the Dryer PCA is unbroken and undamaged.
3. Replace the Dryer PCA.

0001-0001-0067 Dryer PCA – Debugging code issue**Call agent:**

1. Check that the printer has the latest firmware version. If not, update it. See [USB upgrade on page 225](#).
2. Restart the printer. If, after rebooting, the same issue persists, it is recommended to wait until your Support representative repairs the printer.

Service engineer:

1. Check that the printer has the latest firmware version.
2. Replace the Dryer PCA.

0001-0001-0068 Dryer PCA – Invalid boot loader version

Invalid bootloader version

Call agent:

1. Check that the printer has the latest firmware version. If not, update it. See [USB upgrade on page 225](#).
2. Restart the printer. If, after rebooting, the same issue persists, it is recommended to wait until your Support representative repairs the printer.

Service engineer:

1. Check that the printer has the latest firmware version. If not, update it. See [USB upgrade on page 225](#).
2. Replace the Dryer PCA.

0001-0001-0069 Dryer PCA – Execution error

Call agent:

1. Check that the printer has the latest firmware version. If not, update it. See [USB upgrade on page 225](#).
2. Restart the printer. If, after rebooting, the same issue persists, it is recommended to wait until your Support representative repairs the printer.
3. It is recommended to print without using Natural Trace Paper.

Service engineer:

1. Check that the printer has the latest firmware version.
2. Replace the Dryer PCA.

0001-0001-0081 Dryer PCA – PCA internal UART failure

No serial communication between primary and secondary

Call agent:

1. Restart the printer. If, after rebooting, the same issue persists, it is recommended to wait until your Support representative repairs the printer.
2. It is recommended to print without using Natural Trace Paper.

Service engineer:

- ▲ Replace the Dryer PCA.

0001-0001-0082 Dryer PCA – No AC input in Dryer PCA

No AC signal in dryer

Call agent:

1. Restart the printer. If, after rebooting, the same issue persists, it is recommended to wait until your Support representative repairs the printer.
2. It is recommended to print without using Natural Trace Paper.

Service engineer:

1. Check that the AC input into the Dryer PCA is not zero.
2. If there is no AC input into the dryer connector, replace the Power Distribution PCA.
3. If there is AC in the dryer, replace the Dryer PCA.

0001-0001-0083 Dryer PCA – AC signal in dryer with relay switch off

AC signal in dryer with relay switch off means that the relays are broken. This is a severe issue because the Dryer PCA can receive high-voltage power.

Call agent:

1. Restart the printer. Use the power switch to turn it off, then disconnect the power cord. Wait until all of the LEDs are off and then reconnect the power cord and turn on the printer.
2. If, after rebooting, the issue persists, your Support representative is needed to repair the printer on site.

Service engineer:

1. Run diagnostic test 0001-01 Check electronics Check AC values.
2. Replace Dryer PCA.

0001-000Y-0X01 Drying module X – Fan X under speed

(0001-0002-0101; 0001-0002-0201; 0001-0002-0301; 0001-0002-0401; 0001-0006-0101; 0001-0006-0201; 0001-0006-0301; 0001-0006-0401)

Where Y indicates the fan model, Ada (2) or Delta (6); and X indicates the fan number.

Call agent:

1. Restart the printer. If, after rebooting, the same issue persists, it is recommended to wait until your Support representative repairs the printer.
2. It is recommended to print without using Natural Trace Paper.

Service engineer:

1. Check that the fan is clean and not blocked.
2. Check that the air filters are clean.
3. Replace the failed drying module (resistor and fans) if necessary.

0001-000Y-0X05 Drying module X – Temperature timeout

(0001-0002-0105; 0001-0002-0205; 0001-0002-0305; 0001-0002-0405; 0001-0006-0105; 0001-0006-0205; 0001-0006-0305; 0001-0006-0405)

Where Y indicates the fan model, Ada (2) or Delta (6); and X indicates the fan number.

Temperature in drying module X does not reach the target in the pre-defined amount of time.

Call agent:

1. Restart the printer. If, after rebooting, the same issue persists, it is recommended to wait until your Support representative repairs the printer.
2. It is recommended to print without using Natural Trace Paper.

Service engineer:

1. Check whether the ambient temperature is low.
2. Check that the ambient temperature is within the printer's operating specifications; it should be higher than 15°C for printer operation. If not, increase the ambient temperature at the printer's location.
3. Check that the input voltage is in the range of 198–205 V.
4. Check (by loading another type of paper) whether the paper loaded on the printer is too transparent or reflective for the IR sensor to detect the surface temperature.
5. Check whether the dryer's IR sensor needs cleaning, while observing all safety precautions in the area of the heaters.
6. Check the power going to the IR sensor.
7. Perform the IR sensor diagnostic check 8.3 Heating IR Sensor to check the values being detected by the IR sensor. Replace the IR sensor if required .
8. Check that the position of the IR sensor is correct; if it is pointing to a position other than the paper, this will cause an error.
9. Check that the input voltage is within the specified range for printing (see the installation guide).
10. Replace the heaters control assembly.
11. If the power reaches the heater, but the heater does not heat up, replace the heater assembly.

0001-000Y-0X15 Drying module X – Fuse / resistor / circuit open or no voltage

(0001-0002-0115; 0001-0002-0215; 0001-0002-0315; 0001-0002-0415; 0001-0006-0115; 0001-0006-0215; 0001-0006-0315; 0001-0006-0415)

Where Y indicates the fan model, Ada (2) or Delta (6); and X indicates the fan number.

The heating resistors protection is open.

Call agent:

1. Restart the printer. If, after rebooting, the same issue persists, it is recommended to wait until your Support representative repairs the printer.
2. It is recommended to print without using Natural Trace Paper.

Service engineer:

1. Check that the Dryer PCA to drying module 1 cable (NI_71) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Check that the drying module 1 resistor and fans are unbroken and undamaged.
3. Replace the cable or connector if necessary.

4. Replace the drying module 1.
5. Replace the Dryer PCA.

0001-000Y-0X32 Drying module X – Current too low

(0001-0002-0132; 0001-0002-0232; 0001-0002-0332; 0001-0002-0432; 0001-0006-0132; 0001-0006-0232; 0001-0006-0332; 0001-0006-0432)

Where Y indicates the fan model, Ada (2) or Delta (6); and X indicates the fan number.

Current too low is detected in the drying module X.

Call agent:

1. Restart the printer. If, after rebooting, the same issue persists, it is recommended to wait until your Support representative repairs the printer.
2. It is recommended to print without using Natural Trace Paper.

Service engineer:

1. Check that the current in drying module X is within range.
2. Replace the drying module if necessary.

0001-000Y-0X33 Drying module X – Overcurrent

(0001-0002-0133; 0001-0002-0233; 0001-0002-0333; 0001-0002-0433; 0001-0006-0133; 0001-0006-0233; 0001-0006-0333; 0001-0006-0433)

Where Y indicates the fan model, Ada (2) or Delta (6); and X indicates the fan number.

Current too high is detected in drying module X.

Call agent:

1. Restart the printer. If, after rebooting, the same issue persists, it is recommended to wait until your Support representative repairs the printer.
2. It is recommended to print without using Natural Trace Paper.

Service engineer:

- ▲ Check that the current is within range; if not, replace drying module X.

0001-000Y-0X35 Drying module X – Fan X speed out of range

(0001-0002-0135; 0001-0002-0235; 0001-0002-0335; 0001-0002-0435; 0001-0006-0135; 0001-0006-0235; 0001-0006-0335; 0001-0006-0435)

Where Y indicates the fan model, Ada (2) or Delta (6); and X indicates the fan number.

Call agent:

1. Restart the printer. If, after rebooting, the same issue persists, it is recommended to wait until your Support representative repairs the printer.
2. It is recommended to print without using Natural Trace Paper.

Service engineer:

1. Check that the fan is clean and unblocked.
2. Check that current and voltage are within range.
3. Replace the failed drying module X (resistor and fans).

0001-000Y-0X80 Drying module X – NTC X out of range

(0001-0002-0180; 0001-0002-0280; 0001-0002-0380; 0001-0002-0480; 0001-0006-0180; 0001-0006-0280; 0001-0006-0380; 0001-0006-0480)

Where Y indicates the fan model, Ada (2) or Delta (6); and X indicates the fan number.

NTC X detects a temperature out of range or disconnected.

Call agent:

1. Restart the printer. If, after rebooting, the same issue persists, it is recommended to wait until your Support representative repairs the printer.
2. It is recommended to print without using Natural Trace Paper.

Service engineer:

1. Check that NTC X runs correctly and all cables are plugged in.
2. Replace the failed drying module X (resistor and fans).

0001-000Y-0X84 Drying module X – NTC X is different from the others

(0001-0002-0184; 0001-0002-0284; 0001-0002-0384; 0001-0002-0484; 0001-0006-0184; 0001-0006-0284; 0001-0006-0384; 0001-0006-0484)

Where Y indicates the fan model, Ada (2) or Delta (6); and X indicates the fan number.

NTC X is 20°C hotter than the others

Call agent:

1. Restart the printer. If, after rebooting, the same issue persists, it is recommended to wait until your Support representative repairs the printer.
2. It is recommended to print without using Natural Trace Paper.

Service engineer:

1. Check by measuring the temperature that one of the NTCs is 20°C hotter than the others.
2. Replace the failed drying module X (resistor and fans).

0001-0003-0010 AC cable from Power Distribution PCA – Voltage out of range

Voltage out of specs, no voltage.

Call agent:

1. Restart the printer. If, after rebooting, the same issue persists, it is recommended to wait until your Support representative repairs the printer.
2. It is recommended to print without using Natural Trace Paper.

Service engineer:

1. Check the AC voltage quality in the Dryer PCA.
2. Check that the AC cable from the Power Distribution PCA (NI_73) is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
3. Check that the Dryer PCA is unbroken and undamaged.
4. Replace the Dryer PCA.

0001-0003-0011 AC cable from Power Distribution PCA – Voltage too high

Voltage out of specs, overvoltage.

Call agent:

1. Restart the printer. If, after rebooting, the same issue persists, it is recommended to wait until your Support representative repairs the printer.
2. It is recommended to print without using Natural Trace Paper.

Service engineer:

1. Check whether the voltage of the customer's site is too high.
2. Check the resistance values: if they are too low, replace Dryer PCA.
3. Check the AC voltage in the Dryer PCA.
4. Check that the AC cable from the Power Distribution PCA (NI_73) is unbroken, undamaged, and properly connected, replace it if necessary. See [Cable identification on page 2062](#).
5. Check that the Dryer PCA and Power Distribution PCA are unbroken and undamaged.
6. Replace the Dryer PCA.
7. Replace the Power Distribution PCA

0001-0003-0012 AC cable from Power Distribution PCA – Voltage too low

Voltage out of specs, undervoltage. Even if undervoltage is not severe, it can still cause dryer timeouts.

Call agent:

1. Restart the printer. If, after rebooting, the same issue persists, it is recommended to wait until your Support representative repairs the printer.
2. It is recommended to print without using Natural Trace Paper.

Service engineer:

1. Check whether the voltage of the customer's site is too low.
2. Check the resistance values. If they are too low, replace the Dryer PCA.
3. Check the AC voltage in the Dryer PCA.
4. Check that the AC cable from the Power Distribution PCA (NI_73) is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
5. Check that the Dryer PCA and Power Distribution PCA are unbroken and undamaged
6. Replace the Dryer PCA.
7. Replace the Power Distribution PCA.

0001-0003-0019 AC cable from Power Distribution PCA – Dryer frequency out of range

Frequency in AC cable from Power Distribution PCA is out of range.

Call agent:

1. Restart the printer. If, after rebooting, the same issue persists, it is recommended to wait until your Support representative repairs the printer.
2. It is recommended to print without using Natural Trace Paper.

Service engineer:

1. Check whether the AC cable from the Power Distribution PCA (NI_73) is broken or damaged; replace it if necessary. See [Cable identification on page 2062](#).
2. Check the AC electric power quality.

0001-0004-0053 Central Distribution PCA–Dryer PCA – Data cable not detected

Central Distribution PCA-Dryer PCA cable is not detected.

Call agent:

1. Restart the printer. If, after rebooting, the same issue persists, it is recommended to wait until your Support representative repairs the printer.
2. It is recommended to print without using Natural Trace Paper.

Service engineer:

1. Check that the Central Distribution PCA–Dryer PCA cable (NI_74) is properly connected to Central Distribution PCA and Dryer PCA. See [Cable identification on page 2062](#).
2. Check that the Central Distribution PCA–Dryer PCA cable is undamaged, if not replace it.
3. Check that the Dryer PCA runs correctly; if not replace it.

02 INTERNAL RIP**0002-0001-0086 Disk error – Can't create temporary storage in infrastructure****Call agent:**

1. Cancel all jobs in printing queue.
2. Install the latest firmware.

Service engineer:

1. Perform a disk wipe. See [Disk wipe DoD 5220.22-M on page 555](#).
2. Install or reinstall the latest firmware.

0002-0010-0081 Analysis – Customer file not found**Call agent:**

1. Resend the file, checking that it does not have calls to external resources.
2. Recommend installing the latest firmware and software.

0002-0010-0082 Analysis – No permission to access customer file or resources in the file**Call agent:**

1. Resend the file, checking that it does not have calls to external resources.
2. Recommend installing the latest firmware.

0002-0010-0083 Analysis – Unsupported customer file format**Call agent:**

1. Check that the file sent is in a supported format.
2. Reinstall drivers and software.

0002-0010-0086 Disk error in analysis**Call agent:**

- ▲ Install or reinstall the latest firmware.

Service engineer:

1. Check the disk.
2. Perform a disk wipe. See [Disk wipe DoD 5220.22-M on page 555](#).

0002-0010-0087 Analysis – Application or resources not found, or no access permission

Call agent:

- ▲ Install or reinstall the latest firmware.

Service engineer:

- ▲ Install or reinstall the latest firmware.

0002-0020-0044 Out of memory in job processing

Call agent:

1. Resend the job.
2. Recommend installing the latest firmware and software.

Service engineer:

1. Resend the job.
2. Recommend installing the latest firmware and software.

0002-0020-0081 Customer file not found

Call agent:

1. Resend the job.
2. Recommend installing the latest firmware and software.

Service engineer:

1. Resend the job.
2. Recommend installing the latest firmware and software.

0002-0020-0082 No permission to access customer file or resources in the file

Call agent:

1. Resend the job, checking that it does not have calls to external resources.
2. Recommend installing the latest firmware and software.

Service engineer:

1. Resend the job, checking that it does not have calls to external resources.
2. Recommend installing the latest firmware and software.

0002-0020-0086 Disk error – Can't create temporary storage in job processing

Call agent:

1. Clean the printing queue.
2. Install or reinstall the latest firmware.

Service engineer:

1. Perform a disk wipe. See [Disk wipe DoD 5220.22-M on page 555](#).
2. Install or reinstall the latest firmware.

0002-0020-0087 Application or resources not found, or no access permission

Call agent:

- ▲ Install or reinstall the latest firmware.

Service engineer:

- ▲ Install or reinstall the latest firmware.

0002-0050-0044 Out of memory or disk in HP-GL/2

Call agent:

1. Resend the job.
2. Recommend installing the latest firmware and software.

Service engineer:

1. Resend the job.
2. Recommend installing the latest firmware and software.

0002-0050-0081 HP-GL/2 file not found

Call agent:

1. Resend the file, checking that it does not have calls to external resources.
2. Recommend installing the latest firmware and software.

Service engineer:

1. Resend the file, checking that it does not have calls to external resources.
2. Recommend installing the latest firmware and software.

0002-0050-0082 No permission to open HP-GL/2 file

Call agent:

1. Recommend installing the latest firmware and software.
2. Process the file again from the beginning.
3. Try to send the new ripped file.

Service engineer:

1. Recommend installing the latest firmware and software.
2. Process the file again from the beginning.
3. Try to send the new ripped file.

0002-0050-0083 Bad HP-GL/2 format

Call agent:

1. Check that the file sent is in a supported format.
2. Reinstall the drivers and software.

Service engineer:

1. Check that the file sent is in a supported format.
2. Reinstall the drivers and software

0002-0050-0086 Disk error – HP-GL/2 can't write to disk

Call agent:

1. Rip the file again.
2. Perform a disk wipe. See [Disk wipe DoD 5220.22-M on page 555](#).
3. Install or reinstall the latest firmware.

Service engineer:

1. Rip the file again.
2. Perform a disk wipe. See [Disk wipe DoD 5220.22-M on page 555](#).
3. Install or reinstall the latest firmware.

0002-0051-0044 Disk error – Can't create temporary storage in imaging library

Call agent:

1. Clean the printing queue.
2. Install or reinstall the latest firmware.

Service engineer:

1. Perform a disk wipe. See [Disk wipe DoD 5220.22-M on page 555](#).
2. Install or reinstall the latest firmware.

0002-0051-0083 Unsupported format in imaging library

Call agent:

1. Check that the file sent is in a supported format.
2. Reinstall the drivers and software.

Service engineer:

1. Check that the file sent is in a supported format.
2. Reinstall the drivers and software.

0002-0051-0086 Out of memory in imaging library

Call agent:

1. Resend the job.
2. Recommend installing the latest firmware.

Service engineer:

1. Resend the job.
2. Recommend installing the latest firmware.

0002-0051-0090 Invalid parameters in imaging library

Call agent:

1. Clean the printing queue.
2. Resend the job.
3. Recommend installing the latest firmware.

Service engineer:

1. Clean the printing queue.
2. Resend the job.
3. Recommend installing the latest firmware.

0002-0060-0044 Out of memory in PDF processing

Call agent:

1. Clean the printing queue.
2. Resend the job.
3. Recommend installing the latest firmware.

Service engineer:

1. Clean the printing queue.
2. Resend the job.
3. Recommend installing the latest firmware.

0002-0060-0081 PDF file not found

Call agent:

1. Clean the printing queue.
2. Resend the job.
3. Recommend installing the latest firmware.

Service engineer:

1. Clean the printing queue.
2. Resend the job.
3. Recommend installing the latest firmware.

0002-0060-0082 No permission to access PDF file

Call agent:

1. Check that the file sent is in a supported format.
2. Reinstall the drivers and software.

Service engineer:

1. Check that the file sent is in a supported format.
2. Reinstall the drivers and software.

0002-0060-0084 Corrupted PDF file

Call agent:

1. Recommend installing the latest firmware.
2. Process the file again from the beginning.
3. Try sending the new ripped file.

Service engineer:

1. Recommend installing the latest firmware.
2. Process the file again from the beginning.
3. Try sending the new ripped file.

0002-0060-0090 Invalid JDF job ticket

Call agent:

1. Process the PDF file again.
2. Resend the job.
3. Recommend installing the latest firmware and software.

Service engineer:

1. Process the PDF file again.
2. Resend the job.
3. Recommend installing the latest firmware and software.

0002-0060-0099 Generic Monza error

Call agent:

1. Restart the printer.
2. Resend the job.
3. Clean the printing queue.
4. Recommend installing the latest firmware and software.

Service engineer:

1. Restart the printer.
2. Resend the job.
3. Clean the printing queue.
4. Recommend installing the latest firmware and software.

0002-0061-0084 Incorrect PDF as reported by PDF Library

Call agent:

1. Process the PDF file again.
2. Resend the file.
3. Recommend installing the latest firmware and software.

Service engineer:

1. Process the PDF file again.
2. Resend the file.
3. Recommend installing the latest firmware and software.

0002-0061-0086 Disk error in PDF Library

Call agent:

1. Check that the PDF file has got the embedded resources.
2. Install or reinstall the latest firmware.

Service engineer:

1. Check that the PDF file has got the embedded resources.
2. Install or reinstall the latest firmware.

0002-0061-0099 Disk error in PDF Library

Call agent:

1. Check the printer configuration in your computer.
2. Check that the printer powers up and that it is connected to the same network.
3. Check the printer's network configuration.

Service engineer:

1. Check the printer configuration in your computer.
2. Check that the printer powers up and that it is connected to the same network.
3. Check the printer's network configuration.

05 VACUUM SYSTEM

0005-0001-0X01 Vacuum Fan Driver PCA X – Malfunction

(0005-0001-0101; 0005-0001-0201)

Where X indicates the index of Vacuum Fan Driver PCA

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the cable (NI_114) and connectors from the Vacuum Fan Driver PCA X to the Central Distribution PCA. See [Cable identification on page 2062](#).
2. Replace the Vacuum Fan Driver PCA X.

0005-0001-0X53 Vacuum Fan Driver PCA X – Data cable not detected

(0005-0001-0153; 0005-0001-0253)

Where X indicates the Vacuum Fan Driver PCA number.

No signal between Central Distribution PCA and Vacuum Fan Driver PCA

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check whether something is blocking the fan X, or whether it is dirty.
2. Check that the Vacuum Fan Driver PCA cable (NI_114) is undamaged, unbroken, and properly connected to the Central Distribution PCA; otherwise, replace the cable. See [Cable identification on page 2062](#).

0005-0002-0002 Vacuum Sensor PCA – Presence

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the vacuum sensor to Bottom Mechatronics PCA cable (NI_161) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the vacuum sensor.
4. Replace the Bottom Mechatronics PCA.

0005-0002-0013 Vacuum Sensor PCA – Voltage zero or short-circuited

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Vacuum Sensor PCA cable (NI_161) is unbroken, undamaged, and properly connected, replace it if necessary. See [Cable identification on page 2062](#).
2. Check that the Vacuum Sensor PCA is unbroken and undamaged.
3. Replace the Vacuum Sensor PCA.

0005-0003-0X01 Vacuum fan X – Malfunction

(0005-0003-0101; 0005-0003-0201; 0005-0003-0301)

Where X indicates the vacuum fan number.

Vacuum Fan Driver PCA failure.

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that vacuum fan X is unblocked and clean. Clean it if necessary.
2. Check that the Vacuum Fan X cable (NI_126) is undamaged and correctly connected to the Vacuum Fan Driver PCA. See [Cable identification on page 2062](#).
3. Replace Vacuum Fan X.

0005-0003-0X33 Vacuum fan X – Overcurrent

(0005-0003-0133; 0005-0003-0233; 0005-0003-0333)

Where X indicates the vacuum fan number.

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the vacuum fan driver PCA to vacuum fan valves cables are not broken, undamaged and properly connected. Replace them if needed.
2. Replace vacuum fan PCA.
3. If the problem persist, change vacuum fan.

0005-0003-0X80 Vacuum fan X – Pressure issue

(0005-0003-0180; 0005-0003-0280; 0005-0003-0380)

Where X indicates the vacuum pressure fan number.

Vacuum pressure setting not achieved with Fan X working at 100%.

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that pipes and tubes are unbroken and undamaged, clean them if necessary.
2. Check that the Vacuum Fan X runs correctly; if not, replace the fan.

10 WASTE MANAGEMENT

0010-0001-0001 Waste fan – Malfunction

Call agent:

- ▲ If, after rebooting, the issue persists, your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the fan is unblocked and clean, clean it if necessary.
2. Check that the fan cable is undamaged and correctly connected to the Waste Management PCA.
3. Replace the waste fan. Also order the Waste System Foam Service Kit (CZ309–67331).

0010-0003-0002 Waste pipe – Presence

A mechanical switch detects if the waste pipe is well inserted.

Call agent:

- ▲ If, after rebooting, the issue persists, your Support representative is needed to repair the printer on site.

Service engineer:

1. Check whether the pipe is well inserted, blocked, or damaged.
2. Check that the switches to the Waste Management PCA cable (NI_88) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
3. Replace the switch pipe detection or pipe.
4. Replace the Waste Management PCA.

0010-0004-0018 Waste container – Open while printing**Call agent:**

1. Check that the waste container is not open while in use. Close it if found open.
2. If, after rebooting, the issue persists, your Support representative is needed to repair the printer on site.

Service engineer:

1. Ensure that the waste container is closed.
2. Check that the waste container cables (NI_88) and connectors are unbroken and undamaged; replace them if necessary. See [Cable identification on page 2062](#).
3. Replace the waste container switch sensor.

Messages

- **Waste container almost full:** at 70% of capacity (detected by software). You are recommended to order a new waste container.
- **Waste container full:** at 80-90% of capacity (detected by hardware) or 110% (detected by software). You are recommended to replace or empty the container. Check how full the container is; if it's overflowing (more than 100% of capacity), check that the spring is unbroken and that the cable (NI_89), connector, and container-full switch are unbroken and undamaged. Replace them if necessary.

0010-0005-0018 Waste fan door – Open

A mechanical switch detects if the waste fan door is open.

Call agent:

- ▲ Check that the waste fan cover is properly closed.

Service engineer:

1. Check that the waste container is not open while in use. If found open, close it.
2. Check that the waste container, cable and connector are not broken or damaged. Replace if necessary.
3. Replace waste container switch sensor.
4. Replace waste management PCA.

0010-0009-0X17 Spittoon motor X – Movement blocked

(0010-0009-0117; 0010-0009-0217)

Where X indicates the spittoon motor number (1 = Left, 2 = Right)

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the mobile parts of spittoon motor X are not blocked and are able to complete the movement. See [0010-022 Check mechatronics on page 471](#).
2. Check that the cable (right motor cable NI_32, left motor cable NI_33) is properly connected. See [Cable identification on page 2062](#).
3. Replace the spittoon motor X, or replace the board if necessary.

0010-0009-0X59 Spittoon motor X – Servo shutdown

(0010-0009-0159; 0010-0009-0259)

Where X indicates the spittoon motor number (1 = Left, 2 = Right)

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the mobile parts of spittoon motor X are not blocked and are able to complete the movement. See [0010-022 Check mechatronics on page 471](#).
2. Check that the cable (right motor cable NI_32, left motor cable NI_33) is properly connected. See [Cable identification on page 2062](#).
3. Replace the spittoon motor X, or replace the board if necessary.

0010-0009-0X60 Spittoon motor X – Direction test

(0010-0009-0160; 0010-0009-0260)

Where X indicates the spittoon motor number (1 = Left, 2 = Right)

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the Printbar Mechatronics PCA to Spittoon motor Left NI_33 or Right NI_32 & NI_38 connections are properly connected, not broken and undamaged.
2. Replace cables or connectors if needed.
3. Replace Right Spittoon Motor if needed.
4. Replace the Printbar Mechatronics PCA.

0010-0009-0X61 Spittoon motor X – Electrical fault

(0010-0009-0161; 0010-0009-0261)

Where X indicates the spittoon motor number (1 = Left, 2 = Right)

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the spittoon motor X cable (right motor cable NI_32, left motor cable NI_33) is unbroken, undamaged, and properly connected, replace it if necessary. See [Cable identification on page 2062](#).
2. Check that the spittoon motor X is unbroken and undamaged.
3. Replace the spittoon motor X.

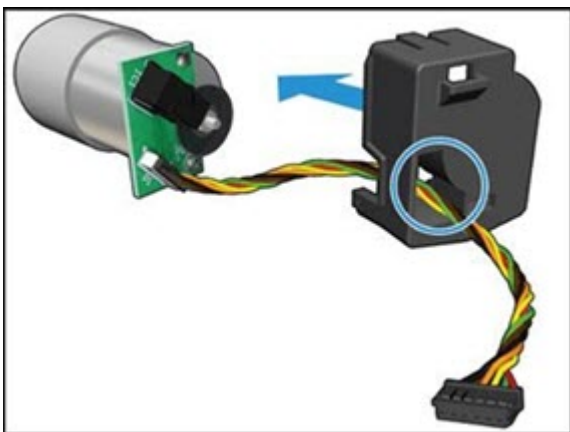
0010-0010-0017 Spittoon-belt motor/encoder – Movement blocked

Call agent:

- ▲ Ask the customer to check whether the spittoon belt is blocked by a paper jam, and restart the printer. If the problem persists, call support.

Service engineer:

1. Check if the spittoon encoder belt motor cover is installed (the Spittoon static transmission right (CZ309-67100) contains this cover together with the motor).



If the cover is not installed, check if the encoder is stained with ink drops from the spittoon. If dirty, replace the Spittoon static transmission right (CZ309-67100) that contains the cover to protect encoder; there is no need to replace the spittoon. To install the encoder cover see the attached instructions. Alternatively, if an encoder cover is available (printers from S/N MY6596Q00B on have this cover), clean the encoder and place the encoder cover.

2. Check that the spittoon-belt motor is not blocked by a paper jam or anything else, and that it can spin properly. See [0010-022 Check mechatronics on page 471](#).
3. Remove the Spittoon and verify that the belt is working properly, and not broken or bound. If the spittoon belt is broken or bound replace the spittoon.
4. Check that the cable NI_45 is properly connected; replace it if necessary.
5. Replace the right spittoon static transmission, or the Print Bar Mechatronics PCA if necessary. Replace any damaged mechanical parts such as belts or gears.

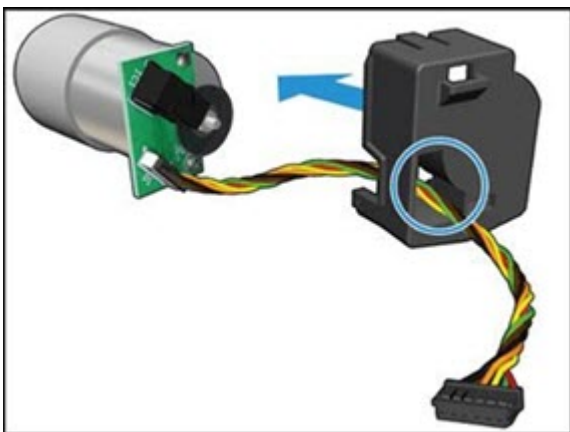
0010-0010-0059 Spittoon-belt motor/encoder – Servo shutdown

Call agent:

- ▲ Ask the customer to check whether the spittoon belt is blocked by a paper jam, and restart the printer. If the problem persists, call support.

Service engineer:

1. Check if the spittoon encoder belt motor cover is installed (the Spittoon static transmission right (CZ309-67100) contains this cover together with the motor).



If the cover is not installed, check if the encoder is stained with ink drops from the spittoon. If dirty, replace the Spittoon static transmission right (CZ309-67100) that contains the cover to protect encoder; there is no need to replace the spittoon. To install the encoder cover see the attached instructions. Alternatively, if a encoder cover is available, clean the encoder and place the encoder cover.

2. Check that the spittoon-belt motor is not blocked by a paper jam or anything else, and that it can spin properly. See [0010-022 Check mechatronics on page 471](#).
3. Remove the Spittoon and verify that the belt is working properly, and not broken or bound. If the spittoon belt is broken or bound replace the spittoon.
4. Check that the cable NI_45 is properly connected; replace it if necessary.
5. Replace the right spittoon static transmission, or the Print Bar Mechatronics PCA if necessary. Replace any damaged mechanical parts such as belts or gears.

0010-0010-0060 Spittoon-belt motor/encoder – Direction test

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the Waste Printbar Mechatronics PCA to Spittoon Belt Motor cable NI_45 and connectors are properly connected, not broken and undamaged.
2. Replace the NI_45 cable or connector if needed.
3. Check that the Spittoon Belt Motor and Encoder are not broken and undamaged; replace if needed.
4. Replace the Printbar Mechatronics PCA.

0010-0010-0061 Spittoon-belt motor/encoder – Electrical fault

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the spittoon-belt motor is not blocked by a paper jam or anything else, and that it can spin properly. See [0010-022 Check mechatronics on page 471](#).
2. Check that the cable NI_45 is properly connected; replace it if necessary.
3. Check that the spittoon belt motor and encoder are not broken and undamaged; replace them if necessary.
4. Replace the spittoon belt motor.
5. Replace the Print Bar Mechatronics PCA.

0010-0012-0002 Waste PCA – Presence

Waste status line issue

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the Waste Management PCA to Air Control PCA cable (NI_99) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the Waste Management PCA.
4. Replace the Air Control PCA.

0010-0012-0013 Waste PCA – Voltage zero or short-circuited

Waste status line shorted to ground.

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the Waste Management PCA to Air Control PCA cable (NI_99) is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
2. Check that the Waste Management PCA is unbroken and undamaged.
3. Replace the Waste Management PCA.

0010-0013-0002 Waste container level line – Presence

Waste container level line issue

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the waste container level line is properly connected, unbroken, and undamaged.
2. Check that the waste container is properly connected.
3. Replace cable (NI_89) or connector if necessary. See [Cable identification on page 2062](#).
4. Replace the Waste Management PCA.

0010-0013-0013 Waste level line – Voltage zero or short-circuited

Waste level line shorted to ground

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the waste level line cable (NI_99) is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
2. Check that the Waste Management PCA is unbroken and undamaged.
3. Replace the Waste Management PCA.

0010-0014-0X47 Spittoon beam sensor X – Sensor issue

(0010-0014-0147; 0010-0014-0247)

Where X indicates the spittoon beam number (1 = Left, 2 = Right)

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the spittoon beam sensor X cable (right sensor cable NI_34, left sensor cable NI_45) is unbroken, undamaged, and properly connected. See [Cable identification on page 2062](#).
2. Check that the Print Bar Mechatronics PCA runs correctly.

0010-0016-0002 Waste diverter flood sensor – Presence

Waste diverter flood sensor not detected.

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check if there is ink in the flood sensor.
2. Check that the flood sensor is properly connected, unbroken, and undamaged.
3. Replace cable or connector if necessary.
4. If the problem persists, replace the sensor.
5. If the problem persists, replace the Waste Management PCA.

0010-0016-0042 Ink detected in waste diverter

Ink presence detected in waste diverter; there is a risk of ink leakage.

Call agent:

- ▲ Service engineer visit is required

Service engineer:

1. Perform the waste diverter cleaning action found in PMK2 (see [Following the preventive maintenance program on page 1079](#)).
2. Replace the [Waste management tubes \(CZ309-67210\) on page 1007](#).

12 CAPPING

0012-0001-0047 Capping home sensor – Sensor issue

Zero calibration, error homing, homing error.

Call agent:

- ▲ Ask the customer to check whether the capping path is blocked by a paper jam, and restart the printer. If the problem persists, ask the customer to remove the printheads and store them in the orange caps.

Service engineer:

1. Check that the homing sensor is not unplugged, broken, or damaged.
2. Check that the capping movement is smooth, and activate the homing sensor.
3. Replace homing sensor if the sensor is activated mechanically but the problem persists.
4. Replace Capping motor.

0012-0002-0017 Capping motor/encoder – Movement blocked

Capping motor distance not reached.

Call agent:

- ▲ Ask the customer to check if capping path is blocked by a paper jam and reboot printer. If problem persists ask to remove ph and store them in the orange caps

Service engineer:

1. Check that the mobile parts of the capping motor are not blocked and that they can complete the movement. See [0012-02 Check mechatronics on page 472](#).
2. Check that the cable NI_32 is properly connected.
3. Replace the capping motor, or the Print Bar Mechatronics PCA if necessary.

0012-0002-0060 Capping motor/encoder – Direction test

Call agent:

- ▲ Ask the customer to check whether the capping path is blocked by a paper jam, and restart the printer. If the problem persists, ask the customer to remove the printheads and store them in the orange caps.

Service engineer:

1. Check that the capping motor assembly cable (NI_32) is undamaged and correctly connected to the Mechatronics PCA.
2. Replace the capping motor.
3. Replace the Printbar Mechatronics PCA.

0012-0002-0061 Capping motor/encoder – Electrical fault

Electrical fault in any electrical part of capping.

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the capping motor assembly cable (NI_32) is undamaged and correctly corrected to the Bottom Mechatronics PCA. See [Cable identification on page 2062](#).
2. Replace the capping motor.
3. Replace the Bottom Mechatronics PCA.

0012-0002-0063 Capping motor/encoder – Driver fault

Driver fault in any electrical part of capping.

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Replace the Bottom Mechatronics PCA.

20 DRAWER

0020-0Y01-0001 Drawer Y Closed but doing action that requires it opened

(0020-0101-0001; 0020-0201-0001; 0020-0301-0001) where Y indicates the drawer number.

Printer is reporting that drawer is being used being opened, but it is closed (by sensors).

Call agent:

1. Check that the drawer is properly opened/closed.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Run Service Diagnostics 0020-03 Check Drawer Sensors to ensure what is being read from the sensor.
2. Adjust the cover if it has any gaps.
3. Replace the damaged switch sensor.

0020-0Y01-0009 Drawer Y Switch – Connector / cable issue

(0020-0101-0009; 0020-0201-0009; 0020-0301-0009)

Where Y indicates the drawer number.

Printer detects that the drawer Y switch is not properly closed when it is in use.

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using another drawer is recommended.

Service engineer:

1. Check that the drawer Y switch to drawer board cable and connectors are properly connected, unbroken, and undamaged.



NOTE: Both sides of the drawer should be closed at the same time.

2. Check that each sensor is unbroken and undamaged; replace it if necessary.
3. Replace cable or connector as needed.
4. Replace the drawer Y switch.
5. Replace the Drawer PCA Y.

0020-0Y01-0018 Drawer Y switches – Discrepancy

(0020-0101-0018; 0020-0201-0018; 0020-0301-0018, 0020-0001-0018)

Where Y indicates the drawer number.

Printer detects that drawer Y is open or not properly closed when it is in use.

Call agent:

1. Check that the drawer is properly closed.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
3. Using another drawer is recommended.

Service engineer:

1. Check drawer Y is properly closed: both sides of the drawer should be closed at the same time.
2. Check that each sensor is unbroken and undamaged; replace it if necessary.

3. Replace the drawer Y switch.
4. Replace the drawer PCA.

0020-0Y02-0001 Drawer Y cutter – Malfunction

(0020-0102-0001; 0020-0202-0001; 0020-0302-0001)

Where Y indicates the drawer number.

The cutter has not cut the paper within a few seconds from when it was ordered.

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using another drawer is recommended. If the issue is with Cutter 1, you cannot continue printing.

Service engineer:

1. Check that the cutter is sharp and in good condition. If it is not try to recalibrate it. Run 0020-0007 Cutter calibration.
2. Check that the drawer Y cutter limit switches (left and right) are properly connected, unbroken, and undamaged.
3. Check that the drawer Y cutter guiding cords are correctly placed in the drawer; otherwise place them correctly.
4. Check that the drawer Y cutter runs correctly along the guiding cords. Remove a paper jam or anything wrongly placed here that impedes cutter movement.
5. Replace cable or connector as needed.
6. Replace the cutter limit switches if necessary.
7. Replace the drawer Y cutter.

0020-0Y02-0059 Drawer Y cutter – Motor malfunction

(0020-0102-0059; 0020-0202-0059; 0020-0302-0059)

Where Y indicates the drawer number.

Call agent:

- ▲ Motor malfunction, press Enter to start the paper jam clearance process. If the problem persists, call your support representative.

Service engineer:

1. Check that the drawer Y cutter motor is not blocked by a paper jam or any agent preventing its movement.
2. Check that the mobile parts of the cutter are not blocked and that they can complete the movement. See [0020-06 Cutter test on page 479](#).

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3. Replace the drawer Y cutter motor if necessary.
4. Replace the Drawer PCA Y.

0020-0Y02-0060 Drawer Y cutter – Direction test

(0020-0102-0060; 0020-0202-0060; 0020-0302-0060)

Where Y indicates the drawer number.

Motor movement is not detected by the printer.

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using another drawer is recommended. If the issue is with Cutter 1, you cannot continue printing.

Service engineer:

1. Check that the drawer 1 cutter encoder is plugged in, unbroken, and undamaged.
2. Remove paper fibers from the cutter module.
3. Check the drawer 1 cutter motor-encoder assembly; replace it if necessary.



NOTE: Calibration may be needed.

4. Replace the Drawer PCA Y if necessary.

0020-0Y02-0061 Drawer Y cutter – Electrical fault

(0020-0102-0061; 0020-0202-0061; 0020-0302-0061)

Where Y indicates the drawer number.

A motor short-circuit has been detected.

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using another drawer is recommended. If the issue is with Cutter 1, you cannot continue printing.

Service engineer:

1. Check that the drawer Y cutter motor assembly cable is undamaged and correctly connected to the Drawer PCA.
2. Replace the drawer Y cutter motor if necessary.
3. Replace the Drawer PCA Y if necessary.

0020-0Y02-0063 Drawer Y cutter – Driver fault

(0020-0102-0063; 0020-0202-0063; 0020-0302-0063)

Where Y indicates the drawer number.

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using another drawer is recommended. If the issue is with Cutter 1, you cannot continue printing.

Service engineer:

1. Check that the drawer Y cutter motor assembly cable is undamaged and correctly connected to the Drawer PCA Y.
2. Replace the drawer Y cutter motor if necessary.
3. Replace the Drawer PCA Y if necessary.

0020-0Y04-0X59 Drawer Y roll feed X motor – Malfunction

(0020-0104-0159; 0020-0104-0259; 0020-0204-0159; 0020-0204-0259; 0020-0304-0159; 0020-0304-0259)

Where Y indicates the drawer number and X the roll feed motor number.

Call agent:

- ▲ Motor malfunction, press Enter to start the paper jam clearance process. If the problem persists, call your support representative.

Service engineer:

1. Check that the drawer Y Transport roller motor (Paper-input motor NGR) is not blocked by a paper jam or any agent preventing its movement. See [0020-02 Check drawer roll-by-roll on page 473](#).
2. Check cutter movement and blade.
3. Replace the Transport roller motor (Paper-input motor NGR) if necessary.
4. Replace the Drawer PCA Y if necessary.

0020-0Y04-0X60 Drawer Y roll feed X motor – Direction test

(0020-0104-0160; 0020-0104-0260; 0020-0204-0160; 0020-0204-0260; 0020-0304-0160; 0020-0304-0260)

Where Y indicates the drawer number and X the roll feed motor number.

Motor movement is not detected by the printer.

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using another roll is recommended.

Service engineer:

1. Check that the drawer Y roll feed X motor is not blocked by a paper jam or any agent preventing its movement.
2. Check that the drawer Y roll feed X encoder cable is unbroken, undamaged, and properly connected; replace the drawer Y roll feed X motor if necessary.
3. Replace the Drawer PCA Y if necessary.

0020-0Y04-0X61 Drawer Y roll feed X motor – Electrical fault

(0020-0104-0161; 0020-0104-0261; 0020-0204-0161; 0020-0204-0261; 0020-0304-0161; 0020-0304-0261)

Where Y indicates the drawer number and X the roll feed motor number.

A motor short-circuit has been detected.

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using another roll is recommended.

Service engineer:

1. Check that the drawer Y roll feed X motor assembly cable is undamaged and correctly connected to the Drawer PCA Y.
2. Replace the drawer Y roll feed X motor if necessary.
3. Replace the Drawer PCA Y if necessary.

0020-0Y04-0X63 Drawer Y roll feed X motor – Driver fault

(0020-0104-0163; 0020-0104-0263; 0020-0204-0163; 0020-0204-0263; 0020-0304-0163; 0020-0304-0263)

Where Y indicates the drawer number and X the roll feed motor number.

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using another roll is recommended.

Service engineer:

1. Check that the drawer Y roll feed X motor assembly cable is undamaged and correctly connected to the Drawer PCA Y.
2. Replace the drawer Y roll feed X motor if necessary.
3. Replace the Drawer PCA Y if necessary.

0020-0Y04-0X98 Drawer Y roll feed X motor – Free encoder direction test

(0020-0104-0198; 0020-0104-0298; 0020-0204-0198; 0020-0204-0298; 0020-0304-0198; 0020-0304-0298)

Where Y indicates the drawer number and X the roll feed motor number.

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using another roll is recommended.

Service engineer:

1. Check that the drawer Y roll feed X motor is not blocked by a paper jam or anything else, and that it can spin properly.
2. Replace the drawer Y roll feed X motor if necessary.
3. Replace the Drawer PCA Y if necessary.

0020-0Y05-0002 Drawer PCA Y – Presence

(0020-0105-0002; 0020-0205-0002; 0020-0305-0002)

Where Y indicates the drawer number.

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using another drawer is recommended.

Service engineer:

1. Check the drawer Y connection to the printer.
2. Replace the Drawer PCA Y.



NOTE: With this error, you may see the same error reported for lower drawers; check the drawer above.

0020-0Y05-0003 Drawer PCA Y – Firmware/hardware mismatch

(0020-0105-0003; 0020-0205-0003; 0020-0305-0003)

Where Y indicates the drawer number.

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using another drawer is recommended.

Service engineer:

1. Check that the Drawer PCA Y is unbroken, undamaged, and properly connected.
2. Update the firmware to the latest version.
3. Replace the Drawer PCA Y if necessary.



NOTE: With this error, you may see the same error reported for lower drawers; check the drawer above.

0020-0Y05-0004 Drawer PCA Y – Comms issue

(0020-0105-0004; 0020-0205-0004; 0020-0305-0004)

Where Y indicates the drawer number.

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using another drawer is recommended.

Service engineer:

1. Check that the drawer Y to Central Distribution PCA cable (NI_124_HE for 8000 series, NI_124_LE otherwise) is unbroken, undamaged, and properly connected. See [Cable identification on page 2062](#).
2. Replace the Drawer PCA Y if necessary.
3. Replace the Central Distribution PCA.



NOTE: If a new Central Distribution PCA was installed for testing purposes, and you want to reinstall the original one, before removing it run [0045-08 Reset Central Distribution board to be removed on page 498](#).

0020-0Y05-0054 Drawer PCA Y – Voltage failure

(0020-0105-0054; 0020-0205-0054; 0020-0305-0054)

Where Y indicates the drawer number.

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using another drawer is recommended.

Service engineer:

1. Check that the Drawer PCA Y input voltage is in range (30–38 V).
2. Replace the printer PSU if the voltage supplied is not within range.
3. Replace Drawer PCA Y if does not run correctly.

0020-0Y05-0068 Drawer PCA Y – Invalid boot loader version

(0020-0105-0068; 0020-0205-0068; 0020-0305-0068)

Where Y indicates the drawer number.

Call agent:

1. Check that the printer has the latest FW; if not, update it. See [USB upgrade on page 225](#).
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Ensure that the printer has the latest firmware version.
2. Replace Drawer PCA Y.

0020-0Y05-0069 Drawer PCA Y – Execution error

(0020-0105-0069; 0020-0205-0069; 0020-0305-0069)

Where Y indicates the drawer number.

Call agent:

1. Check that the printer has the latest FW; if not, update it. See [USB upgrade on page 225](#).
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the Drawer PCA Y to Central Distribution PCA cable (NI_124_HE for 8000 series, NI_124_LE otherwise) is properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace Drawer PCA Y.

0020-0Y05-0074 Drawer PCA Y – NVM issue read failure

(0020-0105-0074; 0020-0205-0074; 0020-0305-0074)

Where Y indicates the drawer number.

NVM memory in the drawer is corrupted.

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using another drawer is recommended.

Service engineer:

1. Check that the Drawer PCA Y to Central Distribution PCA cable (NI_124_HE for 8000 series, NI_124_LE otherwise) is properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace Drawer PCA Y.

0020-0Y05-0080 Drawer PCA Y – Wrong ID

(0020-0105-0080; 0020-0205-0080; 0020-0305-0080)

Where Y indicates the drawer number.

The Drawer PCB ID doesn't match the ID stored in the printer.

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using another drawer is recommended.

Service engineer:

1. Run the diagnostic test [0020-10 Check drawer PCB serial number on page 482](#).
2. Replace Drawer PCA Y.

0020-0Y06-0X59 Drawer Y roll rewinder X motor – Malfunction

(0020-0106-0159; 0020-0106-0259; 0020-0206-0159; 0020-0206-0259; 0020-0306-0159; 0020-0306-0259)

Where Y indicates the drawer number and X the roll rewinder motor number.

Call agent:

- ▲ Motor malfunction, press Enter to start the paper jam clearance process. If the problem persists, call your support representative.

Service engineer:

1. Check that the drawer Y roll rewinder X motor is not blocked by a paper jam or any agent preventing its movement. See [0020-02 Check drawer roll-by-roll on page 473](#).
2. Replace the drawer Y roll rewinder X motor if necessary.
3. Replace Drawer PCA Y.

0020-0Y06-0X60 Drawer Y roll rewinder X motor – Direction test

(0020-0106-0160; 0020-0106-0260; 0020-0206-0160; 0020-0206-0260; 0020-0306-0160; 0020-0306-0260)

Where Y indicates the drawer number and X the roll rewinder motor number.

Motor movement is not detected by the printer.

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using another roll is recommended.

Service engineer:

1. Check that the drawer Y roll rewinder X motor is not blocked by a paper jam or any agent preventing its movement.
2. Check that the drawer Y roll rewinder X encoder cable is unbroken, undamaged, and properly connected
3. Replace drawer Y roll rewinder X motor if necessary.
4. Replace Drawer PCA Y.

0020-0Y06-0X61 Drawer Y roll rewinder X motor – Electrical fault

(0020-0106-0161; 0020-0106-0261; 0020-0206-0161; 0020-0206-0261; 0020-0306-0161; 0020-0306-0261)

Where Y indicates the drawer number and X the roll rewinder motor number.

A motor short-circuit has been detected.

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using another roll is recommended.

Service engineer:

1. Check that the drawer Y roll rewinder X motor assembly cable is undamaged and correctly connected to the Drawer PCA Y.
2. Replace the drawer Y roll rewinder X motor if necessary.
3. Replace drawer PCA Y.

0020-0Y06-0X63 Drawer Y roll rewinder X motor – Driver fault

(0020-0106-0163; 0020-0106-0263; 0020-0206-0163; 0020-0206-0263; 0020-0306-0163; 0020-0306-0263)

Where Y indicates the drawer number and X the roll rewinder motor number.

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using another roll is recommended.

Service engineer:

1. Check that the drawer Y roll rewinder X motor assembly cable is undamaged and correctly connected to the Drawer PCA Y.
2. Replace the drawer Y roll rewinder X motor if necessary.
3. Replace Drawer PCA Y.

0020-0Y06-0X99 Drawer Y roll rewinder X motor – Current sensor error

(0020-0106-0199; 0020-0106-0299; 0020-0206-0199; 0020-0206-0299; 0020-0306-0199; 0020-0306-0299)

Where Y indicates the drawer number and X the roll rewinder motor number.

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using another roll is recommended.

Service engineer:

1. Ensure that the drawer Y roll-rewinder X motor assembly cable is undamaged and correctly connected to the Drawer PCA Y.
2. Replace the drawer Y roll-rewinder X motor if necessary.
3. Replace Drawer PCA Y.

0020-0Y07-0053 Drawer Y LED board – Data cable not detected

(0020-0107-0053; 0020-0207-0053; 0020-0307-0053)

Where Y indicates the drawer number.

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using another drawer is recommended.

Service engineer:

1. Check that the data cable to drawer Y LED board is detected.
2. Check that the data cable is undamaged and properly connected to the drawer Y LED board.
3. Check that the drawer Y LED board runs correctly, replace if necessary.
4. Replace Drawer PCA Y.

0020-0Y08-0053 Drawer Y button board – Data cable error

(0020-0108-0053; 0020-0208-0053; 0020-0308-0053)

Where Y indicates the drawer number.

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using another drawer is recommended.

Service engineer:

1. Check that the data cable to drawer Y button board is detected.
2. Check that the data cable is undamaged and properly connected to the drawer Y button board.
3. Check that the drawer Y button board runs correctly; replace it if necessary.
4. Replace Drawer PCA Y.

0020-0Y09-0X01 Drawer Y jam cover – Switch discrepancy

(0020-0109-0101; 0020-0109-0201; 0020-0209-0101; 0020-0209-0201; 0020-0309-0101; 0020-0309-0201)

Where Y indicates the drawer number and X the jam-switch number (1=left, 2=right).

It is reporting open while drawer is closed.

Call agent:

1. Check that the drawer is properly closed.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
3. Using another drawer is recommended.

Service engineer:

1. Check that drawer Y jam cover is properly closed while drawer is closed.
2. Check that the drawer Y jam-switch left or right switch is not broken or damaged; replace if needed.

0020-0Y09-0X09 Drawer Y jam cover – Switch X discrepancy

(0020-0109-0109; 0020-0109-0209; 0020-0209-0109; 0020-0209-0209; 0020-0309-0109; 0020-0309-0209)

Where Y indicates the drawer number and X indicates the side (1=left, 2=right).

Switch discrepancy (reporting open and close at the same time).

Call agent:

1. Check that the drawer jam cover is properly closed.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
3. Using another drawer is recommended.

Service engineer:

1. Check that both sides of the drawer are closed at the same time.
2. Check that the drawer Y jam switch X connector and cable are not broken or damaged, and are properly connected; replace if needed.
3. Check drawer Y PCA.

0020-0Y09-0018 Drawer Y jam cover – Open while in use

(0020-0109-0018; 0020-0209-0048; 0020-0309-0018)

Where Y indicates the drawer number.

Call agent:

1. Check that the drawer jam cover is properly closed.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
3. Using another drawer is recommended.

Service engineer:

1. Check that drawer Y is not open while in use; in such a case, close it.
2. Check that the drawer Y jam switch sensor is not broken or damaged; replace if needed.

0020-0Y09-0081 Drawer Y - Drawer jam cover switches reporting different status in both sides

(0020-0109-0081; 0020-0209-0081; 0020-0309-0081) where Y indicates the drawer number.

Drawer jam cover switches are reporting different statuses.

Call agent:

1. Check that the drawer is properly opened/closed.
2. If issue appears while cover is opened customer can continue working, maybe the printer needs to be cleared of a jam. But if this issue appears while it is closed, the affected drawer cannot be used, it will need a repair.

Service engineer:

1. Run Service Diagnostics 0020-03 Check Drawer Sensors to ensure what is being read from the sensor.
2. Adjust the cover if it has any gaps.
3. Replace the damaged switch sensor.

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0025-0001-0X02 Air pump X – Presence

(0025-0001-0102; 0025-0001-0202; 0025-0001-0302; 0025-0001-0402)

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the cartridge has no air leakages (this can be done by pressing on the cartridge and checking for air leakage from any of its parts).
2. Check that the air pump X to Air Control PCA cable (NI_98) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
3. Replace air pump X.
4. Replace the Air Control PCA.

0025-0001-0029 Air pumps – Pressurization timeout**Call agent:**

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Air pressure pumps do not achieve the expected pressure on time.
2. Check that the pump cable (NI_98) and air tubes are undamaged and correctly connected. See [Cable identification on page 2062](#).
3. Run the subsystem diagnostic and replace the air pumps if necessary.

0025-0001-0033 Air pumps – Overcurrent

Overcurrent detected in air pump or relief valve

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the Air pumps (NI_98) and relief valve cables are not broken or damaged, and that they are properly connected; replace them if necessary.
2. If the problem persists then change the Air control PCA.
3. Replace Air pumps or Relief valve if necessary.

0025-0001-0X63 Air pump X – Driver fault

(0025-0001-0163; 0025-0001-0263; 0025-0001-0363; 0025-0001-0463)

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check air pump X. If PWM is not working, replace air pump X if necessary.
2. Check that FET is working properly.
3. Check that the air pump X cables (NI_98) are undamaged, unbroken, and connector properly connected to the Air Control PCA. See [Cable identification on page 2062](#).
4. Replace the Air Control PCA if necessary.

0025-0002-0001 Relief valve – Malfunction

Relief valve cannot calibrate pressure sensor failure

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check cable and connectors from the relief valve to the Air Control PCA.
2. Check that the air tubes system to the relief valve are clean.
3. Check that the relief valve runs correctly.
4. Check the Air Control PCA.
5. Replace the relief valve.
6. Replace the Air Control PCA, if necessary.

0025-0002-0002 Relief valve – Presence

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the relief valve to Air Control PCA cable and connectors are properly connected, unbroken, and undamaged.
2. Replace the relief valve.
3. Replace the Air Control PCA.

0025-0002-0034 Relief valve – Depressurize timeout

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

- ▲ Check that the relief valve runs correctly. If not, replace the Air Control PCA.

0025-0003-0X09 I-LED PCA X – Connector / cable issue

(0025-0003-0109; 0025-0003-0209)

Where X indicates the I-LED PCA number.

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the I-LED PCA X to Ink Supply PCA X cable (NI_92) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace I-LED PCA X.
4. Replace Ink Supply PCA X.

0025-0003-0X80 I-LED PCA X – Signal integrity lost

(0025-0003-0180; 0025-0003-0280)

Where X indicates the I-LED PCA number.

Call agent:

- ▲ If, after rebooting, the issue persists, then your support representative is needed to repair the printer on site.

Service engineer:

- ▲ Check that the I-LED PCA cables (NI_92) are unbroken, undamaged, and properly connected; replace them if necessary. See [Cable identification on page 2062](#).

0025-0004-0001 Air Control PCA – ASIC malfunction

Issue detected in ASIC.

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check the voltage in the Air Control PCA ASIC.
2. Replace the Air Control PCA if necessary.

0025-0004-0002 Air Control PCA – Presence

Air Control PCA to Central Distribution PCA cable issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Air Control PCA to Central Distribution PCA cable (NI_90) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the Air Control PCA.
4. Replace the Central Distribution PCA.

 **NOTE:** If a new Central Distribution PCA was installed for testing purposes, and you want to reinstall the original one, before removing it run [0045-08 Reset Central Distribution board to be removed on page 498](#).

0025-0004-0010 Air Control PCA – Voltage out of range

VPS_A voltage out of range.

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check the VPS_A voltage in the Air Control PCA.
2. Check that the Air Control PCA to Central Distribution PCA power cable (NI_90) is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
3. Check that the Fusible F1 is fused.
4. Check that the Air Control PCA is unbroken and undamaged.
5. Replace the Air Control PCA.
6. Replace the Central Distribution PCA.

 **NOTE:** If a new Central Distribution PCA was installed for testing purposes, and you want to reinstall the original one, before removing it run [0045-08 Reset Central Distribution board to be removed on page 498](#).

0025-0004-0010 Air Control PCA – Voltage out of range

3.0V voltage out of range

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check the 3.0V voltage in the Air Control PCA.
2. Check that the Air Control PCA to Central Distribution PCA power cable (NI_90) is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
3. Check that the Fusible F1 is fused.
4. Check that the Air Control PCA is unbroken and undamaged.
5. Replace the Air Control PCA.
6. Replace the Central Distribution PCA.

 **NOTE:** If a new Central Distribution PCA was installed for testing purposes, and you want to reinstall the original one, before removing it run [0045-08 Reset Central Distribution board to be removed on page 498](#).

0025-0004-0010 Air Control PCA – Voltage out of range

VPS_B voltage out of range

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check the VPS_B voltage in the Air Control PCA.
2. Check that the Air Control PCA to Central Distribution PCA power cable (NI_90) is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
3. Check that the Fusible F1 is fused.
4. Check that the Air Control PCA is unbroken and undamaged.
5. Replace the Air Control PCA.
6. Replace the Central Distribution PCA.

 **NOTE:** If a new Central Distribution PCA was installed for testing purposes, and you want to reinstall the original one, before removing it run [0045-08 Reset Central Distribution board to be removed on page 498](#).

0025-0004-0010 Air Control PCA – Voltage out of range

VS voltage out of range

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check the VS voltage in the Air Control PCA.
2. Check that the Air Control PCA to Central Distribution PCA power cable (NI_90) is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
3. Check that the Fusible F1 is fused.
4. Check that the Air Control PCA is unbroken and undamaged.
5. Replace the Air Control PCA.
6. Replace the Central Distribution PCA.

 **NOTE:** If a new Central Distribution PCA was installed for testing purposes, and you want to reinstall the original one, before removing it run [0045-08 Reset Central Distribution board to be removed on page 498](#).

0025-0004-0027 Air Control PCA – Overpressure

This indicates an Air Control PCA or air pumps malfunction.

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that filter tip is present in air tube. Check that the air pumps and relief valve cables (NI_98) are unbroken, undamaged, and properly connected; replace them if necessary. See [Cable identification on page 2062](#).
2. If the problem persists, change the Air Control PCA.

0025-0004-0033 Air Control PCA – Overcurrent VPS

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the air pumps and relief valve cables (NI_98) are unbroken, undamaged, and properly connected; replace them if necessary. See [Cable identification on page 2062](#).
2. If the problem persists, change the Air Control PCA.

0025-0004-0067 Air Control PCA – Debugging code issue

Call agent:

1. Check that the printer has the latest firmware version.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the printer has the latest firmware version.
2. Replace the Air Control PCA.

0025-0004-0068 Air Control PCA – Invalid boot loader version**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Update the printer firmware.
2. Replace the Air Control PCA.

0025-0004-0069 Air Control PCA – Execution error**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Run subsystem diagnostics.
2. Check that the Air Control PCA is powered correctly; if so, replace it.

0025-0004-0094 Air Control PCA – Wrong ID

When the position ID is discovered, it will be stored in the Microcontroller EEPROM.

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the Air Control PCA to Central Distribution PCA cable (NI_90) and connectors are unbroken, undamaged, and properly connected. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the Air Control PCA.
4. Replace the Central Distribution PCA.

0025-0005-0X41 Cartridge X – Broken bag

(0025-0005-0141; 0025-0005-0241; 0025-0005-0341; 0025-0005-0441; 0025-0005-0541;
0025-0005-0641; 0025-0005-0741; 0025-0005-0841)

Where X indicates the cartridge number:

For HP-authorized personnel only

- 1: Top C
- 2: Top K
- 3: Top Y
- 4: Top M
- 5: Bottom C
- 6: Bottom K
- 7: Bottom Y
- 8: Bottom M

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Look for signs of ink on PCAs, cables, sensors, air tubes, etc. Clean or replace the affected parts.
2. If a broken bag, leakage or clog happens then replace the affected supply.

 **IMPORTANT:** Supplies should be replaced ONLY AFTER replacing the PIP and clearing the broken bag status from the machine (Service menu).

0025-0005-0X81 Cartridge X – Bad contact detected

(0025-0005-0181; 0025-0005-0281; 0025-0005-0381; 0025-0005-0481; 0025-0005-0581;
0025-0005-0681; 0025-0005-0781; 0025-0005-0881)

Where X indicates the cartridge number:

- 1: Top C
- 2: Top K
- 3: Top Y
- 4: Top M
- 5: Bottom C
- 6: Bottom K
- 7: Bottom Y
- 8: Bottom M

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

- ▲ Check the contact between cartridge X and host slot X.

0025-0007-0X01 CID Valve PCA X – Photo-interrupter malfunction

(0025-0007-0101; 0025-0007-0201; 0025-0007-0301; 0025-0007-0401)

Where X indicates the CID Valve PCA number:

Cyan
Black
Yellow
Magenta

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the CID Valve PCA X to Air Control PCA cables (NI_97 and NI_98) are unbroken, undamaged, and connected. See [Cable identification on page 2062](#).
2. Check that the CID Valve PCA X is unblocked and clean.
3. Check that the CID Valve PCA X runs properly. If not, replace the [CID valve \(CZ309-67126\) on page 842](#).
4. Check that the Air Control PCA runs correctly, replace it if necessary.

0025-0007-0X05 CID Valve PCA X – Timeout

(0025-0007-0105; 0025-0007-0205; 0025-0007-0305; 0025-0007-0405)

Where X indicates the CID Valve PCA number:

Cyan
Black
Yellow
Magenta

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the CID Valve PCA X cables (NI_97 and NI_98) are unbroken, undamaged, and connected; replace them if necessary. See [Cable identification on page 2062](#).
2. Check CID Valve PCA X, run subsystem diagnostics, and replace it if necessary.

0025-0007-0X09 CID Valve PCA X – Connector / cable issue

(0025-0007-0109; 0025-0007-0209; 0025-0007-0309; 0025-0007-0409)

Where X indicates the CID Valve PCA number:

Cyan

Black

Yellow

Magenta

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the CID Valve PCA X to Air Control PCA cables (NI_97 and NI_98) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace CID Valve PCA X.
4. Replace the Air Control PCA.

0025-0007-0X13 CID Valve PCA X – Voltage zero or short-circuited

(0025-0007-0113; 0025-0007-0213; 0025-0007-0313; 0025-0007-0413)

Where X indicates the CID Valve PCA number:

Cyan

Black

Yellow

Magenta

Sensor LED line shorted to ground

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the CID Valve PCA X cables (NI_97 and NI_98) are unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
2. Check that CID Valve PCA X is unbroken and undamaged.
3. Replace CID Valve PCA X.

0025-0007-0X28 CID Valve PCA X – Pressure goes too low

(0025-0007-0128; 0025-0007-0228; 0025-0007-0328; 0025-0007-0428)

Where X indicates the CID Valve PCA number:

Cyan
Black
Yellow
Magenta

When the printer does the cartridge swap, pressure falls too much, this low pressure could cause air ingestion in the printhead.

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the tubes are unbroken and undamaged, if not replace them.
2. Check that CID Valve PCA X runs properly, if not replace it.
3. Check that the Air Control PCA runs correctly, replace it if necessary.

0025-0007-0X29 CID Valve PCA X – Pressurization timeout

(0025-0007-0129; 0025-0007-0229; 0025-0007-0329; 0025-0007-0429)

Where X indicates the CID Valve PCA number:

Cyan
Black
Yellow
Magenta

After doing an ink swap, the system cannot return to working pressure on time.

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the tubes are unbroken and undamaged, if not replace them.
2. Check that CID Valve PCA X runs properly, if not replace it.
3. Check that the Air Control PCA runs correctly; replace it if necessary.

0025-0008-0001 Pressure sensor – Malfunction

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the cable from the pressure sensor to the Air Control PCA is unbroken, undamaged, and connected.
2. Check that the air tubes system to the pressure sensor are clean.
3. Check that the pressure sensor runs correctly, if not replace it.
4. Check the Air Control PCA, if not replace it.

0025-0011-0X67 Ink Supply PCA X – Debugging code issue

(0025-0011-0167; 0025-0011-0267)

Where X indicates the Ink Supply PCA number.

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Ensure that the printer has the latest firmware.
2. Check that the Air Control PCA to Ink Supply PCA cable (3900/4000/4100/4500/4600 series cable NI_93, 5000 & 8000 series cable NI_91) and connectors are properly connected, unbroken, and undamaged.
3. Replace cable (3900/4000/4100/4500/4600 series cable NI_93, 5000 & 8000 series cable NI_91) or connector as needed.
4. Replace the Ink Supply PCA.
5. Replace the Air Control PCA.

0025-0011-0X68 Ink Supply PCA X – Invalid boot loader version

(0025-0011-0168; 0025-0011-0268)

Where X indicates the Ink Supply PCA number.

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Air Control PCA to Ink Supply PCA cable (3900/4000/4100/4500/4600 series cable NI_93, 5000 & 8000 series cable NI_91) and connectors are properly connected, unbroken, and undamaged.
2. Replace cable (3900/4000/4100/4500/4600 series cable NI_93, 5000 & 8000 series cable NI_91) or connector as needed.

3. Replace the Ink Supply PCA.
4. Replace the Air Control PCA.

0025-0011-0X69 Ink Supply PCA X – Execution error

(0025-0011-0169; 0025-0011-0269)

Where X indicates the Ink Supply PCA number.

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Ensure that the printer has the latest firmware version.
2. Check that the Air Control PCA to Ink Supply PCA cable (3900/4000/4100/4500/4600 series cable NI_93, 5000 & 8000 series cable NI_91) and connectors are properly connected, unbroken, and undamaged.
3. Replace cable (3900/4000/4100/4500/4600 series cable NI_93, 5000 & 8000 series cable NI_91) or connector as needed.
4. Replace the Ink Supply PCA.
5. Replace the Air Control PCA.

0025-0012-0X02 PIP sensor X – Presence

(0025-0012-0102; 0025-0012-0202; 0025-0012-0302; 0025-0012-0402; 0025-0012-0502;
0025-0012-0602; 0025-0012-0702; 0025-0012-0802)

Where X indicates the PIP sensor number:

- 1: Top C
- 2: Top K
- 3: Top Y
- 4: Top M
- 5: Bottom C
- 6: Bottom K
- 7: Bottom Y
- 8: Bottom M

Call agent:

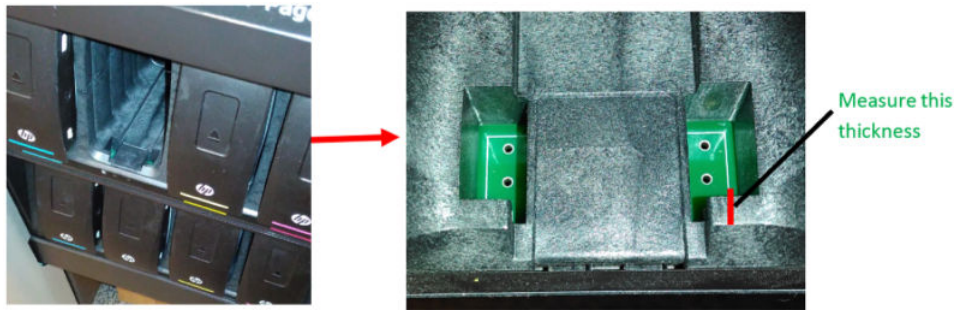
- ▲ Try to reseal cartridge X. It may take a few attempts.

Service engineer:

1. Reseat cartridge X.

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2. Check the thickness of the flange, as in the picture. If it is below 4mm, change the Minnow IDS support part service kit (CZ309-67315).



3. Replace PIP sensor X.
4. Replace Ink Supply PCA.

0025-0012-0X10 PIP sensor X – Voltage out of range

(0025-0012-0110; 0025-0012-0210; 0025-0012-0310; 0025-0012-0410; 0025-0012-0510;
0025-0012-0610; 0025-0012-0710; 0025-0012-0810)

Where X indicates the PIP sensor number:

- 1: Top C
- 2: Top K
- 3: Top Y
- 4: Top M
- 5: Bottom C
- 6: Bottom K
- 7: Bottom Y
- 8: Bottom M

Call agent:

1. Try to reset the ink cartridge.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. A static discharge can cause a wrong read from the sensor. Reseat the ink cartridge.
2. Check the voltage in PIP sensor X.
3. Check that cable running from the PIP sensor X to the Ink Supply PCA is unbroken, undamaged, and properly connected. If it is defective, replace the entire [PIP and floater with tubes \(CZ309-67130\)](#) [on page 847](#).

4. Replace PIP sensor X.
5. Replace the Air Control PCA.

0025-0012-0X46 PIP sensor X – Unable to calibrate

(0025-0012-0146; 0025-0012-0246; 0025-0012-0346; 0025-0012-0446; 0025-0012-0546;
0025-0012-0646; 0025-0012-0746; 0025-0012-0846)

Where X indicates the PIP sensor number:

- 1: Top C
- 2: Top K
- 3: Top Y
- 4: Top M
- 5: Bottom C
- 6: Bottom K
- 7: Bottom Y
- 8: Bottom M

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

- ▲ Replace PIP sensor X.

30 SERVICE CARRIAGE

0030-0001-0052 Carriage – Power cable not detected

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the power cable (NI_50) from the carriage to the Print Bar Mechatronics PCA is properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace the Carriage Sensor PCA.

0030-0002-0053 Carriage – Data cable not detected

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the data cable (NI_50) from the carriage to the Print Bar Mechatronics PCA is properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace the Carriage Sensor PCA.

0030-0003-0009 Drop detector sensor 1 or 2 – Connector/cable issue

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the Drop Detector PCA to Carriage Sensor PCA cable (NI_52 or NI_53) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace the Drop Detector PCA.
3. Replace the Carriage Sensor PCA.

0030-0003-0017 Drop detector – Movement blocked

Drop detector sensors check down position

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check whether the drop-detector sensors are in the down position when printhead cleaning is launched.
2. Check that the drop detector is not blocked, preventing its movement. Run diagnostic test [0030-02 Check mechatronics on page 489](#).
3. Replace the Drop detector PCA, if necessary.

0030-0003-0038 Drop detector – Sync issue

Drop detector movement sync issue

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Service carriage movement is irregular. Lubricate the whole service rod with the correct oil (it is necessary to remove all printheads): see [Service carriage rod lubrication on page 1091](#).
2. Check that the linear encoder is clean and undamaged. Replace it if necessary.

3. Check that the carriage movement is soft and regular along the whole length of the print bar. Run diagnostic test [0030-02 Check mechatronics on page 489](#).
4. Replace the service carriage motor.
5. Replace the belt, the belt tensioner, and the service carriage (in that order).

0030-0003-0046 Drop detector – Misaligned

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Calibrate the drop detector sensor.
2. Replace the drop detector sensor.

0030-0003-0047 Drop detector – Sensor issue

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check whether the drop detector sensor is in the upper position or not.
2. Replace the Drop Detector PCA.

0030-0003-0080 Drop Detector PCA – Nozzles out detected > 10%

Too many nozzles out. Printer discarded the drop detector data.

Call agent:

- ▲ Print PQ plot and check, by means of visual inspection on the actual PQ plot, if many nozzles are out.
 - If not many nozzles are out, DD could be failing. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
 - If many nozzles are out, printhead(s) could have too many nozzles out. Try the printhead troubleshooting and follow the "warranty process" if needed.

Service engineer:

1. Print the nozzle health plot. Check if plot is correct; if not, replace the corresponding printhead. If plot is printed correctly check that the Drop detector does not have any agents inside it, and try to perform a Drop detector calibration.
2. Replace the Drop detector if needed.

0030-0003-0081 Drop Detector — Calibration signal not reached

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Print the nozzle health plot.
2. Check if plot is correct; if not, replace the corresponding printhead. If plot is printed correctly check that the Drop detector does not have any agents inside it, and try to perform a Drop detector calibration.
3. Replace the Drop detector if needed.

0030-0004-0003 Drop Detector PCA – Firmware/hardware mismatch

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the Printbar Mechatronics PCA is not broken or damaged, and that it is properly connected.
2. Update FW to the latest version.
3. Replace the Printbar Mechatronics PCA.

0030-0004-0054 Drop Detector PCA – Voltage 5V failure

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. Using the printer is not recommended.

Service engineer:

1. Replace the Printbar Hub PCA.
2. Replace the Data Distribution PCA.
3. Replace cable NI_50.
4. Replace cable NI_10.

0030-0004-0063 Drop Detector PCA – VLS power presence

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the Drop Detector PCA to Carriage Sensor PCA cable (NI_52 or NI_53) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace the Drop Detector PCA.
3. Replace the Carriage Sensor PCA.

0030-0004-0063 Drop Detector PCA – Voltage 5V supply presence**Call agent:**

- ▲ If, after rebooting, the issue persists, then your support representative is needed to repair the printer on site.

Service engineer:

1. Check that the Drop Detector PCA VPS voltage is correct:
 - If $V < 2.5\text{ V}$ (3100 adc counts) then Drop Detector PCA VPS is off.
 - If $V > 2.5\text{ V}$ (3100 adc counts) then Drop Detector PCA VPS is on.
2. Replace the Drop Detector PCA.
3. Replace the Carriage Sensor PCA.

0030-0004-0067 Drop Detector PCA – Debugging code issue**Call agent:**

1. Check that the printer has the latest firmware version.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the printer has the latest firmware version.
2. Replace the Drop Detector PCA.

0030-0004-0068 Drop Detector PCA – Invalid boot loader version**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the printer has the latest firmware version.
2. Replace the Drop Detector PCA.

0030-0004-0069 Drop Detector PCA – Execution error

Call agent:

1. Check that the printer has the latest firmware version.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the printer has the latest firmware version.
2. Check that the Drop Detector PCA is correctly inserted.
3. Check the Drop Detector PCA.
4. Replace the Drop Detector PCA.

0030-0005-0047 Carriage bump sensor – Sensor issue

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the movement of the service carriage is smooth, and activate the carriage bump sensor.
2. Check the carriage bump sensor.
3. Check that the carriage bump sensor to print-bar mechatronics sideplate cable (NI_34) and connectors are properly connected, unbroken, and undamaged.
4. If the sensor is activated manually but the problem persists, replace the sensor.
5. Replace Carriage motor.

0030-0006-0002 Printhead cleaning motor – Presence

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the printhead cleaning motor to Carriage Sensor PCA cable (NI_56) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace the Carriage Sensor PCA.
3. Replace the carriage.

0030-0006-0054 Printhead cleaning motor – Voltage failure

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the printhead cleaning motor to Carriage Sensor PCA cable (NI_56) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace the Carriage Sensor PCA.
3. Replace the carriage.

0030-0006-0059 Printhead cleaning motor – Servo shutdown

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the mobile parts moved by the printhead cleaning motor are not blocked, and that they can complete the movement; if not, replace the motor. Run diagnostic test [0030-02 Check mechatronics on page 489](#).
2. Check that the printhead cleaning motor to Carriage Sensor PCA cable (NI_56) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
3. Replace the Carriage Sensor PCA.
4. Replace the carriage.

0030-0007-0046 Line sensor – Unable to calibrate line sensor

Call agent:

1. Check that the paper loaded is suitable for calibration.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the paper loaded is suitable for calibration.
2. Check that the line sensor to Carriage Sensor PCA cable (NI_54) is unbroken, undamaged, and properly connected.
3. Replace cable NI_54 or connector as needed.
4. Replace the line sensor.
5. Replace the Carriage Sensor PCA.

0030-0007-0050 Line sensor – Unable to read or get value

Call agent:

1. Check that the paper loaded is suitable for calibration.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the paper loaded is suitable for calibration.
2. Check that the line sensor to Carriage Sensor PCA cable (NI_54) is unbroken, undamaged, and properly connected.
3. Replace cable NI_54 or connector as needed.
4. Replace the line sensor.
5. Replace the Carriage Sensor PCA.

0030-0008-0004 Carriage Sensor PCA – Comms issue

Communication with line sensor

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the line sensor to Carriage Sensor PCA cable (NI_54) is unbroken, undamaged, and properly connected. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the line sensor.
4. Replace the Carriage Sensor PCA.

0030-0009-0002 Data transmission to formatter – Presence

SPI link quality monitoring. Data transmission issue between different boards, CRC check.

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the Carriage Drop Detector PCA to Carriage Sensor PCA (NI_52 and NI_53), the Carriage Sensor PCA to Printbar Mechatronics PCA (NI_50), the Printbar Mechatronics PCA to Printbar Hub PCA (NI_10) or

the Printbar Hub PCA to Engine PCA (NI_01) data cables are properly connected, unbroken, and undamaged.

2. Replace cable or connector if necessary.
3. Replace the Carriage Drop Detector PCA.
4. Replace the Carriage Sensor PCA.
5. Replace the Printbar Mechatronics PCA.
6. Replace the Printbar Hub PCA.
7. Replace the Engine PCA.

0030-0010-0002 Linear encoder – Presence

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the linear encoder to Carriage Sensor PCA cable and connectors are properly connected, unbroken, and undamaged.
2. Replace the linear encoder.
3. Replace the Carriage Sensor PCA.

0030-0010-0038 Motor encoder and linear encoder – Sync issue

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check service carriage movement from the service diagnostics.
2. Check the linear encoder and replace it if necessary.
3. Replace the service carriage motor.

0030-0011-0017 Carriage motor/encoder – Movement blocked

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the carriage motor is not blocked by a paper jam or any agent preventing its movement. Run diagnostic test [0030-02 Check mechatronics on page 489](#).
2. Replace the carriage motor.
3. Replace the Print Bar Mechatronics PCA.

0030-0011-0059 Carriage motor/encoder – Servo shutdown

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the carriage motor is not blocked by a paper jam or anything else preventing its movement. Run diagnostic test [0030-02 Check mechatronics on page 489](#).
2. Replace the carriage motor.
3. Replace the Print Bar Mechatronics PCA.

0030-0011-0060 Carriage motor/encoder – Direction test

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the carriage motor/encoder cable (NI_32) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Check the carriage motor-encoder assembly, and replace it if necessary.

0030-0011-0061 Carriage motor/encoder – Electrical fault

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the carriage motor assembly cable (NI_32) is undamaged and correctly connected to the Print Bar Mechatronics PCA. See [Cable identification on page 2062](#).
2. Replace the carriage motor.
3. Replace the Print Bar Mechatronics PCA.

0030-0011-0063 Carriage motor/encoder – Driver fault

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the carriage motor assembly cable (NI_32 or NI_36) is undamaged and correctly connected to the Print Bar Mechatronics PCA. See [Cable identification on page 2062](#).
2. Replace the carriage motor.
3. Replace the Print Bar Mechatronics PCA.

0030-0013-0080 Drop Detector – Nozzle out detected > 10%

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Print the nozzle health plot.
2. Check if plot is correct; if not, replace the corresponding printhead. If plot is printed correctly check that the Drop detector does not have any agents inside it, and try to perform a Drop detector calibration.
3. Replace the Drop detector if needed.

40 PRINT BAR

0040-0001-0001 Print Bar Hub PCA – FPGA malfunction

FPGA upgrade failure

Call agent:

1. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.
2. It is not recommended to use the printer.

Service engineer:

- ▲ Replace the Print Bar Hub PCA.

0040-0001-0004 Print Bar Hub PCA – Comms issue

Communication between Print Bar Hub PCA and Engine PCA

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the Print Bar Hub PCA to Engine PCA cable (NI_1) is unbroken, undamaged, and properly connected. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the Print Bar Hub PCA.
4. Replace the Engine PCA.

0040-0001-0010 Print Bar Hub PCA – Voltage out of range

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check the voltage in the Print Bar Hub PCA.
2. Check that the Print Bar Hub PCA to Data Distribution PCA PCIe cable is unbroken, undamaged, and properly connected.
3. Check that the Print Bar Hub PCA is unbroken and undamaged.
4. Replace the Print Bar Hub PCA.
5. Replace the Data Distribution PCA.

0040-0001-0052 Print Bar Hub PCA – Power cable not detected

Call agent:

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the Print Bar Hub PCA to Print Bar Mechatronics PCA cable (NI_10) is unbroken, undamaged, and properly connected. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the Print Bar Hub PCA.
4. Replace the Print Bar Mechatronics PCA.

0040-0001-0053 Print Bar Hub PCA – Data cable not detected

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Print Bar Hub PCA to Engine PCA cable (NI_01) is unbroken, undamaged, and properly connected. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the Print Bar Hub PCA.
4. Replace the Engine PCA.

0040-0001-0067 Print Bar Hub PCA – Debugging code issue

Call agent:

1. Check that the printer has the latest firmware version.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

1. Check that the printer has the latest firmware version.
2. Replace the Print Bar Hub PCA.

0040-0001-0068 Print Bar Hub PCA – Invalid boot loader version

Call agent:

1. Check that the printer has the latest firmware version.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the printer has the latest firmware version.
2. Replace the Print Bar Hub PCA.

0040-0001-0069 Print Bar Hub PCA – Execution error

Call agent:

1. Check that the printer has the latest firmware version.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the printer has the latest firmware version.
2. Check the Print Bar Hub PCA cables
3. Check the Print Bar Hub PCA.
4. Replace the Print Bar Hub PCA.

0040-0001-0088 Print Bar Hub PCA – Link between FPGAs down

Call agent:

1. Check that the printer has the latest firmware version.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Try a power cycle: unplug the power cord, wait 10 minutes and boot up again.
2. Replace the Print Bar Hub PCA.
3. Replace the cable NI_01.
4. Replace the Engine PCA.

0040-0002-0X01 Printhead PCA X – Malfunction

(0040-0002-0101; 0040-0002-0201; 0040-0002-0301; 0040-0002-0401; 0040-0002-0501;
0040-0002-0601; 0040-0002-0701; 0040-0002-0801)

Where X indicates the Printhead PCA number.

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Reseat printhead X.
2. Either the board or the power cable (NI_16 or NI_19) could be defective. You can check which by swapping two printhead interconnect boards. See [Cable identification on page 2062](#).



NOTE: The checking order is printhead 1, printhead 2, and so on. Once the printer detects an error, it does not check further. So, if there is a failure of printhead interconnect 2, you know that printhead interconnect 1 is working, but you have no information about the following printhead interconnects.

3. Replace Printhead PCA X.

0040-0002-0X02 Printhead PCA X – Presence

(0040-0002-0102; 0040-0002-0202; 0040-0002-0302; 0040-0002-0402; 0040-0002-0502;
0040-0002-0602; 0040-0002-0702; 0040-0002-0802)

Where X indicates the Printhead PCA number.

Call agent:


- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Printhead PCA X to Data Distribution PCA cable and connectors are properly connected, unbroken, and undamaged.

Cable for Printhead PCA X (see [Cable identification on page 2062](#)):

1. NI_09
 2. NI_08
 3. NI_07
 4. NI_06
 5. NI_05
 6. NI_04
 7. NI_03
 8. NI_02
2. Either the board or the power cable (NI_16 or NI_19) could be defective (see [Cable identification on page 2062](#)). You can check which by swapping two printhead interconnect boards.

 **NOTE:** The checking order is printhead 1, printhead 2, and so on. Once the printer detects an error, it does not check further. So, if there is a failure of printhead interconnect 2, you know that printhead interconnect 1 is working, but you have no information about the following printhead interconnects.

3. Replace cable or connector as needed.
4. Replace Printhead PCA X.
5. Replace the Data Distribution PCA.

0040-0002-0X04 Printhead PCA X – Comms issue

(0040-0002-0104; 0040-0002-0204; 0040-0002-0304; 0040-0002-0404; 0040-0002-0504;
0040-0002-0604; 0040-0002-0704; 0040-0002-0804)

Where X indicates the Printhead PCA number.

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:


1. Check that the Printhead PCA X to Data Distribution PCA cable is unbroken, undamaged, and properly connected; replace it if necessary.

Cable for Printhead PCA X (see [Cable identification on page 2062](#)):

1. NI_09
2. NI_08
3. NI_07
4. NI_06
5. NI_05
6. NI_04

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7. NI_03
8. NI_02
2. Check that the Data Distribution PCA to Print Bar Hub PCA PCIe is unbroken, undamaged, and properly connected.
3. Either the board or the power cable (NI_16 or NI_19) could be defective (see [Cable identification on page 2062](#)). You can check which by swapping two printhead interconnect boards.

 **NOTE:** The checking order is printhead 1, printhead 2, and so on. Once the printer detects an error, it does not check further. So, if there is a failure of printhead interconnect 2, you know that printhead interconnect 1 is working, but you have no information about the following printhead interconnects.

4. Replace Printhead PCA X.
5. Replace the Data Distribution PCA.
6. Replace the Print Bar Hub PCA.

0040-0002-0X52 Printhead PCA X – Power cable not detected

(0040-0002-0152; 0040-0002-0252; 0040-0002-0352; 0040-0002-0452; 0040-0002-0552;
0040-0002-0652; 0040-0002-0752; 0040-0002-0852)


Where X indicates the Printhead PCA number.

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Either the board or the power cable (NI_16 or NI_19) could be defective (see [Cable identification on page 2062](#)). You can check which by swapping two printhead interconnect boards.

 **NOTE:** The checking order is printhead 1, printhead 2, and so on. Once the printer detects an error, it does not check further. So, if there is a failure of printhead interconnect 2, you know that printhead interconnect 1 is working, but you have no information about the following printhead interconnects.

2. Replace the Printhead PCA X or the power cable.

0040-0002-0X53 Printhead PCA X – Data cable not detected

(0040-0002-0153; 0040-0002-0253; 0040-0002-0353; 0040-0002-0453; 0040-0002-0553;
0040-0002-0653; 0040-0002-0753; 0040-0002-0853)


Where X indicates the Printhead PCA number.

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Either the board or the data cable NI_02, NI_03, NI_04, NI_05, NI_06, NI_07, NI_08, or NI_09 could be defective (see [Cable identification on page 2062](#)). You can check which by swapping two printhead interconnect boards.

 **NOTE:** The checking order is printhead 1, printhead 2, and so on. Once the printer detects an error, it does not check further. So, if there is a failure of printhead interconnect 2, you know that printhead interconnect 1 is working, but you have no information about the following printhead interconnects.

2. Replace Printhead PCA X or data cable.

0040-0002-0X54 Printhead PCA X – Voltage Failure

(0040-0002-0154; 0040-0002-0254; 0040-0002-0354; 0040-0002-0454; 0040-0002-0554;
0040-0002-0654; 0040-0002-0754; 0040-0002-0854)


Where X indicates the Printhead PCA number.

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Either the board or the power cable (NI_16 or NI_19) could be defective (see [Cable identification on page 2062](#)). You can check which by swapping two printhead interconnect boards.

 **NOTE:** The checking order is printhead 1, printhead 2, and so on. Once the printer detects an error, it does not check further. So, if there is a failure of printhead interconnect 2, you know that printhead interconnect 1 is working, but you have no information about the following printhead interconnects.

2. Replace Printhead PCA X.

0040-0002-0X67 Printhead PCA X – Debugging code issue

(0040-0002-0167; 0040-0002-0267; 0040-0002-0367; 0040-0002-0467; 0040-0002-0567;
0040-0002-0667; 0040-0002-0767; 0040-0002-0867)


Where X indicates the Printhead PCA number.

Call agent:

1. Check that the printer has the latest firmware version.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the printer has the latest firmware version.
2. Either the board or the power cable (NI_16 or NI_19) could be defective (see [Cable identification on page 2062](#)). You can check which by swapping two printhead interconnect boards.

 **NOTE:** The checking order is printhead 1, printhead 2, and so on. Once the printer detects an error, it does not check further. So, if there is a failure of printhead interconnect 2, you know that printhead interconnect 1 is working, but you have no information about the following printhead interconnects.

3. Replace Printhead PCA X.

0040-0002-0X68 Printhead PCA X – Invalid bootloader version

(0040-0002-0168; 0040-0002-0268; 0040-0002-0368; 0040-0002-0468; 0040-0002-0568; 0040-0002-0668; 0040-0002-0768; 0040-0002-0868)

Where X indicates the Printhead PCA number.

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Either the board or the power cable (NI_16 or NI_19) could be defective (see [Cable identification on page 2062](#)). You can check which by swapping two printhead interconnect boards.



NOTE: The checking order is printhead 1, printhead 2, and so on. Once the printer detects an error, it does not check further. So, if there is a failure of printhead interconnect 2, you know that printhead interconnect 1 is working, but you have no information about the following printhead interconnects.

2. Replace Printhead PCA X.

0040-0002-0X69 Printhead PCA X – Execution error

(0040-0002-0169; 0040-0002-0269; 0040-0002-0369; 0040-0002-0469; 0040-0002-0569; 0040-0002-0669; 0040-0002-0769; 0040-0002-0869)

Where X indicates the Printhead PCA number.

Call agent:

1. Check that the printer has the latest firmware version.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the printer has the latest firmware version.
2. Either the board or the data cable (NI_02, NI_03) could be defective (see [Cable identification on page 2062](#)). You can check which by swapping two printhead interconnect boards.



NOTE: The checking order is printhead 1, printhead 2, and so on. Once the printer detects an error, it does not check further. So, if there is a failure of printhead interconnect 2, you know that printhead interconnect 1 is working, but you have no information about the following printhead interconnects.

3. Replace Printhead PCA X.

0040-0003-0001 Lift brake – Malfunction

Lift brake solenoid failure

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the cable (NI_32 or NI_38) from the lift brake to the Print Bar Mechatronics PCA. See [Cable identification on page 2062](#).
2. Replace the lift brake.

0040-0003-0009 Lift brake – Connector / cable issue**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the lift brake to Print Bar Mechatronics PCA cable (NI_32 or NI_38) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the lift brake.
4. Replace the Print Bar Mechatronics PCA.

0040-0003-0013 Lift brake – Voltage zero or short-circuited**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the lift brake cable (NI_32 or NI_38) is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
2. Check that the lift brake is unbroken and undamaged.
3. Replace the lift brake.

0040-0006-0002 Data Distribution PCA – Presence**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Print Bar Hub PCA to Data Distribution PCA PCI is properly connected, unbroken, and undamaged.
2. Replace the Data Distribution PCA.
3. Replace the Print Bar Hub PCA.
4. Replace the cable NI_01. See [Cables on page 618](#)
5. Replace the engine PCA.

0040-0007-0003 Print Bar Mechatronics PCA – Firmware/hardware mismatch

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Print Bar Mechatronics PCA is not broken or damaged and is properly connected.
2. Update firmware to the latest version.
3. Replace the Print Bar Mechatronics PCA.

0040-0007-0004 Print Bar Mechatronics PCA – Comms issue

Communication between ASICs

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Print Bar Mechatronics PCA to Print Bar Hub PCA cable (NI_10) is unbroken, undamaged, and properly connected. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the Print Bar Mechatronics PCA.
4. Replace the Print Bar Hub PCA.

0040-0007-0052 Print Bar Mechatronics PCA – Power cable not detected

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Print Bar Mechatronics PCA to Mechatronics PSU cable (NI_17) is unbroken, undamaged, and properly connected. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.

0040-0007-0053 Print Bar Mechatronics PCA – Data cable not detected

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Print Bar Mechatronics PCA to Print Bar Hub PCA cable (NI_10) is unbroken, undamaged, and properly connected. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.

3. Replace the Print Bar Mechatronics PCA.
4. Replace the Print Bar Hub PCA.
5. Replace cable NI_01.

0040-0007-0067 Print Bar Mechatronics PCA – Debugging code issue

Call agent:

1. Check that the printer has the latest firmware version.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the printer has the latest firmware version.
2. Replace the Print Bar Mechatronics PCA.

0040-0007-0068 Print Bar Mechatronics PCA – Invalid boot loader version

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the printer has the latest firmware version.
2. Replace the Print Bar Mechatronics PCA.

0040-0007-0069 Print Bar Mechatronics PCA – Execution error

Call agent:

1. Check that the printer has the latest firmware version.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the printer has the latest firmware version.
2. Check the Print Bar Mechatronics PCA cables (NI_10 or NI_50). See [Cable identification on page 2062](#).
3. Check the Print Bar Mechatronics PCA.
4. Replace the Print Bar Mechatronics PCA.

0040-0007-0077 Print Bar Mechatronics PCA – VPS safe interlock issue

Safety element in wrong state or not detected.

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check whether the front panel shows the close cover message or a system error related to the switch cover.
2. Check that the cable (NI_120) is unbroken and correctly connected; replace it if necessary. See [Cable identification on page 2062](#).
3. Check the switch connector on the Central Distribution PCA.
4. Check that the VPS2 voltage is in range (30–35 V) at Pin 1 of the J2 connector on the Print Bar Mechatronics PCA.
5. Replace the Print Bar Mechatronics PCA.
6. Replace the Central Distribution PCA.

 **NOTE:** If a new Central Distribution PCA was installed for testing purposes, and you want to reinstall the original one, before removing it run [0045-08 Reset Central Distribution board to be removed on page 498](#).

0040-0007-0089 Print Bar Mechatronics PCA – Left motors and encoders cable connection

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the Print Bar Mechatronics PCA cable (NI_33) and connector. See [Cable identification on page 2062](#).
2. Check the Print Bar Mechatronics PCA.
3. Replace the Print Bar Mechatronics PCA.

0040-0007-0090 Print Bar Mechatronics PCA – Left sensors cable connection

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the Print Bar Mechatronics PCA cable (NI_36) and connector. See [Cable identification on page 2062](#).
2. Check the Print Bar Mechatronics PCA.
3. Replace the Print Bar Mechatronics PCA.

0040-0007-0091 Print Bar Mechatronics PCA – Right motor sideplate cable connection

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Replace the Print Bar Mechatronics PCA.

0040-0007-0092 Print Bar Mechatronics PCA – Right encoder sideplate cable connection

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the NI_31 cable's sideplate connector. See [Cable identification on page 2062](#).
2. Check the same cable's connector on the Print Bar Mechatronics PCA.

0040-0007-0093 Print Bar Mechatronics PCA – Right sensor sideplate cable connection

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the NI_31 cable's sideplate connector.
2. Check the same cable's connector on the Print Bar Mechatronics PCA.

0040-0007-0095 Print Bar Mechatronics PCA – Voltage VPS failure

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the printhead cleaning motor.
2. Replace the Print Bar Mechatronics PCA.

0040-0007-0095 Print Bar Mechatronics PCA – Voltage VPS_LPS_1 failure

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Replace the Print Bar Mechatronics PCA.

0040-0007-0095 Print Bar Mechatronics PCA – Voltage VPS_LPS_2 failure

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Replace Print Bar Mechatronics PCA.

0040-0007-0095 Print Bar Mechatronics PCA – Voltage VPS_RB failure

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Replace the Print Bar Mechatronics PCA.

0040-0007-0096 Print Bar Mechatronics PCA – Safety interlock issue

Safety element in wrong state or not detected

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check whether the front panel shows the close cover message or a system error related to the switch cover.
2. Check that the cable (NI_120) is unbroken and correctly connected; replace it if necessary. See [Cable identification on page 2062](#).
3. Check the switch connector on the Central Distribution PCA.
4. Replace the Print Bar Mechatronics PCA.
5. Replace the Central Distribution PCA.



NOTE: If a new Central Distribution PCA was installed for testing purposes, and you want to reinstall the original one, before removing it run [0045-08 Reset Central Distribution board to be removed on page 498](#).

0040-0007-0097 Print Bar Mechatronics PCA – Voltage VCC 5V failure

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Replace the Print Bar Mechatronics PCA.

0040-0007-0097 Print Bar Mechatronics PCA – Voltage VCC_SENS_LPS_1 failure

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Replace the Print Bar Mechatronics PCA.

0040-0007-0097 Print Bar Mechatronics PCA – Voltage VCC_ENC_LPS_1 failure

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Replace the Print Bar Mechatronics PCA.

0040-0007-0097 Print Bar Mechatronics PCA – Voltage VCC_ENC_LPS_2 failure

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Replace the Print Bar Mechatronics PCA.

0040-0007-0097 Print Bar Mechatronics PCA – Voltage VCC_SENS_LPS_2 failure

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Replace the Print Bar Mechatronics PCA.

0040-0011-0047 Print-bar lift sensor – Homing error

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the movement of the print bar is smooth, and activate the homing sensor.
2. Check that the Lift brake to Printbar Mechatronics PCA cable (NI32 or NI_38) and connectors are properly connected, unbroken and undamaged.
3. Check that the homing sensor is not broken or damaged; replace it if necessary.
4. Check that the Lift motor encoder to Printbar Mechatronics PCA cable (NI_33) and connectors are properly connected, unbroken and undamaged.
5. Check that the Lift motor encoder is not broken or damaged; replace it if necessary.
6. Check that the Lift motor/brake are not broken or damaged; replace them if necessary.
7. If the problem persists, replace the Printbar Mechatronics PCA.

0040-0012-0009 Lift – Connector / cable issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the lift to Print Bar Mechatronics PCA cable (NI_32) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the lift.
4. Replace the Print Bar Mechatronics PCA.

0040-0012-0017 Lift – Movement blocked

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the lift is not blocked by a paper jam or any agent preventing its movement. See [0040-02 Check mechatronics on page 490](#).
2. Replace the lift.
3. Replace the Print Bar Mechatronics PCA.

0040-0012-0033 Lift – Overcurrent

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the lift to Print Bar Mechatronics PCA cable (NI_32) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the lift motor.
4. Replace the Print Bar Mechatronics PCA.

0040-0012-0059 Lift – Servo shutdown

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the lift is not blocked by a paper jam.
2. Check the position of the brake of the lift motor, the lever has to be in low "locked" position. See [Lift motor and brake on page 52](#).
3. Check that the lift is not blocked by any agent preventing its movement. See [0040-02 Check mechatronics on page 490](#).
4. Replace the lift.
5. Replace the Print Bar Mechatronics PCA.

0040-0012-0061 Lift – Electrical fault**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the lift to Print Bar Mechatronics PCA cable (NI_32) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the lift motor.
4. Replace the Print Bar Mechatronics PCA.

0040-0012-0063 Lift – Driver fault**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the lift to Print Bar Mechatronics PCA cable (NI_32) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the lift motor.
4. Replace the Print Bar Mechatronics PCA.

0040-0014-0046 Printhead - Align Error**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the line sensor is working, run Service carriage diagnostics (0030-01).
2. Check that the printhead nozzles are OK.

0040-0014-0X80 Printhead X – Replace

(0040-0014-0180; 0040-0014-0280; 0040-0014-0380; 0040-0014-0480; 0040-0014-0580;
0040-0014-0680; 0040-0014-0780; 0040-0014-0880)

Where X indicates the printhead number.

Call agent:

- ▲ Remove the non-functional printhead and insert a new printhead.

Service engineer:

- ▲ Replace printhead X.



NOTE: Error ID codes in EWS are not the same as System error codes in printers. Check the status in EWS and compare it with the system error definition.

0040-0014-0X81 Printhead X – Reseat

(0040-0014-0181; 0040-0014-0281; 0040-0014-0381; 0040-0014-0481; 0040-0014-0581;
0040-0014-0681; 0040-0014-0781; 0040-0014-0881)

Where X indicates the printhead number.

Call agent:

- ▲ Remove and reinsert the same printhead, or try cleaning the electrical connections. If necessary, insert a new printhead.

Service engineer:

- ▲ Remove and reinsert the same printhead, or try cleaning the electrical connections. If necessary, insert a new printhead.

0040-0014-0X84 Printhead X – Replaced without following right process

(0040-0014-0184; 0040-0014-0284; 0040-0014-0384; 0040-0014-0484; 0040-0014-0584;
0040-0014-0684; 0040-0014-0784; 0040-0014-0884)

Where X indicates the printhead number.

Call agent:

- ▲ Printhead incorrectly removed or installed. Not following the correct process may cause serious damage to the printhead. See the user guide for more information.

Service engineer:

- ▲ Replace printhead X.

0040-0014-0X85 Printhead X – Too old for purging

(0040-0014-0185; 0040-0014-0285; 0040-0014-0385; 0040-0014-0485; 0040-0014-0585;
0040-0014-0685; 0040-0014-0785; 0040-0014-0885)

Where X indicates the printhead number.

Printhead X manufacturing date is too old to ensure image quality printing.

Call agent:

- ▲ Remove the old printhead and insert a new one.

Service engineer:

- ▲ Replace printhead X.

45 E-BOX

0045-0002-0001 Formatter PCA – Malfunction

BIOS NVRAM corruption

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Replace the hard disk drive.
2. Replace the Formatter PCA.

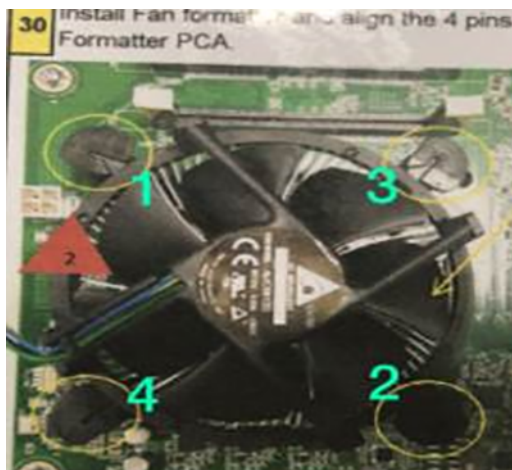
0045-0002-0021 Formatter PCA – Temperature too high

Call agent:

1. Turn off the printer and wait for it to cool down.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check if the fan is being slightly dislodged by pushing all 4 clips of the Formatter cooling fan into position.



2. Check that the CPU heat-sink and fan are properly connected and making contact with the CPU.
3. Replace the Formatter PCA.



NOTE: The CPU temperature is checked every 5 minutes. If it exceeds 79°C (174°F) three times, the printer triggers a severe system error.

0045-0002-0078 Formatter PCA – BIOS update needed

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Update firmware.
2. If issue persists, replace the Formatter PCA.

0045-0003-0002 Engine PCA – Presence

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Engine PCA to Formatter PCA PCI is properly connected, unbroken, and undamaged.
2. Perform a power cycle: power off the printer, unplug power cord and wait until all the connection panel LEDs are off. Boot up again; if the issue persists replace the Engine PCA.
3. Replace the Formatter PCA.

0045-0003-0004 Engine PCA – Comms issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Engine PCA to Formatter PCA PCI is unbroken, undamaged, and properly connected.
2. Perform a power cycle: power off printer, unplug power cord and wait until all the connection panel LEDs are off. Boot up again; if the issue persists install the latest firmware or reinstall it.
3. Replace the Engine PCA.
4. Replace the Formatter PCA.

0045-0003-0021 Engine PCA – FPGA temperature too high

Call agent:

- ▲ Perform a power cycle: power off printer, unplug power cord and wait until all the connection panel LEDs are off. Boot up again; if the issue persists replace the Engine PCA.

Service engineer:

- ▲ Replace the Engine PCA.

0045-0003-0046 Engine PCA – DDR3 banks not calibrated

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Engine PCA is not broken or damaged and that it is properly connected.
2. Perform a power cycle: power off printer, unplug power cord and wait until all the connection panel LEDs are off. Boot up again; if the issue persists replace the Engine PCA.

0045-0004-0001 JDI PCA – Malfunction

Microcontroller malfunction

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. It is not recommended to use the printer.

Service engineer:

1. Check that the JDI PCA is properly connected, unbroken, and undamaged.
2. Replace the JDI PCA.

0045-0004-0002 JDI PCA – Presence

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. It is not recommended to use the printer.

Service engineer:

1. Check that the JDI PCA to Formatter PCA PC is properly connected, unbroken, and undamaged.
2. Replace the JDI PCA.
3. Replace the Formatter PCA.

0045-0004-0004 JDI PCA – Comms issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the JDI PCA is connected to the right PCIe bridge/slot.
2. Check that the JDI PCA is unbroken, undamaged, and properly connected.

For HP-authorized personnel only

3. Replace the JDI PCA.
4. Replace the Formatter PCA.

0045-0004-0043 JDI PCA – Memory failure

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Replace the JDI PCA.

0045-0004-0052 JDI PCA – Power cable not detected

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. It is not recommended to use the printer.

Service engineer:

1. Check that the JDI PCA power cable (NI_102) is connected. See [Cable identification on page 2062](#).
2. Check that the JDI PCA is unbroken and undamaged.
3. Replace the JDI PCA.
4. Replace the Formatter PCA.

0045-0004-0086 JDI PCA – Wrong PCI express window

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the JDI PCA is properly connected, unbroken, and undamaged.
2. Check that the printer has the latest firmware; if not, update it.
3. Replace the JDI PCA.
4. Replace the Formatter PCA.

0045-0004-0099 JDI PCA – Mac address issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the JDI PCA is properly connected, unbroken, and undamaged.
2. The MAC address is not correctly configured.
3. Replace the JDI PCA.
4. Replace the Formatter PCA.

0045-0005-0002 JPE PCA – Presence**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the JPE PCA to Formatter PCA PC is properly connected, unbroken, and undamaged.
2. Replace the JPE PCA.
3. Replace the Formatter PCA.

0045-0005-0004 JPE PCA – Comms issue**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the JPE PCA is connected to the right PCIe bridge/slot.
2. Check that the JPE PCA is unbroken, undamaged, and properly connected.
3. Replace the JPE PCA.

0045-0005-0052 JPE PCA – Power cable not connected**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the JPE PCA power cable (NI_104) is connected. See [Cable identification on page 2062](#).
2. Check that the JPE PCA is unbroken and undamaged.
3. Replace the JPE PCA.

0045-0006-0053 Central Distribution PCA – Data cable not detected**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Engine PCA to Central Distribution PCA cable (NI_104) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace the Engine PCA.
3. Replace the Central Distribution PCA.

0045-0006-0067 Central Distribution PCA – Debugging code issue

Call agent:

1. Check that the printer has the latest firmware version.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the printer has the latest firmware version.
2. Replace Front Panel PCA.

0045-0006-0068 Central Distribution PCA – Invalid boot loader version

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the printer has the latest firmware version.
2. Replace the Central Distribution PCA.

0045-0006-0069 Central Distribution PCA – Execution error

Call agent:

1. Check that the printer has the latest firmware version.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the printer has the latest firmware version.
2. Replace the Central Distribution PCA.

0045-0006-0074 Central Distribution PCA – NVM read failure

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that 12V line from the ATX power supply is arriving correctly to the Central distribution PCA (J21 Connector).
2. Replace the Central Distribution PCA.

 **NOTE:** If a new Central Distribution PCA was installed for testing purposes, and you want to reinstall the original one, before removing it run [0045-08 Reset Central Distribution board to be removed on page 498](#).

0045-0006-0074 Central Distribution PCA – NVM backup issue**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Replace the Central Distribution PCA.

 **NOTE:** If a new Central Distribution PCA was installed for testing purposes, and you want to reinstall the original one, before removing it run [0045-08 Reset Central Distribution board to be removed on page 498](#).

0045-0006-0090 Central Distribution PCA – Output voltage 32V failure**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Central Distribution PCA to Bottom Mechatronics PCA cable (NI_110) and connectors are properly connected, unbroken, and undamaged; otherwise, replace it. See [Cable identification on page 2062](#).
2. Check that the 32V rail is up in the Central Distribution PCA cable (NI_110) connector; if not, replace the Central Distribution PCA.
3. Check that the verify 32V rail is up in the Bottom Mechatronics PCA cable (NI_110) connector; if not, replace the Bottom Mechatronics PCA.

 **NOTE:** If a new Central Distribution PCA was installed for testing purposes, and you want to reinstall the original one, before removing it run [0045-08 Reset Central Distribution board to be removed on page 498](#).

0045-0006-0091 Central Distribution PCA – Input voltage 32V failure**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Central Distribution PCA to Mechatronics PSU cable (NI_112) and connectors are properly connected, unbroken, and undamaged; otherwise, replace it.
2. Check that the verify 32V rail is up in the Mechatronics PSU cable (NI_112) connector; otherwise, replace the Mechatronics PSU.

 **NOTE:** If a new Central Distribution PCA was installed for testing purposes, and you want to reinstall the original one, before removing it run [0045-08 Reset Central Distribution board to be removed on page 498](#).

0045-0006-0094 Central Distribution PCA – Cable to formatter not detected

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:


1. Check that the Central Distribution PCA to formatter cable (NI_105) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace the Central Distribution PCA.
3. Replace the formatter.

0045-0006-0096 Central Distribution PCA – Voltage 24V failure

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.


Service engineer:

 **NOTE:** If, previously to this error, the waste container has overflowed, disconnect the waste fan and check if the SE changes. If the SE changes, replace the fan. Otherwise, continue with the troubleshooting.

1. Check that the Central Distribution PCA to Mechatronics PSU cable (NI_112) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Check that the 24V rail is up and working correctly in:
 - a. The vacuum fan; replace it if necessary.
 - b. The Vacuum Fan Driver PCA; replace it if necessary.
 - c. The aerosol fans; replace them if necessary.
 - d. The Bottom Mechatronics PCA; replace it if necessary.
 - e. The Central Distribution PCA; replace it if necessary.
 - f. The Waste Management PCA; replace it if necessary.

0045-0008-0102 Hard disk drive – Presence

No hard disk drive found.

 **NOTE:** If a new hard disk drive was installed for testing purposes, and you want to reinstall the original one, before removing it run diagnostic 0045-07 Reset HDD to be removed.

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the hard disk drive to Formatter PCA data cable (NI_100) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Check that the hard disk drive to ATX power cable and connectors are properly connected, unbroken, and undamaged.
3. Replace cable or connector as needed.
4. Replace the hard disk drive.
5. Replace the Formatter PCA.

0045-0008-0X40 Disk X – Empty (no boot loader found)

(0045-0008-0140; 0045-0008-0240)

Where X indicates the disk number (1 = hard disk drive, 2 = solid-state drive)

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check cable (NI_100) and connector. See [Cable identification on page 2062](#).
2. Check disk X capacity if your printer is an 8000 series.
3. Check whether disk X is installed.

0045-0008-0174 Hard disk drive – NVM read failure**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Replace the hard disk drive.

0045-0008-0174 Hard disk drive – NVM printer information mismatch**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Replace the hard disk drive.

0045-0008-0174 Hard disk drive – NVM default values found**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Default NVM values applied, printer restored to factory defaults.
2. Replace the hard disk drive.

0045-0008-0181 Hard disk drive – Boot loader issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Replace the hard disk drive.

0045-0008-0X97 Disk X – ATA password locked by another formatter

(0045-0008-0197; 0045-0008-0297)

Where X indicates the disk number (1 = hard disk drive, 2 = solid-state drive)

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Replace disk X.

0045-0008-0198 Hard disk drive – Signature issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Replace the hard disk drive.

0045-0009-0053 Central Distribution PCA to Bottom Mechatronics PCA – Connector/cable issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Central Distribution PCA to Bottom Mechatronics PCA cable (NI_111) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the Bottom Mechatronics PCA.
4. Replace the Central Distribution PCA.

 **NOTE:** If a new Central Distribution PCA was installed for testing purposes, and you want to reinstall the original one, before removing it run [0045-08 Reset Central Distribution board to be removed on page 498](#).

0045-0010-0X01 E-box fan – Malfunction

(0045-0010-0101; 0045-0010-0201; 0045-0010-0301; 0045-0010-0401)

Where X indicates the fan number.

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check which fan is not rotating by checking for airflow coming from the e-box; place a hand over the fan holes in the e-box underneath the printer to check for air coming from both fans.
2. Check that the cable from fan X to the Formatter PCA is correctly connected.
3. Check whether fan X is now rotating.
4. Replace the e-box fan.

0045-0011-0002 RFID PCA – Presence

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the RFID PCA to Central Distribution PCA data cable (NI_118) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the RFID PCA.
4. Replace the Central Distribution PCA.

 **NOTE:** If a new Central Distribution PCA was installed for testing purposes, and you want to reinstall the original one, before removing it run [0045-08 Reset Central Distribution board to be removed on page 498](#).

0045-0011-0048 RFID PCA – Expected value not found or wrong

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the RFID PCA to Central Distribution PCA data cable (NI_118) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connectors as needed.
3. Replace the RFID PCA.

0045-0012-0002 CryptASIC – Presence

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the CryptASIC is inserted properly into the Engine PCA, unbroken, and undamaged.
2. Replace the CryptASIC.
3. Replace the Engine PCA.

0045-0013-0001 E-box CPU fan – Malfunction

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the cable from the CPU fan to the Formatter PCA.
2. Replace the CPU fan.
3. Replace the Formatter PCA.

46 CRYPTASIC

0046-0000-0X82 CryptASIC – CryptASIC hardware failure

(0046-0000-0182; 0046-0000-0282)

Where X indicates the PCA (1 = Engine PCA, 2 = Central Distribution PCA).

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Engine PCA:
 - a. Order a CryptASIC Service Kit. Escalate to Level 3, providing the printer's serial number and product number, and the serial number of the CryptASIC Service Kit. Replace the CryptASIC. Write in an empty

USB flash drive the file provided by Level 3. Plug the USB flash drive into the printer and restart. If startup fails, enable the diagnostic package with the USB flash drive and provide logs to Level 3.

- b. Replace the Engine PCA.
2. Central Distribution PCA:
 - a. Check that the Central Distribution PCA is properly inserted in the Engine PCA, and that it is unbroken and undamaged.
 - b. Replace the Central Distribution PCA.

0046-0000-0X83 CryptASIC – CryptASIC hardware failure

(0046-0000-0183; 0046-0000-0283)

Where X indicates the PCA (1 = Engine PCA, 2 = Central Distribution PCA).

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Engine PCA:
 - a. Order an CryptoASIC Service Kit. Escalate to Level 3, providing the printer's serial number and product number, and the serial number of the CryptoASIC Service Kit. Replace the CryptoASIC. Write in an empty USB flash drive the file provided by Level 3. Plug the USB flash drive into the printer and restart. If startup fails, enable the diagnostic package with the USB flash drive and provide logs to Level 3.
 - b. Replace the Engine PCA.
2. Central Distribution PCA:
 - a. Check that the Central Distribution PCA is properly inserted in the Engine PCA, and that it is unbroken and undamaged.
 - b. Replace the Central Distribution PCA.

0046-0000-0184 CryptASIC – CryptASIC type mismatch

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Order an CryptASIC Service Kit. Escalate to Level 3, providing the printer's serial number and product number, and the serial number of the CryptASIC Service Kit. Replace the CryptASIC. Write in an empty USB flash drive the file provided by Level 3. Plug the USB flash drive into the printer and restart. If startup fails, enable the diagnostic package with the USB flash drive and provide logs to Level 3.
2. Replace the Engine PCA.

0046-0000-0x85 CryptASIC – CryptASIC reset

(0046-0000-0185; 0046-0000-0285)

Where X indicates the PCA (1 = Engine PCA, 2 = Central Distribution PCA).

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Engine PCA:
 - a. Order a CryptASIC Service Kit. Escalate to Level 3, providing the printer's serial number and product number, and the serial number of the CryptASIC Service Kit. Replace the CryptASIC. Write the file provided by Level 3 to a USB flash drive. Plug the USB flash drive into the printer and restart. If startup fails, enable the diagnostic package with the USB flash drive and provide system logs to Level 3.
 - b. Replace the Engine PCA.
2. Central Distribution PCA:
 - a. Check that the Central Distribution PCA is properly inserted into the Engine PCA, and that it is unbroken and undamaged.
 - b. Replace the Central Distribution PCA.

0046-0000-0X99 CryptASIC – CryptASIC generic error

(0046-0000-0199; 0046-0000-0299)

Where X indicates the PCA (1 = Engine PCA, 2 = Central Distribution PCA).

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Engine PCA:
 - ▲ Order an CryptASIC Service Kit. Escalate to Level 3, providing the printer's serial number and product number, and the serial number of the CryptASIC Service Kit. Replace the CryptASIC. Write in an empty USB flash drive the file provided by Level 3. Plug the USB flash drive into the printer and restart. If startup fails, enable the diagnostic package with the USB flash drive and provide logs to Level 3.
2. Central Distribution PCA:
 - a. Check that the Central Distribution PCA is properly inserted in the Engine PCA, and that it is unbroken and undamaged.
 - b. Replace the Central Distribution PCA.

48 CONNECTION PANEL PCA

0048-0001-0053 Connection Panel PCA LAN cable – Data cable not detected

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Connection Panel PCA to JDI PCA LAN cable (NI_143) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the Connection Panel PCA.

0048-0002-0002 Connection Panel PCA LED – Presence

Connection Panel PCA LED to JDI PCA cable issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Connection Panel PCA LED to JDI PCA data cable (NI_145) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the Connection Panel PCA.
4. Replace the JDI PCA.

0048-0004-0002 Connection Panel PCA interconnect – presence

Connection Panel PCA to Central Distribution PCA cable issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Connection Panel PCA interconnect to Central Distribution PCA data cable (NI_116) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the Connection Panel PCA.
4. Replace the Central Distribution PCA.



NOTE: If a new Central Distribution PCA was installed for testing purposes, and you want to reinstall the original one, before removing it run [0045-08 Reset Central Distribution board to be removed on page 498](#).

50 POWER SUPPLY

0050-0001-0009 Mechatronics PSU – Connector/cable issue

Mechatronics PSU interconnect to Central Distribution PCA cable disconnected

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Mechatronics PSU interconnect to Central Distribution PCA cable (NI_113) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the Mechatronics PSU.
4. Replace the Central Distribution PCA.



NOTE: If a new Central Distribution PCA was installed for testing purposes, and you want to reinstall the original one, before removing it run [0045-08 Reset Central Distribution board to be removed on page 498](#).

0050-0001-0011 Mechatronics PSU – Voltage too high

Voltage out of specification, overvoltage

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check whether the voltage of the customer's site is too high.
2. Check the voltage in the Mechatronics PSU.
3. Check that the AC cable (NI_146) from the Power Distribution PCA is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
4. Check that the Mechatronics PSU and Power Distribution PCA are unbroken and undamaged.
5. Replace the Mechatronics PSU.
6. Replace the Power Distribution PCA.

0050-0001-0012 Mechatronics PSU – Voltage too low

Voltage out of specification, undervoltage

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check whether the voltage of the customer's site is too low.
2. Check the voltage in the Mechatronics PSU.
3. Check that the AC cable (NI_146) from the Power Distribution PCA is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
4. Check that the Mechatronics PSU and Power Distribution PCA are unbroken and undamaged.
5. Replace the Mechatronics PSU.
6. Replace the Power Distribution PCA.

0050-0001-0015 Mechatronics PSU – Fuse / resistor / circuit open or no voltage

Relay does not work

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Mechatronics PSU relay is unbroken and undamaged.
2. Replace the Mechatronics PSU.

0050-0001-0021 Mechatronics PSU – Temperature too high

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Diagnostic showing temperature reading, replace the Mechatronics PSU.

0050-0001-0033 Mechatronics PSU – Overcurrent

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Review the load and the maximum current.
2. Replace the Mechatronics PSU.

0050-0002-0001 ATX PSU – Malfunction

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the ATX PSU is not damaged or broken.
2. Check the cable and connectors from the ATX PSU to the Power Distribution PCA.
3. Replace the ATX PSU.

60 PAPER INPUT

0060-0001-0059 Feed motor – Malfunction

Call agent:

- ▲ Motor malfunction, press Enter to start the paper jam clearance process. If the problem persists, call your support representative.

Service engineer:

1. Check that the feed motor is not blocked by a paper jam or anything else preventing its movement. See [0060-03 Check mechatronics loop-feed motor on page 502](#).
2. Replace the feed motor.
3. Replace the Bottom Mechatronics PCA.

0060-0001-0060 Feed motor – Direction test

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Check that the encoder is unplugged; if not, replace the motor.

0060-0001-0061 Feed motor – Electrical fault

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the feed motor assembly to Bottom Mechatronics PCA cable (NI_150) is undamaged and correctly connected. See [Cable identification on page 2062](#).
2. Replace the feed motor.
3. Replace the Bottom Mechatronics PCA.

0060-0001-0063 Feed motor – Driver fault

Call agent:

- ▲ Feed Motor malfunction, press Enter to start the paper jam clearance process. If the problem persists, call your support representative.

Service engineer:

1. Check for any visible obstacles restricting the movement of the feed motor. If there is a wrinkled mass of paper inside the paper path, lift the pinchwheels (using the screw that moves the pinchwheels, or the pinchwheels diagnostic test) and clear the obstruction.
2. Check that the feed motor to Bottom Mechatronics PCA cable (NI_150) is undamaged and correctly connected. See [Cable identification on page 2062](#).
3. Replace the feed motor.
4. Replace the Bottom Mechatronics PCA.

0060-0003-0009 Ribs motor/encoder – Connector/cable issue

Ribs motor and encoder cable disconnected

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the ribs motor to Bottom Mechatronics PCA cable (NI_153 or NI_154) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the ribs motor.
4. Replace the Bottom Mechatronics PCA.

0060-0003-0013 Ribs motor/encoder – Voltage zero or short-circuited**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the ribs encoder to Bottom Mechatronics PCA cable (NI_153 or NI_154) is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
2. Check that the ribs encoder is unbroken and undamaged.
3. Replace the ribs encoder.
4. Replace the Bottom Mechatronics PCA.

0060-0003-0017 Ribs motor/encoder – Movement blocked**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the ribs motor is not blocked by a paper jam or anything else preventing its movement. See [0060-02 Check mechatronics ribs motor on page 501](#).
2. Replace the ribs motor.
3. Replace the Bottom Mechatronics PCA.

0060-0003-0047 Rib motor/encoder – Homing error

Call agent:

- ▲ Remove media jam, ensure there is not any media blocking ribs encoder.

Service engineer:

1. Check that the ribs in media input are not being blocked by a paper jam or some other agent preventing their movement.
2. Check that the Ribs motor assembly to the Bottom Mechatronics PCA cable is undamaged and correctly connected.
3. Replace the Ribs motor.
4. Replace the Bottom Mechatronics PCA.

0060-0003-0059 Ribs motor/encoder – Malfunction

Call agent:

- ▲ Motor malfunction, press Enter to start the paper jam clearance process. If the problem persists, call your support representative.

Service engineer:

1. Check that the ribs motor is not blocked by a paper jam or anything else preventing its movement. See [0060-02 Check mechatronics ribs motor on page 501](#).
2. Replace the ribs motor.
3. Replace the Bottom Mechatronics PCA.

0060-0003-0060 Ribs motor/encoder – Direction test

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Check that the encoder is unplugged; if not, replace the motor.

0060-0003-0061 Ribs motor/encoder – Electrical fault

Call agent:

- ▲ Motor malfunction, press Enter to start the paper jam clearance process. If the problem persists, call your support representative.

Service engineer:

1. Check that the ribs motor assembly to Bottom Mechatronics PCA cable (NI_153 or NI_154) is undamaged and correctly connected. See [Cable identification on page 2062](#).
2. Replace the ribs motor.
3. Replace the Bottom Mechatronics PCA.

0060-0003-0063 Ribs motor/encoder – Driver fault

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check for any visible obstacles restricting the movement of the ribs motor. If there is a wrinkled mass of paper inside the paper path, lift the pinchwheels (using the screw that moves the pinchwheels, or the pinchwheels diagnostic test) and clear the obstruction.
2. Check that the ribs motor to Bottom Mechatronics PCA cable (NI_153 or NI_154) is undamaged and correctly connected. See [Cable identification on page 2062](#).
3. Replace the ribs motor.
4. Replace the Bottom Mechatronics PCA.

0060-0007-0071 Paper input presence sensor – Jam – Paper failed to arrive when expected

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the paper input presence sensor is correctly positioned.
2. Check that the NI_158 cable is undamaged and unbroken. See [Cable identification on page 2062](#).
3. Replace the paper input presence sensor.

0060-0007-0072 Paper input presence sensor – Jam – Paper detected for too long

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the paper input presence sensor is correctly positioned.
2. Check that the NI_158 cable is undamaged and unbroken. See [Cable identification on page 2062](#).
3. Replace the paper input presence sensor.

0060-0007-0073 Paper input presence sensor – Jam – Paper out too early

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the paper input presence sensor is correctly positioned.
2. Check that the NI_158 cable is undamaged and unbroken. See [Cable identification on page 2062](#).
3. Replace the paper input presence sensor.

0060-0008-0003 Ribs Type A - mismatch

Type A Ribs detected but printer configured with B.

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Change configuration or Ribs to match the ones that are physically installed with the printer's settings. Make sure that all Ribs are of the same type.
2. Replace the Bottom Mechatronics PCA.

0060-0009-0003 Ribs Type B - mismatch

Type B Ribs detected but printer configured with A.

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Change the configuration or the Ribs to match the ones that are physically installed with the printer's settings. Make sure that all Ribs are of the same type.
 - a. **OK** (Roll 1 should be Plain paper or HP Bond <90gr/m2) to perform the calibration.

-or-
Cancel to go back to the menu.
 - b. After pressing **OK**, the calibration plot is printed. Press:

OK to repeat it.

Cancel to go back to the menu.

2. Calibrate Media advance. Go to **Service menu ► Calibration ► Media Advance Calibration** and press
 - ▲ **OK** (Roll 1 should be Plain paper or HP Bond <90gr/m2) to perform the calibration.
 - or-
 - Cancel** to go back to the menu.
3. Check that the TOF sensor is correctly placed.
4. Check that the cable (NI_159) is undamaged and unbroken. See [Cable identification on page 2062](#).
5. Replace the TOF sensor.

65 PAPER ADVANCE

0065-0001-0008 Belt motor – Generic jam

Call agent:

- ▲ Motor malfunction, press Enter to start the paper jam clearance process. If the problem persists, call your support representative.

Service engineer:

1. Check that the belt motor is not blocked by a paper jam or anything else preventing its movement. See [0065-02 Check mechatronics on page 506](#).
2. Check that the belt motor assembly to Bottom Mechatronics PCA cable (NI_150) is undamaged and correctly connected. See [Cable identification on page 2062](#).
3. Replace the belt motor.
4. Replace the Bottom Mechatronics PCA.

0065-0001-0059 Belt motor – Malfunction

Call agent:

- ▲ Motor malfunction, press Enter to start the paper jam clearance process. If the problem persists, call your support representative.

Service engineer:

1. Check that the belt motor is not blocked by a paper jam or anything else preventing its movement. See [0065-02 Check mechatronics on page 506](#).
2. Check that the belt motor assembly to Bottom Mechatronics PCA cable (NI_150) is undamaged and correctly connected. See [Cable identification on page 2062](#).
3. Replace the belt motor.
4. Replace the Bottom Mechatronics PCA.

0065-0001-0060 Belt motor – Motor feedback malfunction

The paper advance direction test failed for the digital encoder.

Call agent:

- ▲ Motor malfunction, press Enter to start the paper jam clearance process. If the problem persists, call your support representative.

Service engineer:

1. Check that the encoder is not unplugged, broken, or damaged.
2. Check the motor-encoder assembly, and replace it if necessary.

0065-0001-0061 Belt motor – Electrical fault

Call agent:

- ▲ Motor malfunction, press Enter to start the paper jam clearance process. If the problem persists, call your support representative.

Service engineer:

1. The belt motor suffered an electrical fault.
2. Check that the belt motor assembly to Bottom Mechatronics cable (NI_150) is undamaged and correctly connected. See [Cable identification on page 2062](#).
3. Replace the belt motor.
4. Replace the Bottom Mechatronics PCA.

0065-0001-0063 Belt motor – Driver fault

Call agent:

- ▲ Motor malfunction, press Enter to start the paper jam clearance process. If the problem persists, call your support representative.

Service engineer:

1. Feed roller motor short circuit to ground.
2. Check that the belt motor assembly to Bottom Mechatronics cable (NI_150) is undamaged and correctly connected. See [Cable identification on page 2062](#).
3. Replace the belt motor.
4. Replace the Bottom Mechatronics PCA.

0065-0004-0009 Analog Encoder PCA – Connector/cable issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Paper Encoder PCA to Paper Advance PCA cable and connectors are unbroken, undamaged, and properly connected.
2. Check that the Paper Encoder PCA is unbroken and undamaged.
3. Replace the Paper Encoder PCA.

0065-0004-0013 Analog Encoder PCA – Voltage zero or short-circuited**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Analog Encoder PCA to Bottom Mechatronics cable (NI_152) is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
2. Check that the Analog Encoder PCA is unbroken and undamaged.
3. Replace the Analog Encoder PCA.

0065-0004-0038 Analog Encoder PCA – Sync issue

Digital Belt Encoder and Analog Belt Encoder are not returning the same data.

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Analog Encoder PCA to Bottom Mechatronics cable (NI_152) is properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Check that the Analog Encoder is unbroken and undamaged.
3. Replace the Analog Encoder.
4. Check that the Digital Encoder is unbroken and undamaged.
5. Replace the Digital Encoder.

0065-0004-0046 Paper Encoder PCA – Paper sensor calibration failed

Factory calibration missed. Could be caused by replacing the hard disk drive or Air Control PCA, or both at the same time. The printer needs to be recalibrated.

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Recalibrate the Analog Encoder PCA.
2. Replace the Analog Encoder PCA.

0065-0004-0047 Analog Encoder PCA – Sensor issue

Problem finding the drive roller zero

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Replace the Analog Encoder PCA.

0065-0006-0080 Bottom Mechatronics PCA – Safety interlock issue

Safety element in wrong state or not detected

Call agent:

1. Check that all covers and doors are properly closed.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check whether the front panel shows the close cover message or a system error related to the switch cover.
2. Check that the Central Distribution PCA to Bottom Mechatronics PCA cable (NI_110) and connectors are properly connected, unbroken, and undamaged.
3. Replace cable NI_110 or connector as needed.
4. Replace the Bottom Mechatronics PCA.
5. Replace the Central Distribution PCA.



NOTE: If a new Central Distribution PCA was installed for testing purposes, and you want to reinstall the original one, before removing it run [0045-08 Reset Central Distribution board to be removed on page 498](#).

0065-0006-0081 Bottom Mechatronics PCA – Voltage VPS failure

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Central Distribution PCA to Bottom Mechatronics PCA cable (NI_110) and connectors are properly connected, unbroken, and undamaged.
2. Replace cable NI_110 or connector as needed.
3. Replace the Bottom Mechatronics PCA.
4. Replace the Central Distribution PCA.

0065-0006-0082 Bottom Mechatronics PCA – Voltage VPS for feed roller failure

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Central Distribution PCA to Bottom Mechatronics PCA cable (NI_110) and connectors are properly connected, unbroken, and undamaged.
2. Replace cable NI_110 or connector as needed.
3. Replace the Bottom Mechatronics PCA.
4. Replace the Central Distribution PCA.

0065-0006-0083 Bottom Mechatronics PCA – ASIC 1 issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Replace the Bottom Mechatronics PCA.
2. Replace the Engine PCA.

0065-0006-0084 Bottom Mechatronics PCA – ASIC 2 issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the aerosol fan to Bottom Mechatronics PCA cable (NI_162 or NI_163) is undamaged and correctly connected. See [Cable identification on page 2062](#).
2. Run subsystem diagnostics and replace the affected aerosol fan.
3. Replace the Bottom Mechatronics PCA.
4. Replace the engine PCA.
5. Check if there is a Vacuum driver PCA failure. Run diagnostics 0005-01 and 0005-02 and swap both Vacuum driver PCAs.

0065-0006-0085 Bottom Mechatronics PCA – ASIC 3 issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the pinch motor to Bottom Mechatronics PCA cable (NI_169 or NI_170) is undamaged and correctly connected. See [Cable identification on page 2062](#).
2. Check that the diverter motor to Bottom Mechatronics PCA cable (NI_165 or NI_166) is undamaged and correctly connected. See [Cable identification on page 2062](#).
3. Run subsystem diagnostics and replace the affected motor.
4. Replace the Bottom Mechatronics PCA.
5. Replace the engine PCA.

0065-0006-0086 Bottom Mechatronics PCA – ASIC 4 issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the ribs motor to Bottom Mechatronics PCA cable (NI_153 or NI_154) is undamaged and correctly connected. See [Cable identification on page 2062](#).
2. Check that the belt motor to Bottom Mechatronics PCA cable (NI_150) is undamaged and correctly connected. See [Cable identification on page 2062](#).
3. Check that the feed motor Bottom Mechatronics PCA cable (NI_150) is undamaged and correctly connected. See [Cable identification on page 2062](#).
4. Run subsystem diagnostics and replace the affected motor.
5. Replace the Bottom Mechatronics PCA.
6. Replace the engine PCA.

0065-0006-0087 Bottom Mechatronics PCA – Chain clock issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Replace the Bottom Mechatronics PCA.

0065-0006-0088 Bottom Mechatronics PCA – Open fuse

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Central Distribution PCA to Bottom Mechatronics PCA cable (NI_110) and connectors are properly connected, unbroken, and undamaged.
2. Replace cable NI_110 or connector as needed.
3. Replace the Bottom Mechatronics PCA.
4. Replace the Central Distribution PCA.

0065-0006-0089 Bottom Mechatronics PCA – Voltage VCC 5V failure**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Replace the Bottom Mechatronics PCA.

0065-0006-0092 Bottom Mechatronics PCA – Debug port or spare port short-circuited**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the connector is unbroken and undamaged.
2. Replace the Bottom Mechatronics PCA.

0065-0008-0070 TOF sensor – Jam – Paper arrived unexpectedly**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Run 0065-06 -Check sensor (Diagnostic test and utilities> Paper Advance > 0065-06) to ensure that the sensor is working as expected.
2. Check that the TOF sensor is correctly placed.
3. Check that the cable (NI_159) is undamaged and unbroken. See [Cable identification on page 2062](#).
4. Replace the TOF sensor.

0065-0008-0071 TOF sensor – Jam – Paper failed to arrive when expected**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Run 0065-06 -Check sensor (Diagnostic test and utilities> Paper Advance > 0065-06) to ensure that the sensor is working as expected.
2. Check that the TOF sensor is correctly placed.
3. Check that the cable (NI_159) is undamaged and unbroken. See [Cable identification on page 2062](#).
4. Replace the TOF sensor.

0065-0008-0072 TOF sensor – Jam – Paper detected for too long

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Run 0065-06 -Check sensor (Diagnostic test and utilities> Paper Advance > 0065-06) to ensure that the sensor is working as expected.
2. Check that the TOF sensor is correctly placed.
3. Check that the cable (NI_159) is undamaged and unbroken. See [Cable identification on page 2062](#).
4. Replace the TOF sensor.

0065-0008-0073 TOF sensor – Jam – Paper out too early

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Run 0065-06 -Check sensor (Diagnostic test and utilities> Paper Advance > 0065-06) to ensure that the sensor is working as expected.
2. Check that the TOF sensor is correctly placed.
3. Check that the cable (NI_159) is undamaged and unbroken. See [Cable identification on page 2062](#).
4. Replace the TOF sensor.

0065-0008-0091 TOF sensor – Incorrect page size measured

Call agent:

1. Check that the media rolls are tight to their cores.
2. Calibrate the Page length for that material.
 - Optimize print quality > Advance calibration > Page Length accuracy.

- Select **automatic**
 - If it fails, select **manual**
3. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Measure the page length of the printing page that causes the error. If the page length is correct, go to point 2. Otherwise, go to point 5.
2. Check that the TOF sensor is correctly placed.
3. Check that the cable (NI_159) is undamaged and unbroken. See [Cable identification on page 2062](#).
4. Replace the TOF sensor.
5. Check for slippage between the media core and the Drawer hub.
6. Check that there is no dust on the Encoder of the Transportation roller gear assy (the free one).
7. Check if the error happens from any roll slot. If it only happens with a particular one, go to point 6, otherwise go to point 9.
8. Reboot the printer in diagnostic mode (see [How to run a diagnostic test on page 1976](#)).
9. Run diagnostic test 0020-004.
10. If the diagnostic fails, replace the Transport roller without motor ([Transport roller front roll \(CZ309-67172\) on page 751](#) or [Transport roller rear roll \(CZ309-67173\) on page 754](#)).
11. Run the Roll assist friction calibration with a wide roll (914 mm for example).
12. Run the Feed roller calibration with a wide roll in the roll 1 position.
13. Perform a TOF calibration.
14. Unload the media.
15. Load the media again (an automatic calibration will be performed).
16. If the issue persists, check the rolls of the paper loop bottom CZ309-67076. If said rolls are degraded, replace them.
17. If the issue persists, check [Drawer media loading problems on page 144](#). Repeat the calibrations explained in steps 10, 11, 12, 13 and 14 again.

0065-0009-0070 Paper output sensor – Jam – Paper arrived unexpectedly

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the paper output sensor is correctly placed.
2. Check that the cable (NI_167 or NI_168) is undamaged and unbroken. See [Cable identification on page 2062](#).
3. Replace the paper output sensor.

0065-0009-0071 Paper output sensor – Jam – Paper failed to arrive when unexpected

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the paper output sensor is correctly placed.
2. Check that the cable (NI_167 or NI_168) is undamaged and unbroken. See [Cable identification on page 2062](#).
3. Replace the paper output sensor.

0065-0009-0072 Paper output sensor – Jam – Paper detected for too long

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the paper output sensor is correctly placed.
2. Check that the cable (NI_167 or NI_168) is undamaged and unbroken. See [Cable identification on page 2062](#).
3. Replace the paper output sensor.

0065-0009-0073 Paper output sensor – Jam – Paper out too early

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the paper output sensor is correctly placed.
2. Check that the cable (NI_167 or NI_168) is undamaged and unbroken. See [Cable identification on page 2062](#).
3. Replace the paper output sensor.

0065-0010-0009 Paper sensors – Connector / cable issue

Paper sensor to Bottom Mechatronics PCA cable disconnected

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the paper sensor to Bottom Mechatronics PCA cable (NI_157) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the paper sensors.
4. Replace the Bottom Mechatronics PCA.

0065-0010-0013 Paper sensors – Voltage zero or short-circuited**Call agent:**

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the paper sensor cables (NI_157, NI_158, NI_159, or NI_174) are unbroken, undamaged, and properly connected; replace them if necessary. See [Cable identification on page 2062](#).
2. Check that the paper sensors are unbroken and undamaged.
3. Replace the paper sensors.
4. Check that the Bottom Mechatronics PCA is unbroken and undamaged.
5. Replace the Bottom Mechatronics PCA.

0065-0011-0009 Paper loop / digital belt encoder – Connector / cable issue

Paper loop encoder and digital belt encoder to Bottom Mechatronics PCA cable disconnected

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the paper loop encoder to Bottom Mechatronics PCA cable (NI_150) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Check that the digital belt encoder to Bottom Mechatronics PCA (NI_150) cable and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
3. Replace cable or connector as needed.
4. Replace the Paper Loop Encoder.
5. Replace the Digital Belt Encoder.
6. Check that the Bottom Mechatronics PCA is unbroken and undamaged.
7. Replace the Bottom Mechatronics PCA.

0065-0011-0013 Paper loop / digital belt encoder – Voltage zero or short-circuited

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the paper loop encoder to Bottom Mechatronics PCA cable (NI_150) is unbroken, undamaged, and properly connected. See [Cable identification on page 2062](#).
2. Check that the digital belt encoder to Bottom Mechatronics PCA cable (NI_150) is unbroken, undamaged, and properly connected. See [Cable identification on page 2062](#).
3. Replace cable or connector as needed.
4. Replace the paper loop encoder.
5. Replace the digital belt encoder.
6. Check that the Bottom Mechatronics PCA is unbroken and undamaged.
7. Replace the Bottom Mechatronics PCA.

0065-0012-0007 Belt Intermediate support roller – Check

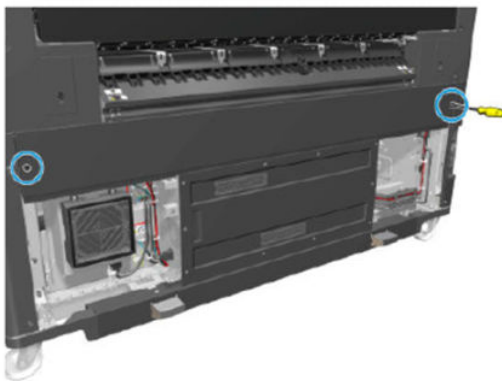
Call agent:

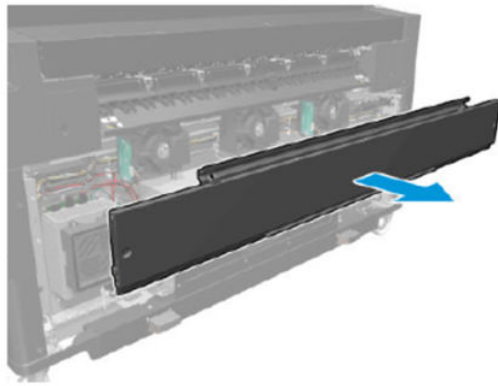
- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service engineer:

When this error appears at every printer boot-up, it is needed to check the status of the Intermediate support roller (CZ309-67322 PZ Intermediate Support Assy Service Kit). To check if it needs to be replaced:

1. Remove the [Top E-box cover \(CZ309-67059, CZ309-67262\) on page 656](#).





2. Check if there is any rubber powder on the beam behind the suction fans, as shown in the following picture.



3. In case there are rubber powder shards, please replace the Intermediate Support Assy Service Kit (CZ309-67322) by following the MyKnowledge App video called “How to replace the belts and platens for the HP PageWide XL Series – 4500 5000 8000.”

 **NOTE:** Complete disassembly of the belts is not necessary.

4. In both cases (no rubber powder visible or if you replace CZ309-67322), reset the error so that it does not appear anymore. At the Front panel, select **Settings > Service Menu > PMK reset counters > Additional life repair parts >** and select “Repair done” for Service Part **Intermediate Support Assy Service Kit (CZ309-67322)**, then press **OK**.

67 AEROSOL REMOVAL

0067-0001-0X17 Aerosol fan X – Movement blocked

(0067-0001-0117; 0067-0001-0317)

Where X indicates the aerosol fan number.

Call agent:

1. Check that all covers and doors are properly closed.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the fan filters are not clogged.
2. Check that the spinning of the fan is not blocked.
3. Run [0067-02 Check fans and filters on page 508](#) and replace the affected module (a pair of fans).

0067-0001-0X61 Aerosol fan X – Fault, not spinning or overcurrent

(0067-0001-0161; 0067-0001-0361)

Where X indicates the aerosol fan number.

An electrical fault in any electrical part of the fan

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Run subsystem diagnostics and replace the affected module (a pair of fans).

0067-0001-0X63 Aerosol fan X – Driver fault

(0067-0001-0163; 0067-0001-0363)

Where X indicates the aerosol fan number.

Driver fault in the aerosol fan

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Driver fault occurs in the aerosol fan.
2. Run subsystem diagnostics and replace the affected module (a pair of fans) or the Bottom Mechatronics PCA.
3. Check if there is a Vacuum driver PCA failure. Run diagnostics 0005-01 and 0005-02 and swap both Vacuum driver PCAs.

0067-0003-0009 Fan cables – Connector / cable issue

Aerosol fans cable disconnected

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the aerosol fan cables to Bottom Mechatronics PCA cable (NI_162 or NI_163) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the aerosol fan cables.
4. Replace the Bottom Mechatronics PCA.

70 PAPER OUTPUT

0070-0002-0009 Diverter motor – Connector / cable issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check for any visible obstacles restricting the movement of the diverter motor. If there is a wrinkled mass of paper inside the paper path, lift the pinchwheels (using the screw that moves the pinchwheels, or the pinchwheels diagnostic test), and clear the obstruction.
2. Check that the diverter motor to Bottom Mechatronics PCA cable (NI_165 or NI_166) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
3. Replace cable or connector as needed.
4. Replace the diverter motor.
5. Replace the Bottom Mechatronics PCA.

0070-0002-0059 Diverter motor – Servo shutdown

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the diverter motor is not blocked by a paper jam or anything else preventing its movement. See [0070-02 Check mechatronics on page 510](#).
2. Check that media path sensors are working properly (run diagnostic test [0065-06 Check sensors on page 507](#)).
3. Replace cable NI_166 or NI_165 or connector as needed.
4. Replace the diverter motor.
5. Replace the Bottom Mechatronics PCA.

0070-0002-0060 Diverter motor – Direction test

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Check that the encoder is unplugged; if not, replace the motor.

0070-0002-0061 Diverter motor – Electrical fault

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check for any visible obstacles restricting the movement of the diverter motor. If there is a wrinkled mass of paper inside the paper path, lift the pinchwheels (using the screw that moves the pinchwheels, or the pinchwheels diagnostic test), and clear the obstruction.
2. Check that the diverter motor to Bottom Mechatronics PCA cable (NI_165 or NI_166) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
3. Replace cable or connector as needed.
4. Replace the diverter motor.
5. Replace the Bottom Mechatronics PCA.

0070-0002-0063 Diverter motor – Driver fault

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check for any visible obstacles restricting the movement of the diverter motor. If there is a wrinkled mass of paper inside the paper path, lift the pinchwheels (using the screw that moves the pinchwheels, or the pinchwheels diagnostic test), and clear the obstruction.
2. Check that the diverter motor to Bottom Mechatronics PCA cable (NI_165 or NI_166) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
3. Replace cable or connector as needed.
4. Replace the diverter motor.
5. Replace the Bottom Mechatronics PCA.

0070-0002-0080 Top stacker physical detection failure

Call agent:

1. Ask customer to ensure nothing is blocking media output diverter.
2. If after reboot issue persists, your support representative it is needed to repair the printer on site.
3. Printer can be used without use top stacker

Service engineer:

1. Adjust the Paper-output path adjustable beam. See “Adjustment” in [Paper-output path adjustable beam \(CZ309-67201\) on page 1261](#).
2. Diverter homing is not finding top stacker installed.
3. Check that top stacker is properly installed.
4. Check that the diverter’s movement is smooth and that it performs the bump properly.

0070-0003-0009 Pinch motor – Connector / cable issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check for any visible obstacles restricting the movement of the pinch motor. If there is a wrinkled mass of paper inside the paper path, lift the pinchwheels (using the screw that moves the pinchwheels, or the pinchwheels diagnostic test), and clear the obstruction.
2. Check that the pinch motor to Bottom Mechatronics PCA cable (NI_169 or NI_170) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
3. Replace cable or connector as needed.
4. Replace the pinch motor.
5. Replace the Bottom Mechatronics PCA.

0070-0003-0059 Pinch motor – Malfunction

Call agent:

- ▲ Motor malfunction, press Enter to start the paper jam clearance process. If the problem persists, call your support representative.

Service engineer:

1. Check for any visible obstacles restricting the movement of the pinch motor. If there is a wrinkled mass of paper inside the paper path, lift the pinchwheels (using the screw that moves the pinchwheels, or the pinchwheels diagnostic test), and clear the obstruction.
2. Check that the pinch motor to Bottom Mechatronics PCA cable (NI_169 or NI_170) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).

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3. Replace cable or connector as needed.
4. Replace the pinch motor.
5. Replace the Bottom Mechatronics PCA.

0070-0003-0060 Pinch motor – Direction test

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Check that the encoder is unplugged; if not, replace the motor.

0070-0003-0061 Pinch motor – Electrical fault

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check for any visible obstacles restricting the movement of the pinch motor. If there is a wrinkled mass of paper inside the paper path, lift the pinchwheels (using the screw that moves the pinchwheels, or the pinchwheels diagnostic test), and clear the obstruction. See [0070-02 Check mechatronics on page 510](#).
2. Check that the pinch motor to Bottom Mechatronics PCA cable (NI_169 or NI_170) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
3. Replace cable or connector as needed.
4. Replace the pinch motor.
5. Replace the Bottom Mechatronics PCA.

0070-0003-0063 Pinch motor – Driver fault

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check for any visible obstacles restricting the movement of the pinch motor. If there is a wrinkled mass of paper inside the paper path, lift the pinchwheels (using the screw that moves the pinchwheels, or the pinchwheels diagnostic test) and clear the obstruction.
2. Check that the pinch motor to Bottom Mechatronics PCA cable (NI_169 or NI_170) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
3. Replace cable or connector as needed.
4. Replace the pinch motor.
5. Replace the Bottom Mechatronics PCA.

0070-0004-0009 Media output jam sensor— Connector/cable issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Media output jam sensor (also called the Paper presence sensor) to Bottom Mechatronics PCA cables (NI_169, NI_172) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cables or connector if necessary.
3. Replace the Media output jam sensor (also called the Paper presence sensor).
4. Replace the Bottom Mechatronics PCA.

0070-0005-0009 Paper output HI sensors – Connector/cable issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the HI paper output sensor to Bottom Mechatronics PCA cables (NI_167, NI_168) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cables or connector if necessary.
3. Replace the HI paper output sensors.
4. Replace the Bottom Mechatronics PCA.

0070-0006-0013 Paper output HI-LO sensor – Voltage zero or short-circuited

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the HI paper output sensor short-circuit cables (NI_167, NI_168, NI_169, NI_172) are unbroken, undamaged, and properly connected; replace them if necessary. See [Cable identification on page 2062](#).
2. Check that the LO paper output sensor short-circuit cables (NI_167, NI_168, NI_169, NI_172) are unbroken, undamaged, and properly connected; replace them if necessary. See [Cable identification on page 2062](#).
3. Check that the HI paper output sensors are unbroken and undamaged.
4. Check that the LO paper output sensors are unbroken and undamaged.
5. Replace the HI paper output sensors.
6. Replace the LO paper output sensors.

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7. Check that the Bottom Mechatronics PCA is unbroken and undamaged.
8. Replace the Bottom Mechatronics PCA.

0070-0007-0013 Diverter / pinch encoder – Voltage zero or short-circuited

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the diverter encoder cable (NI_165 or NI_166) is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
2. Check that the pinch encoder cable (NI_169 or NI_170) is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
3. Check that the diverter encoder is unbroken and undamaged.
4. Check that the pinch encoder is unbroken and undamaged.
5. Replace the diverter encoder.
6. Replace the pinch encoder.

80 USER INTERFACE (FRONT PANEL)

0080-0001-0002 Front panel – Presence

Front Panel PCA to Formatter PCA cable issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the Front Panel PCA to Formatter PCA cable (NI_128) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace the Front Panel PCA.
4. Replace the Formatter PCA.

0080-0002-0002 Semaphore – Presence

Semaphore to Central Distribution PCA cable issue

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the semaphore to Central Distribution PCA cable (NI_119) and connectors are properly connected, unbroken, and undamaged. See [Cable identification on page 2062](#).
2. Replace cable or connector as needed.
3. Replace semaphore.
4. Replace the Central Distribution PCA.



NOTE: If a new Central Distribution PCA was installed for testing purposes, and you want to reinstall the original one, before removing it run [0045-08 Reset Central Distribution board to be removed on page 498](#).

0080-0003-0009 Top cover – Switches inconsistent state

Right and left switches are reporting different states.

Call agent:

1. Check that all covers are properly closed.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check whether the front panel shows a system error related to the switch cover or safety interlock.
 - If there is a system error about the switch cover, check the left switch.
 - If there is a system error about the safety interlock, check the right switch.
2. Check that the switches are unbroken and undamaged.
3. Check the switch cables (NI_121 and NI_122). See [Cable identification on page 2062](#).
4. Check that the switch connectors on the Central Distribution PCA are properly connected.
5. Replace cable or connector as needed.
6. Replace switches as needed.
7. Replace the Central Distribution PCA.

0080-0003-0018 Top cover – Cover open while printing**Call agent:**

1. Check that all covers are properly closed.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check whether the front panel shows a system error related to the cover switches.
2. Check that the switches are unbroken and undamaged.
3. Check the switch cables (NI_121 and NI_122). See [Cable identification on page 2062](#).

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4. Check that the switch connectors on the Central Distribution PCA are properly connected.
5. Replace cable or connector as needed.
6. Replace the switches as needed.
7. Replace the Central Distribution PCA.

0080-0004-0009 Front cover – Switches inconsistent state

Right and left switches are reporting different states.

Call agent:

1. Check that all covers are properly closed.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check whether the front panel shows a system error related to the switch cover or safety interlock.
 - If there is a system error about the switch cover, check the left switch.
 - If there is a system error about the safety interlock, check the right switch.
2. Check that the switches are unbroken and undamaged.
3. Check the switch cables (NI_121 and NI_122). See [Cable identification on page 2062](#).
4. Check that the switch connectors on the Central Distribution PCA are properly connected.
5. Replace cable or connector as needed.
6. Replace switches as needed.
7. Replace the Central Distribution PCA.

0080-0004-0018 Front cover – Cover open while printing

Call agent:

1. Check that all covers are properly closed.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check whether the front panel shows a system error related to the cover switches.
2. Check that the switches are unbroken and undamaged.
3. Check the switch cables (NI_121 and NI_122). See [Cable identification on page 2062](#).
4. Check that the switch connectors to the Central Distribution PCA are properly connected.
5. Replace cable or connector as needed.

6. Replace the switches.
7. Replace the Central Distribution PCA.

0080-0005-0009 Back cover – Switches inconsistent state

Right and left switches are reporting different states.

Call agent:

1. Check that all covers are properly closed.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check whether the front panel shows a system error related to the switch cover or safety interlock.
 - If there is a system error about the switch cover, check the left switch.
 - If there is a system error about the safety interlock, check the right switch.
2. Check that the switches are unbroken and undamaged.
3. Check the switch cables (NI_121 and NI_122). See [Cable identification on page 2062](#).
4. Check that the switch connectors on the Central Distribution PCA are properly connected.
5. Replace cable or connector as needed.
6. Replace switches as needed.
7. Replace the Central Distribution PCA.

0080-0005-0018 Back cover – Cover open while printing

Call agent:

1. Check that all covers are properly closed.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check whether the front panel shows a system error related to the cover switches.
2. Check that the switches are unbroken and undamaged.
3. Check the switch cables (NI_121 and NI_122). See [Cable identification on page 2062](#).
4. Check that the switch connectors to the Central Distribution PCA are properly connected.
5. Replace cable or connector as needed.
6. Replace the switches.
7. Replace the Central Distribution PCA.

0080-0006-0018 Service carriage door – Cover open while printing

Call agent:

1. Check that all covers are properly closed.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check whether the front panel shows a system error related to the cover switches.
2. Check that the switches are unbroken and undamaged.
3. Check the switch cable (NI_121). See [Cable identification on page 2062](#).
4. Check that the switch connectors to the Central Distribution PCA are properly connected.
5. Replace cable or connector as needed.
6. Replace the switches.
7. Replace the Central Distribution PCA.

90 FIRMWARE

0090-0001-0097 System manager – A process being babysitted died

Call agent:

1. Use the power switch at the rear to turn off the printer, then disconnect the power cord. Reconnect the power cord, then turn on the printer.
2. Update the firmware.
3. Note the information available by pressing while viewing the system error screen; or, preferably, provide the printer log. See [Obtaining the printer log and the diagnostics package on page 2058](#).

Service engineer:

1. Restart the printer.
2. Update the firmware.
3. Check if there is an electrical failure with the Output pinches motor (see [Paper-output pinches motor \(CZ309-67142\) on page 898](#)). Use Diagnostics 0070-01 and 0070-02.
4. Replace the Output pinches motor if a failure is detected.

0090-0001-0099 System manager – A process being babysitted died

Call agent:

1. Use the power switch at the rear to turn off the printer, then disconnect the power cord. Reconnect the power cord, then turn on the printer.
2. Update the firmware.
3. Note the information available by pressing while viewing the system error screen; or, preferably, provide the printer log. See [Obtaining the printer log and the diagnostics package on page 2058](#).

Service engineer:

1. Restart the printer.
2. Update the firmware.

0090-0002-0004 CDS server – Comms issue

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0003-0004 CDS client – Comms issue

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0003-0080 CDS client – Cannot find the CDS server

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0004-0080 FSM – Transition not found

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0005-0080 Atlas ASIC – ASIC driver not compatible with hardware or OS

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0005-0081 Atlas ASIC – ASIC driver semaphore locked

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0005-0081 Atlas ASIC – ASIC driver interrupt lost

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0006-0084 EH-CIO connectivity – IO reset

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the JDI PCA is properly connected, unbroken, and undamaged.
2. Run 0045-11 Hard Reset JDI.
3. Install the latest firmware.
4. Replace the JDI PCA.

0090-0006-0086 EH-CIO connectivity – Heartbeat stop

The JDI PCA is not reporting to the Engine PCA.

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the JDI PCA is properly connected, unbroken, and undamaged.
2. Run 0045-11 Hard Reset JDI.
3. Install the latest firmware.
4. Replace the JDI PCA.

0090-0006-0088 EH-CIO connectivity – IO error no IP**Call agent:**

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the JDI PCA is properly connected, unbroken, and undamaged.
2. Run 0045-11 Hard Reset JDI.
3. Install the latest firmware.
4. Replace the JDI PCA.

0090-0007-0005 EH PDL – I/O timeout**Call agent:**

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0007-0044 EH PDL – No memory to start PDL

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0007-0044 EH PDL – Out of memory

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0007-0080 EH PDL – Fatal error

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0007-0080 EH PDL – Generic warning

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0007-0082 EH PDL – PDF is locked for printing

Call agent:

1. Ensure that the file sent is not protected.
2. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
3. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0007-0085 EH PDL – Out of disk space**Call agent:**

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Free space on hard disk:
 1. From the Diagnostic menu, run **0045-09 – Delete Job Manager queue** (also see [0045-09 Delete Job Manager queue on page 498](#)).
 2. From the Service menu, select **Disk Utilities ► Disk wipe DoD 5220.22/M**, and select the first entry—**Insecure mode**.

0090-0007-0087 EH PDL – PS fonts missing**Call agent:**

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0007-0089 EH PDL – Unexpected end of job**Call agent:**

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the customer's network to ensure that network speed is adequate and that there are no breaks in communication.
2. Update the printer's firmware.
3. Reinstall HP SmartStream.

0090-0007-0093 EH PDL – Legal restart**Call agent:**

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0007-0094 EH PDL – Out of virtual memory

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0007-0096 EH PDL – Parse error

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0008-0080 EH VPM – JPEG library error

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0008-0080 EH VPM – RasterConfigure failed

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0008-0080 EH VPM – Image swath

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0008-0080 EH VPM – Open page

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0009-0080 EH FS – File copy

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0009-0080 EH FS – Check disk

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0009-0080 EH FS – Make directory

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0009-0080 EH FS – Remove directory

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0009-0080 EH FS – Open directory

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0009-0080 EH FS – Close directory

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0009-0080 EH FS – Read directory

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0009-0080 EH FS – Rewind directory

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0009-0080 EH FS – File stat

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0009-0080 EH FS – File delete

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0009-0080 EH FS – File rename

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0009-0080 EH FS – File open

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0009-0080 EH FS – File close

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0009-0080 EH FS – File read

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0009-0080 EH FS – File write

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0009-0080 EH FS – File seek

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0009-0080 EH FS – File ioctl

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0009-0080 EH FS – Asynchronous file read

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0009-0080 EH FS – Asynchronous file write

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0009-0080 EH FS – Volume stat

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0010-0080 EH JS – CDS object not found

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0011-0092 EH profiler – Profiling failed

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the disk.
2. Install the latest firmware.

0090-0012-0083 EH PM – Unsupported PDL

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0013-0098 Embedded Web Server – Unable to upload firmware file

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0014-0098 Embedded Web Server – Unable to upload paper preset file

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Try from another computer.
2. Reset I/O permissions and password

0090-0015-0080 Embedded Web Server – Failed to process a request

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Try from another computer.
2. Reset I/O permissions and password

0090-0016-0080 Util L10N – Bundle not found

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0017-0080 Util CDS – Uncaught a throwable in a CDS trap

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0018-0004 GUI Lycurgus – Unable to connect to front panel

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0018-0004 GUI Lycurgus – Control panel connection lost

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0018-0080 GUI Lycurgus – Assert

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0018-0080 GUI Lycurgus – A process died**Call agent:**

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0018-0098 GUI Lycurgus – Error updating front-panel firmware**Call agent:**

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0018-0099 GUI Lycurgus – Process lost**Call agent:**

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

0090-0020-0049 Folder – Configuration out of range or wrong

Page size not compatible with Folder.

Call agent:

1. If printing to a Folder and: page length is longer than 1.9 meters (75 inches); the image quality is set to "max details," this error will be displayed all the time. Workaround: print with image quality setting at "uniform area" or "FAST."
2. Check that the page size configuration is supported by the Folder.
3. Print using a supported size.
4. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. With the Folder, when printing in "Max details," plots longer than 1.9m / 75in, the speed of the printer becomes unsupported by the Folder; this is the root cause of this error. Folder does not accept long plots in high detail because the printer speed is reduced to 3ips.



NOTE: In High Detail ("Max details"), the printer considers jobs that are 75 inches or longer as long plots.

2. Check that the page size configuration is supported by the Folder.
3. If the error is displayed when trying to print to folder "stack" or "not folded" (so sending the page to the top of the bridge), replace the communication cable between the FF and CF PCA, cable 102 (K5H75-67021 / Cable tree FF-Contr.- CF-Contr.+Master).
4. Try to print using a supported size.
5. Installing the latest firmware is recommended.

0090-0090-0003 General – Firmware/hardware mismatch

Call agent:

1. Use the power switch at the rear to turn off the printer, then disconnect the power cord. Reconnect the power cord, then turn on the printer.
2. Update the firmware.
3. Information available by pressing while viewing the system error screen.

Service engineer:

- ▲ Update the firmware.

0090-0090-0005 General – Timeout

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Update the firmware.

0090-0090-0078 Paper preset imported manually is not fully compatible with the actual firmware release

Paper preset installed manually in the printer but it is not up to date. It will work but some settings will be applied by default. It is recommended to upgrade this paper preset.

Call agent:

1. Check the installed media in EWS > Setup > Paper management.
2. Upload the paper presets that are not included by default in the printer. The warning message on startup will disappear once all non-factory default paper presets are updated. Hiding a paper preset will not prevent the warning message.

Service engineer:

1. Delete non-factory default papers from the Service menu > Paper-preset utilities > Remove non-factory papers.
2. Install, if available, a paper preset that is compatible with the current firmware release.

0090-0090-0080 General – Generic firmware issue**Call agent:**

1. Use the power switch at the rear to turn off the printer, then disconnect the power cord. Reconnect the power cord, then turn on the printer.
2. Update the firmware.
3. Information available by pressing while viewing the system error screen.

Service engineer:

- ▲ Update the firmware.

0090-0090-0083 General – File format issue/not supported PDL

Remove blank areas setting is not supported when cutter is off.

Call agent:

- ▲ If the cutter is disabled, do not use the remove blank areas setting. If this setting is needed, enable the cutter.

Service engineer:

1. If the cutter is disabled, do not use the remove blank areas setting. If this setting is needed, enable the cutter.
2. Update the printer firmware.

0090-0095-0078 – Paper preset imported manually is not fully compatible with the actual firmware release

Paper preset installed manually in the printer but not updated. It will work but some settings will be applied by default. It is recommended to upgrade this paper preset.

Call agent:

1. Check the installed media in EWS > Setup > Paper management.
2. Upload the paper presets not included by default in the printer. The warning message on startup will disappear once all non-factory default paper presets are updated. Hiding a paper preset will not prevent the warning message.

Service engineer:

1. Delete non factory default papers from the Service menu > Paper-preset utilities > Remove non-factory papers.
2. Install (if available) a paper preset that is compatible with the current firmware release.

0090-0095-0095 Firmware – Media settings issue

Media settings are incompatible with the firmware, they won't be visible. Old custom media types should be deleted.

Call agent:

- ▲ Delete custom media types from the user menu.

Service engineer:

1. Update the printer firmware.
2. Ensure that all the custom media types have been deleted.
3. Restore factory defaults.

0090-0095-0098 Paper settings – Area missing in paper settings file

Call agent:

1. Update the printer firmware.
2. Try a default paper, if it works then create a new custom paper.

Service engineer:

1. Update the printer firmware.
2. Do a backup of custom paper, restore factory defaults, and reinstall custom papers one by one.

99 SYSTEM

0099-0001-0082 System — CPU is lower than required by SKU catalog

Printer configuration is not standard. High-end printer using low-end processor.

Call agent:

- ▲ The customer can suffer performance issues, a processor change to the right one is required.

Service engineer:

- ▲ Printer does not have a valid HW configuration. Service visit necessary.

0099-0001-0083 System — CPU is greater than required by SKU catalog

Printer configuration is not standard. Low-end printer using high-end processor.

Call agent:

- ▲ Printer does not have a valid HW configuration. Service visit necessary.

Service engineer:

- ▲ Replace Formatter CPU for the correct one according to printer model.

0099-0003-0083 System — Number of disks is greater than required by SKU catalog

Printer configuration is not standard. Low-end printer using HDD and SSD.

Call agent:

- ▲ The printer does not have a valid HW configuration; a service visit is needed.

Service engineer:

- ▲ Replace HDD or SSD for the correct one according to printer model.

0099-0005-0082 RAM size is lower than required by SKU catalog

Printer configuration is not standard.

Call agent:

- ▲ The printer does not have a valid hardware configuration; a service visit is needed.

Service engineer:

- ▲ Replace RAM card for the appropriate one according to printer model.

0099-0005-0083 RAM size is greater than required by SKU catalog

Printer configuration is not standard.

Call agent:

- ▲ The printer does not have a valid hardware configuration; a service visit is needed.

Service engineer:

- ▲ Replace RAM card for the appropriate one according to printer model.

0099-0007-0082 System — HDD is smaller than required by SKU catalog

Printer configuration is not standard.

Call agent:

- ▲ The printer does not have a valid hardware configuration; a service visit is needed.

Service engineer:

- ▲ Replace HDD with the appropriate one according to printer model.

0099-0008-0082 System — SSD is smaller than required by SKU catalog

Printer configuration is not standard.

Call agent:

- ▲ The printer does not have a valid hardware configuration; a service visit is needed.

Service engineer:

- ▲ Replace SSD with the appropriate one according to printer model.

0099-0010-0080 System — High volume PMK preventive maintenance action needed

This system error is appearing when the "active high volume PMK maintenance" is enable from service menu and means that a maintenance is required..

Call agent:

- ▲ Maintenance is required, please contact your support/service team.

Service engineer:

- ▲ Please follow [The preventive maintenance program \(PMK\) concept on page 1076](#).

1000 ACCESSORIES

1000-0000-0004 Generic – Comms error

The printer cannot recognize an attached accessory.

Call agent:

1. Check that the accessory cables and connectors are unbroken, undamaged, and properly connected.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the accessory cables and connectors are unbroken, undamaged, and properly connected.
2. Replace cable or connector as needed.
3. Run the server diagnostics for the accessory.

1000-0000-0078 Generic – Update needed

The printer was unable to upgrade the accessory successfully.

Call agent:

1. Check that the accessory cables and connectors are unbroken, undamaged, and properly connected.
2. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
3. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the accessory cables and connectors are unbroken, undamaged, and properly connected.
2. Replace cable or connector as needed.
3. Ensure that the printer has the latest firmware.
4. Run the server diagnostics for the accessory.

1000-0000-0089 Accessory – Event not received

Event not received from accessory.

Call agent:

1. This error may not cause problems with the printing process, but in most cases will only cause a jam in the accessory. Just follow the media jam process.
2. Just re-initializing the accessory should set it properly again. Also, check that you have the latest firmware installed.

Service engineer:

1. This is a software error, it could be cleared by just rebooting the accessory.
2. Ensure that printer and accessory firmware are updated with the latest firmware available.
3. Th issue could be caused by the Accessory PCA. Replace cable or board if problem persists.
4. Run the server diagnostics for the accessory.

1000-0000-0091 – Wrong Part Number format detected. Device might not work properly

Folder part number is not set correctly. This may produce, lower folding speed, paper jams, and/or may cause the TAB applicator or offline folding option to not be available.

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Go to the **Service Menu > Accessory utilities > Set part number**, and select the correct folder configuration.

1000-0000-0092 – Accessory not supported by SKU.

The accessory cannot be installed.

Call agent:

1. Check if the printer SKU (part number) supports the accessory.
2. If the issue persists after restarting, your support representative must repair the printer on site.
3. Detach and unplug the accessory and print using another output destination.

Service engineer:

1. Check that your printer model supports this accessory.
2. Ensure that printer and accessory firmware are updated with the latest firmware available.
3. Check that the accessory cables and connectors are unbroken, undamaged, and properly connected.
4. Replace cable or connector as needed.

1001 SCANNER

1001-0001-0001 Paper feed motor – Malfunction

System hardware issue

Call agent:

1. Open the scanner cover. Underneath you will see red, then green, then blue flashing lights.
2. In the center of the scanner cover, between the flashing lights, you will find four small sensors labeled R, G, B, and L. Put your fingers over the R, G, and B sensors simultaneously; the scanner motor should advance.
3. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. If there is no response from the scanner motor, see e-box or stepper motor, and see scanner motor assembly (MFP only).
2. Replace the scanner controller board.
3. Check the scanner controller board cable connections and replace the cables if necessary.
4. Replace the paper sensors, see scanner exit paper sensors (MFP only).
5. Restart the printer.
6. Ensure that the printer has the latest firmware.
7. Open the scanner cover. Underneath you will see red, then green, then blue flashing lights.
8. In the center of the scanner cover, between the flashing lights, you will find four small sensors labeled R, G, B, and L. Put your fingers over the R, G, and B sensors simultaneously; the scanner motor should advance.

1001-0001-0008 Paper feed motor – Paper jam

System hardware issue

Call agent:

1. Turn off the printer using the power key at the front, then also turn off the power switch at the rear and disconnect the power cable.
2. There is a small lever at the rear left of the scanner. Slide the lever to the right and open the scanner cover.
3. Remove the jammed paper from the scanner.
4. Check and clean the pressure rollers.
5. Close the scanner cover and gently push it down to lock it into place.
6. Reconnect the printer's power cable. Turn on the power switch at the rear, and turn on the printer using the power key. If no paper is seen:

- a. Open the scanner cover. Underneath you will see red, then green, then blue flashing lights.
- b. In the center of the scanner cover, between the flashing lights, you will find four small sensors labeled R, G, B, and L. Put your fingers over the R, G, and B sensors simultaneously; the scanner motor should advance.

Service engineer:

- ▲ If there is no response from the scanner motor, replace the Scanner Controller Board.

1001-0002-0101 CIS sensor – Malfunction**Call agent:**

1. Clean and calibrate the scanner.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Replace the flat flexible cable.
2. Replace the CIS A element.
3. Replace the scanner controller board (SCU).

1001-0002-0201 CIS sensor – Malfunction**Call agent:**

1. Clean and calibrate the scanner.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Replace the flat flexible cable.
2. Replace the CIS B element.
3. Replace the scanner controller board (SCU).

1001-0002-0301 CIS sensor – Malfunction**Call agent:**

1. Clean and calibrate the scanner.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Replace the flat flexible cable.
2. Replace the CIS C element.
3. Replace the scanner controller board (SCU).

1001-0002-0401 CIS sensor – Malfunction

Call agent:

- ▲ Clean and calibrate the scanner.

Service engineer:

1. Replace the flat flexible cable.
2. Replace the CIS D element.
3. Replace the scanner controller board (SCU).

1001-0002-0501 CIS sensor – Malfunction

Call agent:

1. Clean and calibrate the scanner.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Replace the flat flexible cable.
2. Replace the CIS E element.
3. Replace the scanner controller board (SCU).

1001-0003-0052 Scanner – Power cable not detected

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Check the condition and connections of the scanner power cable (NI_117), and replace it if necessary.

1001-0004-0053 Scanner – Data cable not detected

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check the condition of the scanner USB cable (NI_117) and its connections; if necessary, replace the cable.
2. Check the Central Distribution PCA fuse (F13).
3. Replace the Central Distribution PCA fuse.
4. Replace the Central Distribution PCA.

1001-0005-0002 SCU board – Presence

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the SCU board to Central Distribution PCA cable and connections are unbroken, undamaged, and properly connected.
2. Replace cable or connector as needed.
3. Replace the SCU board.
4. Replace the Central Distribution PCA.

1001-0006-0080 Library – Contex library failed to load

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

1001-0006-0081 Library – Contex library failed to load

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

1001-0006-0082 Library – Contex library failed to load

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

1001-0006-0099 Library – Contex library failed to load

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ Install the latest firmware.

1001-0007-0046 Firmware – Scanner never calibrated or calibration values not found

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Perform the required calibration.
2. Ensure that the printer has the latest firmware.

1001-0007-0083 Firmware – File I/O issue

Call agent:

1. Restart the printer.
2. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
3. Select **Jobs > Options > Delete all scan queue jobs**.
4. Ensure that the hard disk installed in the printer is the correct one for that printer.
5. Check and clean the scanner elements.
6. Calibrate the scanner.
7. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ In some corner cases, the issue could be related to paper movement. Replace the paper sensors.

1001-0007-0099 Firmware – File I/O issue

Call agent:

1. Restart the printer.
2. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
3. Select **Jobs > Options > Delete all scan queue jobs**.
4. Ensure that the hard disk installed in the printer is the correct one for that printer.

5. Check and clean the scanner elements.
6. Calibrate the scanner.
7. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

- ▲ In some corner cases, the issue could be related to paper movement. Replace the paper sensors.

1001-0008-0001 Status – Malfunction

Call agent:

- ▲ Clean and then calibrate the scanner.

Service engineer:

- ▲ Replace the scanner controller board (SCU).

8XXX-XXXX-0000 Internal printer firmware error

Where X can be any hexadecimal value.

After the description provided below, you can find a list of the most common internal printer firmware errors.

Call agent:

- ▲ Ensure that the printer has the latest firmware.

Service engineer:

1. Check that the printer has the latest firmware.
2. Restart the printer and update the firmware to the latest version, if necessary.
3. In case the issue persists, restart the printer one more time (at this 2nd boot, the printer will mainly try to clean all jobs in the queue).
 - When switching off the printer, make sure that all the LEDs at the side of the power inlet are powered off before powering back on.
 - In case the system error prevents the printer to reach ready state, boot in diagnostic mode and run [0045-09 Delete Job Manager queue on page 498](#).
 - In case you can reach ready state, but the printer seems to be unstable, try to run the following test from **Service men: Disk Utilities ► Disk wipe DoD 5220.22/M**, and select the first entry, **Insecure mode**.
4. If the error persists after having performed the steps above, report the error to HP Support. See [Reporting a system error to HP Support on page 294](#).

List of the most common internal printer firmware errors:

82A0-1A7E-0000

803D-05BE-0000

8284-1A7E-0000

883C-A0AA-0000

8027-DB54-0000

82E6-59C2-0000

80AE-C014-0000

8047-BA82-0000

For HP-authorized personnel only

8000-E896-0000	84D4-F279-0000	80AB-ECA5-0000	887B-E5D6-0000
8334-2EB7-0000	83C0-823B-0000	8856-0F12-0000	846F-03C3-0000
83C5-4ABE-0000	88C6-E5D6-0000	8183-FD40-0000	815B-0938-0000
8242-B805-0000	866F-1471-0000	81F4-98C1-0000	8000-7150-0000
8316-DE7F-0000	854F-C305-0000	83DB-898E-0000	8322-DE7F-0000
833F-D6C3-0000	820A-2589-0000	8484-03C3-0000	80AD-DF22-0000
856B-EDE5-0000	834F-01AB-0000	82F7-492E-0000	833B-7900-0000
80B9-CD03-0000	85F2-775D-0000	80F7-36F6-0000	816C-E8D5-0000
80A3-F30D-0000	8ED0-EDE5-0000	8271-9629-0000	80B7-D63C-0000
8133-9AF1-0000	8496-55E8-0000	85A5-55E8-0000	8B61-EDE5-0000
85AC-C5EF-0000	812F-3C40-0000	8131-F2A1-0000	854C-C5EF-0000
804A-2589-0000	8000-7E31-0000	8149-0938-0000	80C2-ECA5-0000
80A3-2120-0000	829A-FF6B-0000	813D-FF6B-0000	8516-D44F-0000
8000-1BEB-0000	8317-385C-0000	8109-188C-0000	828D-C05B-0000
836C-3288-0000	8C6F-0F12-0000	8235-B805-0000	8337-7900-0000
89C6-B197-0000	8000-7384-0000	8141-385C-0000	8182-AF54-0000
8355-CBF7-0000	80E8-EFFF-0000	84C9-03C3-0000	8E3B-EDE5-0000
8000-ACA4-0000	8570-EDE5-0000	80B9-9B8E-0000	803D-EAC1-0000
8112-2AA8-0000	80F5-555C-0000	8B66-EDE5-0000	86FC-823B-0000
8715-D496-0000	82BC-2589-0000	8000-BA61-0000	85DC-7BC2-0000
8098-C790-0000	8142-2FEA-0000	81DA-C2F2-0000	813F-FF6B-0000
80BF-F30D-0000	869F-2205-0000	80A6-CABA-0000	8330-C5EF-0000
8137-F50F-0000	80AE-AA91-0000	8593-6503-0000	8093-C596-0000
8107-385C-0000	831C-2EB7-0000	81FA-EE6B-0000	830B-7284-0000
80D0-4361-0000	886C-0F12-0000	83B9-823B-0000	80C1-CFEE-0000
80D4-6F12-0000	812A-4655-0000	8121-CD03-0000	8251-5874-0000
8420-748C-0000	806B-5405-0000	82CB-CEDD-0000	8073-AD05-0000
8463-2E38-0000	80F6-385C-0000	8000-F071-0000	8279-5874-0000
80B3-9B8E-0000	827A-CEDD-0000	8673-F016-0000	82B1-71E7-0000
86DA-823B-0000	8B89-B3EC-0000	80AA-CFEE-0000	8143-F52E-0000
866B-F016-0000	83F7-A9A3-0000	821C-CEDD-0000	8144-7284-0000
8A9D-C5EF-0000	8431-19EC-0000	83BA-823B-0000	80E6-555C-0000
80F5-385C-0000	814C-F117-0000	80C4-CFEE-0000	829F-A597-0000
8859-F279-0000	848B-EFFF-0000	809C-9E3C-0000	8114-3288-0000
83AE-92AA-0000	807D-4538-0000	80DA-A413-0000	8000-641E-0000
8000-4609-0000	84E4-03C3-0000	831D-0DB3-0000	815B-185D-0000

8136-E714-0000	80E6-EFFF-0000	8000-2446-0000	80E7-17CA-0000
87AB-F279-0000	8092-F30D-0000	80CA-CBF7-0000	8304-4ABE-0000
8000-0CEC-0000	8307-0297-0000	8075-2589-0000	819B-F2DB-0000
89F3-EDE5-0000	81D8-7972-0000	8B00-C5EF-0000	80E9-27BE-0000
83AF-55E8-0000	85EB-775D-0000	8C37-0F12-0000	85F1-99E3-0000
8D79-B3EC-0000	81EE-2EB7-0000	803C-7005-0000	8624-9126-0000
865B-03C3-0000			









7 Support and diagnostic menu


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Diagnostic tests and utilities


Entering the Diagnostics menu


1. Ensure that the printer is switched off using the power key on the side of the front panel, and not with the power switch at the rear of the printer.
2. Press and release the power key to switch on the printer.
3. Wait for the  icon to appear.
4. Press the  icon, which then begins to flash.
5. Press and release three icons, one after another, in this order:
 -    to use the diagnostics as a service engineer.
 -    to use the diagnostics as a customer.

 **IMPORTANT:** Do not press the icons at the same time: press each icon and release it before pressing the next one.

6. The six icons at the sides of the front panel all blink four times.
7. Wait until the printer completes the initialization sequence and shows the **Diagnostics** menu.
8. In the **Diagnostics** menu, scroll up or down by sliding your finger up or down the front panel, and press an option to select it.

 **NOTE:** The diagnostic tests and utilities work in a special mode that does not require the full initialization of the printer. Therefore, whenever you have finished a test, you must turn off the printer and turn it on again before trying to print or before executing another test.

 **NOTE:** In some cases, the front panel may not respond to a quick press of an icon. When pressing an icon, it's best to press it deliberately for about 1 second.

 **NOTE:** If the printer hangs up during a test, go back to step 1 above and restart from the beginning.

The **Diagnostics** menu can vary according to the user. The following table shows which diagnostics are available for each kind of user (service or customer).

Subsystem	Code	Diagnostic	Service	Customer
Dryer	0001-01	Check dryer electronics	Y	Y
	0001-02	Check dryer fans and sensors	Y	Y
	0001-03	Dryer functional test	Y	Y
	0001-04	Dryer warm-up time test	Y	Y
Vacuum system	0005-01	Check vacuum electronics	Y	Y
	0005-02	Check vacuum mechatronics	Y	N
	0005-03	Check vacuum holes	Y	Y
	0005-04	Check/set printer altitude	Y	N

Subsystem	Code	Diagnostic	Service	Customer
	0005-05	Check vacuum level with pressure sensor	Y	N
Waste management	0010-011	Check waste-container electronics	Y	Y
	0010-021	Check spittoon electronics	Y	Y
	0010-022	Check spittoon mechatronics	Y	N
Capping	0012-01	Check capping electronics	Y	Y
	0012-02	Check capping mechatronics	Y	Y
Drawer	0020-01	Check drawer	Y	N
	0020-02	Check drawer roll-by-roll	Y	Y
	0020-03	Check drawer sensors	Y	N
	0020-04	Move drawer motors	Y	Y
	0020-05	Check drawer LEDs	Y	Y
	0020-06	Cutter test	Y	N
	0020-07	Cutter calibration	Y	N
	0020-08	Roll assist friction calibration	Y	N
	0020-10	Check drawer PCB serial number	Y	N
	ISS	0025-01	Check ISS electronics	Y
0025-02		Check ISS mechatronics	Y	Y
0025-03		Check ISS pressurization time	Y	Y
0025-04		ISS valves swap test	Y	Y
0025-05		Check ISS iLED board	Y	Y
0025-06		Check ISS cartridge status	Y	Y
0025-07		Recover broken bag	Y	N
0025-08		Set ISS tubes to purged or empty	Y	N
0025-09		Set printer installed	Y	N
0025-10		Set PIP calibration	Y	N
0025-11		Diagnose IDS only available in Service	Y	N
Service carriage	0030-01	Check service carriage electronics	Y	Y
	0030-02	Check service carriage mechatronics	Y	Y
Printbar	0040-01	Check printbar electronics	Y	Y
	0040-02	Check printbar mechatronics	Y	Y
	0040-03	Move printbar to upper position	Y	Y
E-box	0045-01	Check e-box main electronics	Y	Y
	0045-02	Check e-box connectivity	Y	Y
	0045-03	Check Engine board	Y	Y

Subsystem	Code	Diagnostic	Service	Customer
	0045-04	Check Central Distribution board	Y	N
	0045-05	Check e-box real-time board	Y	N
	0045-06	Check e-box disks	Y	N
	0045-07	Reset hard disk driver to be removed	Y	N
	0045-08	Reset Central Distribution board to be removed	Y	N
	0045-09	Delete Job Manager queue	Y	N
	0045-10	Enable extended log for next boot	Y	N
	0045-11	Hard reset JDI	Y	N
	0045-12	Remove non factory paper	Y	Y
CryptASIC	0046-01	Check CryptASIC electronics	Y	N
Power supply	0050-01	Check power-supply electronics	Y	Y
Paper input	0060-01	Check paper-input electronics	Y	Y
	0060-02	Check paper-input ribs motor	Y	Y
	0060-03	Check paper-input loop-feed motor	Y	Y
	0060-04	Check paper jams	Y	Y
	0060-05	Check paper-input sensors	Y	Y
Paper advance	0065-01	Check paper-advance electronics	Y	Y
	0065-02	Check paper-advance mechatronics	Y	Y
	0065-03	Check paper-advance motor and transmission	Y	Y
	0065-05	Check paper jams	Y	Y
	0065-06	Check paper-advance sensors	Y	Y
	0065-07	Paper-advance calibration reset	Y	N
Aerosol removal	0067-01	Check aerosol-removal electronics	Y	Y
	0067-02	Check aerosol-removal fans and filters	Y	Y
Paper output	0070-01	Check paper-output electronics	Y	Y
	0070-02	Check paper-output mechatronics	Y	Y
Top stacker	0075-01	Check top-stacker electronics	Y	Y
	0075-02	Check top-stacker sensors and mechatronics	Y	Y
	0075-03	Uninstall integrated stacker		
User interface	0080-01	Check cover sensors	Y	Y
Generic / miscellaneous	0099-01	Additional life repairs parts	Y	N
Accessory attachment	1000-01	Check Accessory Attachment status	Y	Y
Scanner	1001-01	Check scanner electronics	Y	Y
	1001-02	Delete scanner queue	Y	Y

Subsystem	Code	Diagnostic	Service	Customer
	1001-03	Check U-turn jam sensor	Y	Y
HC stacker	1005-01	Raise subsystem	Y	Y
	1005-02	Check HC stacker cable connection	Y	Y
	1005-03	Check HC stacker subsystem connection	Y	Y
	1005-04	Check HC stacker attachment accessory	Y	Y
	1005-05	Check HC stacker sensors	Y	Y
	1005-06	Move feed rollers	Y	N
	1005-07	Move kickers	Y	N
	1005-08	Check HC stacker voltage	Y	N
	1005-09	Move kickers and rollers	Y	N
	1005-10	Get last average PWM	Y	N
	1005-11	Get last peak PWM	Y	N
	1005-12	Simulate printing	Y	Y
Folder	1010-01	Raise subsystem	Y	Y
	1010-02	Check folder cable connection	Y	Y
	1010-03	Check folder subsystem connection	Y	Y
	1010-04	Check folder attachment accessory	Y	Y
	1010-05	Check folder configuration	Y	Y
	1010-06	Check main motor FF-X47 & motor feeding roller X-30	Y	N
	1010-07	Check flap motor FF-X41	Y	N
	1010-08	Check FF-only exit guide FF-X31	Y	N
	1010-09	Check interface motor FF-X46	Y	N
	1010-10	Check exit motor FF-X45	Y	N
	1010-11	Check FF sensors	Y	N
	1010-12	Check paper guide FF-X49	Y	N
	1010-13	Check upper exit guide FF-X52	Y	N
	1010-14	Check main motor CF-X47	Y	N
	1010-15	Check entry motor CF-X31	Y	N
	1010-16	Check knife 1 CF-X41	Y	N
	1010-17	Check knife 2 CF-X43	Y	N
	1010-18	Check tilt-tray flap CF-X44	Y	N
	1010-19	Check tilt-tray transport CF-X46	Y	N
	1010-20	Check roller tray CF-X45	Y	N
	1010-21	Check upper transport motor CF-X42	Y	N

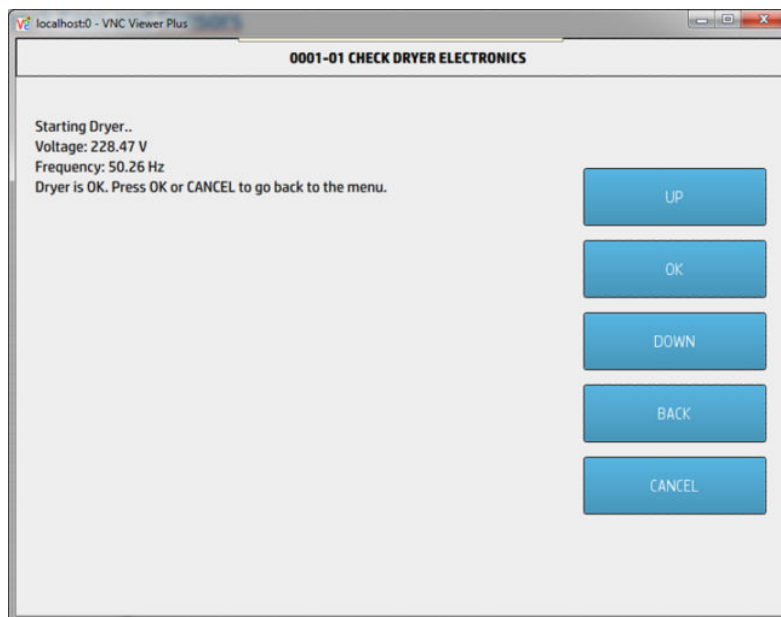
Subsystem	Code	Diagnostic	Service	Customer
	1010-22	Check conveyor motor CF-X50	Y	N
	1010-23	Check exit down holder CF-X51	Y	N
	1010-24	Check flap CF-X48	Y	N
	1010-25	Check CF sensors	Y	N
	1010-26	Check interface transport motor	Y	N
	1010-27	Check solenoid lower entry roller	Y	N
	1010-28	Jam recovery	Y	Y

Dryer

The complete dryer test consists of individual tests for the different components related to the dryer.

0001-01 Check electronics

This test checks the dryer electronics (board, relay, triac) and shows the diagnostics found. If everything is as expected, it shows AC values (voltage and frequency).

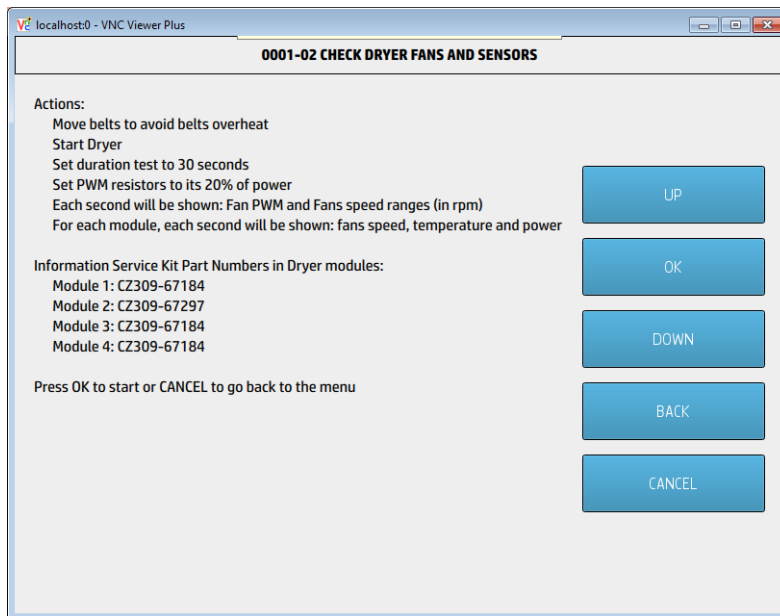


0001-02 Check fans and sensors

This test checks fans and sensors. First, it checks for the part number of the four modules' service kits.

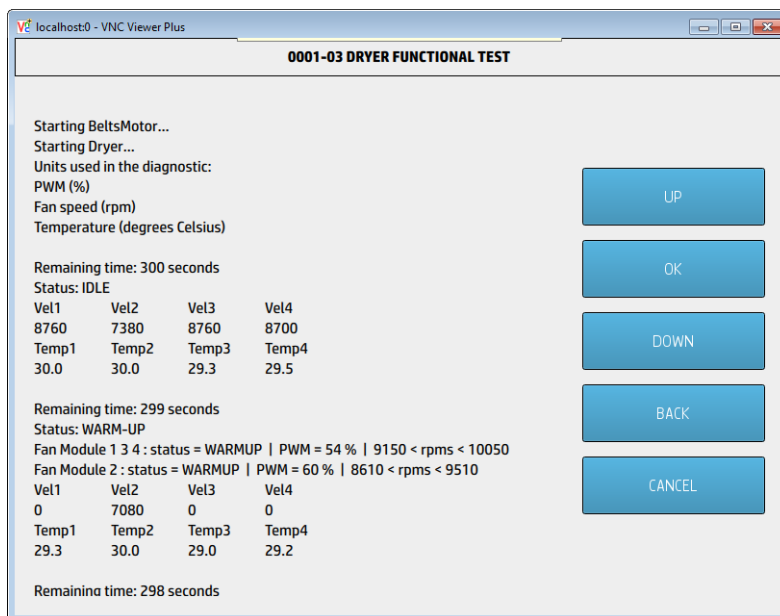
When you press OK, each fan is set to 100% power for 30 seconds. RPM, maximum power values (and their valid ranges), and temperature are reported.

Results may vary depending on the type of fan installed.



0001-03 Functional test

This test sets the dryer to a target temperature and shows rpm, current values (and their valid ranges), and temperature each second until the target temperature is reached. The test lasts for about 5 minutes; after that, the dryer cools down for about a minute until it reaches ambient temperature. Results may vary depending on the type of fans installed.

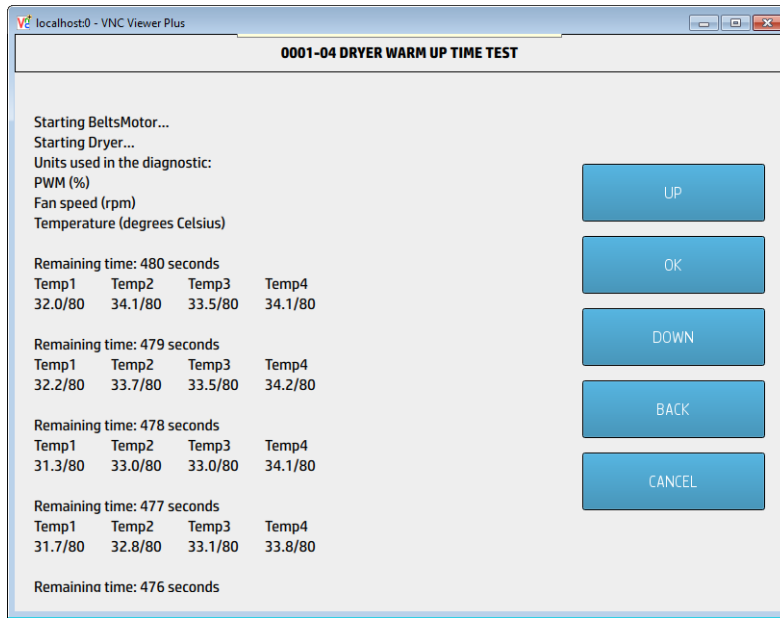



 **TIP:** Scroll the screen up and down to see all values, and to see the evolution of each parameter through time.

0001-04 Warm-up time test

This test sets the dryer to a target temperature of 80°C and shows a time countdown and temperature for each module. The test lasts for about 5 minutes; after that, the dryer cools down for about a minute until it reaches ambient temperature. Results may vary depending on the type of fans installed.

For HP-authorized personnel only



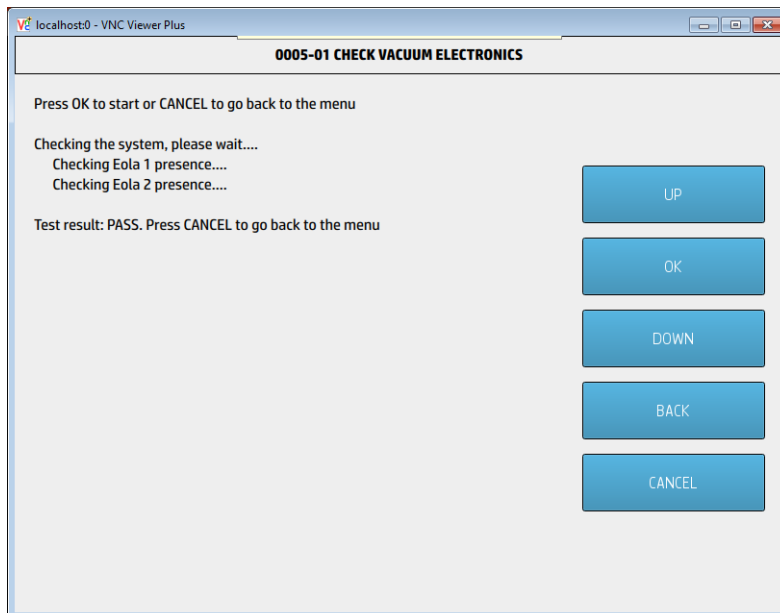
 **TIP:** Scroll the screen up and down to see all values, and to see the evolution of each parameter through time.

Vacuum system

The complete vacuum system test consists of individual tests for the different components related to the vacuum system.

0005-01 Check electronics

This test checks the vacuum electronics (board and fans).



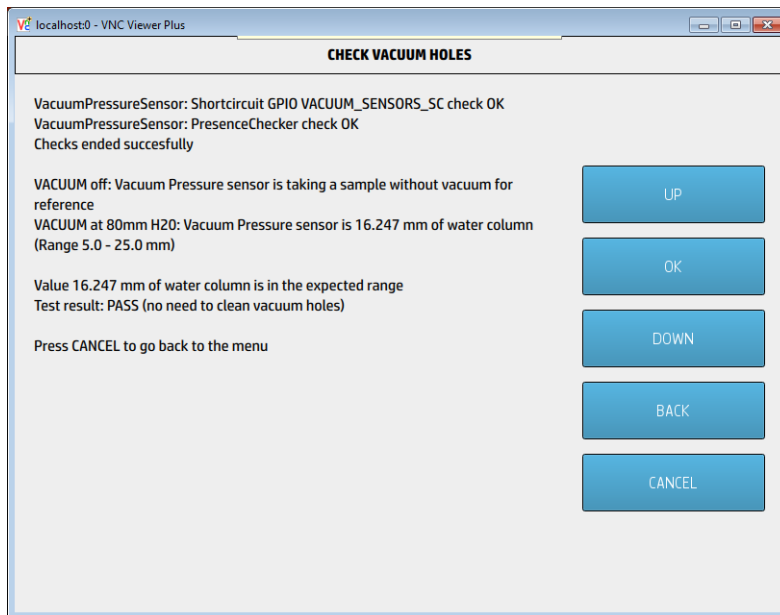
0005-02 Check mechatronics

This test sets each fan to a calibrated RPM in order to achieve 80 mm of H₂O. The measured RPM and its valid ranges are shown.

When requested during the test, open the rear cover and place a plastic sheet. Remember to remove the plastic sheet and cover the cover when the test has finished, to avoid possible paper jams. If the measured RPM is outside of the limits, run Vacuum calibration in printer utilities.

0005-03 Check vacuum holes

This test checks the vacuum sensor behavior. It sets the vacuum to 80 mm H₂O and checks the vacuum level. If this value is higher than a threshold value, it asks you to clean the platen. This test measures vacuum pressure in the central platen where the pressure sensor is connected by default.



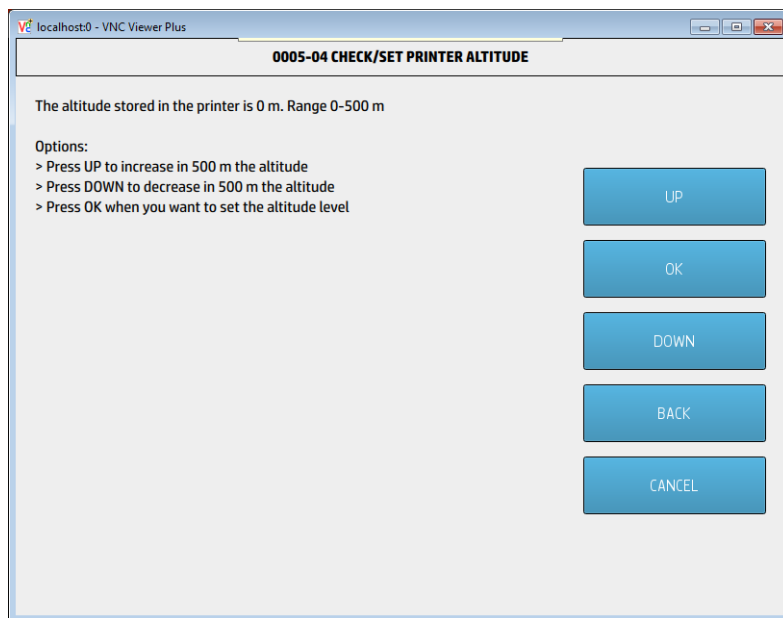
0005-04 Check/set printer altitude

This test shows the stored altitude in the NVM and allows you to change it.

The altitude can be changed using the following commands (the permissible range is shown):

- Press **UP** to increase the altitude by 500 m
- Press **DOWN** to decrease the altitude by 500 m

Whenever **UP** or **DOWN** are pressed, the test shows the new altitude. To save the altitude as shown, press **OK**. Finally, press **CANCEL** to return to the main menu.




0005-05 Check vacuum level with pressure sensor

This test checks the vacuum level for each module. The system has a unique pressure sensor located in the central module; so, when the system is checking left and right modules, you must connect the vacuum sensor to the corresponding module.

 **NOTE:** Left and right fans are relative to the user's position facing the printer.

1. After initial tests, the system asks you to open the rear cover, cover the platen with paper, and close the cover again.
2. When you have done that, press **OK**.
3. Connect the sensor tube to the left vacuum module, and press **OK**.

 **NOTE:** Between measurements in different zones, the service engineer must wait about two minutes before starting the next zone.

4. The measured pressure and valid thresholds are shown and compared.
5. The process is repeated for the central and right modules.
6. After the three vacuum pressures have been measured, remove the paper from the platen and press **CANCEL**.

 **NOTE:** Please remember to leave vacuum sensor connected in its initial position.

Waste management

The complete waste management test consists of individual tests for the different components related to waste management.

0010-01 Check waste container

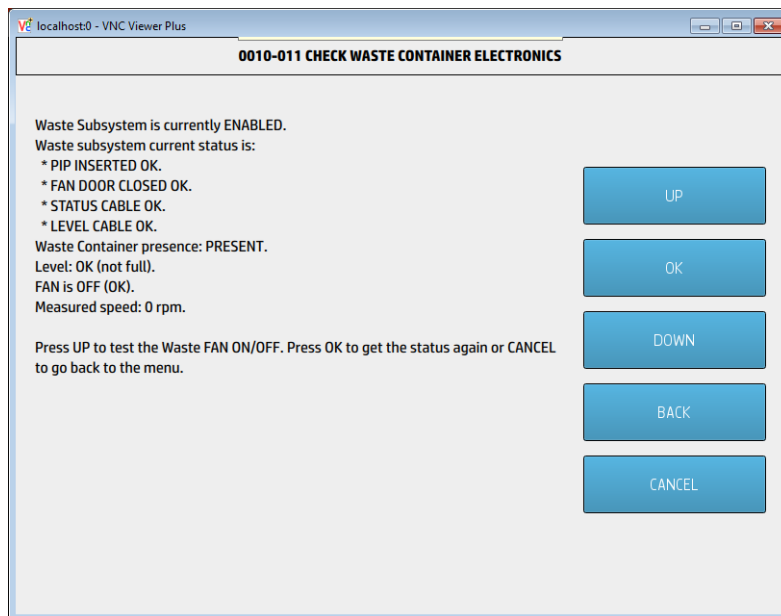
0010-011 Check electronics

This test checks the waste management electronics (board, sensors, and fans).

Press **OK** to begin the tests. Once the board is started, press **OK** to continue with the waste subsystem tests, and **OK** again to see the subsystem status.

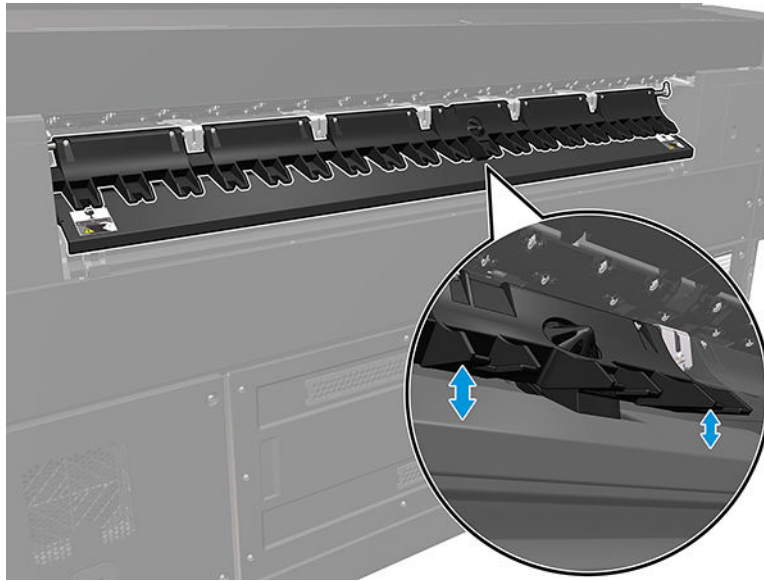
Once the waste subsystem status has been shown, you can repeat the test by pressing **OK**, go back to the main menu by pressing **CANCEL**, or test the waste fan by pressing **UP**. If you press **UP**, the test switches on the waste fan for 30 seconds and shows the measured speed (in rpm). After that, press **OK** to switch off the fan, and wait 30 seconds.

Once the test has ended, press **CANCEL** to go back to the main menu.



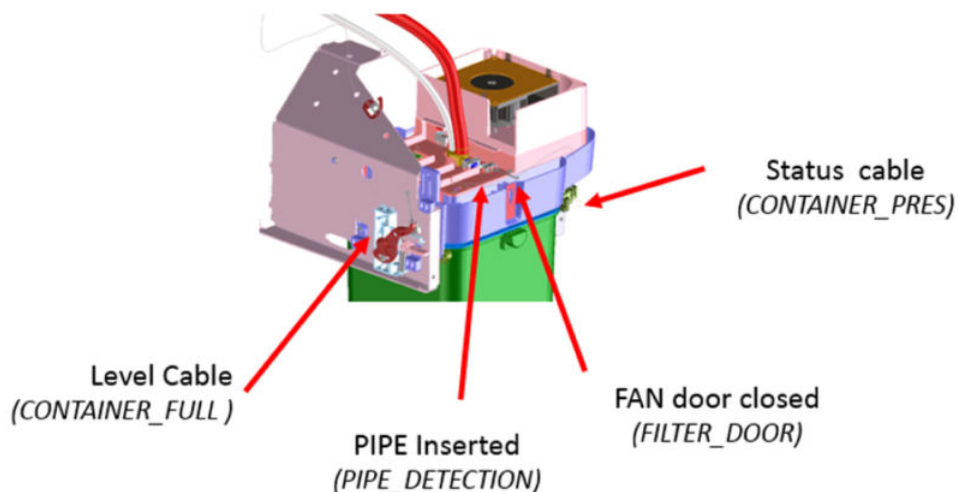
NOTE: in case of Diverter movement FAILURE, mainly in cases where the distance is not wide enough, perform the following check:

1. Power off the printer.
2. Manually move the Diverter to the down position and the up position:
 - In the down position, check that the Diverter is NOT touching the Diverter cover shown in the following picture, mainly in the area highlighted in red.



- When moving the Diverter slightly laterally and mimicking the up / down movement, do you see any ways in which the rotation of the Diverter could be blocked? Check where the Diverter is touching; is there a piece of paper stuck somewhere?
- When moving the Diverter in the up position:
 - Is the touch point stable? If a Top stacker is installed, the “Paper-output path adjustable beam” should NOT move at all (check that the 2 lateral screws that maintain this beam are tight). Refer to [Paper-output path adjustable beam \(CZ309-67201\) on page 1261](#).

In order to ensure that there are no misunderstandings, here is the corresponding placement of each sensor. In *italic* there is also the corresponding name in the block diagram.



Here are specific cases with corresponding test results:

- If the waste container is removed or if the “Status cable” is unplugged, here is the test result:

Waste Subsystem is currently ENABLED.
 Waste subsystem current status is:
 FAN is OFF (OK).
 Measured speed: 0 rpm.

Press UP to test the Waste FAN ON/OFF. Press OK to get the status again or CANCEL to go back to the menu.

- If the PIPE Inserted cable is unplugged, system error 0010-0003-0002 is reported, followed by this screen:

Waste Subsystem is currently ENABLED.
 Waste subsystem current status is:
 * ERROR: PIPE WRONG INSERTED.
 FAN is OFF (OK).
 Measured speed: 0 rpm.

Press UP to test the Waste FAN ON/OFF. Press OK to get the status again or CANCEL to go back to the menu.

- If the Level Cable is activated (> 3kg container), here is what is reported on the screen:

Waste Subsystem is currently ENABLED.
 Waste subsystem current status is:
 FAN is OFF (OK).
 Measured speed: 0 rpm.

Press UP to test the Waste FAN ON/OFF. Press OK to get the status again or CANCEL to go back to the menu.

- If the Level Cable is unplugged, the following screen is displayed (no error reported):

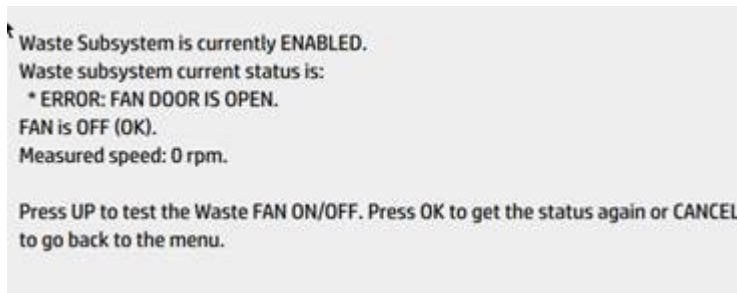
0010-011 CHECK WASTE CONTAINER ELECTRONICS

Waste Subsystem is currently ENABLED. ✕
 Waste subsystem current status is:
 * PIP INSERTED OK.
 * FAN DOOR CLOSED OK.
 * STATUS CABLE OK.
 * LEVEL CABLE OK.
 Waste Container presence: PRESENT.
 Level: OK (not full).
 FAN is OFF (OK).
 Measured speed: 0 rpm.

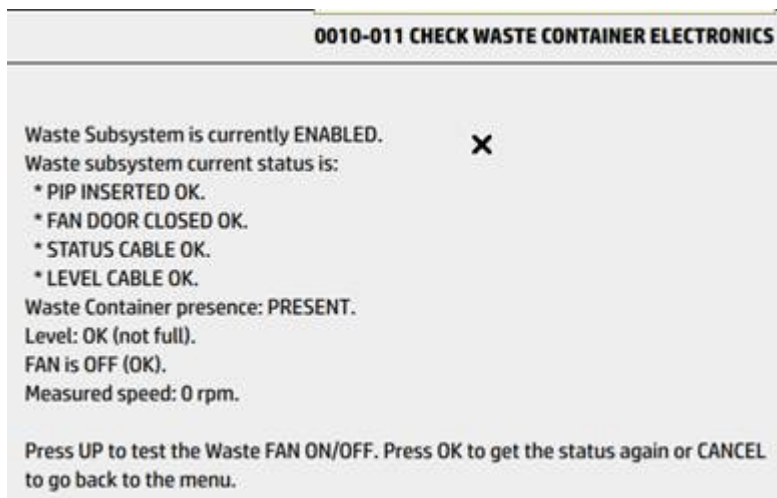
Press UP to test the Waste FAN ON/OFF. Press OK to get the status again or CANCEL to go back to the menu.

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- If “FAN DOOR CLOSED” cable is unplugged, system error 0010-0005-0018 is reported, followed by this screen:



- If the cable connected to the waste management FAN is unplugged, this screen is shown first (no specific error detected):



When pressing UP key (starting the FAN):

- System error 0010-0001-0001 is displayed
- It is followed by this status: “FAN is in ERROR state”



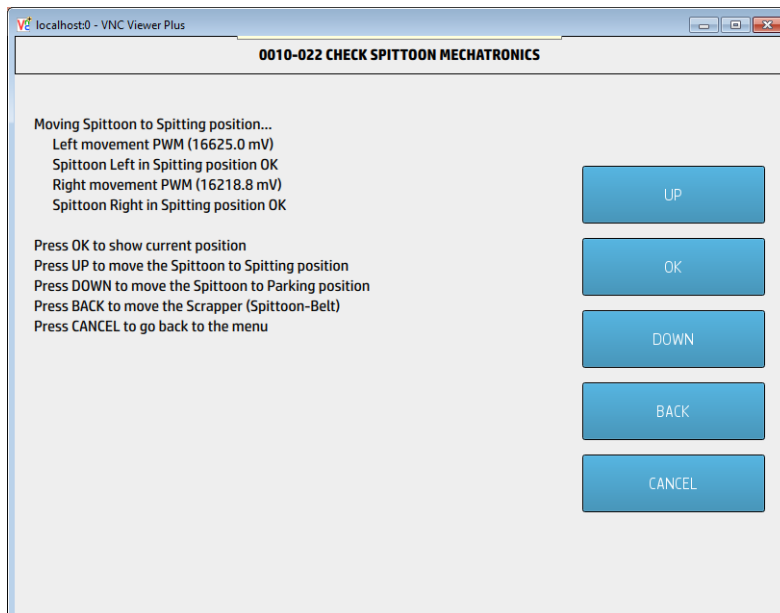
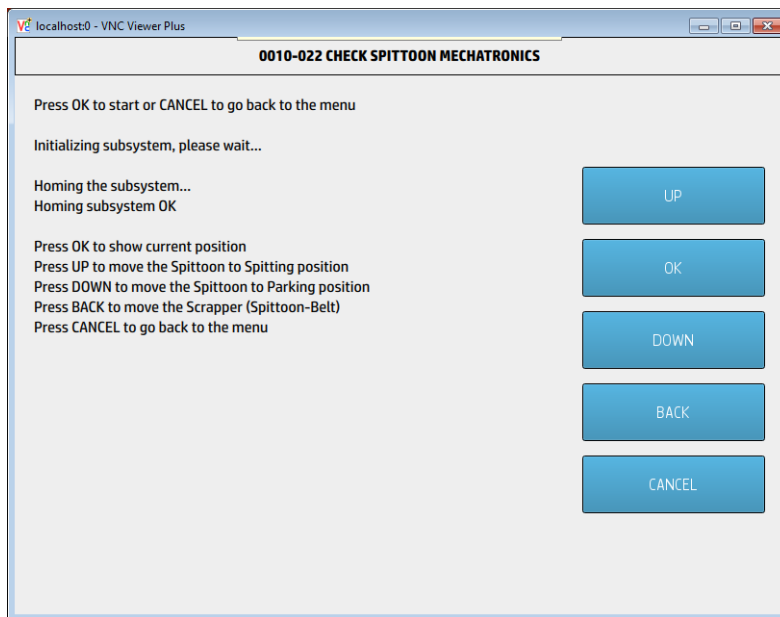
0010-02 Check spittoon

0010-021 Check electronics

This test checks the spittoon electronics (motor connection, voltage levels, and sensors).

0010-022 Check mechatronics

This test checks the spittoon and the spittoon belt mechatronics (motor direction test, motor movement). It also shows the PWM value (mV) in the front panel for each motor when the spittoon bar is moved.



Capping

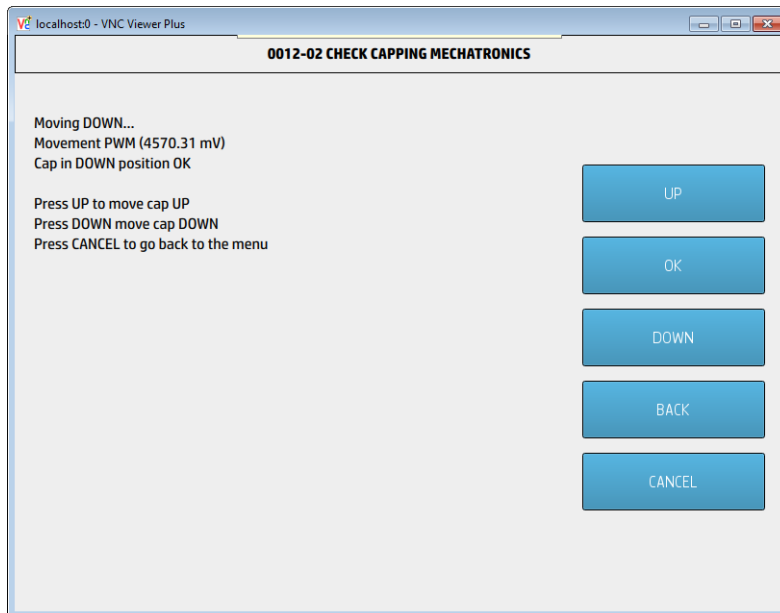
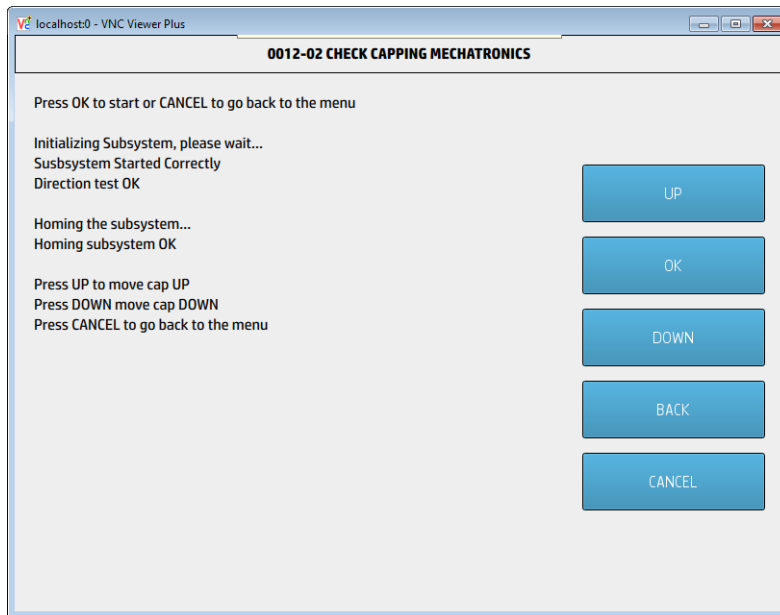
The complete capping test consists of individual tests for the different components related to capping.

0012-01 Check electronics

This test checks capping electronics (board, motor connection, and electrical checks).

0012-02 Check mechatronics

This test checks capping mechatronics (motor direction test, motor movement). It also shows the PWM value (mV) in the front panel when the capping bar is moved.

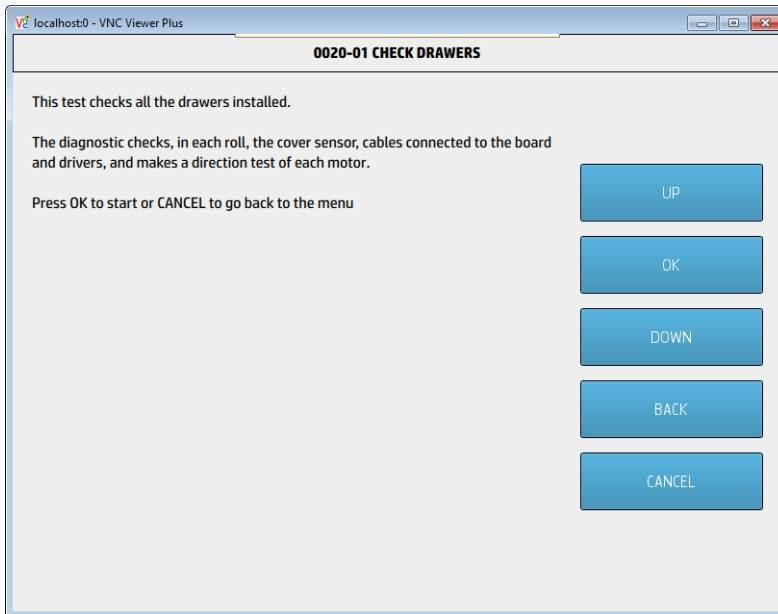


Drawer

The complete drawer test consists of individual tests for the different components related to the drawer.

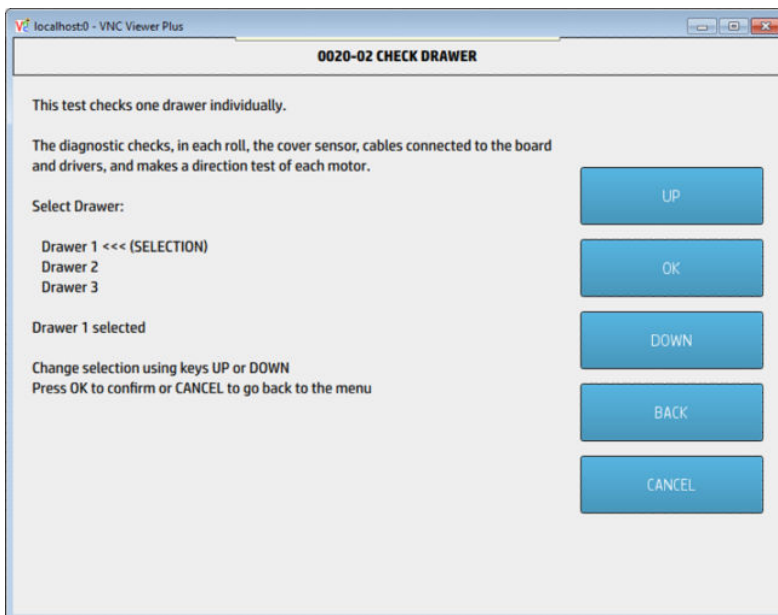
0020-01 Check drawer

This test checks that all installed drawers are connected and ready to use. It covers sensors, cable connections, motor direction tests, and drivers.



0020-02 Check drawer roll-by-roll

This test is the same as 0020-01, but for one specific drawer only.

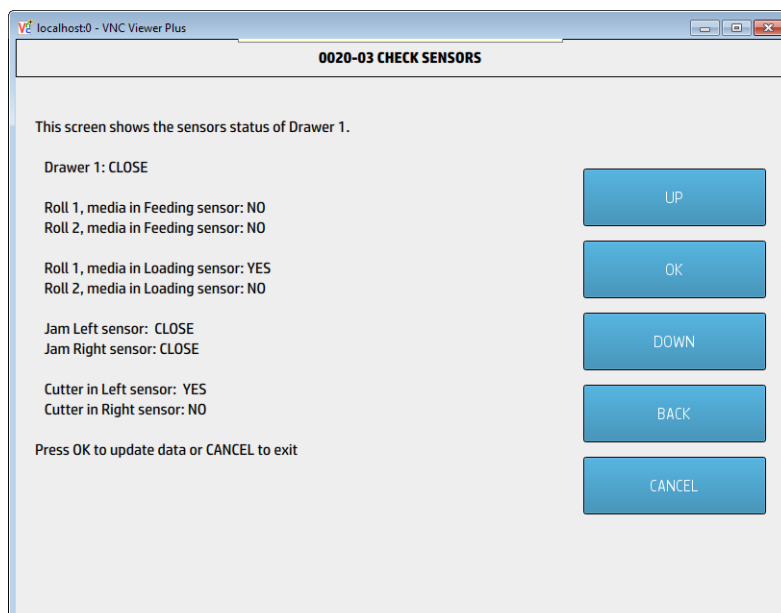
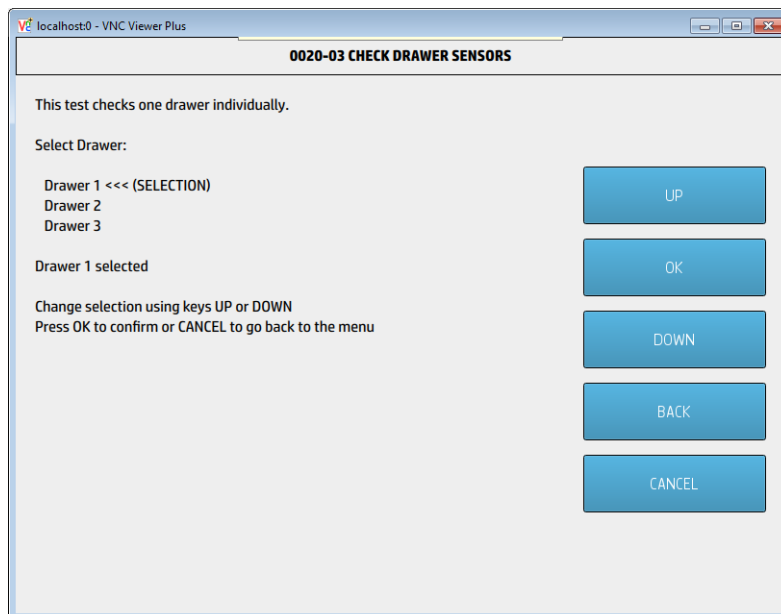


0020-03 Check sensors

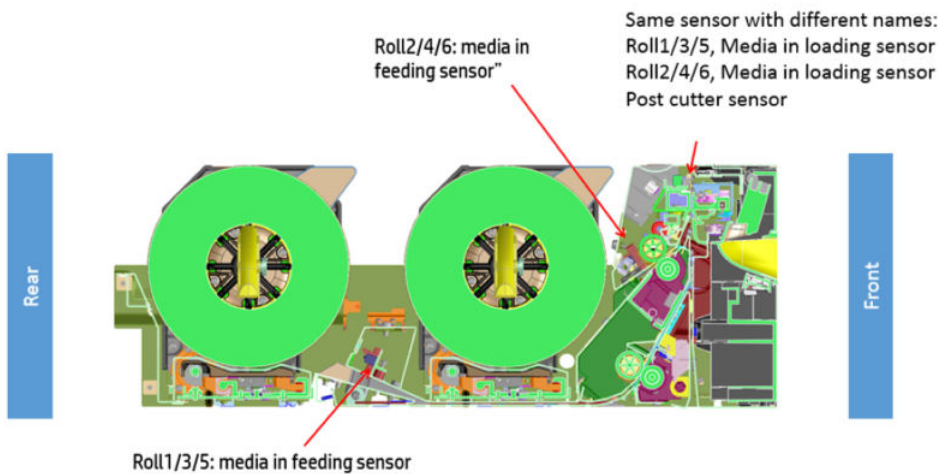
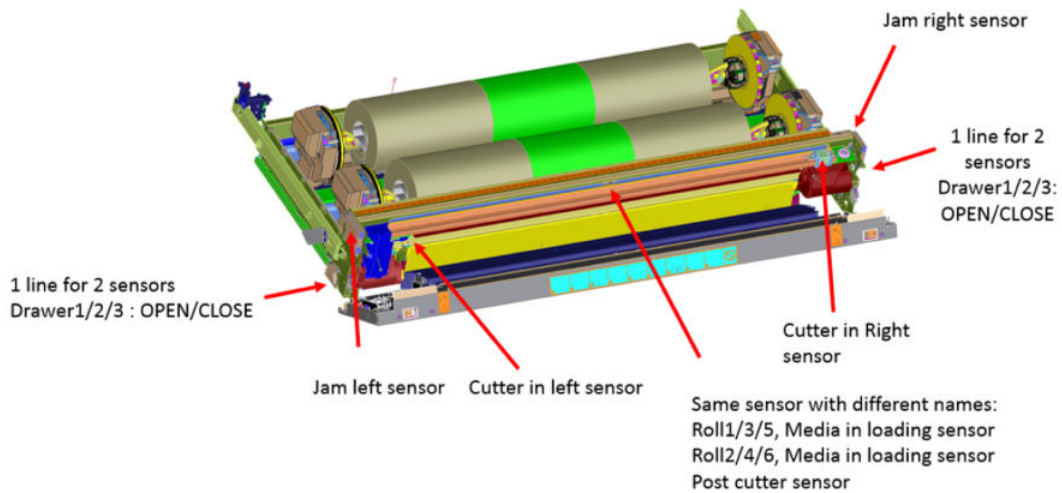
This test checks the paper path sensors and the cover and drawer open/closed sensors.

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1. Select a specific drawer.
2. The system checks the statuses of the following sensors (the data is updated by pressing OK):
 - Paper in feeding sensor (no/yes)
 - Paper in loading sensor (no/yes)
 - Jam left and right sensors (opened/closed)
 - Cutter position (left/right/none)



First, in order to ensure that there are no misunderstandings, here is the corresponding placement of each sensor:



Here are specific cases with corresponding test results:

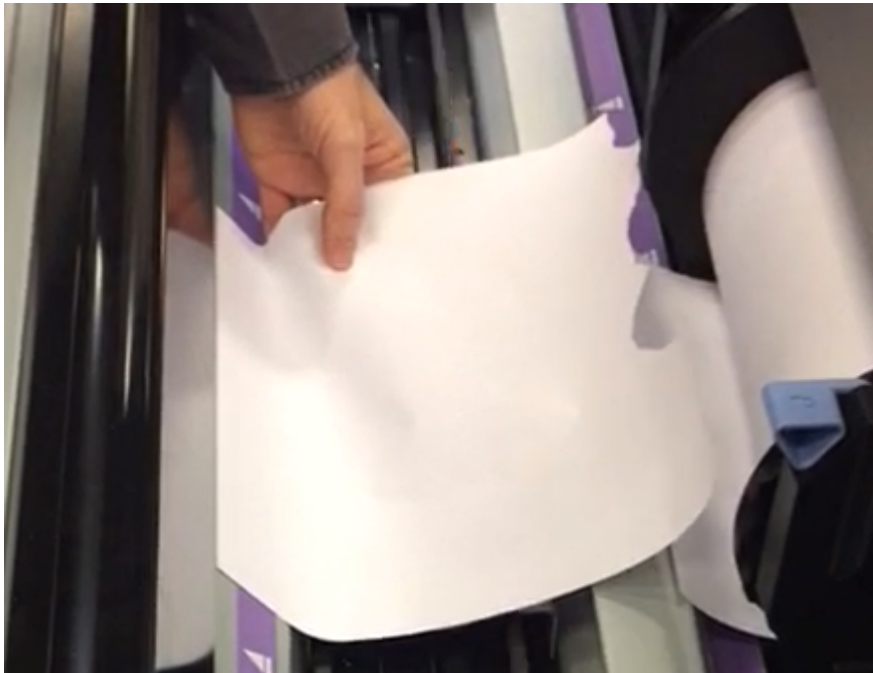
- Concerning the media sensors:
 - YES in the following cases:
 - If sensor unplugged
 - If media at a distance from 1 mm to 5-10 cms
 - NO in the following cases:
 - Media placed against the sensor / touching the sensor
 - Media at a distance > 5-10 cms
- Concerning “Drawer Open:”
 - Both sensors left and right in serial.
 - In case either of the 2 sensors are unplugged -> OPEN
 - In order for a “CLOSE” status to be displayed, both sensor & switch need to be closed

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- Concerning the Jam right & left sensor:
 - “CLOSE” if the corresponding sensor is unplugged
- Concerning the cutter sensor:
 - “No” if cable is unplugged

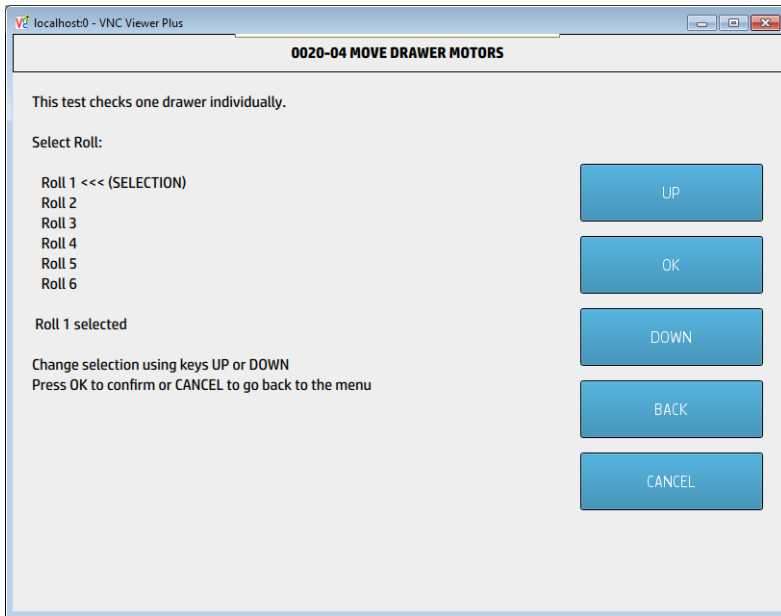
0020-04 Move motors

Before starting the test on a roll, open the corresponding drawer, unload the media from the roll to be tested, and insert a page of around 1 m / 40 inches as if you are loading a roll. Stop pushing when it reaches the transportation roller, as the following picture:



 **NOTE:** On rolls 1, 3, and 5, the page can be shorter, around 50 cm / 20 inches.

On the front panel, select the required roll. The printer checks its connection and moves the roller and transport motors (25 cm / 10 inches movement in both directions for 10 seconds).



During the tests, it will first check the rewinder motor, turning in both directions. Then the transportation roller will be tested, first advancing the media.

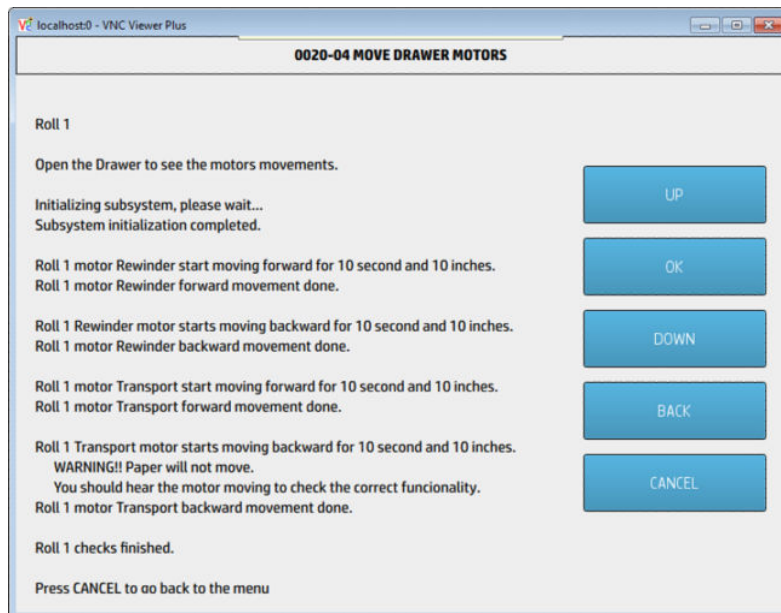




Once the page has advanced by 25 cm / 10 inches, the transportation roller motor will rotate in the other direction.

- If the paper is moving backwards, the “clutch” part of this assembly is defective and the corresponding transportation roll (front or rear) without motor has to be replaced.

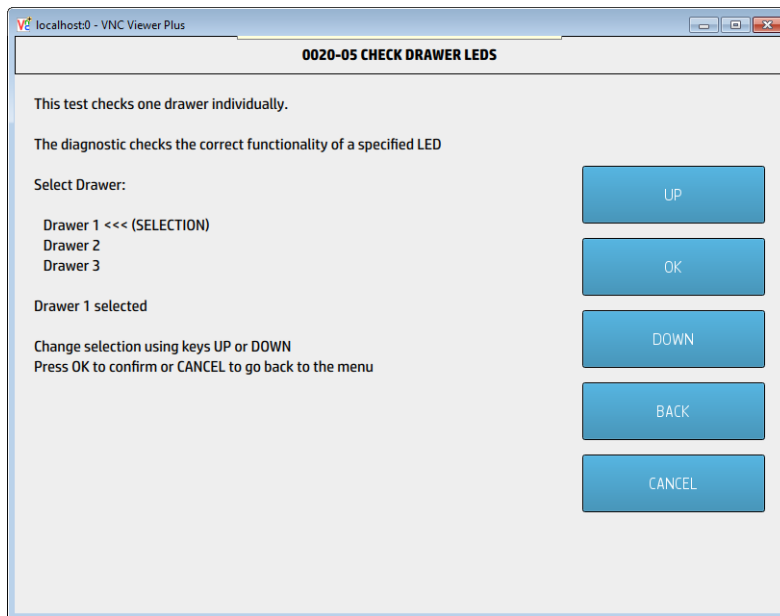
Once the test is completed, the front panel will update:



Do not hesitate to run this test 3-5 times per roll, to detect potential intermittent failures.

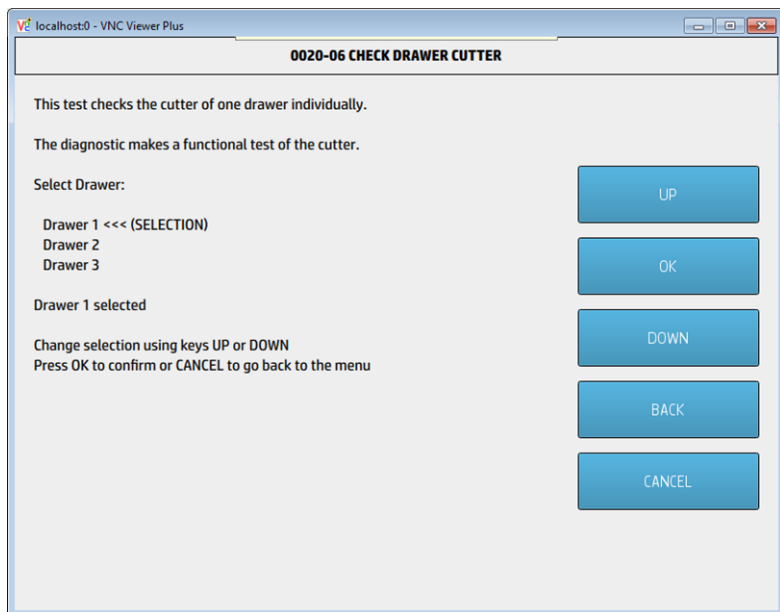
0020-05 Check LED

Select a drawer, LED, and color to be tested. The LED is activated so that you can check that it works.

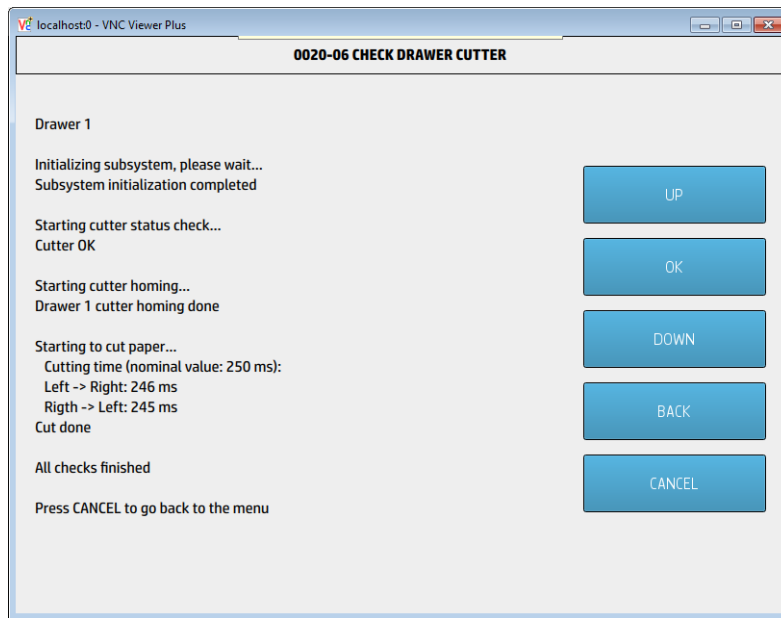


0020-06 Cutter test

Select a specific drawer. The printer checks cutter specifications and cuts the loaded paper.

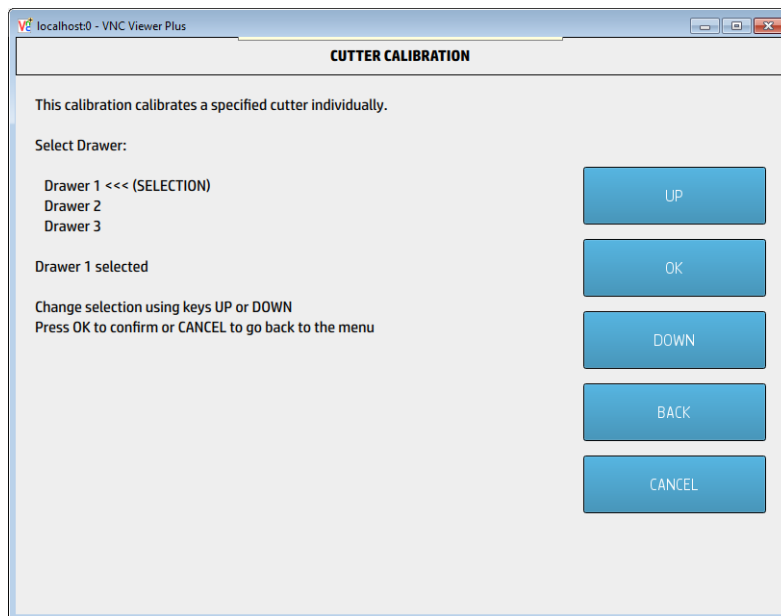


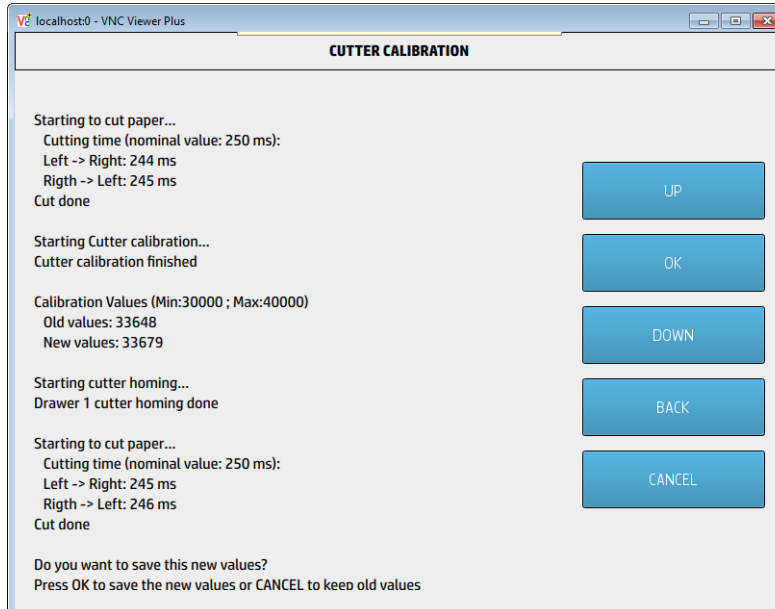
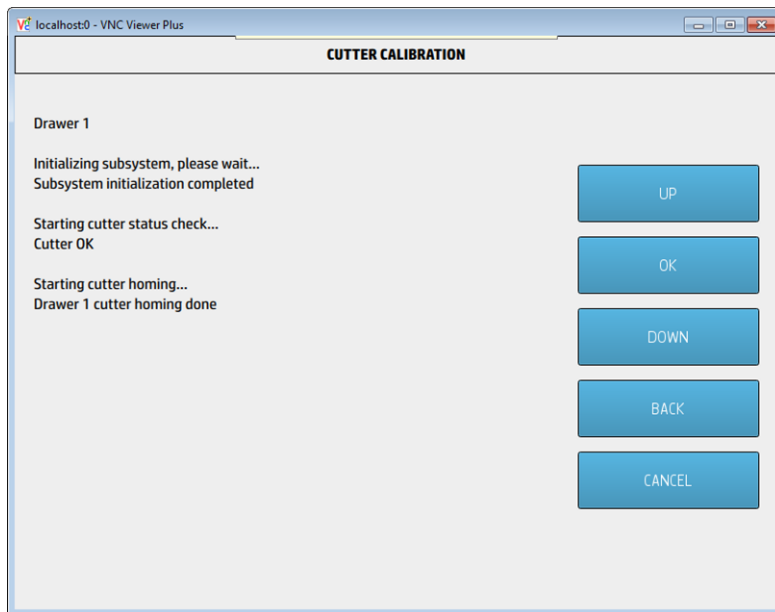
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0020-07 Cutter calibration

Select a drawer. The cutter is calibrated according to the manufacturer's specifications.





0020-08 Roll assist friction calibration

This calibration characterizes the different frictional contributions to each roll assist.

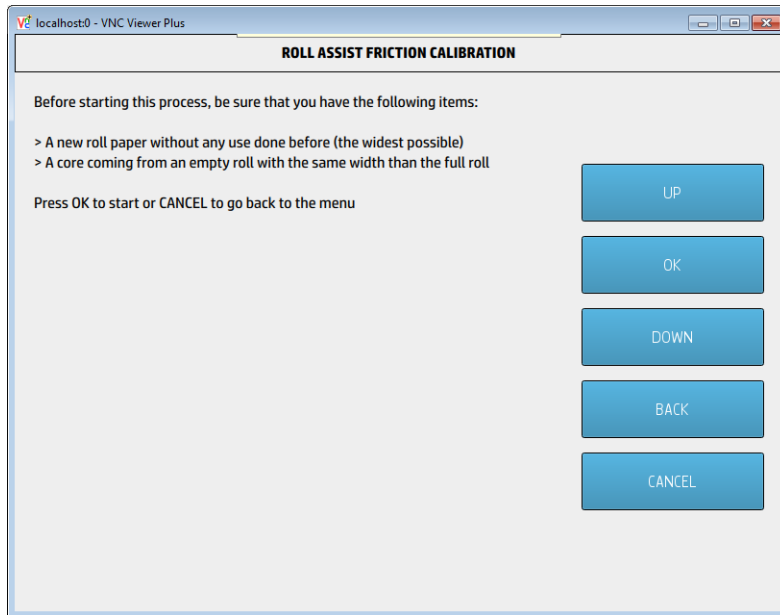
These friction parameters are used in the current calculation that must be injected into the rewinder motor to achieve the back voltage set-point required by the printer.

Before starting the calibration, ensure that you have a new unused roll (the widest possible) and the core from an empty roll.

1. Select the roll you want to calibrate.
2. Load a full roll and press **OK**.
3. Enter the roll's width and diameter.

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4. The front panel displays current and voltage measurements.



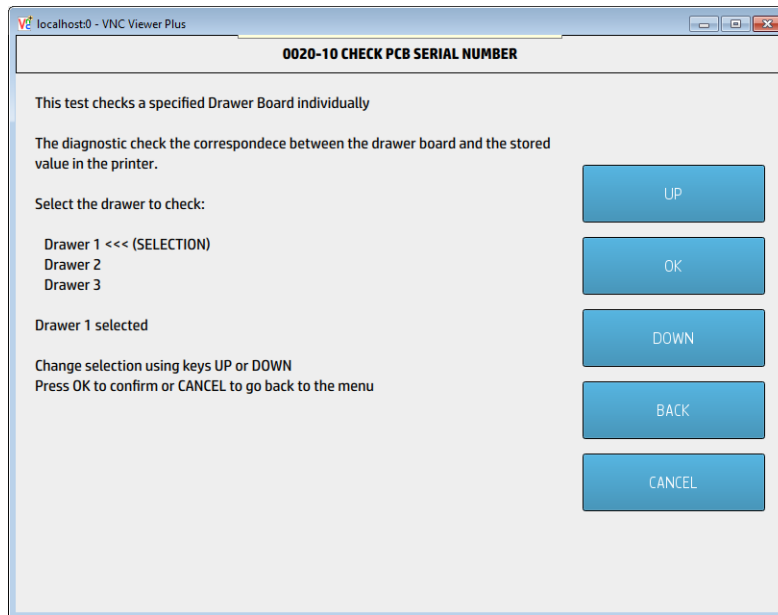
5. Load an empty roll and press **OK**.
6. Enter the roll's width and diameter.
7. The front panel displays current and voltage measurements.
8. The printer calculates the calibration values and displays them in the front panel.
9. Press **OK** to save the values, or **CANCEL** to discard them.

0020-10 Check drawer PCB serial number

Select a drawer. The printer checks whether the same numbers are stored in printer and drawer.

- If the numbers are the same, the diagnostic ends successfully.
- If a new board has been installed, the front panel asks you if it can copy the data stored in the printer for that drawer to the board..
- If the drawer's serial numbers are different, the front panel asks which data should be saved—the data stored in the printer or the data stored on the board.

- If the board's serial numbers are different, the front panel asks which data should be saved—the data stored in the printer or the data stored on the board.

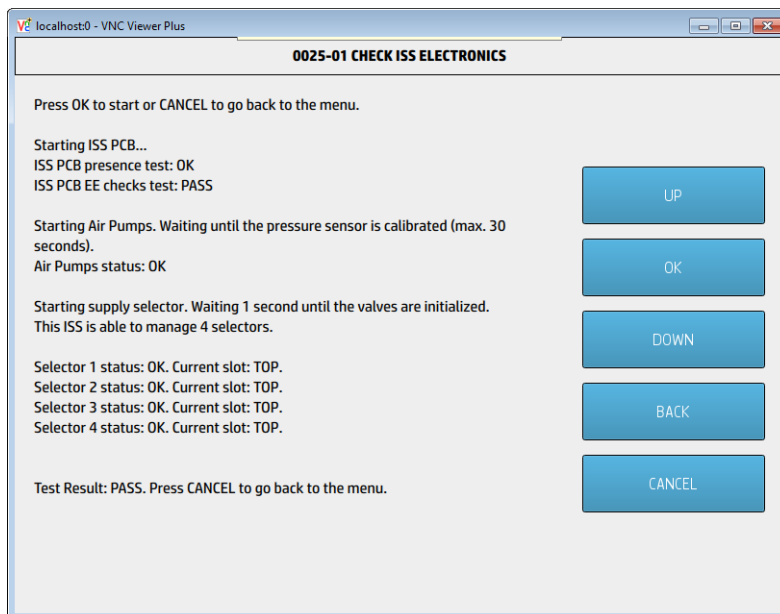


Ink Delivery System (IDS)

The complete ink delivery system test consists of individual tests for the different components related to the IDS.

0025-01 Check electronics

This test checks the IDS electronics (Ink Supply System, Ink Supply Control, and iLED boards, sensors, air pumps, air tubes, CID, relief valves, and ink tubes system).

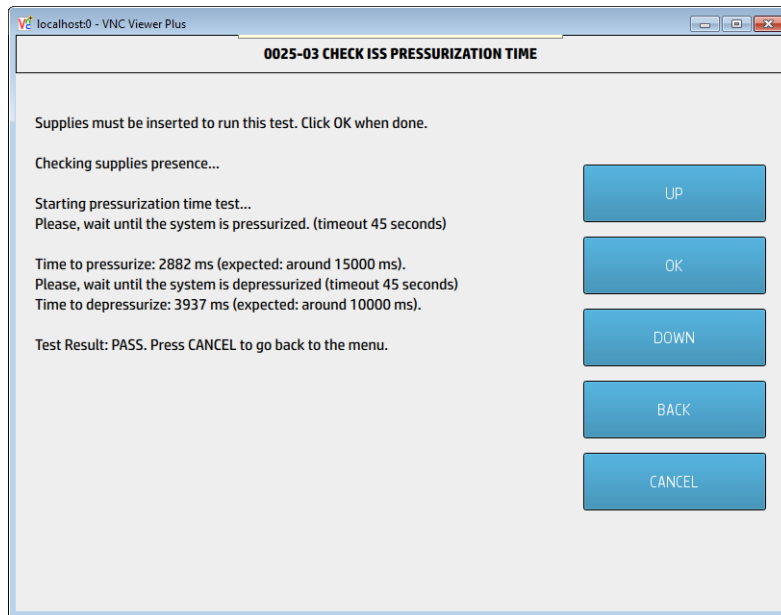


0025-02 Check mechatronics

This test checks the whole subsystem, performing electronic and pressurization checks (0025-01), and pressurization time and swap time tests if the printer has eight ink cartridges.

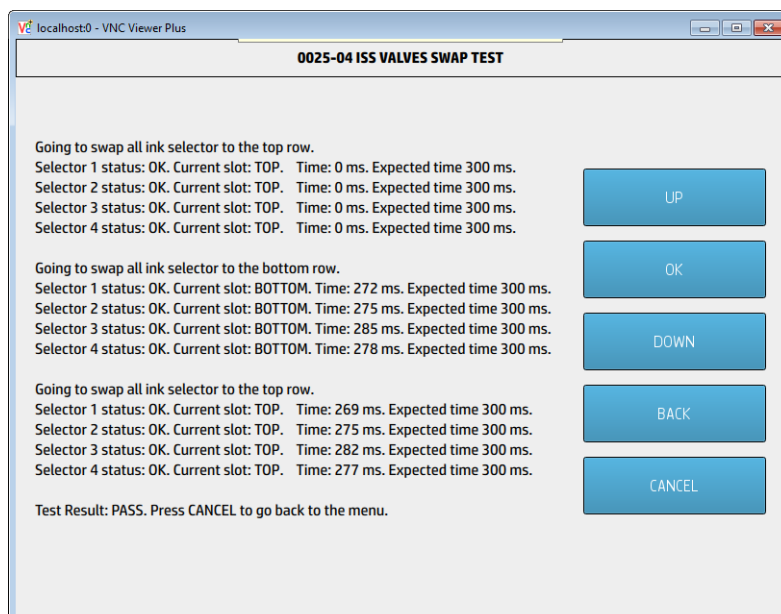
0025-03 Pressurization time test

This test checks the pressurization time.



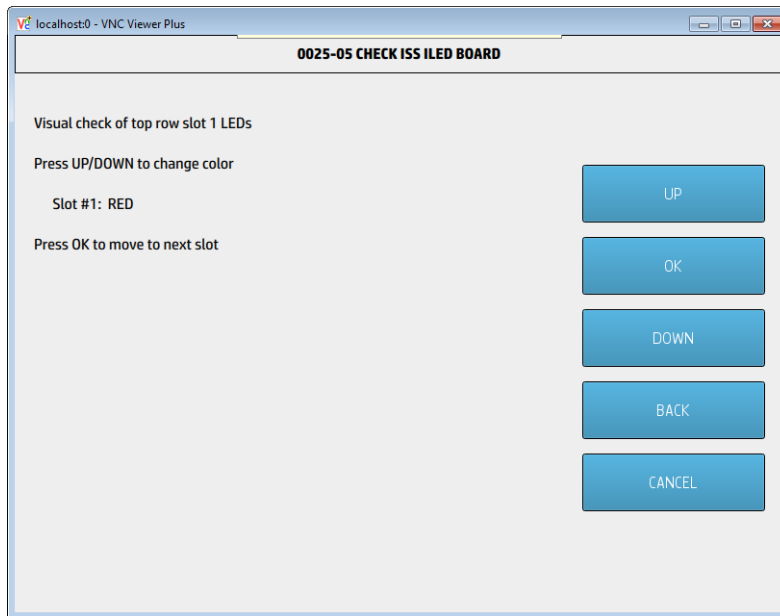
0025-04 Swap time test (5000 and 8000 series only)

This test swaps between top and bottom ink rows and shows the swap time and its threshold value.



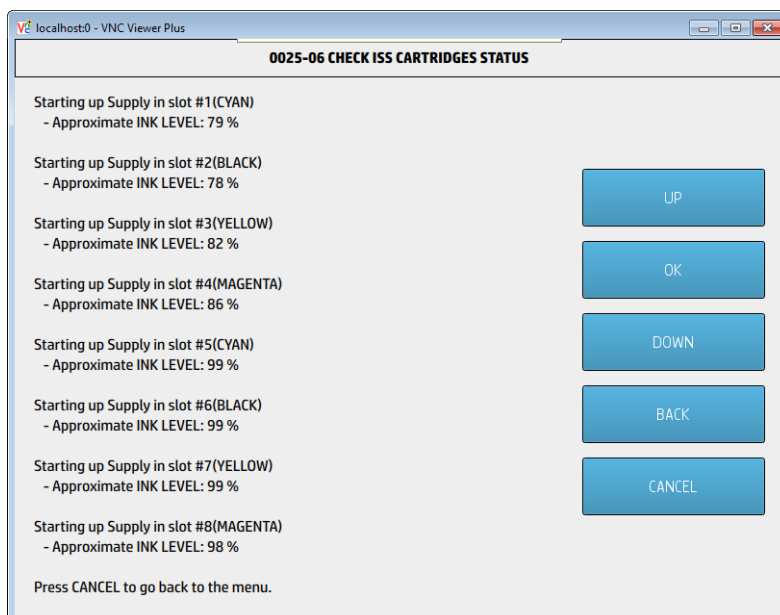
0025-05 Check iLED board

This test checks the correct behavior of each of the LEDs in the ink supplies individually. It starts with the first slot of the first row, swapping between yellow, white, and red LEDs. Then it proceeds to the other ink supplies. Follow front-panel instructions to switch between supplies and rows.



0025-06 Check cartridge status

This test checks the status of each ink cartridge (position, HP cartridge, leakage presence, and ink levels).



0025-07 Recover broken bag

This test checks the broken bag sensor status and allows you to change its status bit. Follow front-panel instructions to recover the condition for a specific ink supply.

 **NOTE:** If a broken bag occurs, first replace affected supply and look for traces of ink on boards, cables, sensors, air tubes, etc. After that, run this test to restart the condition.

When running this test, if the printer still detects a broken bag (sensor located in the PIP sensor), the printer will NOT be able to clear the broken bag, and will display the following message on the front panel, "Replace the APS tubes and PIP: Slot#x (<corresponding color name>). Replace Supplies: Slot#x (<corresponding color name>)"
Example: for the slot 7, the following line will be displayed "Slot#7(YELLOW) "

0025-08 Set ink tubes purged/empty

This test checks the ink system status and allows you to change it between purged and empty. Press **UP** or **DOWN** to set the desired value, and press **OK** to confirm.

If tubes are set as empty, the printer needs to be rebooted to be able to take on the out-of-the-box workflow.

 **NOTE:** Disregard the message when the printer asks for the 16 purgers.

0025-09 Set printer installed

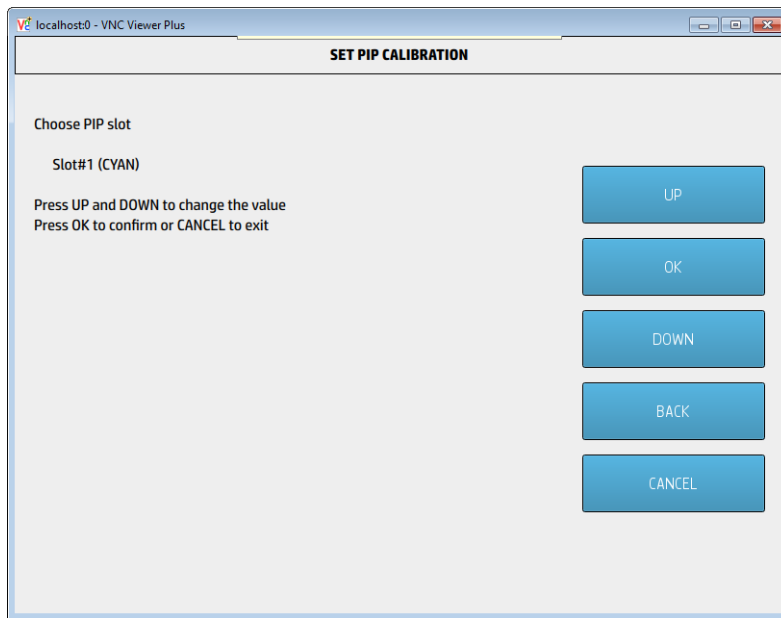
This option allows you to set whether the printer has been installed (out-of-box procedure completed). Press **UP** or **DOWN** to set Yes or No, and press **OK** to confirm.

0025-10 Set PIP calibration

 **NOTE:** The Gain and Offset values are listed on a label located on the actual PIP.

This option allows you to change the calibration values for each PIP.

1. Press **OK** to begin the test.
2. Press **UP** or **DOWN** to select the desired slot, then press **OK**.
3. Gain and offset values can be modified for the selected slot. Press **UP** or **DOWN** to add 0.1 to, or subtract 0.1 from, the current value. Then press **OK**.
4. Save the new calibration values by pressing **UP** or **DOWN** to select Yes or No, and press **OK** to confirm.
5. Press **CANCEL** to return to the main menu.



0025-11 Diagnose IDS


This is an advanced test of the IDS, available since FW 10.x, that can:

- Pressurize and depressurize the ink system.
- You can select which cartridges are pressurized (not applicable for 4x00/3900).
- The current value of the air pressure system is continuously reported.
- Broken bag will also be continuously reported.

Main purposes: to enable further investigation of the intermittent failure of:

- Air leakage.
- Ink leakage (from any part of the ink line).
- Intermittent broken bag.
- Intermittent failure of the Bivalve (not applicable for 4x00/3900).

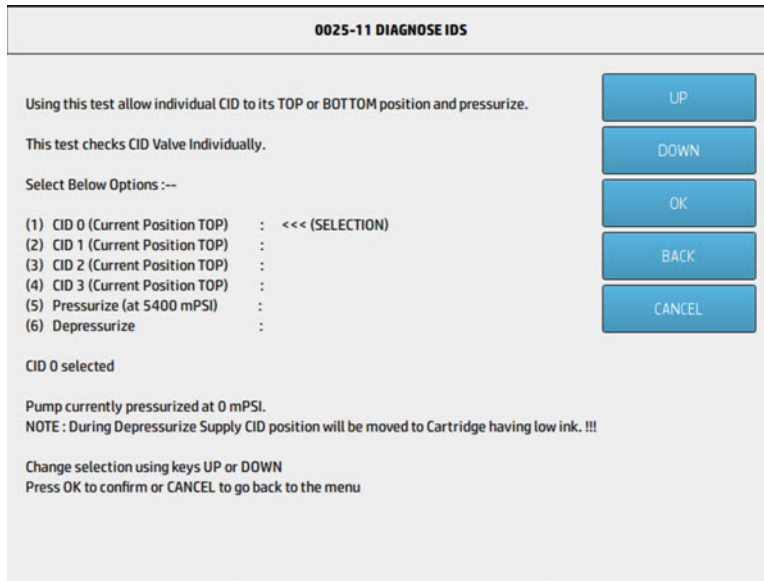
It can also be used to remove any bubbles of air from the ink line (see [How to remove air bubbles from an ink line using a syringe on page 154](#)).

 **IMPORTANT:** Always place the needle or remove it from the ink line when the air/ink line system is depressurized.

Steps to follow:

1. Select the test “0025-11 Diagnose IDS”.
2. Press **OK** to start the test. The current configuration of the cartridges which will be pressurized is displayed.


3. Insert all cartridges/supplies and click **OK**.





4. Select the configuration you want to test:


- CID0 (Cyan), 1(black), 2(yellow) and 3 (Magenta). (Selecting between the upper or lower cartridge to be pressurized).
- Pressurize or Depressurize the air/ink system.


You will see the current level of pressurization displayed continuously on the Front panel (refreshed every second).

 **NOTE:** In the case of PageWideXL 4x00/3900, the options 1 to 4 are not accessible.

 **NOTE:** You can change the CID while the system is pressurized (normal process during the “hotswap”).

 **NOTE:** There is no need to remove the Printheads when running this test (this is the normal pressure level while printing).

 **NOTE:** The system errors linked with the pressurization or depressurization will still appear and will stop the test (cannot pressurize, too long to pressurize, too long to depressurize, etc.).

 **NOTE:** A broken bag (detected by a PIP) can still appear and will stop the pressurization.

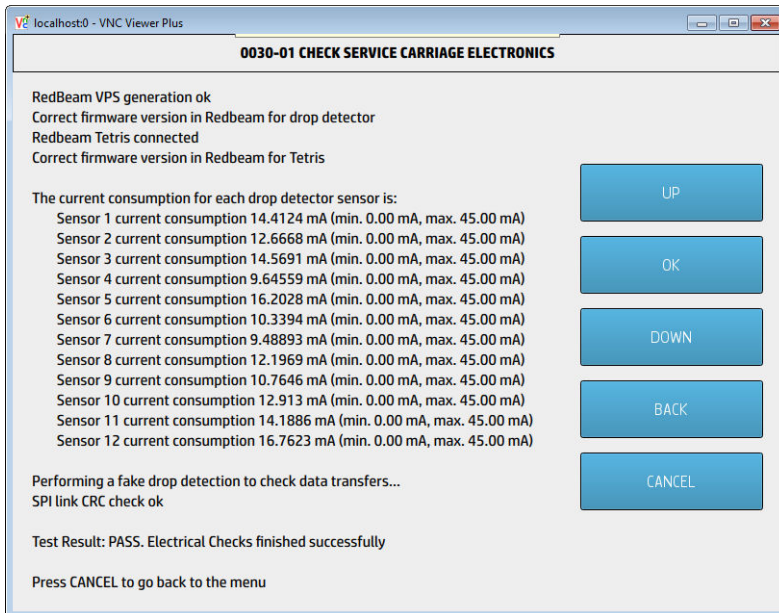
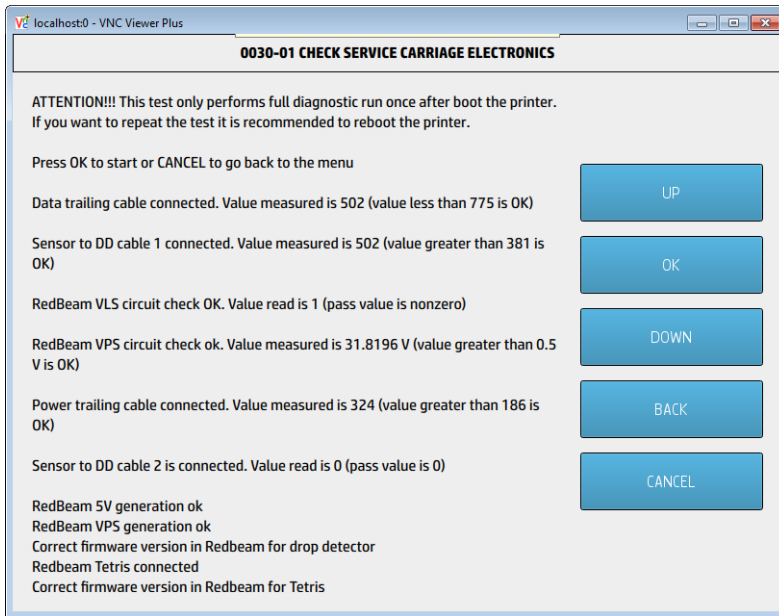
Service carriage

The complete service carriage test consists of individual tests for the different components related to the service carriage.

0030-01 Check electronics

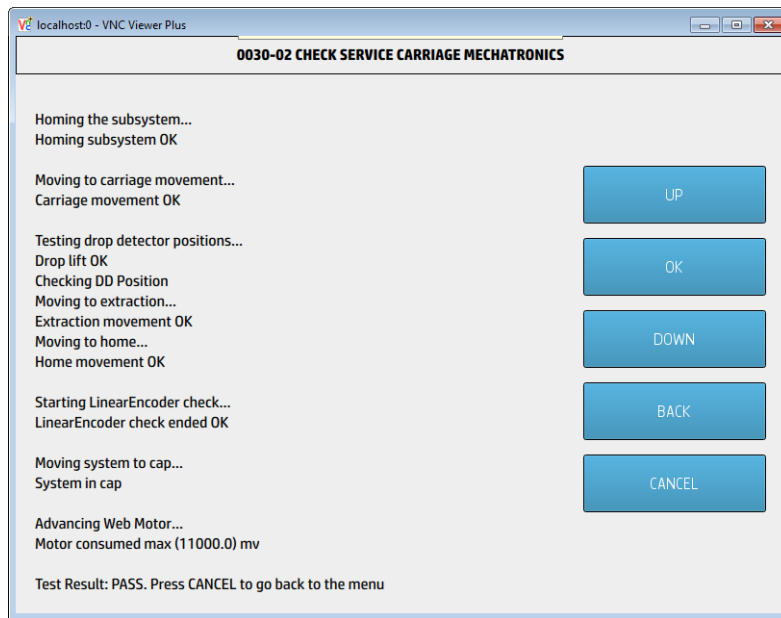
This test checks the service carriage electronics (Drop Detector board and drop detector LEDs, Carriage Sensor board and sensor) and shows the drop detector LED values, including thresholds.

The test performs the full diagnostic run once only after starting the printer. To repeat the test, first restart the printer.



0030-02 Check mechatronics

This test checks the drop detector, the printhead cleaning motor, the carriage motor, and the linear sensor. It also sets the printhead cleaning motor and shows its PWM value in the front panel.



Printbar

The complete printbar test consists of individual tests for the different components related to the printbar.

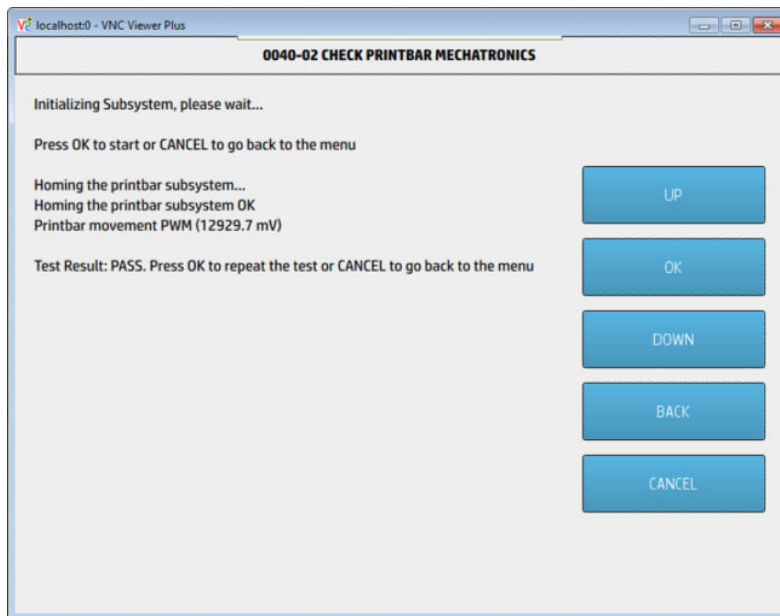
0040-01 Check electronics

This test checks the various printbar boards, including Printbar Mechatronics, Printbar Hub, and Printhead Drive, as well as the lift-brake voltage and printhead connection.

0040-02 Check mechatronics

This test mainly checks the lift motor, showing its PWM value and valid ranges. It gives you the chance to repeat the test if needed.

Press **OK** to start the test. When printhead initialization has finished, press **OK** again to continue with the rest of the test. When the test has finished, press **OK** to repeat it, or **CANCEL** to return to the main menu.



When running the test, normal behavior is the following: the print bar moves up, stops for around 2 seconds in the up position, and then moves down, no error message displayed.

Specific cases:

- If the lift motor brake is in the wrong position (in the high position / unlock), the print bar will move up, reach the up/high position and immediately go down, and the following system error is then displayed "0040-0012-0059 Lift – Servo shutdown".
The lever must be in the low position / "lock". For more details see [Lift motor and brake on page 52](#).
- If the lift sensor (situated at the left side) is taped: no error will appear, the print bar will move up, stop for around 2 seconds in the up position, and move down, the same behavior as when there is no issue.
- If the sensor is removed from its position (not closed) or is disconnected: when the print bar reaches the up/high position, it stays there and the following system error appears "0040-0011-0047 print bar lift sensor error, homing error".
- If there is a higher friction when the lift bar is moving up (adding more pressure by hand for example for testing purposes): the print bar stops before reaching the up/high position, and the following system error is displayed "0040-0011-0047 print bar lift sensor error, homing error".

0040-03 Move printbar to upper position

How to run this test:

1. Enter the diagnostic menu.
2. Execute the Printbar test > Move the printbar Up or Down.
3. Select the "Move the Printbar to TOP" option.

Or, to move the printbar down:

For HP-authorized personnel only

Select the "Move the Printbar DOWN" option.

4. Open the top cover and observe the printbar position. It should be in the TOP position.

Or, if moving the printbar down:

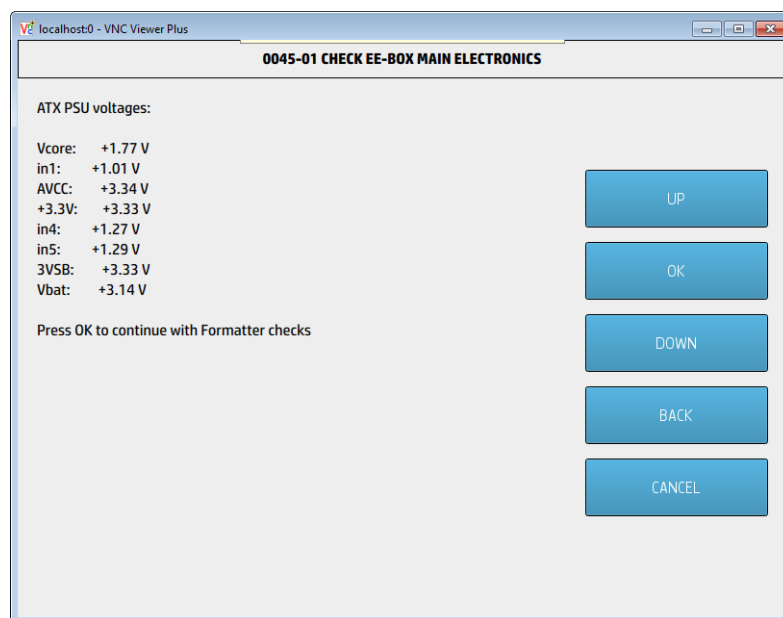
Open the top cover and observe the printbar position. It should be in the DOWN position.

E-box

The complete e-box test consists of individual tests for the different components related to the e-box.

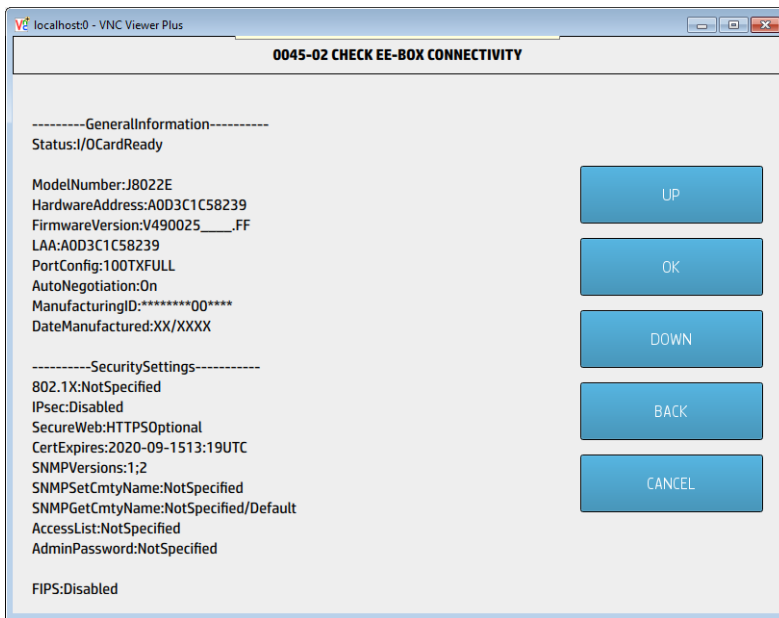
0045-01 Check main electronics

This test checks ATX PSU voltages, the formatter (processor, RAM, BIOS) and disk (hard disk and/or solid-state disk) status.



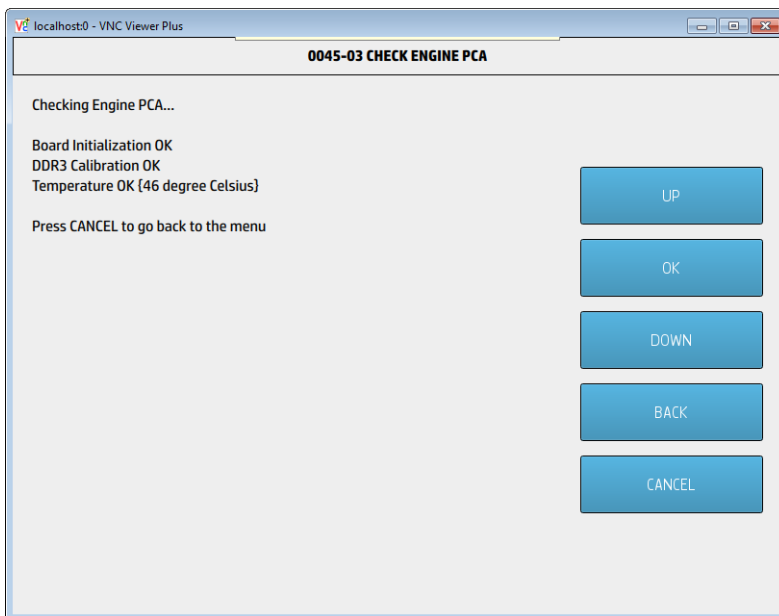
0045-02 Check connectivity

This test checks JDI board status.



0045-03 Check Engine board

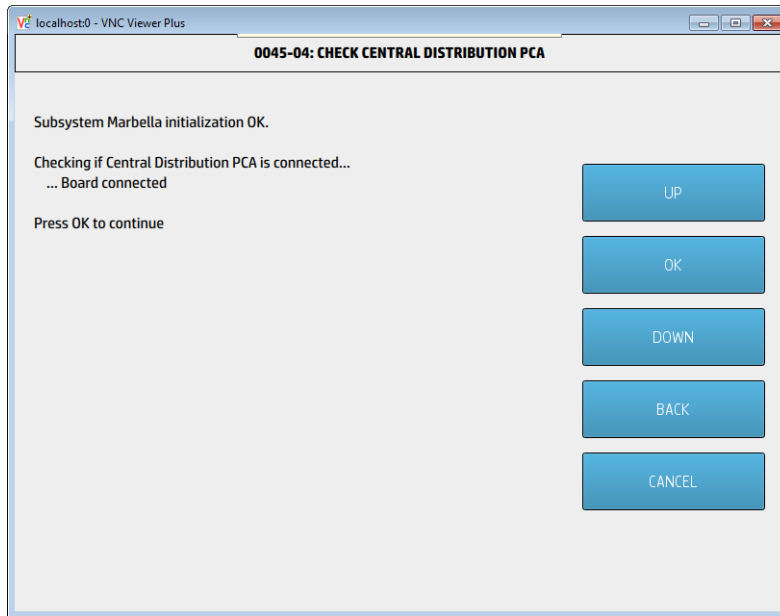
This test checks Engine board status and temperature.



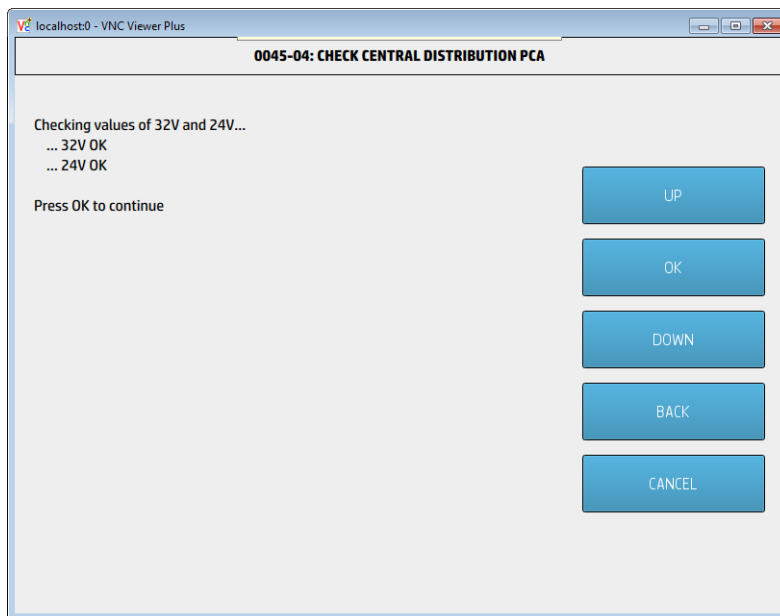
0045-04 Check Central Distribution board

This test checks Central Distribution board status, temperature, and voltages (24V and 32V).

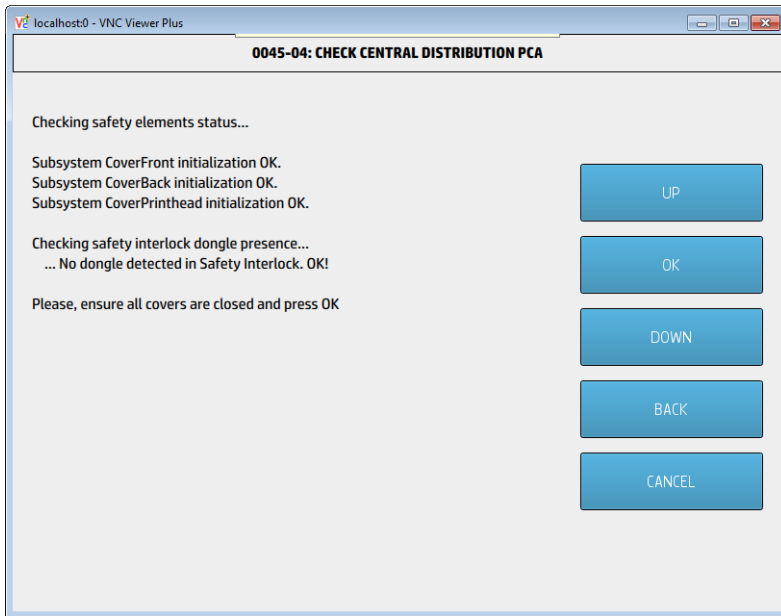
For HP-authorized personnel only



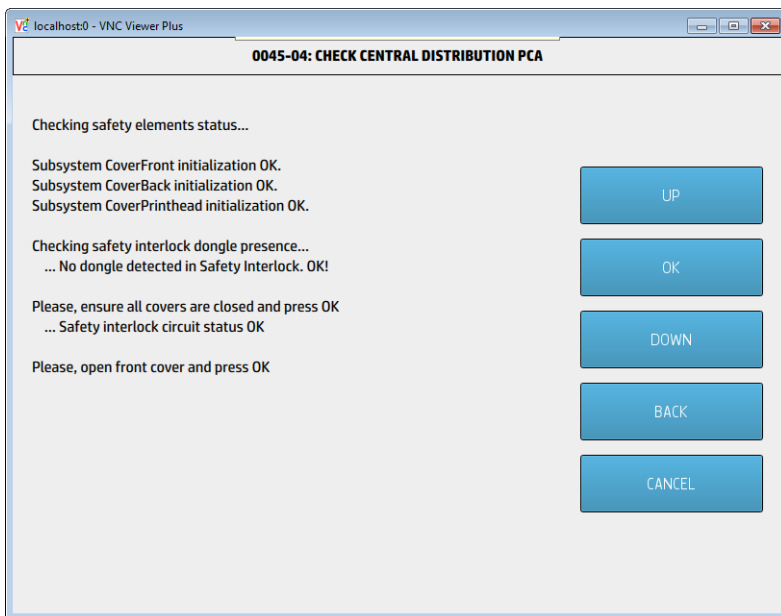
Press **OK** to continue with the voltage checks.



Press **OK** to continue with the safety element checks.

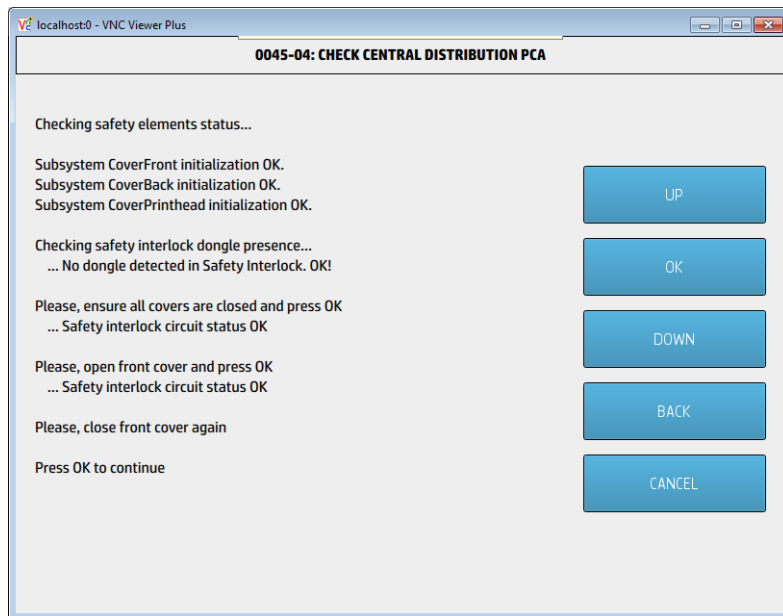


Ensure that all covers are closed, then press **OK** to check the safety interlock circuits.

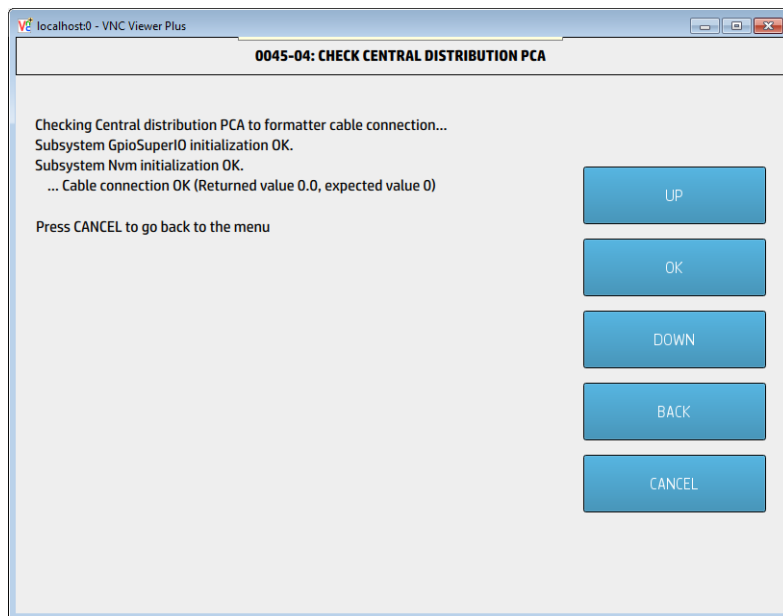


Open the front cover, then press **OK** to continue. Alternatively, you can leave the front cover closed and press **CANCEL** to continue or **BACK** to finish the whole test.

For HP-authorized personnel only



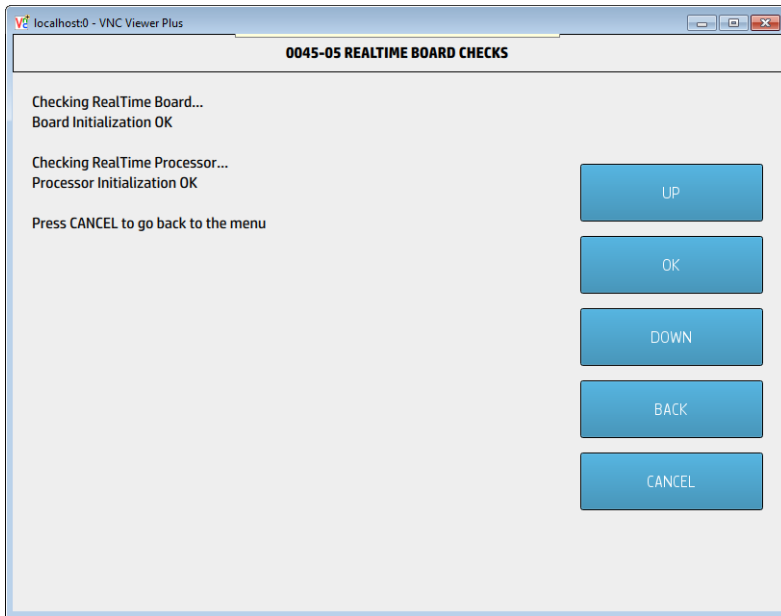
If the front cover is open, close it, and press **OK** to continue.



Press **CANCEL** to return to the main menu.

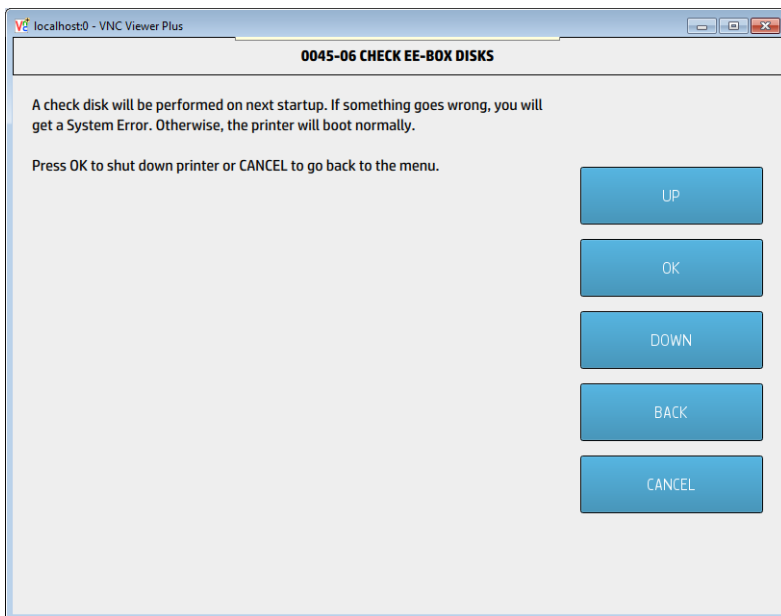
0045-05 Check real-time board

This test checks the status of the real-time board.




0045-06 Check disks

This test checks the hard disk drive and the solid-state drive (if printer has the latter).



0045-07 Reset HDD to be removed

If for troubleshooting purposes you install a hard disk drive as a service part, and you want to undo it, run this diagnostic in order to enable the service part to be used again.

 **NOTE:** The hard disk drive and the Central Distribution board should NEVER be replaced at the same time. These parts can be reused in other printers as long as they have been reset correctly first.

0045-08 Reset Central Distribution board to be removed

If for troubleshooting purposes you install a Central Distribution board as a service part, and you want to undo it, run this diagnostic in order to enable the service part to be used again.



NOTE: The hard disk drive and the Central Distribution board should never be replaced at the same time, and never try to reuse those parts from other printers: the printer won't accept reused parts.

0045-09 Delete Job Manager queue

This utility clears the Job Manager queue.

0045-10 Enable extended log for next boot

This utility activates traces as if printer were in dev mode only for the next boot.

Press **OK** to enable extended log or **CANCEL** to go back to the menu.

0045-11 JDI hard reset

This utility resets all the configuration and data saved on the real-time board. The diagnostic is useful when the board is found in an error status and does not boot up correctly, i.e. another option when the printer does not have any connectivity.

0045-12 Remove non-factory papers

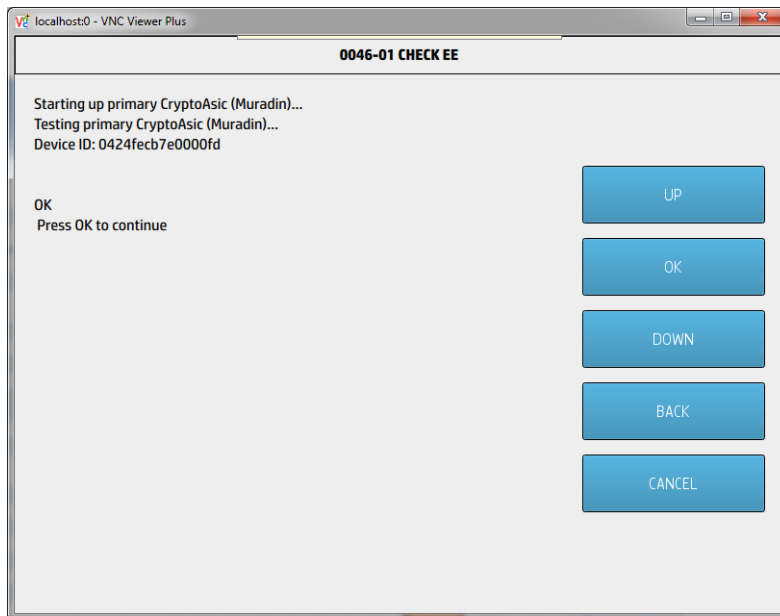
This diagnostic removes paper presets installed by the user. It does not remove any original paper preset shipped with the printer. Use this diagnostic when a paper profile installed by the user could be the cause of a problem.

CryptASIC

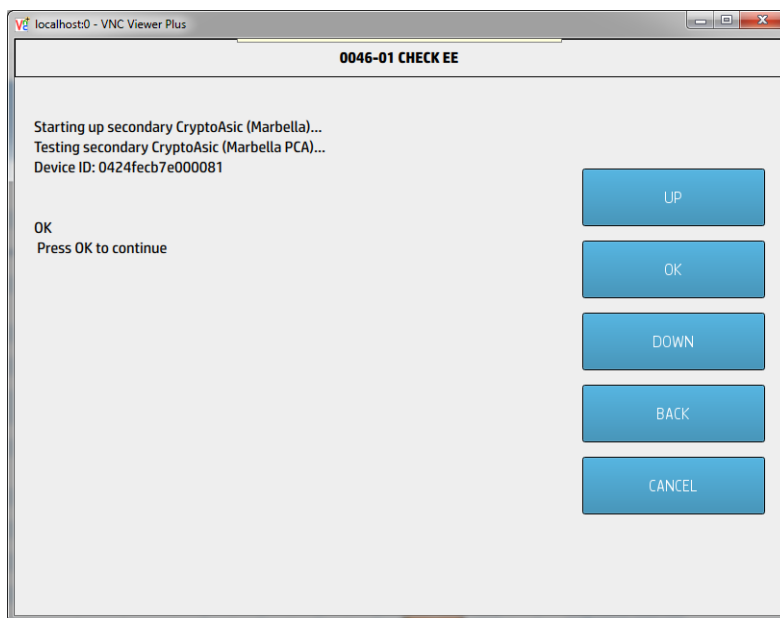
The complete CryptASIC test consists of individual tests for the different components related to the CryptASIC.

0046-01 Check electronics

This test checks both CryptASIC boards: first the Encryption board, then the Central Distribution board.



Press **OK** to continue with the Central Distribution board.



Power supply

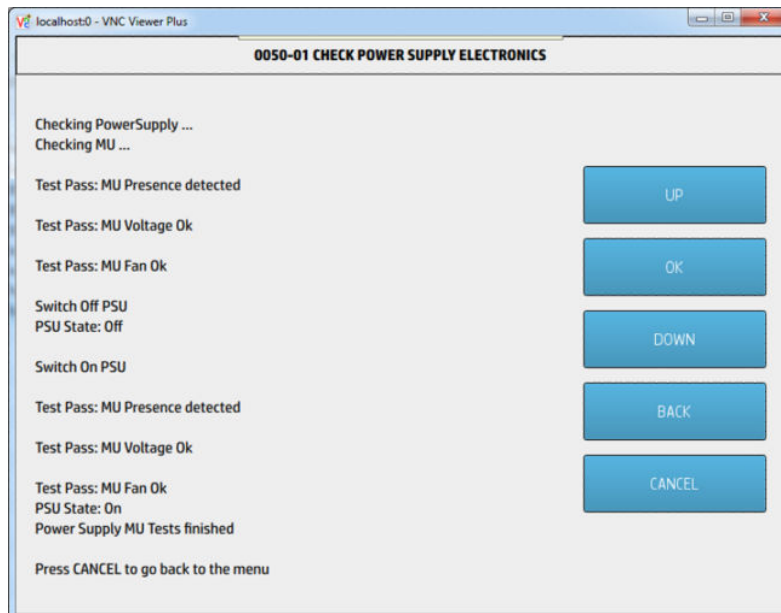
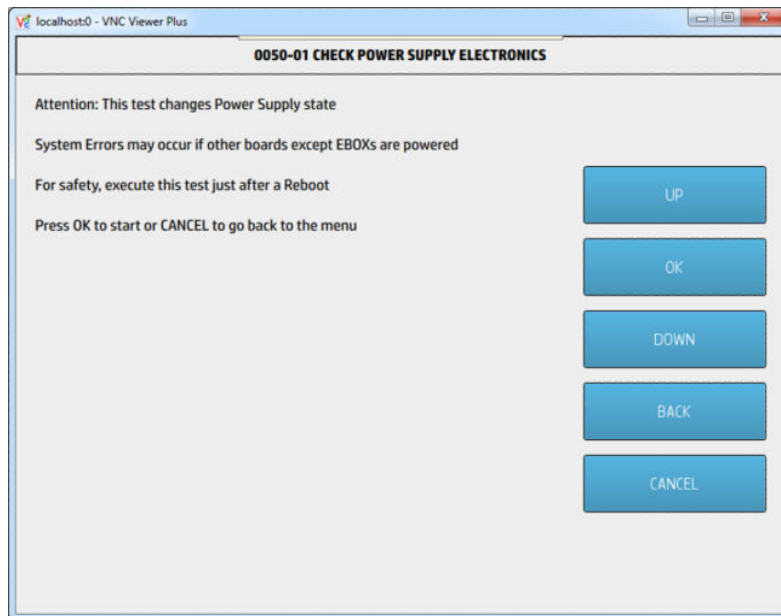
The complete power-supply test consists of individual tests for the different components related to the power supply.

0050-01 Check EE

The test includes a power supply presence check, returns voltage levels and fan status.



NOTE: It is recommended to execute this test just after the printer is powered on.



Paper input

The complete paper-input test consists of individual tests for the different components related to paper input.

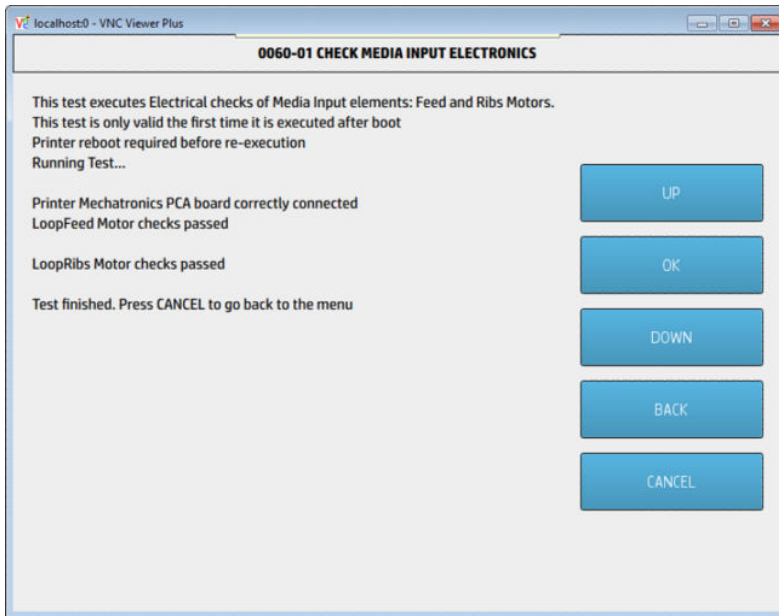
0060-01 Check electronics

This test checks the connections between the Paper Advance board and its motors (feed and ribs), as well as related electrical checks.




NOTE: This test will be executed only once after each printer start.

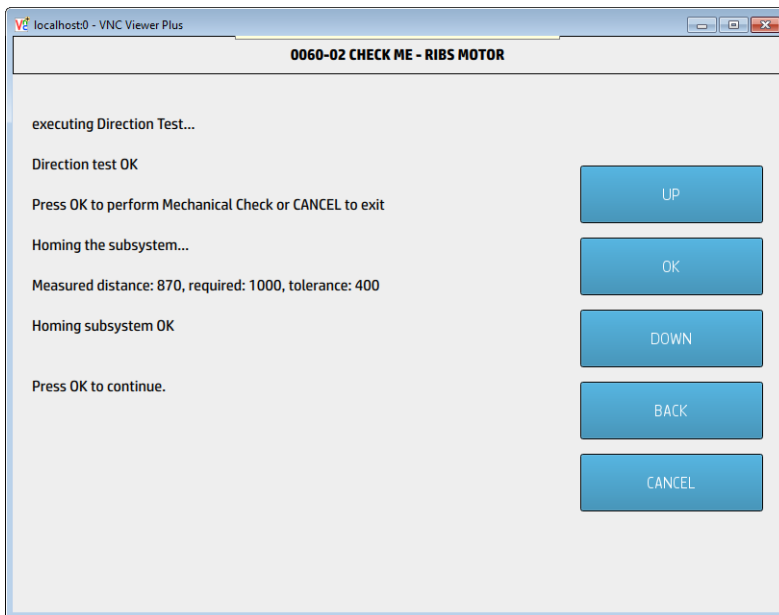
After some internal checks, press **OK** to start the electrical tests of the ribs motor encoder, then press **OK** again to start the tests of the loop-feed motor encoder.

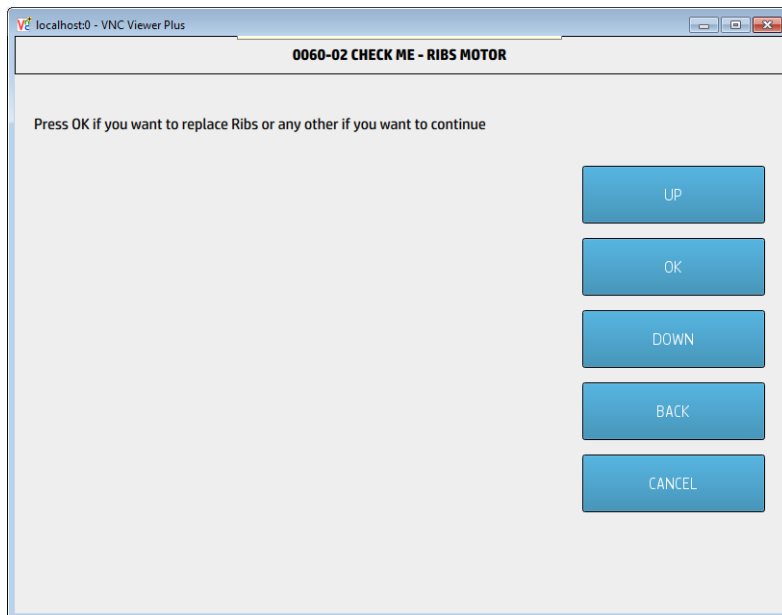
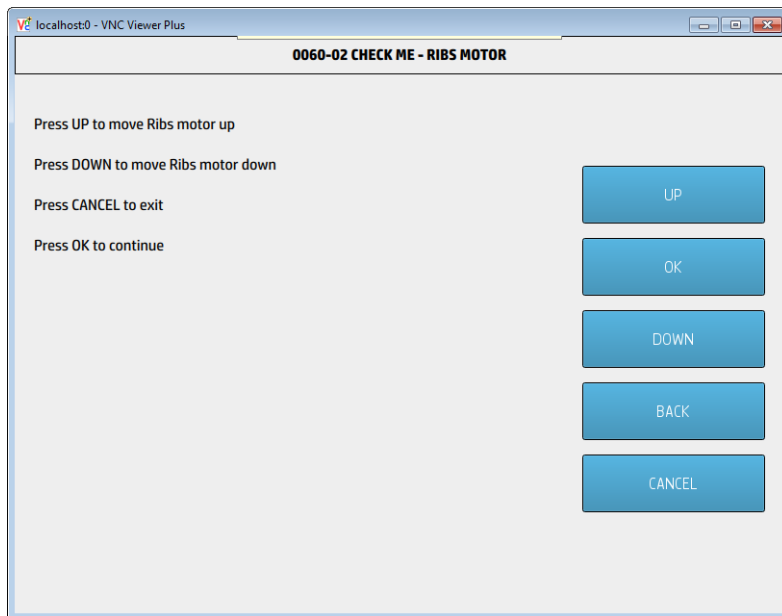


0060-02 Check mechatronics ribs motor

This test checks the motor movement and detects if it is blocked, allowing you to remove paper manually. Finally, it gives the opportunity to replace ribs manually.


 **NOTE:** Please take into account that this test can only be executed once. If you want to repeat the test, please reboot the printer.

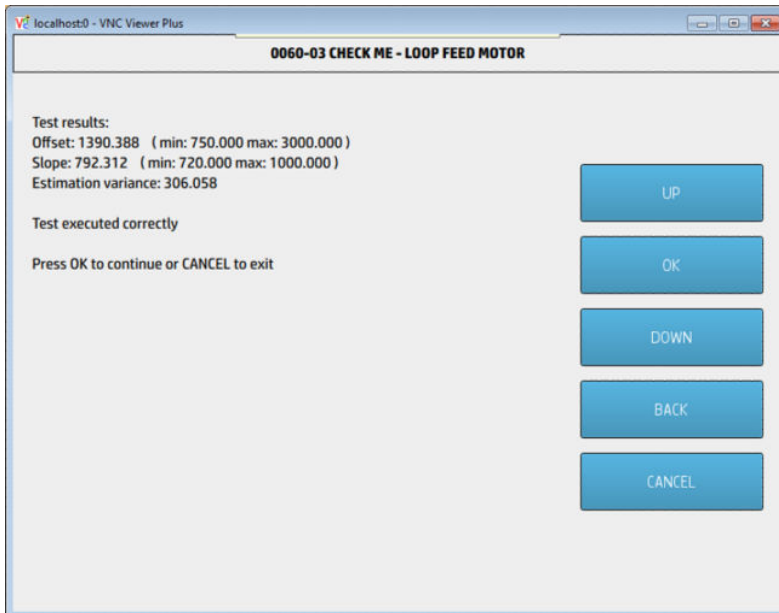
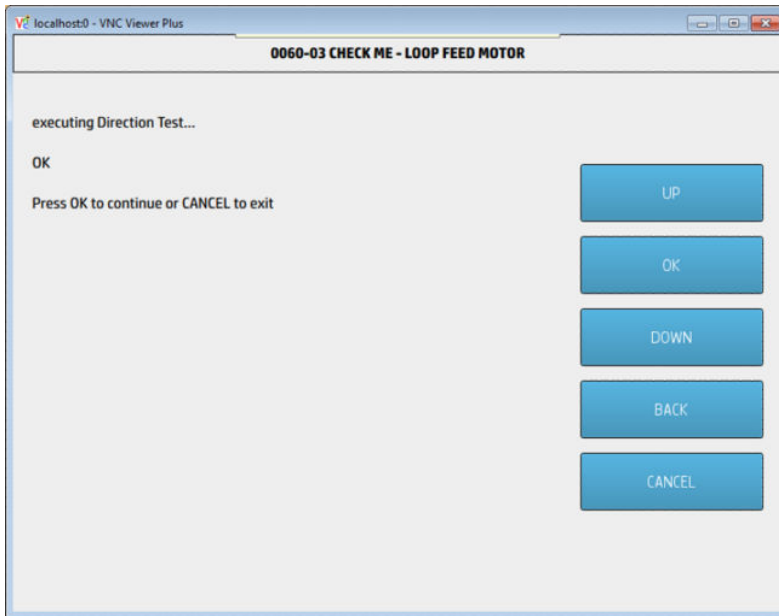


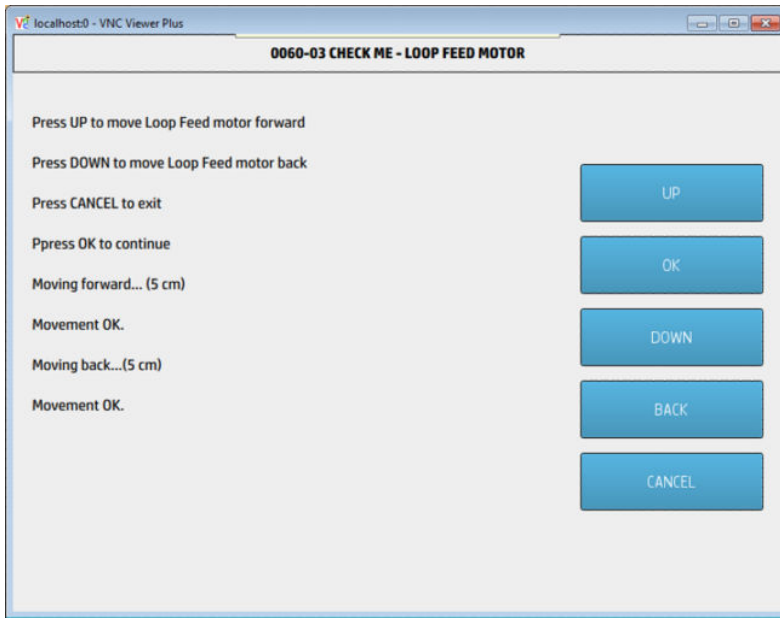


0060-03 Check mechatronics loop-feed motor

This test checks the motor movement and detects if it is blocked, allowing you to remove paper manually. It performs a PWM test and shows values, and allows you to replace the loop feed manually.

 **NOTE:** Please take into account that this test can only be executed once. If you want to repeat the test, please reboot the printer.





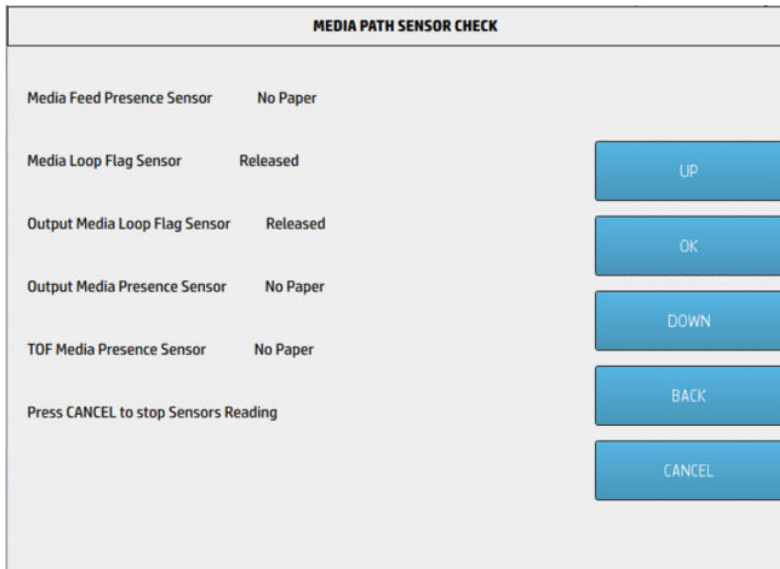
0060-04 Check paper jams

This test checks paper jams for those cases in which the printer shows constant messages.

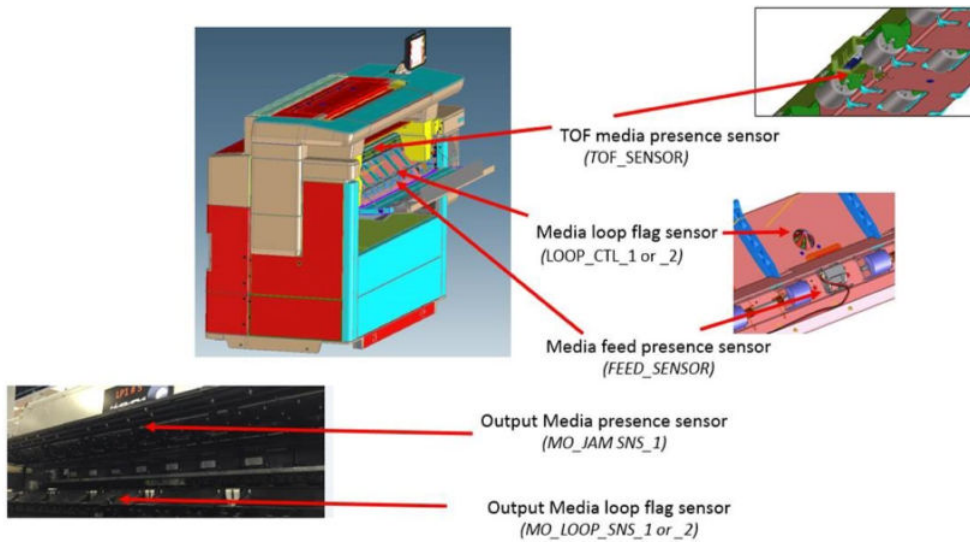
0060-05 Check sensors

This test checks TOF, paper input, and paper loop sensors.

Paper feed, paper output, and TOF paper presence sensors report if they see paper under them. You can use a piece of paper to check that they change their status and work properly. The paper-loop sensor can be tested just by pressing and releasing the cone in the paper loop.



In order to ensure that there are no misunderstandings, here is the corresponding placement of each sensor. In *italic* there is also the corresponding name in the block diagram.



Here are specific cases with corresponding test results, what happens in case you unplug:

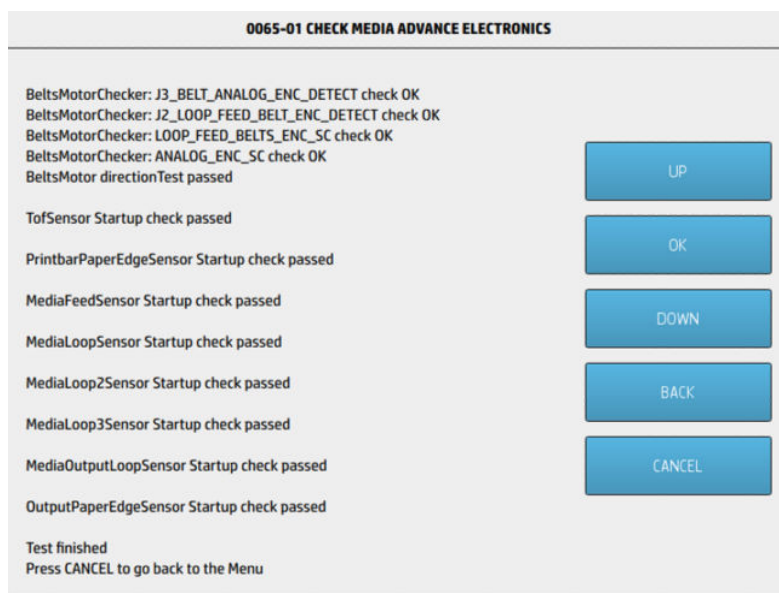
- In case Any media presence sensor is not plugged -> report: PAPER
- In case any Flag Sensor cable is unplugged -> report: Released

Paper advance

The complete paper-advance test consists of individual tests for the different components related to paper advance.

0065-01 Check electronics

This test checks the connections between the Paper Advance board, belt motor, and cooling fan, as well as some electrical checks.

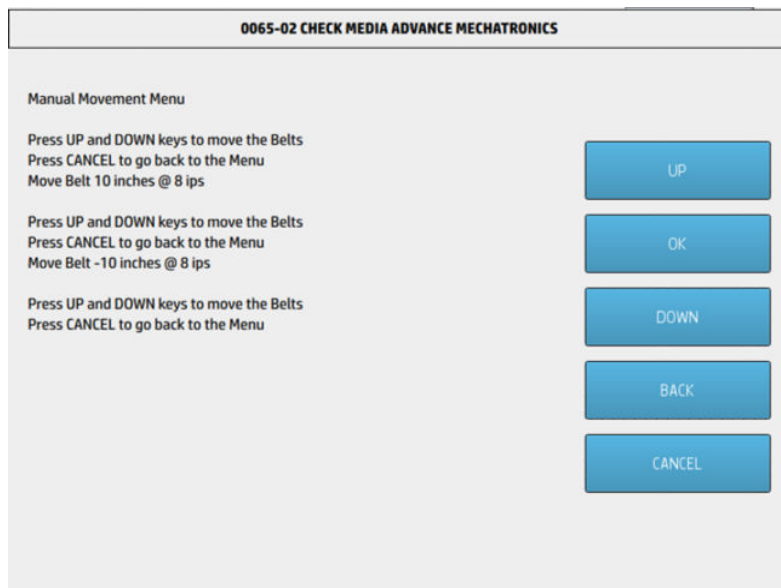
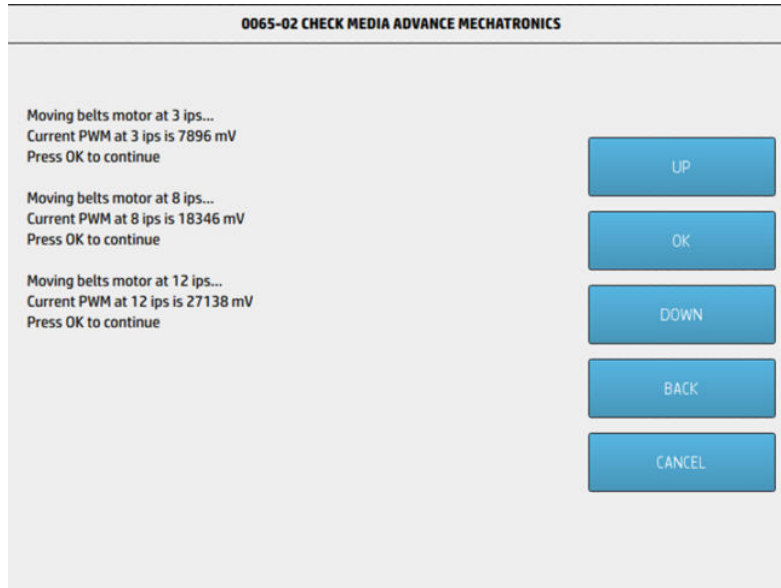


0065-02 Check mechatronics

This test runs the belt motor in three different speeds and shows its PWM value. Also allows you to move the belts backwards and forwards.

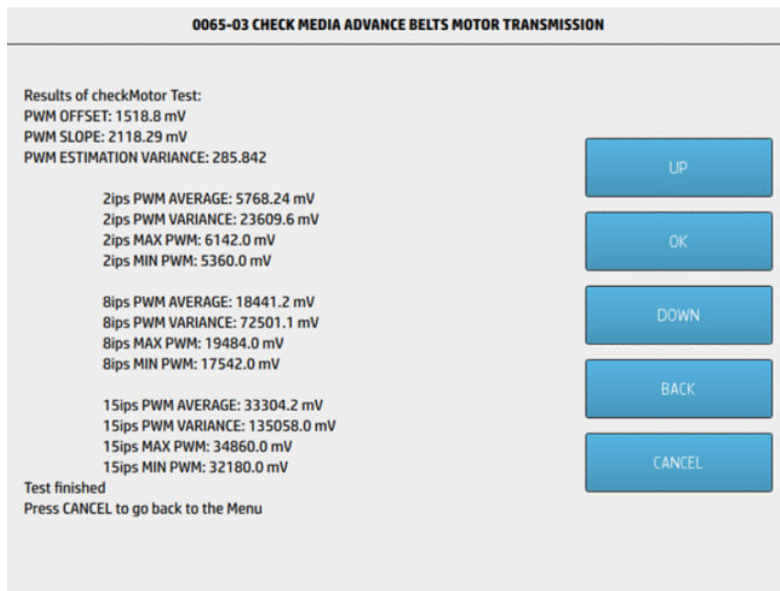


NOTE: Use the motor manual movement to clean belts.



0065-03 Check motor and transmission

This test moves the belts motor and reports its PWM value and valid ranges in the front panel.

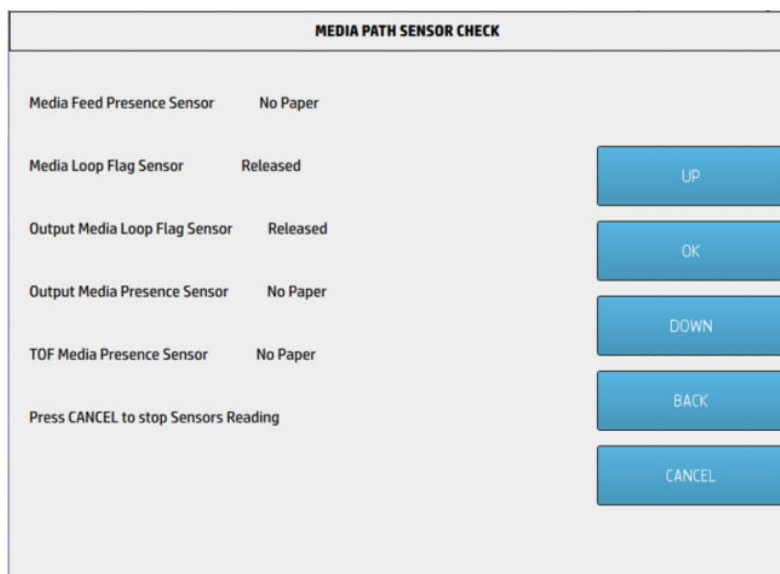


0065-05 Check paper jams

This test checks the paper jams for those cases in which the printer shows constant messages.

0065-06 Check sensors

This test checks the correct functioning of the TOF, PB, and paper-output sensors.



0065-07 Paper-advance calibration reset

This utility resets the values set in paper-advance calibration, available in the service utilities.

Aerosol removal

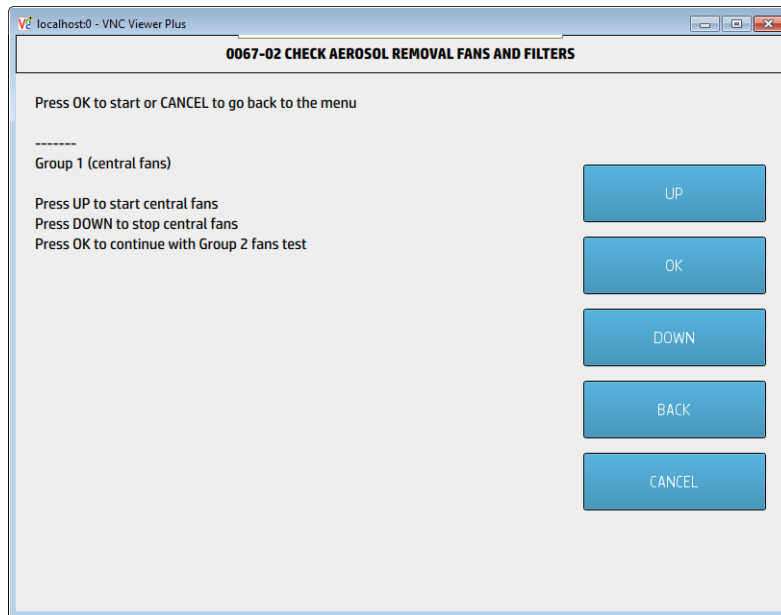
The complete aerosol-removal test consists of individual tests for the different components related to aerosol removal.

0067-01 Check electronics

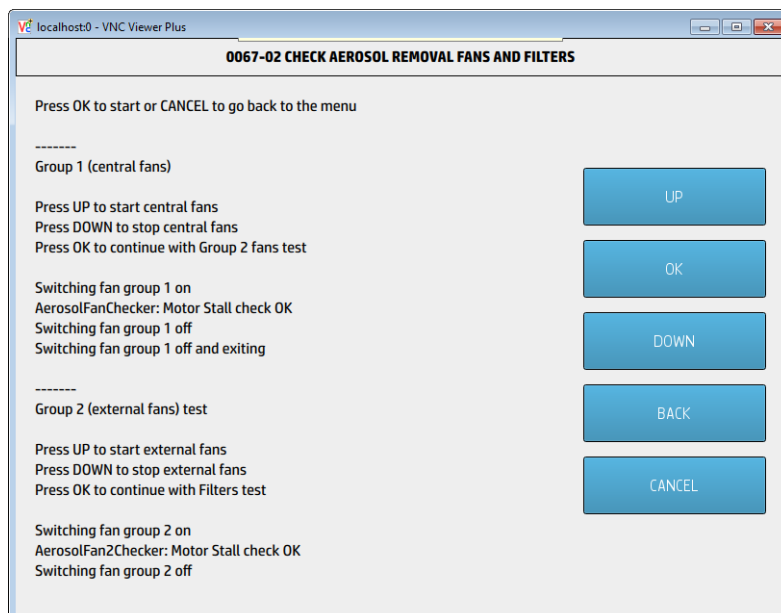
This test checks the connections of the various fans and their drivers by group (one group includes both external fans and the other both central fans).

0067-02 Check fans and filters

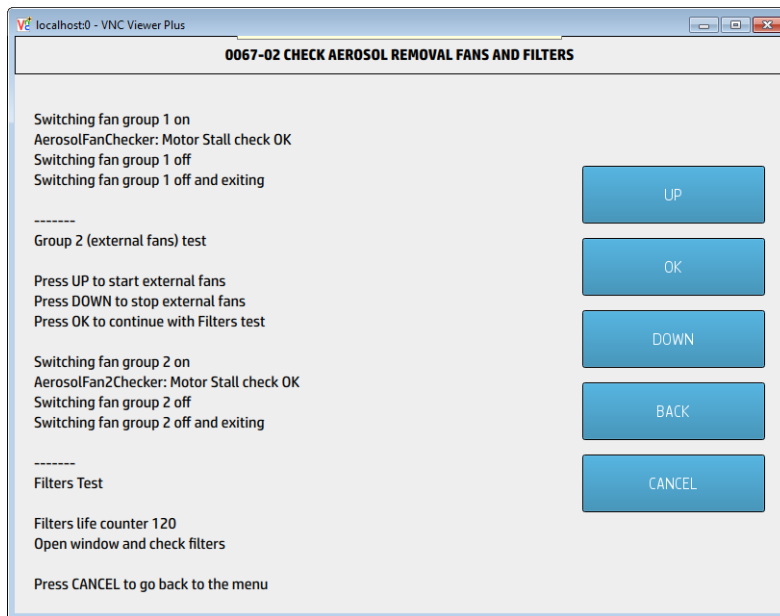
This test checks the movement of the fans and the status of the filter counters.



Press **UP** to start fan group 1 and check that it moves. Press **DOWN** to stop the fans. Press **OK** to start the fan group 2 test.



Press **UP** to start fan group 2 and check that it moves. Press **DOWN** to stop the fans. Press **OK** to start the filters test.



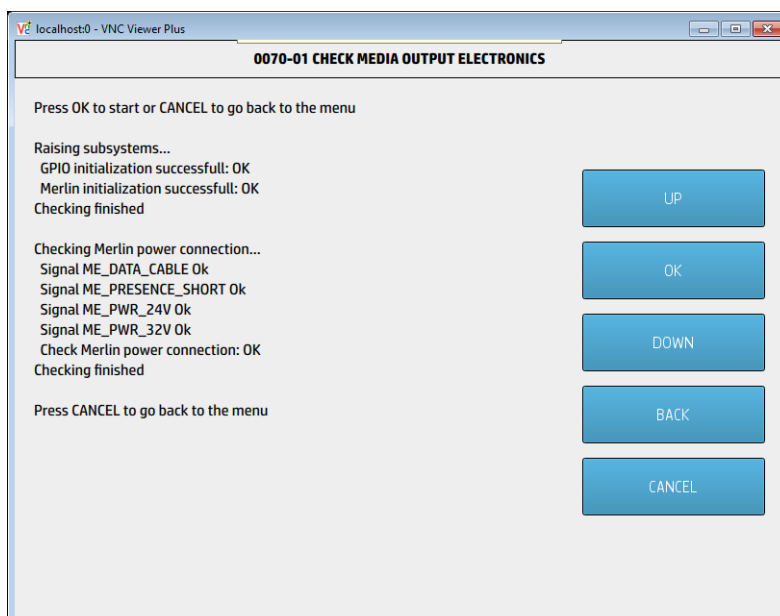
Open the top cover and check the filters. Change them if necessary. Then press **CANCEL** to return to the main menu.

Paper output

The complete paper-output test consists of individual tests for the different components related to paper output.

0070-01 Check electronics

This test checks the connection of the Paper Advance board, pinch and diverter motors, and paper-output loop sensors, as well as some electrical checks.

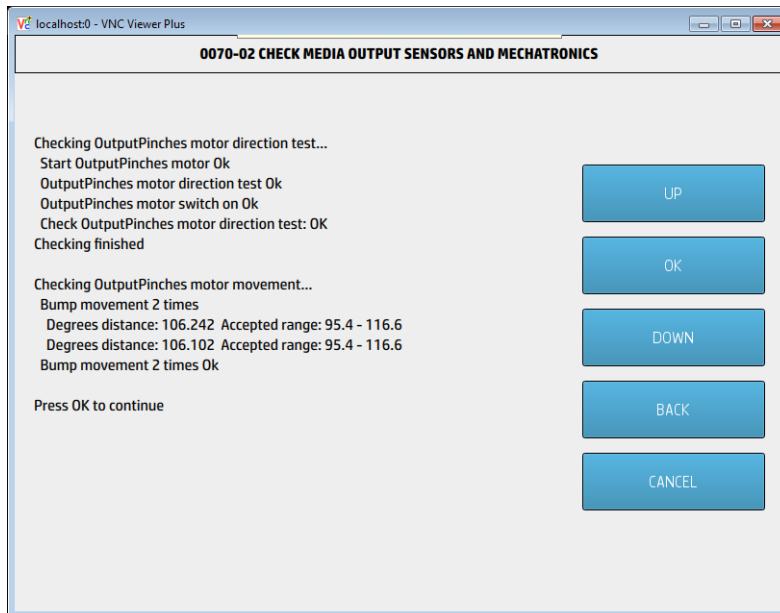


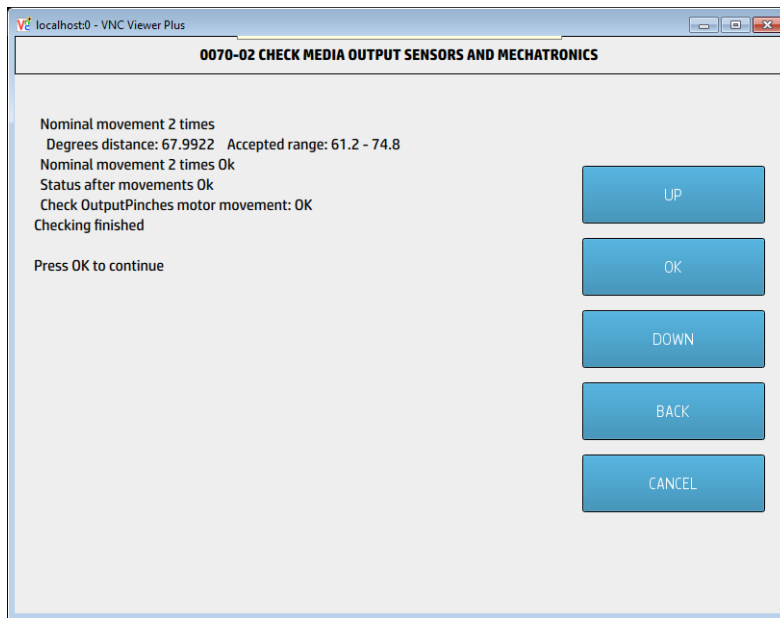
0070-02 Check mechatronics


This test checks the (bump and nominal) movement of the pinch and diverter motors, and shows their PWM values and valid ranges in the front panel.

 **NOTE:** Diverter's motor has to move a different degree of distance depending on which accessory is attached. Run one of the following diagnostics:

- Check Media Output Mechatronics
- Check Media Output Mechatronics with Folder
- Check Media Output Mechatronics with Folder & Integrated Stacker
- Check Media Output Mechatronics with Integrated Stacker
- Check Media Output Mechatronics with HC Stacker
- Check Media Output Mechatronics with HCStacker & Integrated Stacker





 **NOTE:** In case of FAIL on the diverter test (2nd part of the tests), check the following items:

In case of failure during the "bump movement" check:

- If there is a top stacker, check/adjust the paper-output path adjustable beam. See [Paper-output path adjustable beam \(CZ309-67201\) on page 1261](#).
- When placing the diverter in the low position, check that the bottom part of the media sensor in the middle of the diverter is NOT touching the Diverter Cover (the diverter cover, at the level of the media sensor, should slide under the metal part).

In case of failure during the "nominal movements" tests:

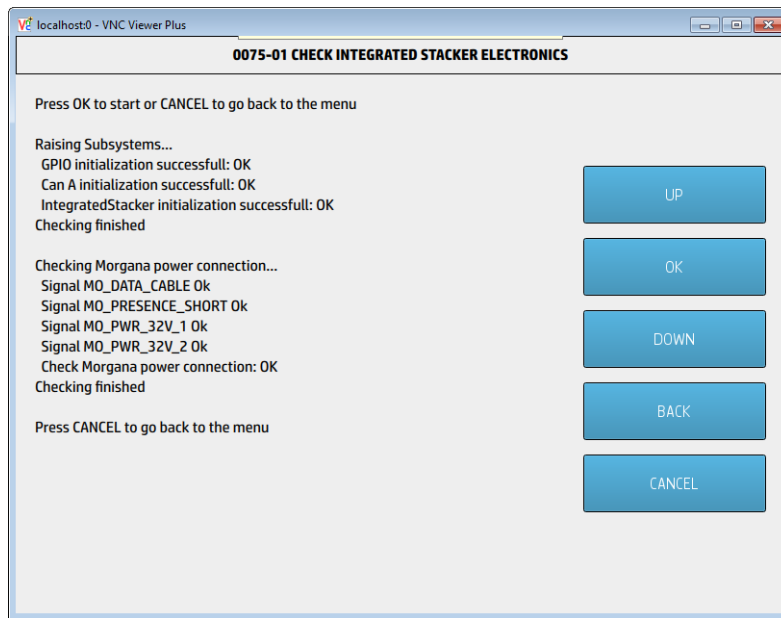
- Check that the possible calibration of the diverter (this will be specific depending on the accessories mounted) is NOT set at too low a value or too high a value. For example, with a diverter position compensation at -40, most probably the test will fail (example of possible results: encoder unit distance: 4261 Accepted range 4544 - 4923). If you set the calibration to 0 and this test is passed then there is no need to suspect a possible failure of the diverter.

Top stacker

The complete top-stacker test consists of individual tests for the different components related to the top stacker.

0075-01 Check electronics

This test checks the Top Stacker board. This test includes board initialization, power and data cables presence, and 32V input voltage checks.



0075-02 Check sensors and mechatronics

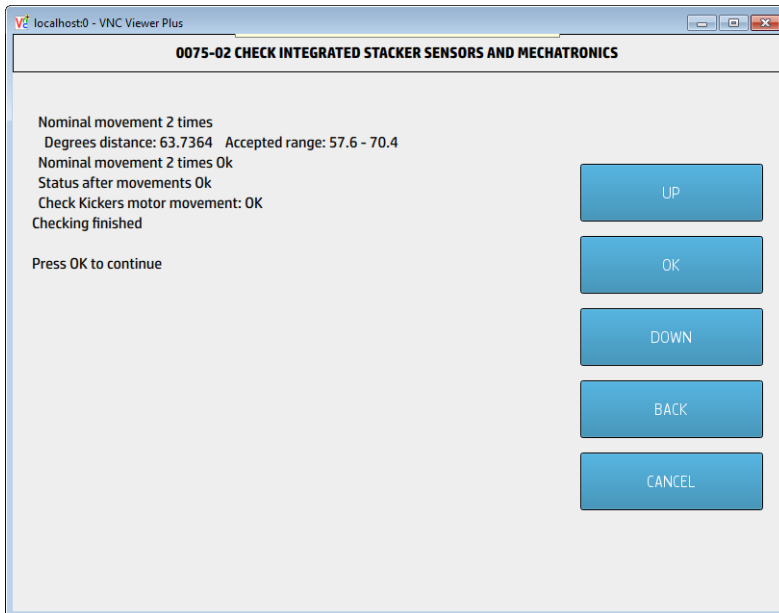
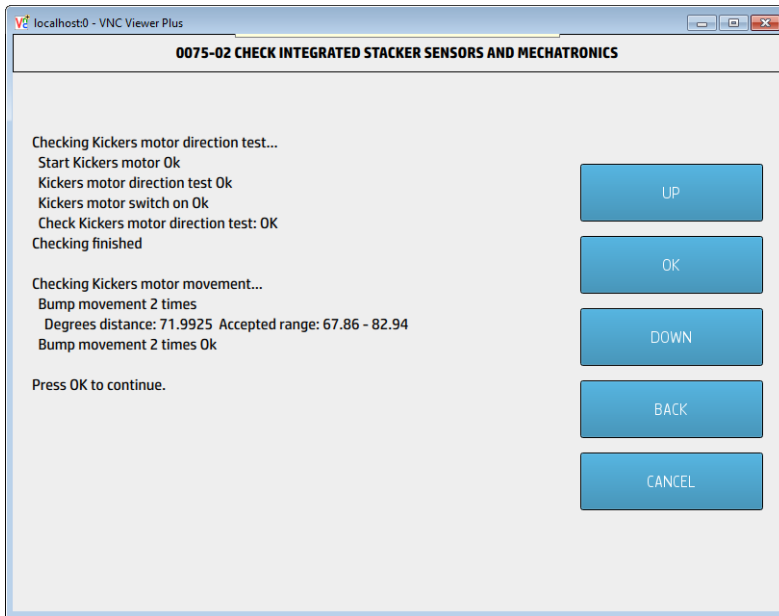
This test checks the top stacker motors and sensors. Firstly, the system is initialized, and then, kicker and roller motors are checked. Finally, the system shows the statuses of all the top stacker sensors.

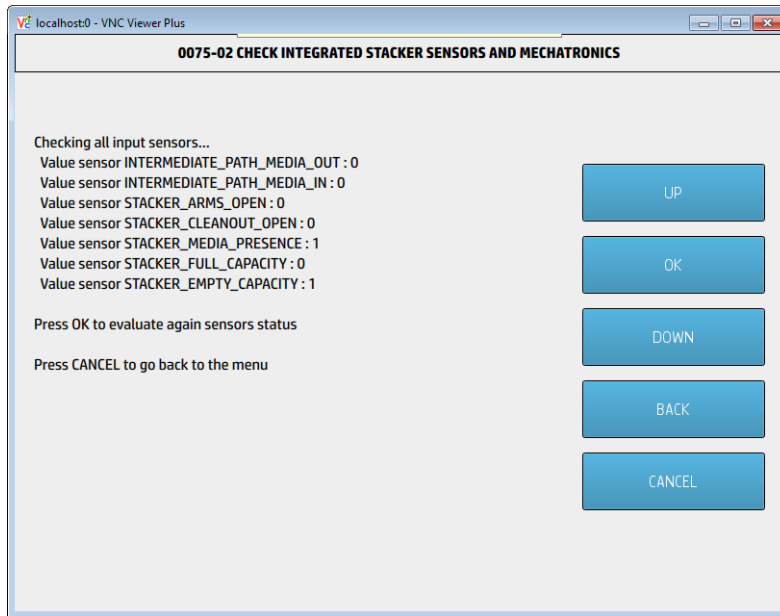
The motor test checks (for both kicker and roller motors) presence, direction, and bump and nominal movements (showing the distance moved, in degrees, and its valid ranges).

The sensor test checks the statuses of the following sensors:

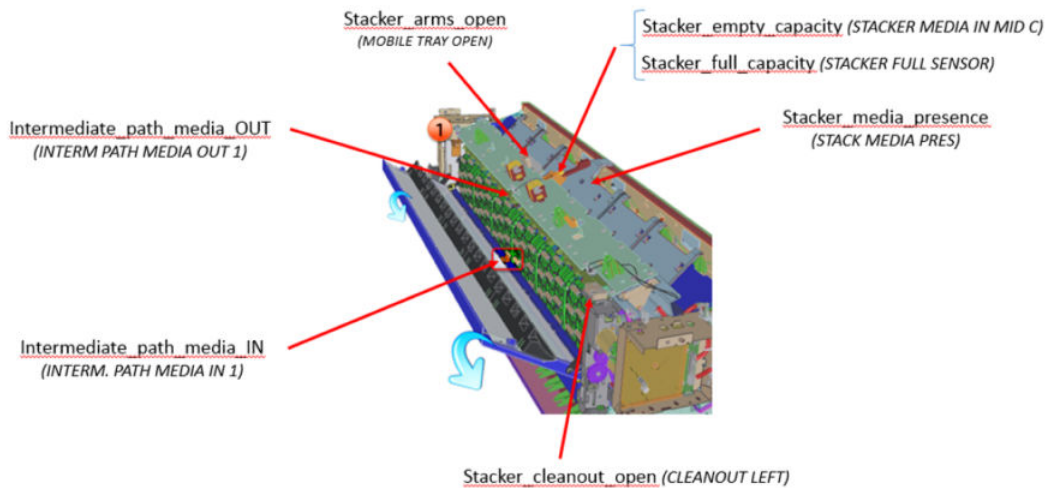
- Intermediate path — paper output
- Intermediate path — paper in
- Stacker — arms
- Stacker — clean-out sensor
- Stacker — paper presence
- Stacker — full capacity
- Stacker — empty capacity

To update the statuses of the sensors, press **OK**. Press **CANCEL** to go back to the menu.





In order to ensure that there are no misunderstandings, here is the corresponding placement of each sensor. In italic there is also the corresponding name in the block diagram.



Here are specific cases with corresponding test results, when a sensor is unplugged:

- Stacker_cleanout_open: if switch not plugged -> 1 (the same as if door is open, if door is closed -> 0)
- If intermediate_path_media_in not plugged -> 1 (the same as if there is paper at the front, if no paper and it is well plugged in: 0)
- If intermediate_path_media_out not plugged -> 1 (the same as if there is paper at the front, if no paper and it is well plugged in: 0)
- If stacker_full capacity and stacker_empty_capacity sensor not plugged -> both at 1
- If Stacker_arms_open switch unplugged -> 1 (the same as if door open, if door closed -> 0)
- If stacker_media_presence not plugged -> 1 (the same as if there is paper at the front, if no paper and it is well plugged in: 0)

Here are specific cases with corresponding test results, when a sensor is unplugged:

- If no paper in the tray:
 - Stacker_full capacity -> 0
 - Stacker_empty_capacity -> 1
- If a little bit of paper is in the tray (same result if cable is unplugged):
 - Stacker_full capacity -> 1
 - Stacker_empty_capacity -> 1
- If some paper is in the tray:
 - Stacker_full capacity -> 1
 - Stacker_empty_capacity -> 0
- If the tray is totally full:
 - Stacker_full capacity -> 0
 - Stacker_empty_capacity -> 0

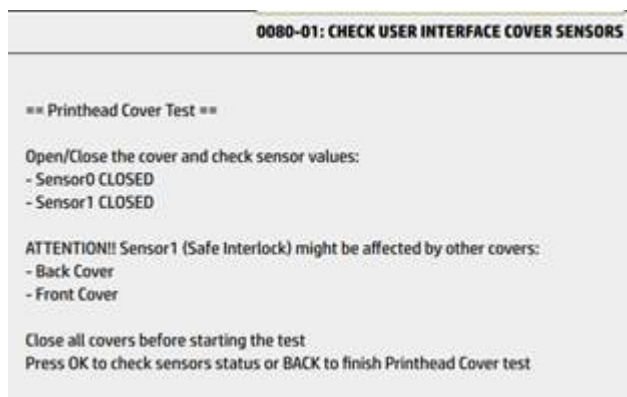
0075-03 Install / uninstall Top stacker

This utility allows you to install or uninstall the top stacker.

User interface

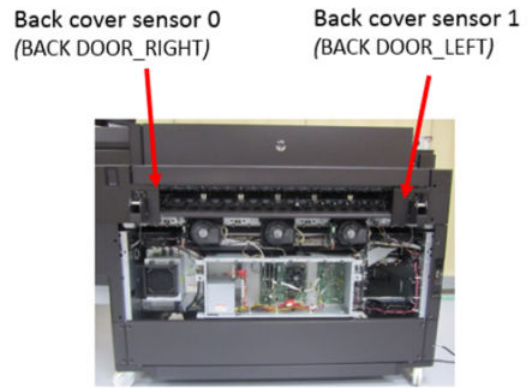
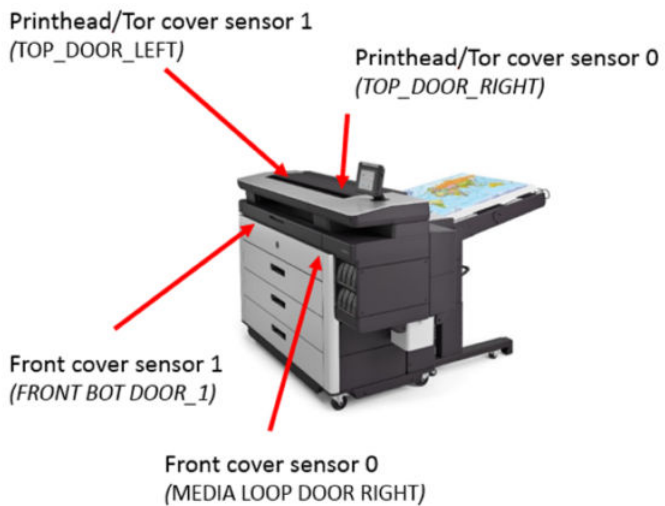
0080-01 Check cover sensors

This test checks the status of the switches of the 3 main covers (back, front and top).



In order to ensure that there are no misunderstandings, here is the corresponding placement of each sensor. In italic there is also the corresponding name in the block diagram.

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Here are specific cases with corresponding test results:

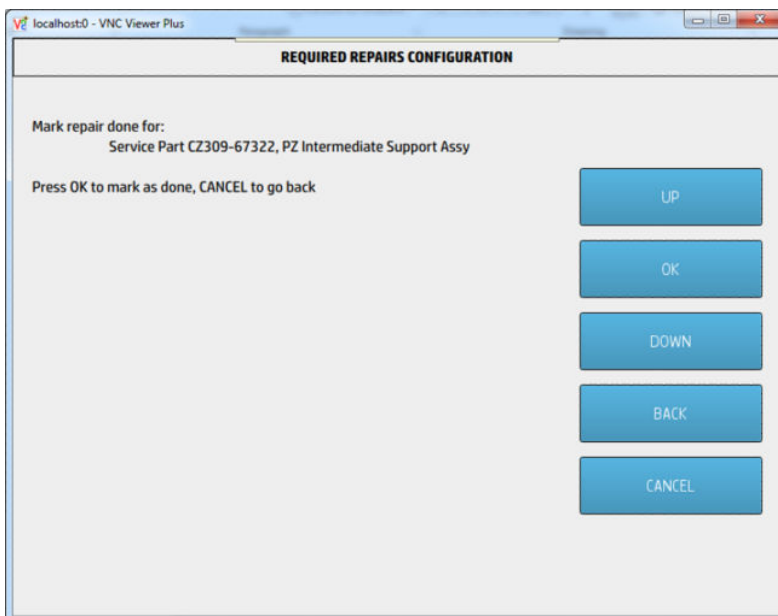
- Concerning X Cover 0:
 - If the corresponding sensor is unplugged: CLOSED
- Concerning X Cover 1:
 - If the corresponding sensor is unplugged: OPEN

System / miscellaneous

0099-01 Additional life repairs parts

This diagnostic is used to mark the repairs of different service parts of the printer as done.

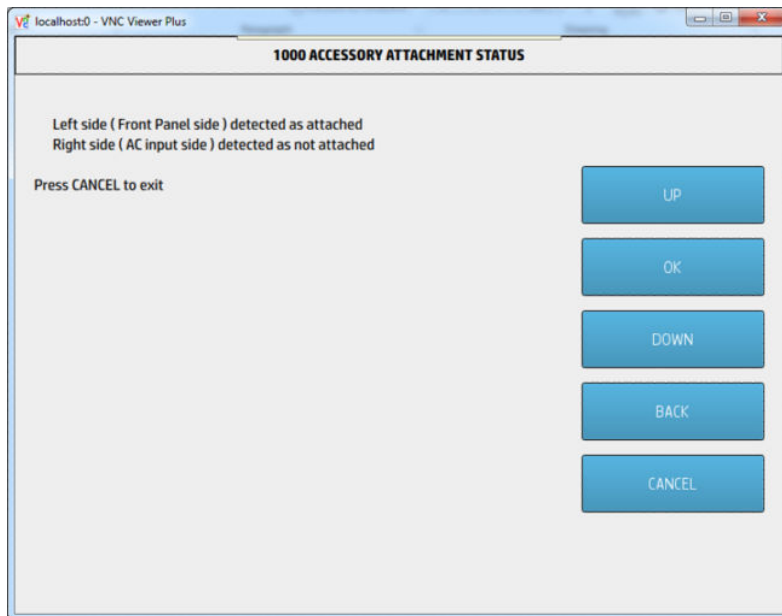
The diagnostic shows the available Service parts that can be marked as repaired. Select the desired one:



After that, press OK to confirm and the repair will be marked as done. The system notifies you if the printer is not affected by any repair.

1000-01 Check Accessory Attachment status

This test checks the status of the hook sensors on both sides (attached / not attached).



Scanner

The complete scanner test consists of individual tests for the different components related to the scanner.

1001-01 Check electronics

This test checks the scanner connection and motor, and also CIS elements and libraries.

Insert the calibration sheet and wait until the scanner takes it.

The test can last several minutes; please be patient. When the checks are finished, the system will notify you as to whether it has passed the test or not.

1001-02 Delete scanner queue

This test deletes the scanner queue, which can be useful in some cases when the printer is unable to start due to a scanner problem.

1001-03 Check U-turn jam sensor

This test checks the status of the scanner's U-turn sensor: 1 — activated; 0 — not activated. The screen is updated automatically. Press CANCEL to cancel the test and go back to the menu.

High-capacity stacker

The complete high-capacity stacker test consists of individual tests for the different components related to the high-capacity stacker.

1005-01 Raise subsystem

This test checks the initialization and communications of the high-capacity stacker. It is included in the following diagnostics because it is required in the initialization process.

1005-02 Check connection

This test checks the cable connecting the high-capacity stacker to the printer. This test is included in the following diagnostics because it is required in the initialization process.

1005-03 Check subsystem connection

This test checks the subsystem connection between the high-capacity stacker and the printer. This test is included in the following diagnostics because it is required in the initialization process.

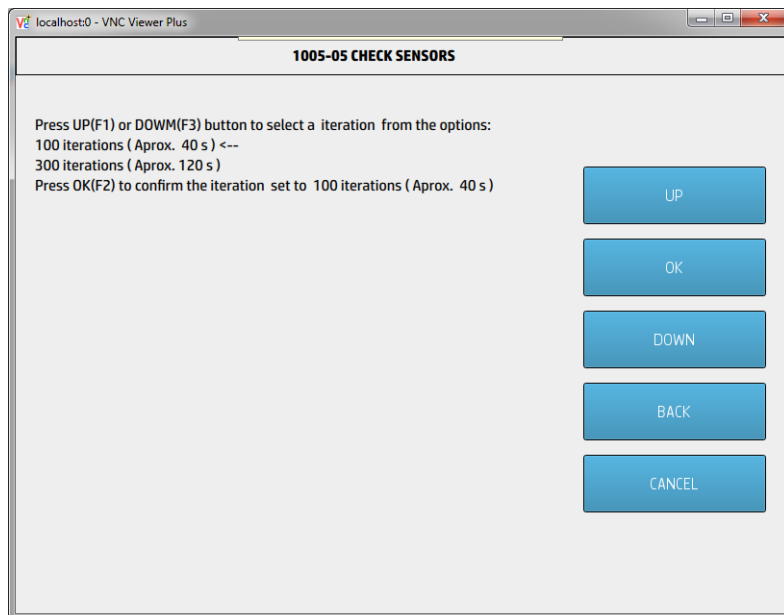
1005-04 Check attachment accessory

This test checks if the high-capacity stacker is correctly attached to the printer hooks.

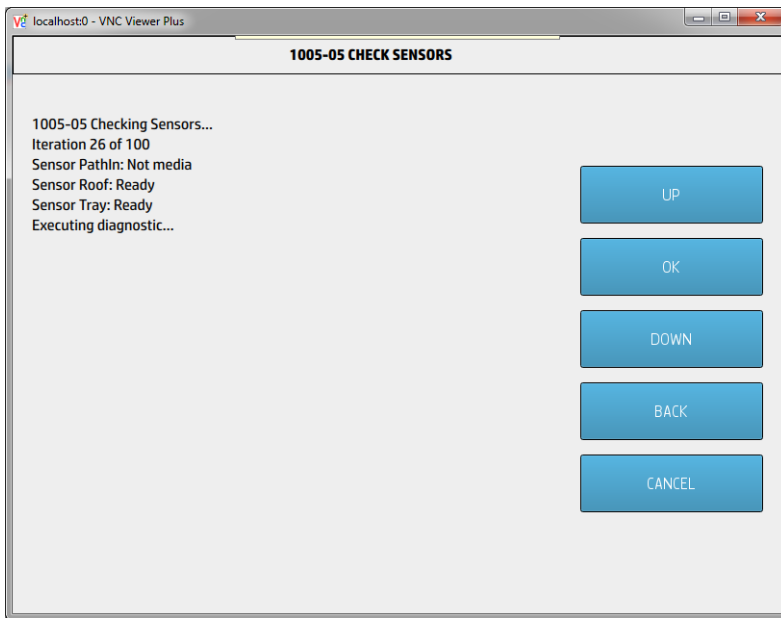
In case the corresponding switch/cable is not connected, the test will report as a FAIL for this sensor.

1005-05 Check sensors

This test checks the various sensors in the high-capacity stacker: path-in, roof, and tray sensors.

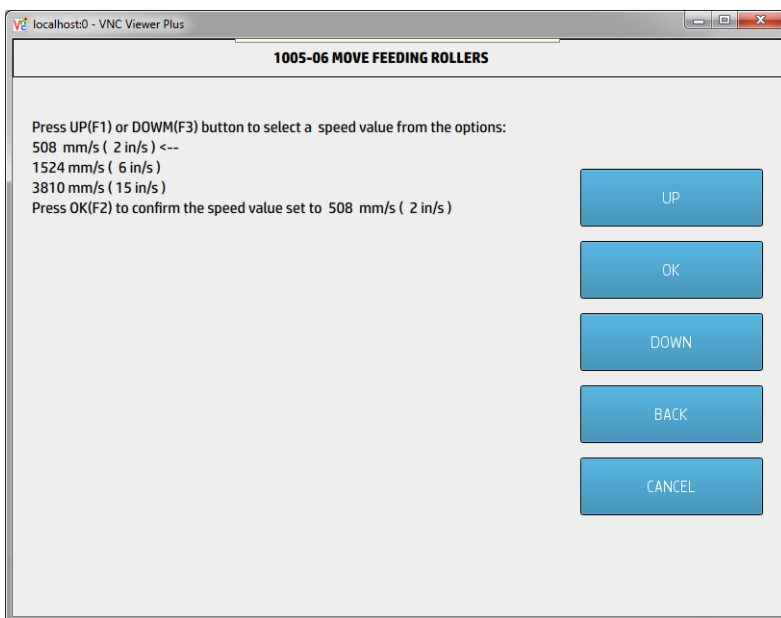


After initialization tests, press UP or DOWN to select the number of iterations for the sensor tests, then press **OK** to begin.



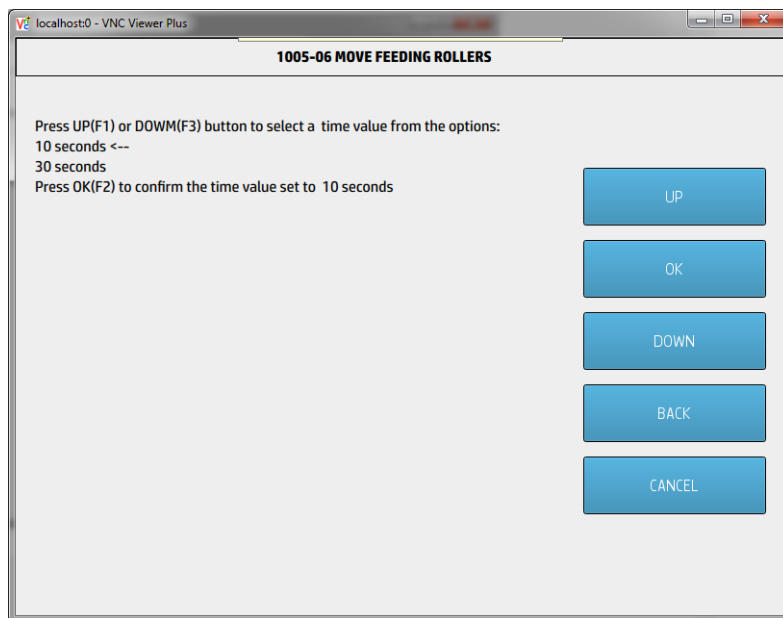
1005-06 Move feed rollers

This test moves the feed-roller motor at a specified speed during a certain time.

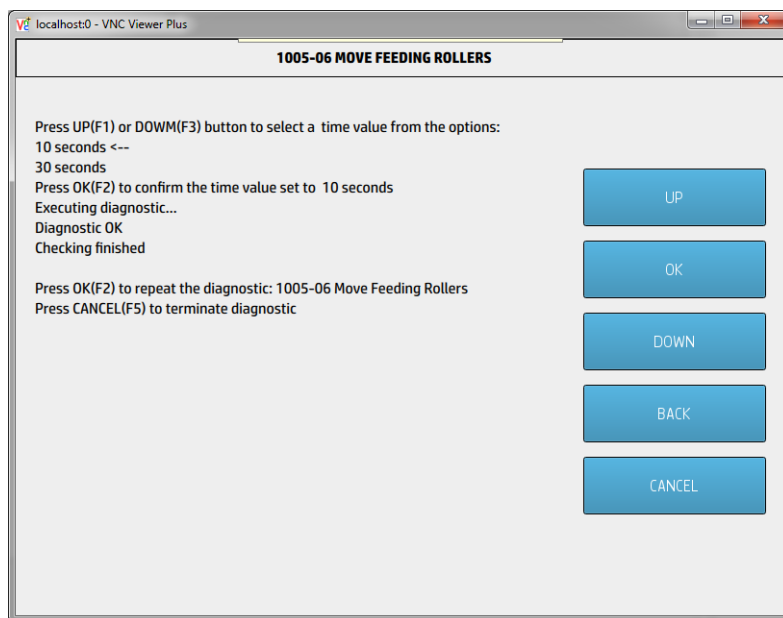


After initialization tests, select the desired motor speed and press **OK** to continue.

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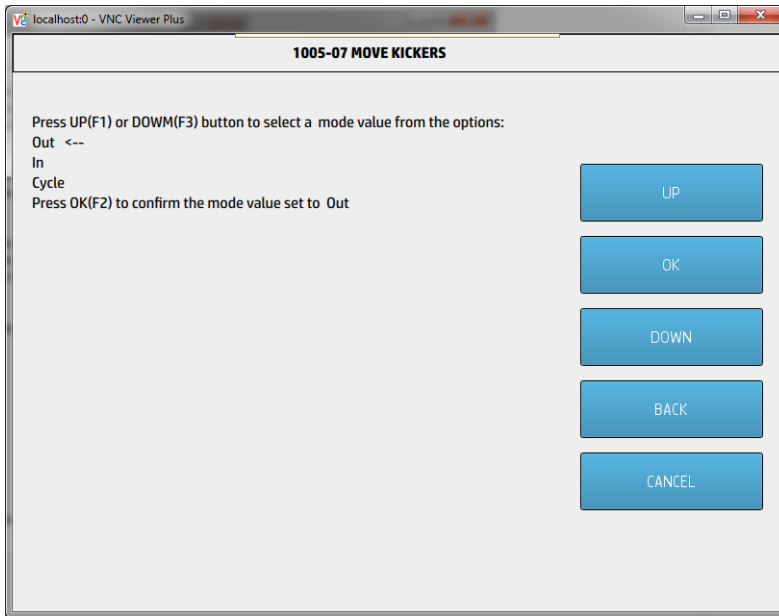


Select the number of seconds for which the motor should be moved, and press **OK** to continue.

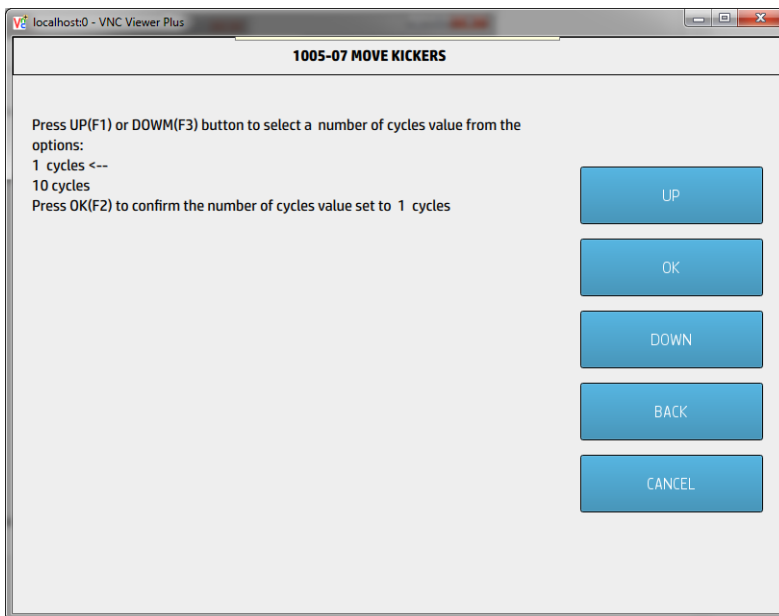


1005-07 Move kickers

This test moves the kickers motor at a specified speed.

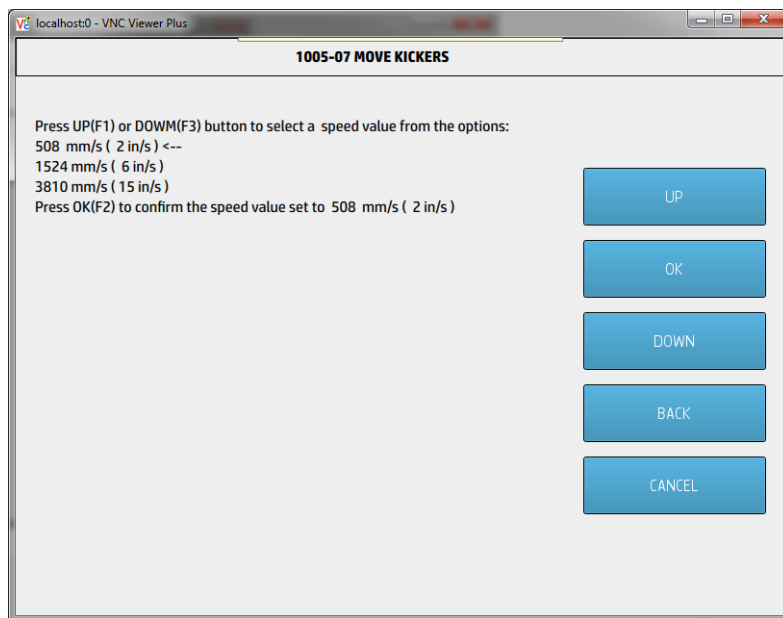


After initialization tests, select the kind of movement and press **OK** to continue.

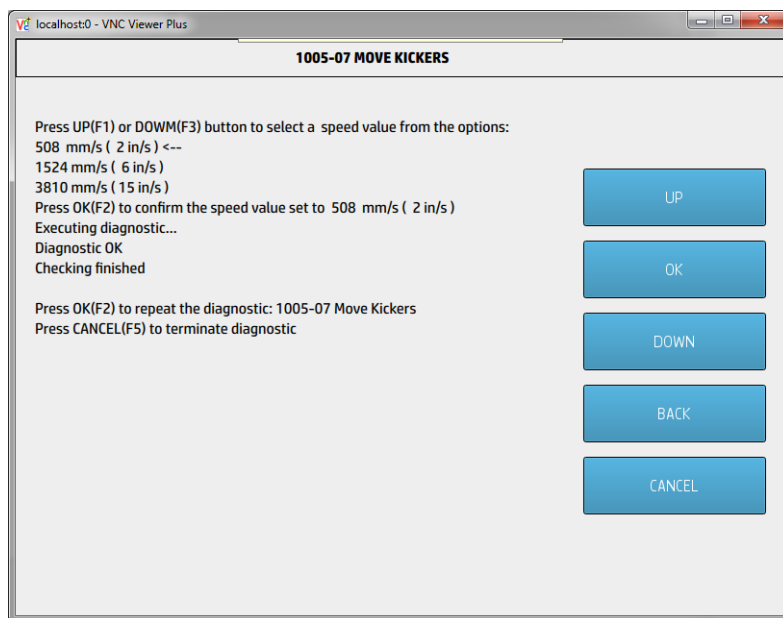


Select the desired number of cycles and press **OK** to continue.

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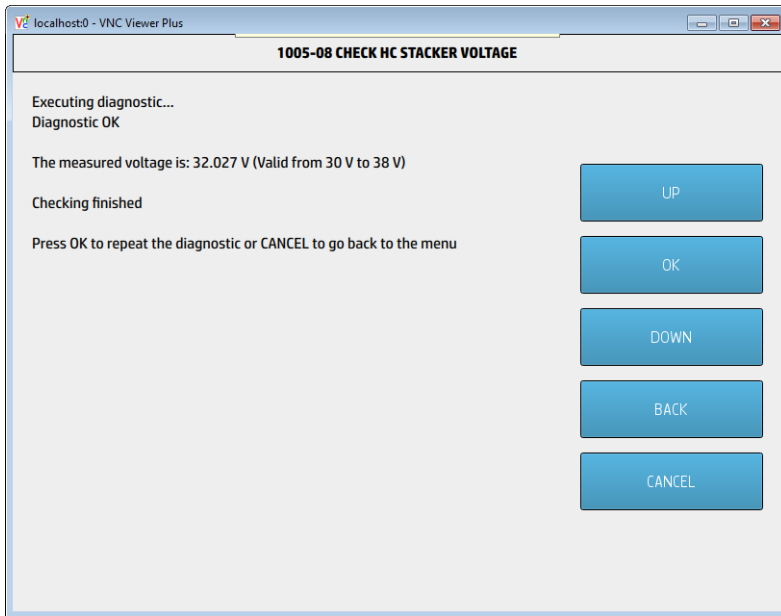


Select the desired motor speed and press **OK** to continue.



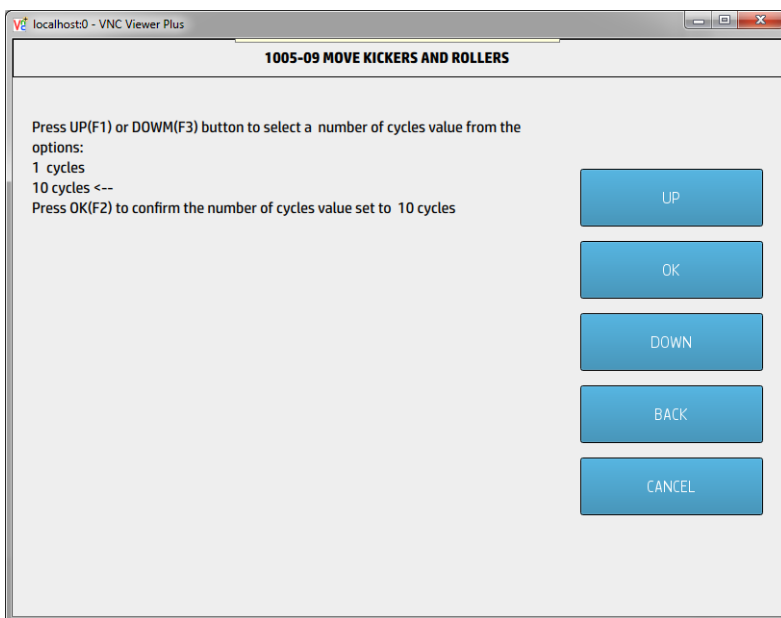
1005-08 High-capacity stacker voltage

This test checks the input voltage level and shows its value and valid ranges.

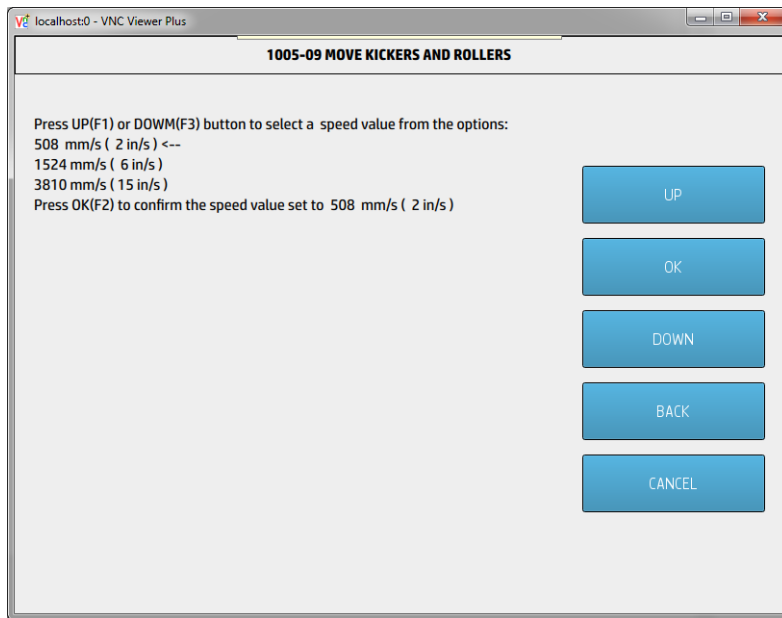


1005-09 Move kickers and rollers

This test moves the kicker and the feed-roller motors at the same time at a specified speed.



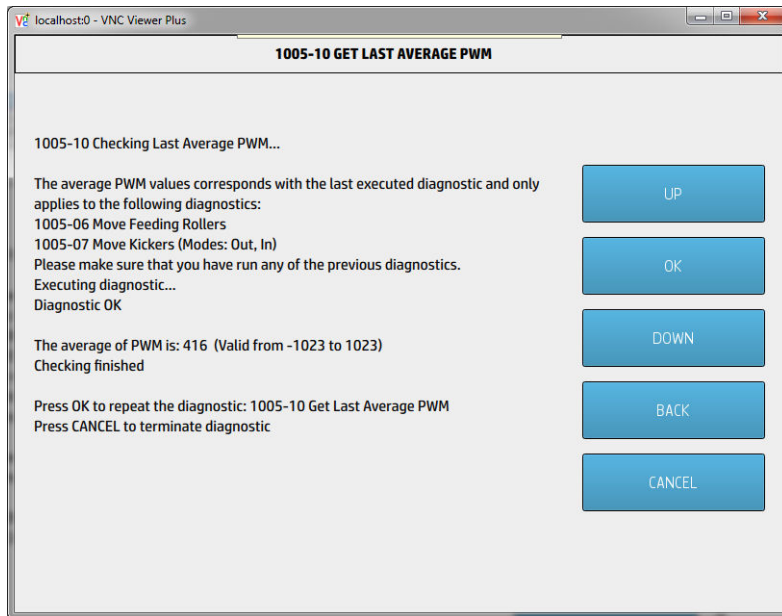
After initialization tests, press **OK** to begin the check. Then select the desired number of cycles and press **OK** to continue.



Select the speed of the motor and press **OK** to begin the test.

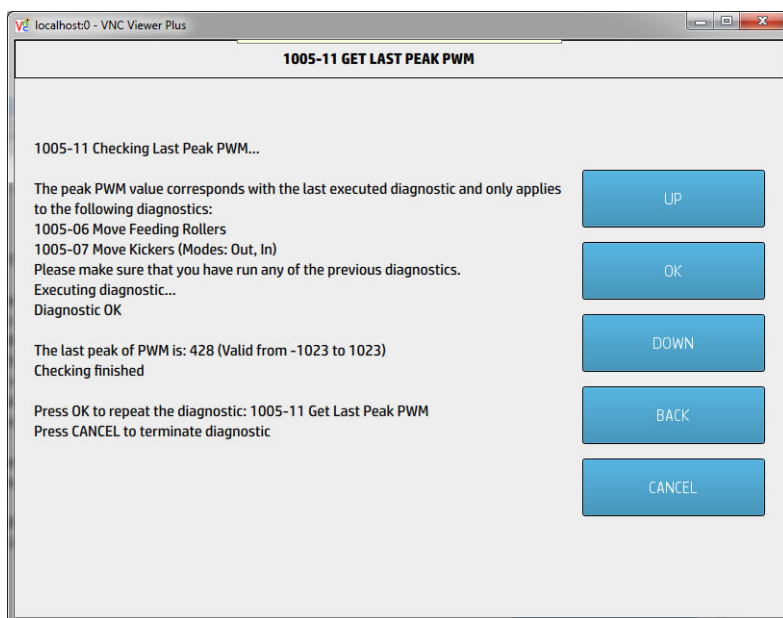
1005-10 Get last average PWM

This test returns the last average PWM obtained from the last executed diagnostic (applies to 1005-07 and 1005-08 only) and its valid ranges.



1005-11 Get last peak PWM

This test returns the last peak PWM obtained from the last executed diagnostic (applies to 1005-07 and 1005-08 only) and its valid ranges.



1005-12 Simulate printing

This test checks the correct functioning of the high-capacity stacker. To start it, introduce paper manually into the high-capacity stacker and wait until the stacker starts to move the feed—roller motors.

Folder

The complete folder test consists of individual tests for the different components related to the folder.

1010-01 Raise subsystem

This test initializes the folder board and its communications. It is included in the following diagnostics because it is required in the initialization process.

1010-02 Check cable connection

This test checks the cable connecting the folder to the printer. It is included in the following diagnostics because it is required in the initialization process.

1010-03 Check subsystem connection

This test checks the subsystem connection between the folder and the printer. It is included in the following diagnostics because it is required in the initialization process.

1010-04 Check attachment accessory

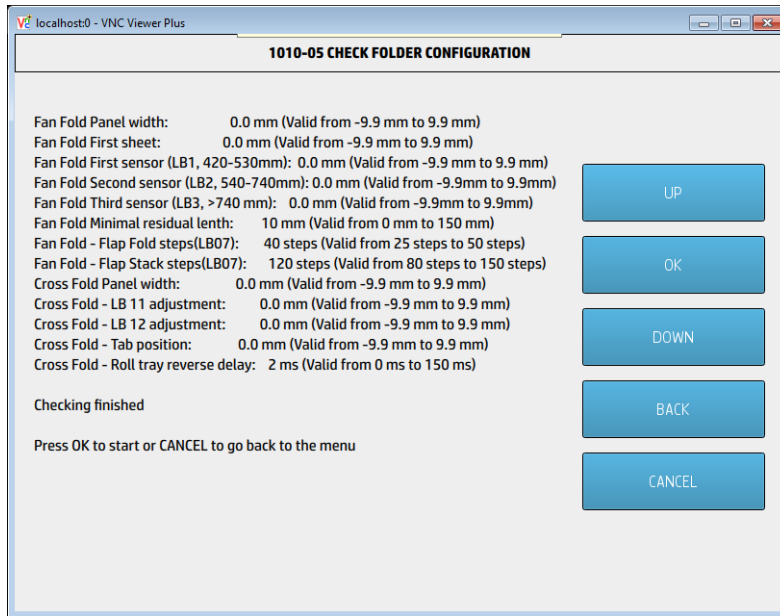
This test checks that the printer hooks are correctly attached to the folder.

In case the corresponding switch/cable is not connected, the test will report as a FAIL for this sensor.

1010-05 Check folder configuration

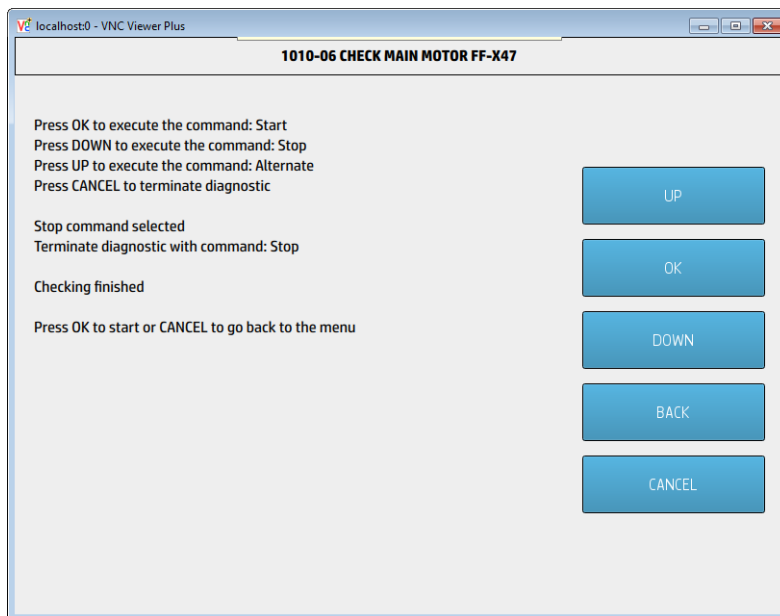
This test checks various folder configuration parameters: panel width, sheets and sensors, flap fold steps, tab position, and so on. These parameters can be changed from the Service menu (in printer mode).

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1010-06 Check main motor X47 & Motor feeding roller X-30

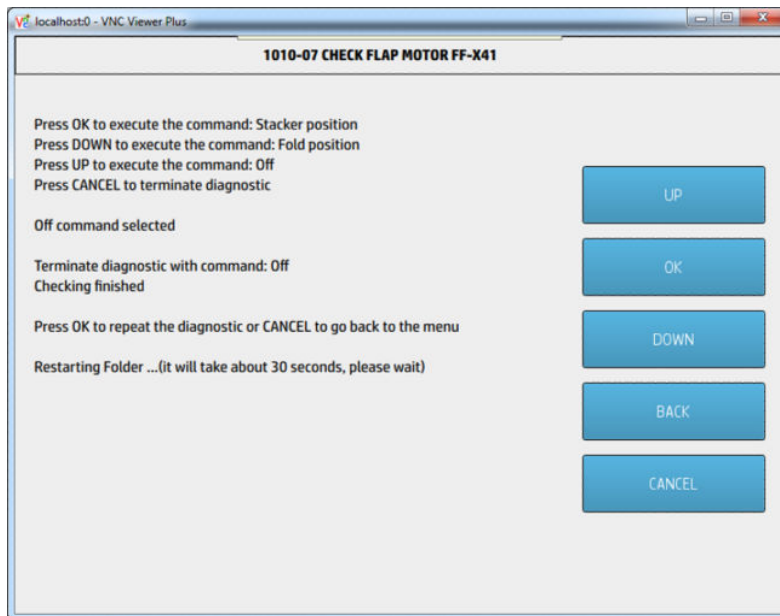
This test allows you to move the main fan-fold motor (X47).



After initialization tests, press **OK** to begin the check. Then press **OK** to move the motor, **DOWN** to stop it, **UP** to alternate, and **CANCEL** to finish.

1010-07 Check flap motor X41

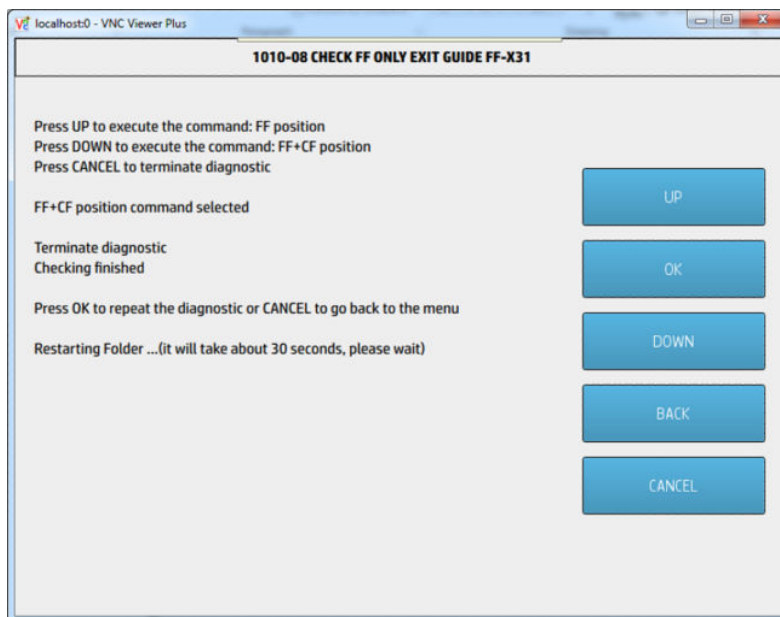
This test allows you to move the flap fan-fold motor (X41).



After initialization tests, press **OK** to begin the check. Then press **OK** to move the motor to stacker position, **DOWN** to move it to fold position, **UP** to stop it, and **CANCEL** to finish.

1010-08 Check FF-only exit guide X31

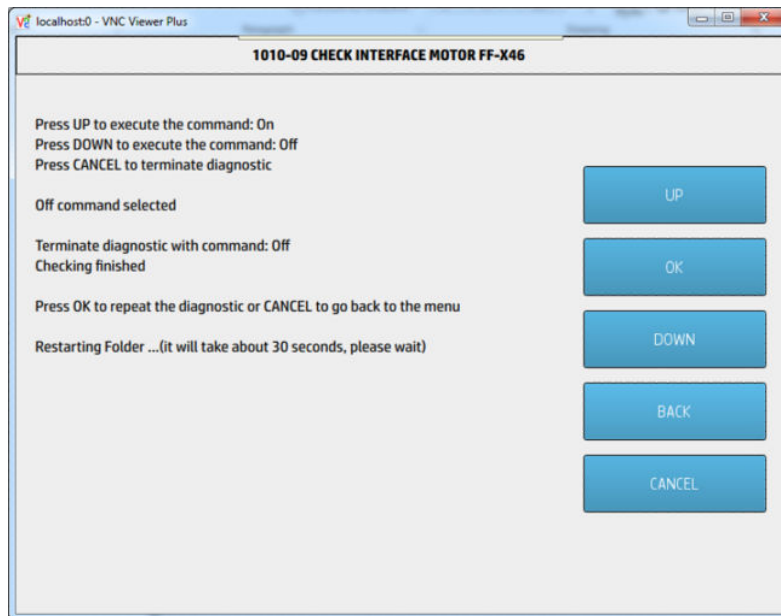
This test allows you to move the fan-fold only exit guide motor (X31).



After initialization tests, press **OK** to begin the check. Then press **OK** to move the motor to fan-fold position, **DOWN** to move it to fan-fold + cross-fold position, and **CANCEL** to finish.

1010-09 Check interface motor X46

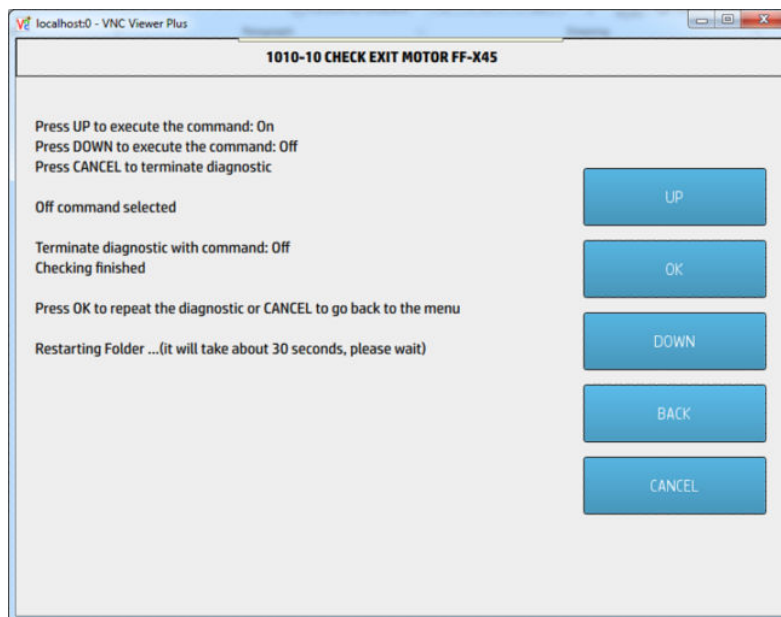
This test allows you to move the fan-fold interface motor (X46).



After initialization tests, press **OK** to begin the check. Then press **OK** to start the motor, **DOWN** to stop it, and **CANCEL** to finish.

1010-10 Check exit motor X45

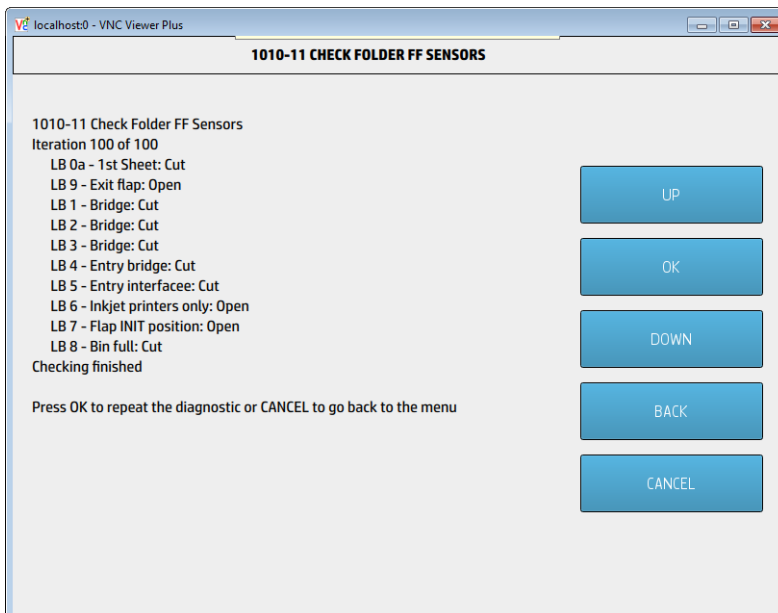
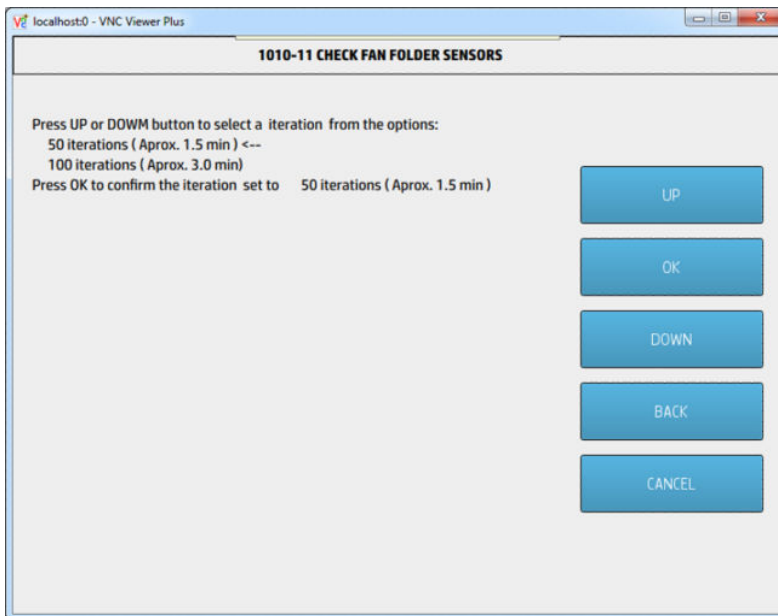
This test allows you to move the fan-fold exit motor (X45).



After initialization tests, press **OK** to begin the check. Then press **OK** to start the motor, **DOWN** to stop it, and **CANCEL** to finish.

1010-11 Check fan-fold sensors

This test checks the status of the sensors located in the folder's fan-fold subsystem.

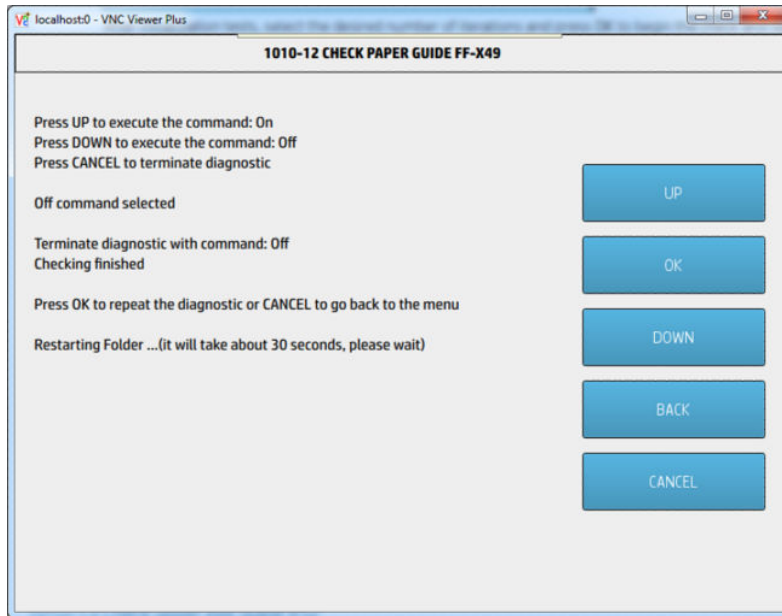


After initialization tests, select the desired number of iterations and press **OK** to begin the check and see the status of all folder sensors.

1010-12 Check paper guide X49

This test allows you to move the fan-fold paper-guide motor (X49).

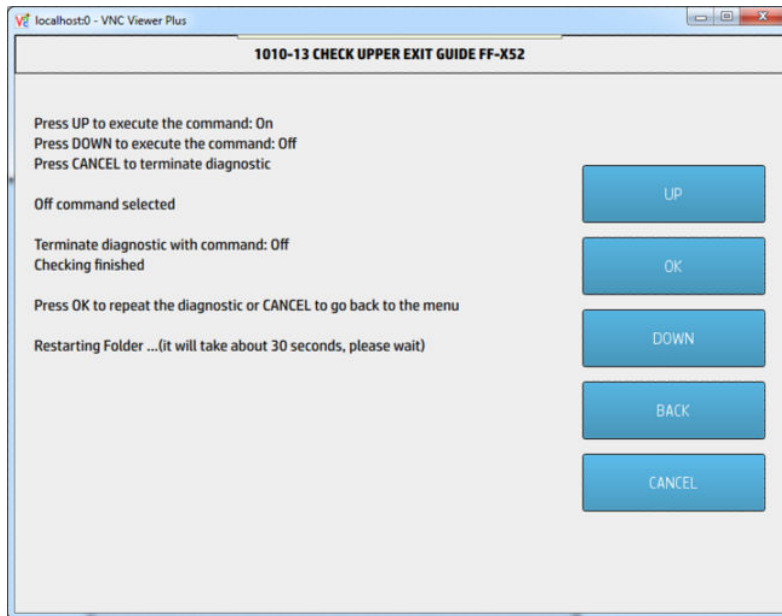
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After initialization tests, press **OK** to begin the check. Then press **OK** to start the motor, **DOWN** to stop it, and **CANCEL** to finish.

1010-13 Check upper exit guide X52

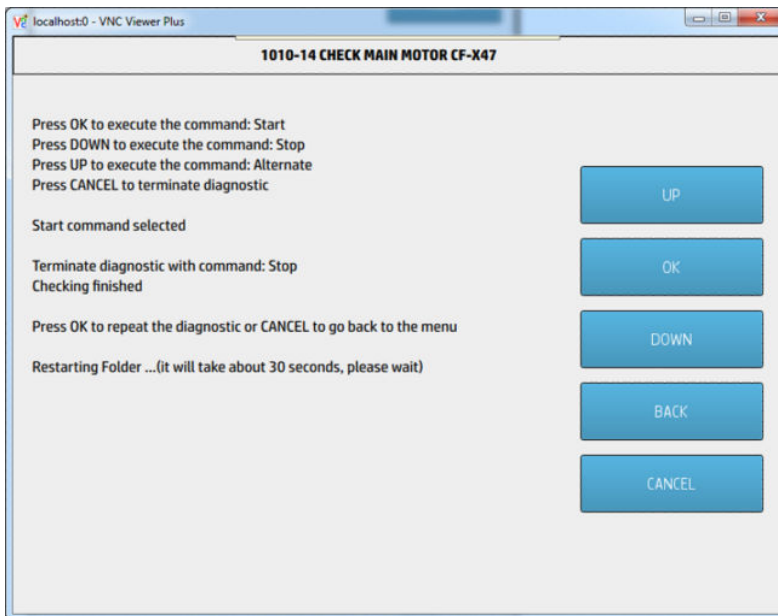
This test allows you to move the fan-fold upper exit guide motor (X52).



After initialization tests, press **OK** to begin the check. Then press **OK** to start the motor, **DOWN** to stop it, and **CANCEL** to finish.

1010-14 Check main motor X47

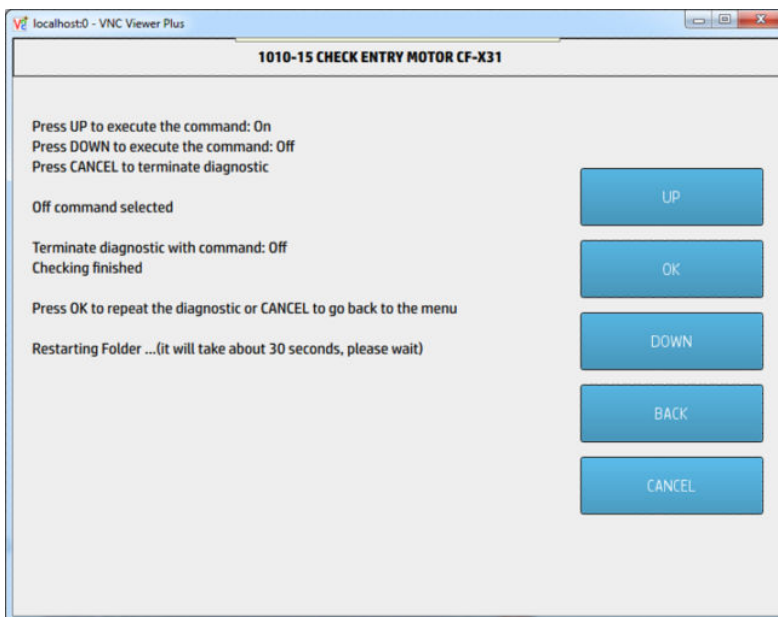
This test allows you to move the cross-fold main motor (X47).



After initialization tests, press **OK** to begin the check. Then press **OK** to move the motor, **DOWN** to stop it, **UP** to alternate, and **CANCEL** to finish.

1010-15 Check entry motor X31

This test allows you to move the cross-fold entry motor (X31).

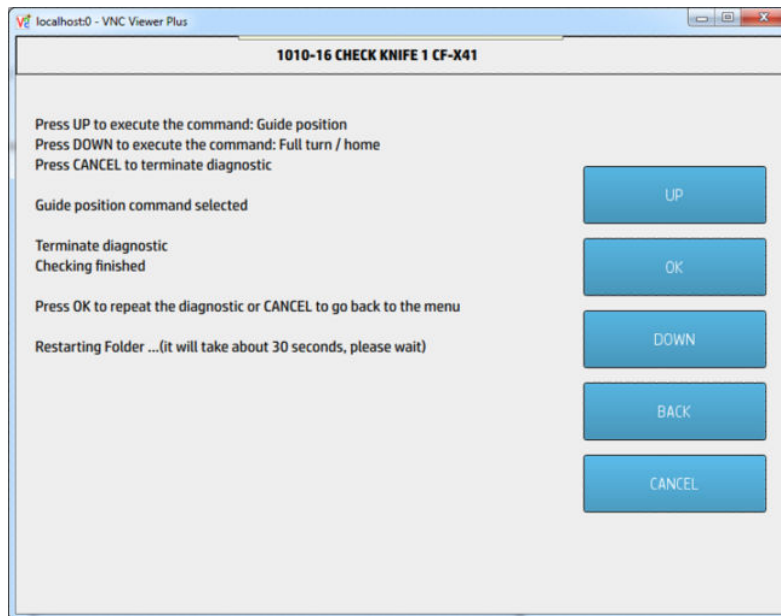


After initialization tests, press **OK** to begin the check. Then press **OK** to start the motor, **DOWN** to stop it, and **CANCEL** to finish.

1010-16 Check knife 1 X41

This test allows you to move the cross-fold knife 1 motor (X41).

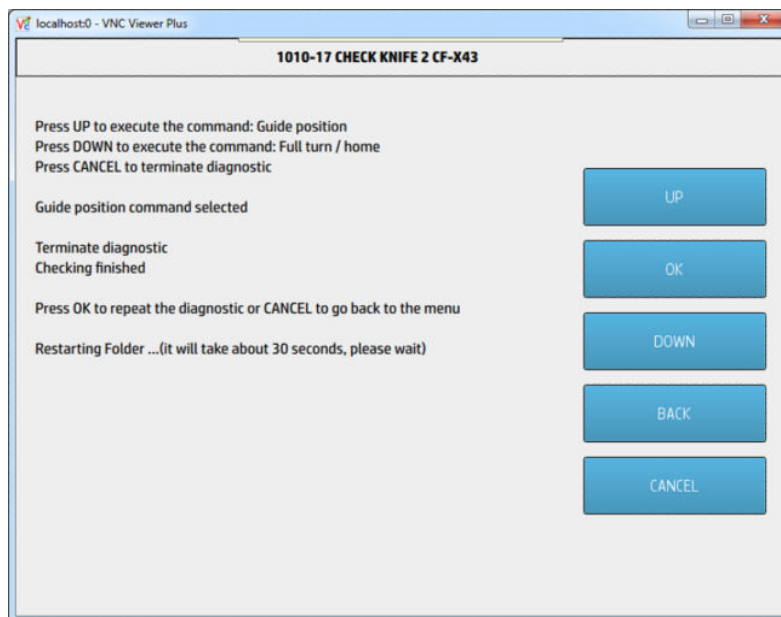
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After initialization tests, press **OK** to begin the check. Then press **OK** to go to the guide position, **DOWN** to make a full turn/home movement, and **CANCEL** to finish.

1010-17 Check knife 2 X43

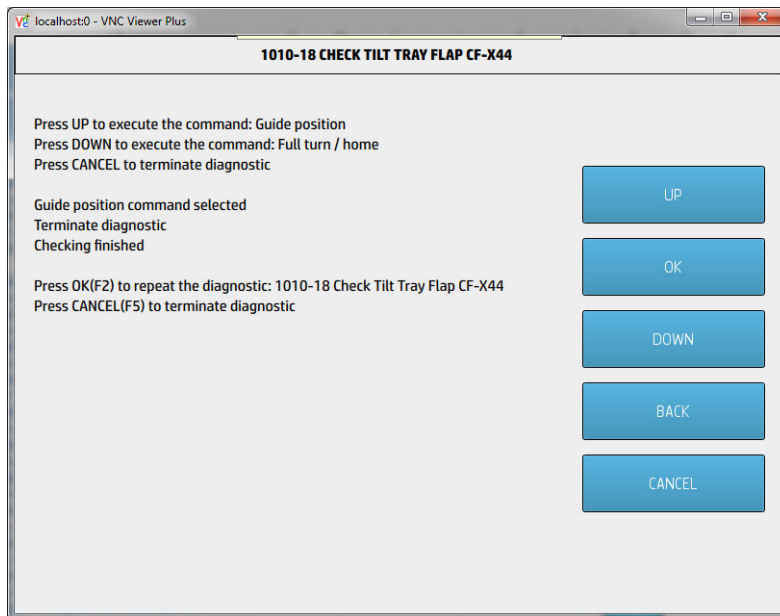
This test allows you to move the cross-fold knife 2 motor (X43).



After initialization tests, press **OK** to begin the check. Then press **OK** to go to the guide position, **DOWN** to make a full turn/home movement, and **CANCEL** to finish.

1010-18 Check tilt-tray flap X44

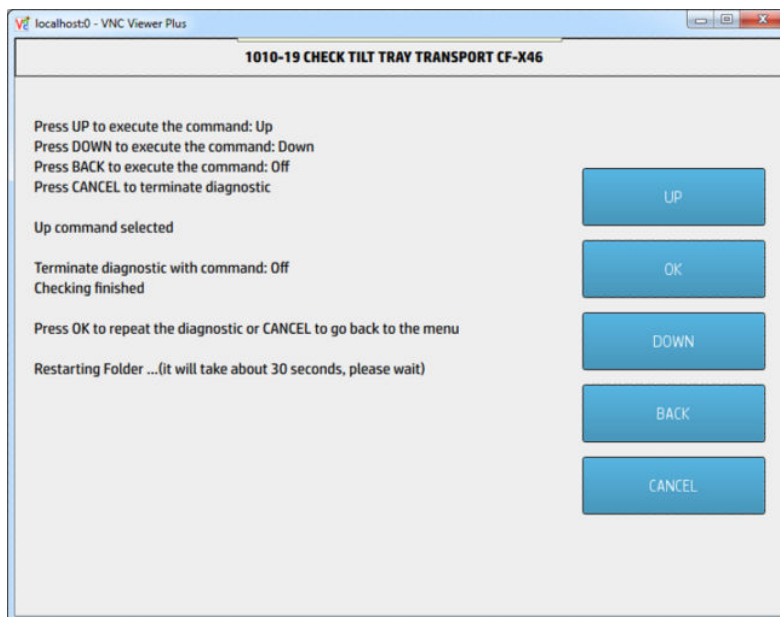
This test allows you to move the cross-fold tilt-tray flap motor (X44).



After initialization tests, press **OK** to begin the check. Then press **OK** to go to the guide position, **DOWN** to make a full turn/home movement, and **CANCEL** to finish.

1010-19 Check tilt-tray transport X46

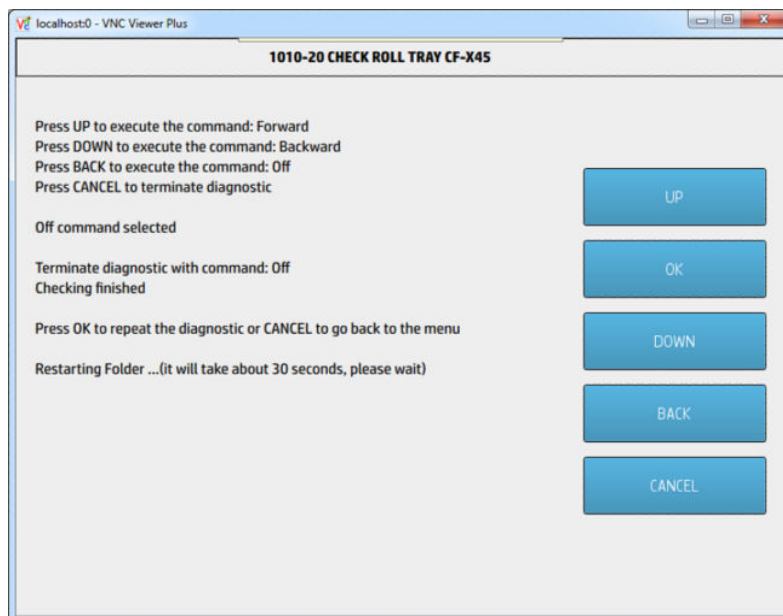
This test allows you to move the cross-fold tilt-tray transport motor (X46).



After initialization tests, press **OK** to begin the check. Then press **OK** to move to Up position, **DOWN** to move to Down position, **BACK** to stop the motor, and **CANCEL** to finish.

1010-20 Check roller tray X45

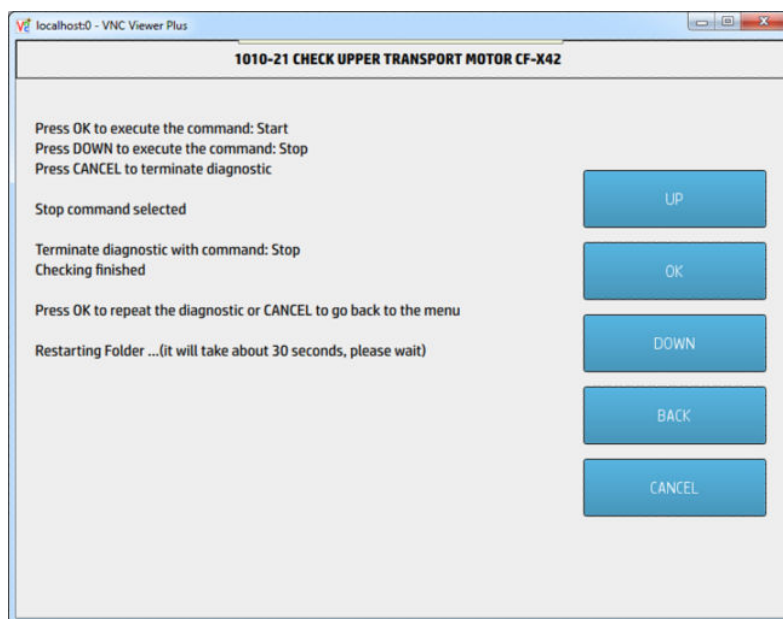
This test allows you to move the cross-fold roller-tray motor (X45).



After initialization tests, press **OK** to begin the check. Then press **OK** to move to Forward position, **DOWN** to move to Backward position, **BACK** to stop the motor, and **CANCEL** to finish.

1010-21 Check upper transport motor X42

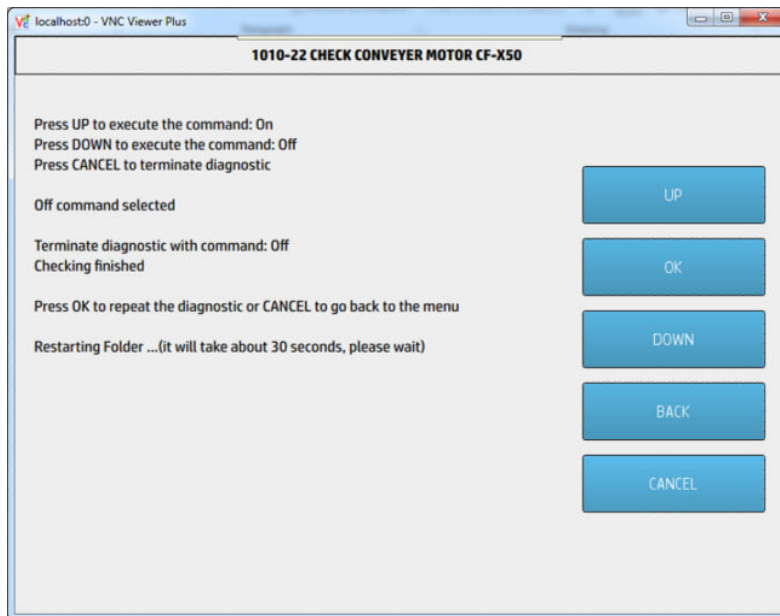
This test allows you to move the cross-fold upper transport motor (X42).



After initialization tests, press **OK** to begin the check. Then press **OK** to move the motor, **DOWN** to stop it, and **CANCEL** to finish.

1010-22 Check conveyor motor X50

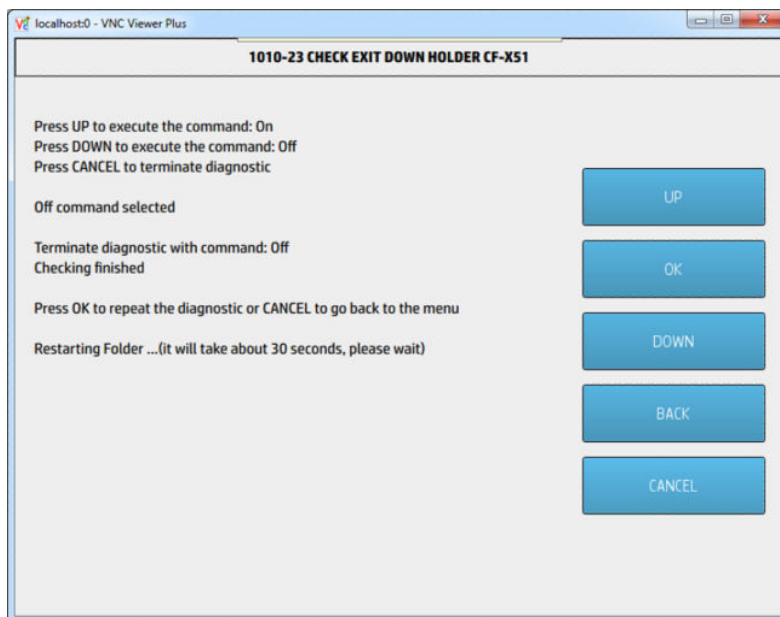
This test allows you to move the cross-fold conveyor motor (X50).



After initialization tests, press **OK** to begin the check. Then press **OK** to move the motor, **DOWN** to stop it, and **CANCEL** to finish.

1010-23 Check exit down holder X51

This test allows you to move the cross-fold exit down holder (X51).

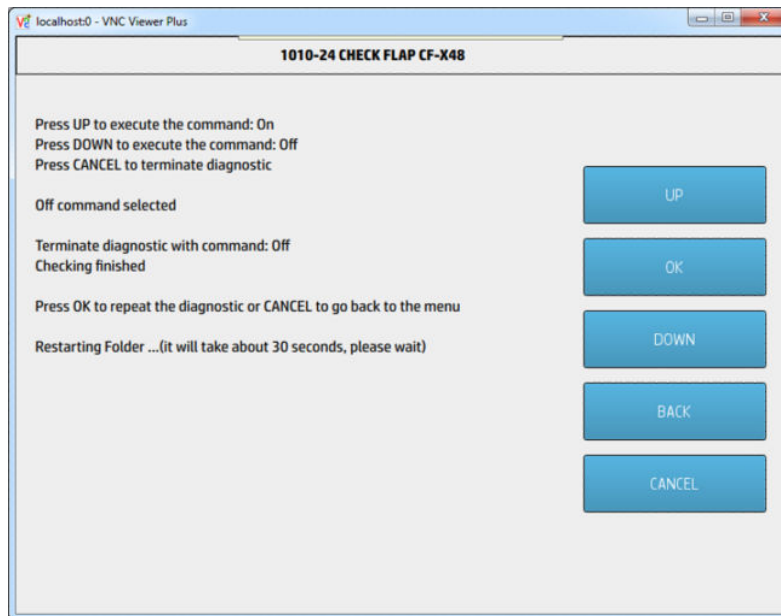


After initialization tests, press **OK** to begin the check. Then press **OK** to move the motor, **DOWN** to stop it, and **CANCEL** to finish.

1010-24 Check flap X48

This test allows you to move the cross-fold flap motor (X48).

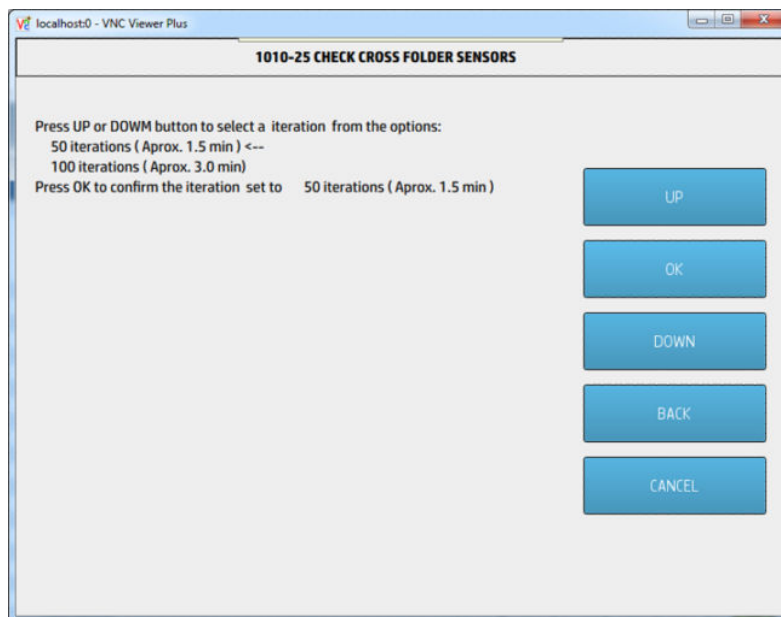
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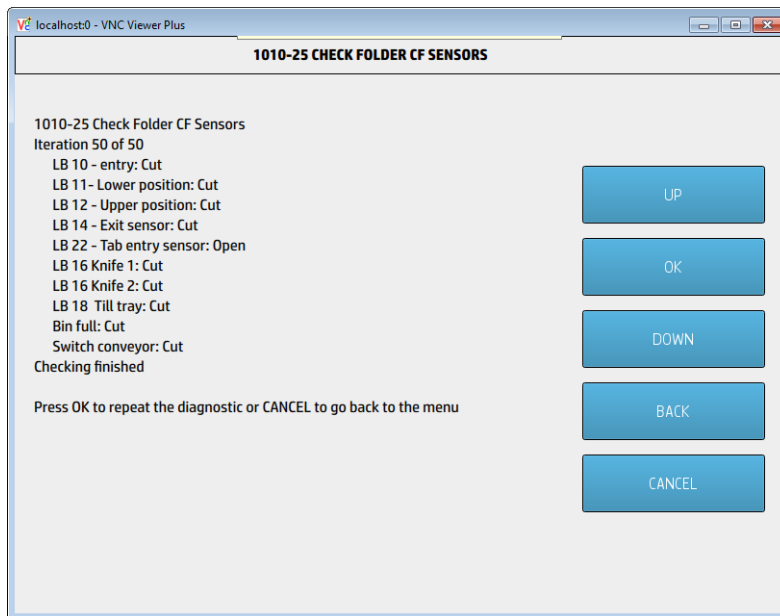
After initialization tests, press **OK** to begin the check. Then press **OK** to move the motor, **DOWN** to stop it, and **CANCEL** to finish.

1010-25 Check cross-fold sensors

This test checks the status of the sensors located in the folder's cross-fold subsystem.

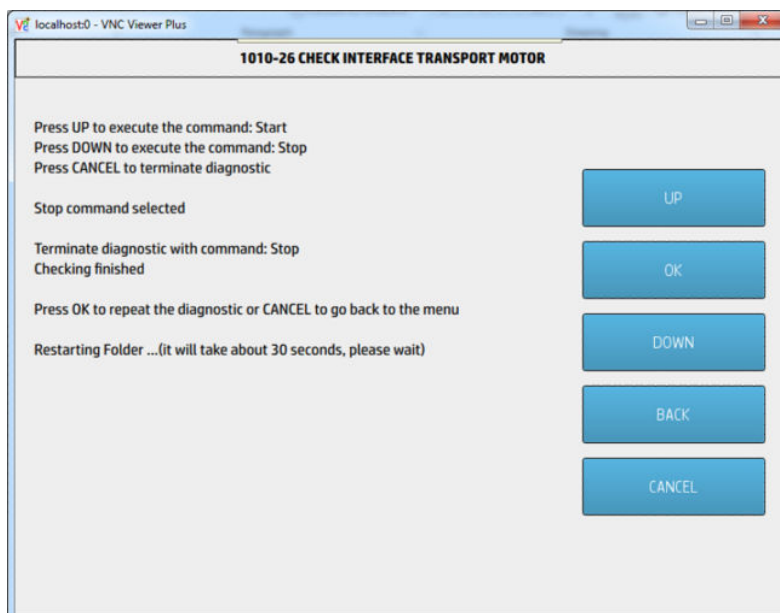


After initialization tests, select the desired number of iterations, then press **OK** to begin the check and see the status of all folder sensors.



1010-26 Check interface transport motor

This test allows you to move the interface transport motor.

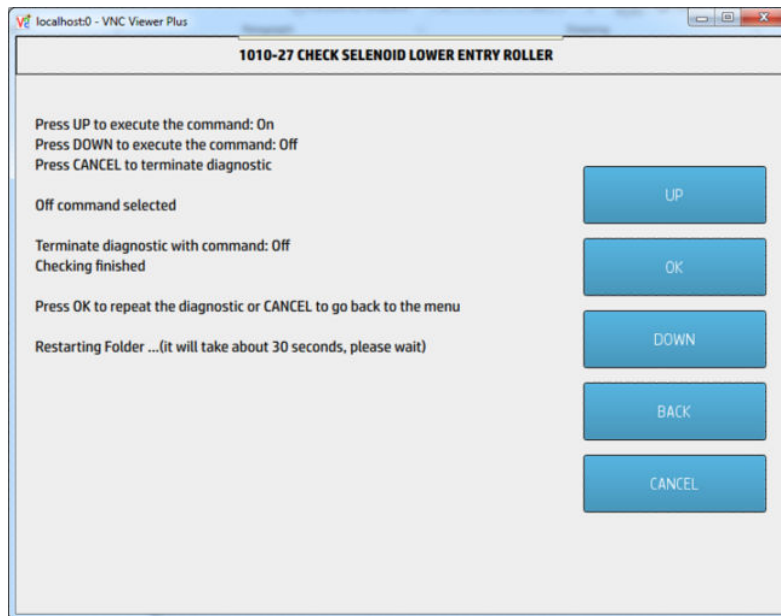


After initialization tests, press **OK** to begin the check. Then press **OK** to move the motor, **DOWN** to stop it, and **CANCEL** to finish.

1010-27 Check solenoid lower entry roller

This test allows you to move the solenoid lower entry roller.


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After initialization tests, press **OK** to begin the check. Then press **OK** to move the motor, **DOWN** to stop it, and **CANCEL** to finish.

Service utilities

Entering the Service Utilities menu

1. Go to the Main Menu and press the  icon.
2. Scroll down to the lowest menu option and press **Service**.
3. Use the USB service key.
4. From the **Service** menu, you can scroll up and down the available utilities. Press the selected menu option.

The **Service utilities** menu can vary according to the user. The following table shows which diagnostics are available for each kind of user (service or customer).

Subsystem	Utility
Calibrations	Carriage backlash calibration
Calibrations	Roll assist friction calibration
Calibrations	Drop detection calibration
Calibrations	Feed roller calibration
Calibrations	Image length calibration
Calibrations	Line sensor calibration
Calibrations	Paper advance calibration
Calibrations	PPS test
Calibrations	PPSGV (gauge verification)
Calibrations	Skew check utility
Calibrations	Cutter calibration
Calibrations	TOF calibration
Calibrations	Vacuum calibration
Diagnostic prints	Print color-calibration check plot
Diagnostic prints	Print image-quality specification plot
Diagnostic prints	Print paper-advance check plot
Diagnostic prints	Print nozzle check plot
Diagnostic prints	Print printhead-alignment check plot
Diagnostic prints	Print PPS check plot
IQ recovery	Color-specific intensive recovery
Printer settings	Reset life counters
Printer settings	Reset access control
Printer settings	Reset to factory defaults (from service menu)
Printer settings	Unit information utility

Subsystem	Utility
Printer settings	Show/hide front-panel information
Printer settings	Enable I/O interfaces
Printer settings	Set printer uninstalled
Disk utilities	Secure file erase mode
Disk utilities	Disk wipe DoD 5220.22/M
ISS utilities	Set ink tubes to purged/empty
ISS utilities	Set PIP calibration
Hardware utilities	Scanner validation
Hardware utilities	Set scanner Y-axis scale
Hardware utilities	Reset scanner usage counters
Hardware utilities	Delete scanner queue
Hardware utilities	Delete job manager queue
Hardware utilities	Check vacuum holes/maintenance
Hardware utilities	Configure roll loading mode (API)
Hardware utilities	Additional life repair parts
IQ troubleshooting	Printhead gauge information
Accessories	Install/remove drawer
Accessories	Install/remove dryer
Accessories	Get Dryer module Service kit part number
Acc./Top stacker utilities	Diagnostics
Acc./Top stacker utilities	Install / uninstall Integrated Stacker
Acc./Folder utilities	Folder speed mode
Acc./Folder utilities	Configuration file
Acc./Folder utilities	Parameter configuration
Acc./Folder utilities	Jam removal
Acc./Folder utilities	Reset to factory defaults (from service menu)
Acc./Folder utilities	Calibration plot
Acc./Folder utilities	Diagnostics
Acc./Folder utilities	Set Part Number
Acc./Folder utilities	Set Serial Number
Acc./Folder utilities	Calibrate Diverter position
Acc./HC stacker utilities	Calibrate Diverter position
Acc./HC stacker utilities	Diagnostics
Paper-preset utilities	Remove non-factory papers

Subsystem	Utility
Paper-preset utilities	Custom roll sizes
PMK reset counters	PMK1 filters
PMK reset counters	PMK2 basic cleaning
PMK reset counters	PMK3 cutter
PMK reset counters	PMK4 capping
PMK reset counters	PMK5 spittoon
PMK reset counters	PMK6 sensors
PMK reset counters	PMK7 drawers
PMK reset counters	PMK8 print-bar lift and ink tubing system
PMK reset counters	PMK9/PMK9B belts and platen
PMK reset counters	PMK10 dryer
PMK reset counters	PMK11 vacuum pump fan
PMK reset counters	PMK12 service carriage spittoon beam

Calibrations

Carriage backlash calibration

This utility calculates the required carriage movement needed to compensate for a change in motor direction. When a direction change occurs, for a moment motor movement is not translated into a carriage shift. This calibration moves the carriage from home to a specified position and turns it back around. After that, it calculates the difference between the start and end positions and determines the correction required.

Drop detection calibration

This utility calibrates the drop detection sensors.

1. Initialize required subsystems (drop detection, controller, supplies and pens).
2. Select desired calibration (signal and odd or even dice).

Roll assist friction calibration

This utility calibrates the friction of a specific roll. See [0020-08 Roll assist friction calibration on page 481](#).

Feed roller calibration

This utility calibrates the tuning controllers of the feed roller motor. This calibration improves cutter precision by measuring the distance between pages.

Image length calibration

This utility calibrates image length.

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1. Load paper in Roll 1.
2. Print plot.
3. Measure image between lines manually.
4. Set and save the **measured length**.

What not to do

If you re-enter the calibration and print the same plot, the calibration will start from zero, deleting everything done before. Do not enter the calibration again to double check if the calibration has been performed correctly.

What to do

Please print a plot with a known theoretical image length and measure it manually.

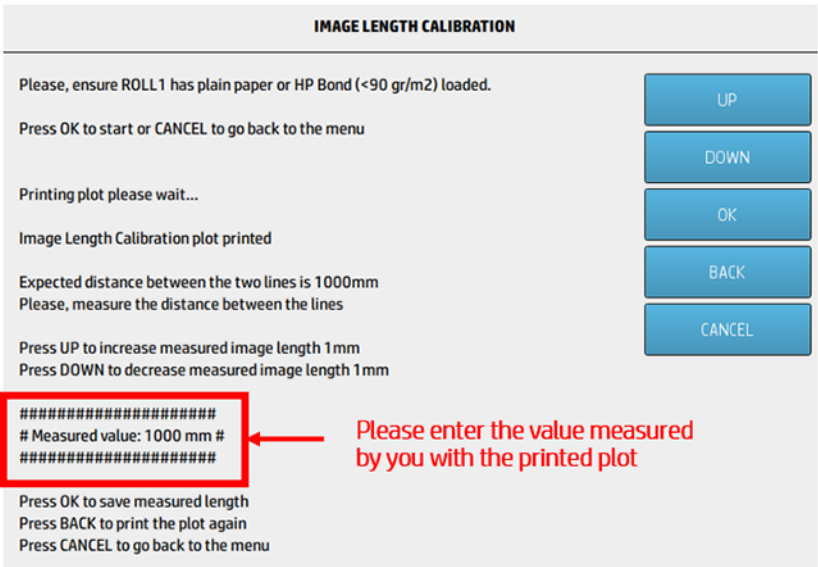



IMAGE LENGTH CALIBRATION

Please, ensure ROLL1 has plain paper or HP Bond (<90 gr/m2) loaded.

Press OK to start or CANCEL to go back to the menu

Printing plot please wait...

Image Length Calibration plot printed

Expected distance between the two lines is 1000mm
Please, measure the distance between the lines

Press UP to increase measured image length 1 mm
Press DOWN to decrease measured image length 1 mm

Measured value: 1000 mm #
#####

Press OK to save measured length
Press BACK to print the plot again
Press CANCEL to go back to the menu

UP
DOWN
OK
BACK
CANCEL

Please enter the value measured by you with the printed plot

Line sensor calibration

The purpose of this calibration is to calibrate the intensity of the line sensor in the Carriage board. An incorrect calibration can result in edge-detection failures during paper loading and incorrect reading of prints that are used for alignment or calibration.

Perform this calibration in the following cases:

- If the edge-detect procedure fails during paper loading
- If the carriage is disassembled or replaced
- If the line sensor is disassembled or replaced
- If banding is detected in prints
- If misalignment between colors is detected
- If the cutter platen has been disassembled or replaced

Paper advance calibration

This utility calibrates the paper advance.

1. Load paper in Roll 1.
2. Print plot.
3. Wait until calibration is finished (it may last between 10 and 15 minutes).
4. If the system doesn't detect any errors, it shows values and copies them to the NVM (changes will take effect at the next reboot).

PPS test

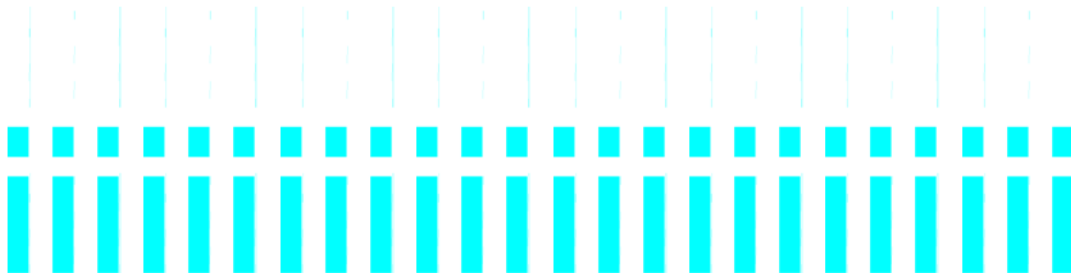
This utility checks if the PPS is within specifications by scanning some patterns. The system shows a message if the results are positive or negative, but it doesn't report the exact PPS values.

General instructions


Ensure that you have loaded a roll of HP Matte Polypropylene, 40 in (1016 mm) wide.

1. Load paper in Roll 1.
2. Print plot.
3. Repeat if necessary.

The process of checking the height of the PPS takes about 15 minutes and uses about 1 m (39 in) of paper. It prints four plots, all in cyan ink. Two examples are shown below:



Afterwards, a message with the check results is displayed on the front panel.

 **NOTE:** This utility doesn't actually report PPS values. If you need these values, please run the PPSGV (gauge verification) test.

What to do in each case

PPS check fails: error message on front panel	Check the PPS check plots for any printhead not printing properly (incomplete patterns due to nozzle-outs). Recover or replace any malfunctioning printhead. Then restart the printer and repeat the PPS check plot.
PPS height < 1.60	PPS is within specification unless there are ink smears. In this case PPS is too low, out of specification. Launch the PRS gauges check process to readjust.
PPS height > 1.60	PPS is out of specification, higher than the maximum tolerated. Launch the PRS gauges check process to readjust.

PPSGV (gauge verification) test

This test validates the printer's PPS. If the result is not good, the utility gives the chance to enter the PPSGA tool, a utility with which you can adjust the PPS and bring it within specifications.

This utility requires the use of four gauges to check the PPS. See [PPSGV test on page 269](#) for further information.

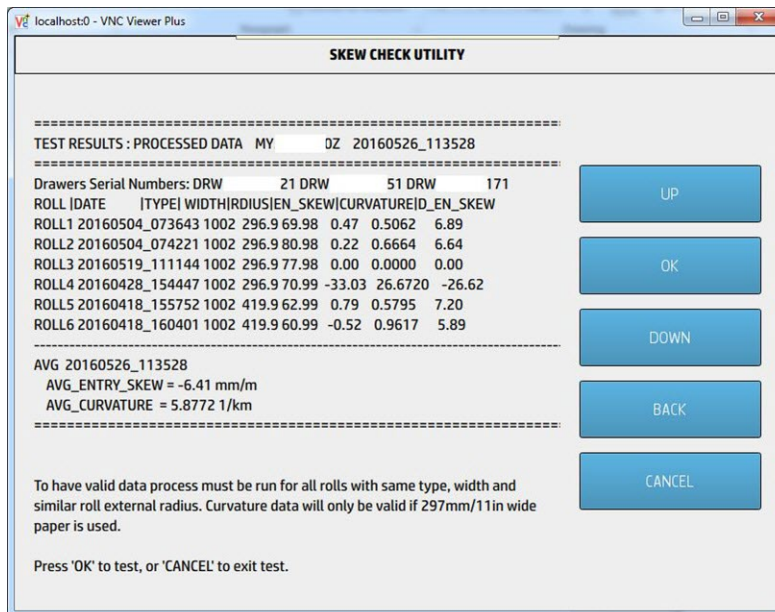
Roll assist friction calibration

See [0020-08 Roll assist friction calibration on page 481](#).

Skew check utility

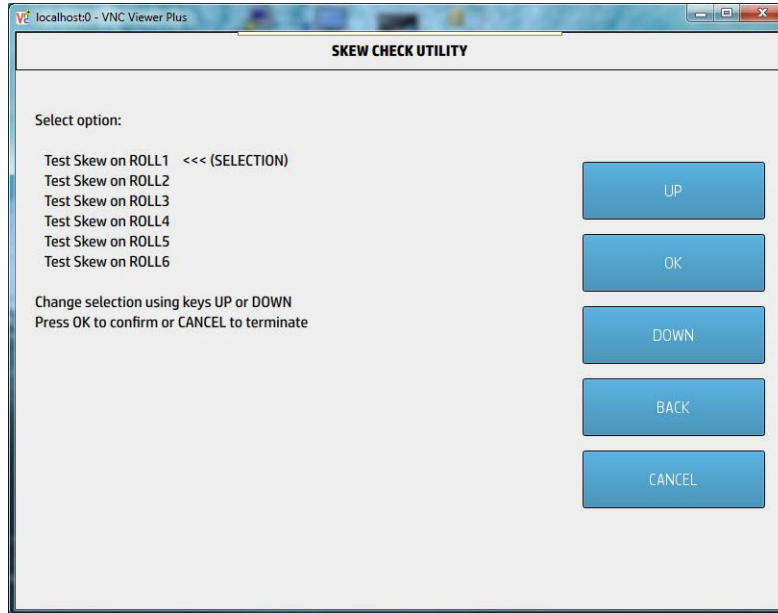
This utility calibrates the parallelism between belt and roller, in order to prevent skew. The calibration transports the paper along the paper path and measures the distances with the linear sensor. After that, it applies the necessary corrections in order to prevent skew. See [Media feed directional skew adjustment on page 232](#).

1. Run service utility.
2. Printer shows information about each roll calibration status..

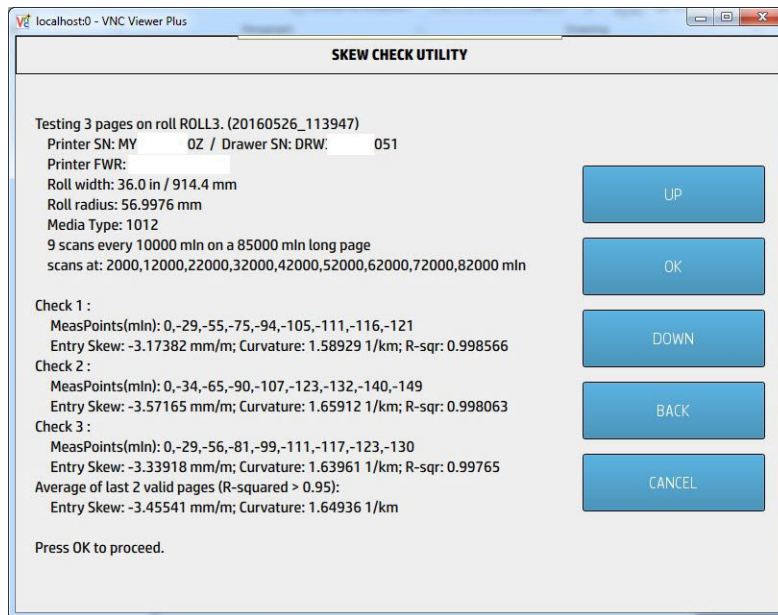


3. Press OK to start the test or CANCEL to go back to the menu.

- Select a specific roll using UP or DOWN keys and press OK to begin.



- The printer starts the calibration. Once finished, press OK to save the results.



- Printer shows roll calibration status again (including the new check). Press OK to run another roll or CANCEL to go back to the menu.

Cutter calibration

See [0020-07 Cutter calibration on page 480](#).

- Load paper in Roll 1.
- Print plot.

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3. Wait until calibration is finished.
4. Repeat if necessary.

TOF calibration

This utility calibrates the TOF sensor.

1. Load paper in Roll 1. It is recommended to use a 841 mm roll or wider.
2. Print plot.
3. Wait until calibration is finished.
4. Repeat if necessary.

Vacuum calibration

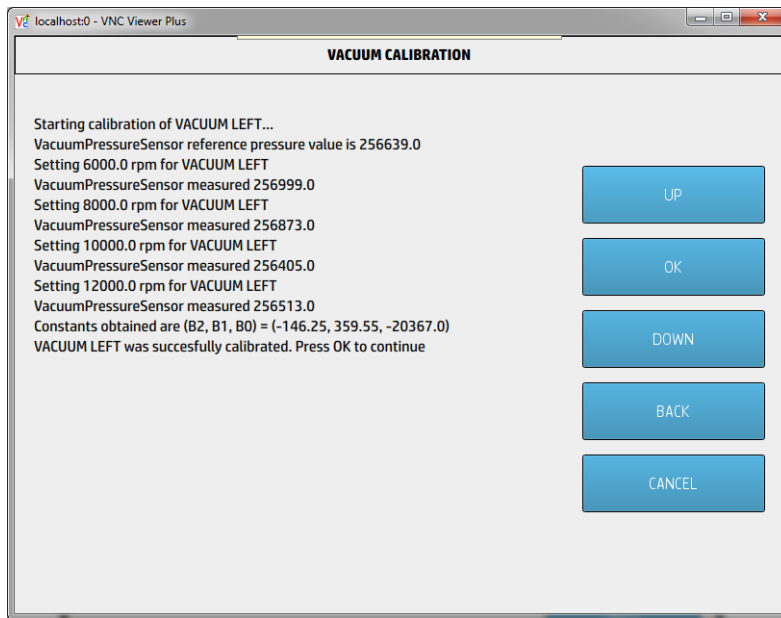
This utility calibrates the three vacuum fans (left, center, and right). The printer has a unique sensor; so, for each fan, the user has to change the corresponding tube to the sensor, located in the central fan.

1. Open back cover, cover the print platen with media (at least 1060 mm wide by > 610 mm or 24 inches long, plastic polypropylene paper preferable) and close cover.
2. Connect vacuum sensor to left vacuum fan.
3. Wait until calibration is finished.*
4. Connect vacuum sensor to right vacuum fan.
5. Wait until calibration is finished.*
6. Connect vacuum sensor to central vacuum fan.
7. Wait until calibration is finished.*
8. Open back cover, remove paper and close cover.

*For each fan, the system gets the average value of the samples obtained from the pressure sensor for a desired speed (6000, 8000, 10,000 and 12,000 RPM). After that, it calculates B0, B1 and B2 calibration parameters.




NOTE: Left and right fans are relative to the user's position, seen as if you are situated in front of the printer.



Diagnostic prints

There is a set of diagnostic prints used to highlight printhead reliability, or other printer problems that can affect print quality.

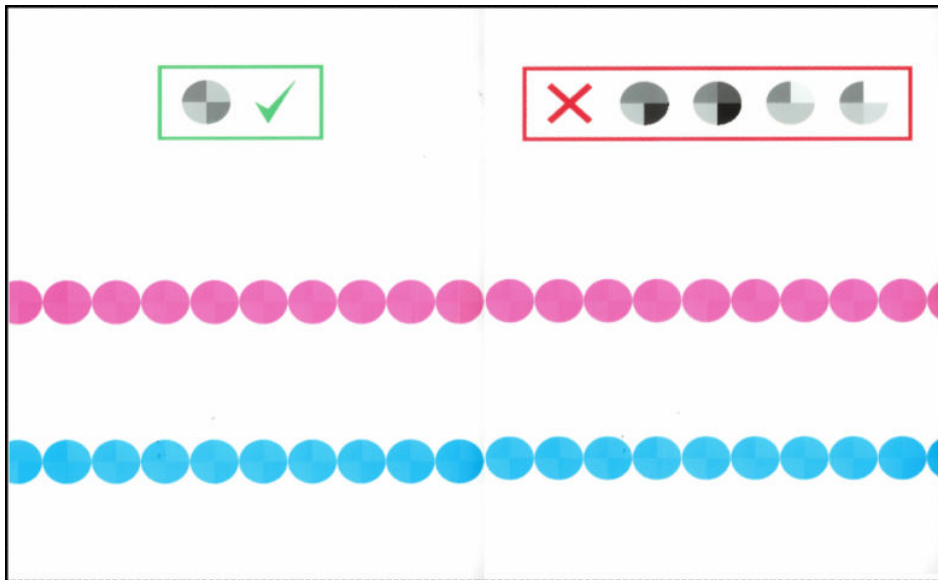
To print any of the diagnostic prints:

1. Use the same paper type that was used to calibrate the printer.
2. Check that the selected paper type is the same as the paper type loaded into the printer.
3. On the printer's front panel, select , then **Service menu** > **Diagnostic prints**.

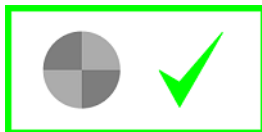
Color-calibration check plot

Ensure that you have loaded a roll of HP Matte Polypropylene.

This plot helps to determine whether the printer is performing as expected in terms of color uniformity. It consists of a series of cyan and magenta circles printed along with the instructions to evaluate the plot.



If all the circles, both cyan and magenta, look like the following figure (diagonally opposed dark and light areas), the printer is OK and no further action is required.



If one or more circles, cyan or magenta, look like those in the next figure (not following the pattern described above), the diagnostic plot and the image-quality reference plot should be printed (both on HP Production Matte Polypropylene).



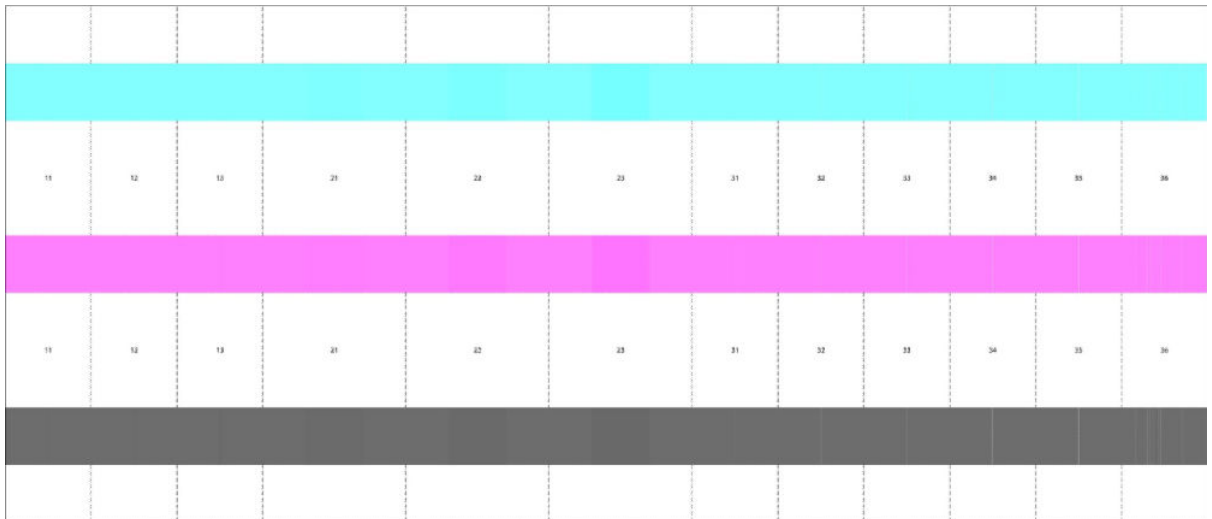
Image-quality reference plot

Ensure that you have loaded a roll of HP Matte Polypropylene.

In the image-quality reference plot, the most common flaws in HP PageWide XL prints have been reproduced.

Each code in the plot corresponds to one type of imperfection:

- 1x: Due to alignment
- 2x: Due to color calibration
- 3x: Due to alignment or nozzles out

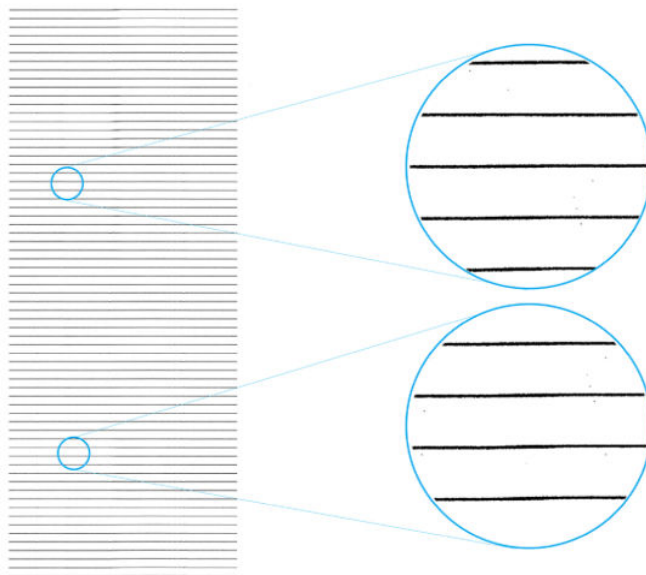


To use this plot, the defects found in the diagnostic plot (also printed on HP Matte Polypropylene) should be compared with the ones simulated on the image-quality reference plot, and classified into the categories shown in the latter plot. After this classification, the chosen category number for each defect should be communicated to the call center.

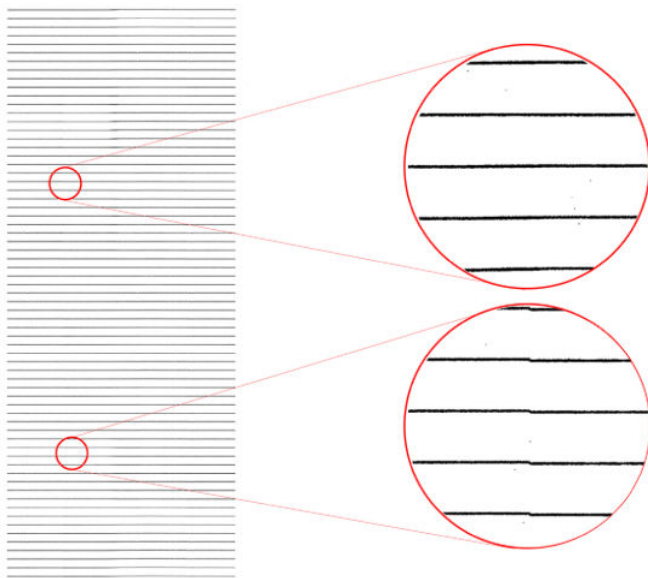
Paper-advance check plot

General instructions

The printed plot comprises a set of parallel lines. If the paper advance is properly calibrated, the continuity of the lines will not change, typically, the lines will be continuous everywhere, as below:



However, if the paper advance is not properly calibrated, the continuity of this lines will change. In some places they may be aligned and then gradually misalign, as below:



In the latter case, launch a paper-advance calibration: press , then **Service menu** > **Calibrations** > **Paper advance calibration**.

Nozzle check plot

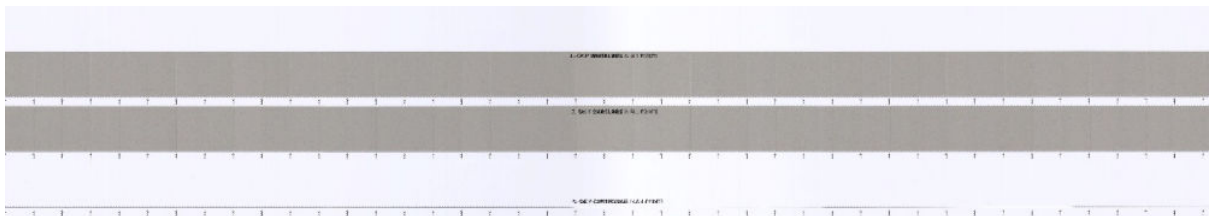
The nozzle health print is focused exclusively on nozzle health. It's not intended to help you to understand overall banding problems; it's used only for specific nozzle health problems.

For each individual colored pattern, check that most of the dashes are present. If you see missing dashes in one color, see [Thin white vertical lines on page 180](#).

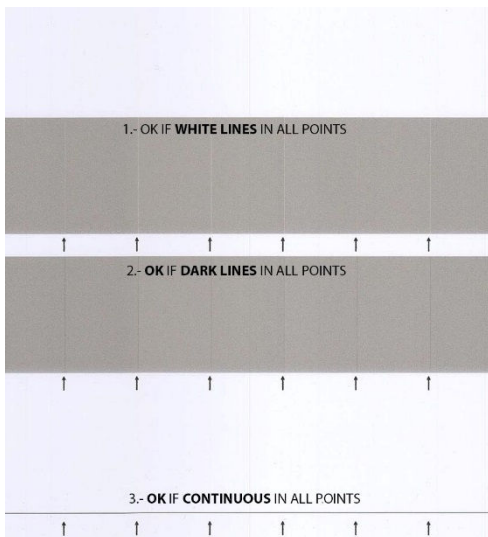
Printhead alignment check

Before starting the printhead alignment check, load the widest paper that you have available.

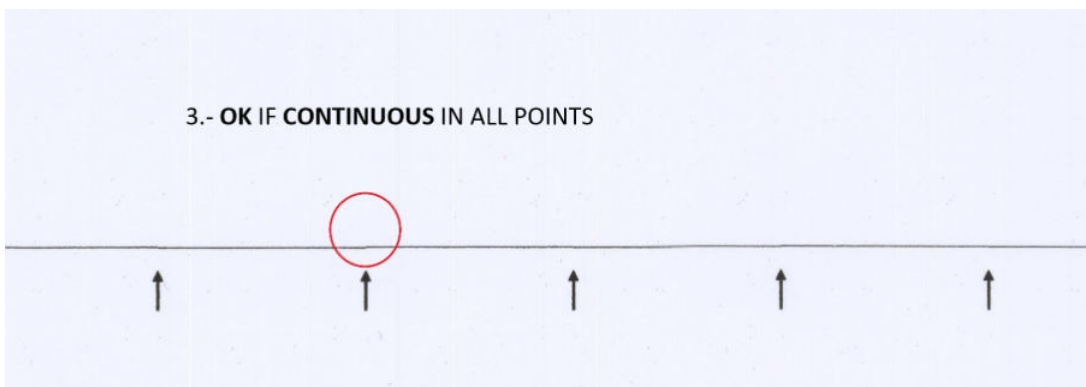
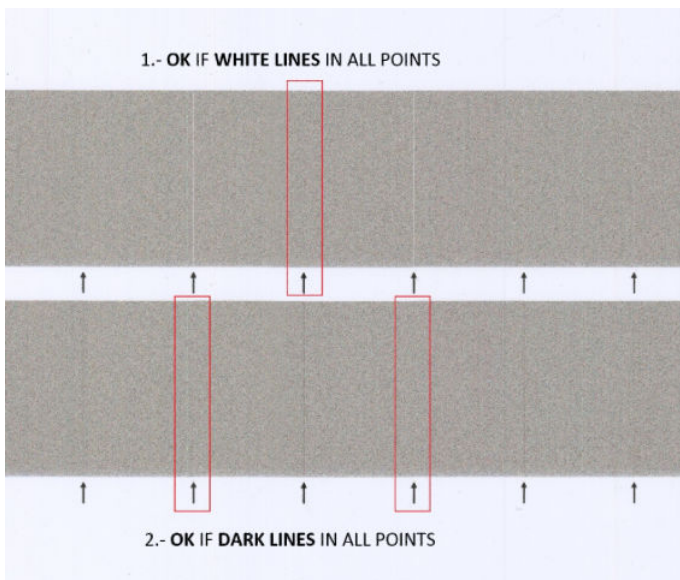
The printhead alignment check plot looks like this:



You have to look at three rows of positions marked by the arrows. For each row, check each position against the corresponding instructions:



The following examples show failed alignment check situations where expected patterns are not followed:



If printhead alignment check fails in any position, proceed with the following steps in order, stopping when the problem is solved.

1. If the check fails in parts 1, 2, or 3, concentrate on the sides of the paper (OK in center positions). You are recommended to redo the calibration after loading a full-width 40-inch-wide paper, preferably

polypropylene. After calibration, print-quality problems will probably be solved, otherwise repeat the printhead alignment check and continue the diagnosis.

2. If in part 3 there are discontinuous or broken lines everywhere, probably the line sensor and/or paper advance are not calibrated properly, so:
 - a. Perform a line sensor calibration: **Service menu > Calibrations > Line sensor calibration.**
 - b. Check the paper advance (see [Paper-advance check plot on page 549](#)) and repeat the calibration if needed according to the results of the check.
 - c. Repeat print-bar calibration with 40-inch-wide paper, preferably polypropylene. After calibration, print-quality problems will probably be solved, otherwise repeat the printhead alignment check and continue the diagnosis.
 - d. If the paper advance was already OK, that means that the line sensor calibration was the problem, otherwise the problem was the paper advance. The print-quality problem will have been solved; but these calibrations shouldn't change in normal printer operation, so you should report the problem to HP R&D for issue tracking.
3. If in part 3 there's a big discontinuity in a single place, and you can see by looking at the diagnostic plot that this coincides with a border between two printhead modules, repeat print-bar calibration with full-width 40-inch-wide paper, preferably polypropylene, and check again. If the problem persists, reseal both printheads and repeat the calibration.

IQ recovery

- **Color-specific intensive recovery:** See [Color-specific intensive recovery on page 173](#).

Printer settings

Reset options

Reset to factory defaults (from service menu)

The EEROM reset utility resets the product to the factory defaults and deletes any user information and files. In more detail, it:

- Deletes usage counters
- Resets NVM and flushes it too
- Sets IO with dynamic IP (DHCPv4)
- Resets printer history
- Clears stored jobs
- Clears the Event Log
- Clears printer.log data
- Deletes temporary pages
- Removes other temporary resources
- Resets entire CDS and sysmgr

- Ensures that all logs are disabled from that point on
 - Ensures that the printer diagnostic package will be generated with encryption
 - Deletes calibrations
 - Deletes Valhala printer information
 - Ensures that access to the unit is disabled, removing all .fixed files
 - Deletes accounting history and clears queue
 - Clears scanner queue and temporary files
 - Patches the OS (both partitions) to prevent losing connectivity upon firmware upgrade
1. In the **Service utilities** menu, select **Reset to factory defaults**.
 2. The utility starts, and the front panel asks whether you want to continue. Press **OK** to reset to default values or **CANCEL** to cancel.
 3. After setting all life counters to zero, press **CANCEL** to return to the main menu.

Reset life counters

This utility resets all the life counters.

1. In the **Service utilities** submenu, select **Reset life counters**.
2. The utility starts, and the front panel asks whether you want to continue. Press **OK** to confirm and continue with the reset or **Cancel** to exit.

Reset access control

The purpose of this utility is to reset the Embedded Web Server access control to default values; the admin username and password and other users' passwords are set to " " (space).

1. In the **Service utilities** submenu, select **Reset access control**.
2. Press **OK** to confirm and continue with the reset or **Cancel** to exit.

Enable I/O interfaces

This utility can be used to enable the interfaces that have been disabled via CDS server. The objects that are reset are:

- IO-NETWORKING-ENABLED
- IO-EIO-1-ENABLED
- IO-EIO-2-ENABLED
- IO-EIO-3-ENABLED
- IO-EIO-4-ENABLED

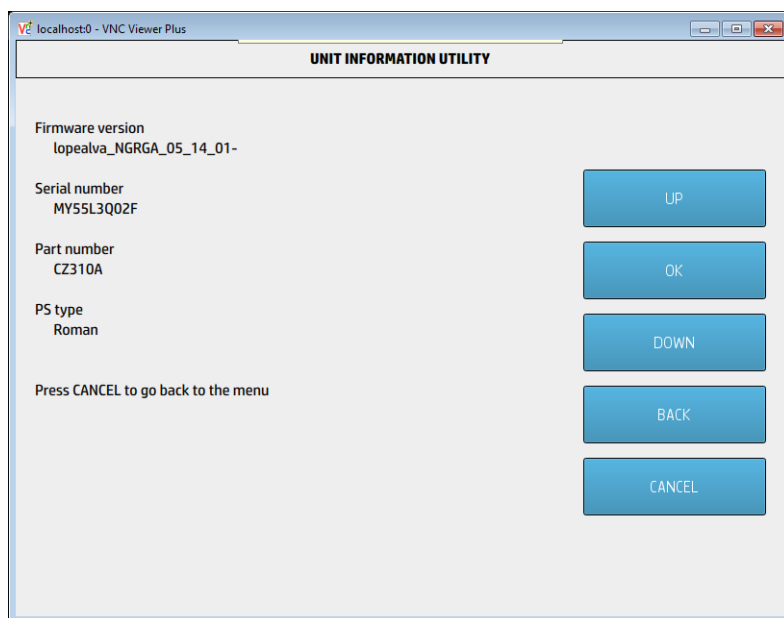
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1. In the **Service utilities** menu, select **Enable I/O interfaces**.
2. The utility starts, and the front panel asks whether you want to continue. Press **OK** to continue or **CANCEL** to cancel.
3. After setting the default configuration, press **CANCEL** to return to the main menu.

Unit information utility

The unit information utility retrieves the firmware version, serial number, and part number of the printer.

1. In the **Diagnostics** menu, select **Unit information**.
2. The unit information utility starts, and the front panel displays the following message:
 - Initializing
 - Getting information
3. The front panel displays the firmware version, serial number, and part number of the printer.
4. Press **CANCEL** to return to the menu.



Show/hide front-panel information

The purpose of this utility is to prevent network information from being viewed directly from the Embedded Web Server or the front panel.

1. In the **Service utilities** submenu, select **Show/hide front panel info**.
2. Use the **UP** or **DOWN** button to change whether network information is viewable, then press **OK** to confirm.
3. Press **CANCEL** to return to the main menu.

Set printer installed

This option allows you to set whether the printer has been installed (out-of-box procedure completed). Press **UP** or **DOWN** to set Yes or No, and press **OK** to confirm. See [0025-09 Set printer installed on page 486](#).

Disk utilities

Secure file erase mode

The purpose of this service utility is to select the security level that will be used when erasing data from the printer's hard disk. For an explanation of the security levels, see [Disk wipe DoD 5220.22-M on page 555](#).

Disk wipe DoD 5220.22-M

The purpose of this service utility is to erase data from the hard disk securely, according to the directive DoD 5220.22-M.

The printer's hard disk is used as a temporary storage area for print jobs. The Secure Disk Wipe utility can erase user information from the hard disk to prevent unauthorized access.

Secure Disk Wipe provides three different levels of security:

- **Insecure Mode:** All pointers to the information are erased. The information itself is *not* erased, and remains on the hard disk until the disk space it occupies is needed for new print jobs. The new print information overwrites the old information. While the information remains on the disk, it is difficult for most people to access, but may be accessed using software designed for that purpose. This is the normal method in which files are erased on most computer systems; it is the fastest method but the least secure. This is the default security level when using Secure Disk Erase.
- **1 Pass Mode:** All pointers to the information are erased, and the information itself is immediately overwritten with a fixed character pattern. This method is slower than Non-Secure Fast Erase, but more secure. It may still be possible to access fragments of the erased information by using special tools to detect residual magnetic traces.
- **5 Pass Mode:** All pointers to the information are erased, and the information itself is repetitively overwritten using an algorithm designed to eliminate any residual traces. This is the slowest method, but the most secure. Secure Sanitizing Erase meets the US Department of Defense 5220-220M requirements for clearing and sanitization of disk media.

Execute the Disk Wipe DoD 5220.22-M utility as follows:

1. In the **Service utilities** submenu, select **Disk Wipe DoD 5220.22-M**.
2. In the **Disk Wipe DoD 5220.22-M** submenu, select **Disk Wipe DoD 5220.22-M**.
3. In the **Sanity level** submenu, scroll to the required sanity level and press **OK**.



NOTE: Erasing the hard disk drive using either of the Secure Sanitize Levels is a very slow process: 6 hours for the 1 Pass mode and 40 hours for the 5 Pass mode.

4. When the sanity level has been changed, the front panel displays a message, or an error message if there is some problem.
5. In the **Disk Wipe DoD 5220.22-M** submenu, scroll to **Disk Wipe (DoD 5220.22-M)** and press **OK**.
6. A message appears on the front panel, you must select whether you would like to perform a complete erase of the hard disk drive using the previously selected erase mode by pressing **OK**. Press **Cancel** to exit the utility.

7. A message appears on the front panel, you must select whether you want to continue and completely erase the hard disk drive by pressing **OK**. Press **Cancel** to exit the utility.
8. The erase process starts and the front panel shows a setup progress bar.
9. The printer restarts in the Disk Wipe mode, and continues with the disk erase until it is completed.

 **CAUTION:** Do not try to interrupt this process. All front panel keys are disabled while the printer erases the hard disk drive.

Frequently Asked Questions – Disk Wipe

Question	Answer
What does the disk wipe function do?	The disk wipe function removes all the files related with jobs that have been printed from the printer (logs, previews, files in the job queue, etc.)
Does the disk wipe function remove printer configuration?	No, it does not. Firmware data, configuration and other settings such as custom profiles, are in another partition and are not removed by the disk wipe.
Do all disk wipe modes remove the same data?	Yes. It doesn't matter which type of disk wipe was chosen, all of them only remove the data described in 1. The number of passes only makes the recovery the deleted data more difficult. This protects your privacy in case of a stolen hard disk.

ISS utilities

Set ink tubes purged/empty

See [0025-08 Set ink tubes purged/empty on page 486](#).


Set PIP calibration

See [0025-10 Set PIP calibration on page 486](#).

Hardware utilities

Scanner utilities


Scanner validation


 **NOTE:** To identify the most common problems with scan quality and calibration, see [Troubleshooting on page 125](#).

By executing this validation, the product will perform the following scanner tests:

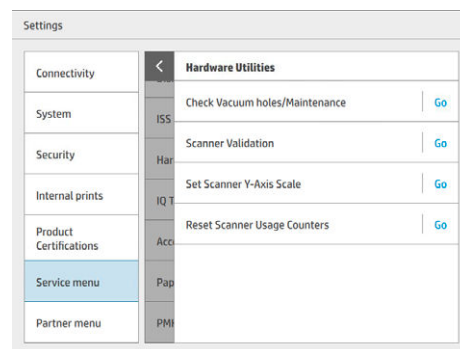
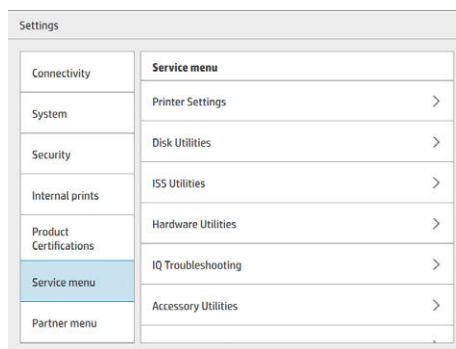
- ScanDump
- Focus
- Skew
- Dead/hot pixels
- Alignment/stitching

- Chromatic aberration
- Streak
- Gray matching
- Signal noise

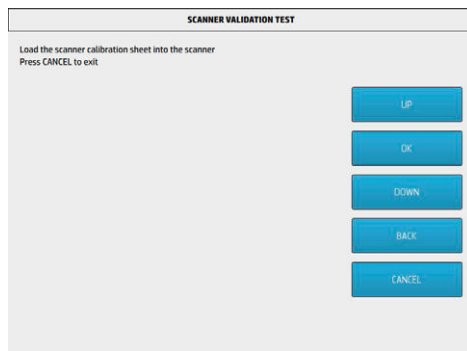
 **NOTE:** Before running the scanner validation, check that the calibration sheet is free from dust, spots, and stripes. Check that the calibration sheet is not dirty, wrinkled, scratched, or folded.

 **NOTE:** Before running the scanner validation, open the scanner to check that the glass plate is free from dirt, dust, and scratches. Clean the glass plate if necessary before proceeding.

1. In the **Service utilities** menu, select **Scanner validation**.



2. The front panel prompts you to load the calibration sheet.

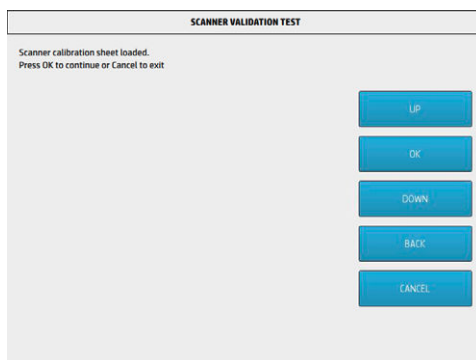


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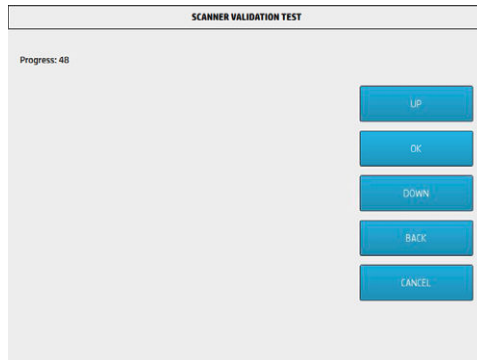
3. Hold the calibration sheet on both sides and place it facing the arrow in the center of the sheet in front of the Page icon present on the input tray of the scanner. Push the sheet with both hands on both sides at the same time to load the sheet with no skew. Press **OK** to continue with the test.




4. Press **OK** to continue with the test.



5. The front panel displays the progress of the validation (as a percentage).




6. Wait until the scanner validation test has completed. The front panel then shows the test results. Press **OK** to continue

 **NOTE:** If the scanner validation result is FAIL then:

- Check that the calibration sheet is in good condition as described in the earlier note. Replace it with a new one if necessary.
- Check that the five glass plates are in good condition. Replace with new ones if necessary.
- Check that the five glass plates are correctly installed, and that they are clean.
- Perform a scanner calibration (explained in the User's Guide) and repeat the validation.
- If the scanner validation result is FAIL with error CWS_RC_VAL_DEADPIXEL_FOUND, replace the individual CIS module accordingly.

After the validation, a set of files is saved in the CWS_validation folder. SCANDump and log files are written every time a validation is executed. TIFF files are written only if a test fails. If the validation is performed again, the files are overwritten. The following files are written:

File name	CWS_validation folder
SCANDump_Xxx.con	SCANDump files can be opened with SCANview (part of SCANTest)
scanTRUSTresult.log	Results file, contains the following: <ul style="list-style-type: none"> • Measured values and limits • Error codes (if any)
scanTRUST.log	The Log file, which primarily contains information that can help to identify where an error has occurred.
*.tif	Scanned images of failed tests. These are mainly for escalation to division for troubleshooting purposes.

 **NOTE:** The diagnostic package (reduced level) will contain only all LOG and CON files. The extended diagnostic package (full level) will contain all files.

Set scanner Y-axis scale

This utility calibrates the paper advance in the scanner.

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Reset scanner usage counters

This utility resets the scanner counters. It must be run whenever the scanner is changed.

Delete scanner queue

See [1001-02 Delete scanner queue on page 517](#).

Delete job manager queue

See [0045-09 Delete Job Manager queue on page 498](#).

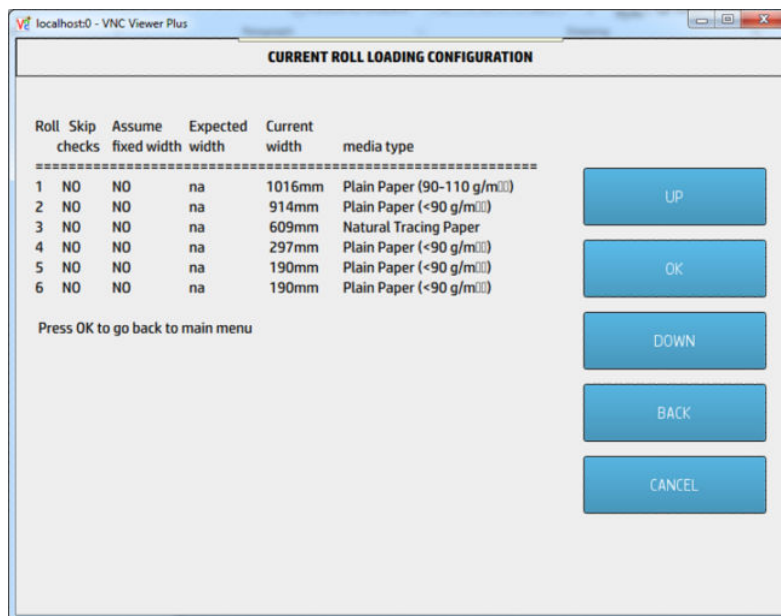
Check vacuum holes

See [0005-03 Check vacuum holes on page 465](#).

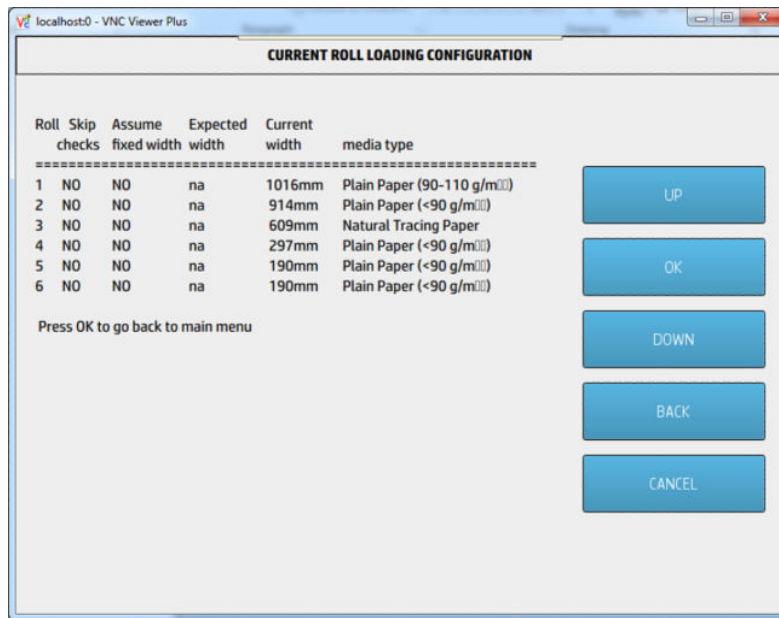
Configure roll loading mode (APJ)

This utility sets different configuration options for any of the available rolls.

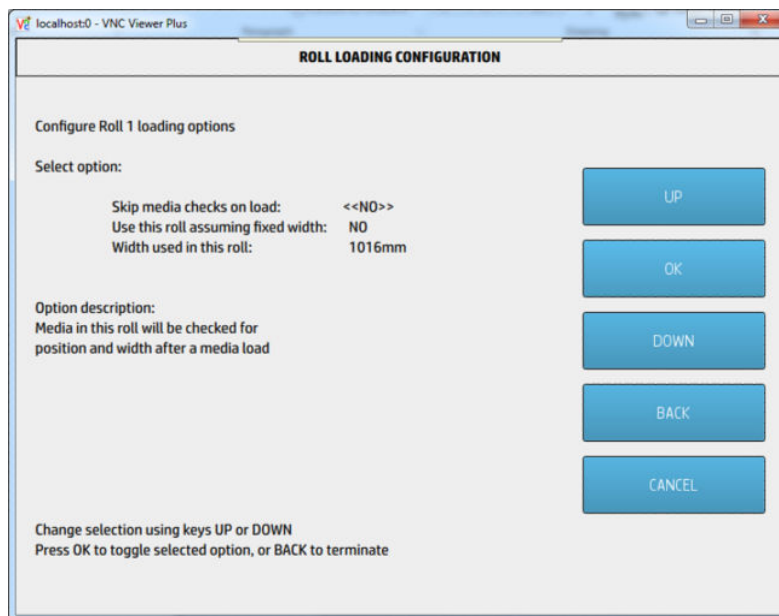
When the utility is selected, the front panel allows you to show the current configurations for each roll, configure n specific roll or reset the loading configuration to system defaults.



1. The information that is displayed includes:

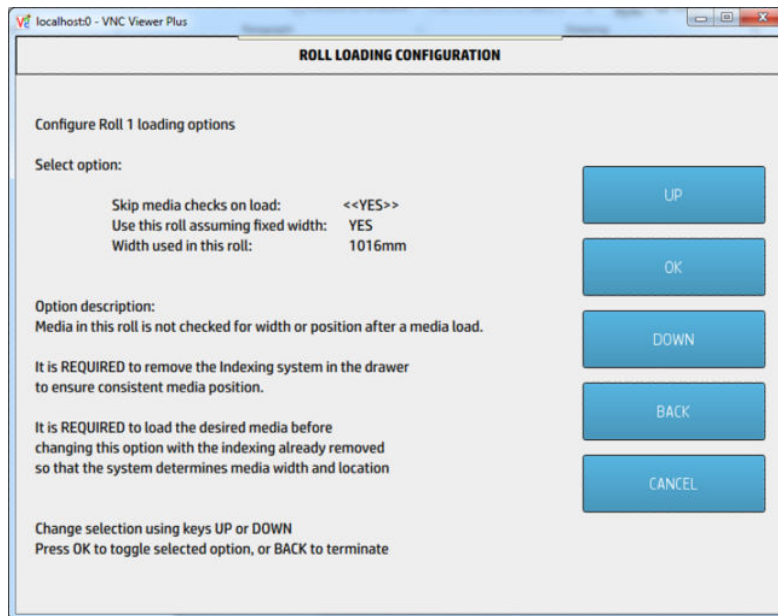


2. The configuration options include (**bold style is the default setting**):

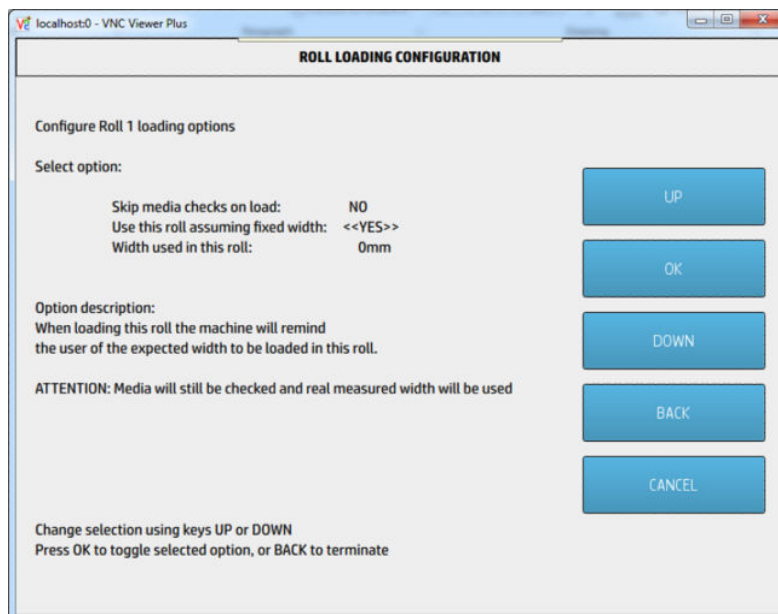


- Skip media checks on load (YES/NO).

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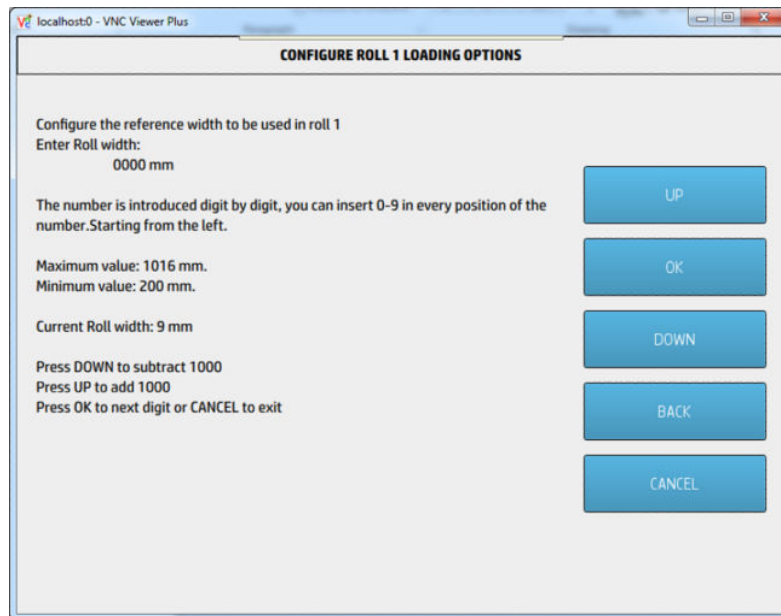


- Use this roll assuming fixed width (YES/NO).

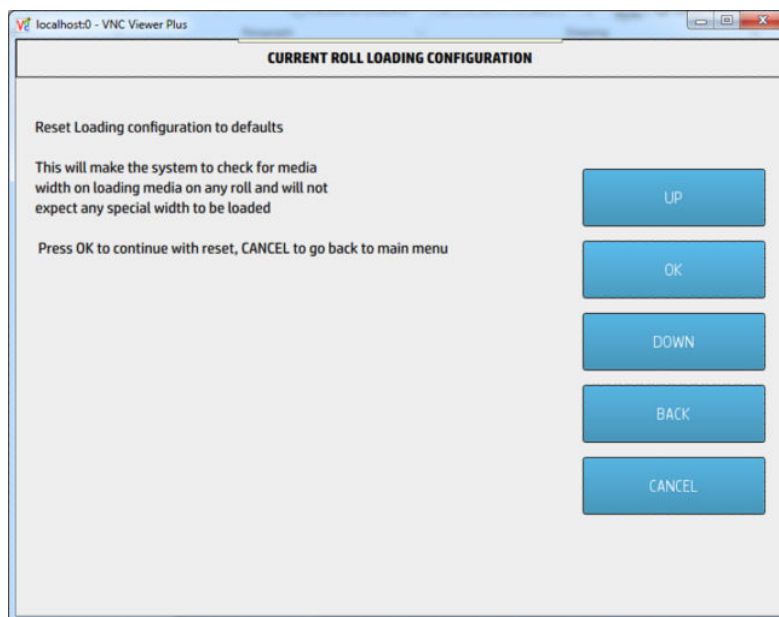


- Width used in this roll: X mm.

If the previous option is set to YES, this option must be configured with the desired fixed width. The minimum configurable width is 200 mm and the maximum is 1016 mm.



3. This option will restart the roll configuration options (media checks will not be skipped on load, a fixed width will not be assumed). Two confirmations are required.



Additional life repair parts

See [0099-01 Additional life repairs parts on page 516](#).

IQ troubleshooting

Printhead gauge information

For printhead health tracking, there is a summary table in which each printhead has its own status based on a combination of the number of nozzles not working properly and their distribution along the printhead. The table could look like this:

Printhead A1	OK
Printhead A2	OK
Printhead A3	Recover
Printhead A4	OK
Printhead A5	Monitor print quality
Printhead A6	Near end of life
Printhead A7	Monitor print quality
Printhead A8	OK

Meaning of each status:

OK	The printhead seems to be working normally.
Monitor print quality	Depending on the image content, some prints may not be able to achieve satisfactory quality.
Recover	Printhead health is degraded, run a recovery routine.
Near end of life	The printhead is almost at the end of its life; you may need to replace it if the recovery routine does not solve the problem.

You are recommended not to replace a printhead unless it is reported as “Near end of life”.

Accessory utilities

Install / remove Drawer

This utility allows you to install or uninstall drawers. Take into account that this utility works only the first time it is executed after starting the printer.

Select the drawer you want to install and press OK to continue or CANCEL to cancel the utility.

If there has been an error during the installation, the system notifies you of it. If the drawer has been installed successfully, the printer needs to be rebooted. Press OK in both cases.

Install/uninstall dryer

This utility allows you to install or uninstall the dryer.

To use the utility, select whether you want to install or uninstall the dryer, and press **OK** to confirm the setting parameter or **CANCEL** to go back to the menu.

Dryer fan manufacturer

This utility checks which fan is installed in each dryer module.

1. The printer checks the current configuration (which takes about a minute) and shows it in the front panel, under the saved configuration.
2. After detecting the fans' manufacturer, the system allows you to save the new configuration by pressing **OK**.
3. After pressing **OK**, press **CANCEL** to go back to the menu.



NOTE: This utility must be executed each time a dryer module is changed. If not, the dryer may malfunction.

Folder utilities

- **Folder speed mode:** This utility allows you to switch the folder speed between default and maximum.
- **Configuration file:** This utility allows you to save the current configuration file. All configurable folder parameters will be saved on the folder, and they can be restored later from a backup copy. You can save the current configuration or remove an existing one. See [Service Menu – Configuration file on page 1579](#).
- **Parameter configuration:** This utility allows you to set any configurable parameter of the folder. Select a specific parameter.
- **Jam recovery:** This utility checks that the system is reporting a jam in the folder and tries to fix it.
- **Reset to factory defaults (from service menu):** This utility resets all folder configurations to factory defaults.
- **Calibration plot:** This utility prints a calibration plot in order to test the folder's configuration parameters.
- **Set Part Number:** This utility sets Folder part number.
- **Set Serial Number:** This utility sets Folder serial number.
- **Diagnostics:** This group contains all the diagnostics related to the folder explained in [Folder on page 525](#).
- **Calibrate diverter position:** This utility sets the diverter's position in order to match the position of the folder that is installed.
- **Retrieve Full Folder Logging:** This utility needs to be enabled when reporting a case to HP concerning the folder. Details are available in Appendix A, [How to retrieve full Folder logging on page 2059](#).

Jam recovery

- This diagnostic checks that the system is reporting a jam in the folder and tries to fix it.

High-capacity stacker utilities

- **Diagnostics:** This group contains all the diagnostics related to the high-capacity stacker explained in [High-capacity stacker on page 517](#).
- **Calibrate diverter position:** This utility sets the diverter's position in order to match the position of the folder that is installed.

Top stacker utilities

- **Install / uninstall Top stacker:** This utility allows you to install or uninstall the top stacker. See [0075-03 Install / uninstall Top stacker on page 515](#) for more info.
- **Diagnostics:** This group contains all the diagnostics related to the High-capacity stacker. They are explained in [Calibration on page 2029](#).

Paper preset utilities

Remove non-factory papers

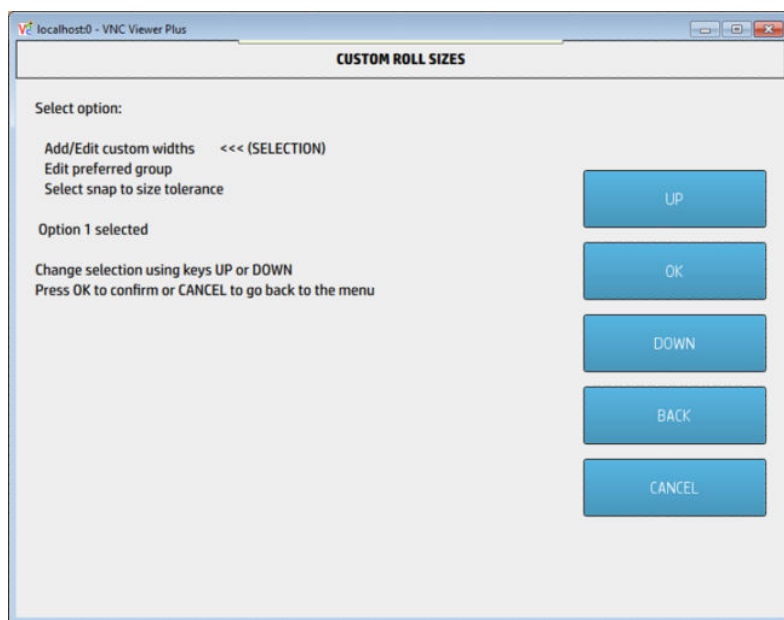
This utility removes paper presets installed by the user. It does not remove any original paper preset shipped with the printer.

Use this utility when a paper profile installed by the user could be the cause of a problem.

1. In the **Service utilities** submenu, select **Remove non-factory papers**.
2. Press **OK** to confirm.

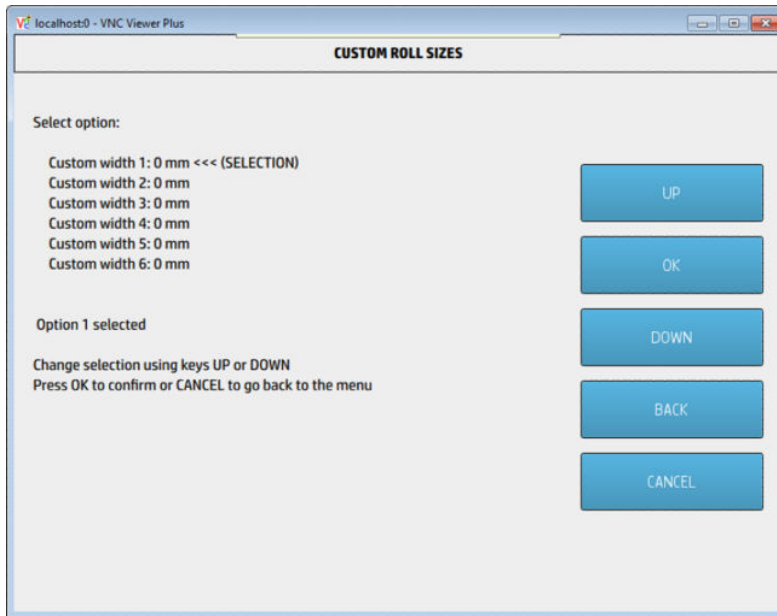
Custom roll sizes

This utility installs a new custom roll width. Execute it as follows:

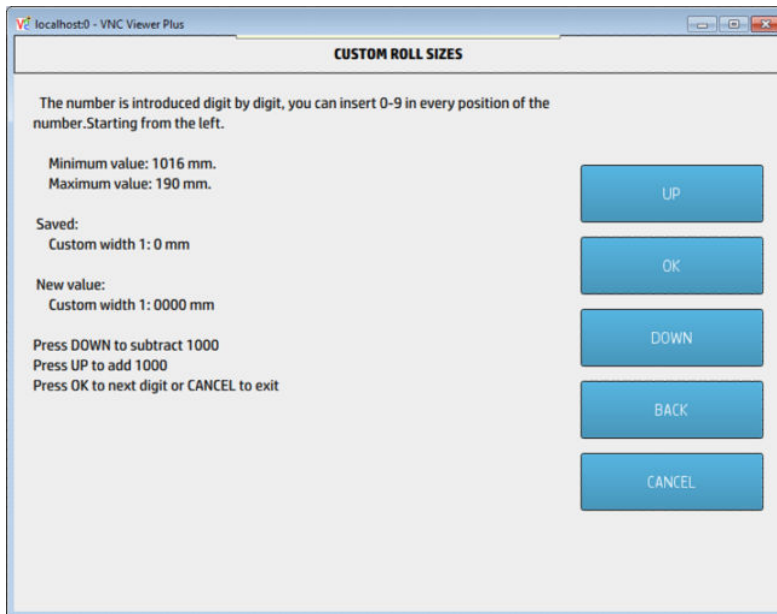


Select the desired option:

- **Add/Edit Custom widths**
Up to 6 different custom sizes can be configured.

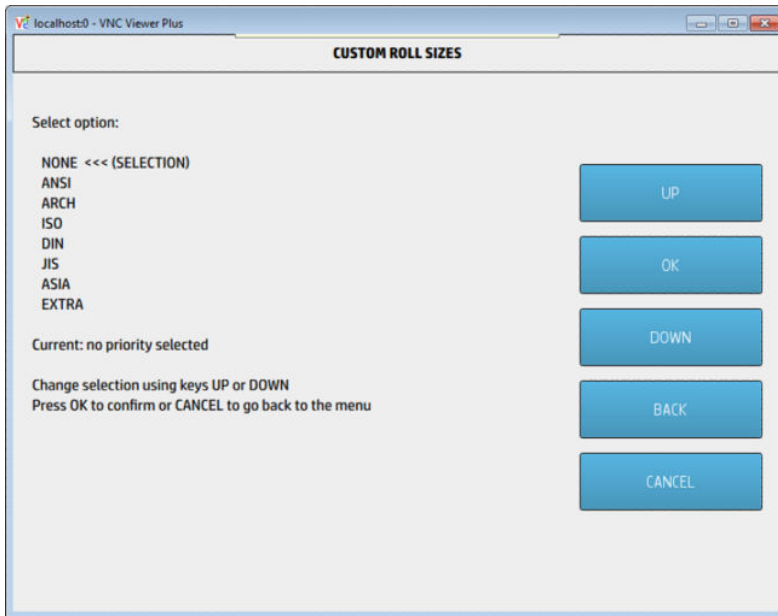


After selecting the desired configuration, enter a valid width between 190 and 1016 mm. Each unit must be inserted separately according to front panel instructions.



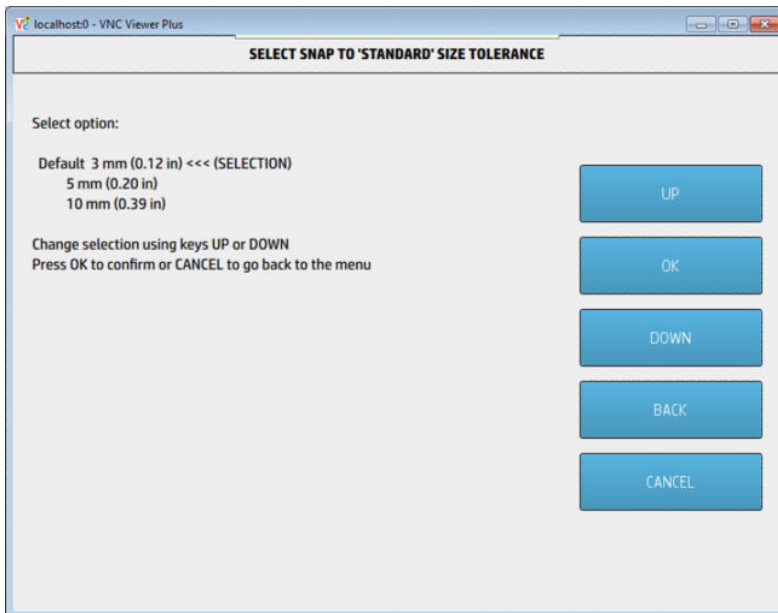
- **Edit preferred group**

Select one of the available options: NONE, ANSI, ARCH, ISO, DIN, JIS, ASIA or EXTRA, and press **OK** to confirm or **CANCEL** to go back to the menu.



- **Select snap to size tolerance**

Select one of the available options: 3mm (0.12 in), 5mm (0.20 in), or 10 mm (0.39 in) and press **OK** to confirm or **CANCEL** to go back to the menu.



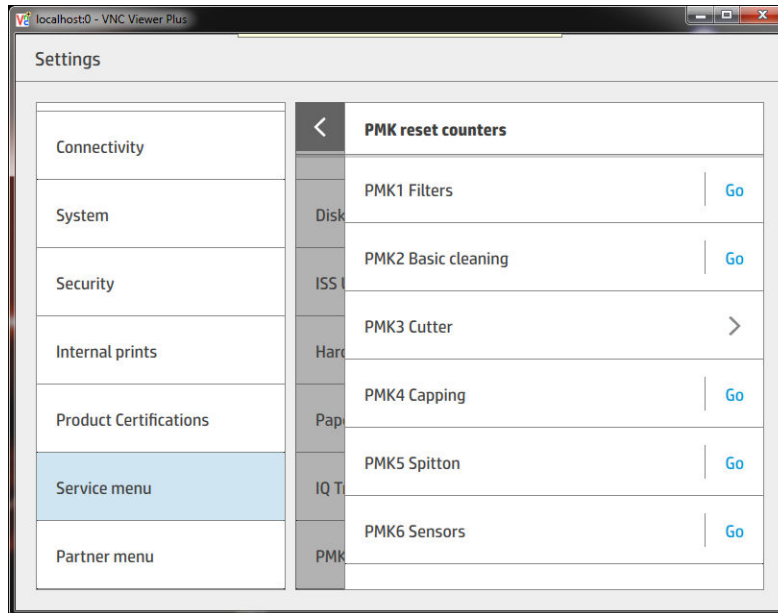
PMK replacements

The purpose of this utility is to reset the internal life counters. This utility allows you to reset only the counters related to a specific replaced part.

 **NOTE:** Always reset the life counter of a part after replacing it.

Execute the utility as follows:

1. In the **Service utilities** submenu, select **Reset life counters**.
2. Select a specific Preventive Maintenance Kit (PMK) to reset the life counter for all parts included in it.



You can choose from the following Preventive Maintenance Kits:

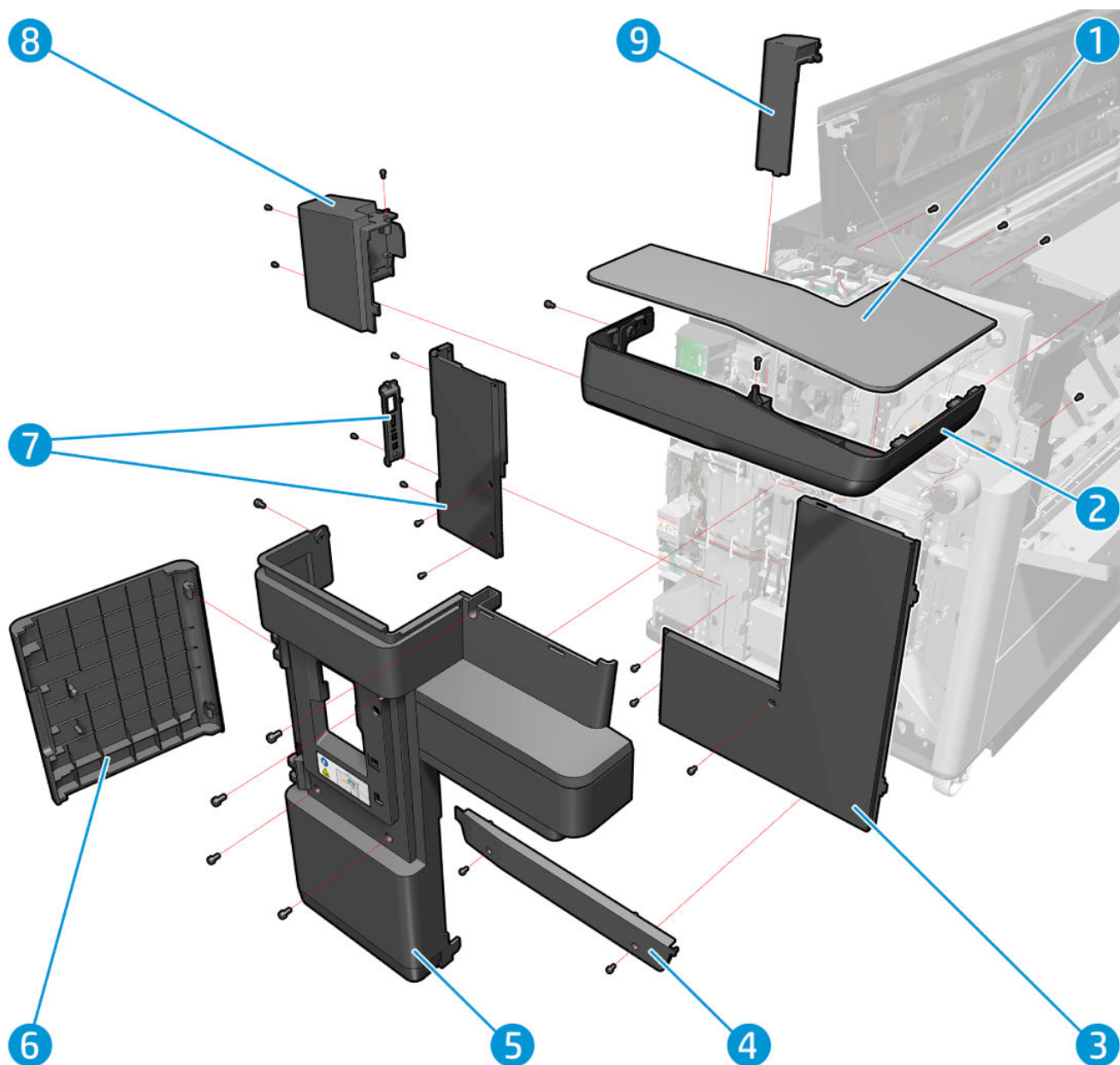
- PMK1 Filters
 - PMK2 Basic cleaning
 - PMK3 Cutter
 - PMK4 Capping
 - PMK5 Spittoon
 - PMK6 Sensors
 - PMK7 Drawers
 - PMK8 Print-bar lift and ink tubing system
 - PMK9/PMK9B Belts and platen
 - PMK10 Dryer
 - PMK11 Vacuum pump fan
 - PMK12 Service carriage spittoon beam
3. Press **OK** to confirm the reset of the PMK.
 4. Press **CANCEL** to return to the menu.

8 Parts and diagrams

- [Left covers](#)
- [Right covers](#)
- [Front covers 1](#)
- [Front covers 2](#)
- [Top covers](#)
- [Top covers and front panel](#)
- [Rear covers](#)
- [HE \(PageWide XL 8000\) covers](#)
- [E-box 1](#)
- [E-box 2](#)
- [Vacuum system](#)
- [Print bar 1](#)
- [Print bar 2](#)
- [Top cover \(paper output\)](#)
- [Paper loop system](#)
- [Ink delivery system 1](#)
- [Ink delivery system 2](#)
- [Spittoon capping](#)
- [Print zone](#)
- [Lift system](#)
- [Carriage impelling system](#)
- [Waste system](#)
- [Dryer](#)
- [Drawer 1](#)

- [Drawer 2](#)
- [Drawer 3](#)
- [Drawer 4](#)
- [Scanner](#)
- [Scanner 1](#)
- [Scanner 2](#)
- [Spare parts](#)
- [Tools and others](#)
- [Cables](#)

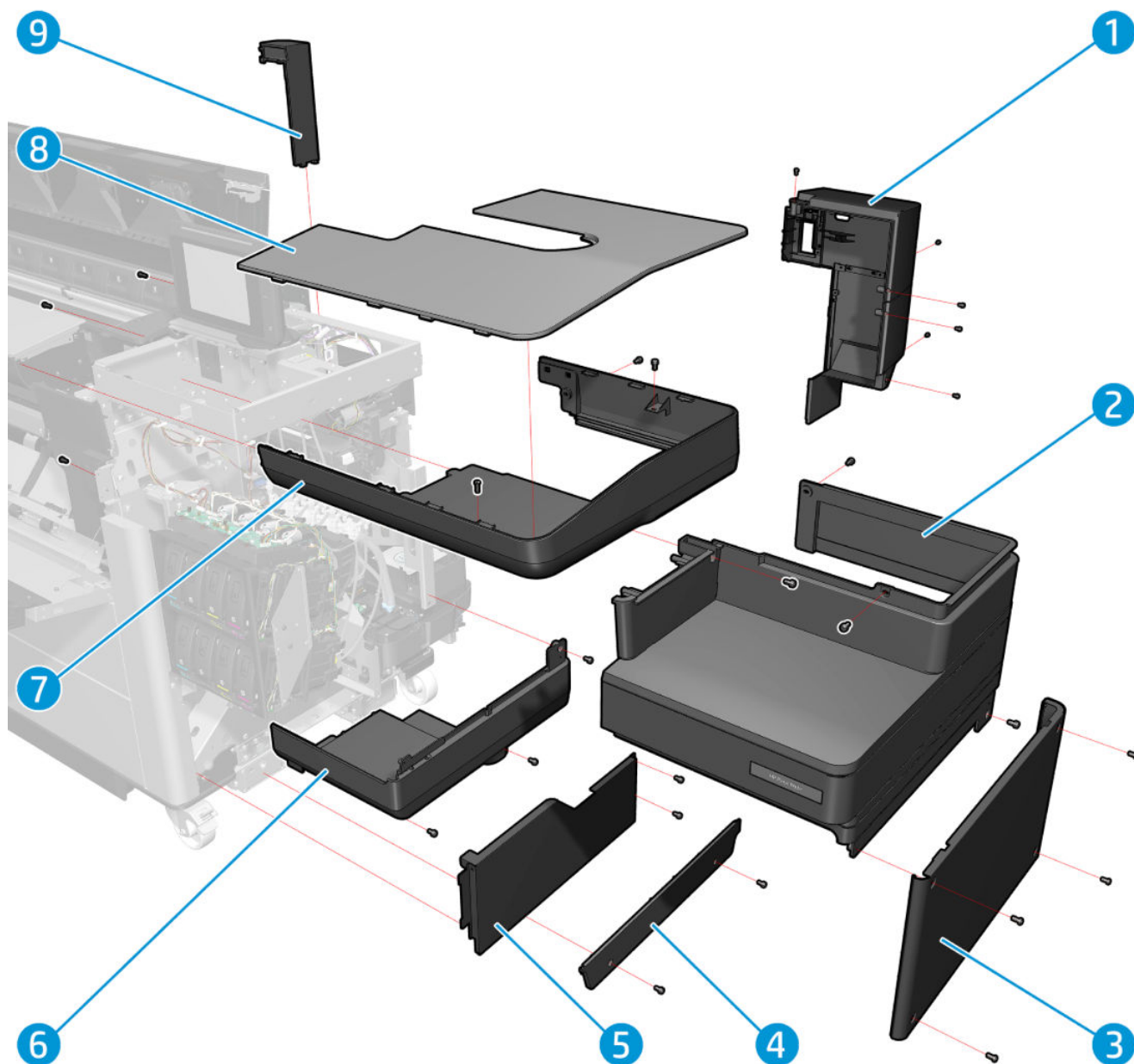
Left covers



	Part number	Description
1	CZ309-67036	Top-left exterior cover
2	CZ309-67038	Top left cover
3	CZ309-67041	Lower left cover
4	CZ309-67222	Left foot cover plate
5	CZ309-67039	Left cover assembly
6	CZ309-67040	Service door
7	CZ309-67043	Rear-left connector cover

	Part number	Description
8	CZ309-67042	Rear left cover
9	CZ309-67044	Top-right exterior cover

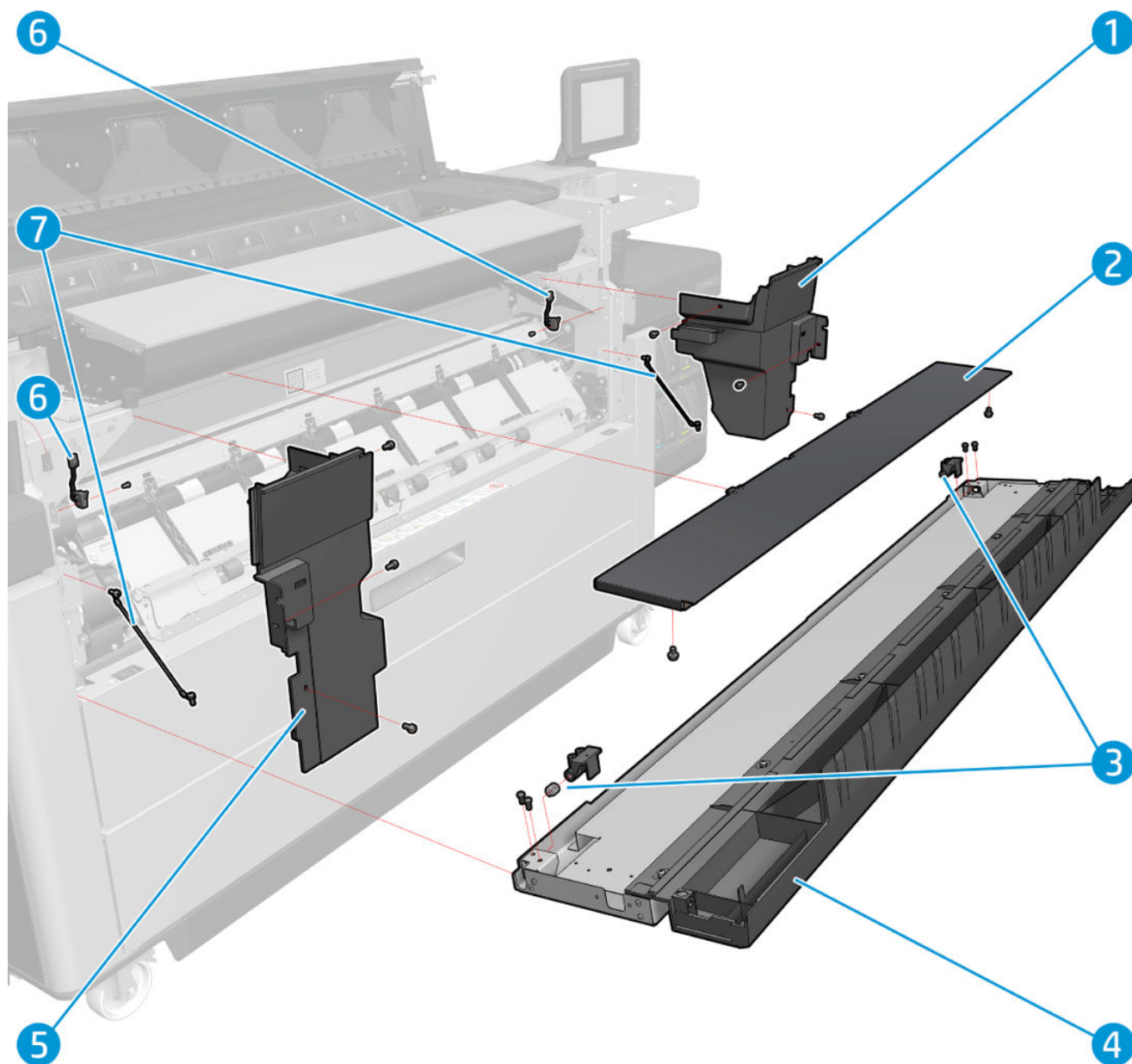
Right covers



	Part number	Description
1	CZ309-67050	Rear right cover
2	CZ309-67047	Right cover assembly
3	CZ309-67150	Right cover panel
4	CZ309-67223	Right foot cover plate
5	CZ309-67049	Lower right cover
6	CZ309-67048	Right bottom cover
7	CZ309-67046	Top right cover

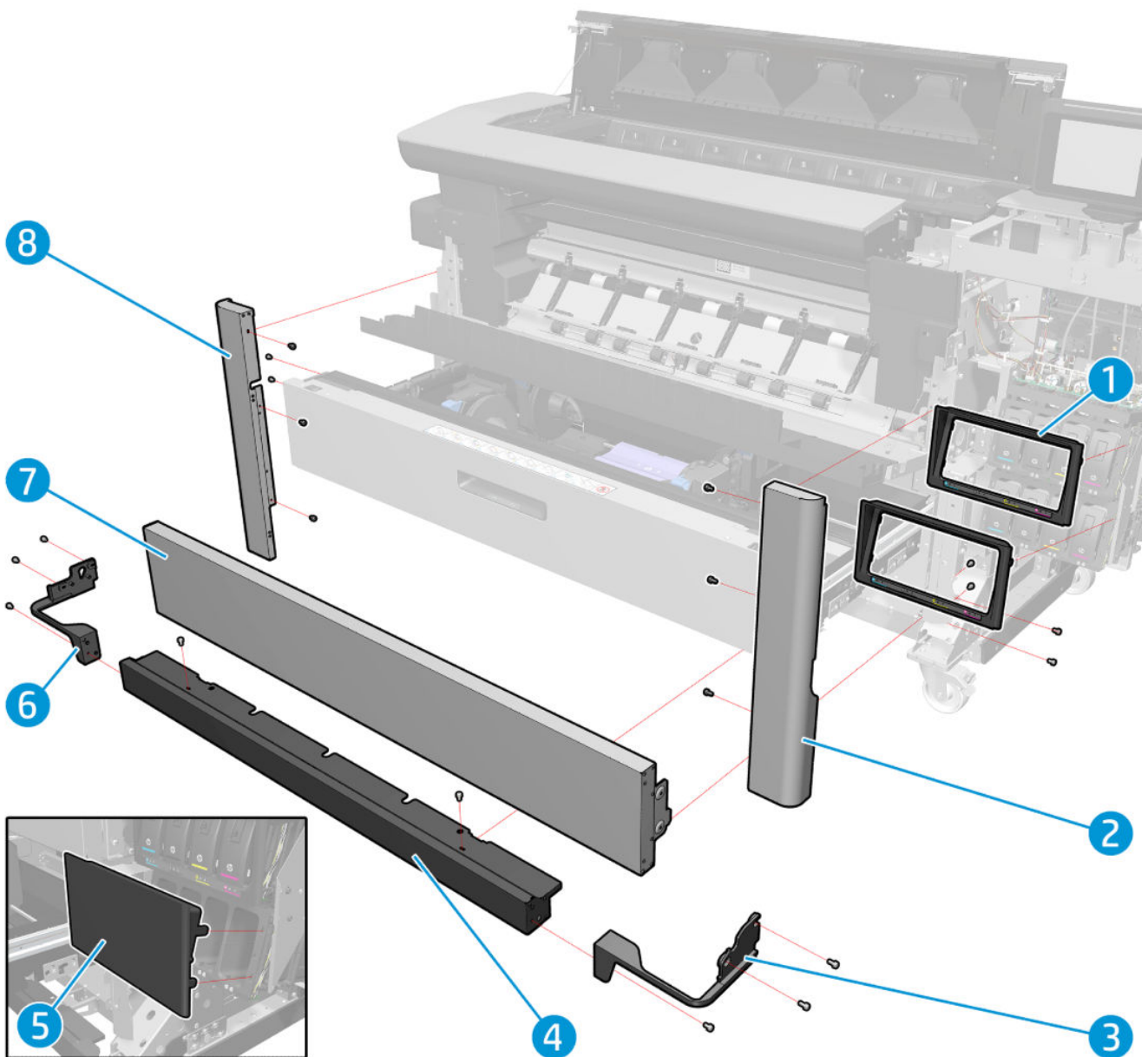
	Part number	Description
8	CZ309-67044	Top-right exterior cover
9	CZ309-67045	Rear corner cover

Front covers 1



	Part number	Description
1	CZ309-67054	Right-side Interior cover
2	CZ309-67052	Paper-loop top door
3	CZ309-67216	Paper-loop front door hinge and spring
4	CZ309-67051	Paper-loop front door
5	CZ309-67053	Left-side interior cover
6	CZ309-67034	Sensor safety
7	CZ309-67064	Front door cables

Front covers 2

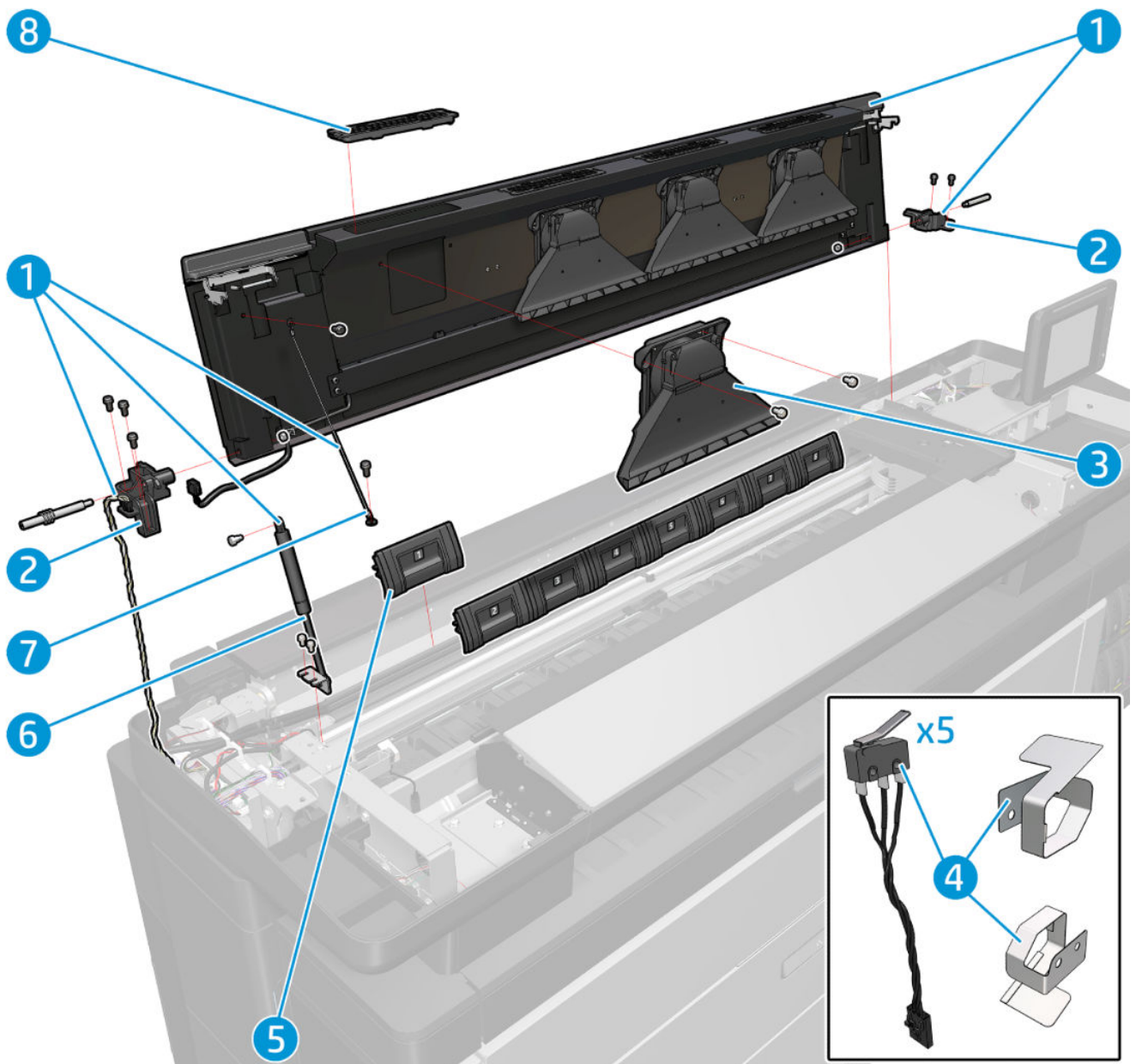


	Part number	Description
1	CZ309-67240	ISS bezel
2	CZ309-67070	Front cover right, 2 drawers
	CZ309-67379	Front cover right (PWXL 4X00/3900s with SNs ≥ MY7688Q008)
3	CZ309-67226	Right corner foot cover
4	CZ309-67221	Foot cover
5	CZ309-67248	ISS bezel cover (only for PageWide XL 4x00/3900), 4 ink
6	CZ309-67227	Left corner foot cover

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	Part number	Description
7	CZ309-67228	Fake drawer
8	CZ309-67068	Front cover left, 2 drawers
	CZ309-67378	Front cover left (PWXL 4x00/3900s with SNs \geq MY7688Q008)

Top covers

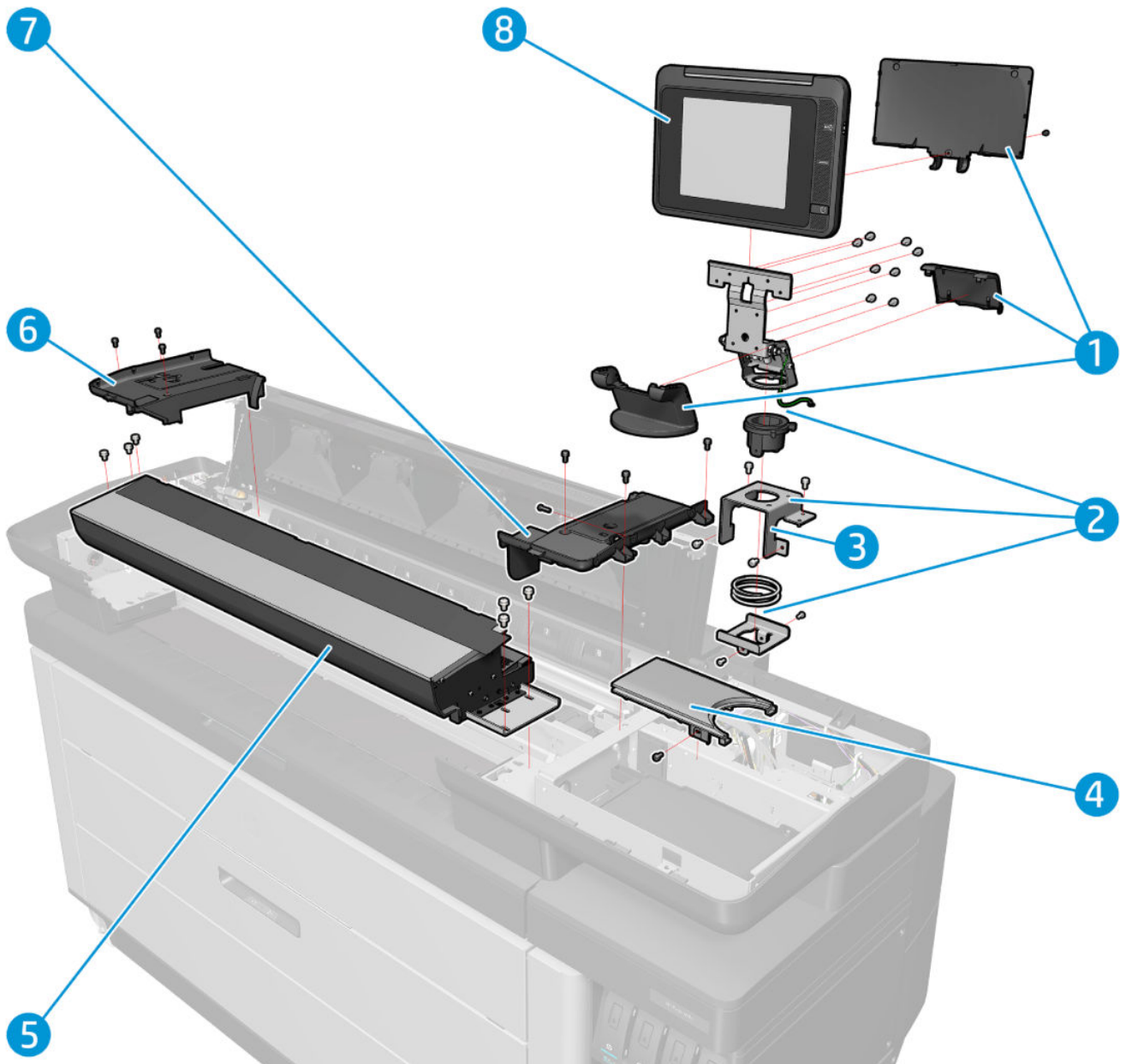


	Part number	Description
1	CZ309-67066	Top cover subassembly (PWXL 4x00/3900s w/ SNs below MY7688Q008 and for PWXL5x00, 6000, and 8000)
	CZ309-67351	Top cover subassembly (PWXL 4x00/3900s w/ SNs ≥ MY7688Q008)
	CZ309-67364	Top Cover Cylinder Service Kit (PWXL 4x00/3900s w/ SNs ≥ MY7688Q008)
2	CZ309-67220	Top cover shafts
3	CZ309-67112	Aerosol fan assembly
4	CZ309-67071	Sensors and parts for connectors
5	CZ309-67237	Rear printhead bezel

For HP-authorized personnel only

	Part number	Description
6	CZ309-67236	Top cover cylinder
7	CZ309-67065	Top door cable
8	CZ309-67113	Aerosol fan filter

Top covers and front panel

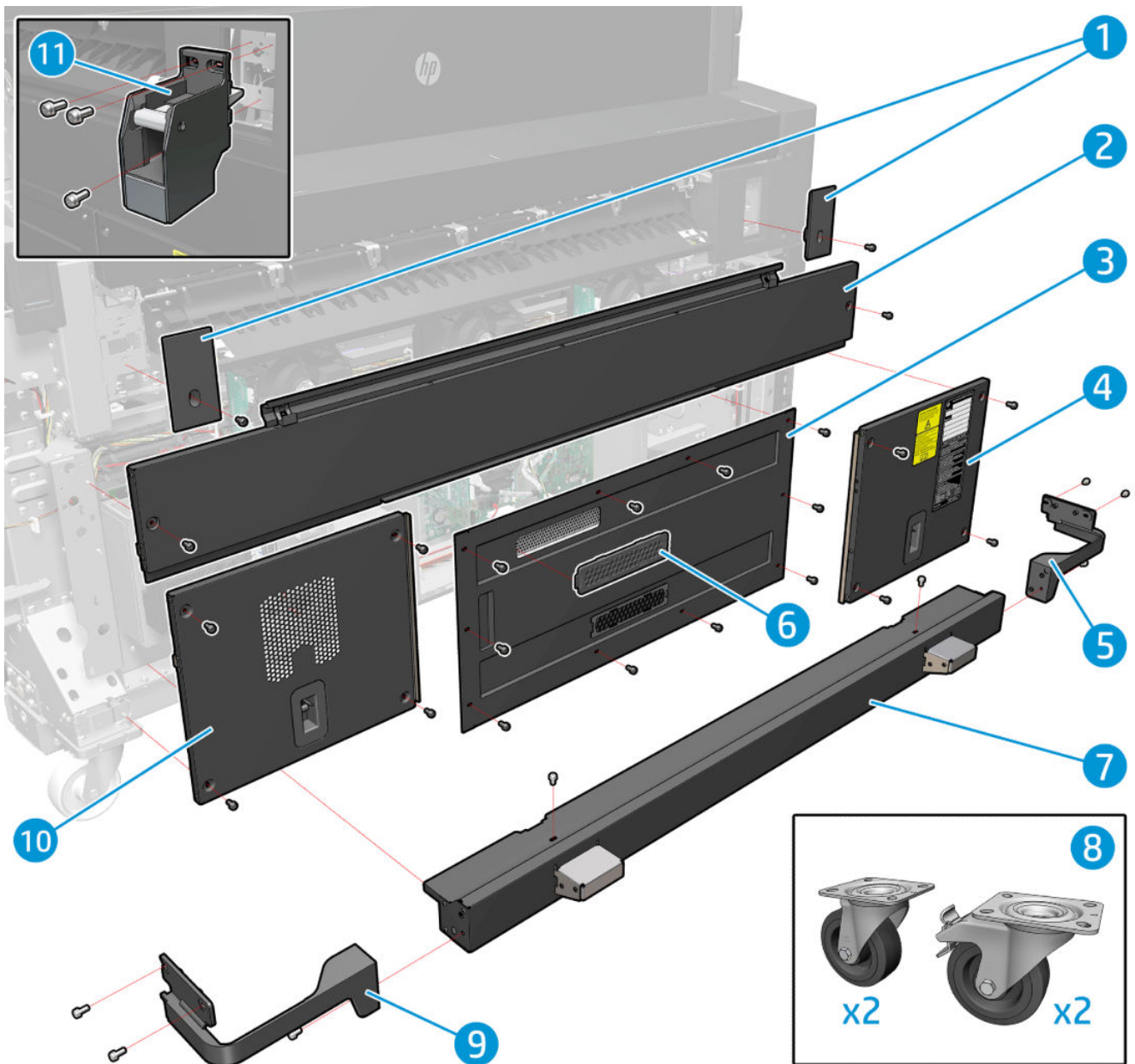


	Part number	Description
1	CZ309-67063	Front-panel support (covers)
2	CZ309-67219	Front-panel structure
3	CZ309-67029	Front-panel support
4	CZ309-67062	Top-right exterior cover fixed trim
5	CZ309-67235	No-scanner cover (for PWXLs w/ SNs below MY7468Q002)
6	CZ309-67060	Left printhead bezel

For HP-authorized personnel only

	Part number	Description
7	CZ309-67061	Right printhead bezel
8	CZ309-67320	Front panel, no covers

Rear covers

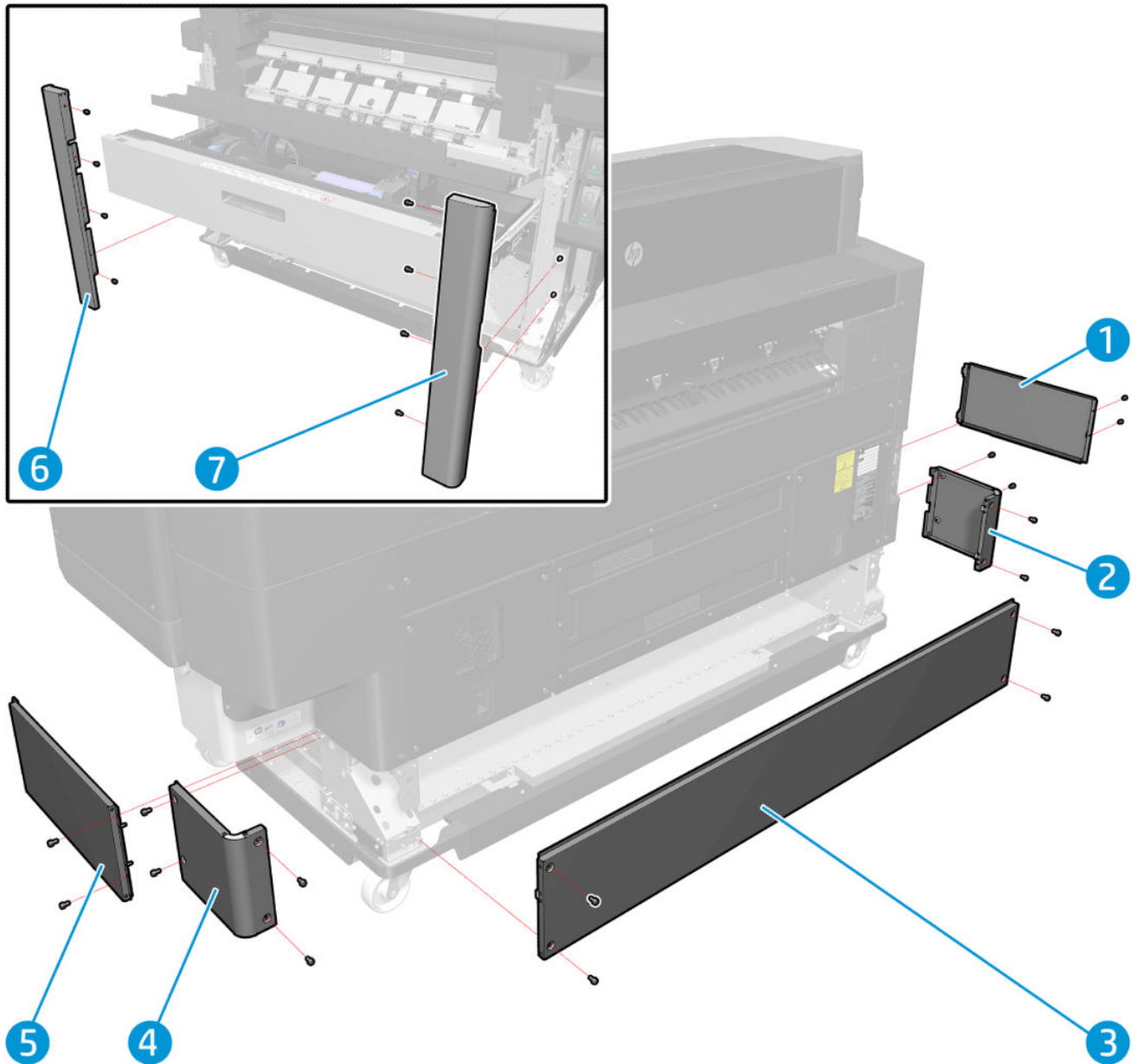


	Part number	Description
1	CZ309-67055	Cover accessory attachment (left and right)
2	CZ309-67059	Top E-box cover
	CZ309-67262	Top ent. E-box cover
3	CZ309-67056	E-box cover
4	CZ309-67057	Left E-box cover
	CZ309-67260	Left ent. E-box cover
5	CZ309-67225	Exterior-left foot cover

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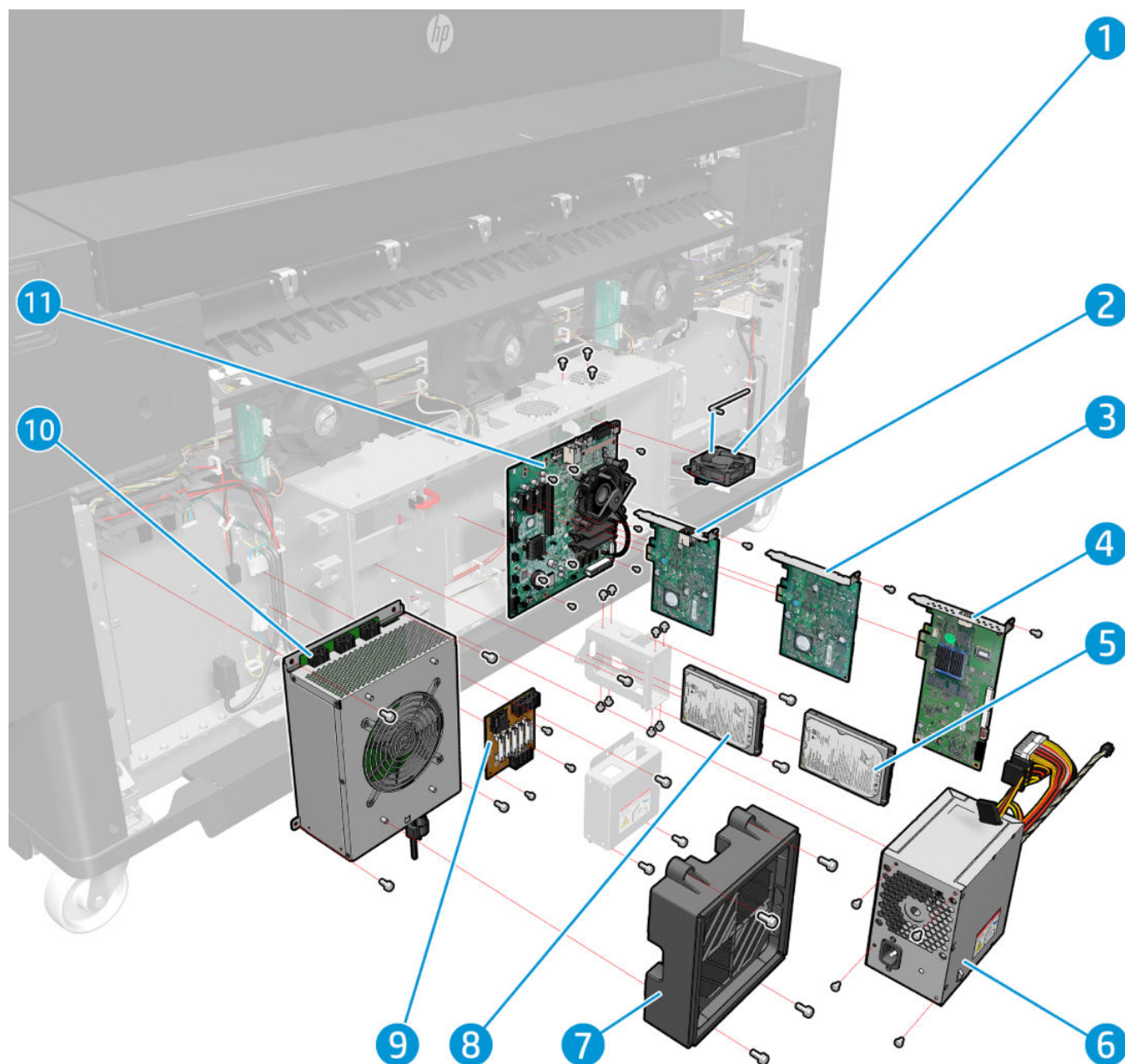
	Part number	Description
6	CZ309-67113	Aerosol fan filter
7	CZ309-67247	Rear foot cover
	CZ309-67358	Harness cover (PWXL 4x00/3900s with SNs \geq MY7688Q008)
8	CZ309-67193	Anti-vibration wheels
9	CZ309-67224	Exterior-right foot cover
10	CZ309-67058	Right E-box cover
	CZ309-67261	Right ent. E-box cover
11	CZ309-67212	Accessory adapter

HE (PageWide XL 8000) covers



	Part number	Description
1	CZ309-67230	Lateral front left, 3 drawers
2	CZ309-67232	Back left, 3 drawers
3	CZ309-67234	Rear bottom panel
4	CZ309-67233	Back right, 3 drawers
5	CZ309-67231	Lateral front right, 3 drawers
6	CZ309-67067	Front-left cover, 3 drawers
7	CZ309-67069	Front-right cover, 3 drawers

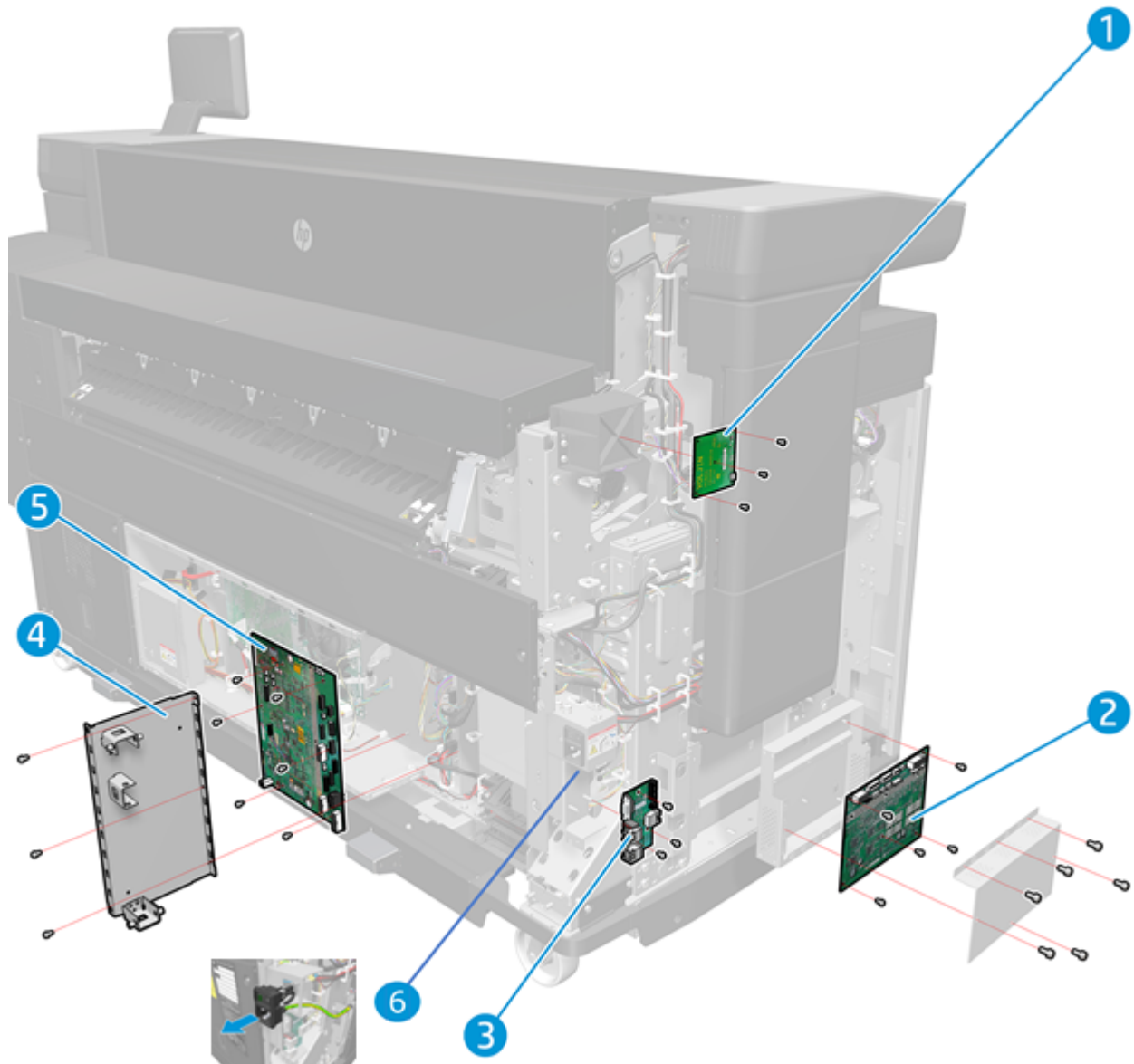
E-box 1



	Part number	Description
1	CZ309-67152	E-box fan
2	CZ309-67013	Jester JDI PCA
3	CZ309-67012	Jester JPE PCA
4	CZ309-67011	Engine PCA
5	CZ309-67308	Solid-state disk (PageWide XL 5100/6000/8000)
6	CZ309-67402	ATX PSU PICOLIT 180W
7	CZ309-67016	Air dust filter

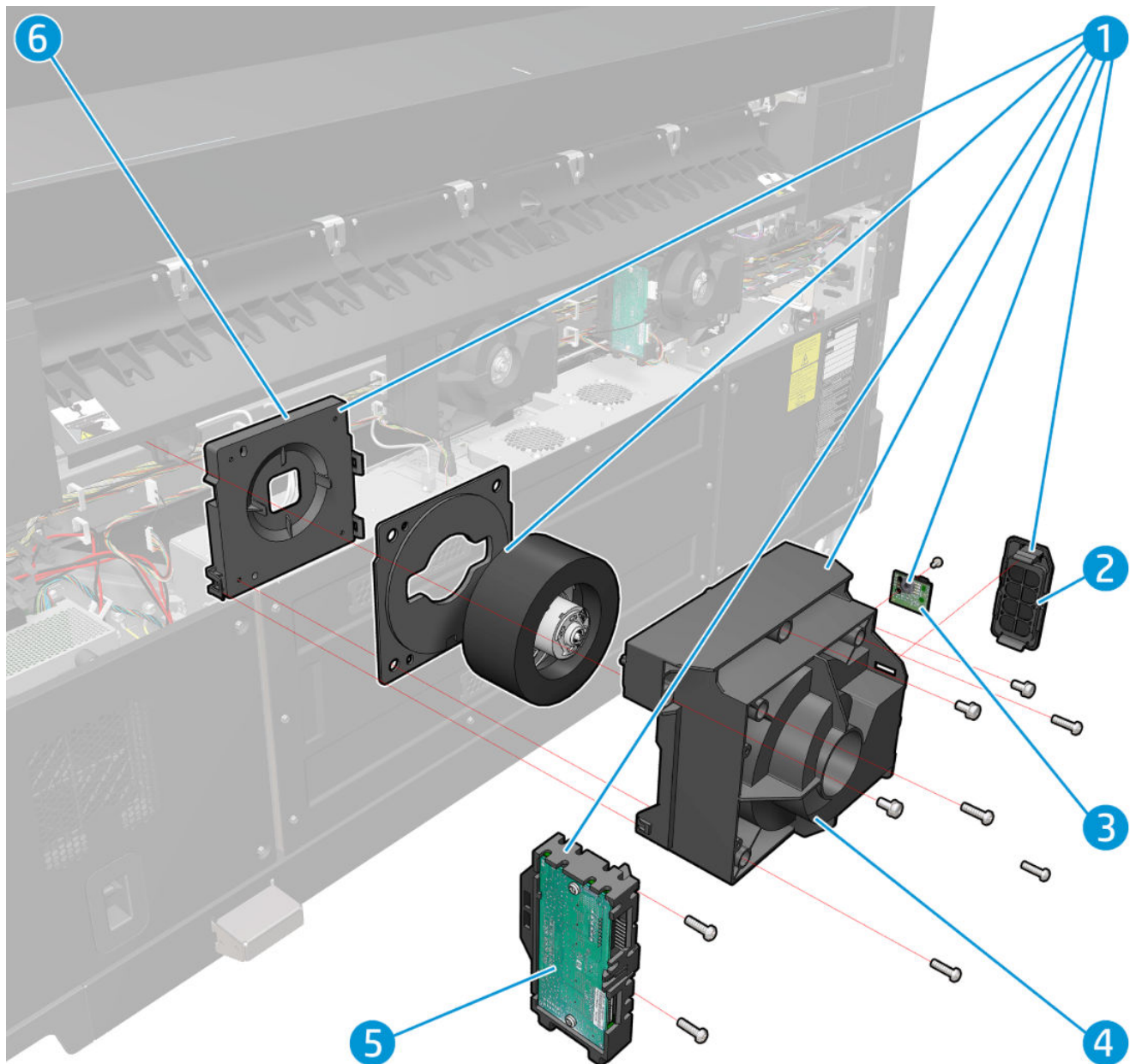
	Part number	Description
8	CZ309-67306	Hard Disk Drive W/ FW HE (PageWide XL 5100/6000/8000)
	CZ309-67436	Hard Disk Drive W/ FW LE (PageWide XL 5000/4x00/3900)
9	CZ309-67209	Power distributor PCA
10	CZ309-67015	Mechatronics PSU
11	CZ309-67009	Formatter PCA HE (PageWide XL 8000)
	CZ309-67010	Formatter PCA LE (PageWide XL 5000/4x00/3900)
	CZ309-67415	Formatter PCA (PageWide XL 5100/6000)
	CZ309-67383	Removable Hard Disk Drive W/FW Service Kit (PageWide XL 5100/6000/8000) (Pictures in "Removal and Installation")

E-box 2



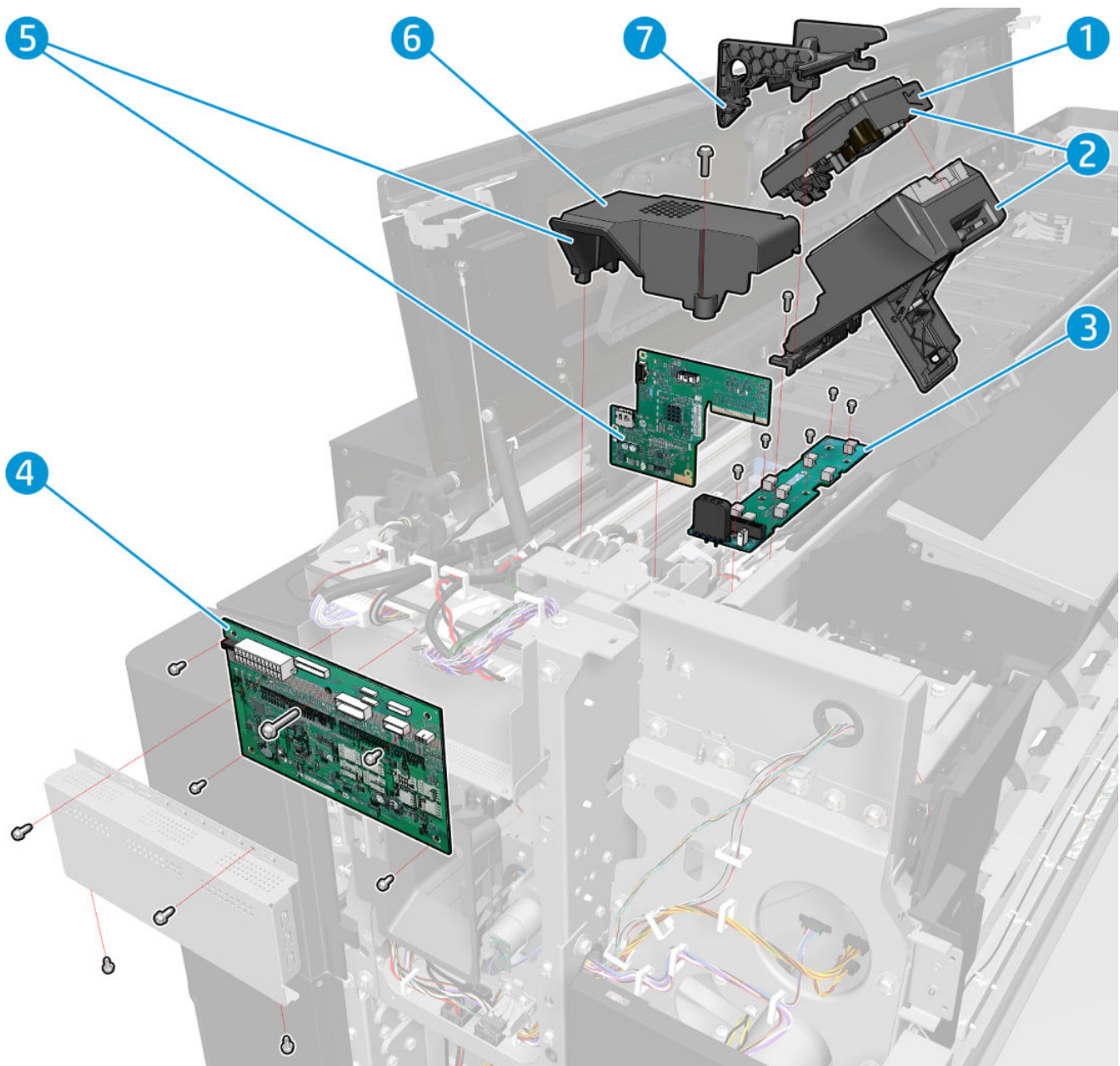
	Part number	Description
1	CZ309-67019	RFID PCA
2	CZ309-67002	Bottom Mechatronics PCA
3	CZ309-67003	Connections Panel PCA
4	CZ309-67007	P label wall
5	CZ309-67314	NEW Central Distribution PCA Service Kit
6	CZ309-67398	Power Distribution Cable and Inlet Service Kit

Vacuum system



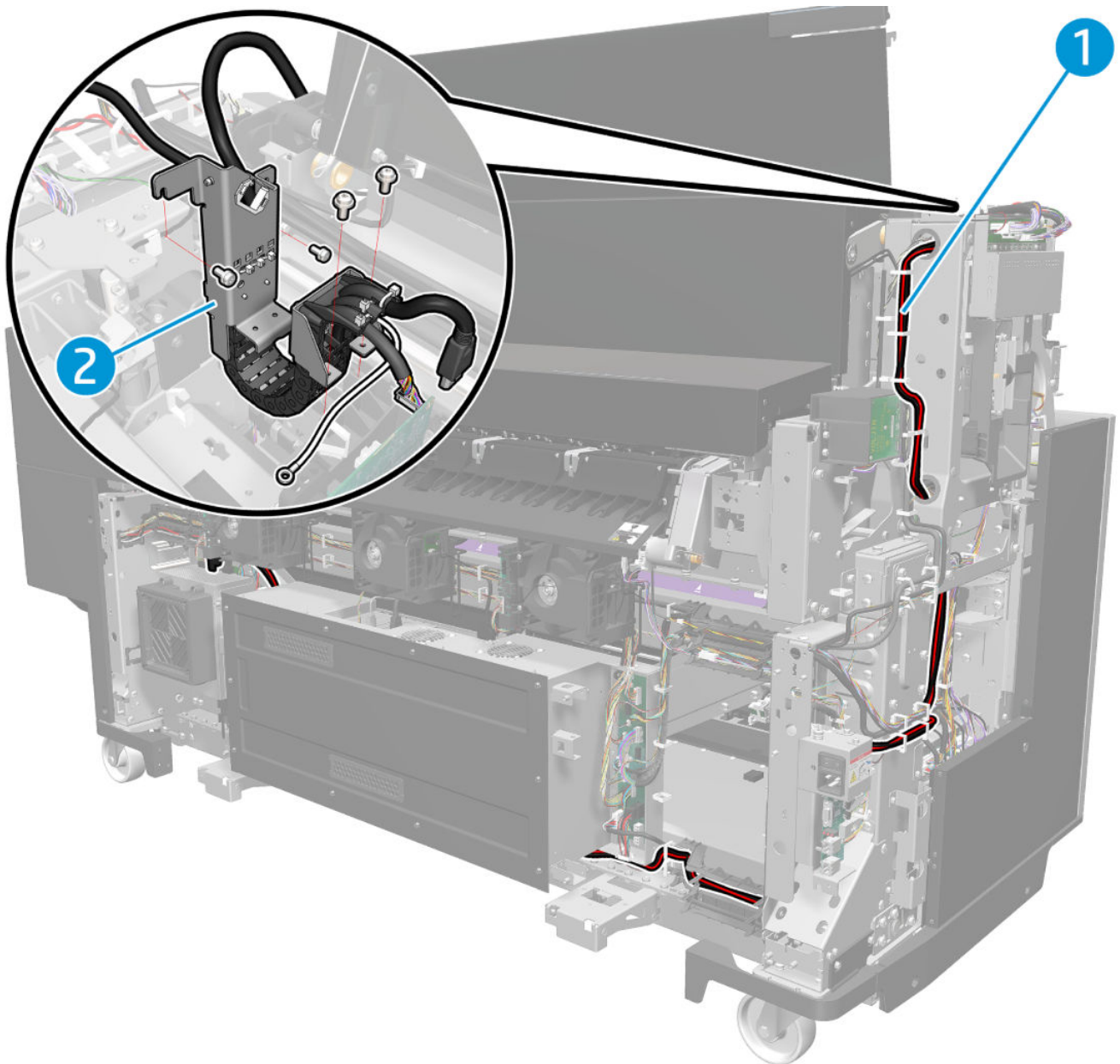
	Part number	Description
1	CZ309-67087	Vacuum fan assembly
2	CZ309-67086	Vacuum filter
3	CZ309-67088	Vacuum Sensor PCA
4	CZ309-67090	Vacuum fan box
5	CZ309-67089	Vacuum Fan Driver PCA
6	CZ309-67091	Vacuum fan inlet

Print bar 1



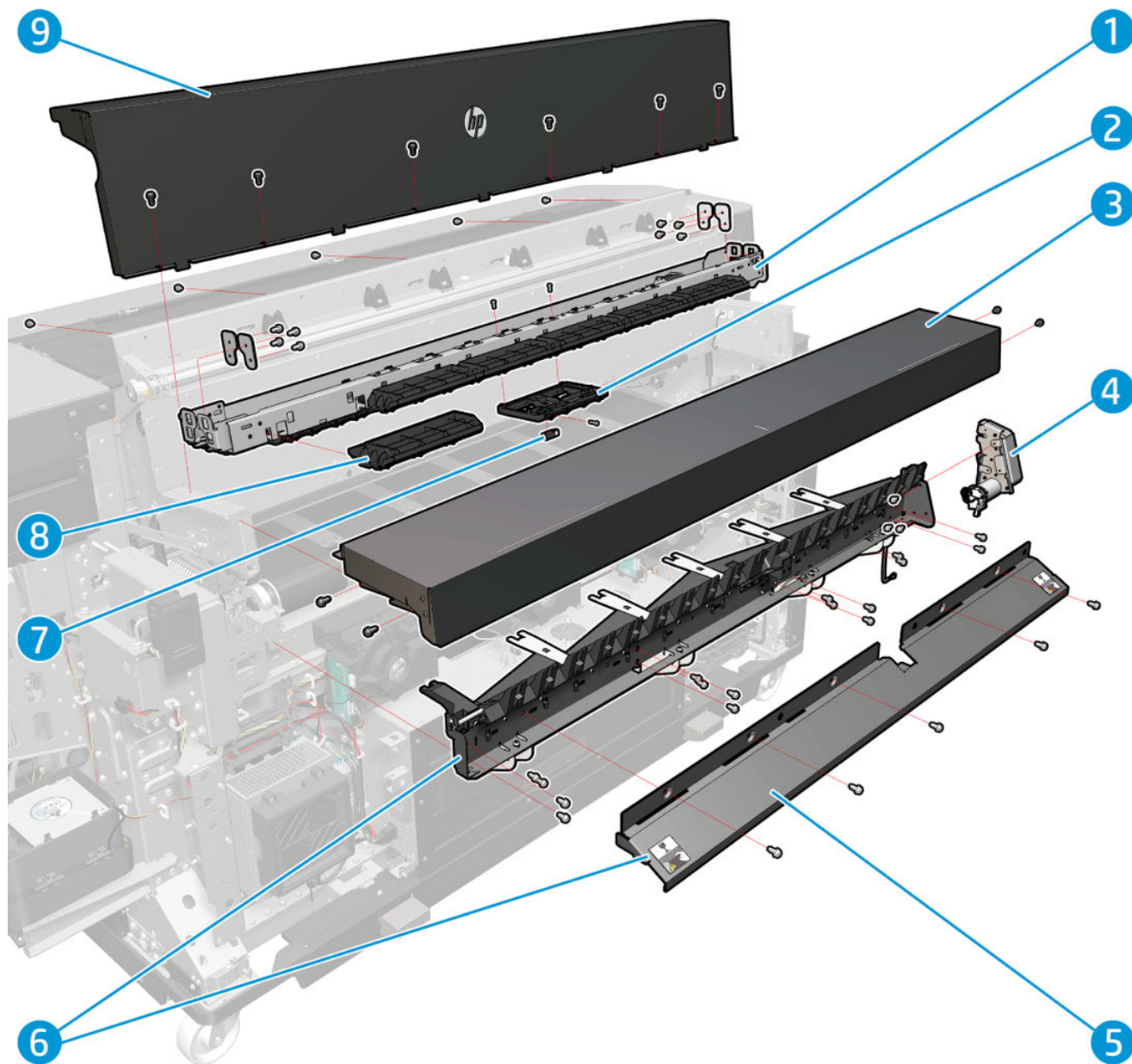
	Part number	Description
1	CZ309-67021	Printhead PCA with primer pump
2	CZ309-67023	Latch full
3	CZ309-67024	Data Distribution PCA
4	CZ309-67001	Print Bar Mechatronics PCA
5	CZ309-67025	Print Bar Hub PCA
6	CZ309-67017	Menorca cover
7	CZ309-67022	Latch cable lid

Print bar 2



	Part number	Description
1	CZ309-67211	Print-bar power cable
2	CZ309-67072	PEM cable loop

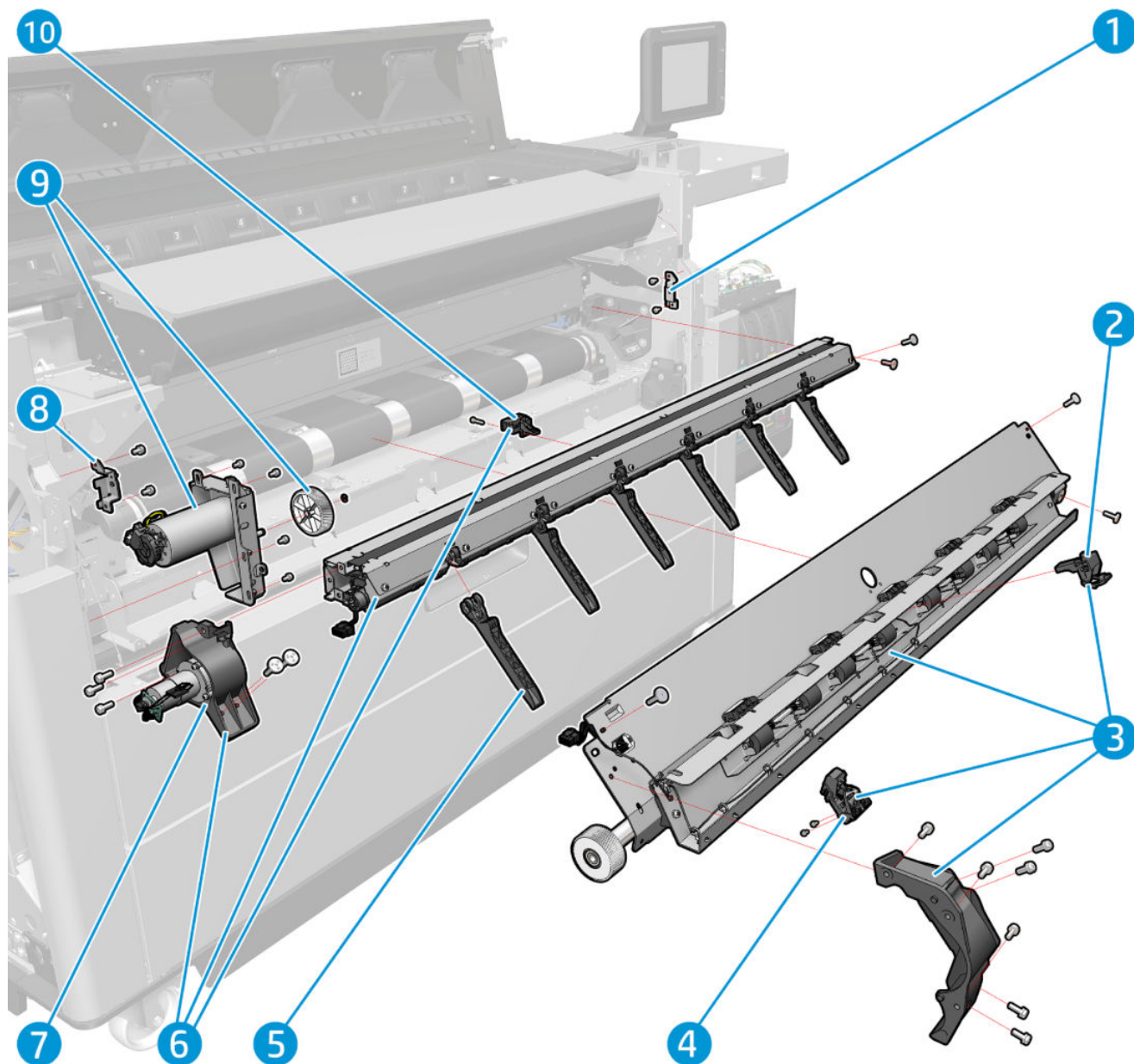
Top cover (paper output)



	Part number	Description
1	CZ309-67142	Paper-output pinches motor
2	CZ309-67143	Paper-output pinches starwheels
3	CZ309-67133	Pinch roller top cover
	CZ309-67239	Pinch roller top cover (HE)
4	CZ309-67144	Paper-output diverter transmission
5	CZ309-67147	Diverter cover
6	CZ309-67148	Diverter assembly

	Part number	Description
7	CZ309-67145	Paper presence sensor
8	CZ309-67140	Paper-output starwheels
9	CZ309-67238	Dryer top cover

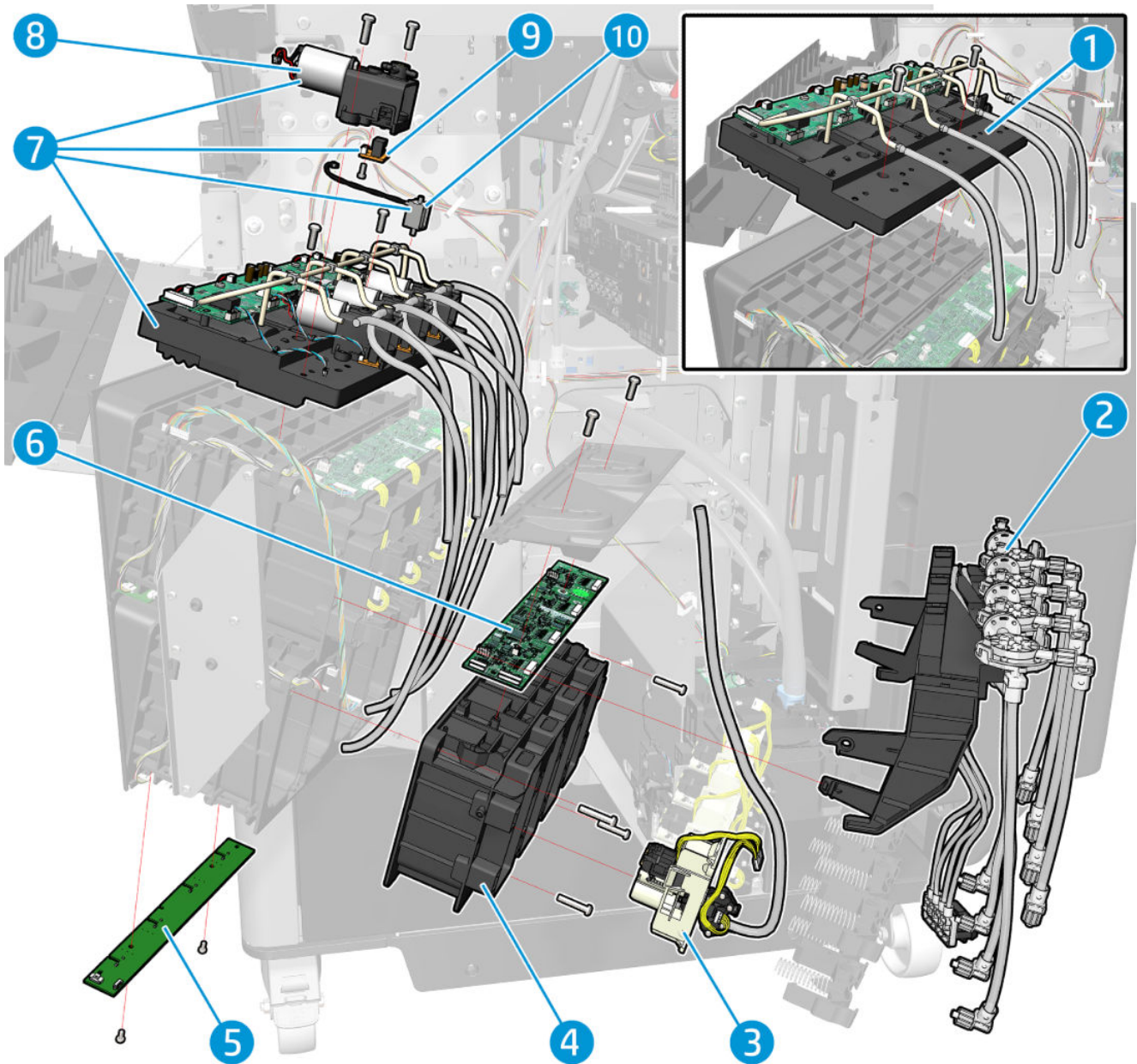
Paper loop system



	Part number	Description
1	CZ309-67074	Paper-loop door switch support right
2	CZ309-67073	Feed sensor
3	CZ309-67076	Paper-loop bottom
4	CZ309-67077	Paper-loop sensor
5	CZ309-67241	Paper-loop baffle
6	CZ309-67437	Paper-loop roof (sheet metal)
	CZ309-67434	Paper-loop roof (sheet metal) (PageWide XL 4x00/3900s with SNs ≥ MY89JCQ00B, PageWide XL 5100/6000 with SN ≥ MY94UDQ00F from AMS and APJ)

	Part number	Description
7	CZ309-67081	Paper-loop baffle shaft drive
8	CZ309-67075	Paper-loop door switch support left
9	CZ309-67080	Feed motor
10	CZ309-67078	TOF sensor

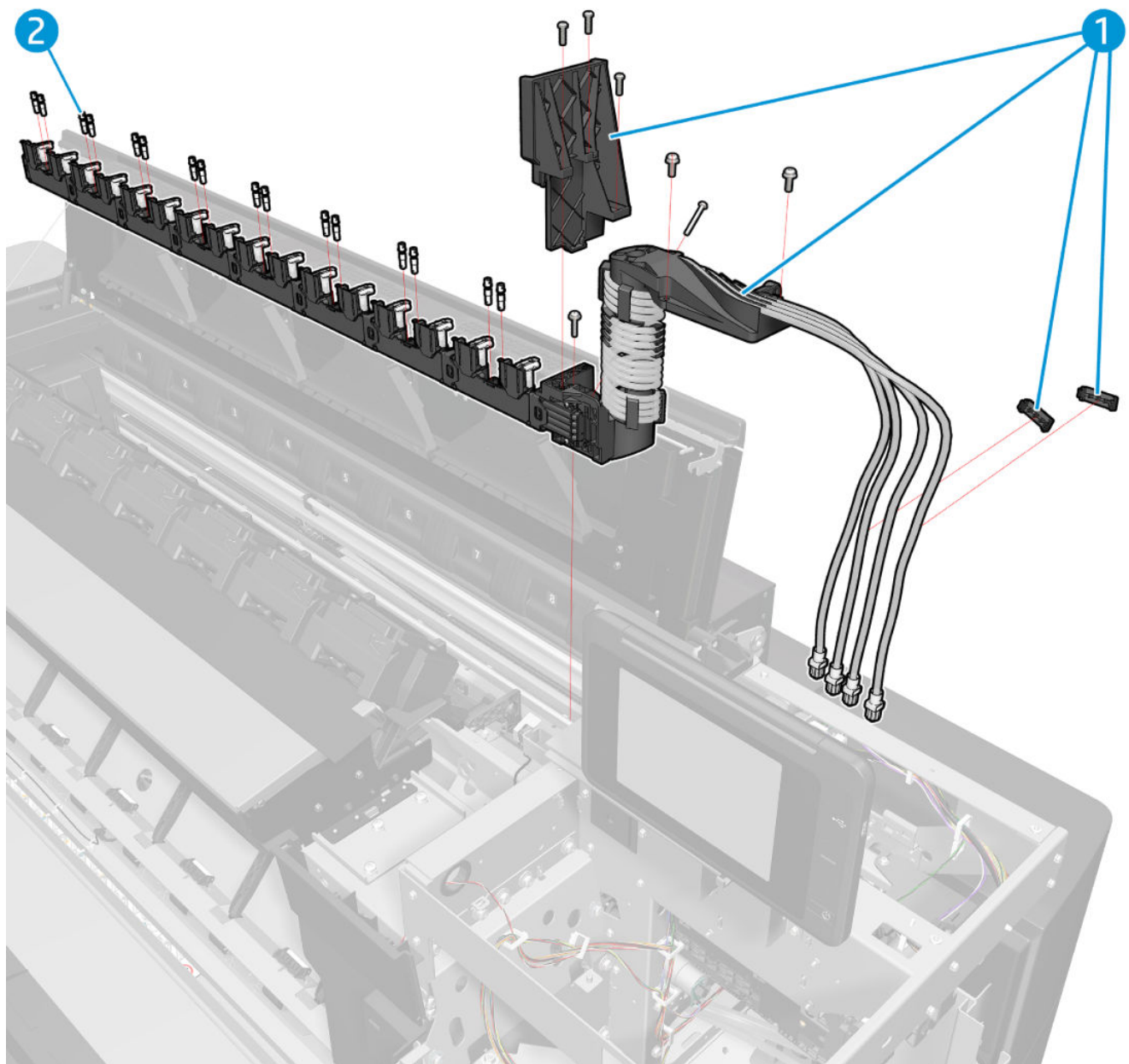
Ink delivery system 1



	Part number	Description
1	CZ309-67121	Air Control PCA LE (PageWide XL 4x00/3900)
2	CZ309-67131	ISS support, bivalves, purge non-Enterprise (PageWide XL 8000/5000/5100/6000)
3	CZ309-67130	PIP and floater with tubes
	CZ309-67332	Spring Retainer PIP Service Kit
4	CZ309-67122	ISS backplate
5	CZ309-67128	Ink Supply Indicator PCA (x2 units on the PageWide XL 8000/5000/5100/6000)
6	CZ309-67119	Ink Supply PCA (x2 units on the PageWide XL 8000/5000/5100/6000)

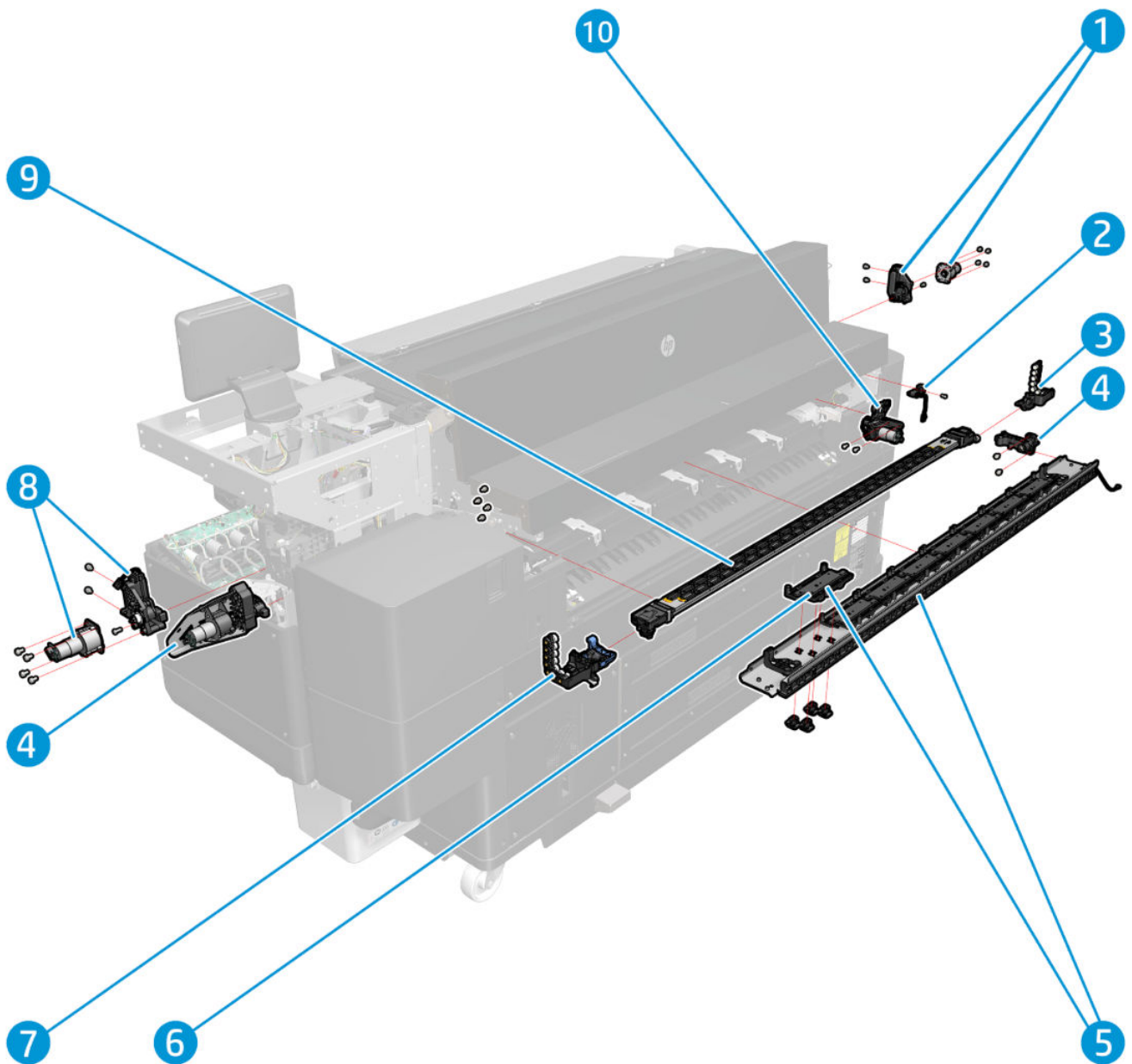
	Part number	Description
7	CZ309-67120	Air Control PCA HE (PageWide XL 8000/5000/5100/6000)
8	CZ309-67126	CID valve
9	CZ309-67127	CID Valve PCA
10	CZ309-67129	Relief valve

Ink delivery system 2



	Part number	Description
1	CZ309-67123	Print-bar tubing HE (PageWide XL 8000)
	CZ309-67124	Print-bar tubing LE (PageWide XL 5000/5100/6000)
	CZ309-67125	Print-bar tubing LE Enterprise (PageWide XL 4x00/3900)
2	CZ309-67132	ISS plunger

Spittoon capping

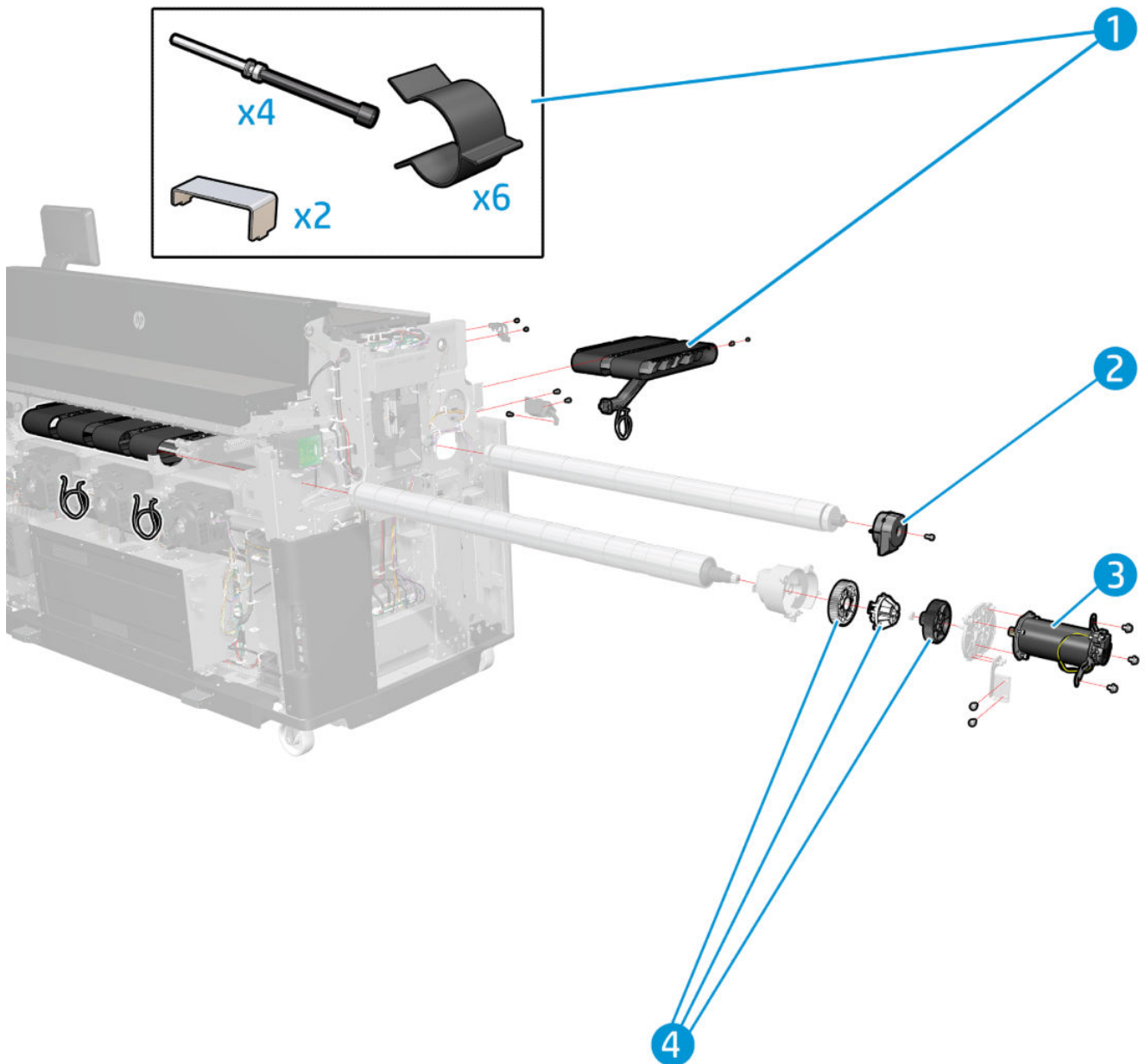


	Part number	Description
1	CZ309-67098	Spittoon guide left
2	CZ309-67118	Capping station stopper
3	CZ309-67096	Spittoon chain left
4	CZ309-67094	Capping motor and idle
5	CZ309-67093	Capping platform
6	CZ309-60274	Cap unit
7	CZ309-67097	Spittoon chain right

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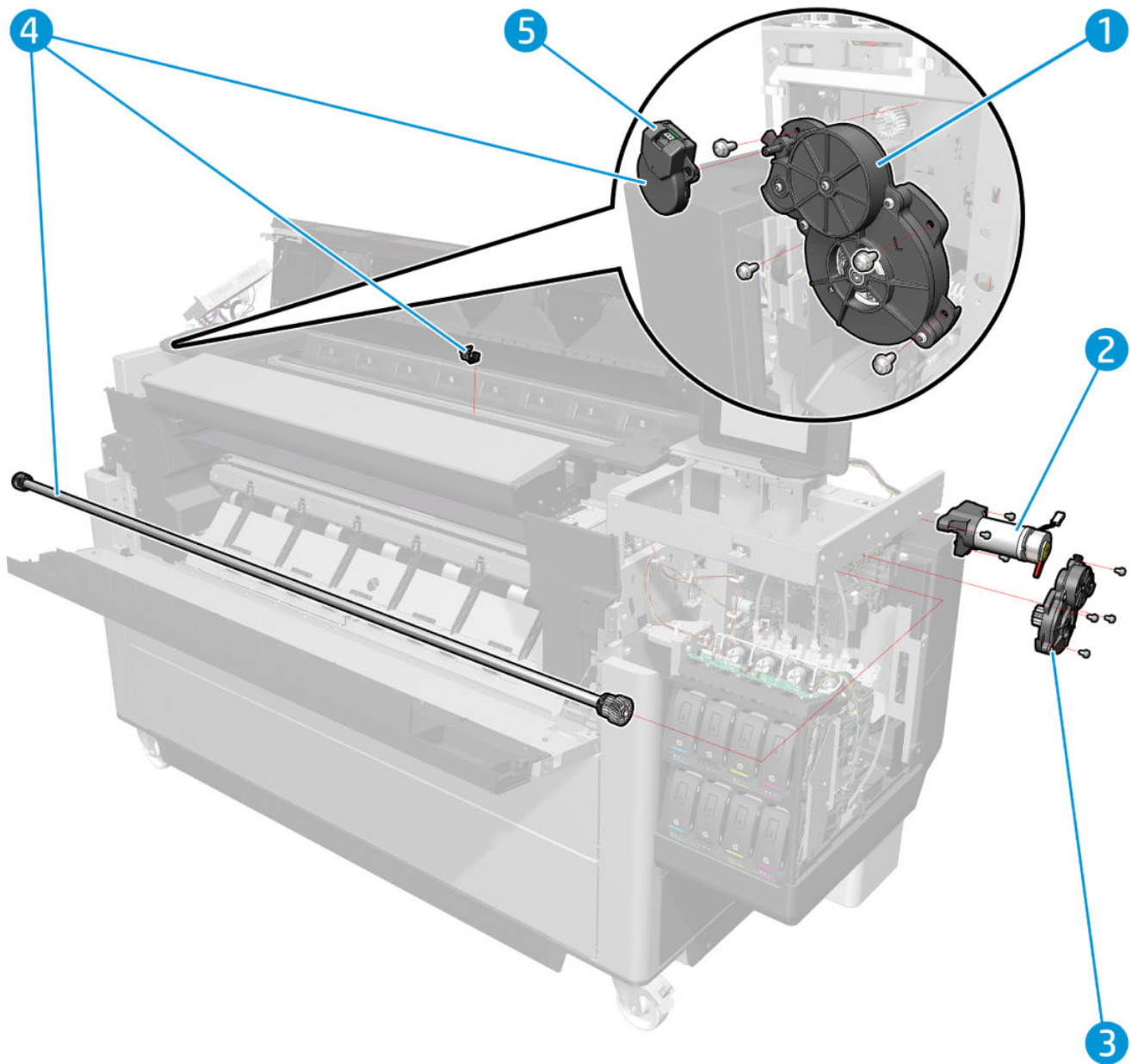
	Part number	Description
8	CZ309-67099	Spittoon guide right
9	CZ309-67095	Spittoon beam
10	CZ309-67100	Spittoon static transmission right

Print zone



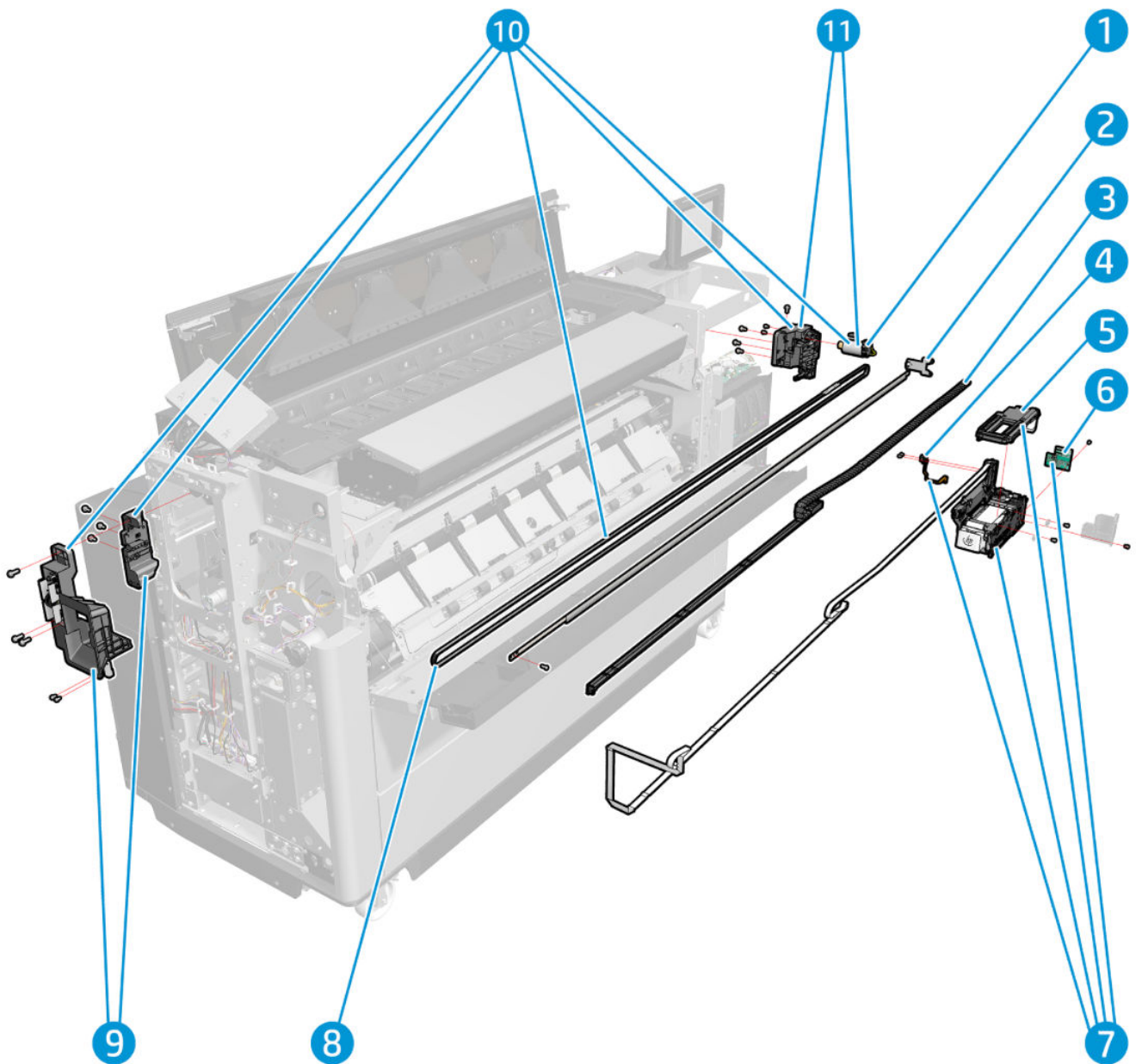
	Part number	Description
1	CZ309-67092	Belts and platen
	CZ309-67433	Belts and platen (PageWide XL 4x00/3900s with SNs \geq MY89JCQ00B, PageWide XL 5100/6000 with SN \geq MY94UDQ00F from AMS and APJ)
2	CZ309-67082	Print zone encoder
3	CZ309-67084	Belt motor
4	CZ309-67085	Belt gearbox

Lift system



	Part number	Description
1	CZ309-67031	Lift mech left transmission
2	CZ309-67028	Lift mech motor
3	CZ309-67030	Lift mech right transmission
4	CZ309-67032	Synchro bar with bushing
5	CZ309-67033	Lift mech encoder

Carriage impelling system

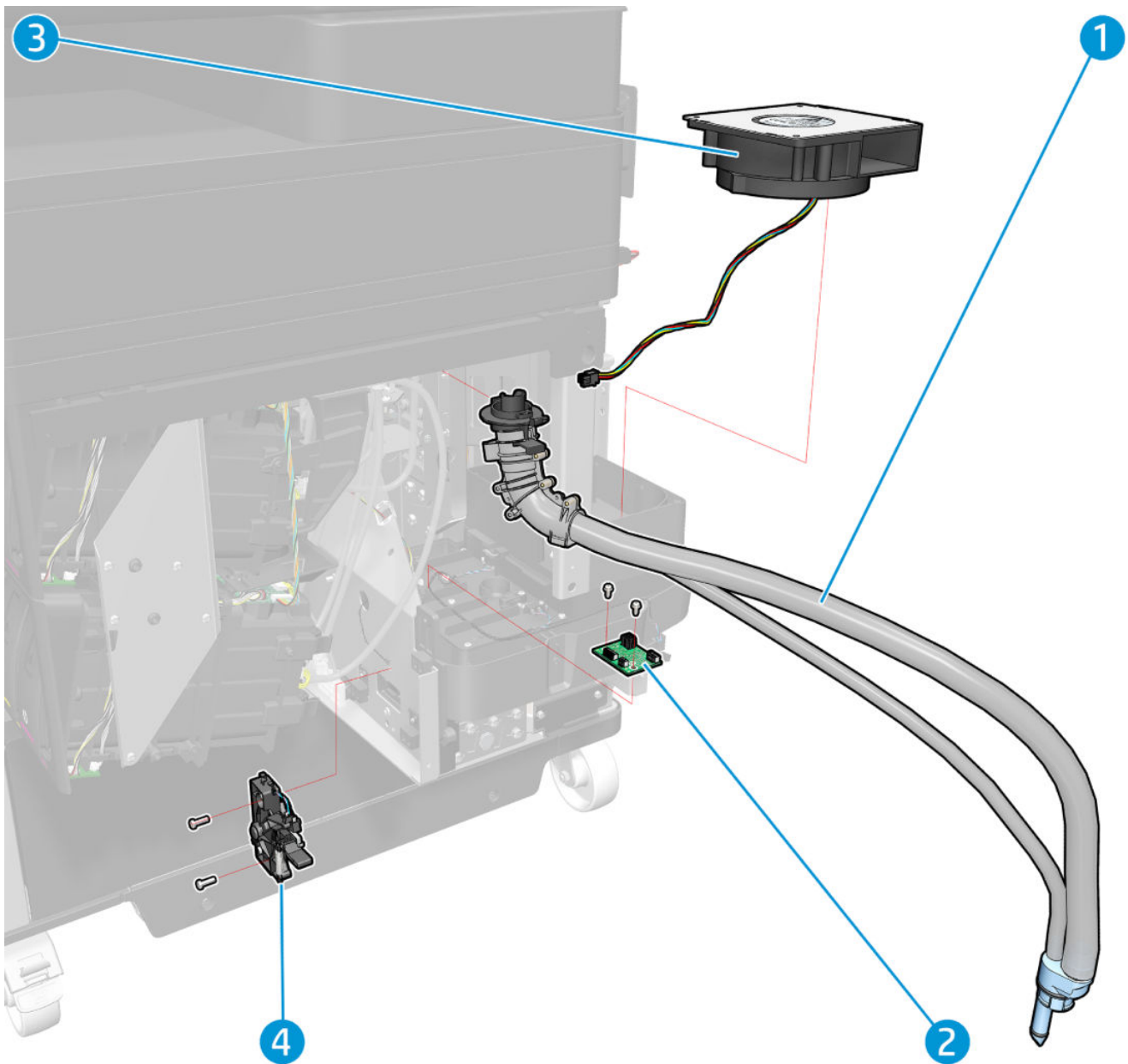


	Part number	Description
1	CZ309-67106	Service carriage motor
2	CZ309-67101	Carriage encoder strip
3	CZ309-67103	Trailing cable
4	CZ309-67104	Linear encoder sensor
5	CZ309-67110	Drop Detector PCA
6	CZ309-67111	Carriage Sensor PCA
7	CZ309-67105	Service carriage

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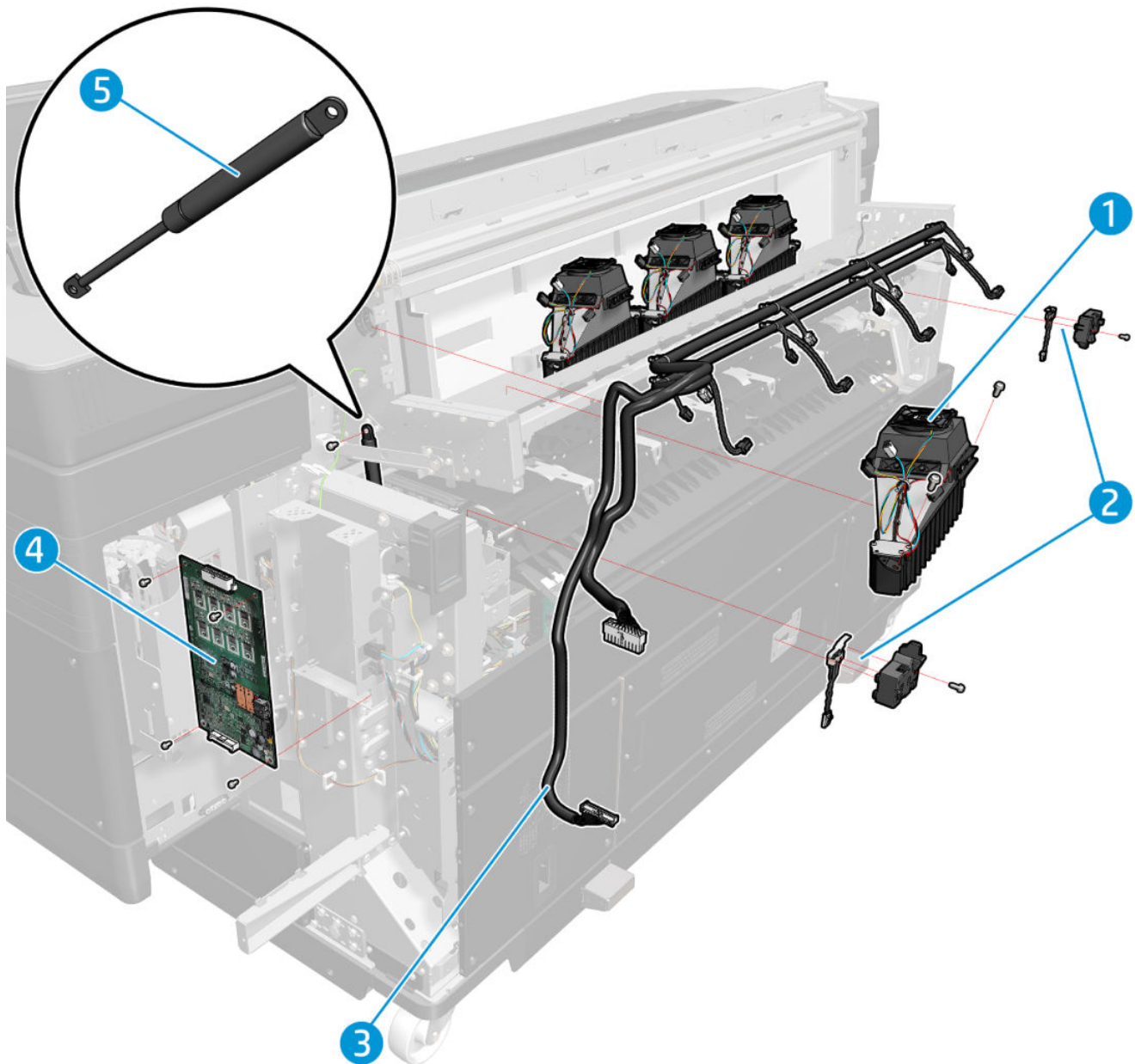
	Part number	Description
8	CZ309-67108	Service belt
9	CZ309-67107	Service belt tensioner
10	CZ309-67102	Carriage impelling
11	CZ309-67114	Belt transmission
12	CZ309-67333	Carriage oiler (for assembly instructions, please refer to the Carriage oiler flyer attached to this document)

Waste system



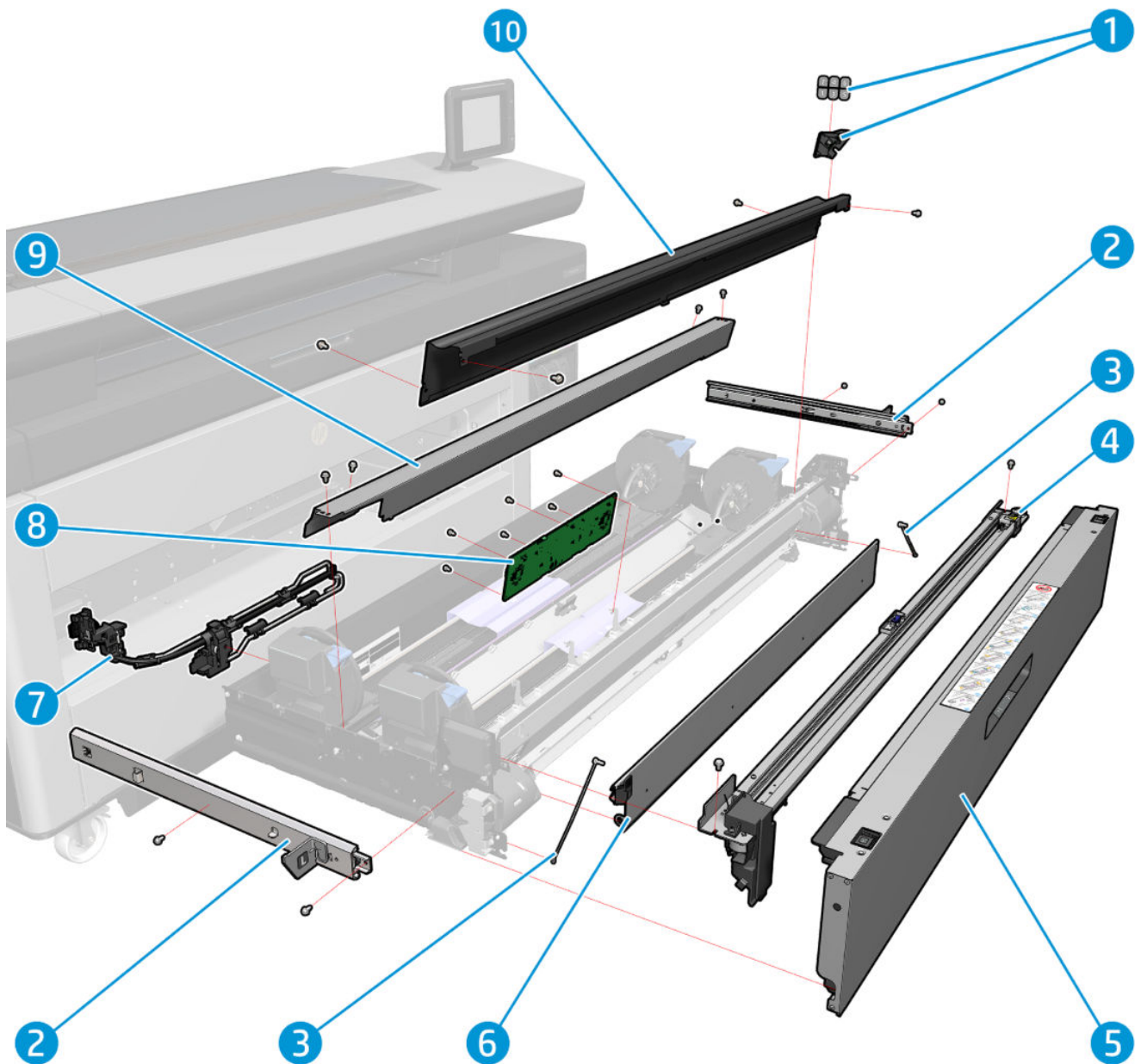
	Part number	Description
1	CZ309-67210	Waste management tubes
2	CZ309-67116	Waste Management PCA
3	CZ309-67117	Waste System Fan
	CZ309-67331	Waste System Foam Service Kit
4	CZ309-67338	Waste container detection level sensor

Dryer



	Part number	Description
1	CZ309-67184	Dryer
2	CZ309-67138	Dryer switch
3	CZ309-60772	Dryer Harness assembly – Dryer cables
4	CZ309-67139	Dryer PCA
5	CZ309-67149	Gas spring
6	CZ309-67298	Dryer harness assembly

Drawer 1

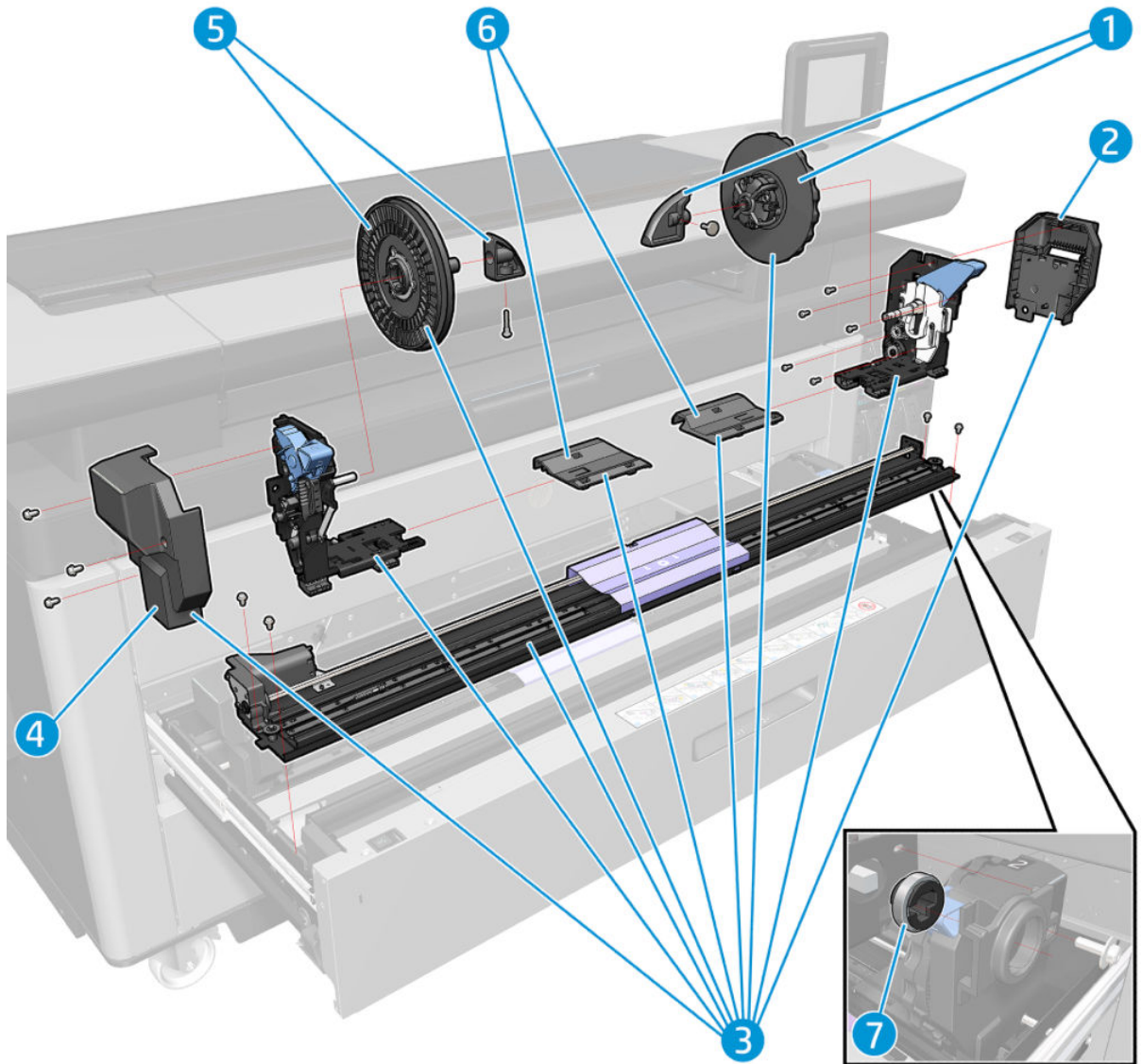


	Part number	Description
1	CZ309-67159	PCB buttons
2	CZ309-67171	Telescopic slides
3	CZ309-67158	Cable front plate
4	CZ309-67155	Cutter
5	CZ309-67168	Front panel complete
6	CZ309-67170	Intermediate triangle plate
7	CZ309-67167	Rear cable router

For HP-authorized personnel only

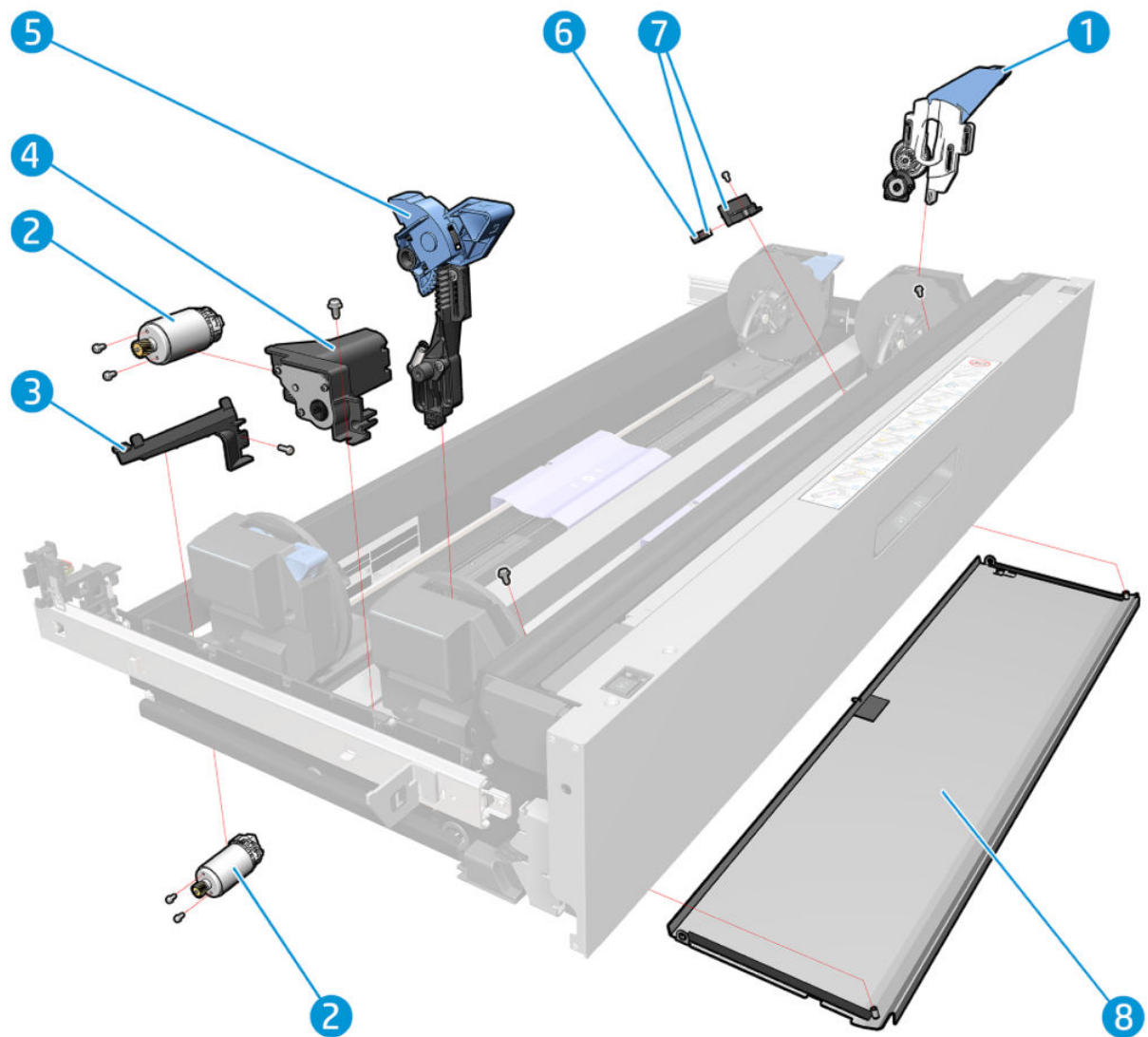
	Part number	Description
8	CZ309-67162	Drawer PCA - Main PCB - Benji
9	CZ309-67169	Intermediate plate middle
10	CZ309-67154	Cover assembly mounting
	CZ318-67007	Complete Drawer assembly (available only when escalating a case to HP Competency Center)

Drawer 2



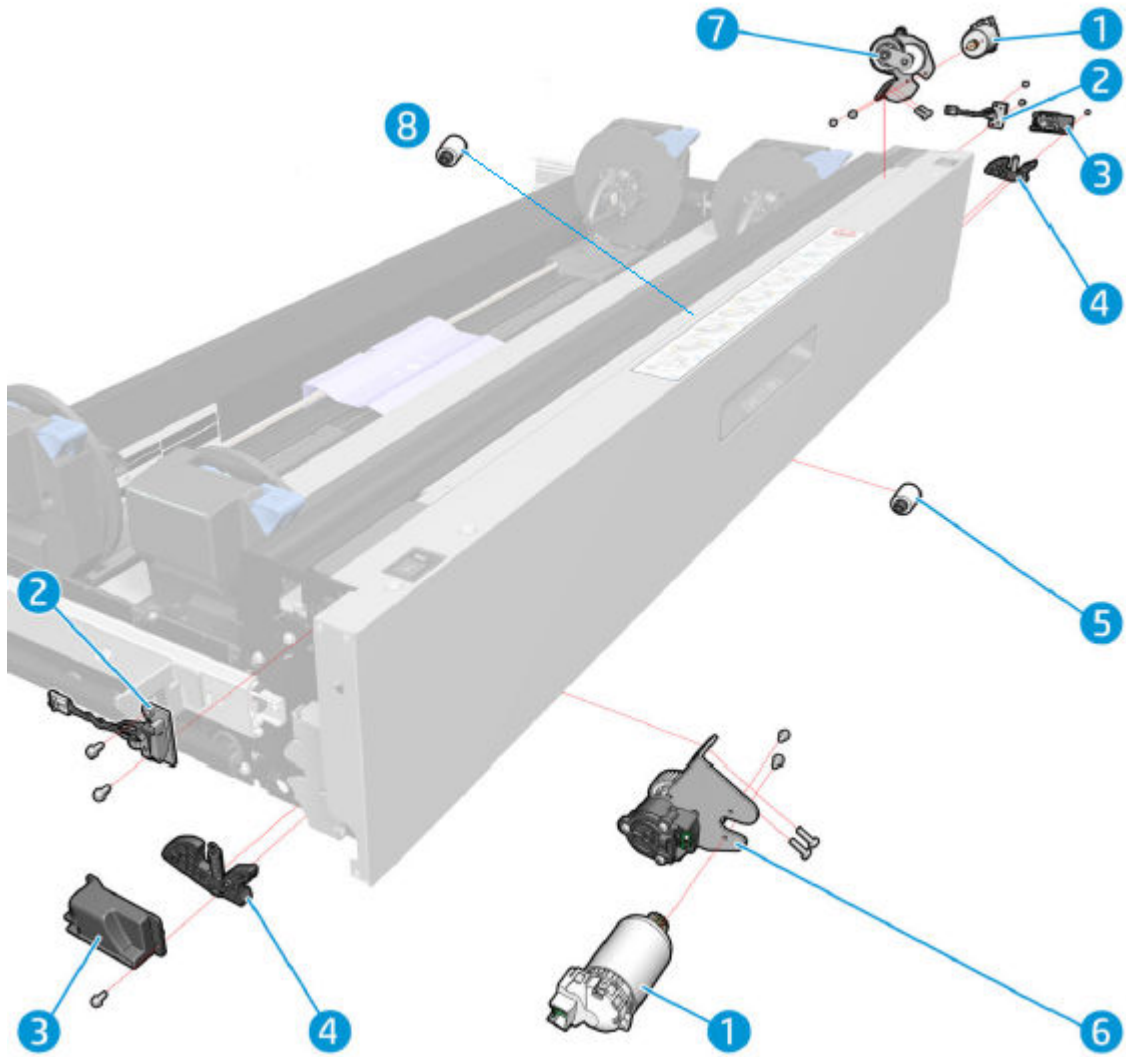
	Part number	Description
1	CZ309-67179	Hub assembly expansion
2	CZ309-67182	Cover sled right
3	CZ309-67174	Roll mounting assembly
4	CZ309-67178	Cover sled left
5	CZ309-67176	Indexing system inner
6	CZ309-67181	Guide plate right and left
7	CZ309-67319	Axis holder (6 per kit)

Drawer 3



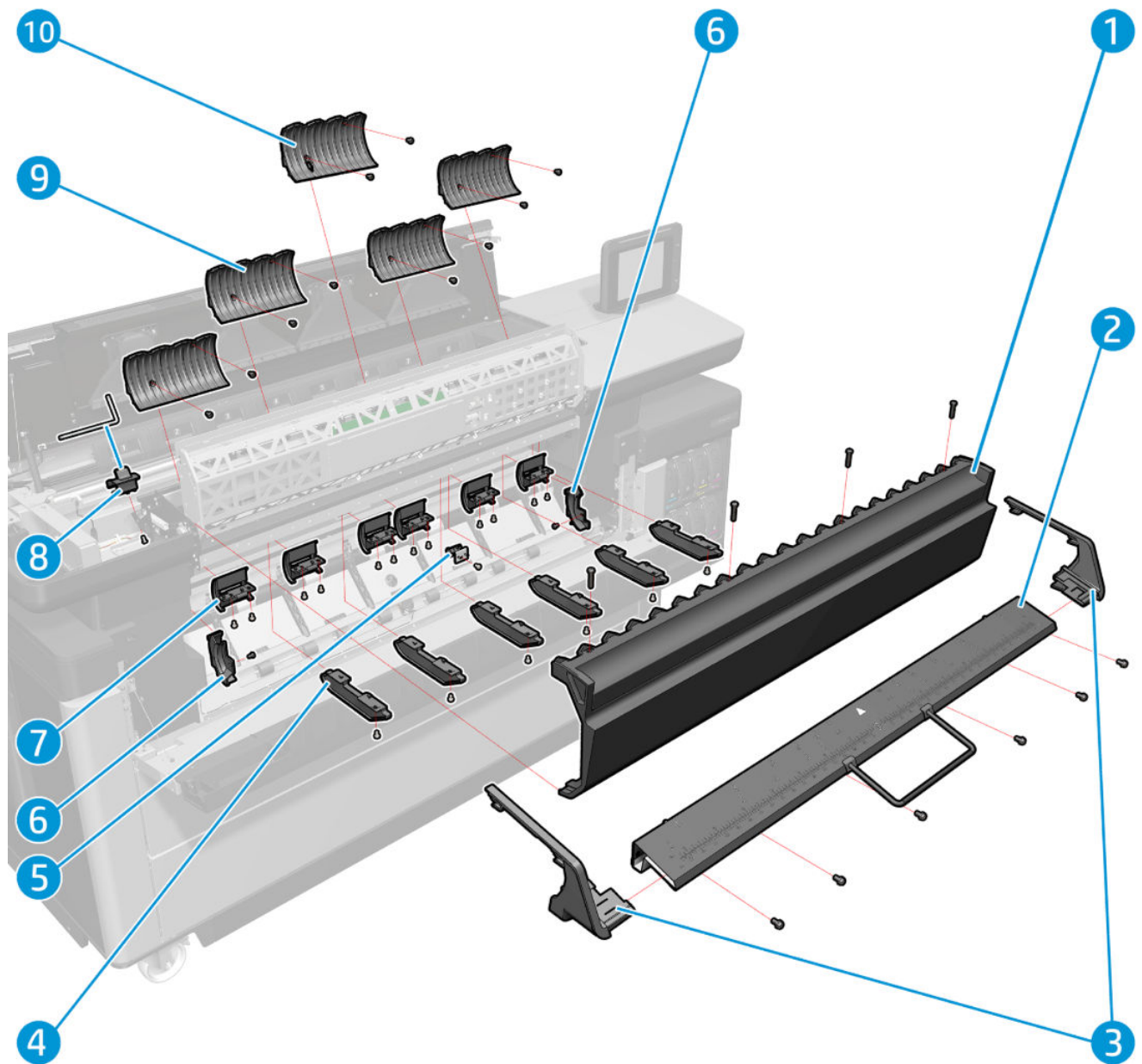
	Part number	Description
1	CZ309-67180	Sled right brake and lever
2	CZ309-67153	Paper-input motor NGR
3	CZ309-67157	Cover RWD rear
4	CZ309-67175	Motor block rewinder assembly without motor
5	CZ309-67177	Sled left internal parts with index out
6	CZ309-67161	Paper sensor alone x10
7	CZ309-67160	Paper sensor
8	CZ318-67004	Drawer bottom plate

Drawer 4



	Part number	Description
1	CZ309-67153	Paper-input motor NGR
2	CZ309-67191	Sensors front cover
3	CZ309-67165	Sensor drawer closed left right
4	CZ309-67183	Drawer hooks
5	CZ309-67156	Rubber transport roller
6	CZ309-67173	Transport roller rear roll without motor
7	CZ309-67172	Transport roller front roll without motor
8	CZ309-67326	Drawer idle transport roller (Pressure roller – only for Front roll)
	CZ309-67166	All cables drawer
	CZ309-67326	Drawer idle transport roller (Pressure roller) - only for Front roll

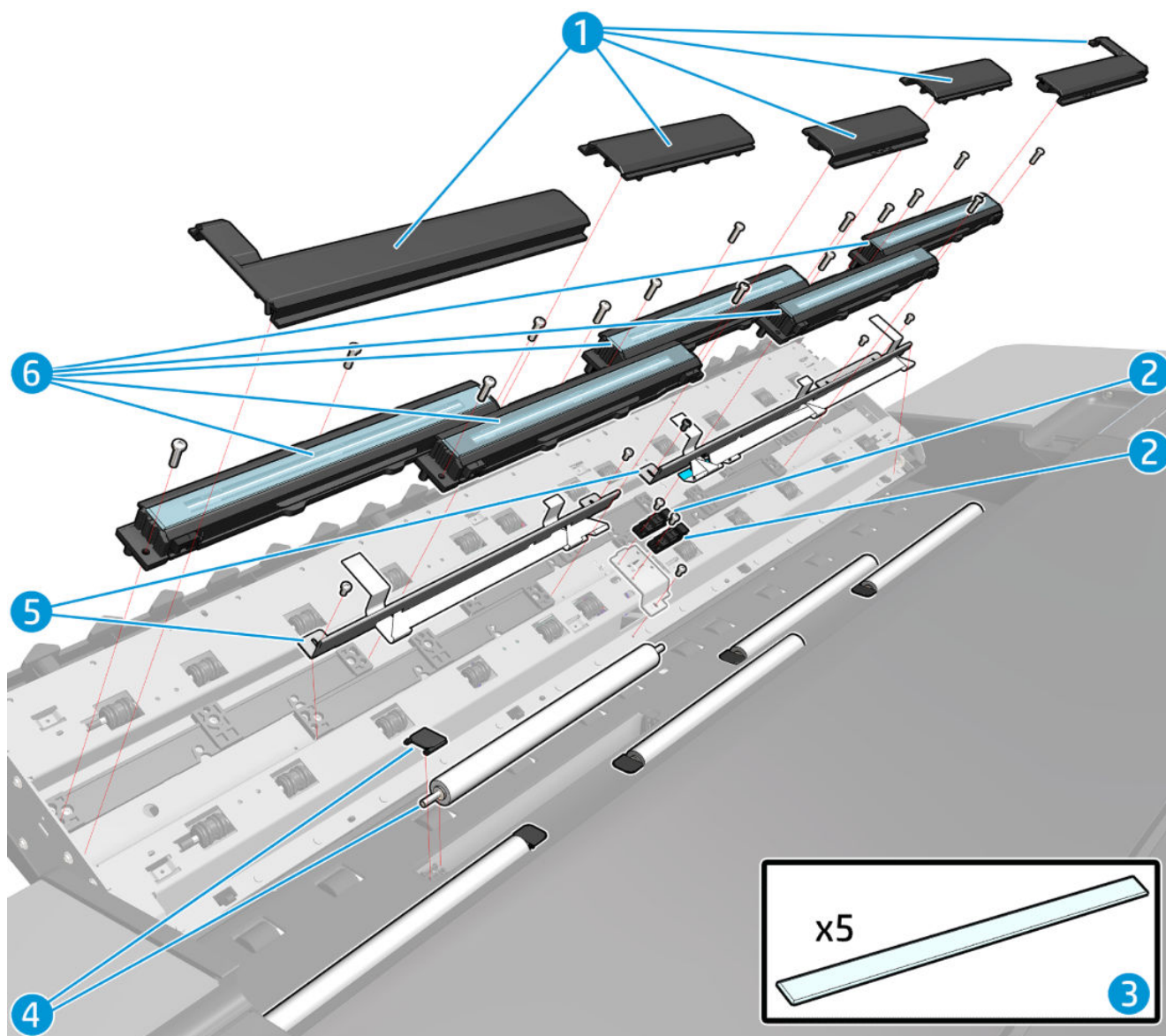
Scanner



	Part number	Description
1	CZ309-67249	Scanner cover
2	CZ309-67252	Table painted
3	CZ309-67250	Shelf supports
4	CZ309-67257	Scanner BMP top rib
5	CZ309-67259	Scanner U-turn sensor
6	CZ309-67256	U-turn cover (left and right)
7	CZ309-67258	Scanner paper path

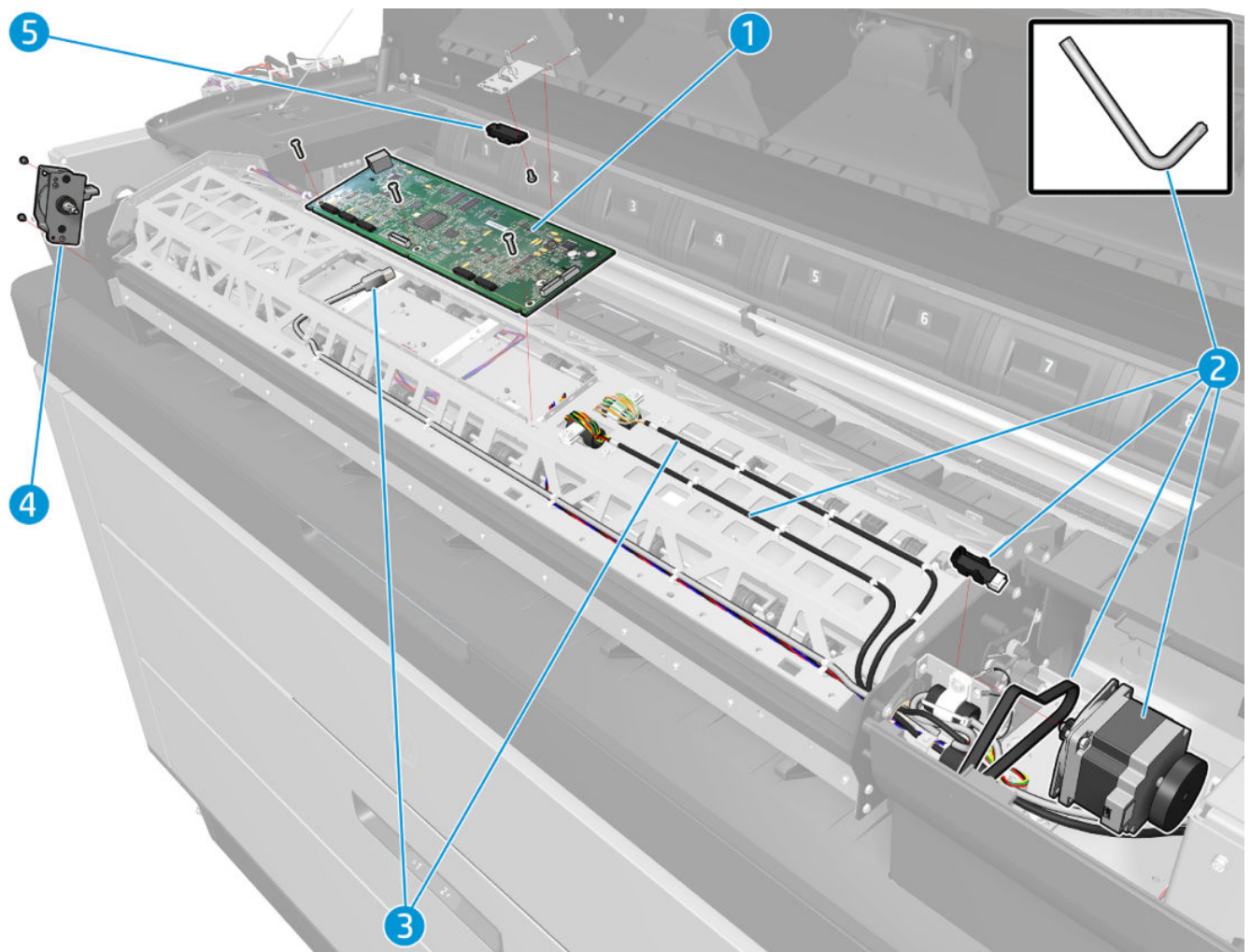
	Part number	Description
8	CZ309-67251	Scanner latch button
9	CZ309-67253	U-turn cover
10	CZ309-67254	U-turn cover sensor

Scanner 1



	Part number	Description
1	CR359-67014	T2500/T3500 Tiles kit
2	CR359-67018	T2500/T3500 Paper sensor
3	CZ309-67342	PageWide XL Glass Plate (5 units)
4	CZ309-67187	Pressure roller NOTE: Service Kit includes a single Pressure roller.
5	CZ309-67189	FFC cable set-scan
6	CZ309-67336	PageWide XL CIS Module x5u
	CZ309-67305	Scanner Media Guides Service Kit

Scanner 2



	Part number	Description
1	CZ309-67185	LW3 PCA
2	CZ309-67186	Stepper motor
3	CZ309-67188	Power/reset/awake
4	CR359-67019	T2500/T3500 Torsioner dump
5	CR359-67018	T2500/T3500 Paper sensor
6	CN727-69006	Calibration sheet

Spare parts

Part number	Description
CZ309-67188	Power/Reset/Awake Service Kit

Tools and others

- HP matte polypropylene roll service kit (CZ309-67301)
- HP Universal Bond Paper (K6B88A, L4L08A, M2N04A, M2N05A, M2N06A)
- Lubricant service kit (CZ309-67328)



NOTE: Lubricant service kit must be ordered with PMK2 (see [Following the preventive maintenance program on page 1079](#)).

- Air purge service kit (CZ309-67329)



NOTE: Please see [Start the printer on page 112](#) for details on how to use the purges.

- Syringe Service Kit (CZ309-67330)
- CZ309-67343 (Niagara PPS Plastic Gauges Service Kit)
- CZ309-67295 (TRANSPORT_TOOL_ASSY). This kit includes the rotation tool.
- CZ309-67290 LEVELING FEET KIT ASSY
- Locker Service Kit (CZ309-67327)
- CZ309-67414 (Top stacker adjustment tool Service Kit)

Cables

Electronics block diagram cable no.	HP part no.	Cable name	From	To	Kit to order	Name of kit to order
NL_01	CZ309-50001	PRINTBAR_DATA	Engine PCA (PANACEA)	Print Bar Hub PCA (Menorca)	CZ309-67072	PEM Cable Loop
NL_02	CZ309-50005	PRINTHEAD_DAT A_8	Data Distribution PCA (Magonis)	Printhead PCA (Coral)	CZ309-67288	Printbar Cables Service Kit
NL_03	CZ309-50006	PRINTHEAD_DAT A_7	Data Distribution PCA (Magonis)	Printhead PCA (Coral)	CZ309-67288	Printbar Cables Service Kit
NL_04	CZ309-50007	PRINTHEAD_DAT A_6	Data Distribution PCA (Magonis)	Printhead PCA (Coral)	CZ309-67288	Printbar Cables Service Kit
NL_05	CZ309-50008	PRINTHEAD_DAT A_5	Data Distribution PCA (Magonis)	Printhead PCA (Coral)	CZ309-67288	Printbar Cables Service Kit
NL_06	CZ309-50009	PRINTHEAD_DAT A_4	Data Distribution PCA (Magonis)	Printhead PCA (Coral)	CZ309-67288	Printbar Cables Service Kit
NL_07	CZ309-50010	PRINTHEAD_DAT A_3	Data Distribution PCA (Magonis)	Printhead PCA (Coral)	CZ309-67288	Printbar Cables Service Kit
NL_08	CZ309-50011	PRINTHEAD_DAT A_2	Data Distribution PCA (Magonis)	Printhead PCA (Coral)	CZ309-67288	Printbar Cables Service Kit
NL_09	CZ309-50012	PRINTHEAD_DAT A_1	Data Distribution PCA (Magonis)	Printhead PCA (Coral)	CZ309-67288	Printbar Cables Service Kit
NL_10	CZ309-50017	PRINTBAR_PCA_CONTROL	Print Bar Hub PCA (Menorca)	Printbar Mechatronics PCA (Montjoi)	CZ309-67288	Printbar Cables Service Kit
NL_16	CZ309-50014	power cable to printhead PCAs	AERIAL_NI_19	Printhead PCA (CORAL)	CZ309-67288	Printbar Cables Service Kit
NL_17	CZ309-50015	PRINTHEAD_POWER	Aerial NI_19	Aerial NI_39	CZ309-67399	Power Cables Upgrade Service Kit
NL_19	CZ309-50016	PRINTBAR_POWER_DISTRIBUTOR	Aerial NI_17	Aerial NI_16 (for each PH)	CZ309-67288	Printbar Cables Service Kit
NL_31	CZ309-50020	PRINTBAR_MECH_DATA	Printbar Mechatronics PCA (Montjoi)	Aerial NI_34 and NI_32	CZ309-67288	Printbar Cables Service Kit
NL_32	CZ309-50021	PB_RIGHT_SIDE_MOTOR_ENC	Aerial NI_38 and NI_31	Aerial, right printbar lift motor, service carriage motor, spittoon motor, and capping motor	CZ309-67288	Printbar Cables Service Kit
NL_33	CZ309-50029	PB_LEFT_SIDE_MOTOR_ENC	Printbar Mechatronics PCA (Montjoi)	Aerial, NI_45 and left printbar spittoon and lift encoder	CZ309-67288	Printbar Cables Service Kit

Electronics block diagram cable no.	HP part no.	Cable name	From	To	Kit to order	Name of kit to order
NI_34	CZ309-50022	PB_RIGHT_SIDE_SENSOR	Aerial NI_31	Aerial, right printbar switches, spittoon beam, and carriage bump	CZ309-67288	Printbar Cables Service Kit
NI_36	CZ309-50023	PB_LEFT_SIDE_SENSOR	Printbar Mechatronics PCA (Montjoi)	Aerial, left printbar, upper lift sensors, capping sensor and NI_45	CZ309-67288	Printbar Cables Service Kit
NI_38	CZ309-50071	PRINTBAR_MECH_PWM_SHIELDED	Printbar Mechatronics PCA (Montjoi)	Aerial, NI_32	CZ309-67288	Printbar Cables Service Kit
NI_45	CZ309-50120	PICOBLADE_MOTOR_SPLIT	Aerial, NI_36 and NI_33	Aerial, left printbar spittoon beam sensor and spittoon beam motor	CZ309-67288	Printbar Cables Service Kit
NI_50	CZ309-60675		Printbar Mechatronics PCA (Montjoi)	Carriage Sensor PCA (RedStar)		
NI_52	CZ309-50033		Carriage Sensor PCA (RedStar)	Drop-detector PCA (RedBeam)		
NI_53	CZ309-50072		Carriage Sensor PCA (RedStar)	Drop-detector PCA (RedBeam)		
NI_54	CZ309-50030		Carriage Sensor PCA (RedStar)	Drop-detector PCA (RedBeam)		
NI_56	CZ309-50035		Carriage Sensor PCA (RedStar)	Aerial, PH cleaning motor		
NI_73	CZ309-50028	PD to AC DRYER	Power Distributor (Kappa)	Dryer PCA (Petrie)	CZ309-67399	Power Cables Upgrade Service Kit
NI_74	CZ309-50090	CAN BULLI DRYER WIRE	Central Distribution PCA (Marbella)	Dryer PCA (Petrie)	CZ309-67400	EEbox Cables - split from ATX
NI_86	CZ309-50193	ISS GROUNDING	Ink Supply PCA (ZEPPELIN)	Chassis	CZ309-67289	Cables Miscellany Service Kit
NI_87	CZ309-50182		Ink Supply PCA (ZEPPELIN)	Aerial, to PIP sensor		
NI_88	CZ309-50164	WASTE_SWITCH_SENSOR_A	Waste Management PCA (Terol)	Aerial, to Pipe detection, filter door and container presence sensors.	CZ309-67289	Cables Miscellany Service Kit
NI_89	CZ309-50162	WASTE_SWITCH_SENSOR_B	Waste Management PCA (Terol)	Waste Management PCA (Terol)	CZ309-67289	Cables Miscellany Service Kit

Electronics block diagram cable no.	HP part no.	Cable name	From	To	Kit to order	Name of kit to order
NL_90	CZ309-50039	data and power cable to air control PCA	Central Distribution PCA (MARBELLA)	AIR CONTROL PCA (CLARA)	CZ309-67400	EEbox Cables - split from ATX
NL_91	CZ309-50040	CID_to_2xISS_LINK	Air Control PCA (Clara)	Ink Supply PCA (Zeppelin)	CZ309-67289	Cables Miscellany Service Kit
NL_92	CZ309-50041	CID_TO_iLED_LINK	Ink Supply PCA (Zeppelin)	I-LED PCA	CZ309-67289	Cables Miscellany Service Kit
NL_93	CZ312-50001		Air Control PCA (Clara)	Ink Supply PCA (Zeppelin)		
NL_97	CZ309-50089	CID_VALVE_SENSOR	Air Control PCA (Clara)	Aerial, CID valve sensor	CZ309-67289	Cables Miscellany Service Kit
NL_98	CZ309-50100	AIR_PUMP_AND_CID_VALVE_MOTORS	Air Control PCA (Clara)	Aerial, CID valve motors	CZ309-67289	Cables Miscellany Service Kit
NL_99	CZ309-50103	ISS_TO_WASTE_SYSTEM	Air Control PCA (Clara)	Waste Management PCA (Terol)	CZ309-67289	Cables Miscellany Service Kit
NL_100	CZ309-50192	HDD_SATA_CABLE	Formatter PCA (Antartica)	HDD	CZ309-67400	EEbox Cables - split from ATX
NL_101	CZ309-50148	ENGINE TO CENTRAL_INTERCONNECT	Engine PCA (Panacea)	Central Distribution PCA (Marbella)	CZ309-67400	EEbox Cables - split from ATX
NL_102	CZ309-50098	JESTER POWER-JDI	Formatter PCA (Antartica)	Jester JDI PCA	CZ309-67400	EEbox Cables - split from ATX
NL_104	CZ309-50165	JESTER POWER-JPE	Formatter PCA (Antartica)	Jester JPE PCA	CZ309-67400	EEbox Cables - split from ATX
NL_105	CZ309-50168	FORMATTER_LED_DEBUG	Formatter PCA (Antartica)	Central Distribution PCA (Marbella)	CZ309-67400	EEbox Cables - split from ATX
NL_106	CZ309-50186	PSU to CENTRAL INTERCONNECT 12	ATX PSU (Picolit)	Central Distribution PCA (Marbella)	CZ309-67400	EEbox Cables - split from ATX
NL_107	CZ309-50187	PSU to Formatter P2 split	ATX PSU (Picolit)	Formatter PCA (Antarctica)	CZ309-67400	EEbox Cables - split from ATX
NL_110	CZ309-50180	CENTRAL_INTERCONNECT TO MA POW	Central Distribution PCA (Marbella)	Bottom Mechatronics PCA (Merlin)	CZ309-67287	Media Advance Cables Service kit
NL_111	CZ309-50181	CENTRAL_INTERCONNECT TO MA PCA	Central Distribution PCA (Marbella)	Bottom Mechatronics PCA (Merlin)	CZ309-67287	Media Advance Cables Service kit
NL_112	CZ309-50112	32V_PSU_POWER	Mechatronics PSU (MU VPS PSU)	Central Distribution PCA (Marbella)	CZ309-67399	Power Cables Upgrade Service Kit
NL_113	CZ309-50101	32V_PSU_CONTROL	Mechatronics PSU (MU VPS PSU)	Central Distribution PCA (Marbella)	CZ309-67400	EEbox Cables - split from ATX

Electronics block diagram cable no.	HP part no.	Cable name	From	To	Kit to order	Name of kit to order
NI_114	CZ309-50111	CI_TO_EOLA	Central Distribution PCA (Marbella)	Vacuum FAN driver PCA (EOLA)	CZ309-67400	EEbox Cables - split from ATX
NI_115	CZ309-50109	CENTRAL_INTERCONNECT_TO_MO	Central Distribution PCA (Marbella)	Top Stacker PCA (Morgana)	CZ309-67400	EEbox Cables - split from ATX
NI_116	CZ309-50153	CENTRAL_INTERCONNECT_TO_PORTRT	Central Distribution PCA (Marbella)	Connection Panel PCA (Cricket)	CZ309-67400	EEbox Cables - split from ATX
NI_117	CZ309-50154	U-TURN SCANNER JAM SENSOR	Central Distribution PCA (Marbella)	U_Turn scanner jam sensor	CZ309-67400	EEbox Cables - split from ATX
NI_118	CZ309-50155		Central Distribution PCA (Marbella)	RFID PCA (Voljin)		
NI_119	CZ309-50156	CENTRAL_INTERCONNECT_TO_SEMAPH	Central Distribution PCA (Marbella)	Front panel (van Gogh)	CZ309-67400	EEbox Cables - split from ATX
NI_120	CZ309-50157	CENTRAL_INTERCONNECT_TO_PB_MEC	Central Distribution PCA (Marbella)	Printbar Mechatronics PCA (Montjoi)	CZ309-67400	EEbox Cables - split from ATX
NI_121	CZ309-50158	CENTRAL_INTERCONNECT_TO_SWITCH	Central Distribution PCA (Marbella)	Aerial different cover/door and MO accessory sensors	CZ309-67400	EEbox Cables - split from ATX
NI_122	CZ309-50159	CENTRAL_INTERCONNECT_TO_SAFETY	Central Distribution PCA (Marbella)	Aerial different right cover (rear, top and front sensor safety switch)	CZ309-67400	EEbox Cables - split from ATX
NI_124	CZ310-50001 (3900, 4x00 & 5x00) CZ309-50108 (8x00)	data and power cable to drawers	Central Distribution PCA (Marbella)	Drawer PCA (Benji)	CZ309-67400	EEbox Cables - split from ATX
NI_125	CZ309-50122	cable to vacuum FANs	Vacuum FAN driver PCA (EOLA)	Aerial, to right and middle vacuum FAN	CZ309-67289	Cables Miscellany Service Kit
NI_126	CZ309-50160	VACUUM_FAN_TO_EOLA_2	Vacuum fan driver PCA (EOLA)	Aerial, to left vacuum fan	CZ309-67289	Cables Miscellany Service Kit
NI_128	CZ309-50190	FRONT PANEL	Formatter PCA (Antarctica)	Front Panel (van Gogh)	CZ309-67289	Cables Miscellany Service Kit
NI_142	CZ309-50097	PRINT_BAR_GROUNDING	Aerial, grounding cables	Aerial, grounding cables	CZ309-67288	Printbar Cables Service Kit
NI_143	CZ309-50094	LAN TO USER INLET	Formatter PCA (Antarctica)	Connection Panel PCA (Cricket)	CZ309-67400	EEbox Cables - split from ATX
NI_145	CZ309-50176	JESTER LED EXTENSION	Jester JDI PCA	Connection Panel PCA (Cricket)	CZ309-67400	EEbox Cables - split from ATX

Electronics block diagram cable no.	HP part no.	Cable name	From	To	Kit to order	Name of kit to order
NL_146	CZ309-50092	INLET TO POWER DISTRIBUTOR	Aerial, inlet power	Power Distribution (Kappa)	Power Cables Upgrade Service Kit	CZ309-67399
NL_147	CZ309-50091	PD_TO_PSUs	Power Distribution (Kappa)	ATX PSU (Picolit)	CZ309-67399	Power Cables Upgrade Service Kit
NL_150	CZ309-50049	power cable to printhead PCAs	BOTTOM Mechatronics PCA (Merlin)	Aerial, Feed motor and belt encoder	CZ309-67287	Media Advance Cables Service Kit
NL_152	CZ309-50066	MA TO BELT ANALAG_ENC	Bottom Mechatronics PCA (Merlin)	Aerial, Belt Analog Enc	CZ309-67287	Media Advance Cables Service Kit
NL_153	CZ309-50053	MA TO AERIAL RIBS MOTOR_ENC	Bottom Mechatronics PCA (Merlin)	Aerial, NI_154	CZ309-67287	Media Advance Cables Service Kit
NL_154	CZ309-50163	CZ309-50163	Aerial, NI_153	Aerial, RIBs motor + enc	CZ309-67287	Media Advance Cables Service Kit
NL_157	CZ309-50057	MA TO MEDIA LOOP AERIAL SENS	Bottom Mechatronics PCA (Merlin)	Aerial, cables 158, 159, 174	CZ309-67287	Media Advance Cables Service Kit
NL_158	CZ309-50058	AERIAL TO LOOP AND FEED MEDIA	Aerial, NI_157	Aerial, Loop control and Feed sensor	CZ309-67287	Media Advance Cables Service Kit
NL_159	CZ309-50063	MEDIA_LOOP_AERIAL_TOF_SENSOR	Aerial, NI_157	Aerial, TDS sensor	CZ309-67287	Media Advance Cables Service Kit
NL_161	CZ309-50113	VACUUM PRESSURE SENSOR	Bottom Mechatronics PCA (Merlin)	Vavuum SNS PCA	CZ309-67287	Media Advance Cables Service Kit
NL_162	CZ309-50050	MEDIA ADVANCE PCA_to_AEROSOL_F	Bottom Mechatronics PCA (Merlin)	Aerial, NI_163	CZ309-67287	Media Advance Cables Service Kit
NL_163	CZ309-50099	AERIAL TO AEROSOL FAN 1to4	Aerial, NI_162	Aerial, to each aerosol fan	CZ309-67287	Media Advance Cables Service Kit
NL_165	CZ309-50139	MA TO AERIAL DIV. MOT+ENC	Bottom Mechatronics PCA (Merlin)	Aerial, NI_168	CZ309-67287	Media Advance Cables Service Kit
NL_166	CZ309-50140	AERIAL to Diverter Motor +En	Aerial, NI_165	Aerial, diverter motor and encoder	CZ309-67287	Media Advance Cables Service Kit
NL_167	CZ309-50135	MA TO AERIAL DIV. LOOP SENS	Bottom Mechatronics PCA (Merlin)	Aerial, NI_168	CZ309-67287	Media Advance Cables Service Kit
NL_168	CZ309-50136	AERIAL TO LOOP SENSOR	Aerial, NI_167	Aerial, NI_68	CZ309-67287	Media Advance Cables Service Kit

Electronics block diagram cable no.	HP part no.	Cable name	From	To	Kit to order	Name of kit to order
NI_169	CZ309-50141	MA TO AERIAL PINCH MOT+ENC. JA	Bottom Mechatronics PCA (Merlin)	Aerial, NI_170	CZ309-67317	Pinches cable service kit
NI_170	CZ309-50142		Aerial, NI_169	Aerial, pinch motor and encoder	CZ309-67287	Media Advance Cables Service Kit
NI_172	CZ309-50134	AERIAL TO JAM SENSOR	Aerial, NI_169	Aerial, MO jam sensor	CZ309-67287	Media Advance Cables Service Kit
NI_201	CZ309-50169	Aerial to Stacker Kicker motor	Aerial, NI_206	Aerial, to MO_kickers and hands-off motor & encoder and stacker full & stacker paper in MID C sensors	CZ309-67289	Cables Miscellany Service Kit
NI_202	CZ309-50170	Aerial to Stacker Arms	Aerial, NI_205	Aerial, Stacker arms open, intermediate path paper out and rolls	CZ309-67289	Cables Miscellany Service Kit
NI_203	CZ309-50171	Aerial to Stacker Tray	Aerial, NI_205	Aerial, mobile tray open and stack paper presence sensors	CZ309-67289	Cables Miscellany Service Kit
NI_204	CZ309-50172	Aerial to Stacker Media Path	Aerial, NI_206	Aerial, Intermed. roller motor & enc., Intermed. paper path 1&2&3 and right & left cleanout sensors	CZ309-67289	Cables Miscellany Service Kit
NI_205	CZ309-50173	MO to Stacker and Arms and tra	Top Stacker PCA (Morgana)	Aerial, NI_203 and NI_202	CZ309-67289	Cables Miscellany Service Kit
NI_206	CZ309-50174	Stacker Tray and Media Path SP	Top Stacker PCA (Morgana)	Aerial, NI_204 and NI_201	CZ309-67289	Cables Miscellany Service Kit

9 Removal and installation

- [Printheads](#)
 - [Printhead replacement \(how it works\)](#)
 - [Remove / install](#)
- [Covers](#)
 - [Top-left exterior cover \(CZ309-67036\)](#)
 - [Rear-left corner cover \(CZ309-67037\)](#)
 - [Top-left cover \(CZ309-67038\)](#)
 - [Left cover assembly \(CZ309-67039\)](#)
 - [Lower-left cover \(CZ309-67041\)](#)
 - [Left cover attachment accessory \(CZ309-67055\)](#)
 - [Right cover attachment accessory \(CZ309-67055\)](#)
 - [Rear-left cover \(CZ309-67042\)](#)
 - [Rear-left cover connector \(CZ309-67043\)](#)
 - [Top-right exterior cover \(CZ309-67044\)](#)
 - [Rear-right corner cover \(CZ309-67045\)](#)
 - [Top-right cover \(CZ309-67046\)](#)
 - [Right panel cover \(CZ309-67150\)](#)
 - [Right cover assembly \(CZ309-67047\)](#)
 - [Bottom right cover \(CZ309-67048\)](#)
 - [Lower-right cover \(CZ309-67049\)](#)
 - [Rear-right cover \(CZ309-67050\)](#)
 - [Right E-box cover \(CZ309-67058, CZ309-67261\)](#)
 - [Left E-box cover \(CZ309-67057, CZ309-67260\)](#)
 - [E-box cover \(CZ309-67056\)](#)

- [Top E-box cover \(CZ309-67059, CZ309-67262\)](#)
- [Let printhead bezel \(CZ309-67060\)](#)
- [Top-right exterior cover fixed trim \(CZ309-67062\)](#)
- [Right printhead bezel \(CZ309-67061\)](#)
- [Top paper-loop door \(CZ309-67052\)](#)
- [Front paper-loop door \(CZ309-67051\)](#)
- [Left-interior side cover \(CZ309-67053\)](#)
- [Right-interior side cover \(CZ309-67054\)](#)
- [Lateral front L – 3 drawers \(CZ309-67230\)](#)
- [Back L – 3 drawers \(CZ309-67232\)](#)
- [Lateral front R – 3 drawers \(CZ309-67231\)](#)
- [Back R – 3 drawers \(CZ309-67233\)](#)
- [Bottom-rear panel \(CZ309-67234\)](#)
- [Service door \(CZ309-67040\)](#)
- [FP support \(CZ309-67063\)](#)
- [Front-door cables \(CZ309-67064\)](#)
- [Top-door cable \(CZ309-67065\)](#)
- [Front cover L assembly – 3 drawers \(CZ309-67067\)](#)
- [Front cover L assembly – 2 drawers \(CZ309-67068\)](#)
- [Front cover R assembly – 3 drawers \(CZ309-67069\)](#)
- [Front cover R assembly – 2 drawers \(CZ309-67070\)](#)
- [Foot cover \(CZ309-67221\)](#)
- [Foot cover plate L \(CZ309-67222\)](#)
- [Foot cover plate R \(CZ309-67223\)](#)
- [Foot cover ext R \(CZ309-67224\)](#)
- [Foot cover ext L \(CZ309-67225\)](#)
- [Foot cover corner R \(CZ309-67226\)](#)
- [Foot cover corner L \(CZ309-67227\)](#)
- [Fake drawer \(CZ309-67228\)](#)
- [No-scanner cover \(CZ309-67235\) \(PWXLs w/ SNs below MY7468Q002\)](#)
- [Top cover cylinder \(CZ309-67236\)](#)

- [Dryer top cover \(CZ309-67238\)](#)
- [Pinch roller top cover \(CZ309-67133\)](#)
- [ISS bottom bezel \(CZ309-67240\)](#)
- [ISS top bezel \(CZ309-67240\)](#)
- [ISS bezel cover – 4 inks \(CZ309-67248\)](#)
- [Menorca cover \(CZ309-67017\)](#)
- [Foot cover rear LE \(CZ309-67247\)](#)
- [Diverter cover \(CZ309-67147\)](#)
- [Top cover subassembly \(CZ309-67066\)](#)
- [Top cover subassembly \(CZ309-67351\) \(PWXL 4x00/3900s with SNs ≥ MY7688Q008\)](#)
- [Sensors and parts for connectors \(CZ309-67071\)](#)
- [Top cover shafts \(CZ309-67220\)](#)
- [Printhead bezel rear \(CZ309-67237\)](#)
- [Drawer subsystem](#)
 - [Front plate complete assembly \(CZ309-67168\)](#)
 - [Cover assembly mounting \(CZ309-67154\)](#)
 - [Main PCB NGR \(CZ309-67162\)](#)
 - [Intermediate plate middle \(CZ309-67169\)](#)
 - [Paper sensor \(CZ309-67160\)](#)
 - [PCB buttons assembly \(CZ309-67159\)](#)
 - [Sensors right front cover \(CZ309-67191\)](#)
 - [Sensors left front cover \(CZ309-67191\)](#)
 - [Sensors drawer closed left and right \(CZ309-67165\)](#)
 - [Drawer hooks \(CZ309-67183\)](#)
 - [Cable front plate \(CZ309-67158\)](#)
 - [Intermediate triangle plate \(CZ309-67170\)](#)
 - [Cutter assembly \(CZ309-67155\)](#)
 - [Guide plate right and left \(CZ309-67181\)](#)
 - [Cover RWD rear \(CZ309-67157\)](#)
 - [Roll mounting assembly \(CZ309-67174\)](#)
 - [Paper-input motor NGR \(CZ309-67153\)](#)

- [Transport roller front roll \(CZ309-67172\)](#)
- [Transport roller rear roll \(CZ309-67173\)](#)
- [Rubber transport roller \(CZ309-67156\)](#)
- [Rear cable router assembly \(CZ309-67167\)](#)
- [Telescopic slides \(CZ309-67171\)](#)
- [Motor block rewinder assembly \(CZ309-67175\)](#)
- [Indexing system inner \(CZ309-67176\)](#)
- [Hub assembly \(expandable\) \(CZ309-67179\)](#)
- [Cover sled left assembly \(CZ309-67178\)](#)
- [Cover sled right assembly \(CZ309-67182\)](#)
- [Right sled brake and lever \(CZ309-67180\)](#)
- [Paper sensor alone \(CZ309-67161\)](#)
- [Left sled internal parts with index out \(CZ309-67177\)](#)
- [Axis holder \(CZ309-67319\)](#)
- [Bottom drawer plate \(CZ318-67004\)](#)
- [EE subsystem](#)
 - [Hard Disk Drive W/ FW HE Service Kit \(PageWide XL 8000/5100/6000\)\(CZ309-67306\)](#)
 - [Hard Disk Drive W/ FW LE Service Kit \(PageWide XL 5000/4x00/3900\)\(CZ309-67436\)](#)
 - [Removable Hard Disk Drive W/ FW HE Service Kit \(PageWide XL 8000/5000/4x00/3900\) \(CZ309-67383\)](#)
 - [Connections Panel PCA \(CZ309-67003\)](#)
 - [Jester JDI PCA \(CZ309-67013\)](#)
 - [Jester JPE PCA \(CZ309-67012\)](#)
 - [Engine PCA \(CZ309-67011\)](#)
 - [Formatter PCA \(CZ309-67009, CZ309-67010\)](#)
 - [Central Distribution PCA \(CZ309-67008\) and new Central distribution PCA \(CZ309-67314\)](#)
 - [ATX PSU PICOLIT 180W Service Kit \(CZ309-67402\)](#)
 - [Mechatronics PSU \(CZ309-67015\)](#)
 - [Power Distribution PCA \(CZ309-67209\)](#)
 - [E-box fan \(CZ309-67152\)](#)
 - [Bottom Mechatronics PCA \(CZ309-67002\)](#)
 - [RFID PCA \(CZ309-67019\)](#)

- [P label wall assembly \(CZ309-67007\)](#)
- [Solid-state disk \(CZ309-67006, CZ309-67308\)](#)
- [CryptASIC PCA service kit \(CZ309-67300\)](#)
- [Power Distribution Cable and Inlet Service Kit \(CZ309-67398\)](#)
- [8GB Memory bank service kit \(CZ309-67304\)](#)
- [Scanner media guide service kit \(CZ309-67305\)](#)
- [Fuse \(CZ309-67398\)](#)
- [IDS subsystem](#)
 - [Print-bar power cable \(CZ309-67211\)](#)
 - [Print-bar tubing system HE CZ309-67123, LE \(CZ309-67124\) and LE enterprise \(CZ309-67125\)](#)
 - [ISS plunger assembly \(CZ309-67132\)](#)
 - [ISS backplate \(CZ309-67122\)](#)
 - [Ink Supply PCA \(CZ309-67119\)](#)
 - [Air Control PCA with APS HE \(CZ309-67120\)](#)
 - [Air Control PCA with APS LE \(CZ309-67121\)](#)
 - [CID valve \(CZ309-67126\)](#)
 - [Ink Supply Indicator PCA \(CZ309-67128\)](#)
 - [Relief valve \(CZ309-67129\)](#)
 - [PIP and floater with tubes \(CZ309-67130\)](#)
 - [ISS support, bi-valve, purge HE \(CZ309-67131\)](#)
 - [CID Valve PCA \(CZ309-67127\)](#)
 - [Printhead cap \(CZ309-67192\)](#)
 - [Broken bag](#)
 - [Minnow IDS support part service kit \(CZ309-67315\)](#)
- [Lift mechanism subsystem](#)
 - [Lift mechanism motor assembly \(CZ309-67028\)](#)
 - [Lift mechanism encoder assembly \(CZ309-67033\)](#)
 - [Lift mechanism right transmission \(CZ309-67030\)](#)
 - [Lift mechanism left transmission \(CZ309-67031\)](#)
 - [Synchro bar with bushing \(CZ309-67032\)](#)
- [Paper loop subsystem](#)

- [Feed sensor \(CZ309-67073\)](#)
- [Paper-loop bottom assembly \(CZ309-67076\)](#)
- [Paper-loop sensor assembly \(CZ309-67077\)](#)
- [Paper-loop roof sheet-metal \(CZ309-67437/CZ309-67434\)](#)
- [TOF sensor assembly \(CZ309-67078\)](#)
- [Feed motor assembly \(CZ309-67080\)](#)
- [Sensor safety assembly \(CZ309-67034\)](#)
- [Paper-loop door-switch support right \(CZ309-67074\)](#)
- [Paper-loop door-switch support left \(CZ309-67075\)](#)
- [Paper-loop baffles \(CZ309-67241\)](#)
- [Paper-loop baffle shaft drive \(CZ309-67081\)](#)
- [Paper-loop front-door hinge and spring \(CZ309-67216\)](#)
- [Paper output subsystem](#)
 - [Diverter assembly \(CZ309-67148\)](#)
 - [Paper-output starwheels \(CZ309-67140\)](#)
 - [Accessory adapters \(CZ309-67212\)](#)
 - [Paper-output pinches motor \(CZ309-67142\)](#)
 - [Paper-output pinches motor \(CZ309-67142\) \(PWXL 4x00/3900s with SNs ≥ MY7688Q008\)](#)
 - [Paper-output pinch starwheels \(CZ309-67143\)](#)
 - [Paper presence sensor \(CZ309-67145\)](#)
 - [Paper-output driver transmission \(CZ309-67144\)](#)
 - [Gas spring \(CZ309-67149\)](#)
 - [Basket HE and LE service kit \(CZ309-67316\)](#)
- [PEM subsystem](#)
 - [PEM cable loop assembly \(CZ309-67072\)](#)
 - [Printhead PCA with primer pump \(CZ309-67021\)](#)
 - [Print Bar Hub PCA \(CZ309-67025\)](#)
 - [Latch cable lid \(CZ309-67022\)](#)
 - [Latch full \(CZ309-67023\)](#)
 - [Data Distribution PCA \(CZ309-67024\)](#)
 - [Print Bar Mechatronics PCA \(CZ309-67001\)](#)

- [Print zone subsystem](#)
 - [Vacuum filter \(CZ309-67086\)](#)
 - [Vacuum fan assembly \(CZ309-67087\)](#)
 - [Vacuum Sensor PCA \(CZ309-67088\)](#)
 - [Vacuum Fan Driver PCA \(CZ309-67089\)](#)
 - [Vacuum fan inlet \(CZ309-67091\)](#)
 - [Belt motor assembly \(CZ309-67084\)](#)
 - [Belt gearbox \(CZ309-67085\)](#)
 - [Air dust filter mechatronics PSU \(CZ309-67016\)](#)
 - [Aerosol fan filter \(CZ309-67113\)](#)
 - [Aerosol fan assembly \(CZ309-67112\)](#)
 - [Analog encoder and extra part assembly \(CZ309-67082\)](#)
 - [Linear encoder sensor \(CZ309-67104\)](#)
 - [Dryer assembly \(CZ309-67184\)](#)
 - [Dryer PCA \(CZ309-67139\)](#)
 - [Dryer Harness assembly – Dryer cables \(CZ309-60772\)](#)
 - [Dryer switch \(CZ309-67138\)](#)
 - [Clean waste diverter](#)
 - [Intermediate support \(CZ309-67322\)](#)
- [Servicing subsystem](#)
 - [Carriage encoder strip \(CZ309-67101\)](#)
 - [Carriage Sensor PCA \(CZ309-67111\)](#)
 - [Service carriage assembly \(CZ309-67105\)](#)
 - [Trailing cable \(CZ309-67103\)](#)
 - [Service belt tensioner \(CZ309-67107\)](#)
 - [Drop Detector PCA \(CZ309-67110\)](#)
 - [Service belt \(CZ309-67108\)](#)
 - [Capping platform \(CZ309-67093\)](#)
 - [Capping platform \(CZ309-67093\) \(PWXL 4x00/3900s with SNs ≥ MY7688Q008\)](#)
 - [Spittoon beam \(CZ309-67095\)](#)
 - [Spittoon beam \(CZ309-67095\) \(PWXL 4x00/3900s with SNs ≥ MY7688Q008\)](#)

- [Spittoon chain assembly left \(CZ309-67096\)](#)
- [Spittoon chain assembly left \(CZ309-67096\) \(PWXL 4x00/3900s with SNs ≥ MY7688Q008\)](#)
- [Spittoon chain assembly right \(CZ309-67097\)](#)
- [Spittoon chain assembly right \(CZ309-67097\) \(PWXL 4x00/3900s with SNs ≥ MY7688Q008\)](#)
- [Belts and platen – CZ309-67092 \(Non-APJ\), CZ309-67324 \(APJ machines\)](#)
- [Belts and platen – CZ309-67092 \(Non-APJ\), CZ309-67324 \(APJ machines\)\(PWXL 4x00/3900s with SNs ≥ MY7688Q008\)](#)
- [Belts and platen – CZ309-67433 \(WW machines\)\(PWXL 4x00/3900s with SNs ≥ MY89JCQ00B, PageWide XL 5100/6000 with SN ≥ MY94UDQ00F from AMS and APJ\)](#)
- [Waste management tubes \(CZ309-67210\)](#)
- [Waste management tubes \(CZ309-67210\) \(PWXL 4x00/3900s with SNs ≥ MY7688Q008\)](#)
- [Waste system \(CZ309-67117\)](#)
- [Waste system foam \(CZ309-67331\)](#)
- [Capping motor and idle \(CZ309-67094\)](#)
- [Spittoon guide assembly left \(CZ309-67098\)](#)
- [Spittoon guide assembly right \(CZ309-67099\)](#)
- [Spittoon static transmission \(CZ309-67100\)](#)
- [Spittoon static transmission \(CZ309-67100\) \(PWXL 4x00/3900s with SNs ≥ MY7688Q008\)](#)
- [Service carriage motor \(CZ309-67106\)](#)
- [Belt transmission assembly \(CZ309-67114\)](#)
- [Carriage impelling assembly \(CZ309-67102\)](#)
- [Capping station stopper \(CZ309-67118\)](#)
- [Capping station stopper \(CZ309-67118\) \(PWXL 4x00/3900s with SNs ≥ MY7688Q008\)](#)
- [Waste Management PCA \(CZ309-67116\)](#)
- [Front panel \(CZ309-67020, CZ309-67029, CZ309-67219\)](#)
- [Anti-vibration wheels \(CZ309-67193\)](#)
- [Scanner](#)
 - [PageWide XL CIS module x5u \(CZ309-67336\)](#)
 - [PageWide XL Glass Plate \(5 units\) \(CZ309-67342\)](#)
 - [Scanner latch button \(CZ309-67251\)](#)
 - [Scanner cover \(CZ309-67249\)](#)
 - [Loading table \(CZ309-67252\)](#)

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- [Scanner shelf supports \(CZ309-67250\)](#)
- [Scanner BMP top rib \(CZ309-67257\)](#)
- [Scanner paper path \(CZ309-67258\)](#)
- [U-turn cover \(CZ309-67253\)](#)
- [U-turn cover L and R \(CZ309-67256\)](#)
- [U-turn sensor cover \(CZ309-67254\)](#)
- [Scanner U-turn sensor \(CZ309-67259\)](#)
- [LW3 PCA \(CZ309-67185\)](#)
- [Pressure roller \(CZ309-67187\)](#)
- [T2500/T3500 Tiles kit \(CR359-67014\)](#)
- [T2500/T3500 Torsioner dump \(CR359-67019\)](#)
- [FFC cable set-scan \(CZ309-67189\)](#)
- [Stepper motor \(CZ309-67186\)](#)
- [T2500/T3500 Paper sensor \(CR359-67018\)](#)
- [Cable kits](#)
- [Reseller kits](#)

Printheads

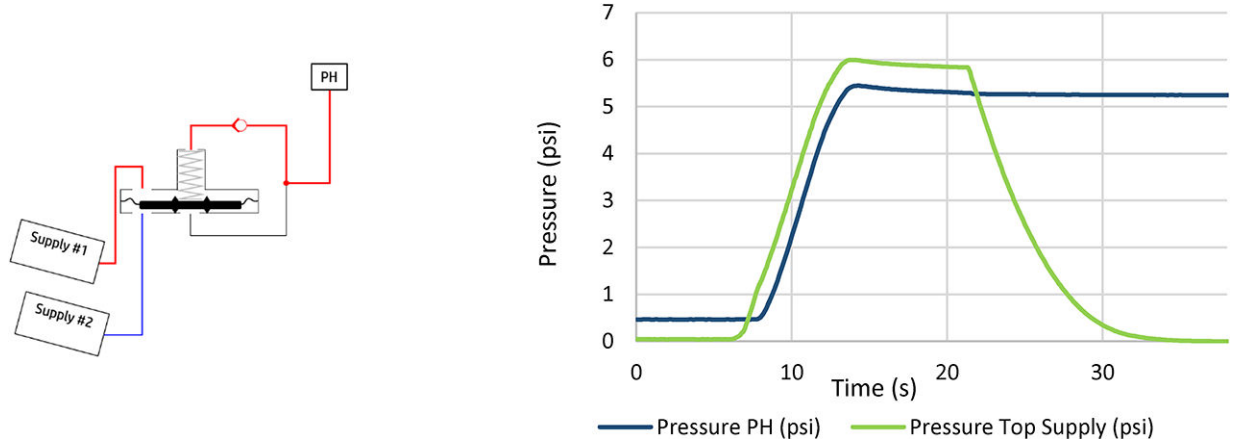
Printhead replacement (how it works)

When the user wants to do a printhead replacement, the system has to guarantee that the conditions of pressure at the FI (or at the inlet of the printhead's needle) are appropriate. If the pressure is too low, the printhead will absorb air; if the pressure is too high, the printhead will spit ink. So there is a very narrow pressure range in which a printhead replacement will work properly.

At this point it is very important to consider the top and bottom row of supplies differently.

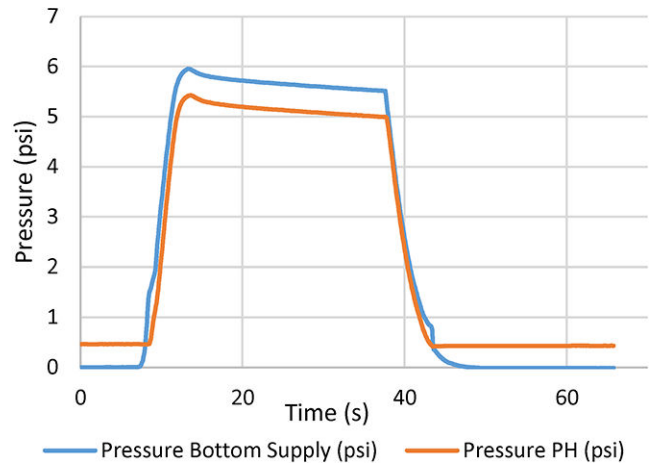
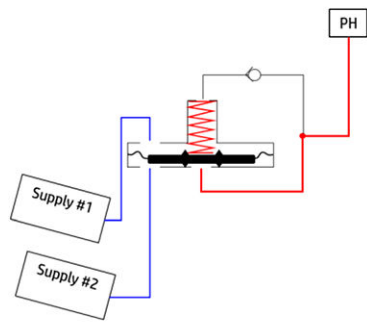
On the one hand, it has to be taken into account that between the printhead's line and the top supply there is a check valve which avoids system depressurization when the top row is the one that is working. That is to say, when the top row is the one that is pressurized, the check valve can maintain the pressure even when the system is depressurized (see the figure below). This implies that, due to the architecture of the bivalve, when the last active cartridge is the top one and the system is depressurized, the pressure at the printhead will be approximately 5 psi, which is not desirable if you want to avoid spitting ink.

Top pressure cycle



On the other hand, it is possible to offer a mechanical calibration when the bottom row is the last one used. This solution consists of using the appropriate spring (in the bivalve) that closes the bottom circuit when the residual pressure on the exit of the bivalve is 0.3–0.5 psi approximately (see the figure below). Due to the difference in height between the bivalves and the printhead's line, this residual pressure at the exit of the first ones will represent a value of almost 0 psi at the FI. This means that the printheads will neither absorb air nor spit ink during their extraction, so the conditions are good for printhead replacement.

Bottom pressure cycle



However, it must be emphasized that the bottom mechanical calibration explained above works only when the top supply is present and when at least one of them has more than about 70 ml of ink, in order to transmit pressure to the ink correctly.

Thus, when the user selects the printhead replacement option at the front panel, the printer checks that all of these conditions are accomplished. If so, it automatically proceeds with a bottom pressure cycle to leave the correct residual pressure. Then the user can proceed with the replacement.

If one of these conditions is not accomplished, the printer will ask the user to intervene as in the following table, depending on the situation. This way, once the option is selected, the user has only to follow the instructions.

Different situations during a printhead replacement

		Top cartridge		
		>25%	<25%	Missing
Bottom cartridge	>25%	APS Cycle bottom	APS Cycle bottom	Insert Top Cartridge
	<25%	APS Cycle bottom	Insert 1 Cartridge >25%	Insert Top Cartridge >25%
	Missing	Insert Bottom Cartridge	Insert Bottom Cartridge >25%	Insert 2 Cartridges

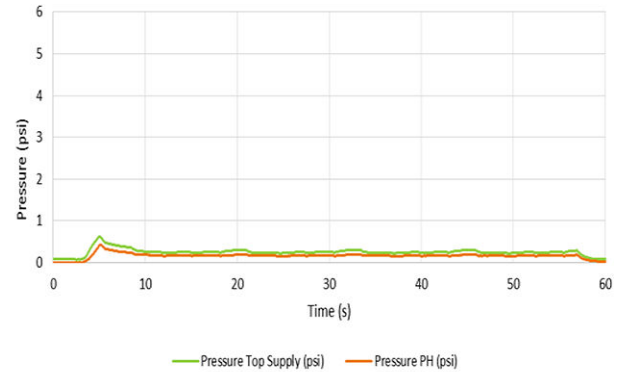
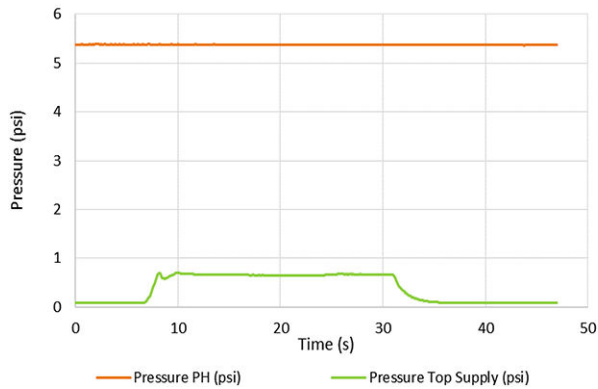
Note that the printer asks to have more than 25% of ink, which represents more than the 70 ml mentioned above. This is needed in order to guarantee, assuming the worst case in the drop count, this minimum amount of ink required for the process.

$$x \cdot 1,2 = 775 - 70 \rightarrow x = 587,5 \text{ cc} \rightarrow \frac{775-587,5}{775} \cdot 100 = \mathbf{24,2 \%}$$

For those SKU's that have only one row of supplies, the solution is to pressurize the system actively up to 0.5 psi, which will be done automatically when the user selects the printhead replacement option at the front panel. Once the option is selected, the user has only to follow the instructions.

This solution cannot be implemented when there is a bivalve, because the check valve doesn't open. Note the difference between the behaviors in the following graphs.

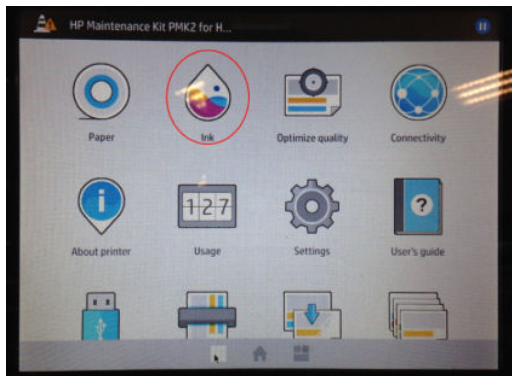
Difference in behavior due to bivalve presence



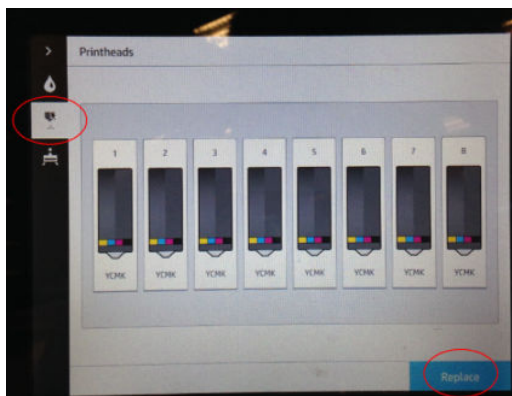
Remove / install

Removal

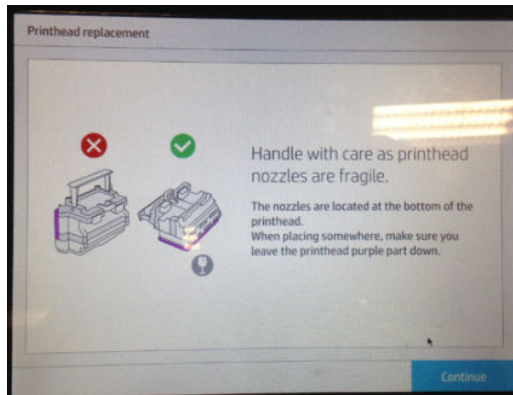
1. Tap **Ink** on the main front panel menu.



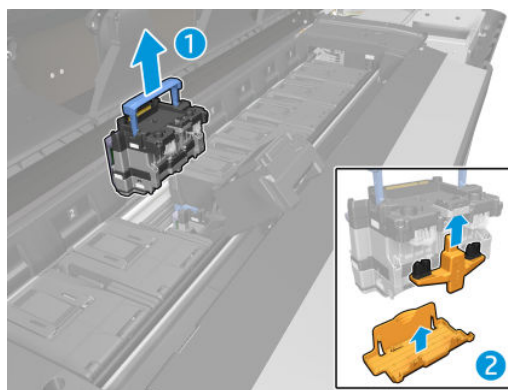
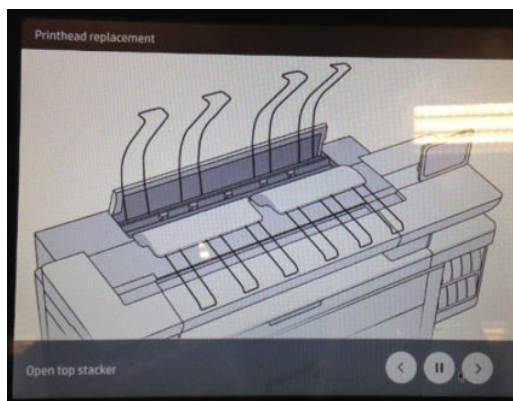
2. Tap the printheads icon and then click **Replace**.



3. Wait until the following message appears, then tap **Continue**.



4. Open the cover and remove the printheads.



5. Don't close the cover nor power off the printer.

Installation

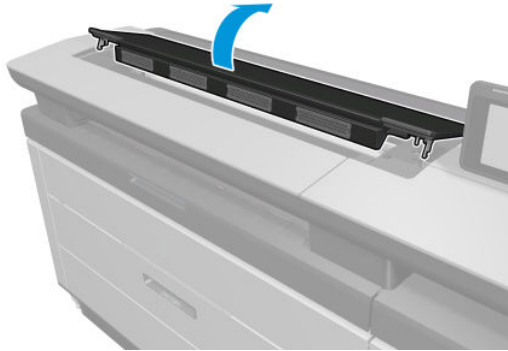
- ▲ To install, perform the removal operation in reverse. Turn on the printer, tap the **Ink** option on the front panel menu, then **printhead**, then **replace**.

Covers

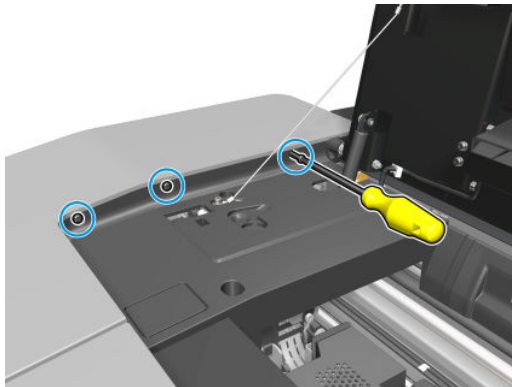
Top-left exterior cover (CZ309-67036)

Removal

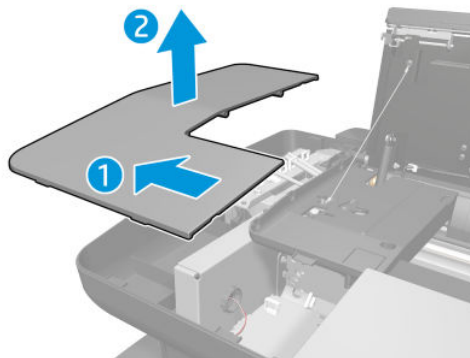
1. Open the door.



2. Remove three screws.



3. Remove the top cover exterior left.



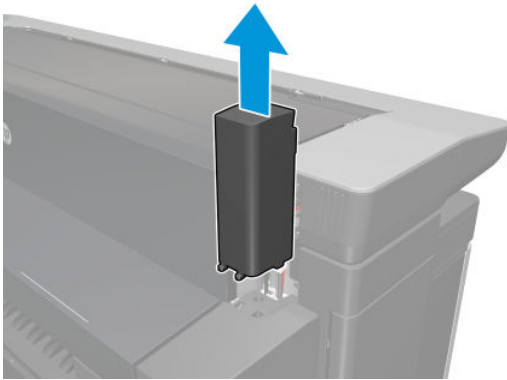
Installation

- ▲ To install, perform the removal operation in reverse.

Rear-left corner cover (CZ309-67037)

Removal

- ▲ Remove the rear corner cover left.



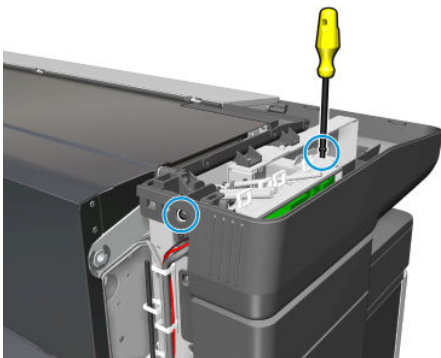
Installation

- ▲ To install, perform the removal operation in reverse.

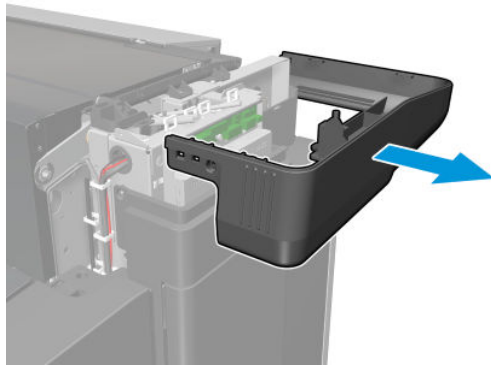
Top-left cover (CZ309-67038)

Removal

1. Remove the [Top-left exterior cover \(CZ309-67036\) on page 637](#).
2. Remove the [Rear-left corner cover \(CZ309-67037\) on page 638](#).
3. Remove two screws.



4. Remove the top cover left.



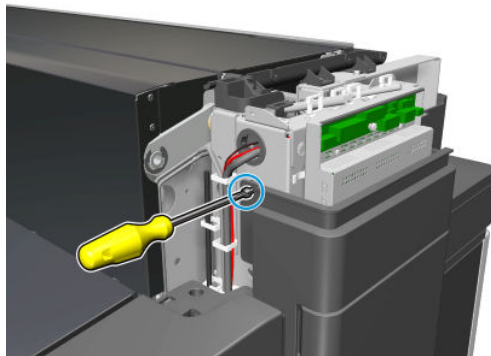
Installation

- ▲ To install, perform the removal operation in reverse.

Left cover assembly (CZ309-67039)

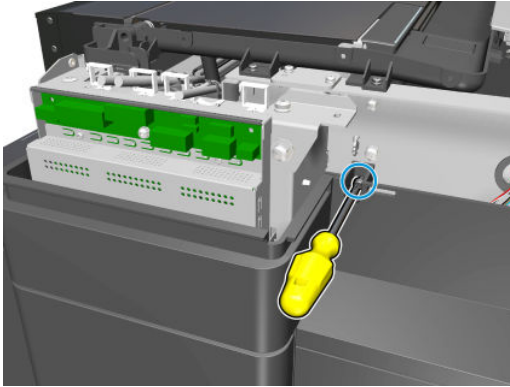
Removal

1. Remove the [Top-left exterior cover \(CZ309-67036\) on page 637](#).
2. Remove the [Rear-left corner cover \(CZ309-67037\) on page 638](#).
3. Remove the [Top-left cover \(CZ309-67038\) on page 638](#).
4. Remove a screw.

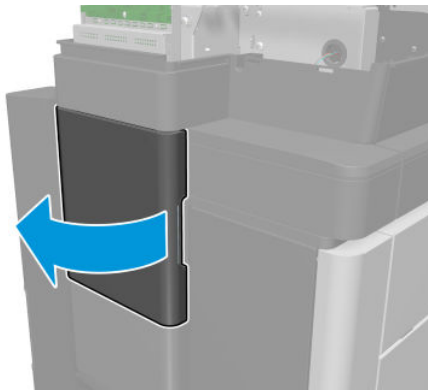


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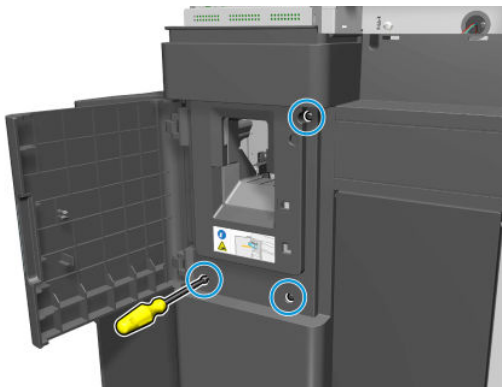
5. Remove another screw.



6. Open the side door.



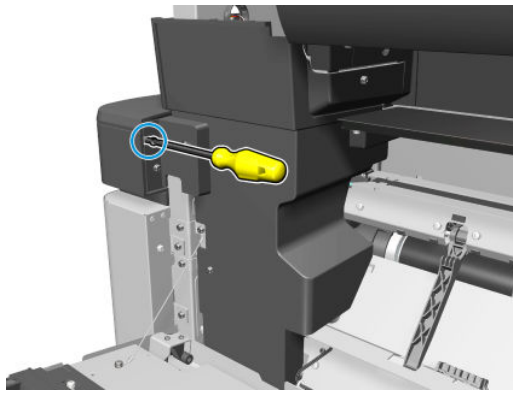
7. Remove three screws.



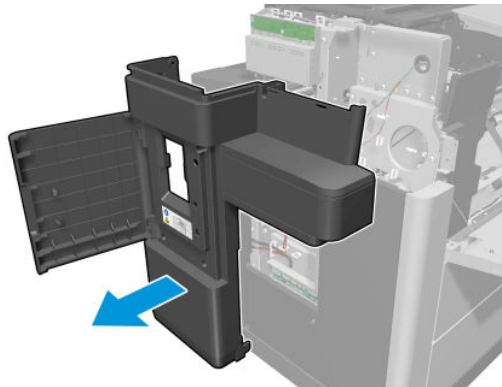
8. Open the paper-loop front door.



9. Remove a screw.



10. Remove the cover left assembly.



Installation

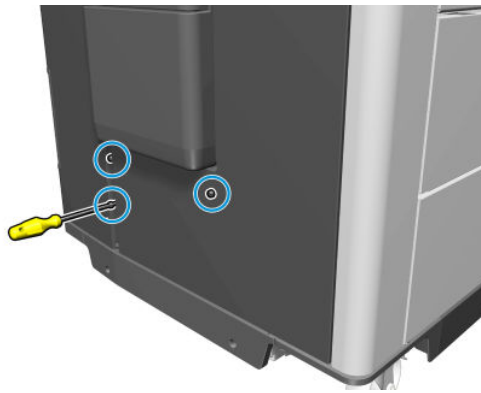
- ▲ To install, perform the removal operation in reverse.

Lower-left cover (CZ309-67041)

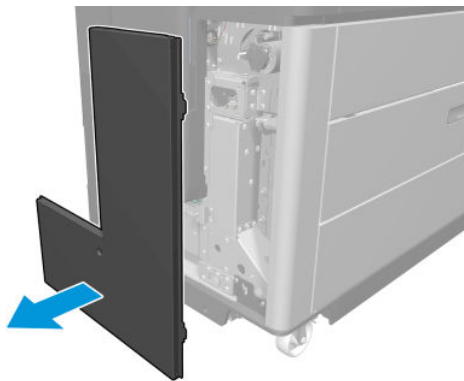
Removal

1. Remove three screws.

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2. Remove the down cover left.



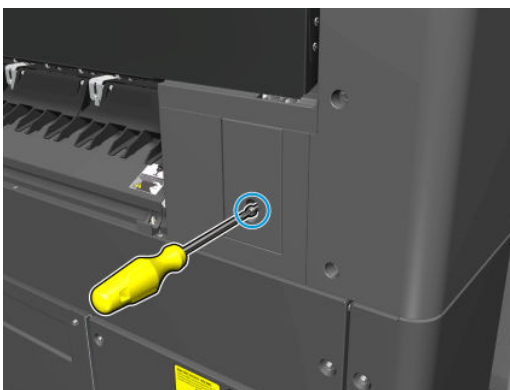
Installation

- ▲ To install, perform the removal operation in reverse.

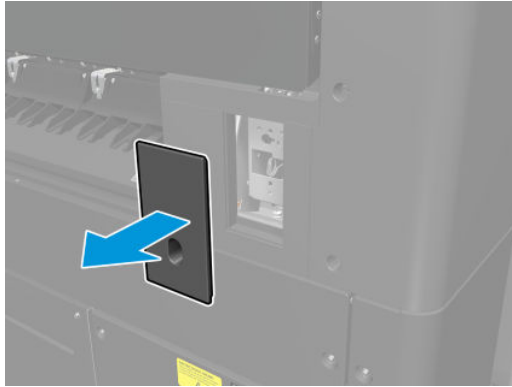
Left cover attachment accessory (CZ309-67055)

Removal

1. Remove a screw.



2. Remove the cover accessory attach left.



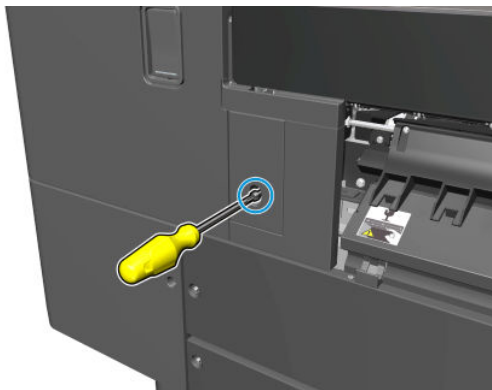
Installation

- ▲ To install, perform the removal operation in reverse.

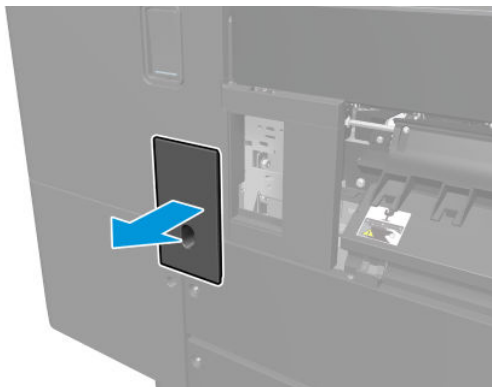
Right cover attachment accessory (CZ309-67055)

Removal

1. Remove a screw.



2. Remove the cover accessory attach right.



Installation

- ▲ To install, perform the removal operation in reverse.

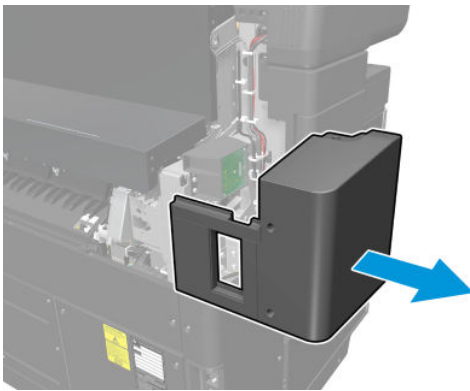
Rear-left cover (CZ309-67042)

Removal

1. Remove the [Rear-left corner cover \(CZ309-67037\)](#) on page 638.
2. Remove the [Left cover attachment accessory \(CZ309-67055\)](#) on page 642.
3. Remove three screws.



4. Remove the rear cover left.



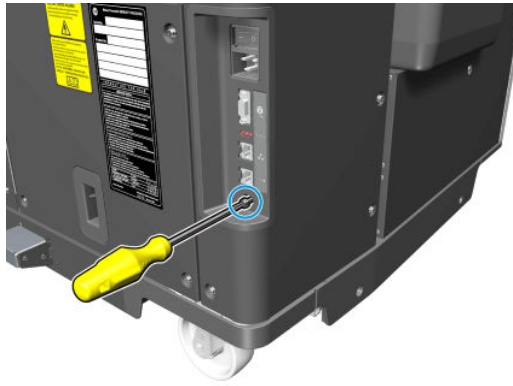
Installation

- ▲ To install, perform the removal operation in reverse.

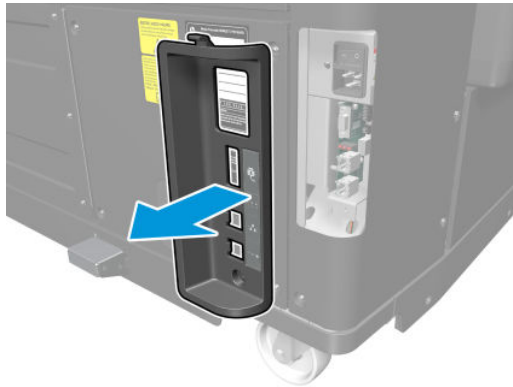
Rear-left cover connector (CZ309-67043)

Removal

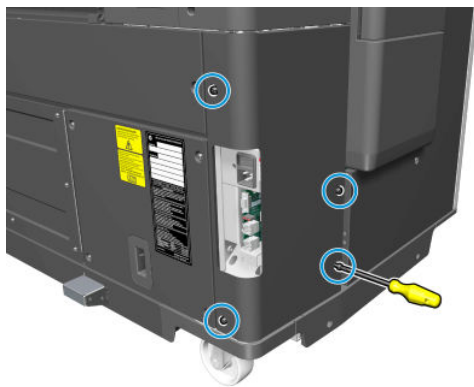
1. Remove a screw.



2. Remove the rear connector bezel.

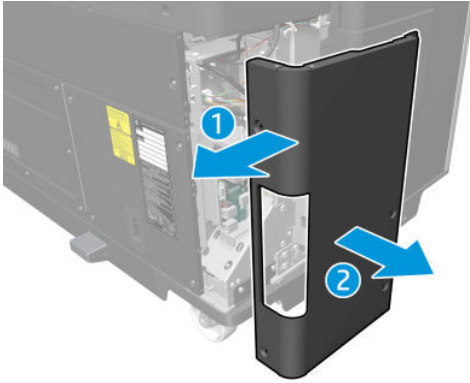


3. Remove four screws.



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4. Remove the rear left connector cover.



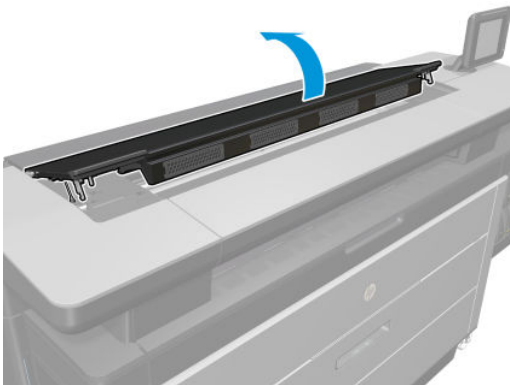
Installation

- ▲ To install, perform the removal operation in reverse.

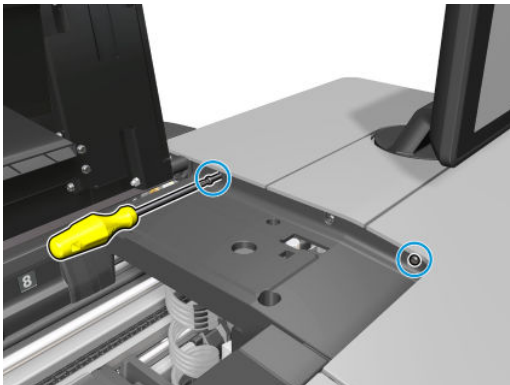
Top-right exterior cover (CZ309-67044)

Removal

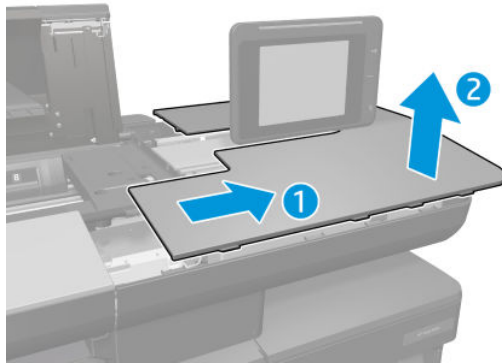
1. Open the door.



2. Remove two screws.



3. Remove the top cover exterior right.



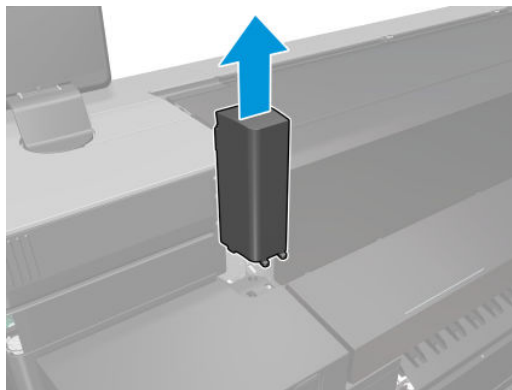
Installation

- ▲ To install, perform the removal operation in reverse.

Rear-right corner cover (CZ309-67045)

Removal

- ▲ Remove the rear corner cover right.



Installation

- ▲ To install, perform the removal operation in reverse.

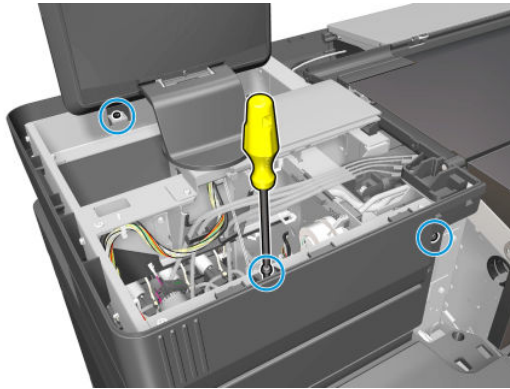
Top-right cover (CZ309-67046)

Removal

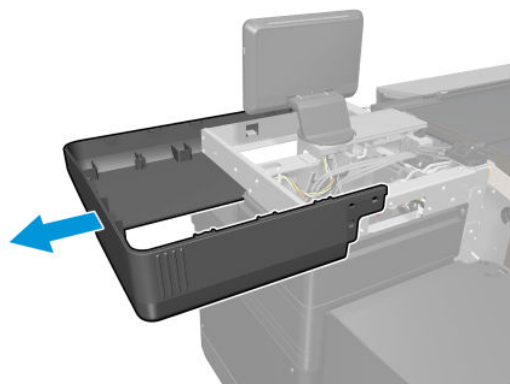
1. Remove the [Top-right exterior cover \(CZ309-67044\)](#) on page 646.
2. Remove the [Rear-right corner cover \(CZ309-67045\)](#) on page 647.

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3. Remove three screws.



4. Remove the top cover right.



Installation

- ▲ To install, perform the removal operation in reverse.

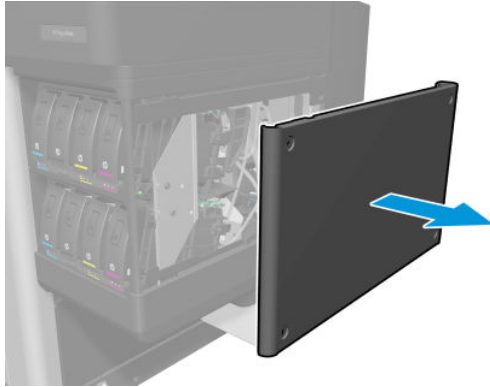
Right panel cover (CZ309-67150)

Removal

1. Remove four screws.



2. Remove the right cover panel.



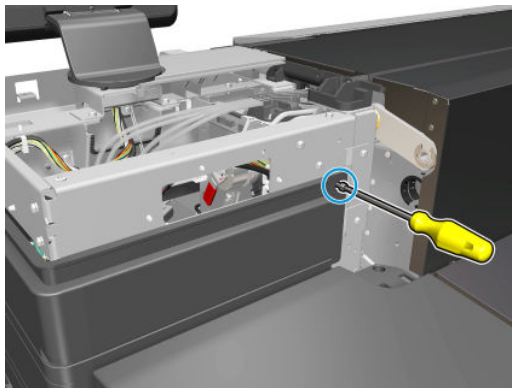
Installation

- ▲ To install, perform the removal operation in reverse.

Right cover assembly (CZ309-67047)

Removal

1. Remove the [Top-right exterior cover \(CZ309-67044\)](#) on page 646.
2. Remove the [Rear-right corner cover \(CZ309-67045\)](#) on page 647.
3. Remove the [Top-right cover \(CZ309-67046\)](#) on page 647.
4. Remove a screw.

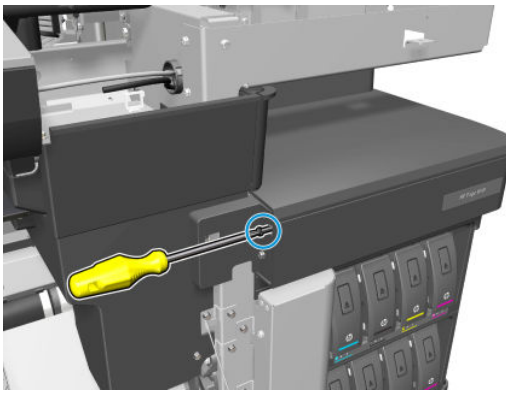


For HP-authorized personnel only

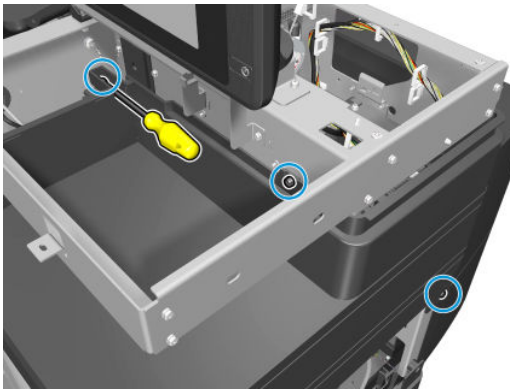
5. Open the paper-loop front door.



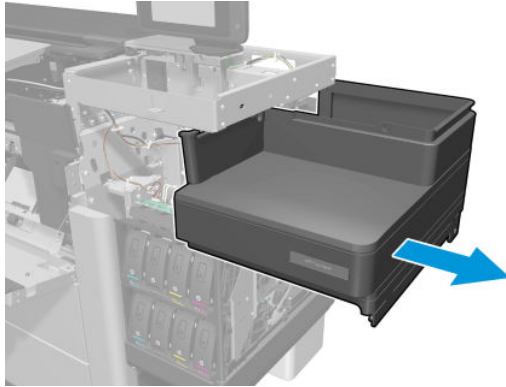
6. Remove a screw.



7. Remove three screws.



8. Remove the cover right assembly.



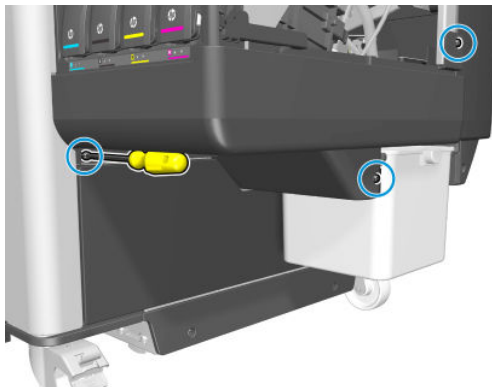
Installation

- ▲ To install, perform the removal operation in reverse.

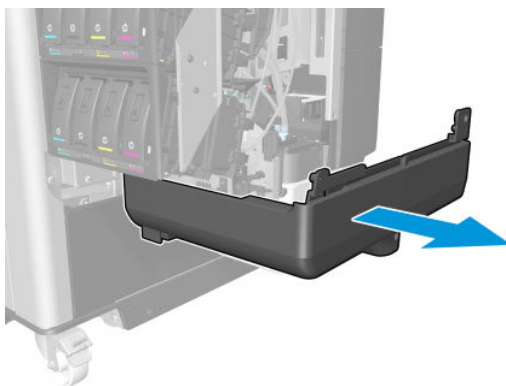
Bottom right cover (CZ309-67048)

Removal

1. Remove the [Right panel cover \(CZ309-67150\)](#) on page 648.
2. Remove three screws.



3. Remove the right cover bottom.



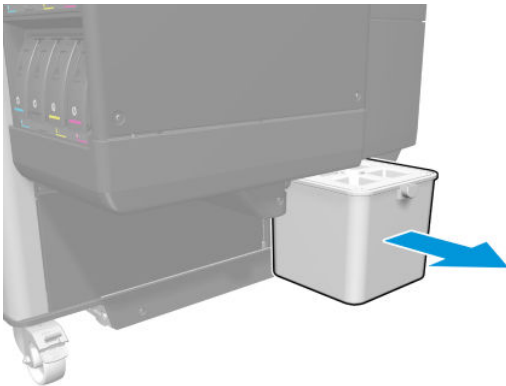
Installation

- ▲ To install, perform the removal operation in reverse.

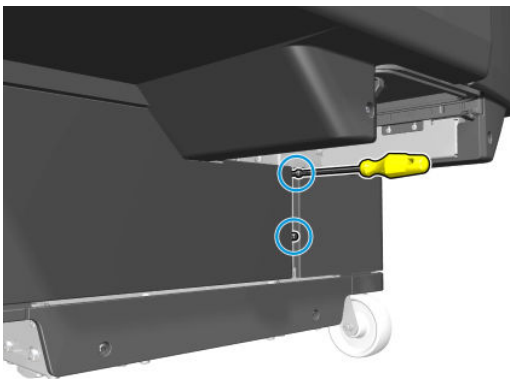
Lower-right cover (CZ309-67049)

Removal

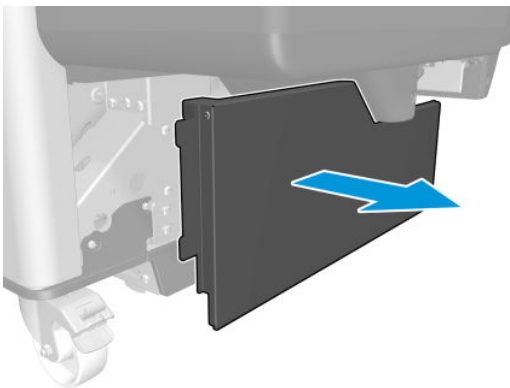
1. Remove the waste container.



2. Remove two screws.



3. Remove the down cover right.



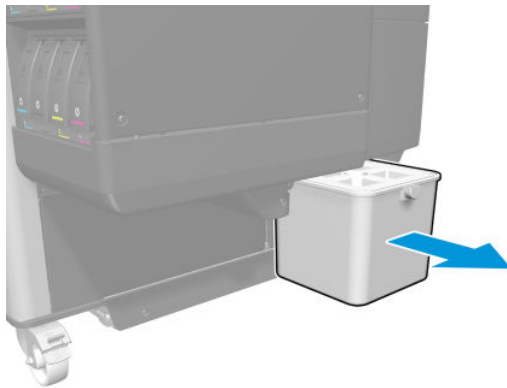
Installation

- ▲ To install, perform the removal operation in reverse.


Rear-right cover (CZ309-67050)

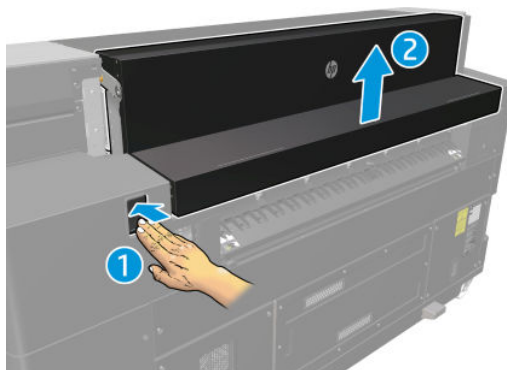
Removal

1. Remove the [Rear-right corner cover \(CZ309-67045\)](#) on page 647.
2. Remove the Right stacker cover. See [Paper-output stacker cover right \(CZ309-67203\)](#) on page 1242.
3. Remove the [Right cover attachment accessory \(CZ309-67055\)](#) on page 643.
4. Remove the waste container.



5. Open the door structure.

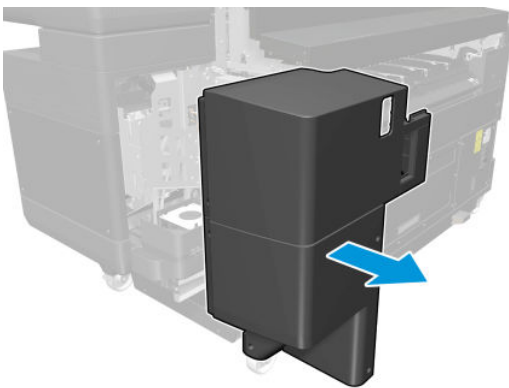
 **NOTE:** Skip this step for PWWL 4x00/3900s with SNs \geq MY7688Q008.



6. Remove six screws.




7. Remove the rear cover right.



Installation

- ▲ To install, perform the removal operation in reverse.

Right E-box cover (CZ309-67058, CZ309-67261)

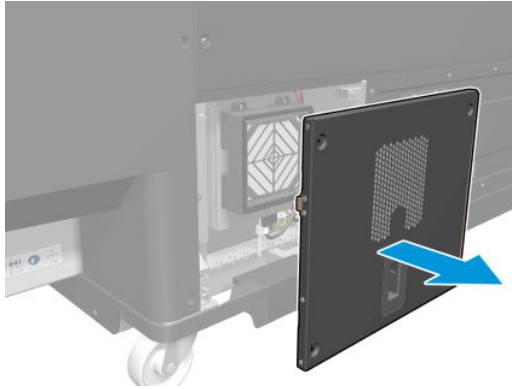
 **NOTE:** This section illustrates the E-box Cover Right Service Kit (CZ309-67058). The very similar E-box Cover R Ent Service Kit (CZ309-67261) can be removed and installed in the same way.

Removal

1. Remove four screws.




2. Remove the e-box cover right.



Installation

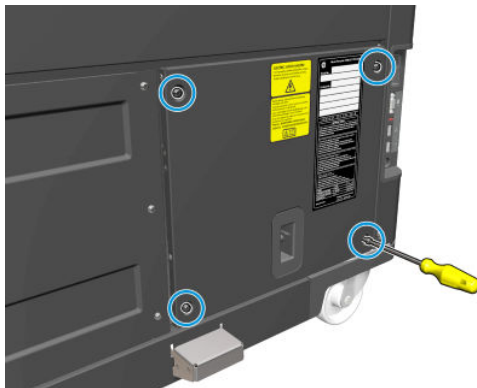
- ▲ To install, perform the removal operation in reverse.

Left E-box cover (CZ309-67057, CZ309-67260)

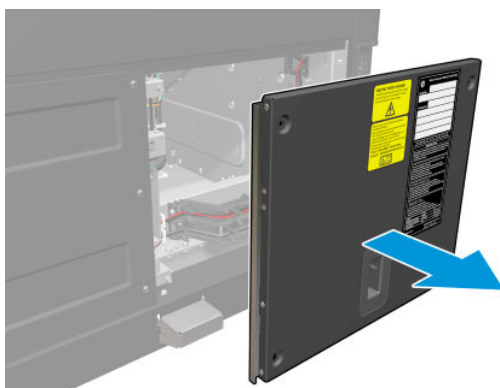
 **NOTE:** This section illustrates the E-box Cover Left Service Kit (CZ309-67057). The very similar E-box Cover Left Service Kit (CZ309-67260) can be removed and installed in the same way.

Removal

1. Remove four screws.



2. Remove the e-box cover left.



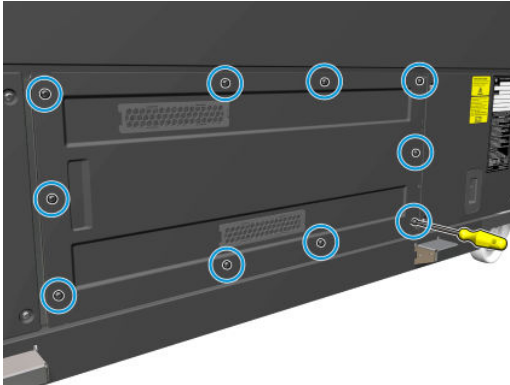
Installation

- ▲ To install, perform the removal operation in reverse.

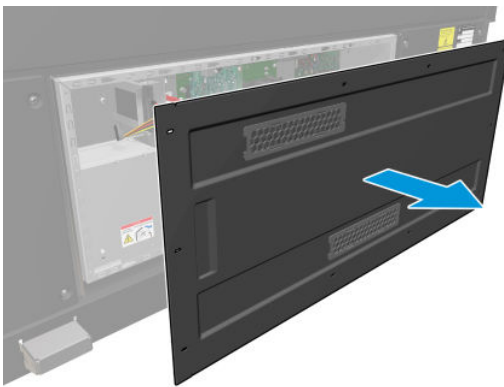
E-box cover (CZ309-67056)

Removal

1. Remove ten screws.



2. Remove the e-box cover.



Installation

- ▲ To install, perform the removal operation in reverse.

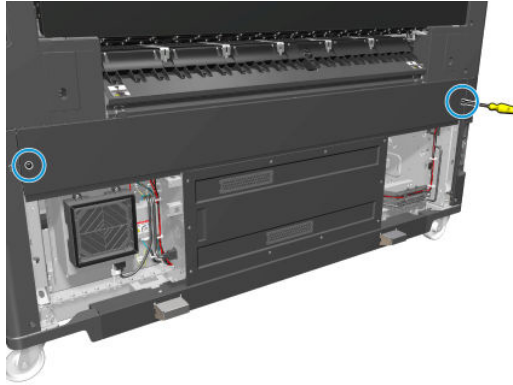
Top E-box cover (CZ309-67059, CZ309-67262)

 **NOTE:** This section illustrates the E-box Cover Top Service Kit (CZ309-67059). The very similar E-box Cover Top Ent Service Kit (CZ309-67262) can be removed and installed in the same way.

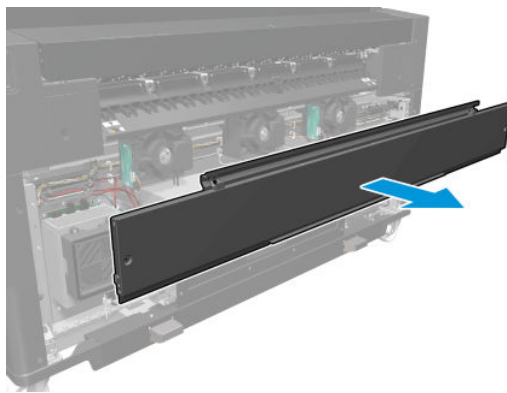
Removal

1. Remove the [Right E-box cover \(CZ309-67058, CZ309-67261\) on page 654](#).
2. Remove the [Left E-box cover \(CZ309-67057, CZ309-67260\) on page 655](#).

3. Remove two screws.



4. Remove the e-box cover top.



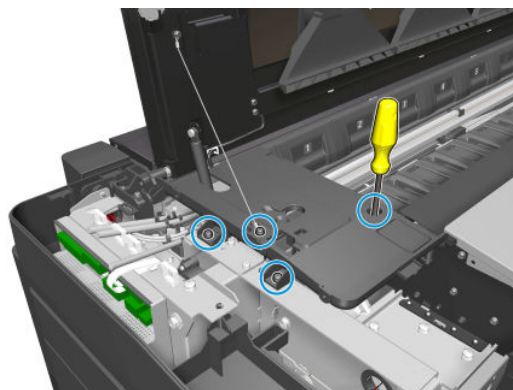
Installation

- ▲ To install, perform the removal operation in reverse.

Let printhead bezel (CZ309-67060)

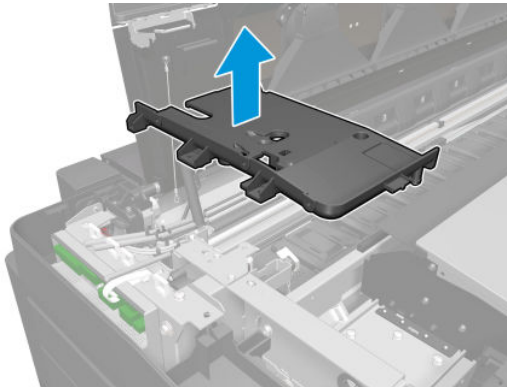
Removal

1. Remove the [Top-left exterior cover \(CZ309-67036\)](#) on page 637.
2. Remove three screws and the top cover cable screw.



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3. Remove the printhead bezel left.



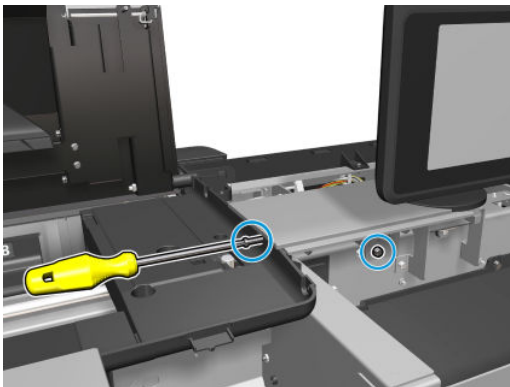
Installation

- ▲ To install, perform the removal operation in reverse.

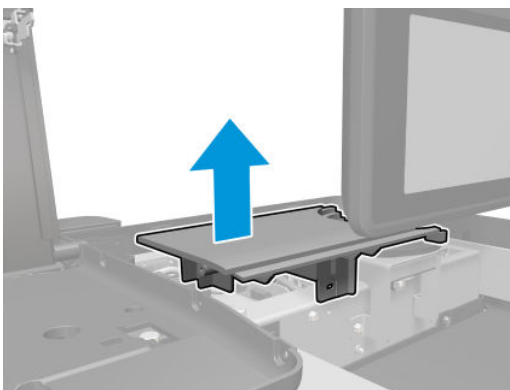
Top-right exterior cover fixed trim (CZ309-67062)

Removal

1. Remove the [Top-right exterior cover \(CZ309-67044\)](#) on page 646.
2. Remove two screws.



3. Remove the top cover exterior right fixed trim.



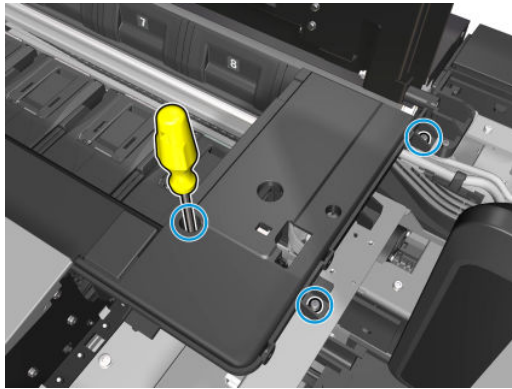
Installation

- ▲ To install, perform the removal operation in reverse.

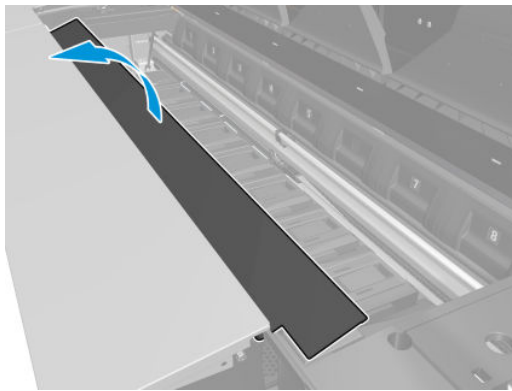
Right printhead bezel (CZ309-67061)

Removal

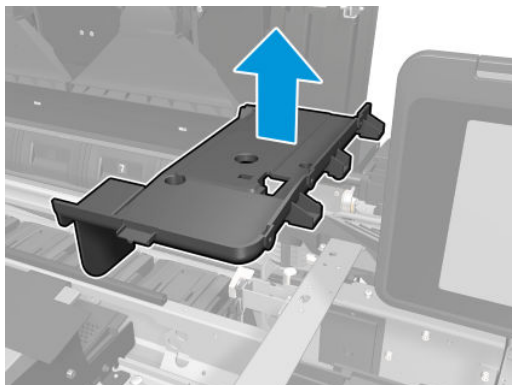
1. Remove the [Left E-box cover \(CZ309-67057, CZ309-67260\)](#) on page 655.
2. Remove the [Top-right exterior cover fixed trim \(CZ309-67062\)](#) on page 658.
3. Remove three screws.



4. Open the scanner.



5. Remove the printhead bezel right.



Installation

- ▲ To install, perform the removal operation in reverse.

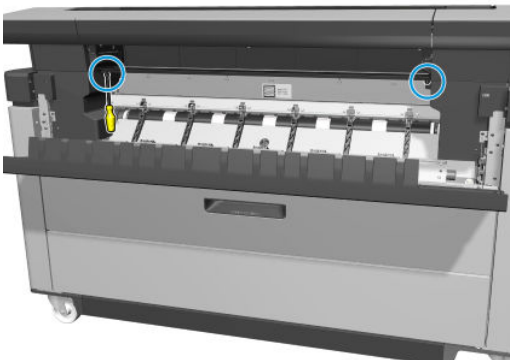
Top paper-loop door (CZ309-67052)

Removal

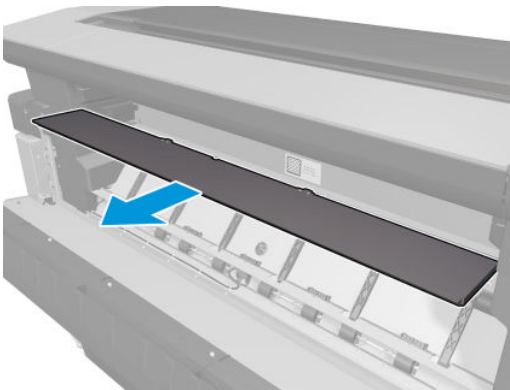
1. Open the paper-loop front door.



2. Remove two screws.



3. Remove the paper-loop top door.



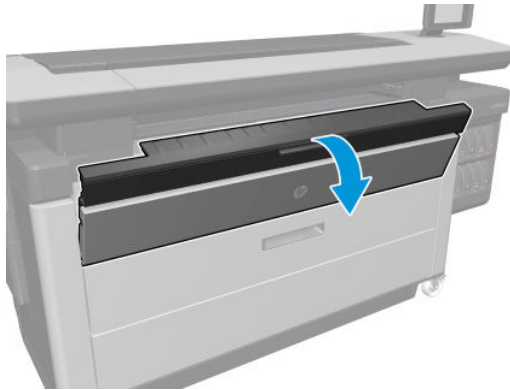
Installation

- ▲ To install, perform the removal operation in reverse.

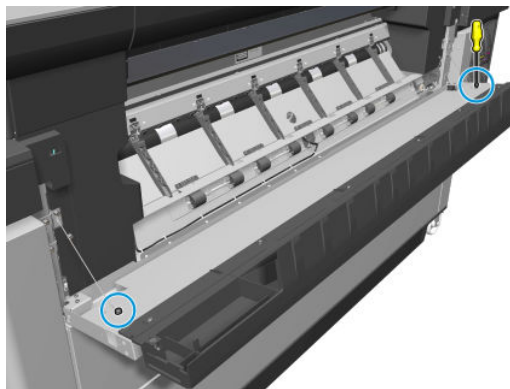
Front paper-loop door (CZ309-67051)

Removal

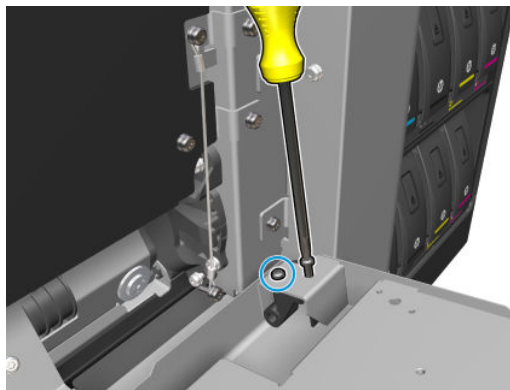
1. Open the paper-loop front door.



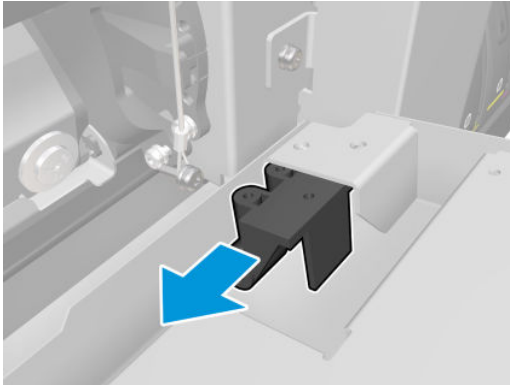
2. Remove two strap cable screws.



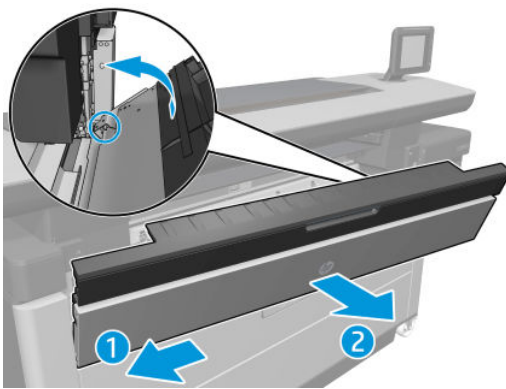
3. Remove two more screws.



4. Remove the support closure.



5. Remove the paper-loop front door.



Installation

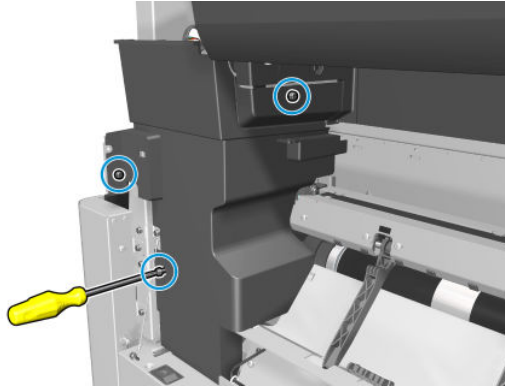
- ▲ To install, perform the removal operation in reverse.

Left-interior side cover (CZ309-67053)

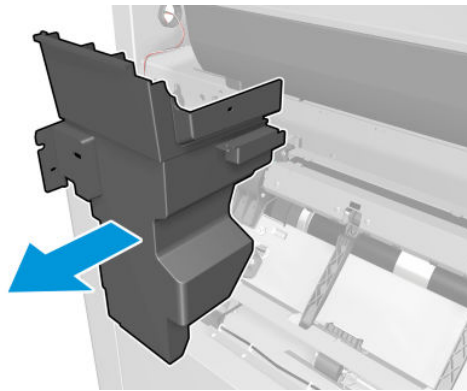
Removal

1. Remove the [Top-left exterior cover \(CZ309-67036\)](#) on page 637.
2. Remove the [Rear-left corner cover \(CZ309-67037\)](#) on page 638.
3. Remove the [Top-left cover \(CZ309-67038\)](#) on page 638.
4. Remove the [Left cover assembly \(CZ309-67039\)](#) on page 639.
5. Remove the [Front paper-loop door \(CZ309-67051\)](#) on page 661.
6. Remove the [Top paper-loop door \(CZ309-67052\)](#) on page 660.

7. Remove three screws.



8. Remove the interior side cover left.



Installation

- ▲ To install, perform the removal operation in reverse.

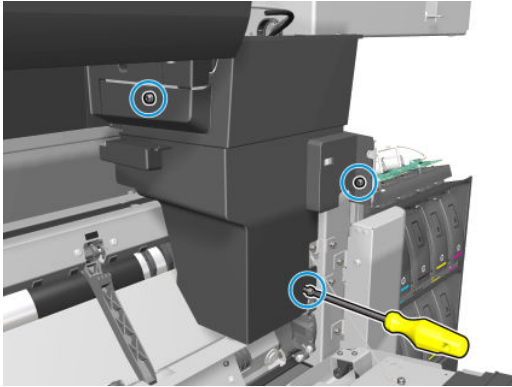
Right-interior side cover (CZ309-67054)

Removal

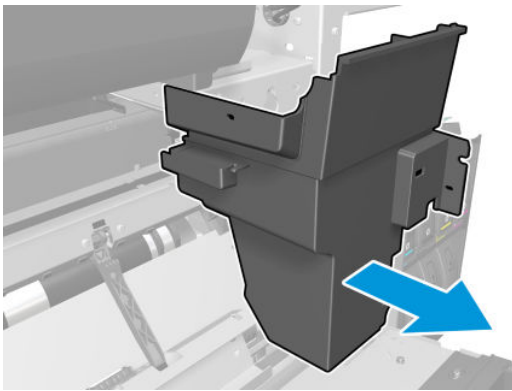
1. Remove the [Top-right exterior cover \(CZ309-67044\)](#) on page 646.
2. Remove the [Rear-right corner cover \(CZ309-67045\)](#) on page 647.
3. Remove the [Top-right cover \(CZ309-67046\)](#) on page 647.
4. Remove the [Right panel cover \(CZ309-67150\)](#) on page 648.
5. Remove the [Right cover assembly \(CZ309-67047\)](#) on page 649.
6. Remove the [Top paper-loop door \(CZ309-67052\)](#) on page 660.

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7. Remove three screws.



8. Remove the interior side cover left.



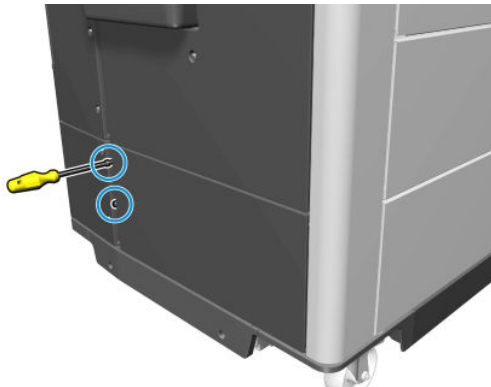
Installation

- ▲ To install, perform the removal operation in reverse.

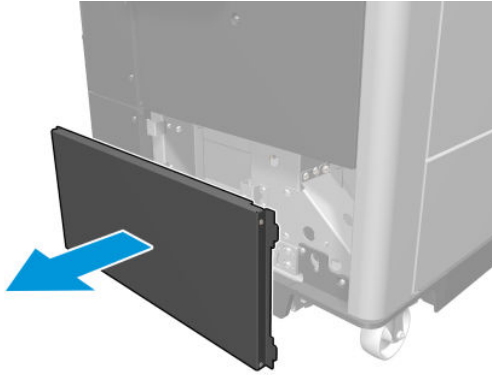
Lateral front L – 3 drawers (CZ309-67230)

Removal

1. Remove two screws.



2. Remove the lateral front L.



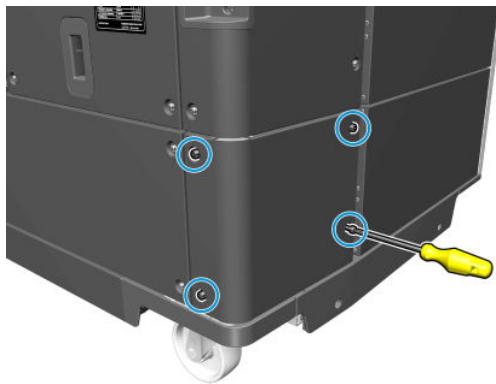
Installation

- ▲ To install, perform the removal operation in reverse.

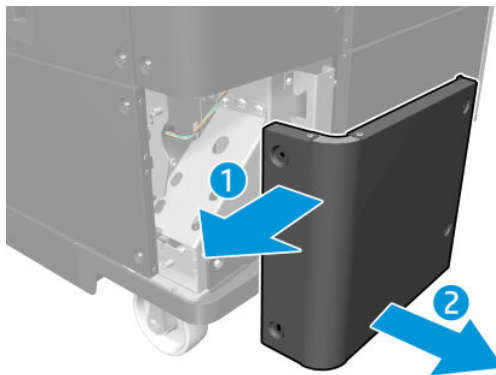
Back L – 3 drawers (CZ309-67232)

Removal

1. Remove four screws.



2. Remove the back L.



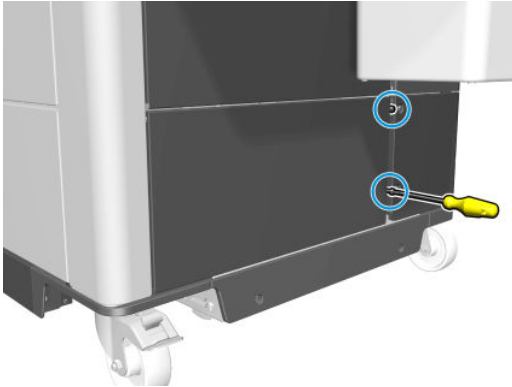
Installation

- ▲ To install, perform the removal operation in reverse.

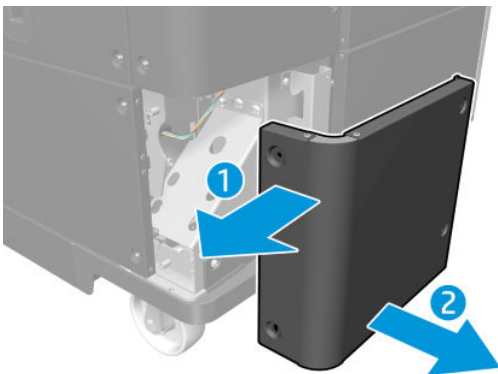
Lateral front R – 3 drawers (CZ309-67231)

Removal

1. Remove two screws.



2. Remove the lateral front R.



Installation

- ▲ To install, perform the removal operation in reverse.

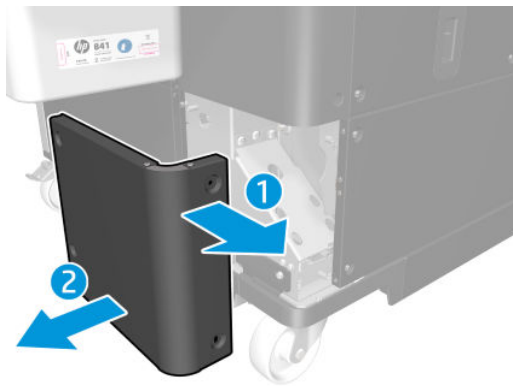
Back R – 3 drawers (CZ309-67233)

Removal

1. Remove four screws.



2. Remove the back R.



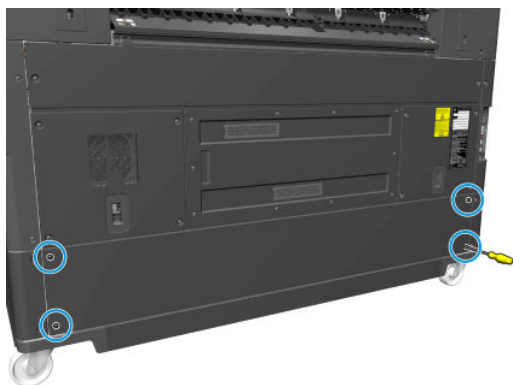
Installation

- ▲ To install, perform the removal operation in reverse.

Bottom-rear panel (CZ309-67234)

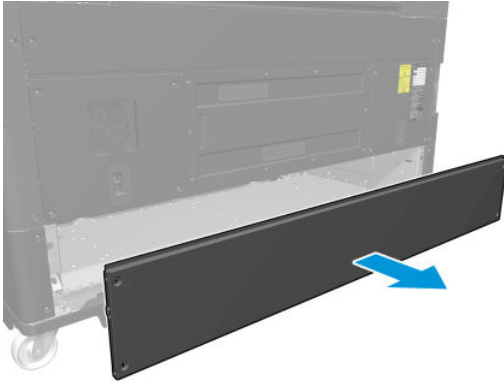
Removal

1. Remove four screws.



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2. Remove the rear bottom panel.



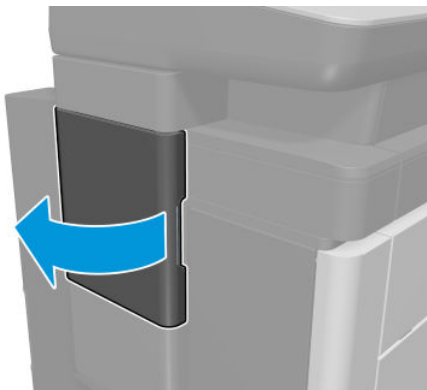
Installation

- ▲ To install, perform the removal operation in reverse.

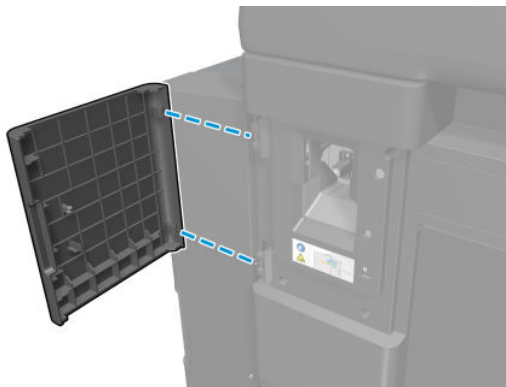
Service door (CZ309-67040)

Removal

1. Open the service door.



2. Unclip the service door.



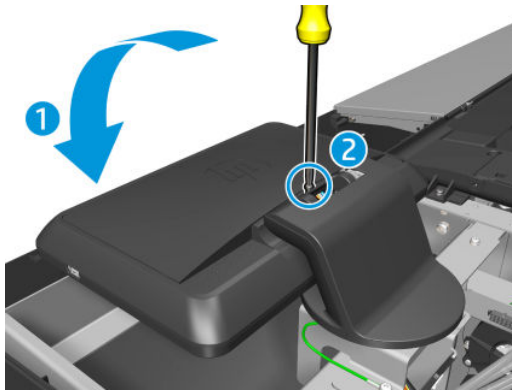
Installation

- ▲ To install, perform the removal operation in reverse.

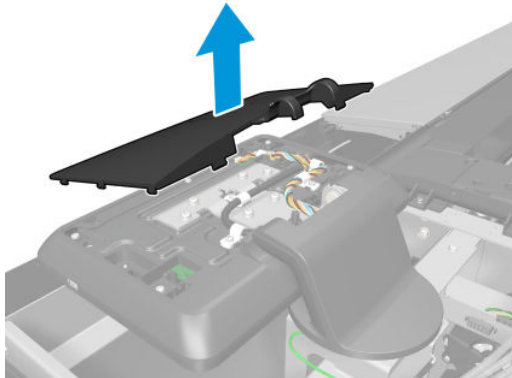
FP support (CZ309-67063)

Removal

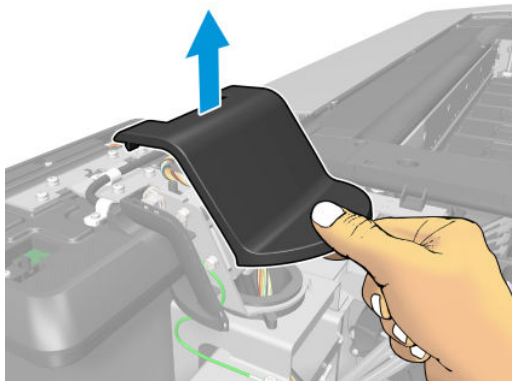
1. Remove the [Top-right exterior cover \(CZ309-67044\)](#) on page 646.
2. Remove the [Top-right exterior cover fixed trim \(CZ309-67062\)](#) on page 658.
3. Fold the front panel and remove a screw from its rear cover.



4. Remove the front panel's rear cover.



5. Remove the upper cover of the front-panel support.



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6. Unfold the front panel and remove the lower cover.



Installation

- ▲ To install, perform the removal operation in reverse.

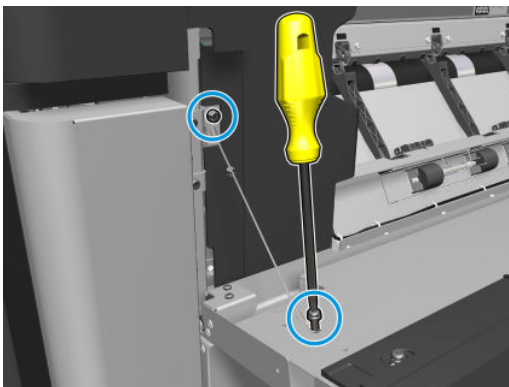
Front-door cables (CZ309-67064)

Removal

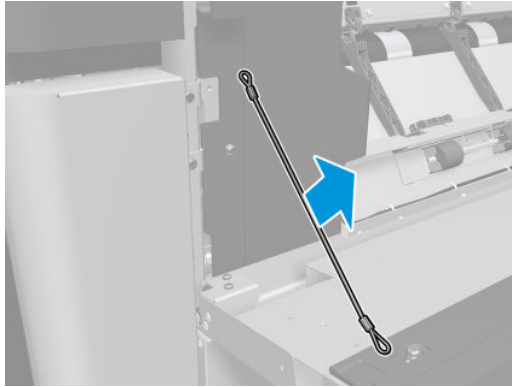
1. Open the paper-loop front door.



2. Remove two cable screws.



3. Remove the cable.



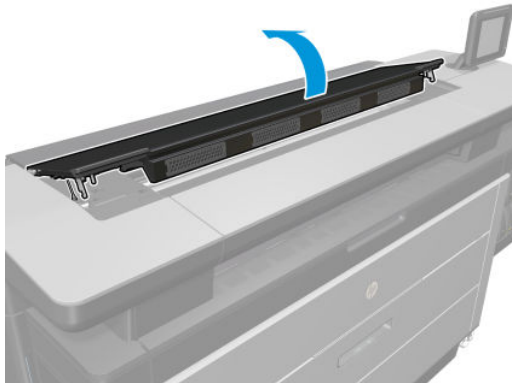
Installation

- ▲ To install, perform the removal operation in reverse.

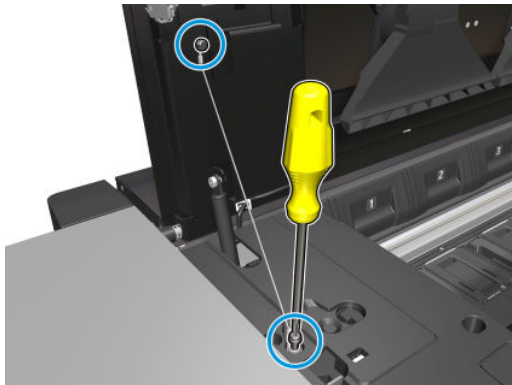
Top-door cable (CZ309-67065)

Removal

1. Open the top cover door.

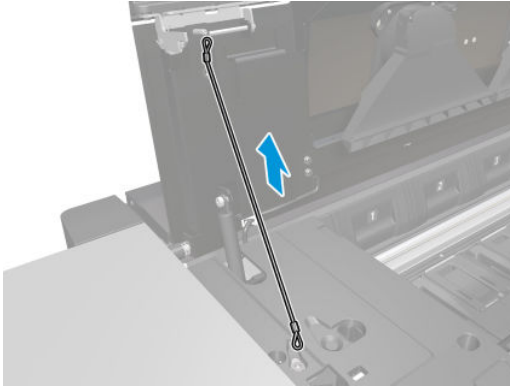


2. Remove two cable screws.



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3. Remove the cable.



Installation

- ▲ To install, perform the removal operation in reverse.

Front cover L assembly – 3 drawers (CZ309-67067)

Removal

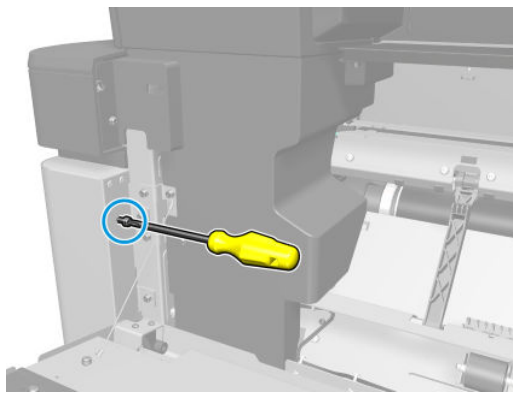
1. Remove the [Lower-left cover \(CZ309-67041\)](#) on page 641.
2. Remove the [Lateral front L – 3 drawers \(CZ309-67230\)](#) on page 664.
3. Remove three screws.



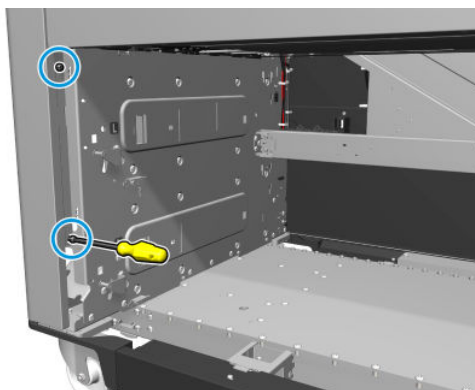
4. Open the paper-loop front door.



5. Remove a screw and close the paper-loop front door.



6. Remove the [Lower-right cover \(CZ309-67049\) on page 652](#).
7. Remove the [Lateral front R – 3 drawers \(CZ309-67231\) on page 666](#).
8. Remove the [Fake drawer \(CZ309-67228\) on page 689](#).
9. Remove two screws.

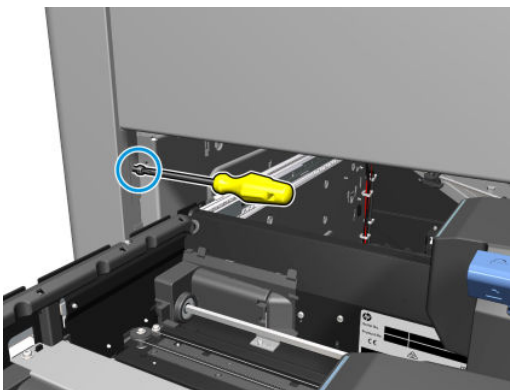


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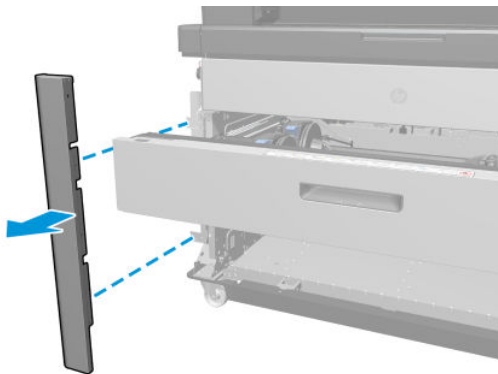
10. Open the top drawer.



11. Remove a screw.



12. Remove the front cover L assembly.



Installation

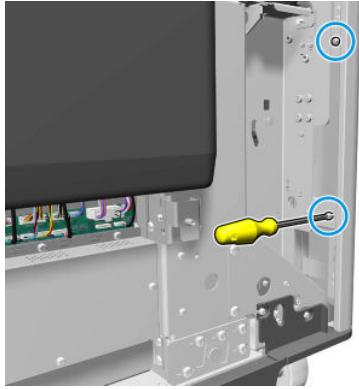
- ▲ To install, perform the removal operation in reverse.

Front cover L assembly – 2 drawers (CZ309-67068)

Removal

1. Remove the [Lower-left cover \(CZ309-67041\) on page 641](#).

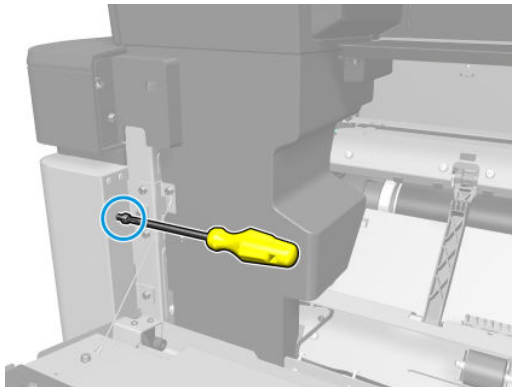
2. Remove two screws.



3. Open the paper-loop front door.



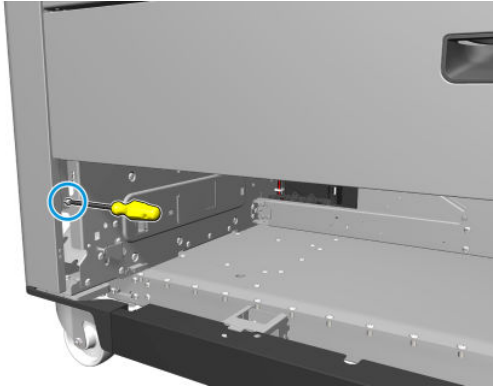
4. Remove a screw and close the paper-loop front door.



5. Remove the [Lower-right cover \(CZ309-67049\) on page 652](#).
6. Remove the [Fake drawer \(CZ309-67228\) on page 689](#).

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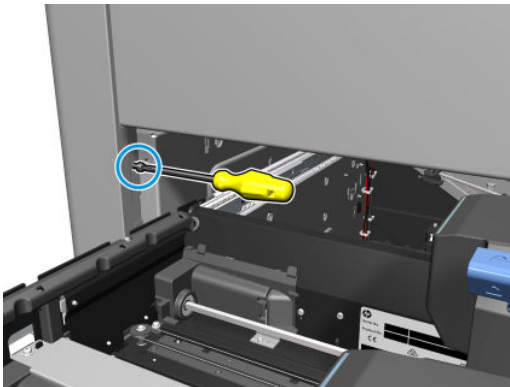
7. Remove a screw.



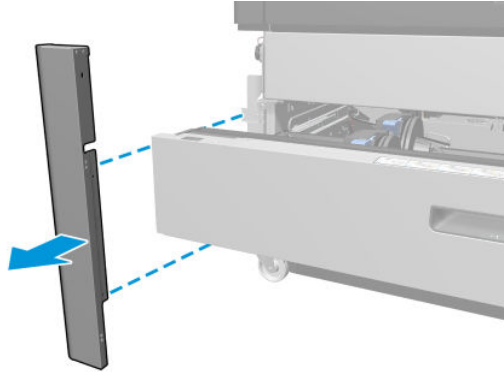
8. Open the top drawer.



9. Remove a screw.



10. Remove the front cover L assembly.



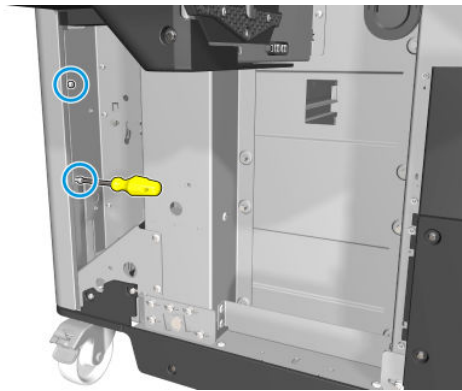
Installation

- ▲ To install, perform the removal operation in reverse.

Front cover R assembly – 3 drawers (CZ309-67069)

Removal

1. Remove the [Lower-right cover \(CZ309-67049\) on page 652](#).
2. Remove the [Lateral front R – 3 drawers \(CZ309-67231\) on page 666](#).
3. Remove two screws.

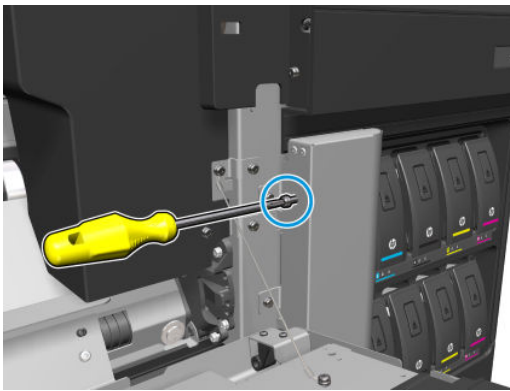


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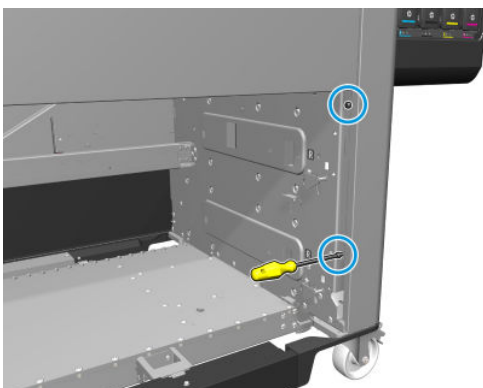
4. Open the paper-loop front door.



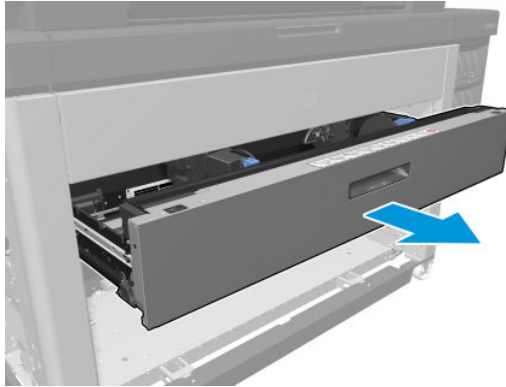
5. Remove a screw and close the paper-loop front door.



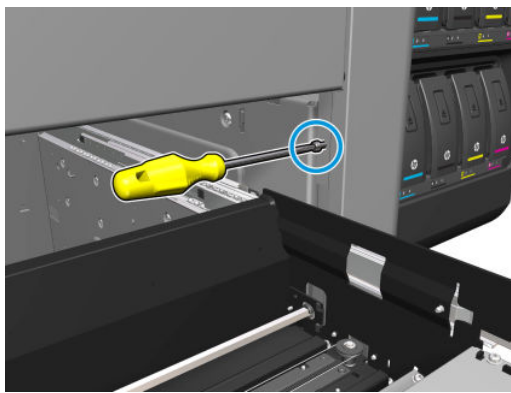
6. Remove the [Lower-left cover \(CZ309-67041\) on page 641](#).
7. Remove the [Lateral front L – 3 drawers \(CZ309-67230\) on page 664](#).
8. Remove the [Fake drawer \(CZ309-67228\) on page 689](#).
9. Remove two screws.



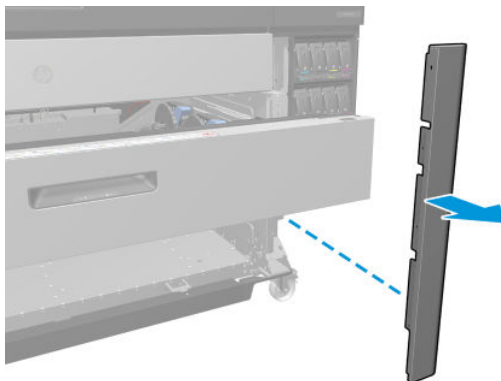
10. Open the top drawer.



11. Remove a screw.



12. Remove the front cover R assembly.



Installation

- ▲ To install, perform the removal operation in reverse.

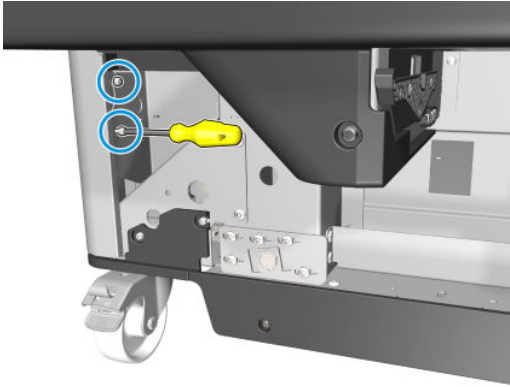
Front cover R assembly – 2 drawers (CZ309-67070)

Removal

1. Remove the [Lower-right cover \(CZ309-67049\) on page 652](#).

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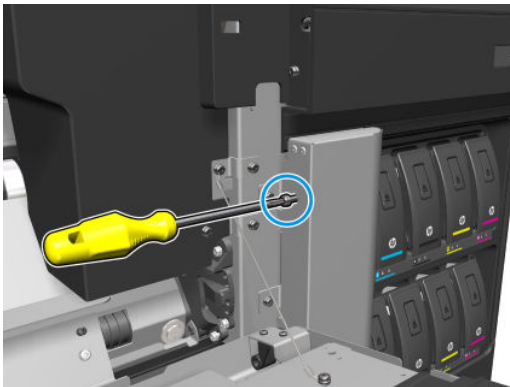
2. Remove two screws.



3. Open the paper-loop front door.

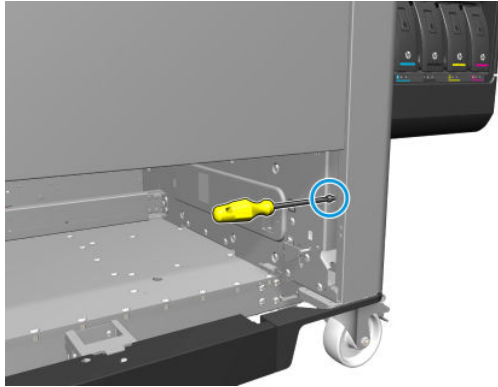


4. Remove a screw and close the paper-loop front door.

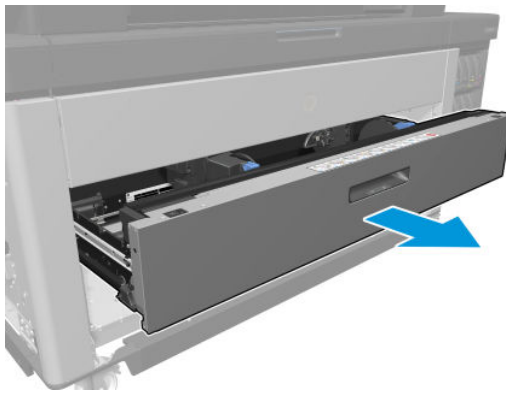


5. Remove the [Lower-left cover \(CZ309-67041\)](#) on page 641.
6. Remove the [Fake drawer \(CZ309-67228\)](#) on page 689.

7. Remove a screw.



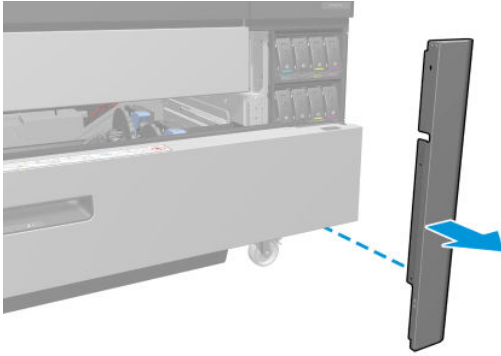
8. Open the top drawer.



9. Remove a screw.



10. Remove the front cover R assembly.



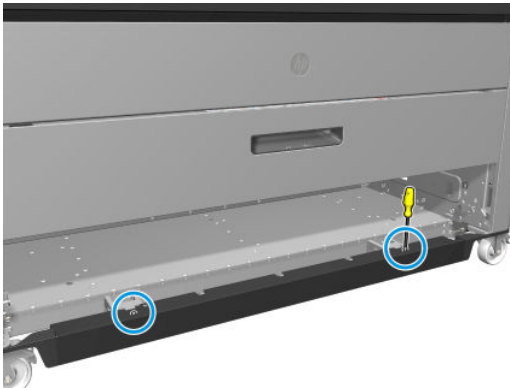
Installation

- ▲ To install, perform the removal operation in reverse.

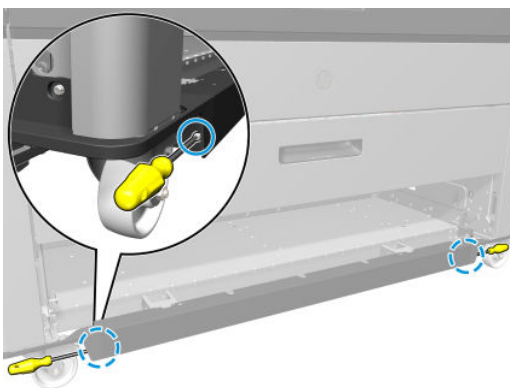
Foot cover (CZ309-67221)

Removal

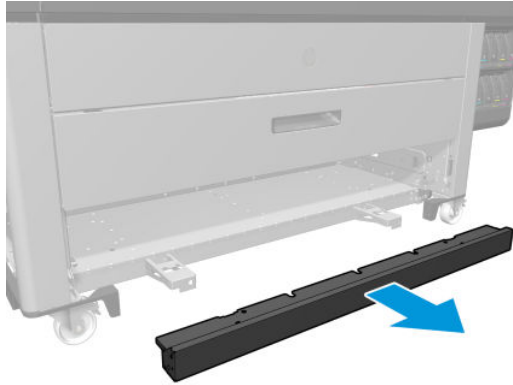
1. Remove the [Fake drawer \(CZ309-67228\)](#) on page 689.
2. Remove two screws.



3. Remove a screw from each side.



4. Remove the foot cover.




Installation

- ▲ To install, perform the removal operation in reverse.


Foot cover plate L (CZ309-67222)

Removal

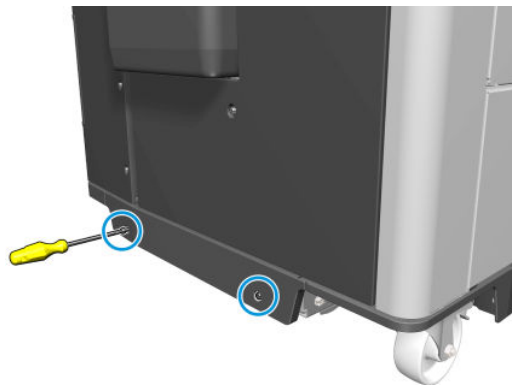
1. Remove the [Lower-left cover \(CZ309-67041\)](#) on page 641.

 **NOTE:** Skip this step for PWXL 4x00/3900s with SNs \geq MY7688Q008.

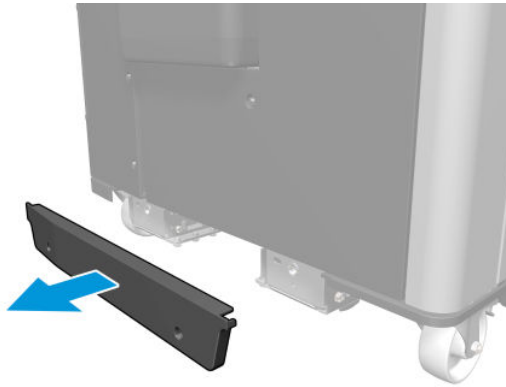
2. Remove the [Fake drawer \(CZ309-67228\)](#) on page 689.

 **NOTE:** Skip this step for PWXL 4x00/3900s with SNs \geq MY7688Q008.

3. Remove two screws.



4. Remove the foot cover plate L.




Installation

- ▲ To install, perform the removal operation in reverse.


Foot cover plate R (CZ309-67223)

Removal

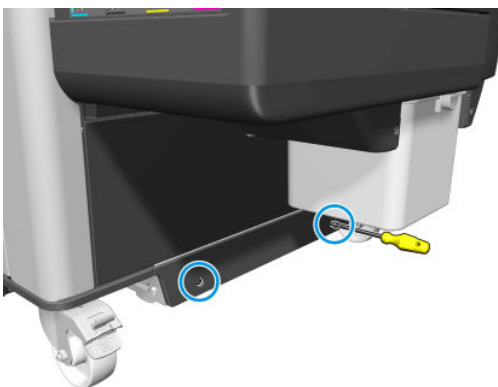
1. Remove the [Lower-right cover \(CZ309-67049\) on page 652](#).

 **NOTE:** Skip this step for PWXL 4x00/3900s with SNs \geq MY7688Q008.

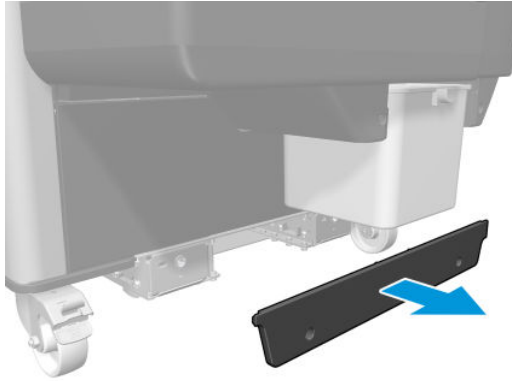
2. Remove the [Fake drawer \(CZ309-67228\) on page 689](#).

 **NOTE:** Skip this step for PWXL 4x00/3900s with SNs \geq MY7688Q008.

3. Remove two screws.



4. Remove the foot cover plate R.



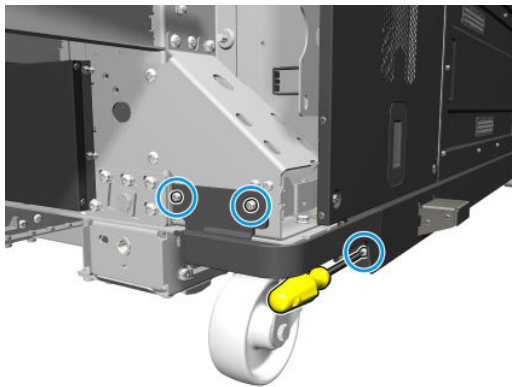
Installation

- ▲ To install, perform the removal operation in reverse.

Foot cover ext R (CZ309-67224)

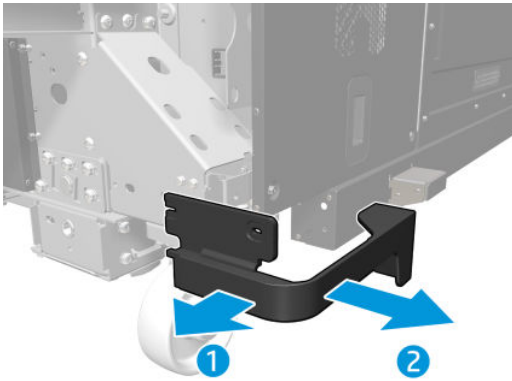
Removal

1. Remove the [Rear-right cover \(CZ309-67050\) on page 653](#).
2. Remove the [Foot cover plate R \(CZ309-67223\) on page 684](#).
3. Remove three screws.



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4. Remove the foot cover ext R.



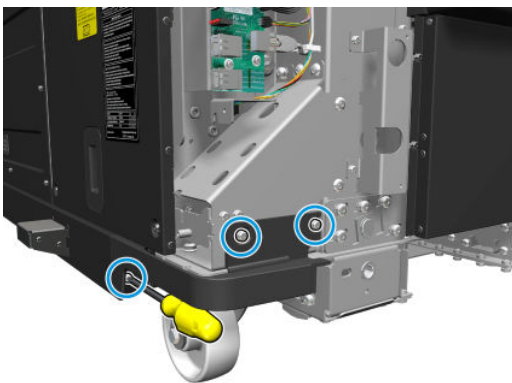
Installation

- ▲ To install, perform the removal operation in reverse.

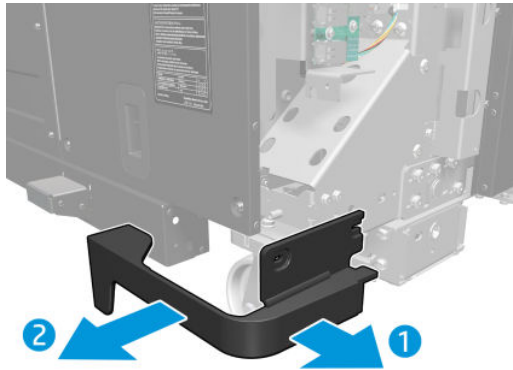
Foot cover ext L (CZ309-67225)

Removal

1. Remove the [Rear-left cover connector \(CZ309-67043\)](#) on page 644.
2. Remove the [Foot cover plate L \(CZ309-67222\)](#) on page 683.
3. Remove three screws.



4. Remove the foot cover ext L.



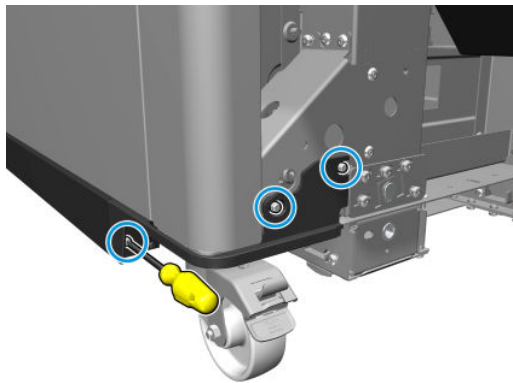
Installation

- ▲ To install, perform the removal operation in reverse.

Foot cover corner R (CZ309-67226)

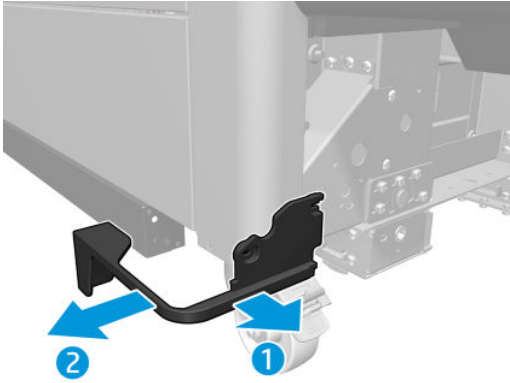
Removal

1. Remove the [Lower-right cover \(CZ309-67049\) on page 652](#).
2. Remove the [Foot cover plate R \(CZ309-67223\) on page 684](#).
3. Remove three screws.



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4. Remove the foot cover corner R.



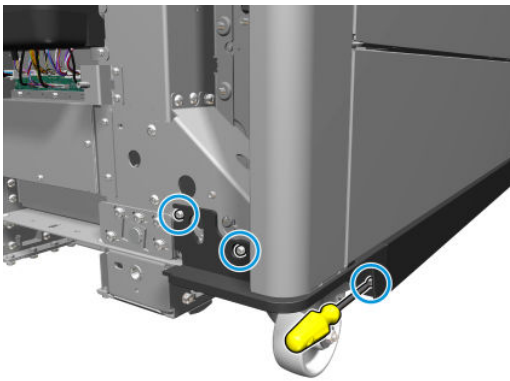
Installation

- ▲ To install, perform the removal operation in reverse.

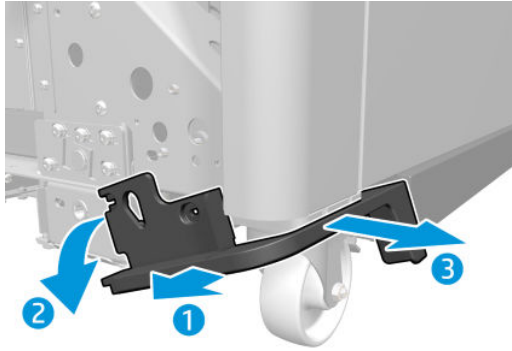
Foot cover corner L (CZ309-67227)

Removal

1. Remove the [Lower-left cover \(CZ309-67041\)](#) on page 641.
2. Remove the [Foot cover plate L \(CZ309-67222\)](#) on page 683.
3. Remove three screws.



4. Remove the foot cover corner L.



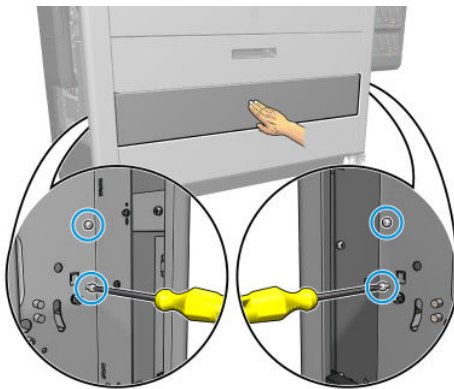
Installation

- ▲ To install, perform the removal operation in reverse.

Fake drawer (CZ309-67228)

Removal

1. If your printer is an 8000, remove the [Lateral front L – 3 drawers \(CZ309-67230\) on page 664](#); otherwise, remove the [Lower-left cover \(CZ309-67041\) on page 641](#).
2. If your printer is an 8000, remove the [Lateral front R – 3 drawers \(CZ309-67231\) on page 666](#); otherwise, remove the [Lower-right cover \(CZ309-67049\) on page 652](#).
3. Remove two screws from each side.




4. Remove the fake drawer.



Installation

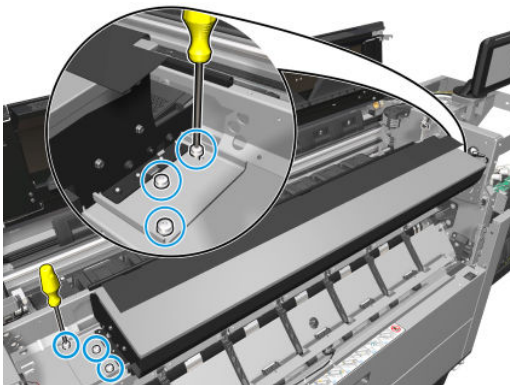
- ▲ To install, perform the removal operation in reverse.

No-scanner cover (CZ309-67235) (PWXLs w/ SNs below MY7468Q002)

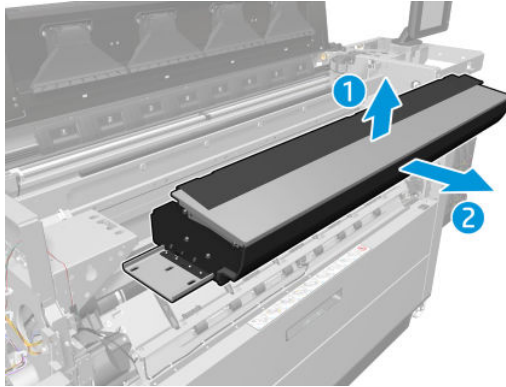
 **NOTE:** Please note that this part is only for printers with SNs lower than MY7468Q002. Printers with higher SNs have a new design and this part is not needed for them.

Removal

1. Remove the [Let printhead bezel \(CZ309-67060\) on page 657](#).
2. Remove the [Right printhead bezel \(CZ309-67061\) on page 659](#).
3. Remove the [Left-interior side cover \(CZ309-67053\) on page 662](#).
4. Remove the [Right-interior side cover \(CZ309-67054\) on page 663](#).
5. Remove three screws from each side.



6. Remove the no-scanner cover.



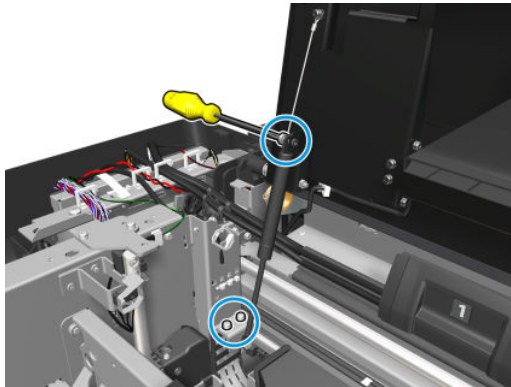
Installation

- ▲ To install, perform the removal operation in reverse.

Top cover cylinder (CZ309-67236)

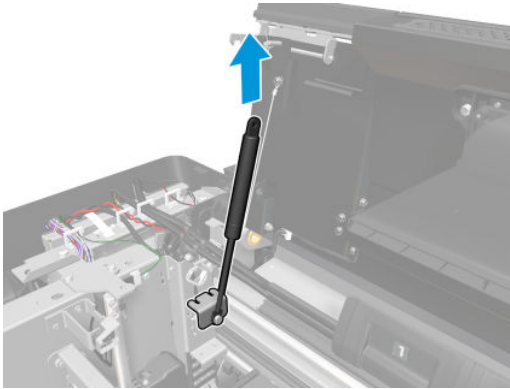
Removal

1. Remove the [Top-left exterior cover \(CZ309-67036\)](#) on page 637.
2. Remove the [Let printhead bezel \(CZ309-67060\)](#) on page 657.
3. Remove three screws.



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4. Remove the top cover cylinder.



Installation

- ▲ To install, perform the removal operation in reverse.

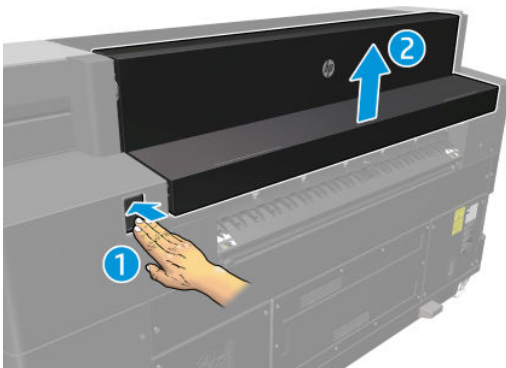
Dryer top cover (CZ309-67238)

Removal

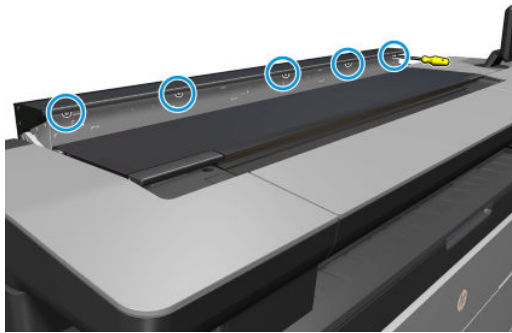
1. Remove six screws.



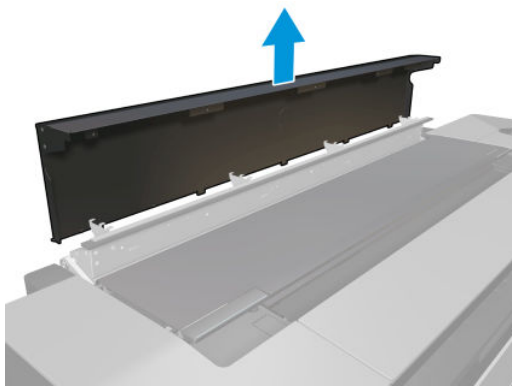
2. Open the door.



3. Remove six screws.



4. Remove the dryer top cover.



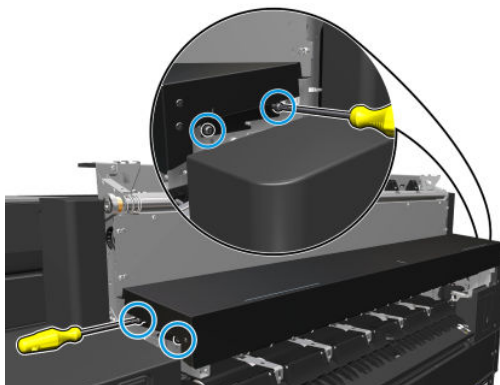
Installation

- ▲ To install, perform the removal operation in reverse.

Pinch roller top cover (CZ309-67133)

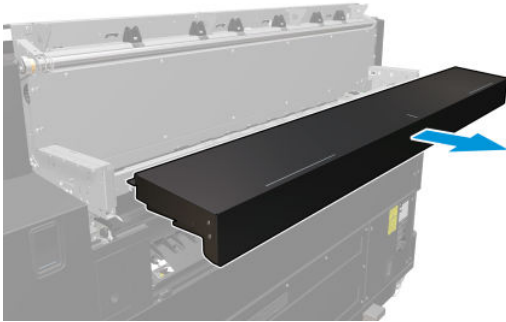
Removal

1. Remove the [Dryer top cover \(CZ309-67238\)](#) on page 692.
2. Remove two screws from each side.



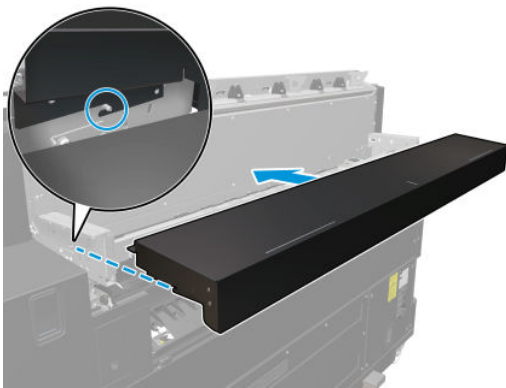
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3. Remove the pinch roller top cover.



Installation

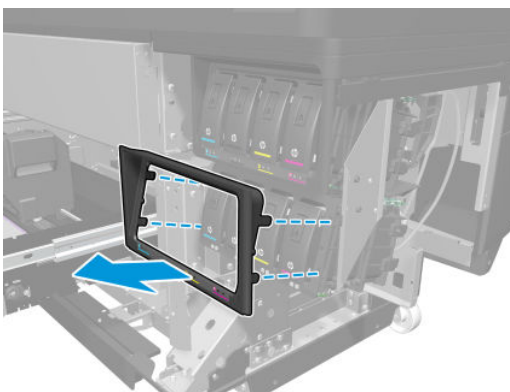
- ▲ Install the new pinch roller top cover.



ISS bottom bezel (CZ309-67240)

Removal

1. Remove the [Bottom right cover \(CZ309-67048\)](#) on page 651.
2. Remove the [Front cover R assembly – 2 drawers \(CZ309-67070\)](#) on page 679.
3. Remove the ISS bottom bezel.



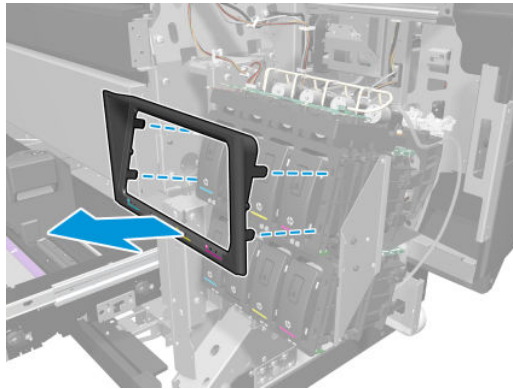
Installation

- ▲ To install, perform the removal operation in reverse.

ISS top bezel (CZ309-67240)

Removal

1. Remove the [Right cover assembly \(CZ309-67047\) on page 649](#).
2. Remove the [ISS bottom bezel \(CZ309-67240\) on page 694](#).
3. Remove the ISS top bezel.



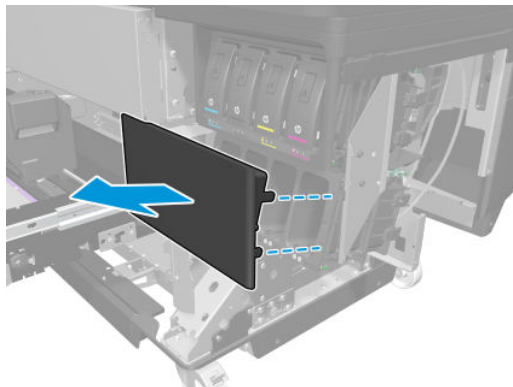
Installation

- ▲ To install, perform the removal operation in reverse.

ISS bezel cover – 4 inks (CZ309-67248)

Removal

1. Remove the [Bottom right cover \(CZ309-67048\) on page 651](#).
2. Remove the [Front cover R assembly – 2 drawers \(CZ309-67070\) on page 679](#).
3. Remove the ISS bezel cover – 4 inks.



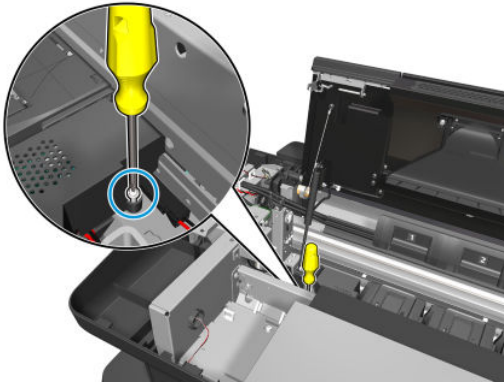
Installation

- ▲ To install, perform the removal operation in reverse.

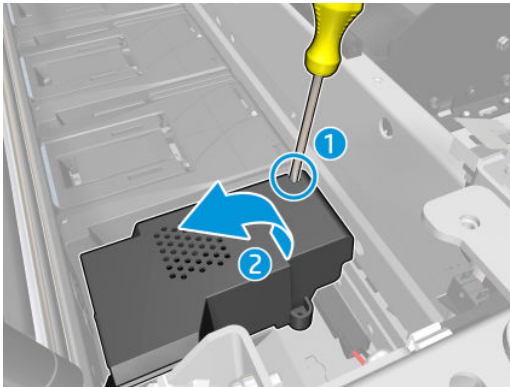
Menorca cover (CZ309-67017)

Removal

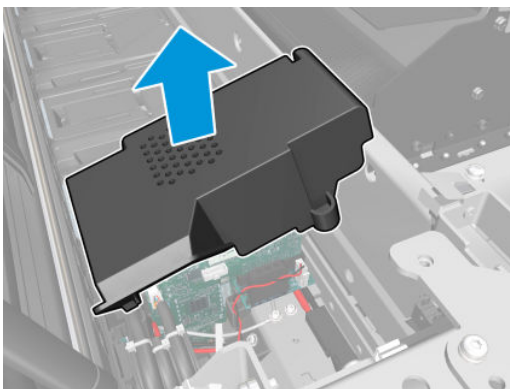
1. Remove the [Let printhead bezel \(CZ309-67060\) on page 657](#).
2. Remove a screw from the Menorca cover.



3. Unclip the Menorca cover.



4. Remove the Menorca cover.



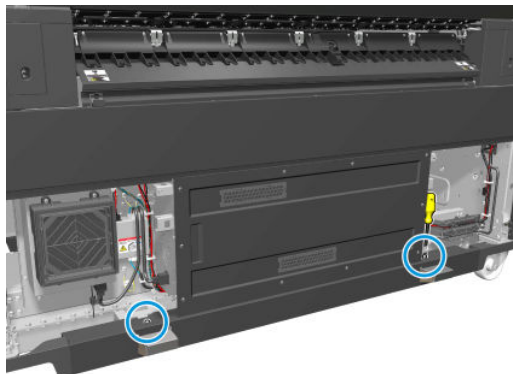
Installation

- ▲ To install, perform the removal operation in reverse.

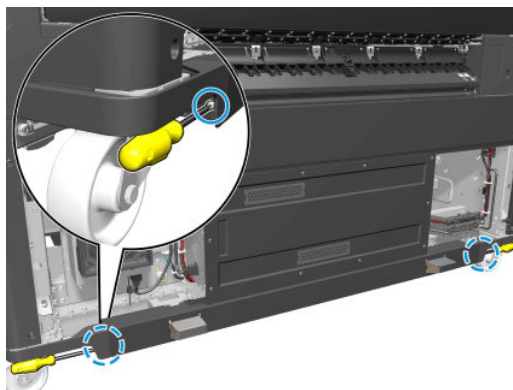
Foot cover rear LE (CZ309-67247)

Removal

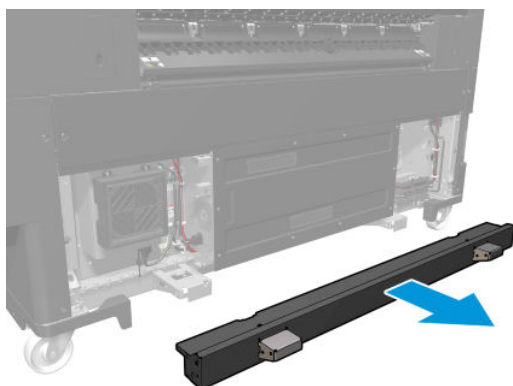
1. Remove the [Right E-box cover \(CZ309-67058, CZ309-67261\) on page 654](#).
2. Remove the [Left E-box cover \(CZ309-67057, CZ309-67260\) on page 655](#).
3. Remove two screws.



4. Remove two screws from each side.



5. Remove the foot cover rear LE.



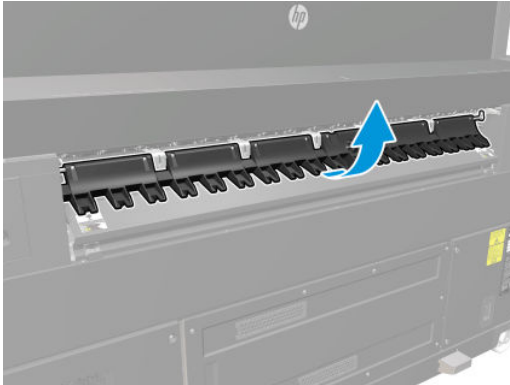
Installation

- ▲ To install, perform the removal operation in reverse.

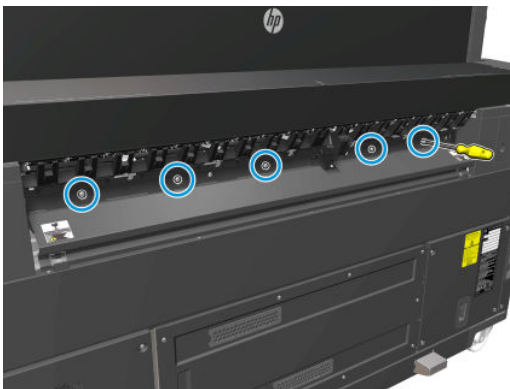
Diverter cover (CZ309-67147)

Removal

1. Open the flaps.



2. Remove five screws.



3. Remove the diverter cover.



Installation

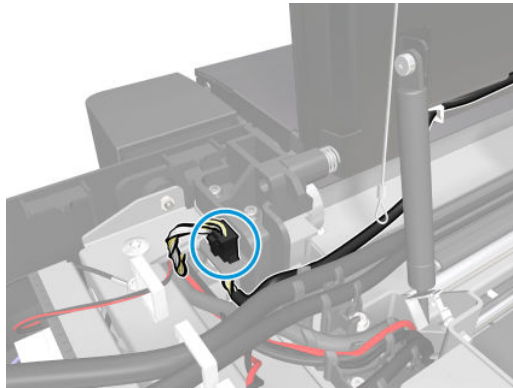
- ▲ To install, perform the removal operation in reverse.

Top cover subassembly (CZ309-67066)

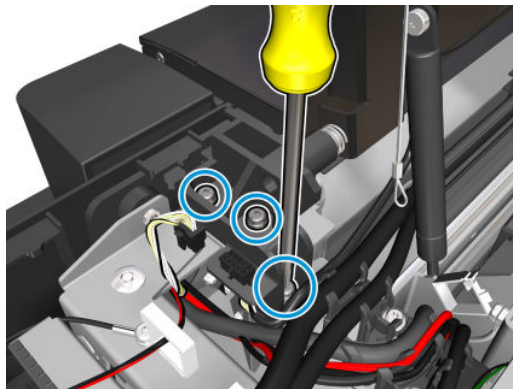
Please note that for PWXL 4x00/3900 units, this procedure only applies for SNs < MY7688Q008.

Removal

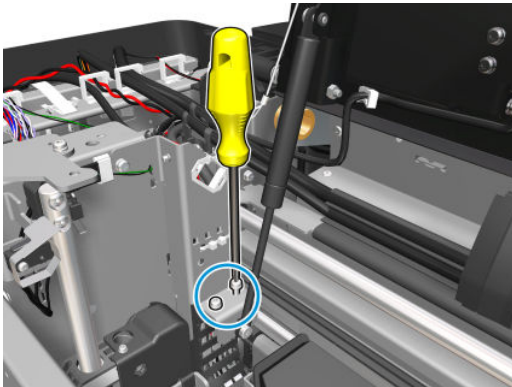
1. Remove the [Let printhead bezel \(CZ309-67060\)](#) on page 657.
2. Remove the [Top-right exterior cover \(CZ309-67044\)](#) on page 646.
3. Disconnect the fan cable on the left-hand side.



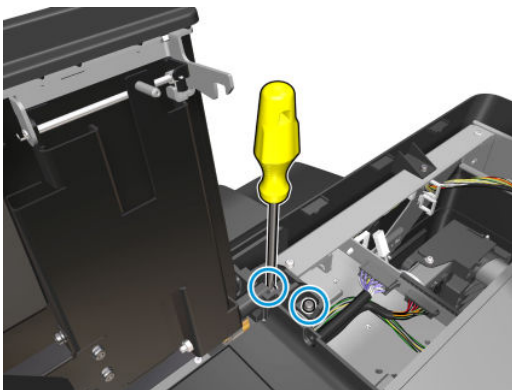
4. Remove three screws from the top cover shaft support.



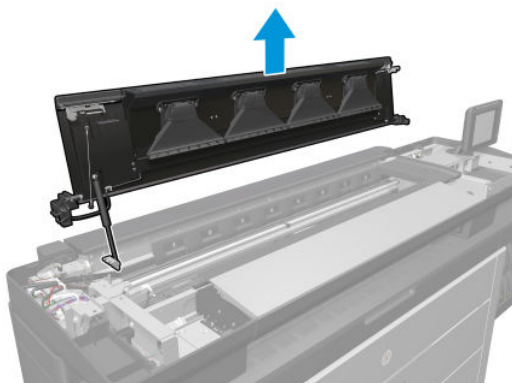
5. Remove two screws from the support bracket.



6. Remove two screws from the top cover shaft support right.



7. Remove the top cover subassembly.



Installation

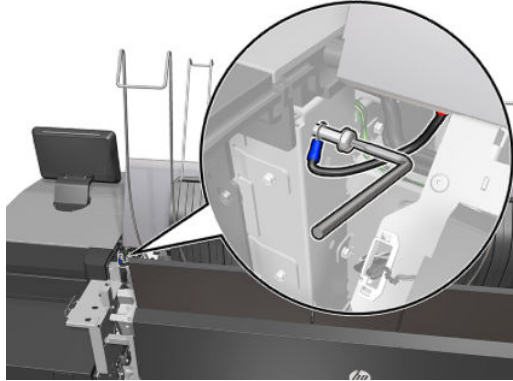
- ▲ To install, perform the removal operation in reverse.

Top cover subassembly (CZ309-67351) (PWXL 4x00/3900s with SNs \geq MY7688Q008)

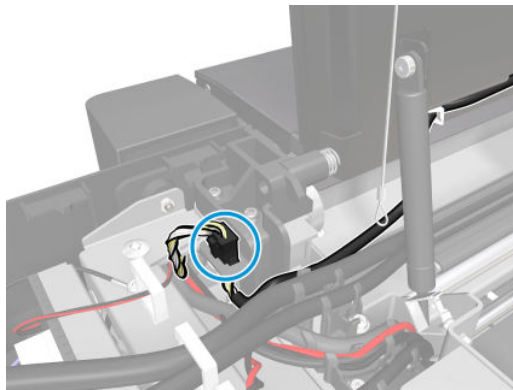
Please note that this part number and procedure only applies to PWXL 4x00/3900 units with SNs $<$ MY7688Q008.

Removal

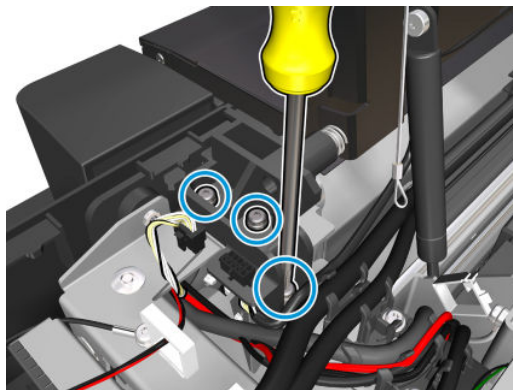
1. Remove the [Let printhead bezel \(CZ309-67060\) on page 657](#).
2. Remove the [Top-right exterior cover \(CZ309-67044\) on page 646](#).
3. Remove the grounding cable screw.



4. Disconnect the fan cable on the left-hand side.

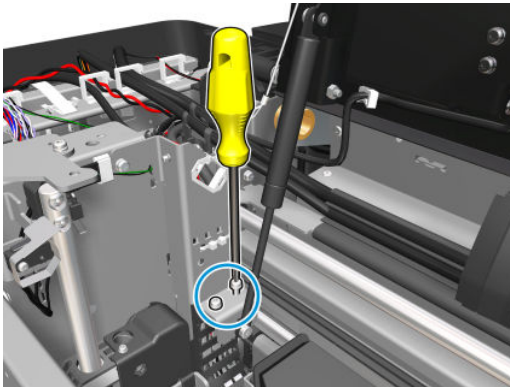


5. Remove three screws from the top cover shaft support.

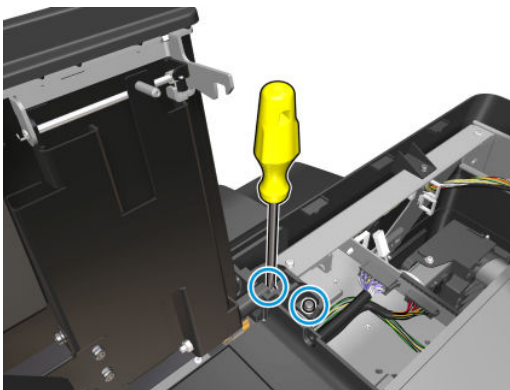


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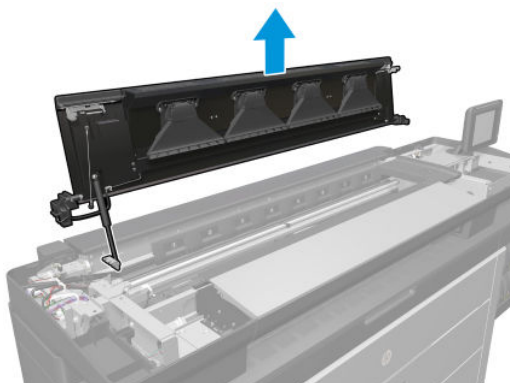
6. Remove two screws from the support bracket.



7. Remove two screws from the top cover shaft support right.



8. Remove the top cover subassembly.



Installation

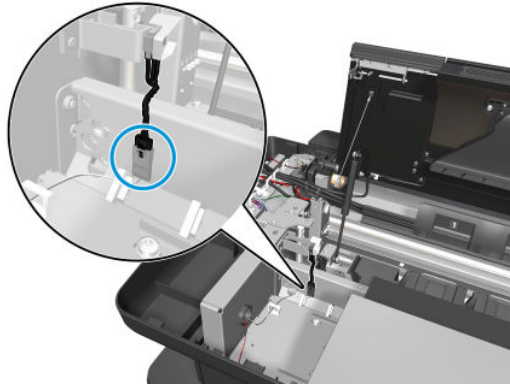
- ▲ To install, perform the removal operation in reverse.

Sensors and parts for connectors (CZ309-67071)

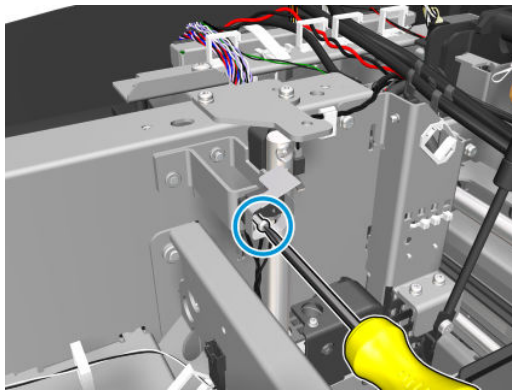
Removal

1. Remove the [Let printhead bezel \(CZ309-67060\) on page 657](#).

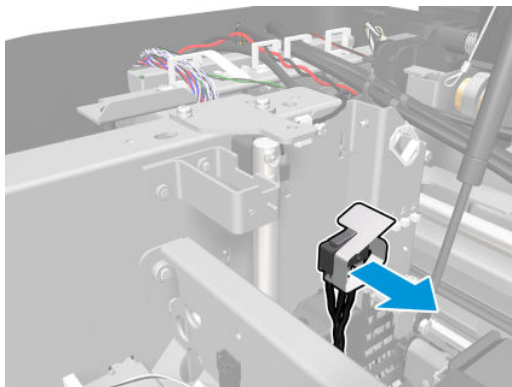
2. Disconnect the sensor cable.



3. Remove a screw from the sensor.



4. Remove the sensor.



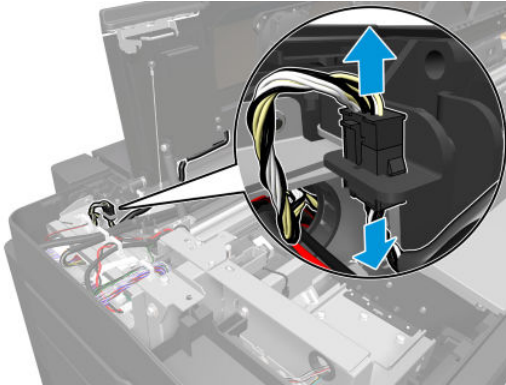
Installation

- ▲ To install, perform the removal operation in reverse.

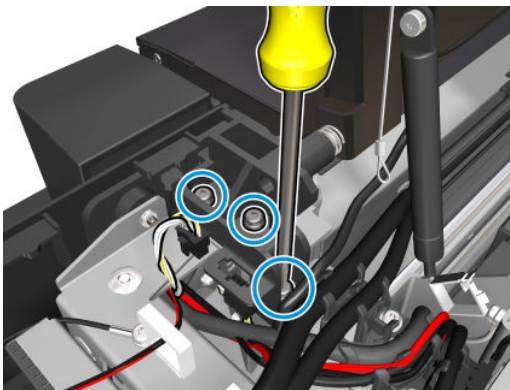
Top cover shafts (CZ309-67220)

Removal

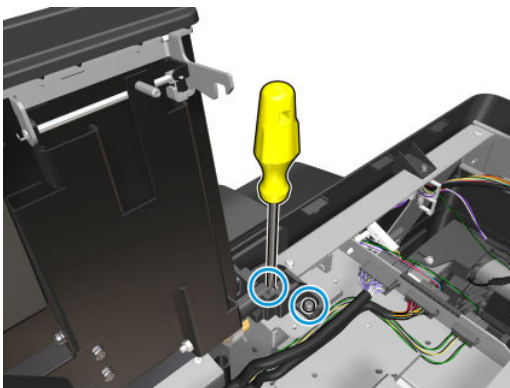
1. Remove the [Left printhead bezel \(CZ309-67060\) on page 657](#).
2. Remove the [Right printhead bezel \(CZ309-67061\) on page 659](#).
3. Unplug the cable and unclip the connector from the top cover shaft left bezel.



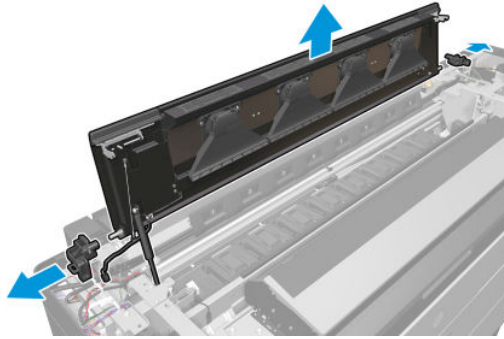
4. Unscrew three screws from the left top cover shaft.



5. Unscrew two screws from the right top cover shaft.



6. Lift the top cover and remove the shafts.



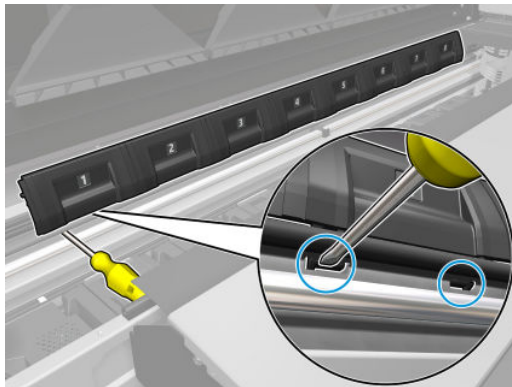
Installation

- ▲ To install, perform the removal operation in reverse.

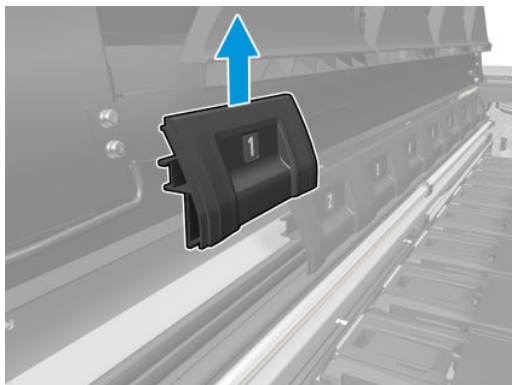
Printhead bezel rear (CZ309-67237)

Removal

1. Remove the [Let printhead bezel \(CZ309-67060\)](#) on page 657.
2. Starting with the leftmost bezel, unclip the printhead bezel legs with a flat screwdriver.



3. Remove the printhead bezel rear.



Installation

- ▲ To install, perform the removal operation in reverse.

Drawer subsystem

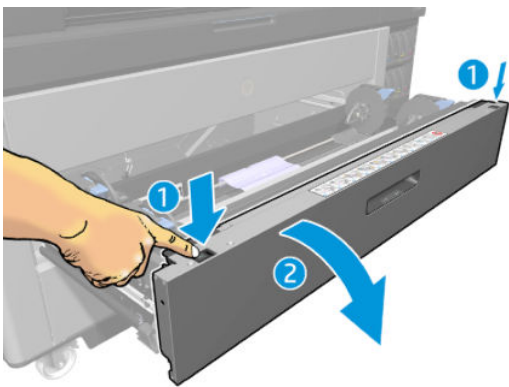
Front plate complete assembly (CZ309-67168)

Removal

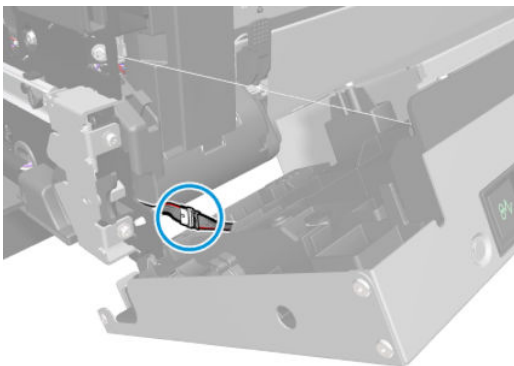
1. Open the Drawer.



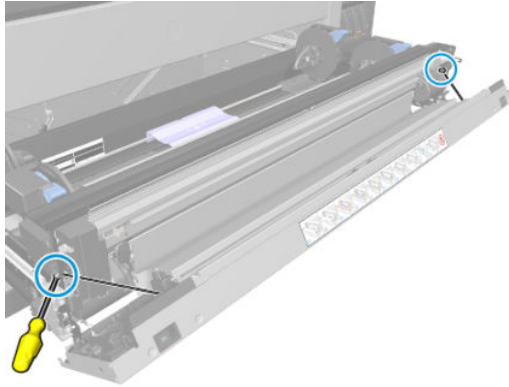
2. Open the paper input's front plate.



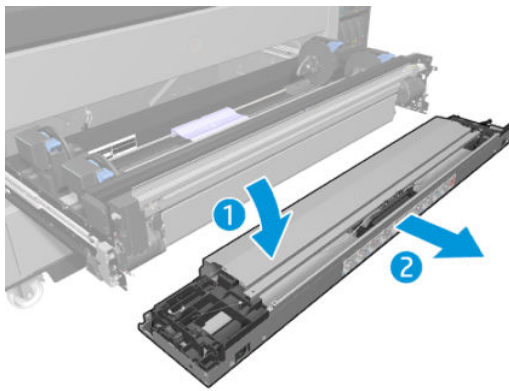
3. Disconnect the cable from the left of the paper input.



4. Unscrew the screws from the front plate's cable (left and right).

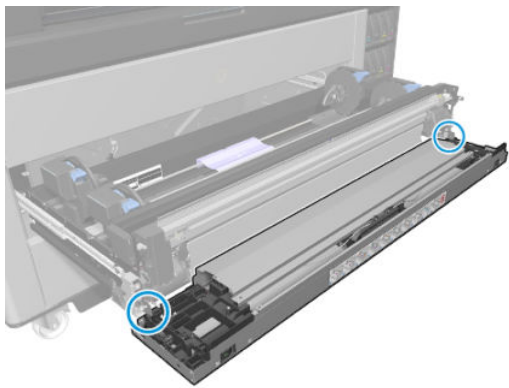


5. Remove the front plate by placing it horizontal and disengaging it from its hinges.



Installation

1. Place the new paper-input front cover completely horizontal.



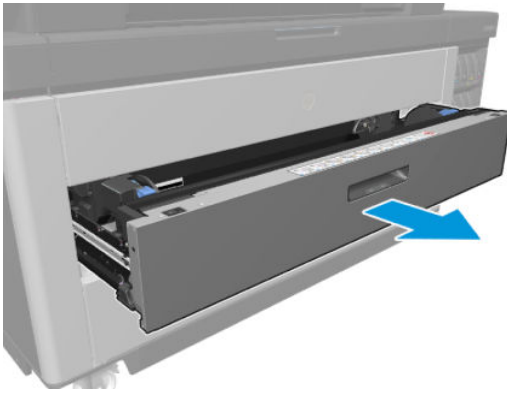
2. Perform the removal operation in reverse.

Cover assembly mounting (CZ309-67154)

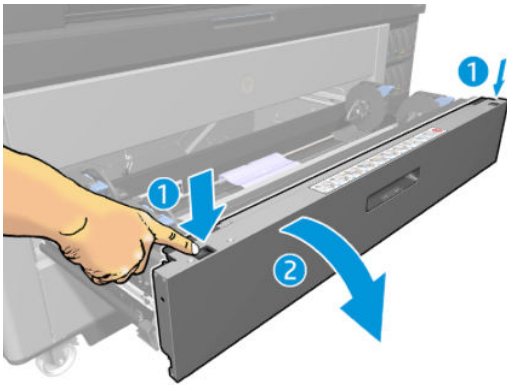
Removal

1. Open the Drawer.

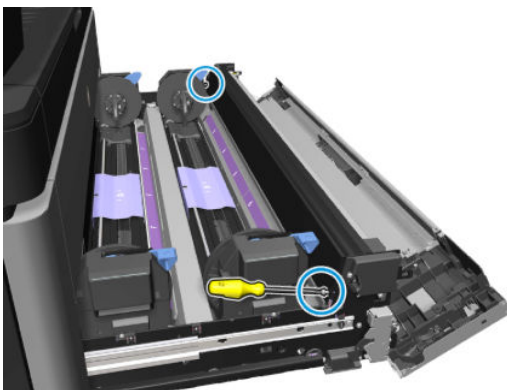
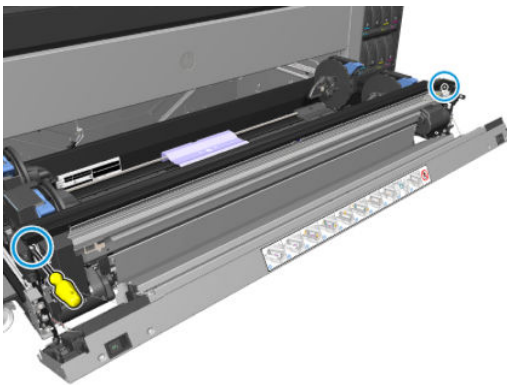
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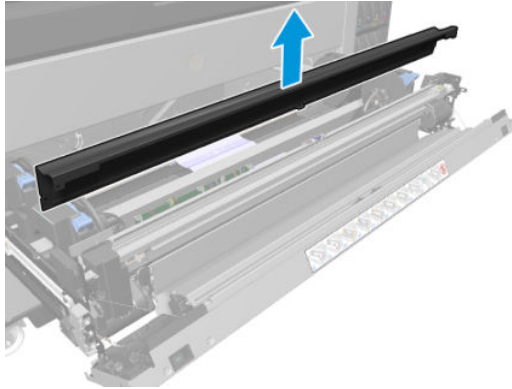
2. Open the paper input's front plate.



3. Unscrew four screws.




4. Remove the cover assembly mounting.

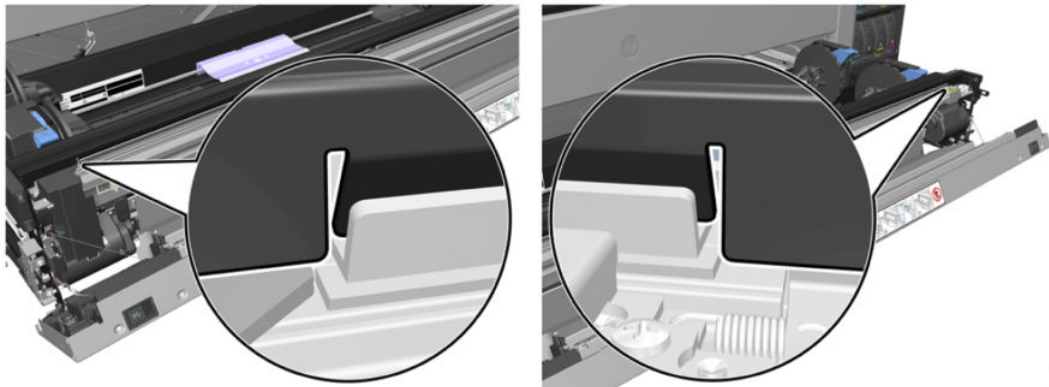


Installation

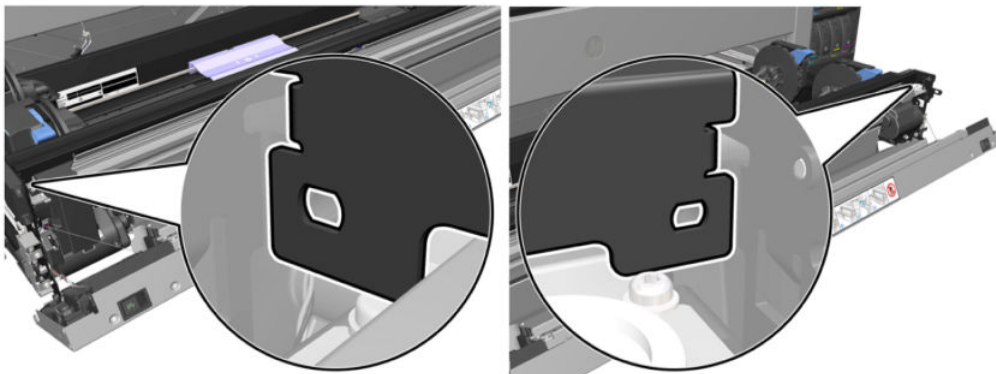
- ▲ To install, perform the removal operation in reverse. The following illustrations show correct positioning.

 **NOTE:** Ensure that the cover is correctly installed with respect to the cutter, otherwise you could experience paper jams.

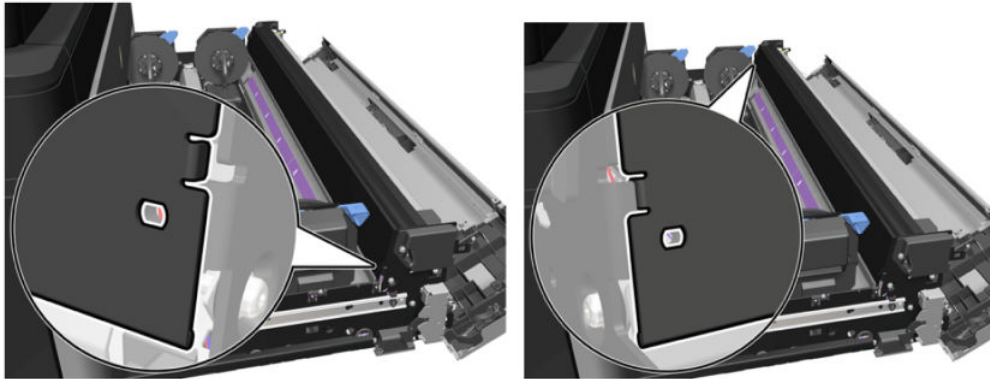
Central tab behind cutter



Lateral plate left and right (1) (front)



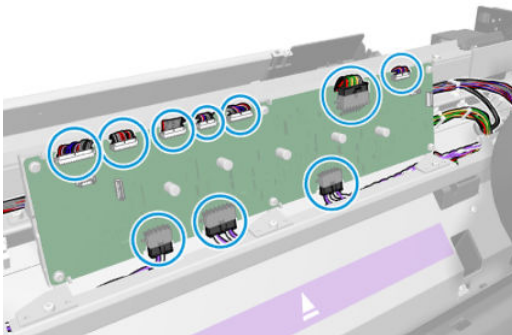
Lateral plate left and right (2) (rear)



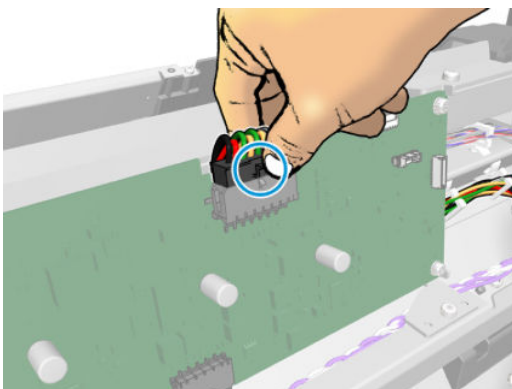
Main PCB NGR (CZ309-67162)

Removal

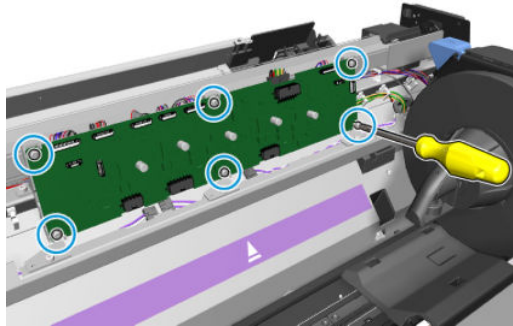
1. Remove the [Cover assembly mounting \(CZ309-67154\)](#) on page 707.
2. Unplug all the Main PCB's cables.



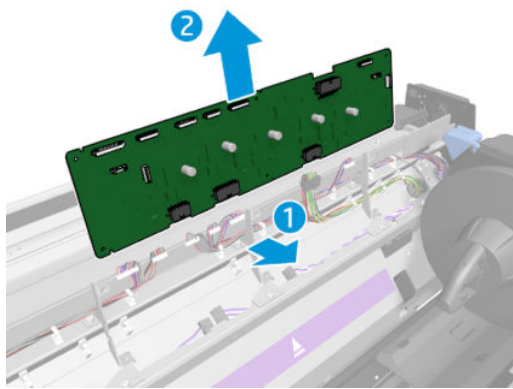
3. Pay special attention to cables that need you to press the plastic pin before unplugging.



4. Unscrew six screws.

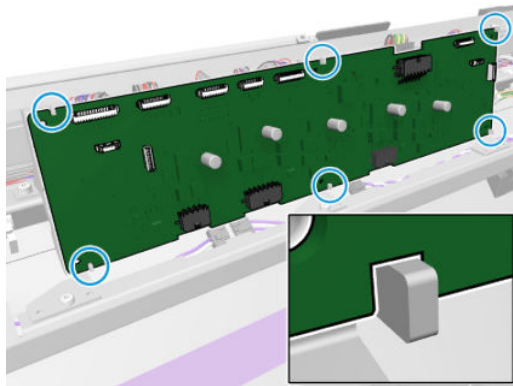


5. Remove the Main PCB.



Installation

- ▲ To install, perform the removal operation in reverse. The following illustration shows correct positioning.



Intermediate plate middle (CZ309-67169)

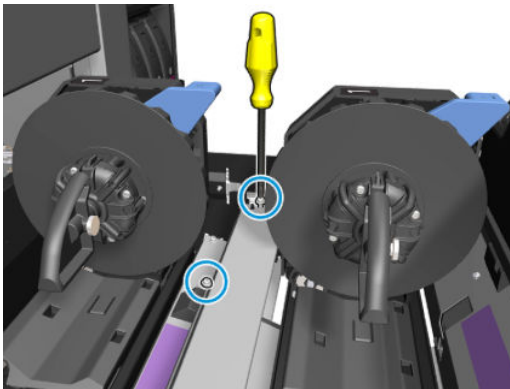
Removal

1. Open the Drawer.

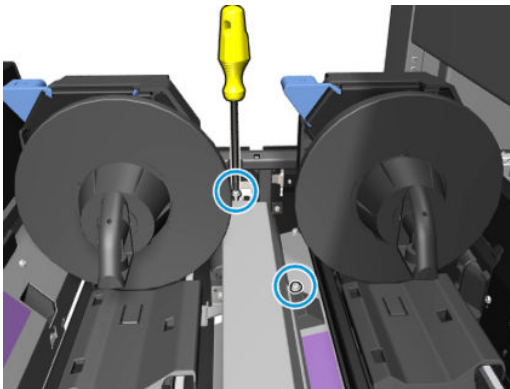
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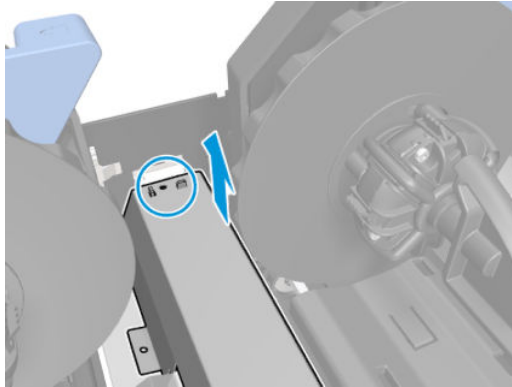
2. Unscrew 2 right screws.



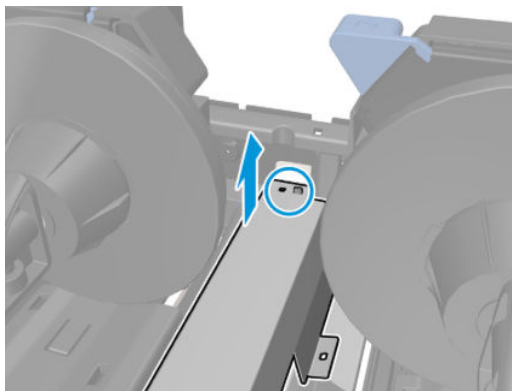
Unscrew 2 left screws.



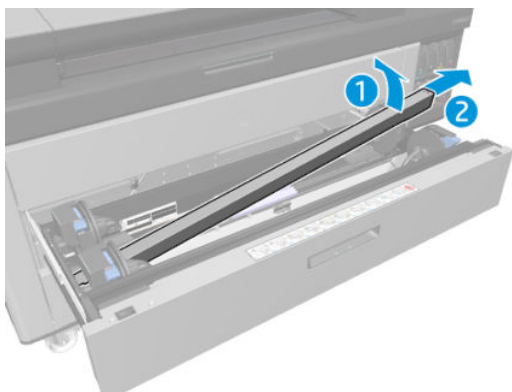
3. Pull up the right-hand side of the intermediate plate middle to disengage it from the pins.



4. Pull up the left-hand side slightly to disengage it from the pin.



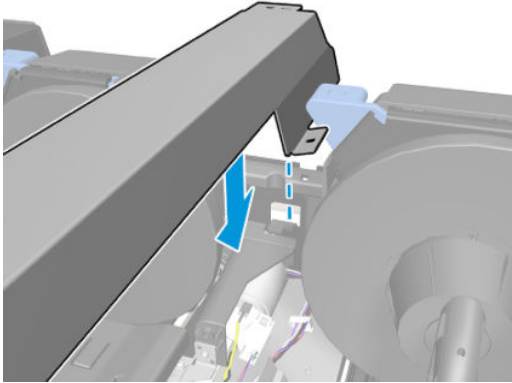
5. Rotate the plate counterclockwise by pulling up the right-hand side and leaving the left-hand side in place. Once the plate has passed the height of the paper input structure on the right, you can extract it diagonally.



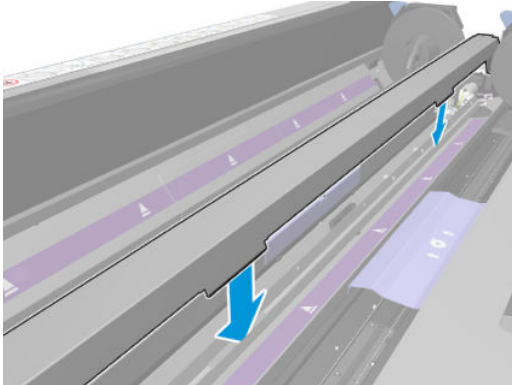
Installation

- ▲ To install, perform the removal operation in reverse. The following illustrations show correct positioning.

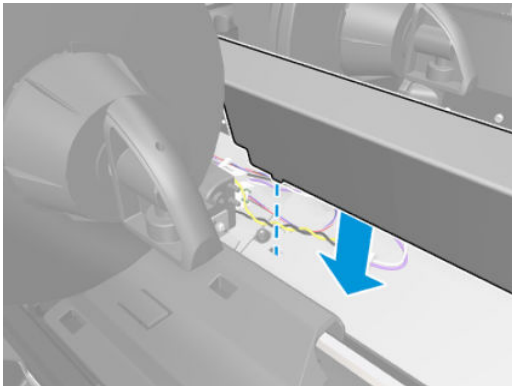
Correct positioning (left end of plate)



Rear pin slot



Front pin slot

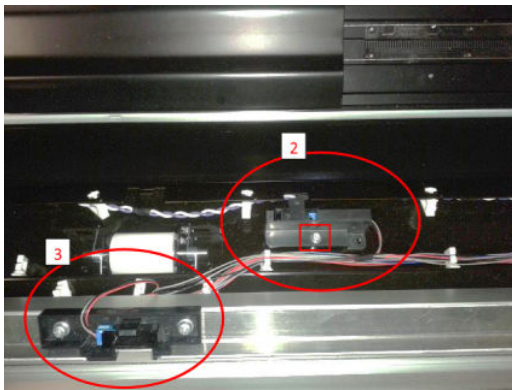


Paper sensor (CZ309-67160)

There are three paper sensors. One of them can be accessed after removing the [Intermediate plate middle \(CZ309-67169\)](#) on page 711.

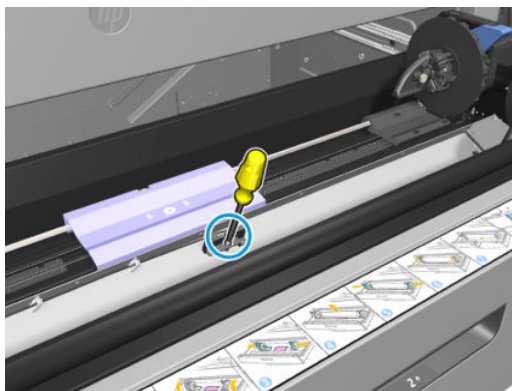


The other two can be accessed after removing the [Cover assembly mounting \(CZ309-67154\)](#) on page 707.



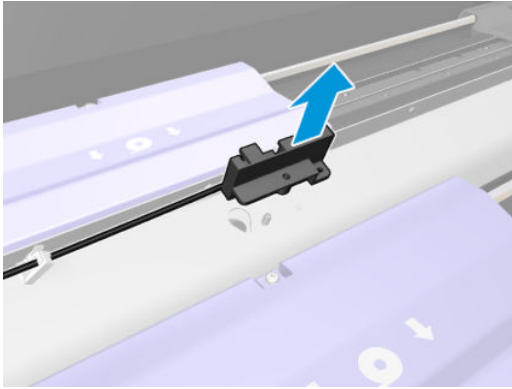
Removal (sensor 1)

1. Remove the [Intermediate plate middle \(CZ309-67169\)](#) on page 711.
2. Unscrew the screw attaching sensor 1.

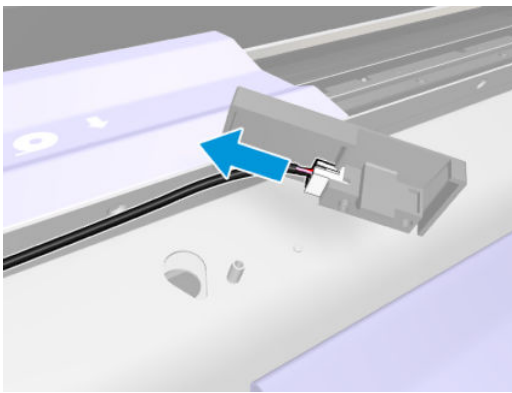


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3. Remove sensor 1.

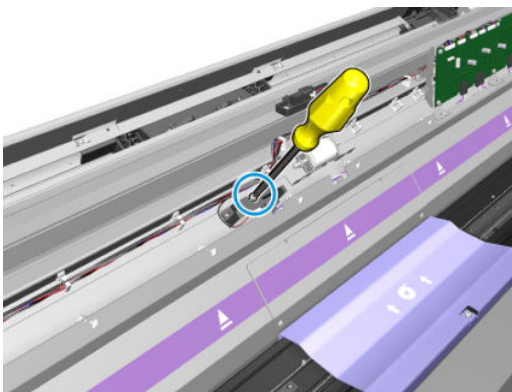


4. Unplug the cable.

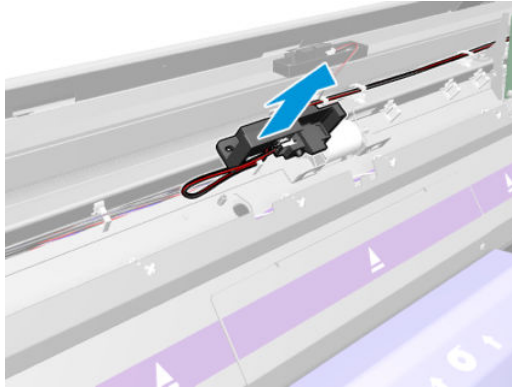


Removal (sensor 2)

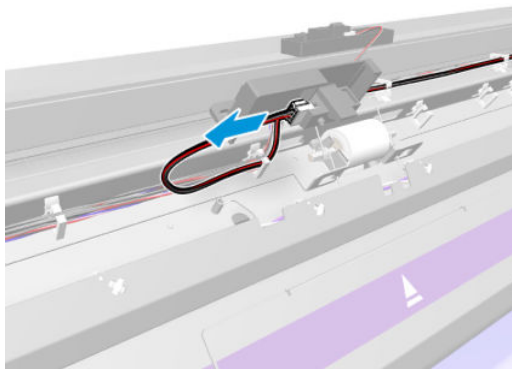
1. Remove the [Cover assembly mounting \(CZ309-67154\) on page 707](#).
2. Remove the screw attaching sensor 2.



3. Remove sensor 2.

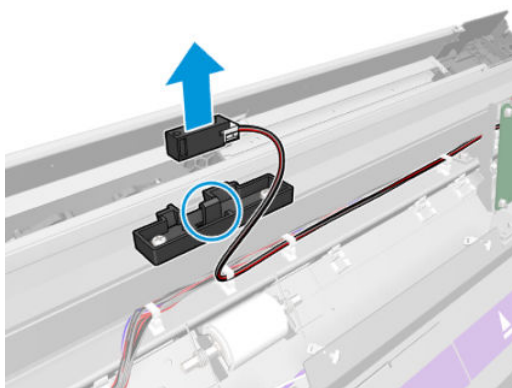


4. Unplug the cable.



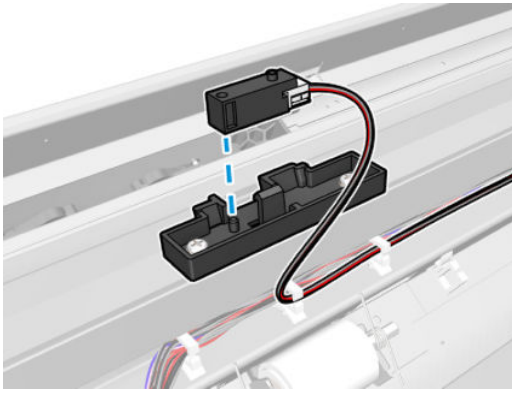
Removal (sensor 3)

1. Remove the [Cover assembly mounting \(CZ309-67154\) on page 707](#).
2. Gently pull back the plastic part in order to remove sensor 3.



Installation

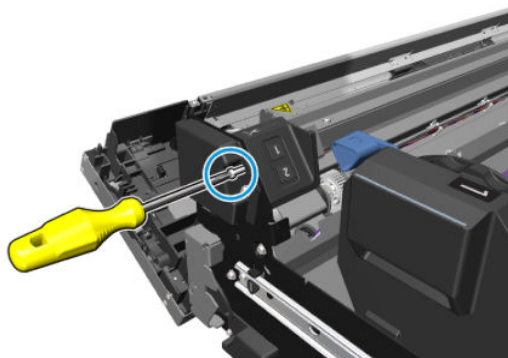
- ▲ The following illustration shows correct positioning of the sensor.



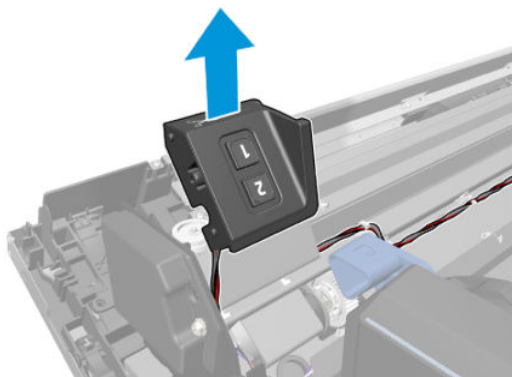
PCB buttons assembly (CZ309-67159)

Removal

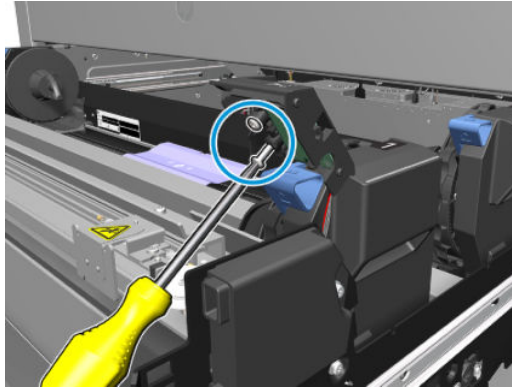
1. Remove the [Cover assembly mounting \(CZ309-67154\)](#) on page 707.
2. Unscrew the screw.



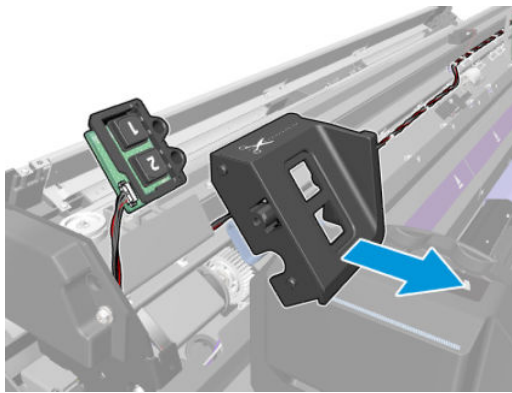
3. Remove the buttons' support.



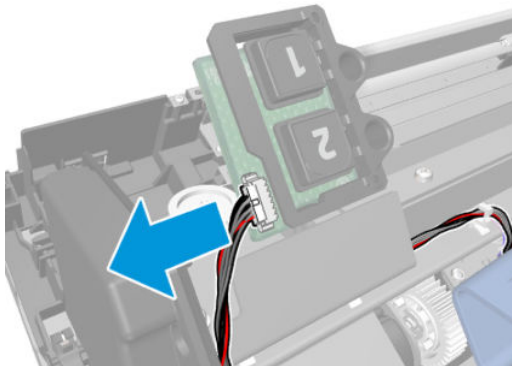
4. Unscrew 2 button screws.



5. Disengage the PCB from the buttons.



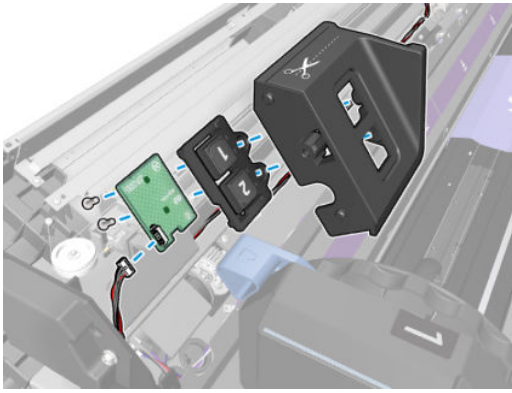
6. Unplug the cable.



Installation

- ▲ The following illustration shows correct positioning.

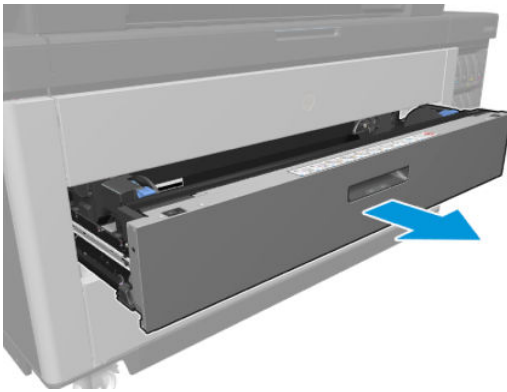
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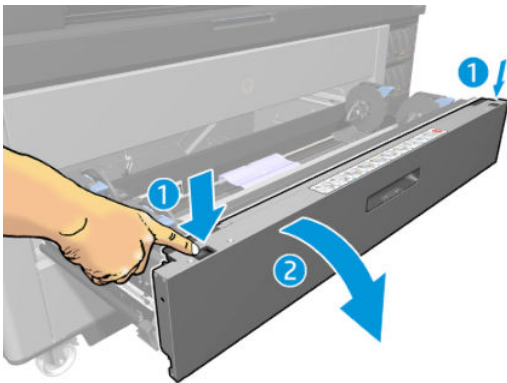
Sensors right front cover (CZ309-67191)

Removal

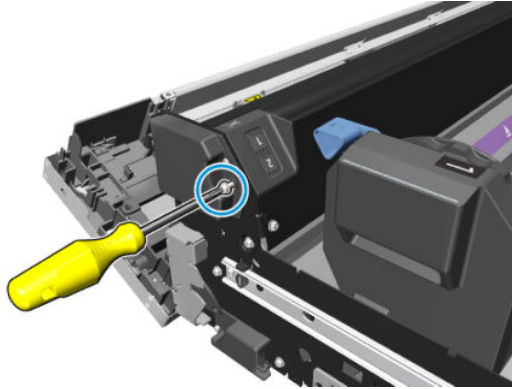
1. Open the Drawer.



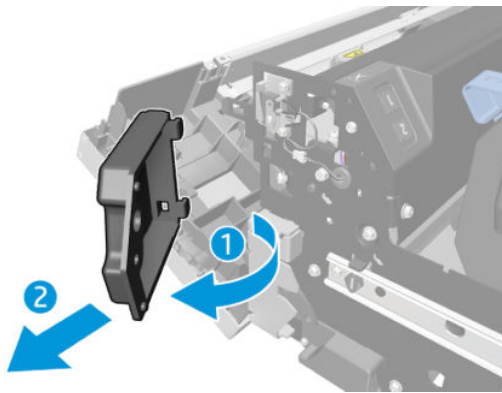
2. Open the paper input's [Front plate complete assembly \(CZ309-67168\)](#) on page 706.



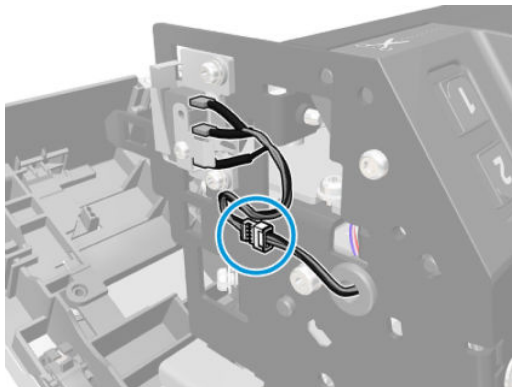
3. Unscrew screw.



4. Remove the sensors right front cover. It is attached by two pins to the paper input, so you have to rotate it.

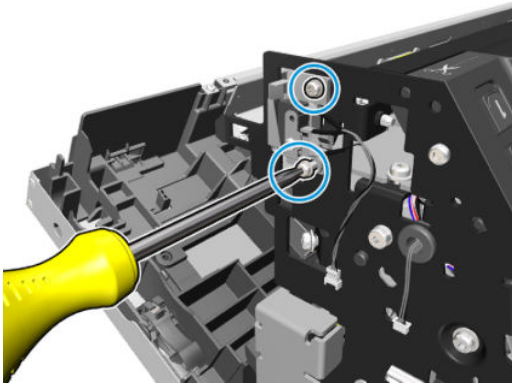


5. Unplug the sensor cable.

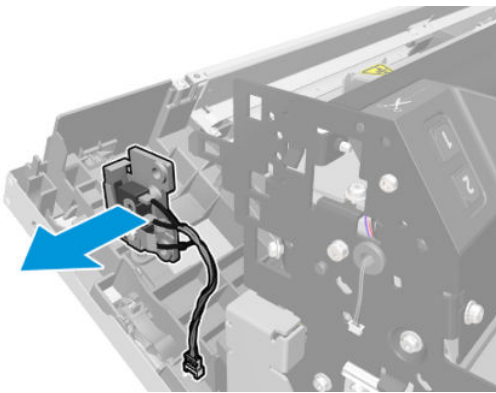


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6. Unscrew 2 sensor screws.



7. Remove sensor.



Installation

- ▲ To install, perform the removal operation in reverse. Ensure that the sensor is installed in the correct direction as shown above.

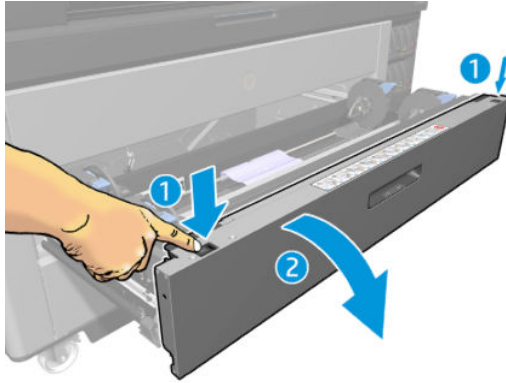
Sensors left front cover (CZ309-67191)

Removal

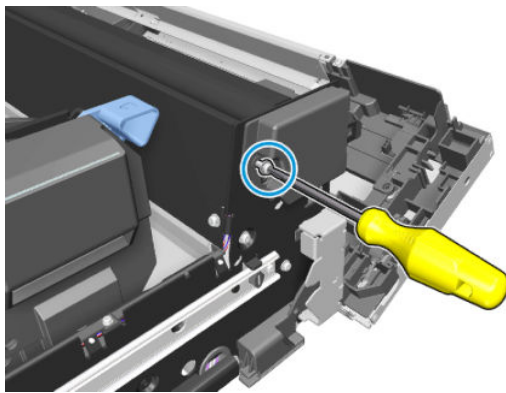
1. Open the Drawer.



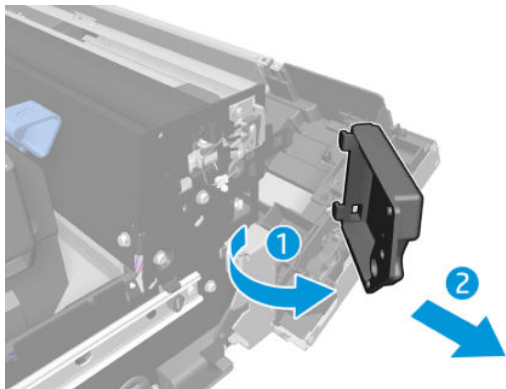
2. Open the paper input's [Front plate complete assembly \(CZ309-67168\)](#) on page 706.



3. Unscrew screw.



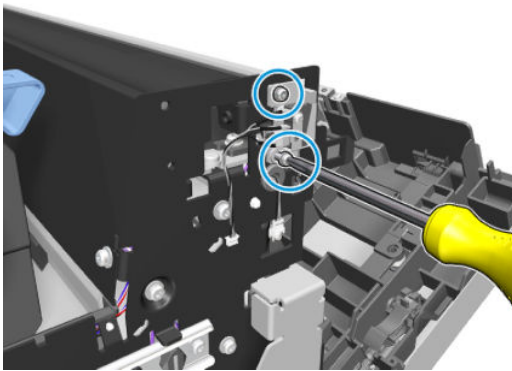
4. Remove the sensors left front cover. It is attached by two pins to the paper input, so you have to rotate it.



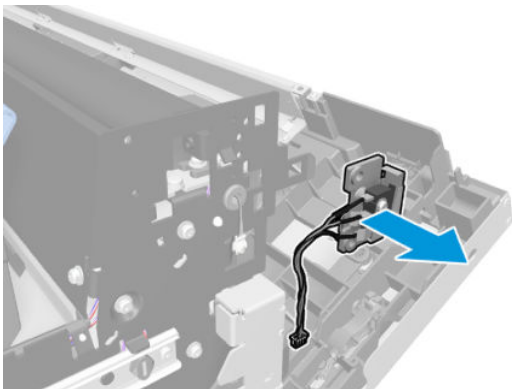
5. Unplug the sensor cable.



6. Unscrew 2 sensor screws.



7. Remove the left sensor.



Installation

- ▲ To install, perform the removal operation in reverse. Ensure that the sensor is installed in the correct direction as shown above.

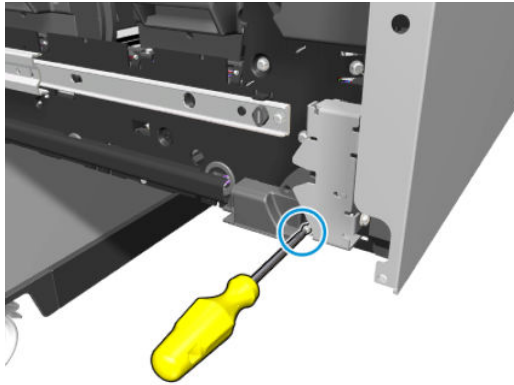
Sensors drawer closed left and right (CZ309-67165)

Removal (left sensor)

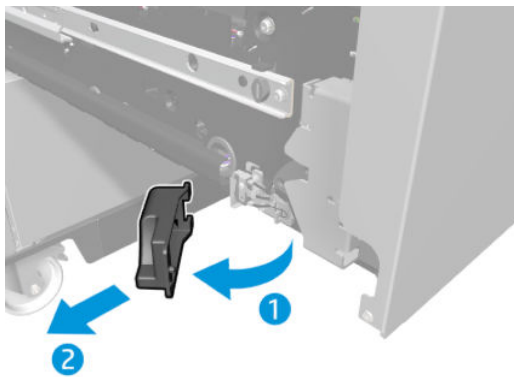
1. Open the Drawer.



2. Unscrew the sensor cover screw.

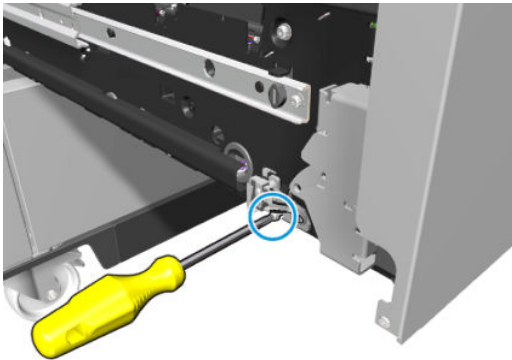


3. Remove the sensor cover.

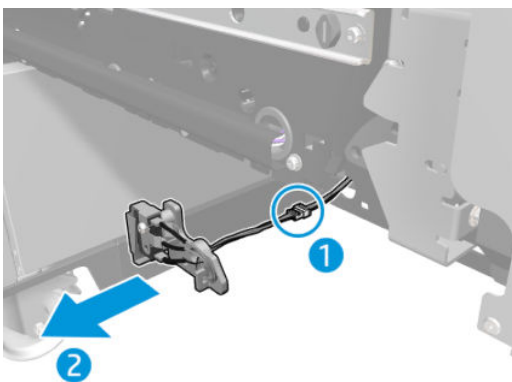


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4. Unscrew the inner screw that attaches the sensor.

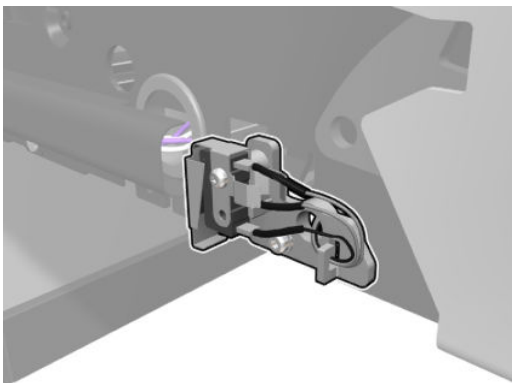


5. Remove the sensor and unplug the cable.



Installation (left sensor)

- ▲ To install, perform the removal operation in reverse. Ensure that the cable is routed inside the slot and that the sensor is installed as shown in step 3 above.

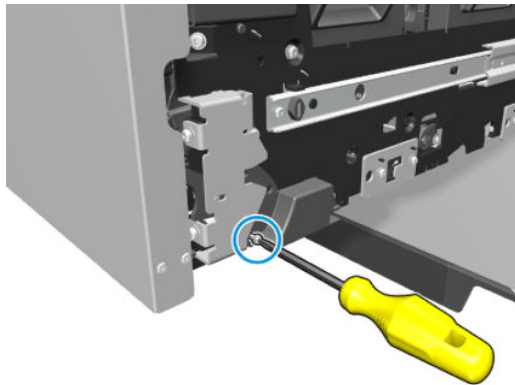


Removal (right sensor)

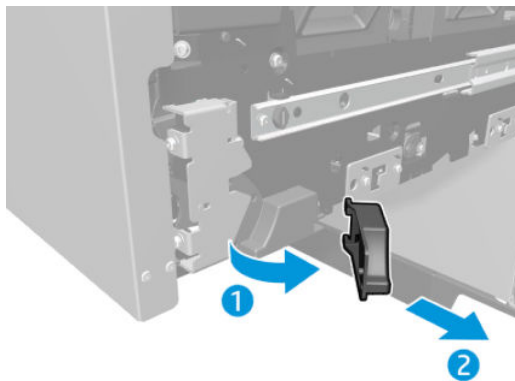
1. Open the Drawer.



2. Unscrew the sensor cover screw.

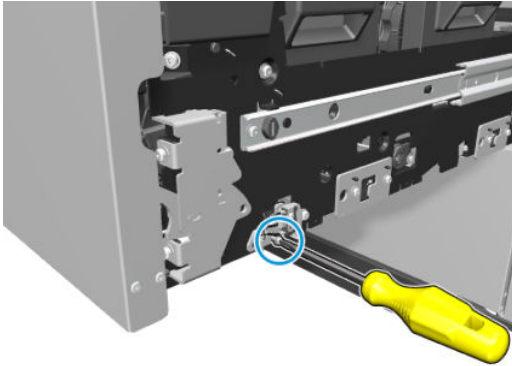


3. Remove the sensor cover.

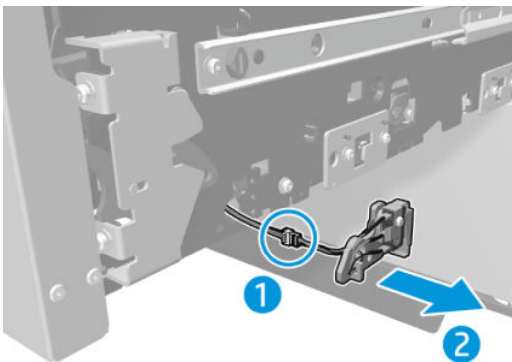


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4. Unscrew the inner screw that attaches the sensor.

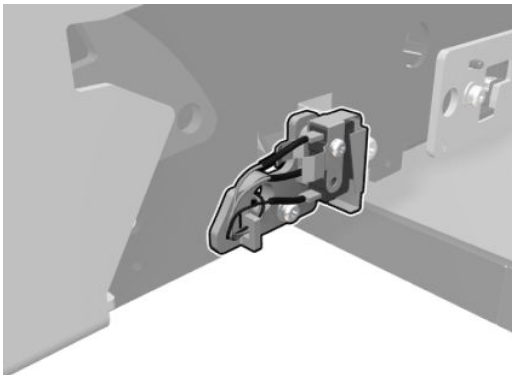


5. Remove the sensor and unplug the cable.



Installation (right sensor)

- ▲ To install, perform the removal operation in reverse. Ensure that the cable is routed inside the slot and that the sensor is installed as shown above.



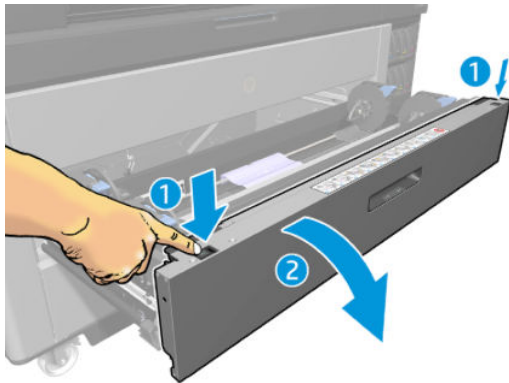
Drawer hooks (CZ309-67183)

Removal

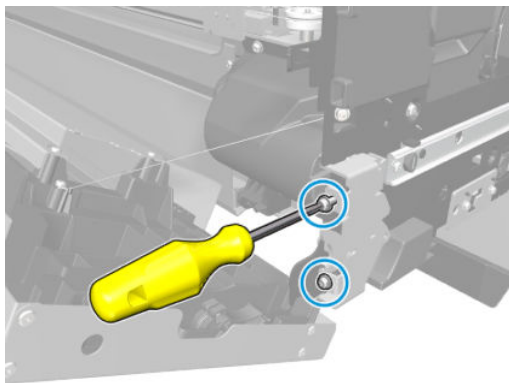
1. Open the Drawer



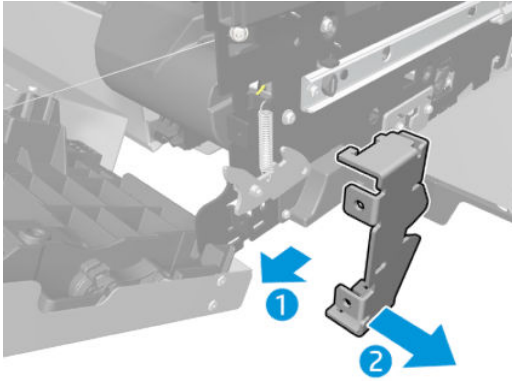
2. Open the paper input's [Front plate complete assembly \(CZ309-67168\)](#) on page 706.



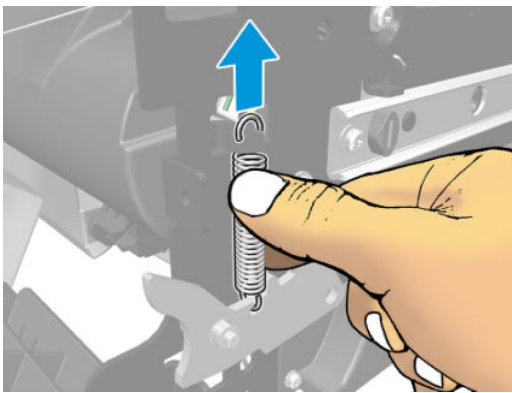
3. Unscrew 2 metallic cover screws.



4. Remove the metallic cover.

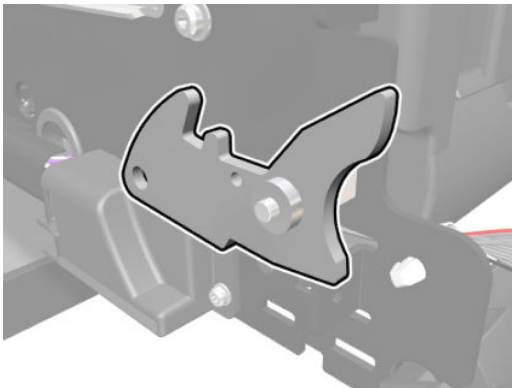


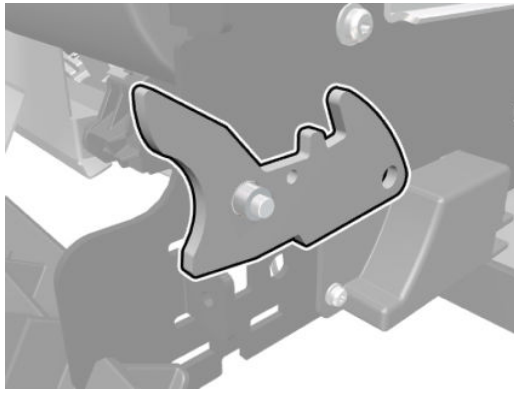
5. Remove the spring's hook by pulling its upper end.



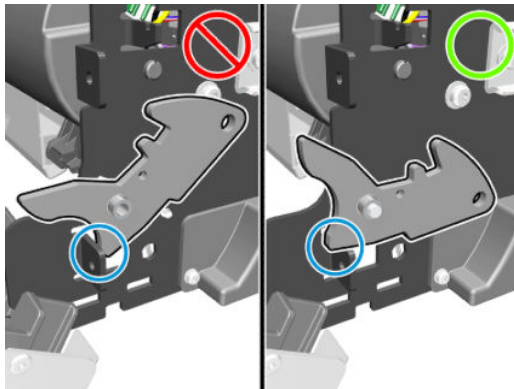
Installation

1. To install, perform the removal operation in reverse. The following illustrations show the hook's internal face (in contact with the lateral plate) on the left, and its external face on the right.

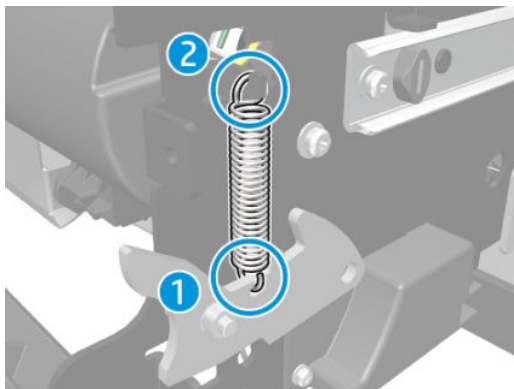




2. Ensure that the hook does not surpass the metallic tab; correct and incorrect positions are shown below.

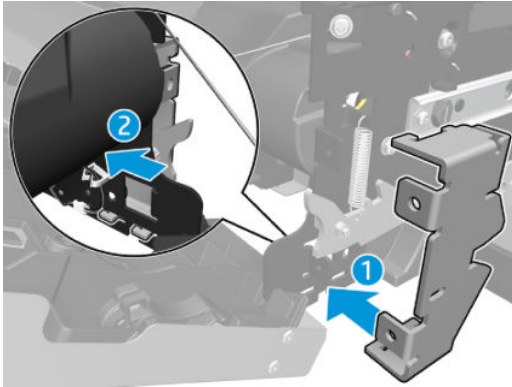


3. Install the spring by placing the lower end first and then the upper end.



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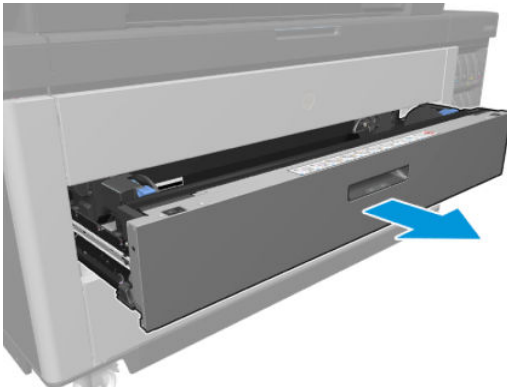
4. Replace the cover.



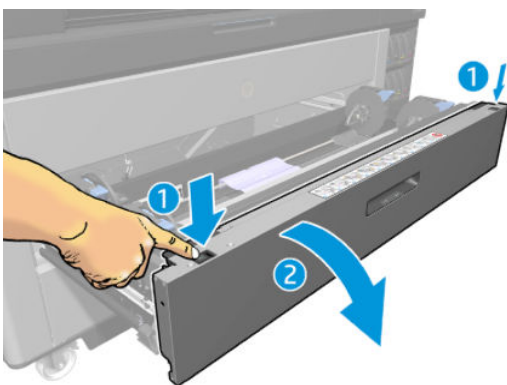
Cable front plate (CZ309-67158)

Removal

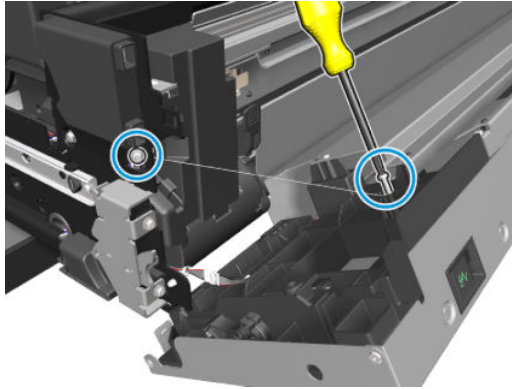
1. Open the Drawer.



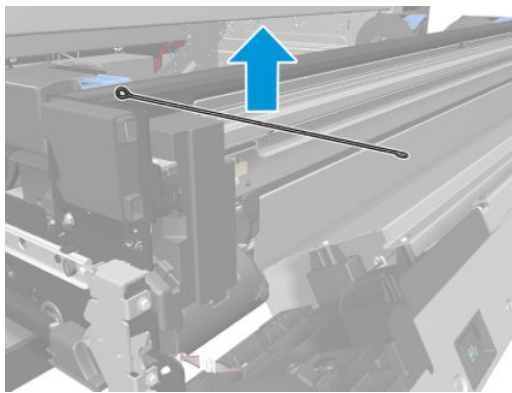
2. Open the [Front plate complete assembly \(CZ309-67168\)](#) on page 706.



3. Unscrew 2 Cable screws.



4. Remove the Cable front plate.



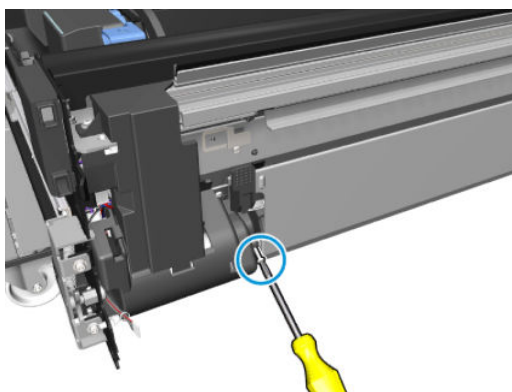
Installation

- ▲ To install, perform the removal operation in reverse.

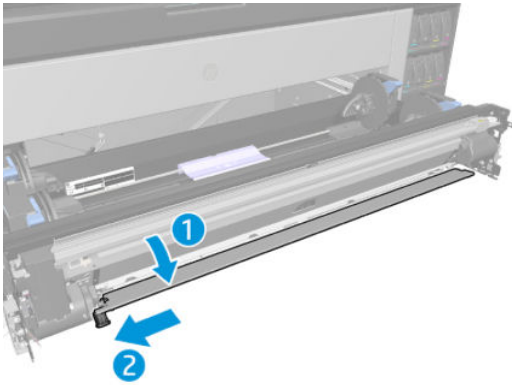
Intermediate triangle plate (CZ309-67170)

Removal

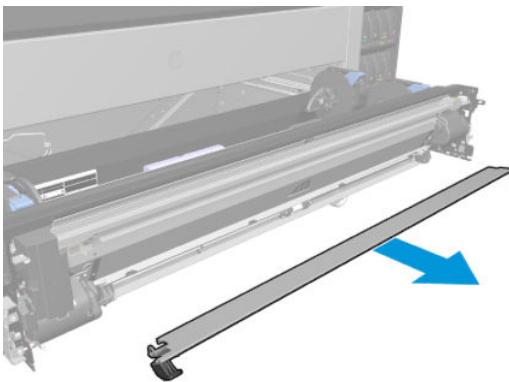
1. Remove the paper input's [Front plate complete assembly \(CZ309-67168\) on page 706](#).
2. Unscrew the screw.



3. Push the intermediate triangle plate to the left in order to disengage it from its axis.

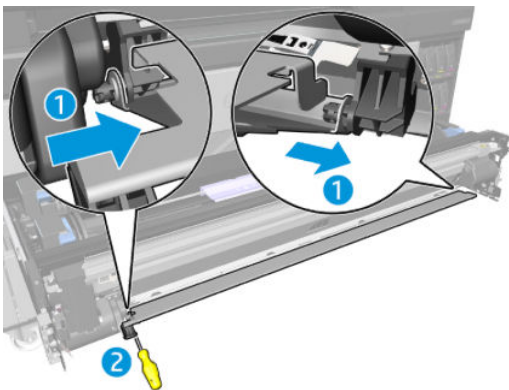


4. Remove the intermediate triangle plate.



Installation

- ▲ To install, perform the removal operation in reverse. Engage the plate in both axes and tighten the screw.

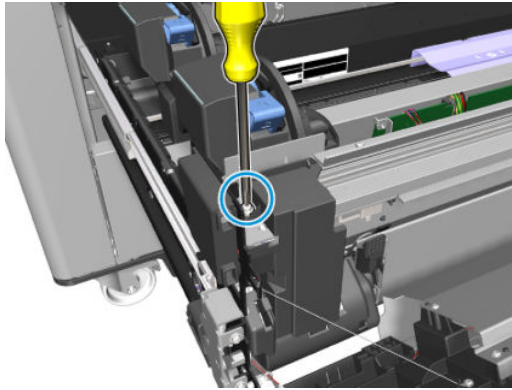


Cutter assembly (CZ309-67155)

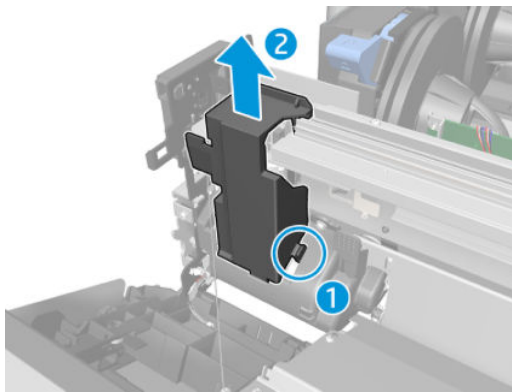
Removal

1. Remove the [Cover assembly mounting \(CZ309-67154\)](#) on page 707.

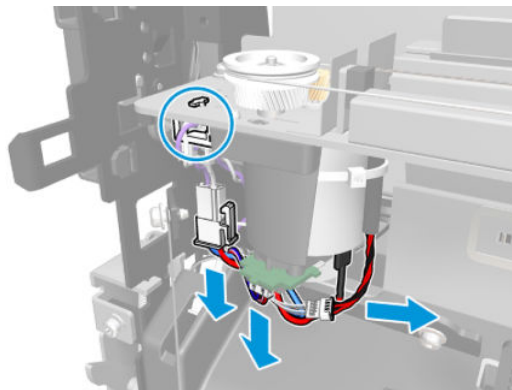
2. Unscrew the screw that attaches the indicated plastic part (which must be removed in order to remove the cutter).



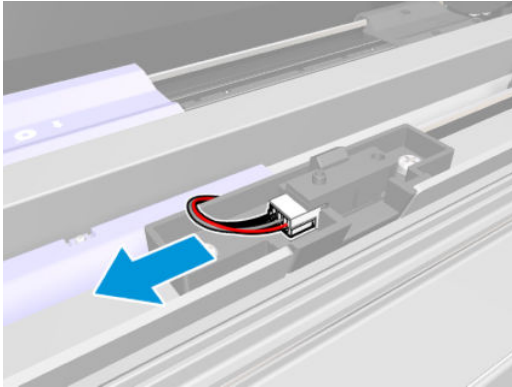
3. Remove the plastic part by pressing to the left the plastic snap indicated on the right (below), and then pulling up the rear upper cover with your left hand as shown on the left.



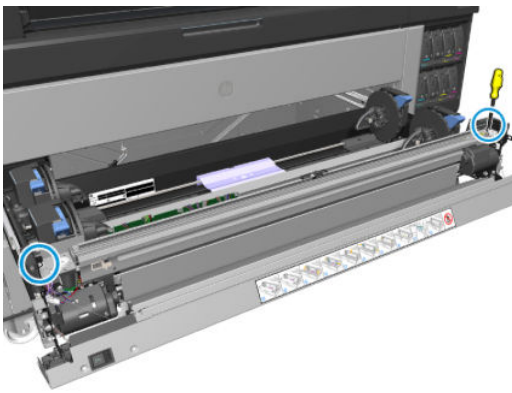
4. Unplug 3 motor cables and unclip.



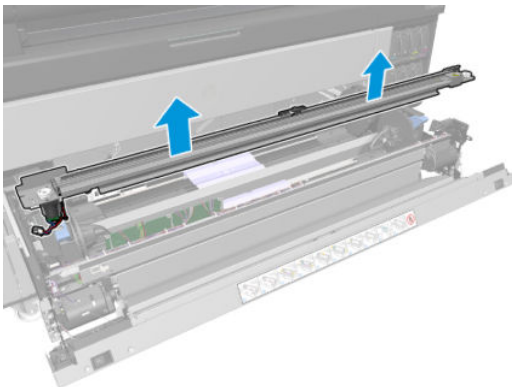
5. Unplug the Paper sensor cable:



6. Unscrew 2 Cutter assembly screws.

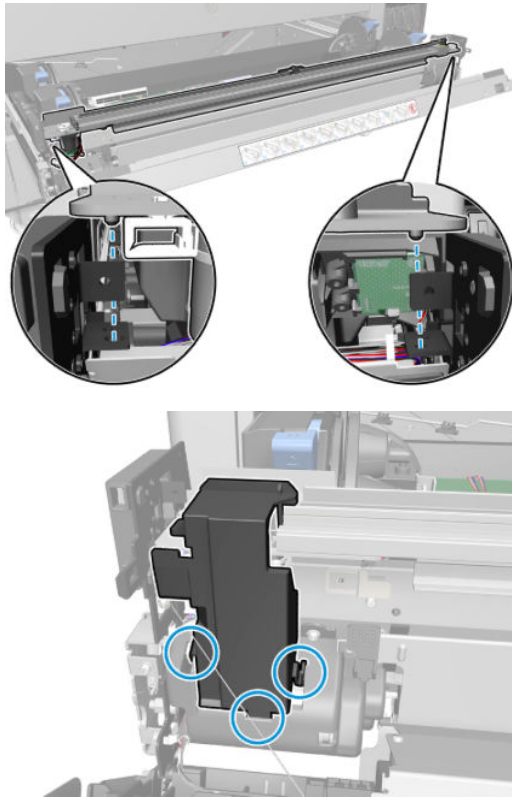


7. Remove the Cutter assembly.



Installation

- ▲ To install, perform the removal operation in reverse. The following illustrations show how pins should be inserted into slots.



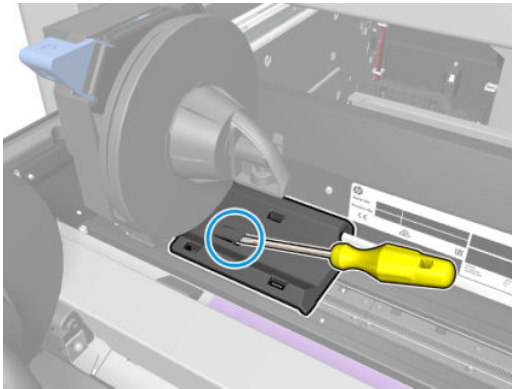
Guide plate right and left (CZ309-67181)

Removal

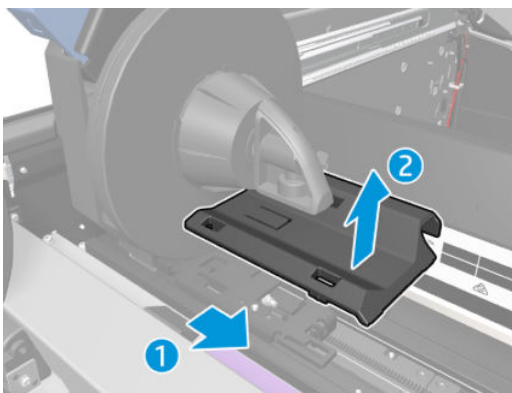
1. Open the paper input.



2. Insert a tool with a sharp end into the clip and lift it slightly.



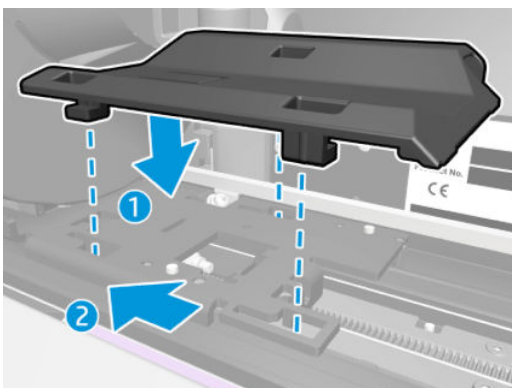
3. Extract the guide plate by displacing it along the guide rails.



Installation

- ▲ To install, perform the removal operation in reverse. Position the guide plate horizontally, and ensure that all the pins at the rear are inserted into the correct slots.

Insert pin 1 as far as possible away from the final position; then align pins 2 and 3 and press the guide plate down while moving it to the left. Pin 4 should insert itself.



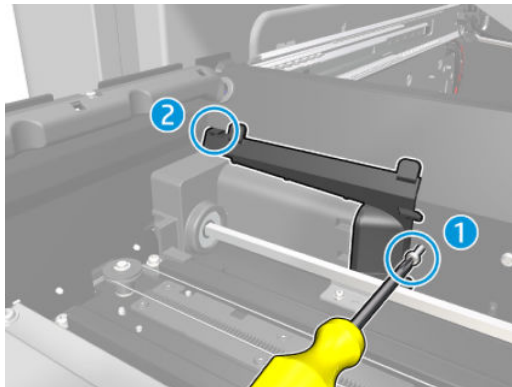
Cover RWD rear (CZ309-67157)

Removal

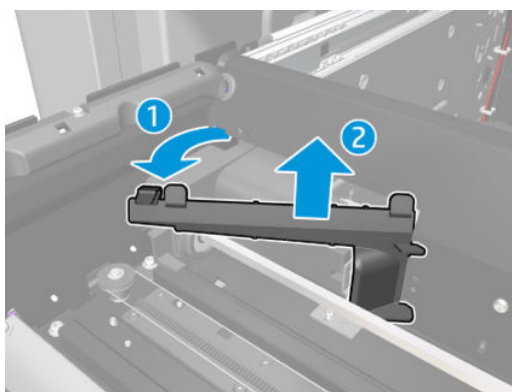
1. Open the paper input.



2. Unscrew the screw and press the snap shown below.

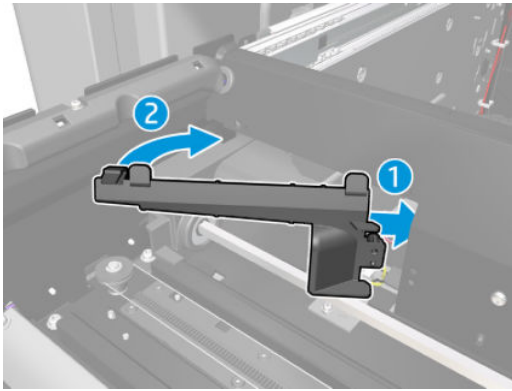


3. Remove the cover RWD rear by pulling it from the snap and rotating from its right edge.



Installation

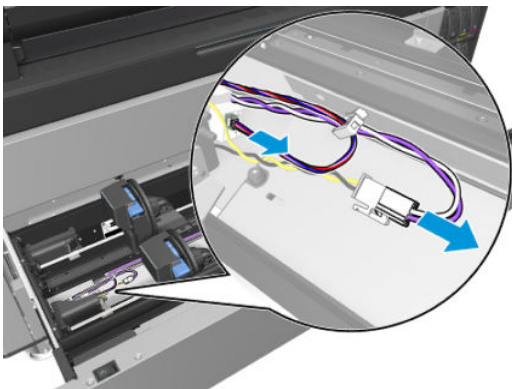
- ▲ To install, perform the removal operation in reverse. Place the cover diagonally and insert the right-hand side, then rotate it to align the second pin.



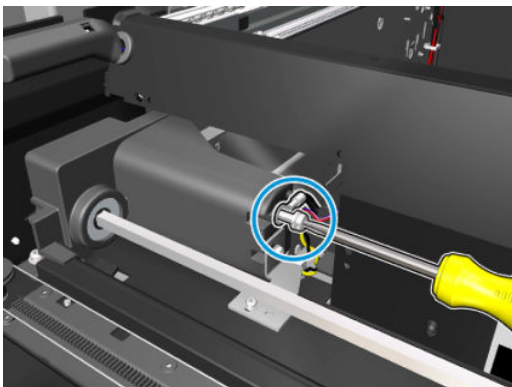
Roll mounting assembly (CZ309-67174)

Removal

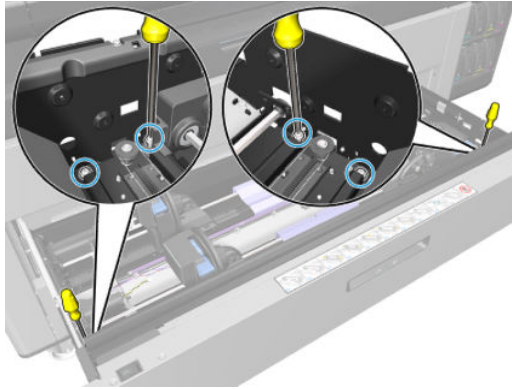
1. Remove the [Intermediate plate middle \(CZ309-67169\) on page 711](#) (for the front mounting) or the [Cover RWD rear \(CZ309-67157\) on page 739](#) (for the rear mounting).
2. Unplug the motor's data and power cables.



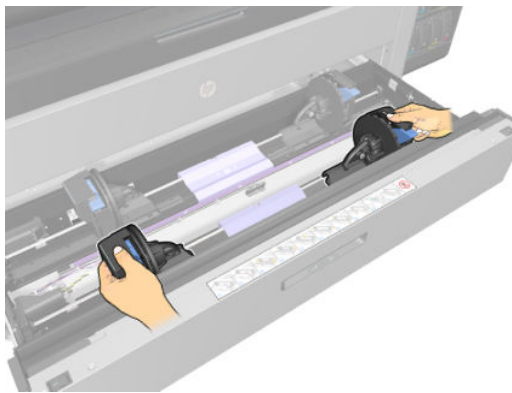
For the rear mounting only, you must also remove a screw and unplug a third black ground cable.



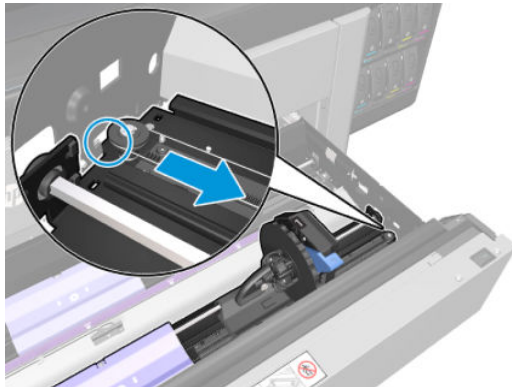
3. Remove four screws.



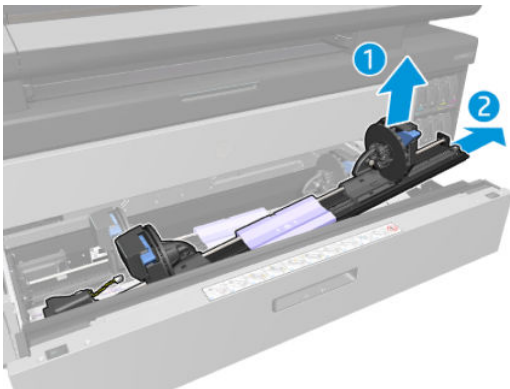
4. Hold the roll mounting assembly by the two cover sleds.



5. Pull the whole assembly to the left to remove the right pin from the structure.

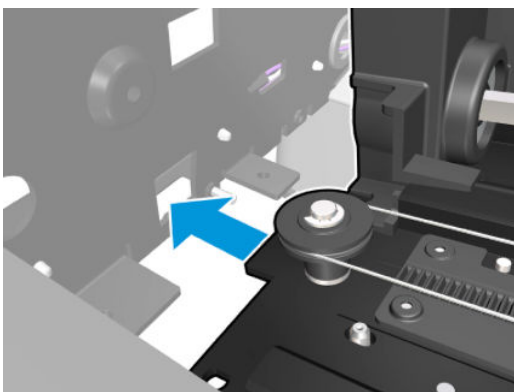


6. Pull up the right-hand side, then pull the assembly to the right to extract it.



Installation

1. To install, perform the removal operation in reverse, ensuring that pins are aligned with slots.



2. Run the following after replacement:

From the Service Menu, go to **Calibrations**, then:

- Run the **Roll assist friction calibration** for the corresponding rolls of that drawer
- Run the **Feed roller calibration**
- Run the **TOF calibration**

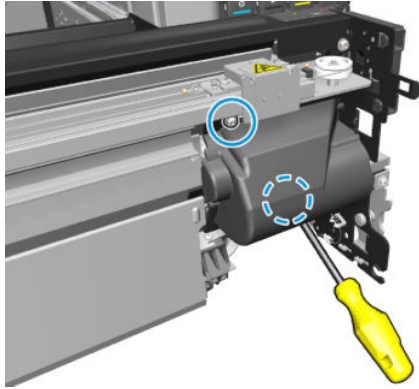
Paper-input motor NGR (CZ309-67153)

There are four motors. Two of them are placed behind the front cover; the one on the left moves the rear roll mounting forwards, the one on the right moves the front roll mounting forwards. The other two motors are placed behind each roll mounting and move them backwards.

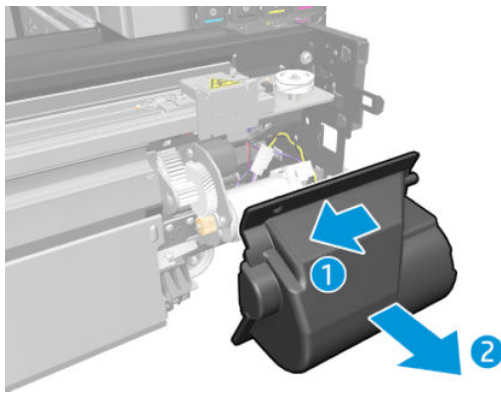
Removal (front right motor)

1. Remove the [Front plate complete assembly \(CZ309-67168\) on page 706](#).
2. Remove the [Cover assembly mounting \(CZ309-67154\) on page 707](#).

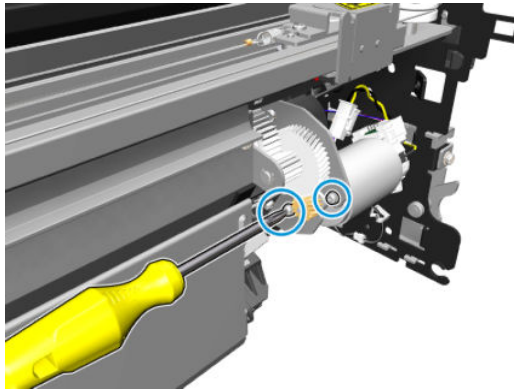
3. Remove two screws from the motor cover.



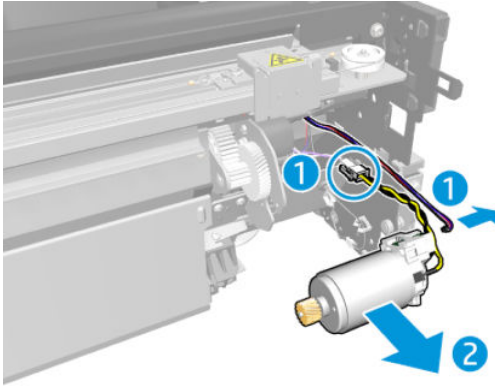
4. Remove two screws that attach the motor.



5. Disconnect the motor's data (1) and power (2) cables.

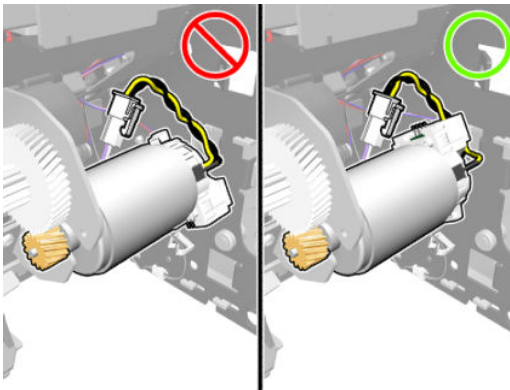


6. Remove the motor; disconnect the motor's data and power cables.

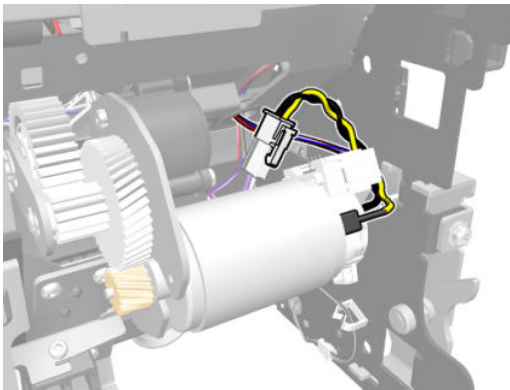


Installation (front right motor)

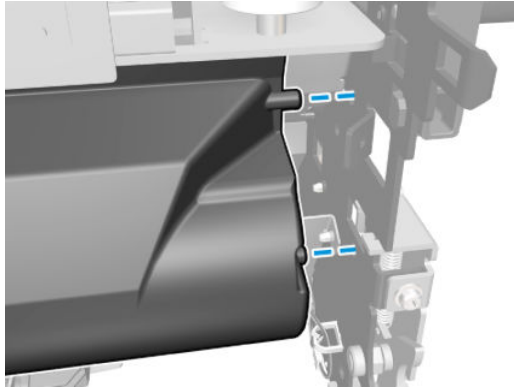
1. To install, perform the removal operation in reverse, aligning the motor as shown below.



2. Cables should be routed as shown below.



3. The plastic cover should be aligned as shown below.



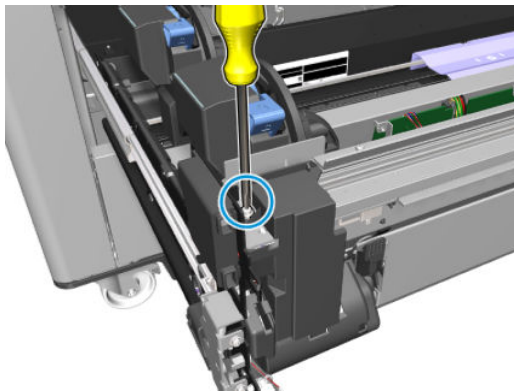
4. Run the following after replacement:

From the Service Menu, go to **Calibrations**, then:

- Run the **Roll assist friction calibration** for the corresponding rolls of that drawer
- Run the **Feed roller calibration**
- Run the **TOF calibration**

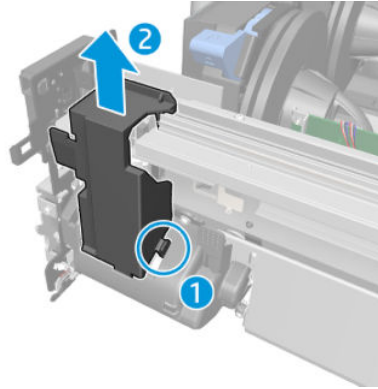
Removal (front left motor)

1. Remove the [Front plate complete assembly \(CZ309-67168\) on page 706](#).
2. Remove the [Cover assembly mounting \(CZ309-67154\) on page 707](#).
3. Remove the plastic cutter cover screw.

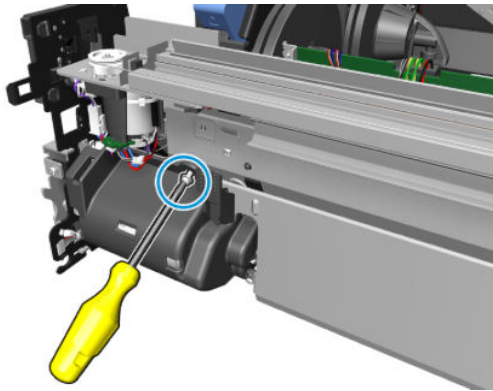


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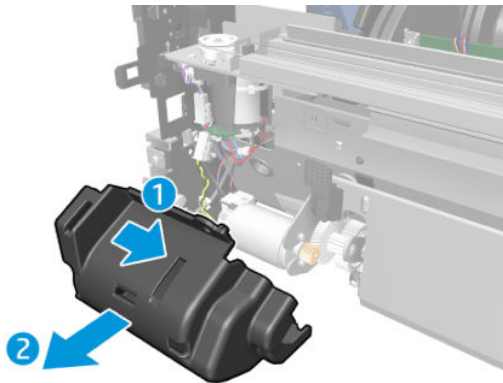
4. Remove the plastic cutter cover.



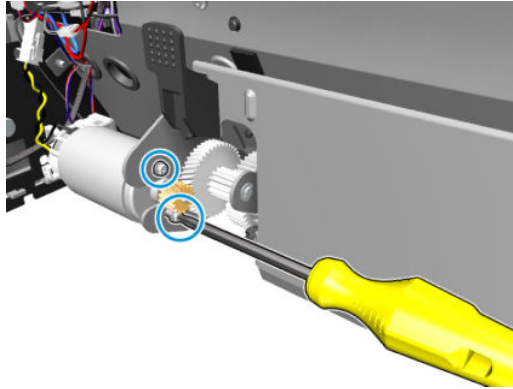
5. Remove two screws from the motor cover.



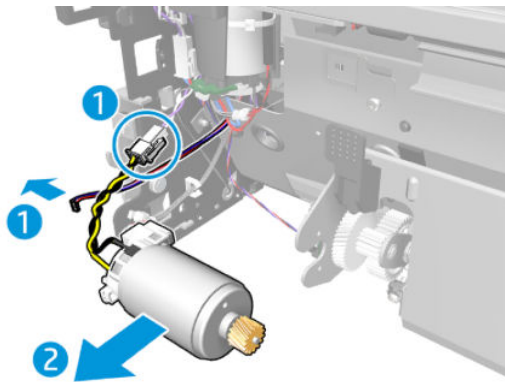
6. Remove the motor cover.



7. Unscrew the 2 screws that fix the motor in place.

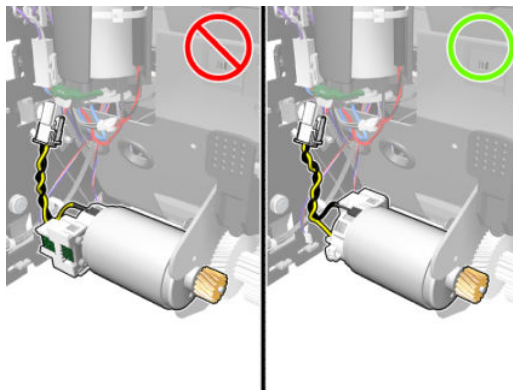


8. Remove the motor: disconnect the motor's data and power cables.

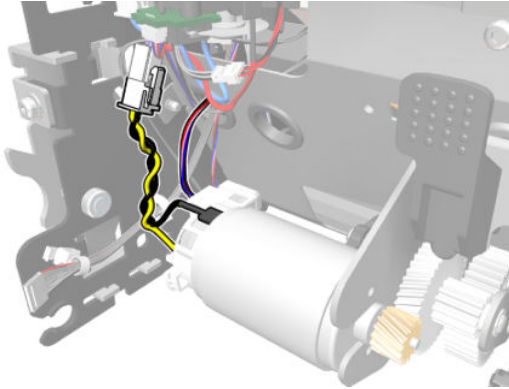


Installation (front left motor)

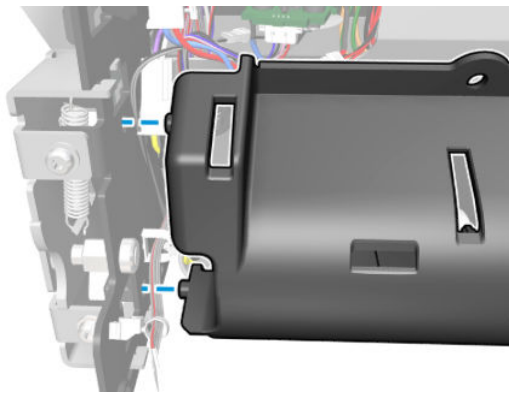
1. To install, perform the removal operation in reverse, aligning the motor as shown below.



2. Cables should be routed as shown below.



3. The plastic cover should be aligned as shown below.



4. Run the following after replacement:

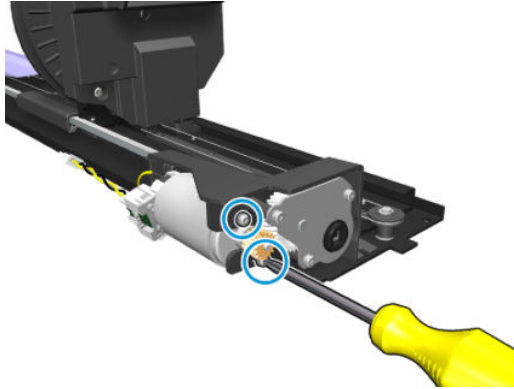
From the Service Menu, go to **Calibrations**, then:

- Run the **Roll assist friction calibration** for the corresponding rolls of that drawer
- Run the **Feed roller calibration**
- Run the **TOF calibration**

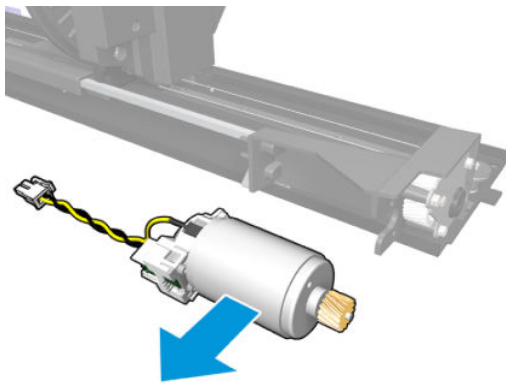
Removal (front reverse motor)

1. Remove the front roll mounting (see [Roll mounting assembly \(CZ309-67174\) on page 740](#)).

2. Remove the 2 screws that fix the motor in place.

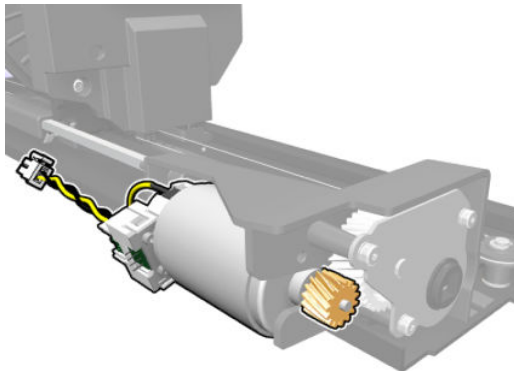


3. Remove the motor.



Installation (front reverse motor)

1. To install, perform the removal operation in reverse, aligning the motor as shown below.



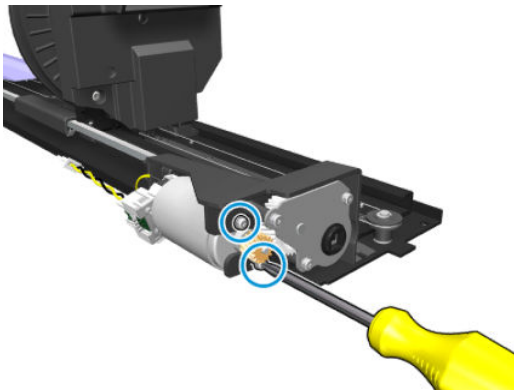
2. Run the following after replacement:

From the Service Menu, go to **Calibrations**, then:

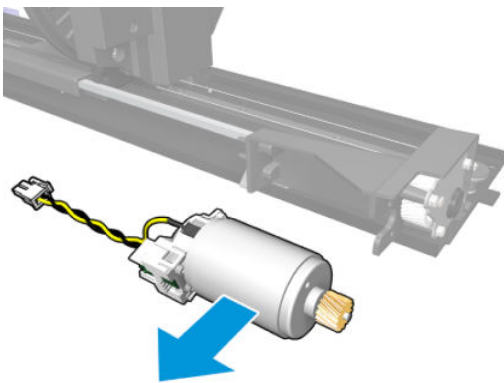
- Run the **Roll assist friction calibration** for the corresponding rolls of that drawer
- Run the **Feed roller calibration**
- Run the **TOF calibration**

Removal (rear reverse motor)

1. Remove the rear roll mounting (see [Roll mounting assembly \(CZ309-67174\) on page 740](#)).
2. Remove the 2 screws that fix the motor in place.

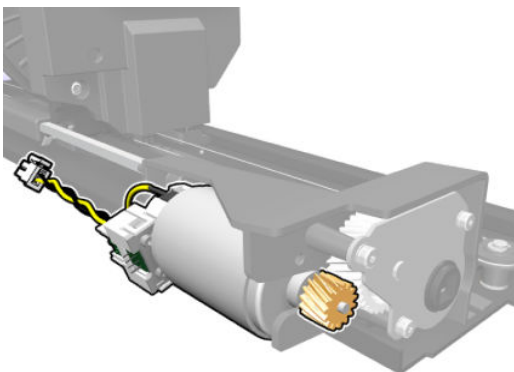


3. Remove the motor.



Installation (rear reverse motor)

1. To install, perform the removal operation in reverse, aligning the motor as shown below.



2. Run the following after replacement:

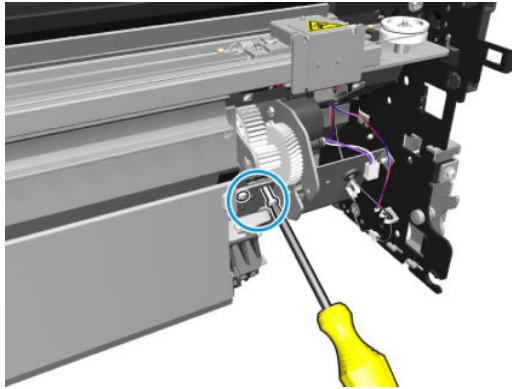
From the Service Menu, go to **Calibrations**, then:

- Run the **Roll assist friction calibration** for the corresponding rolls of that drawer
- Run the **Feed roller calibration**
- Run the **TOF calibration**

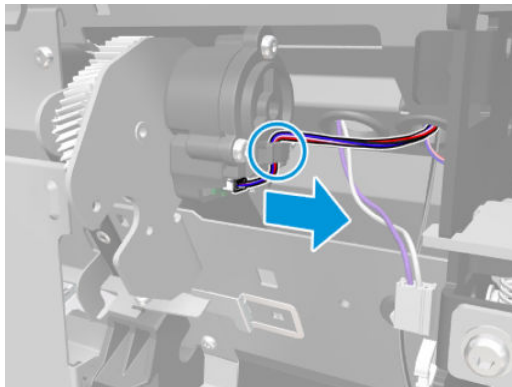
Transport roller front roll (CZ309-67172)

Removal

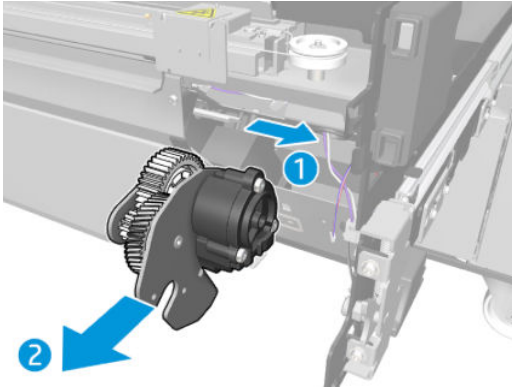
1. Remove the front right paper-input motor (see [Paper-input motor NGR \(CZ309-67153\) on page 742](#)).
2. Remove two screws.



3. Unplug and unroute the encoder cable.

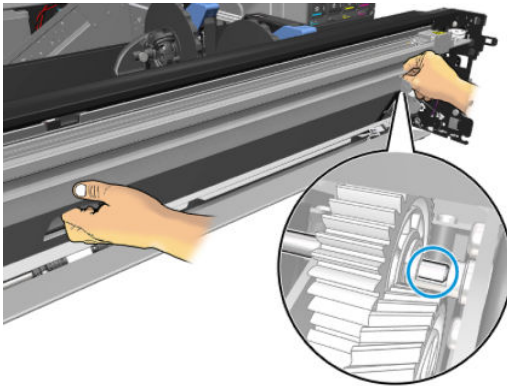


4. Pull out the transport roller along its axis and remove it.

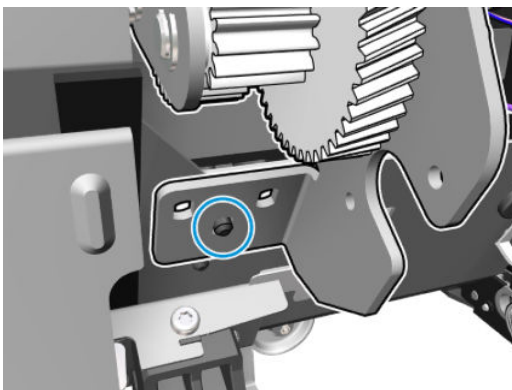


Installation

1. To install, perform the removal operation in reverse. In order for the gears to be placed into the correct position, you need to align the transport roller axis with the gears as shown on the right, by gently pressing the gear box towards the left while rotating the axis, by rotating the rubber as shown on the left.

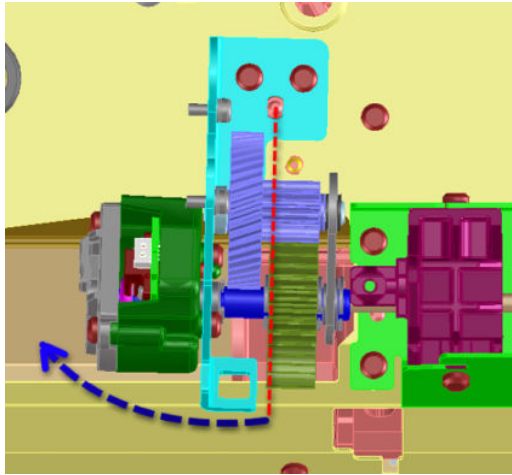


2. Once the transport roller is correctly inserted, you can put back the screws, aligning with the reference shown below.



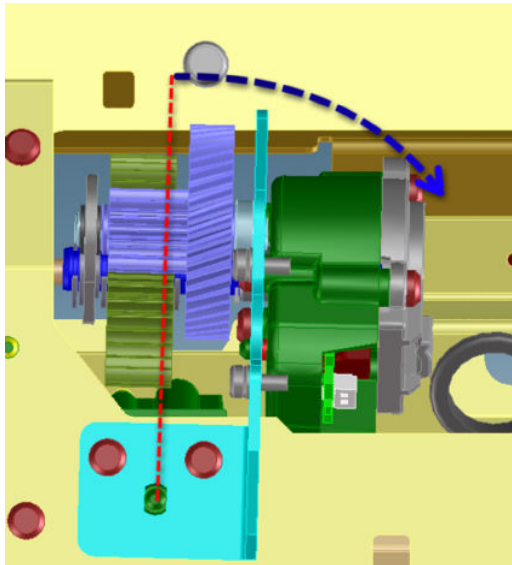
3. Load the transport roller clockwise during tightening as shown below.

Rear transport roller assembly



Before tightening the screws, rotate the assembly 1^o-2^o clockwise as shown above.

Front transport roller assembly



Before tightening the screws, rotate the assembly 1^o-2^o clockwise as shown above.

 **NOTE:** To be performed on CZ309-67172 and CZ309-67173.

4. Run the following after replacement:

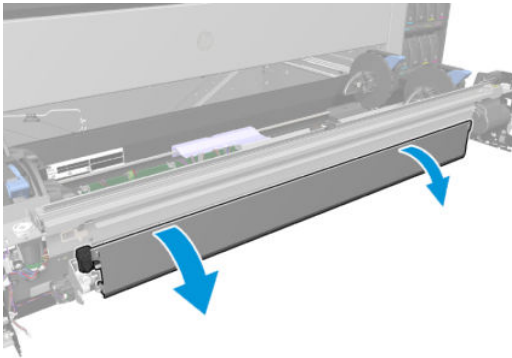
From the Service Menu, go to **Calibrations**, then:

- Run the **Roll assist friction calibration** for the corresponding rolls of that drawer
- Run the **Feed roller calibration**
- Run the **TOF calibration**

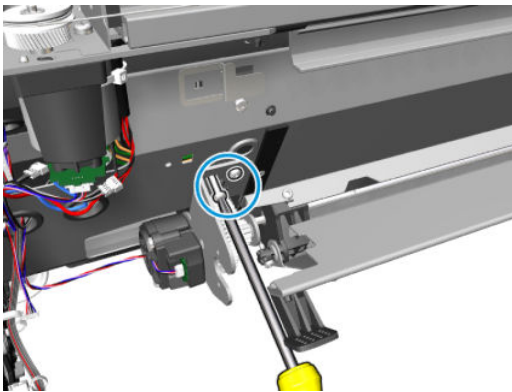
Transport roller rear roll (CZ309-67173)

Removal

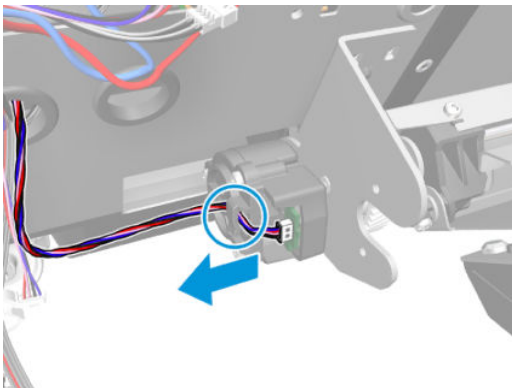
1. Remove the front left paper-input motor (see [Paper-input motor NGR \(CZ309-67153\) on page 742](#)).
2. Open the guide plate intermediate triangle.



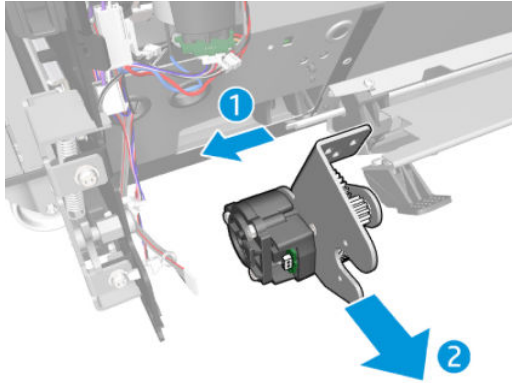
3. Remove two screws.



4. Unplug and unroute the encoder cable.

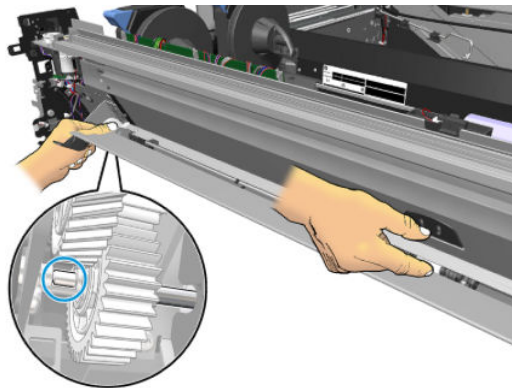


5. Gently pull out the transport roller along its axis.

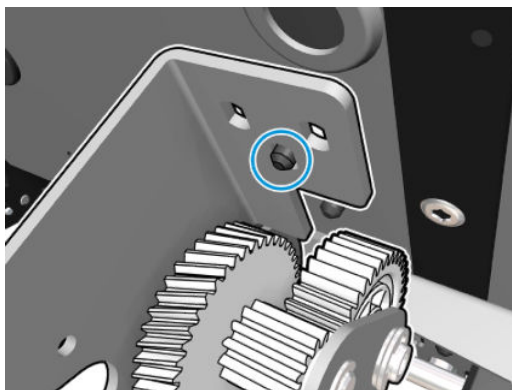


Installation

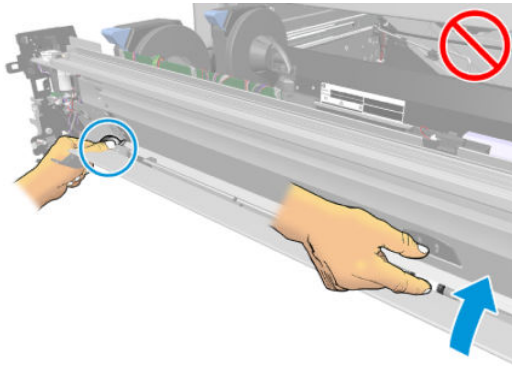
1. To install, perform the removal operation in reverse. In order for the gears to be placed into the correct position, you need to align the transport roller axis with the gears, by rotating the roller as shown on the right, while pushing it towards the right as shown on the left.



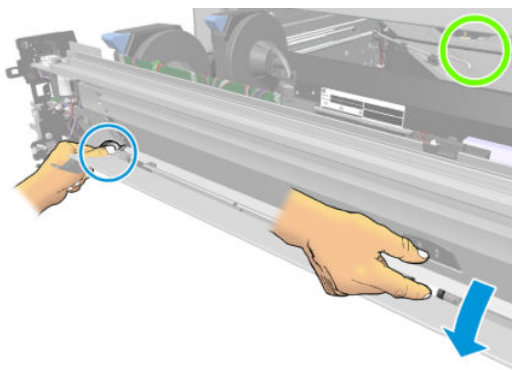
2. Once the transport roller is correctly inserted, you can put back the screws, aligning with the reference shown below.



3. To check: Hold the gears with your left hand and try to rotate the rubber up; you should *not* be able to do it.



If you try to rotate the rubber down (as if paper were going through, which is another way to check correct assembly), you should be able to do it.



4. Run the following after replacement:

From the Service Menu, go to **Calibrations**, then:

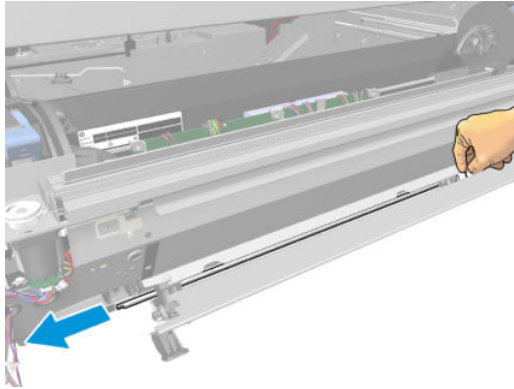
- Run the **Roll assist friction calibration** for the corresponding rolls of that drawer
- Run the **Feed roller calibration**
- Run the **TOF calibration**

Rubber transport roller (CZ309-67156)

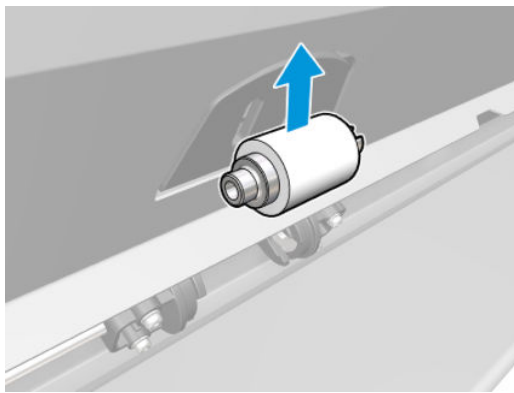
Removal (rear roller)

1. Remove the [Transport roller rear roll \(CZ309-67173\) on page 754](#).

2. Move the axis carefully to the left while holding the rubber roller, until they become disengaged.

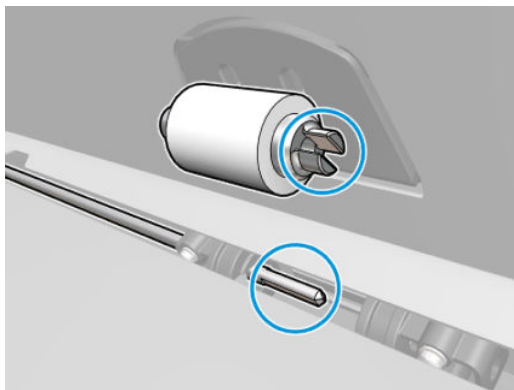


3. Remove the rubber transport roller.

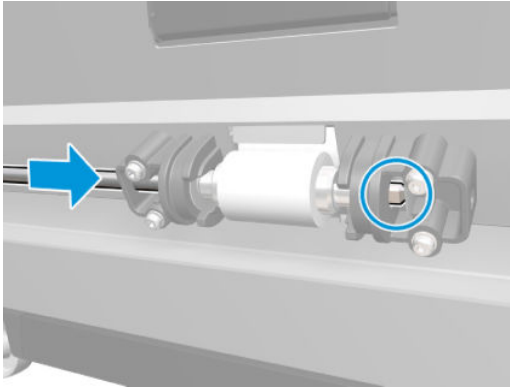


Installation (rear roller)

1. Check that the rubber roller is correctly oriented before mounting it.



2. Press the rubber roller against the white plastic roller and pass it along the axis to the end.



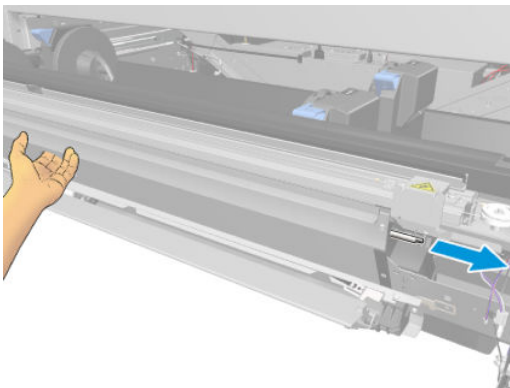
3. Run the following after replacement:

From the Service Menu, go to **Calibrations**, then:

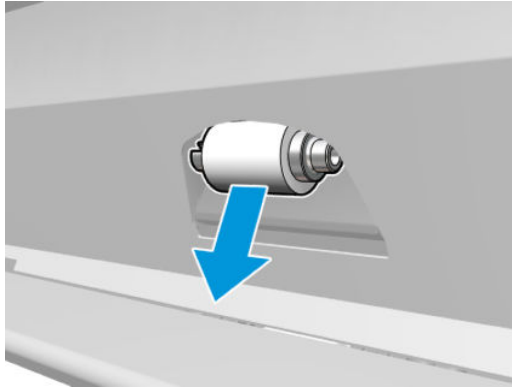
- Run the **Roll assist friction calibration** for the corresponding rolls of that drawer
- Run the **Feed roller calibration**
- Run the **TOF calibration**

Removal (front roller)

1. Remove the [Transport roller front roll \(CZ309-67172\) on page 751](#).
2. Open the service cover. Hold the rubber roller by pressing it with your finger, while pulling its axis to the right, until they become disengaged. The axis does not need to be completely removed, just enough for the rubber roller to fall.

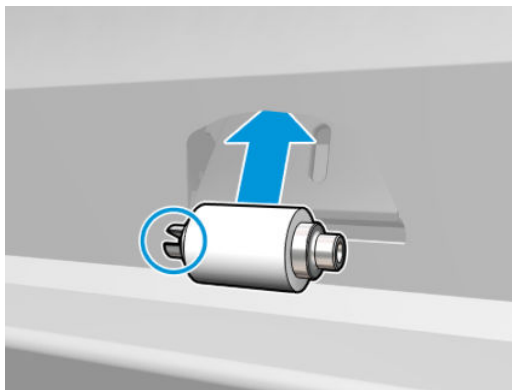


3. The rubber roller will fall through the hole.

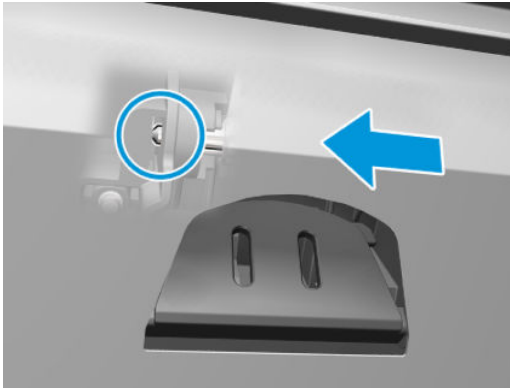


Installation (front roller)

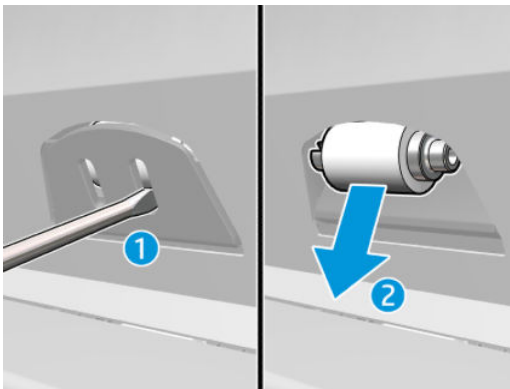
1. Insert the rubber piece back through the hole, oriented as shown below, and align it with its axis.



2. Re-engage the axis by pulling it back towards the left. You will probably need to rotate it so it can reach the end.



 **NOTE:** If the rubber roller falls inside the cavity, use a screwdriver or other tool to get it out.

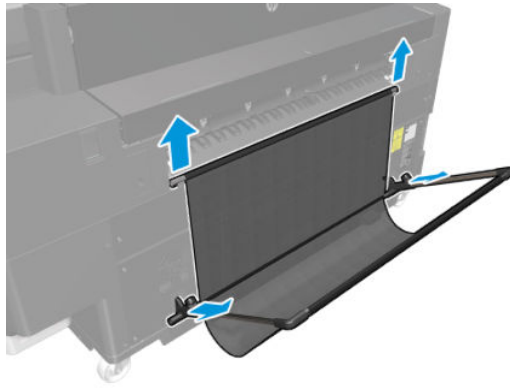


3. Run the following after replacement:
From the Service Menu, go to **Calibrations**, then:
 - Run the **Roll assist friction calibration** for the corresponding rolls of that drawer
 - Run the **Feed roller calibration**
 - Run the **TOF calibration**

Rear cable router assembly (CZ309-67167)

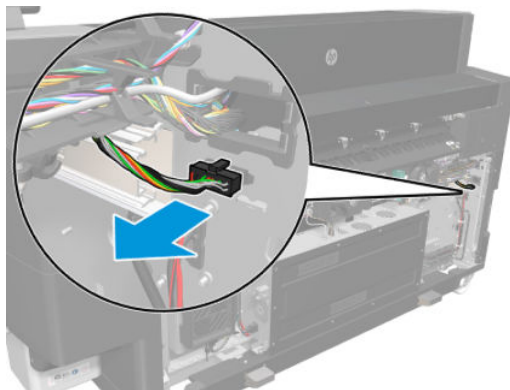
Removal

1. Remove the paper basket if it's installed.

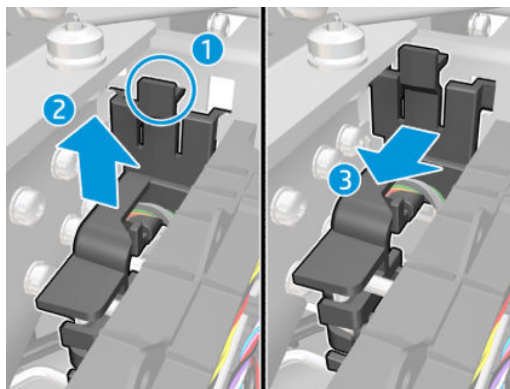


2. Remove the [Top E-box cover \(CZ309-67059, CZ309-67262\)](#) on page 656.
Remove the [Left E-box cover \(CZ309-67057, CZ309-67260\)](#) on page 655.
Remove the [Bottom-rear panel \(CZ309-67234\)](#) on page 667.

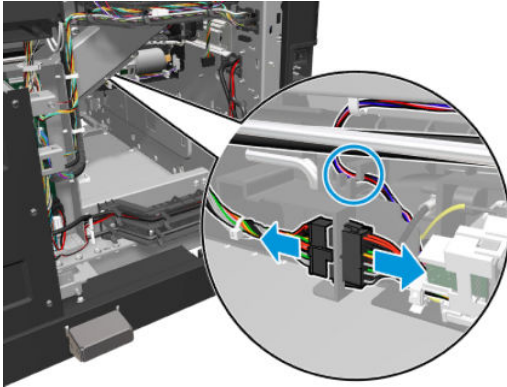
3. Unplug the Drawer connector.



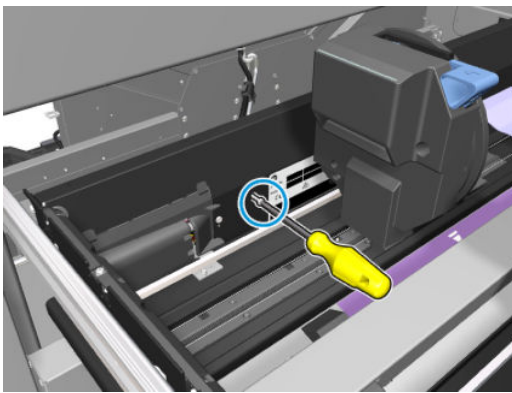
4. Unclip and remove the plastic part from the printer's structure.



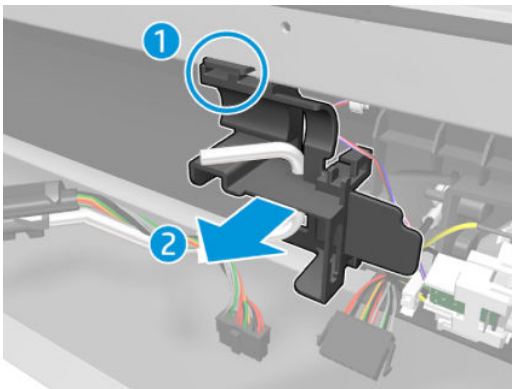
5. Unplug the Drawer cable and unroute the motor cable.



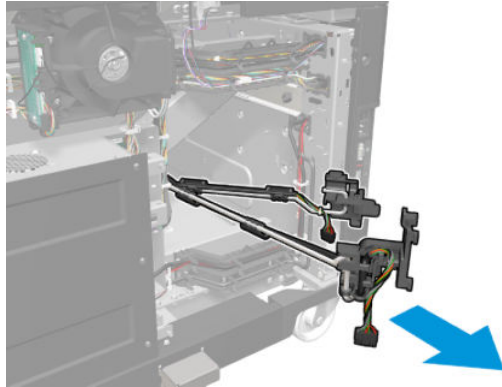
6. Open the Drawer and unscrew the bar holder screw.



7. Unclip the bar holder.

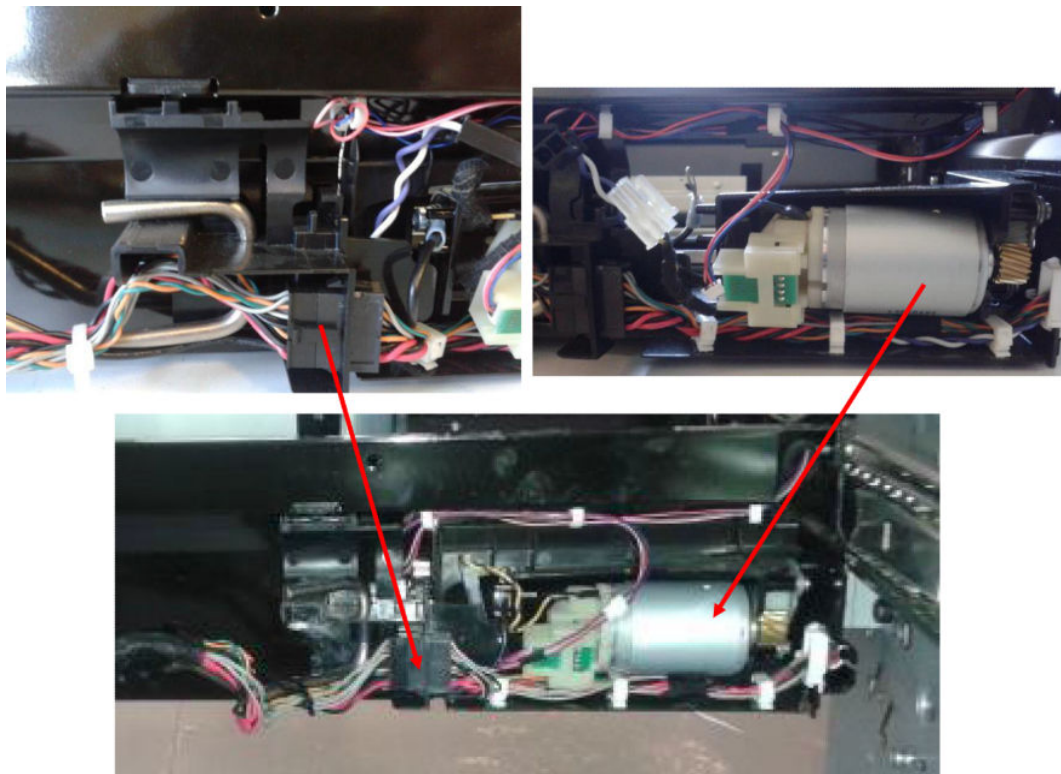


8. Remove the Rear cable router.

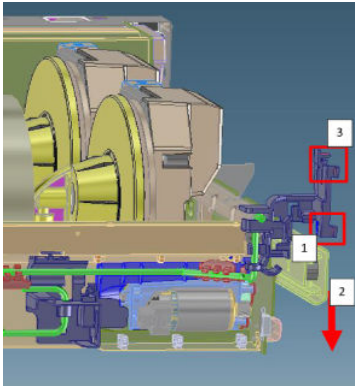


Installation

1. To install, perform the removal operation in reverse. The following illustration shows the cable routing.



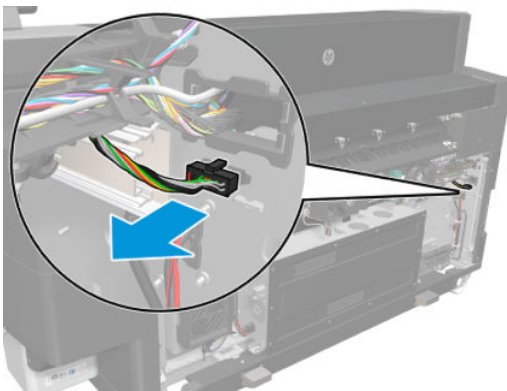
2. Connect the rear cable router to the printer in the order shown below. First insert the lower part, then pull down and finally insert the upper clip.



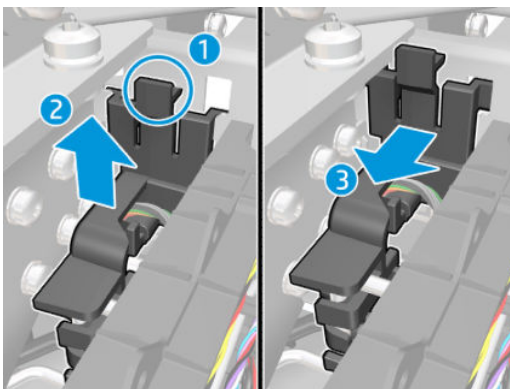
Telescopic slides (CZ309-67171)

Removal

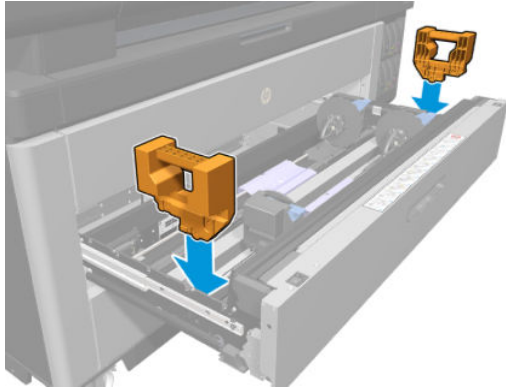
1. Remove the [Top E-box cover \(CZ309-67059, CZ309-67262\)](#) on page 656.
Remove the [Left E-box cover \(CZ309-67057, CZ309-67260\)](#) on page 655.
Remove the [Bottom-rear panel \(CZ309-67234\)](#) on page 667
2. Unplug the Drawer connector.



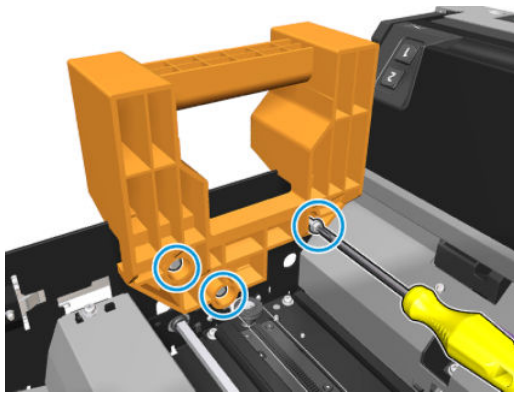
3. Unclip and remove the plastic part from the printer's structure.



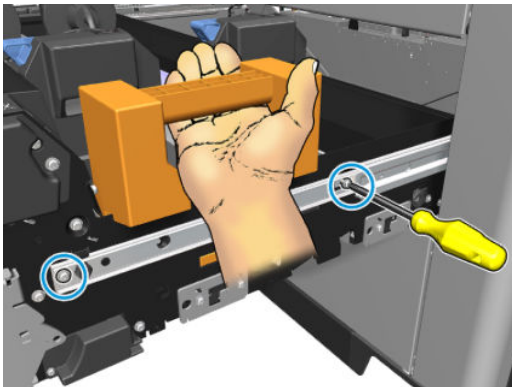
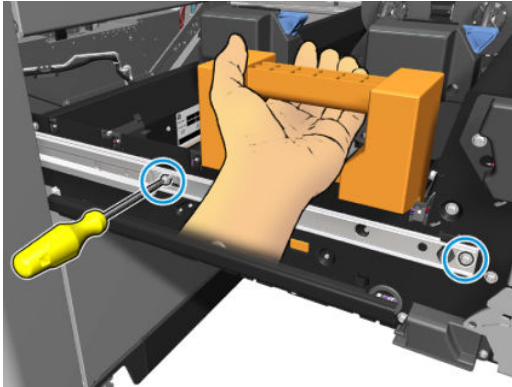
4. Open the Drawer and install two handles—one on each side of the paper input.




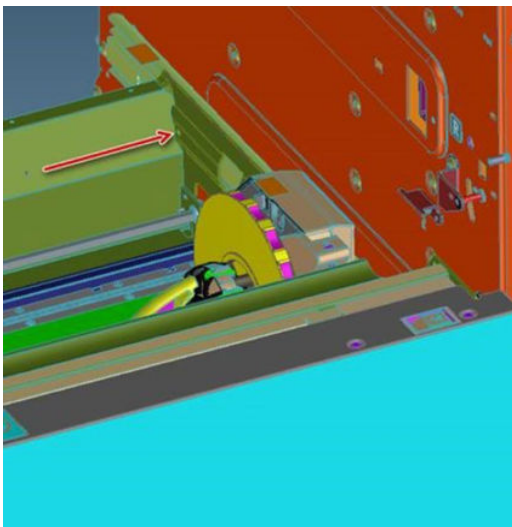
5. Screw in 3 screws for each handle.




6. Remove the screws, two on each side, while holding the paper input with the handles.




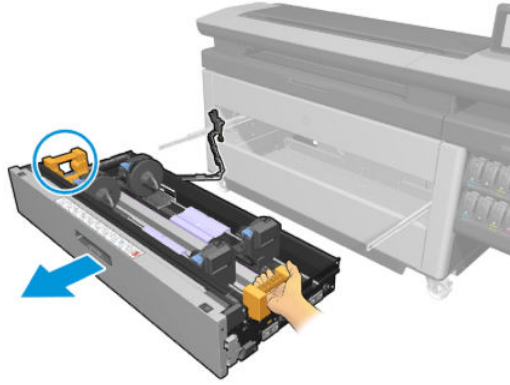
 **NOTE:** If the Guides have a fixing point at the location seen below, install using the screws provided with the service kit. Fixing points will be the same on both sides of the drawer.



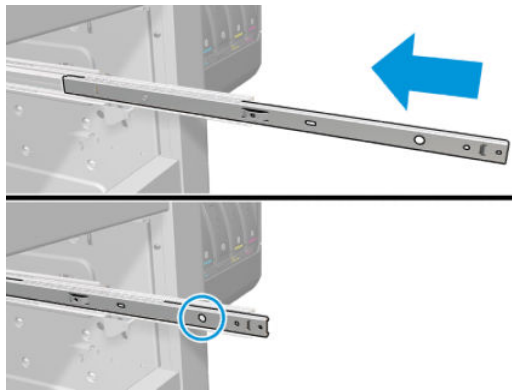
7. Remove the paper input.

 **NOTE:** In order to replace the telescopic slides you need to use two handles, one on each side of the paper input, to hold the drawer. They have three screws each, shown below in red circles. The red square indicates the mounting guide.

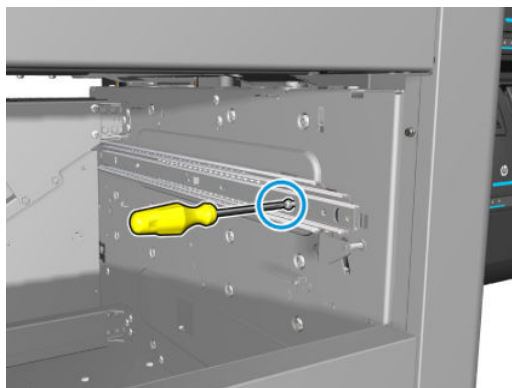
 **IMPORTANT:** Two people are needed: one for each handle.



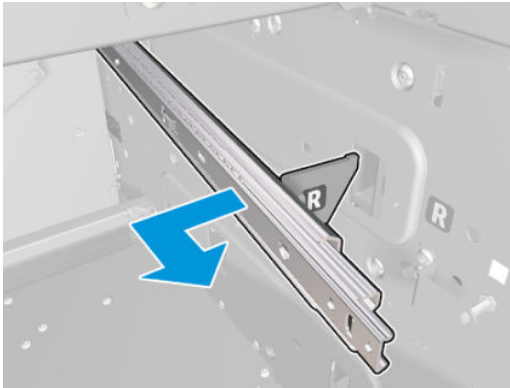
8. Move the slide so that the holes from the intermediate guide and the external guide become aligned.



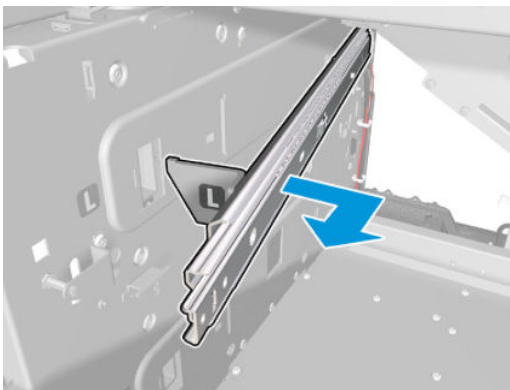
9. Push back both guides until they are in line with the screw that attaches the right slide to the printer and remove it



10. Disengage the right slide from the printer by moving it slightly in the drawer's opening direction and then rotating it clockwise.

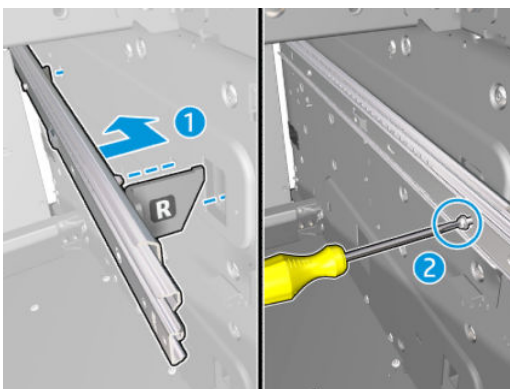


11. Remove the left telescopic slide, which is not attached by a screw, so you need only move it in the drawer's opening direction and then rotate it counterclockwise.

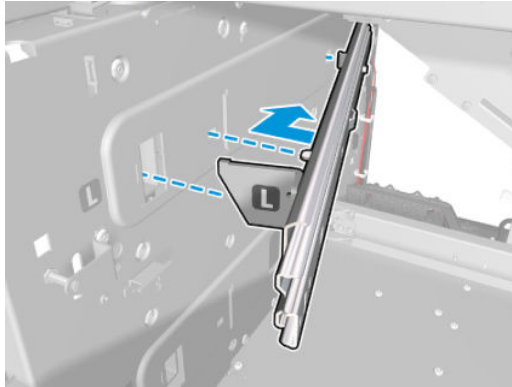


Installation

1. To install, perform the removal operation in reverse. First install the right slide and screw it in.



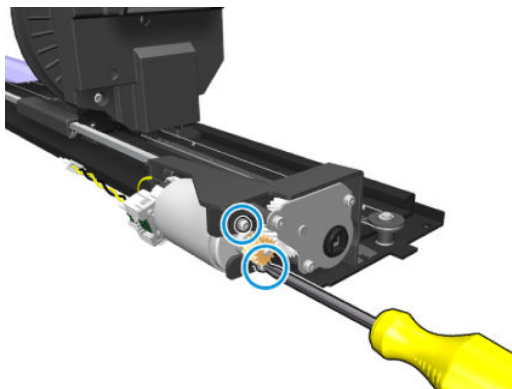
2. The following illustration shows the correct positioning for the left slide:



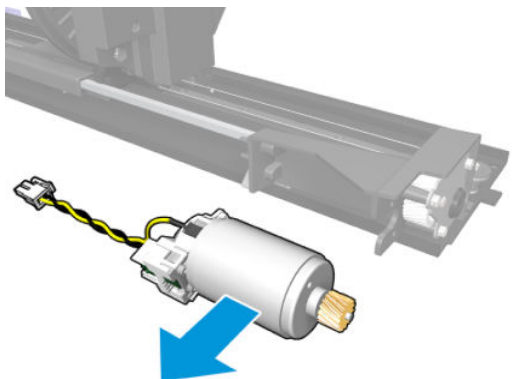
Motor block rewinder assembly (CZ309-67175)

Removal (front block)

1. Remove the front roll mounting's motor; see [Roll mounting assembly \(CZ309-67174\) on page 740](#).
Remove the [Roll mounting assembly \(CZ309-67174\) on page 740](#).
2. Unscrew 2 screws that attach the motor.

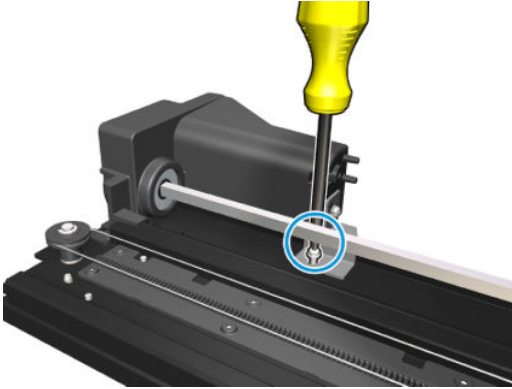


3. Remove the motor.

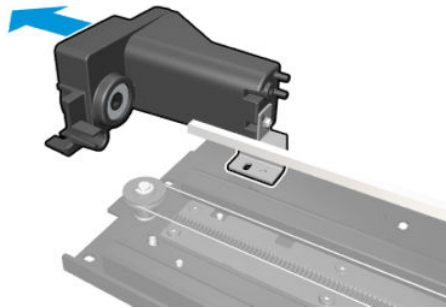


For HP-authorized personnel only

4. Unscrew the motor block rear holder screw.

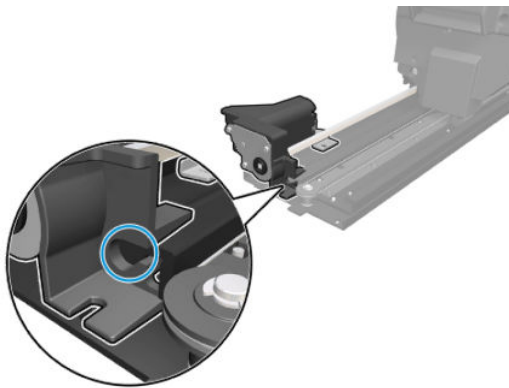


5. Pull out the front motor block rewriter assembly from the front roll's mounting axis.



Installation (front block)

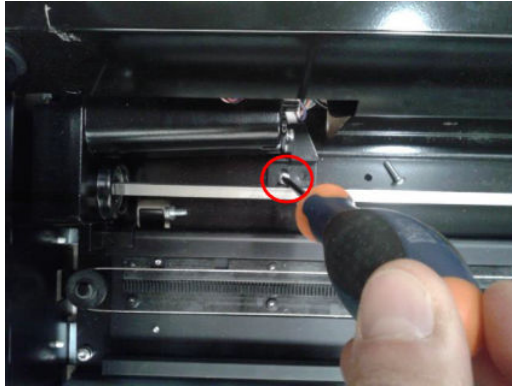
- ▲ To install, perform the removal operation in reverse. The following illustration shows correct positioning.



Removal (rear block)

1. Remove the rear roll mounting's motor; see [Roll mounting assembly \(CZ309-67174\) on page 740](#).

2. Remove a screw.



3. Pull out the rear motor block rewinder assembly from the front roll's mounting axis.
4. Remove the rear motor block rewinder assembly.

Installation (rear block)

1. To install, perform the removal operation in reverse.
2. Run the following after replacement:

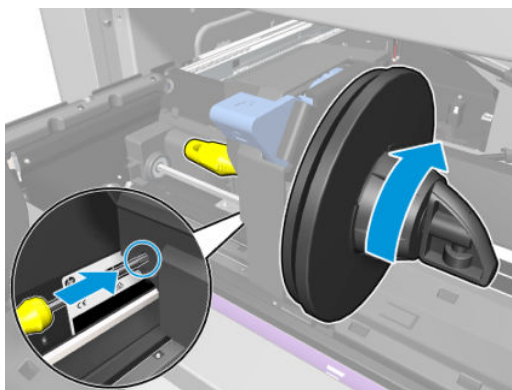
From the Service Menu, go to **Calibrations**, then:

- Run the **Roll assist friction calibration** for the corresponding rolls of that drawer
- Run the **Feed roller calibration**
- Run the **TOF calibration**

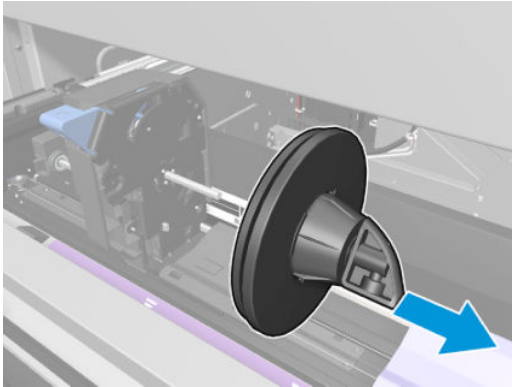
Indexing system inner (CZ309-67176)

Removal

1. Insert a screwdriver and press the internal plastic part while rotating as indicated, then pull the indexing system out of its axis.

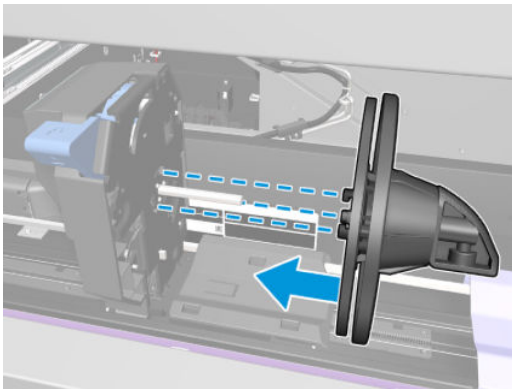


2. Pull the indexing system out of its axis.

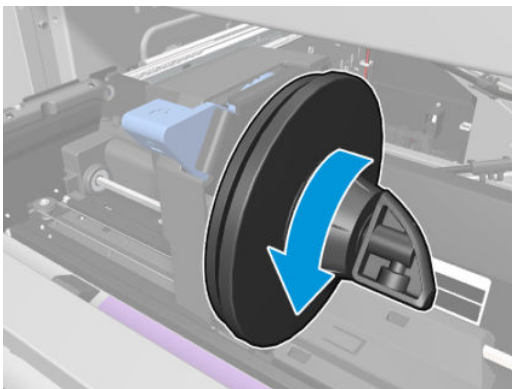


Installation

1. To install, perform the removal operation in reverse. You need to align the pins shown below on the right with the slots shown on the left.



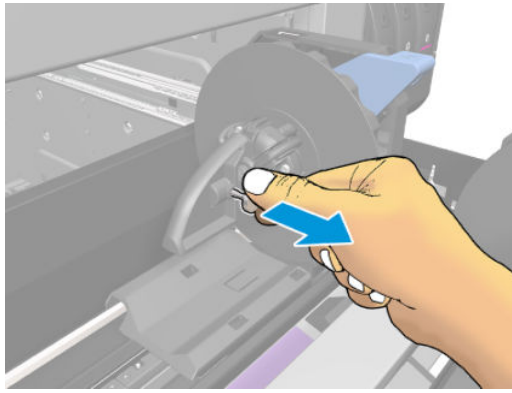
2. Rotate slightly in the indicated direction until the indexing system is clipped (the wedge is completely vertical).



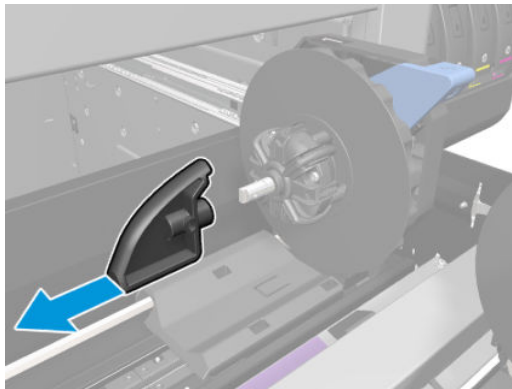
Hub assembly (expandable) (CZ309-67179)

Removal

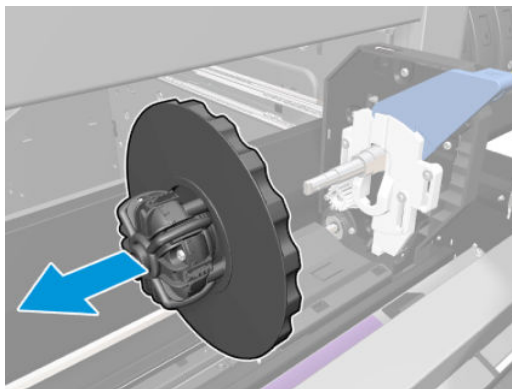
1. Remove the bolt.



2. Extract the wedge from its axis.



3. Pull left to extract the expandable hub assembly.



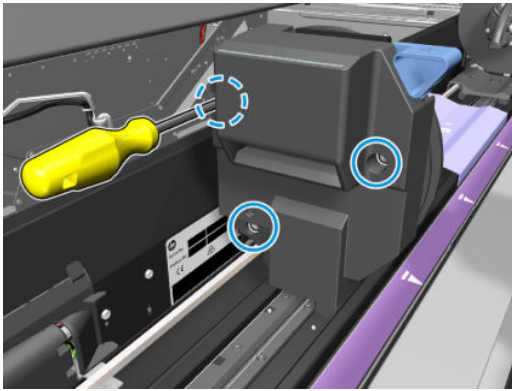
Installation

- ▲ To install, perform the removal operation in reverse. Ensure that the wedge is vertical.

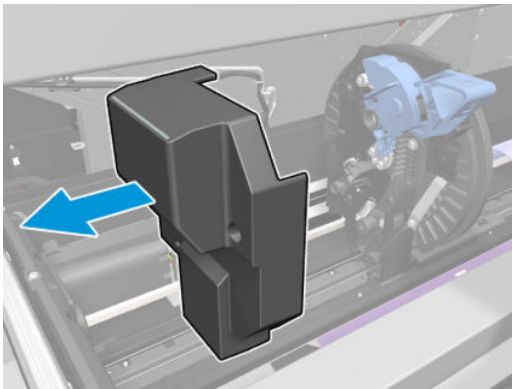
Cover sled left assembly (CZ309-67178)

Removal

1. Unscrew the 3 plastic cover screws.



2. Remove the cover sled left assembly.



Installation

- ▲ To install, perform the removal operation in reverse.

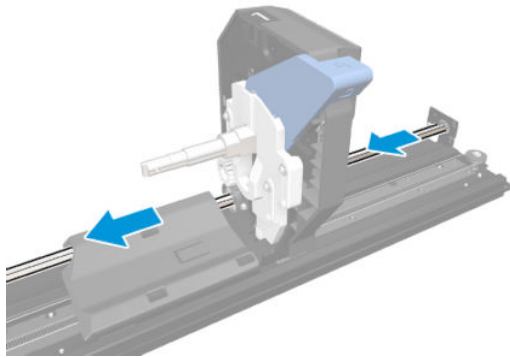
Cover sled right assembly (CZ309-67182)

Removal

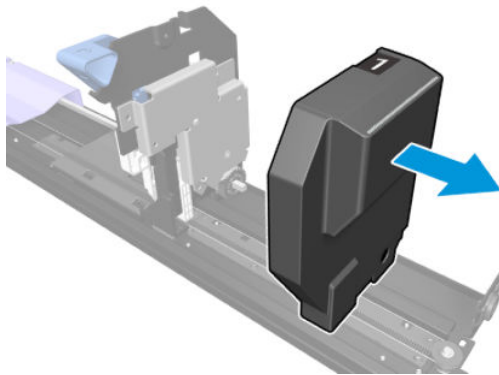
1. Remove the [Motor block rewinder assembly \(CZ309-67175\) on page 769](#).
2. Remove the [Hub assembly \(expandable\) \(CZ309-67179\) on page 772](#).
3. Remove five screws from the cover sled right assembly.



4. Move the axis rewriter to disengage it from its right end.



5. Remove the cover sled right assembly.



Installation

- ▲ To install, perform the removal operation in reverse.

Right sled brake and lever (CZ309-67180)

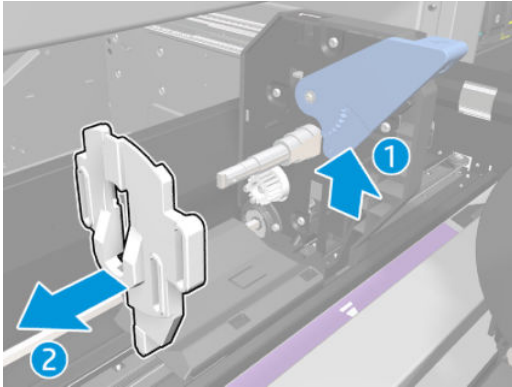
Removal

1. Remove the [Hub assembly \(expandable\) \(CZ309-67179\) on page 772](#).
2. Unscrew 3 brake screws.

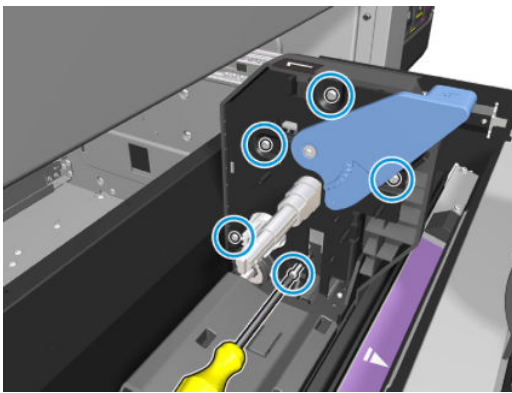


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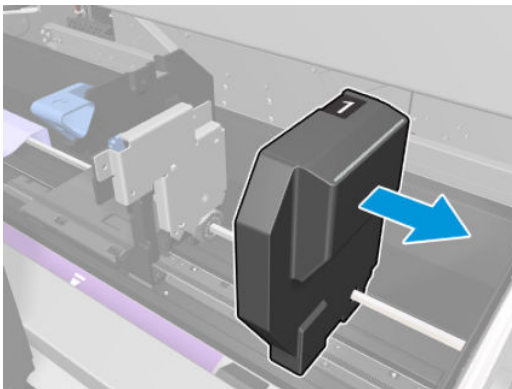
3. Remove the brake.



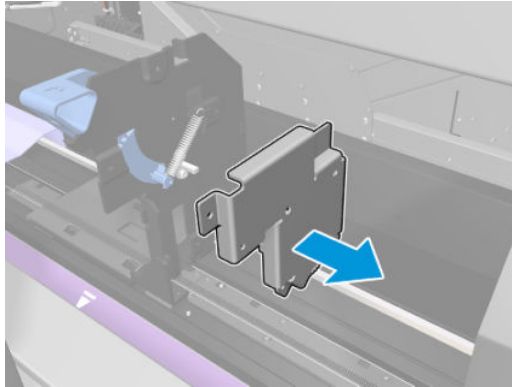
4. Unscrew 5 right sled cover screws.



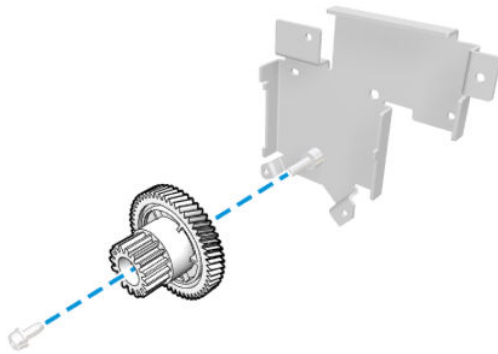
5. Pull out the right sled cover.



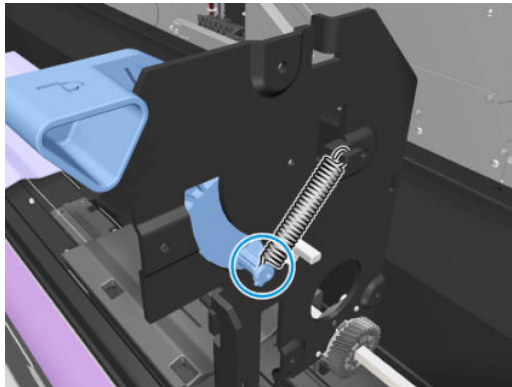
6. Remove the cover spring.



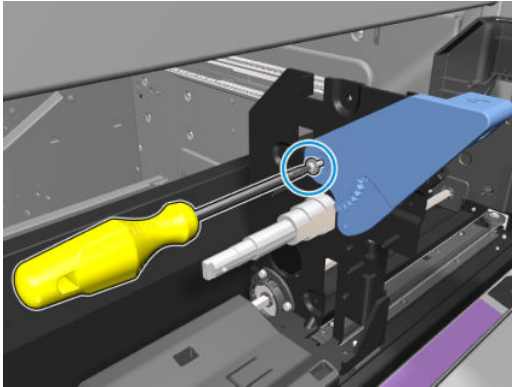
7. Unscrew the gear from the cover spring.



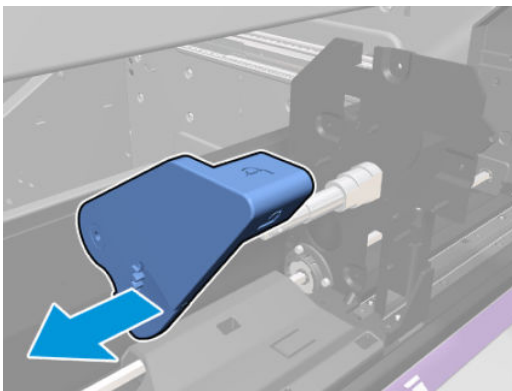
8. Unclip the lever spring.



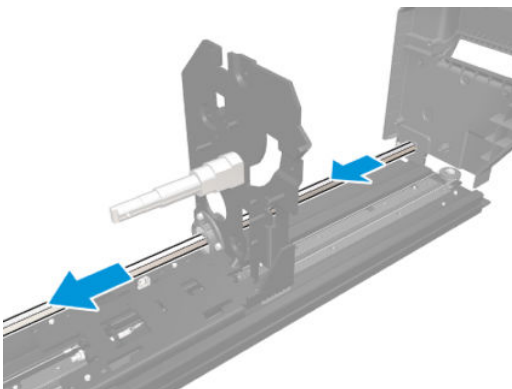
9. Unscrew the screw lever.



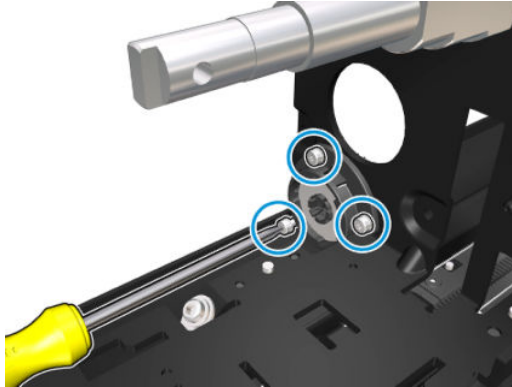
10. Remove the lever.



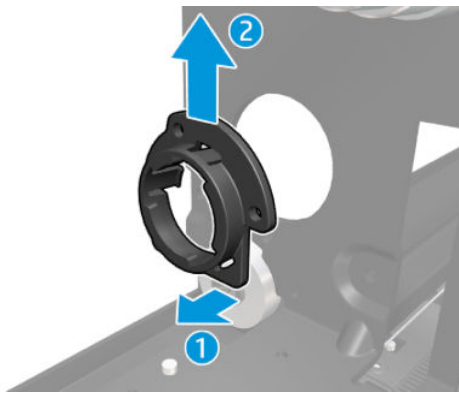
11. Remove the [Motor block rewinder assembly \(CZ309-67175\)](#) on page 769.
12. Remove the [Guide plate right and left \(CZ309-67181\)](#) on page 737.
13. Move the axis rewinder to disengage it from its right end.



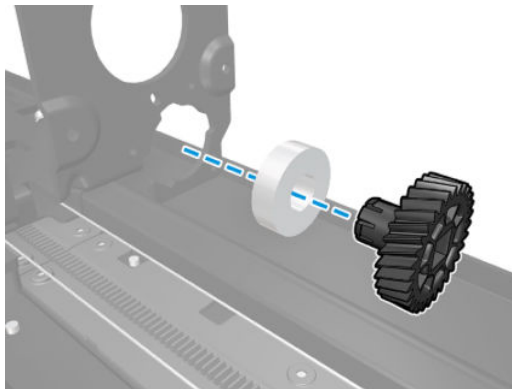
14. Unscrew 3 rewinder support gear screws.



15. Remove rewinder support gear.



16. Remove rewinder idler gear.



Installation

- ▲ To install, perform the removal operation in reverse.

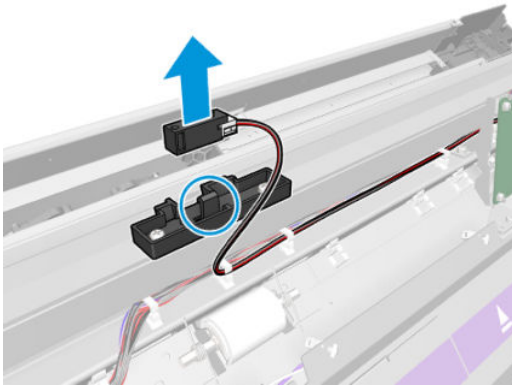
Paper sensor alone (CZ309-67161)

Removal

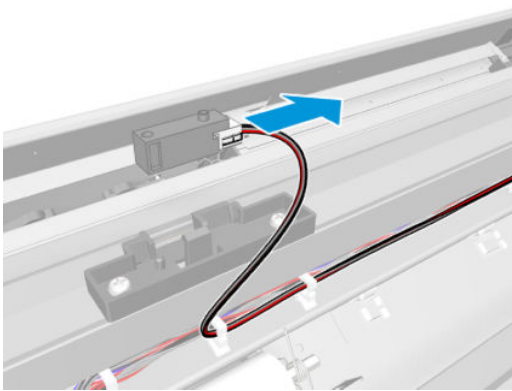
1. Remove the [Cover assembly mounting \(CZ309-67154\)](#) on page 707.

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2. Gently pull back the plastic part in order to remove sensor 3.

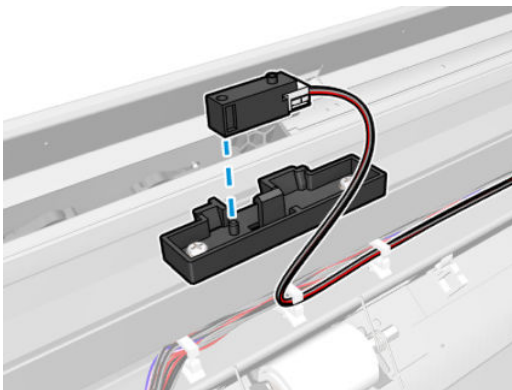


3. Unplug the cable.



Installation

- ▲ To install, perform the removal operation in reverse. The following illustration shows the correct positioning of the sensor.

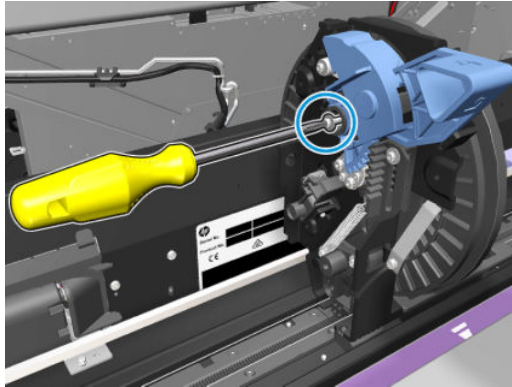


Left sled internal parts with index out (CZ309-67177)

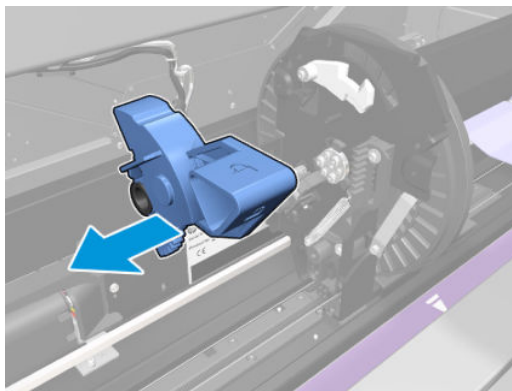
Removal

1. Remove the [Cover sled left assembly \(CZ309-67178\) on page 773](#)

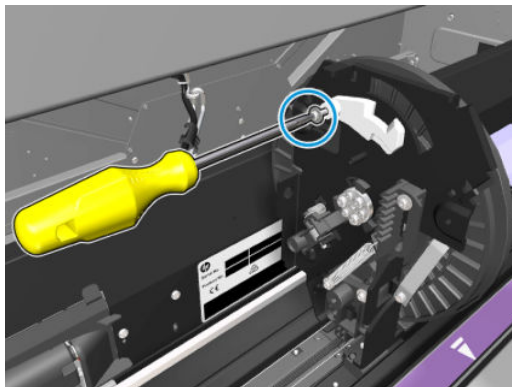
2. Unscrew the indexing lever screw.



3. Remove the indexing lever.

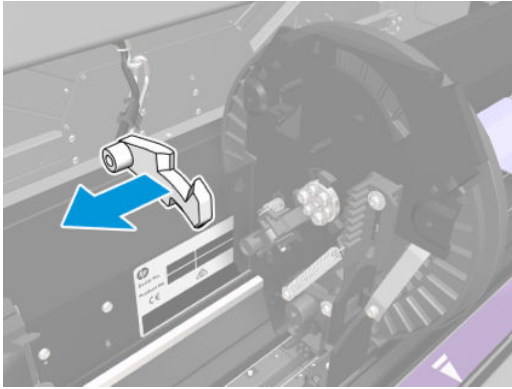


4. Unscrew the locker indexing screw.

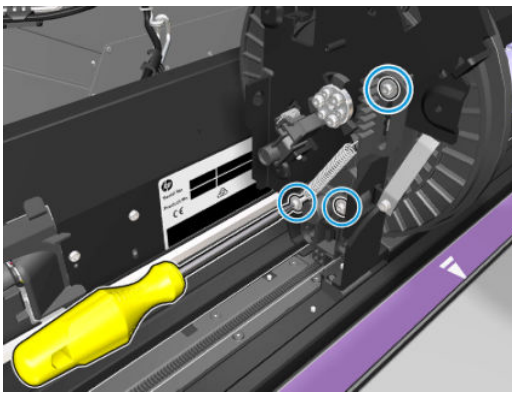


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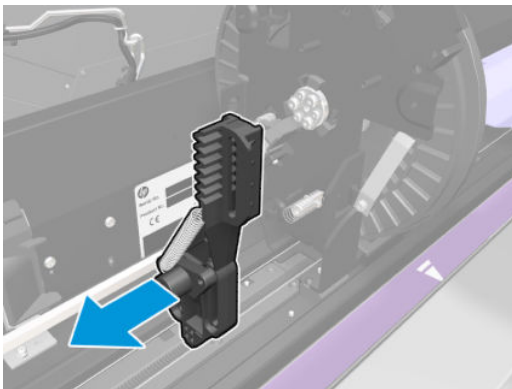
5. Remove the locker indexing.



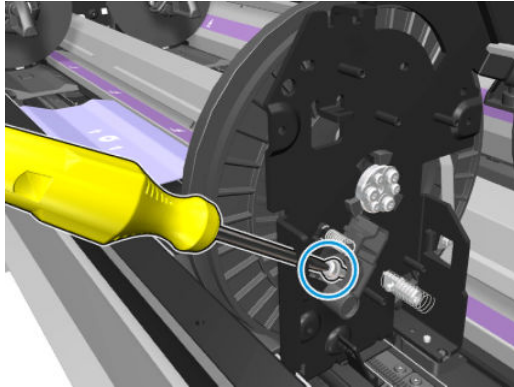
6. Unscrew 3 indexing brake screws.



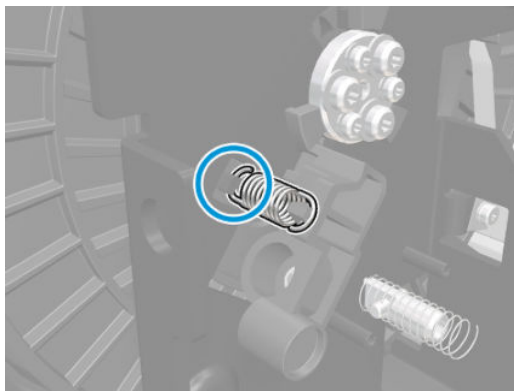
7. Remove the indexing brake.



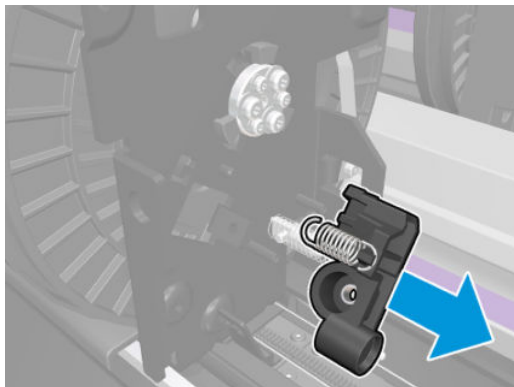
8. Unscrew locker screw.



9. Unclip locker spring.



10. Remove locker.



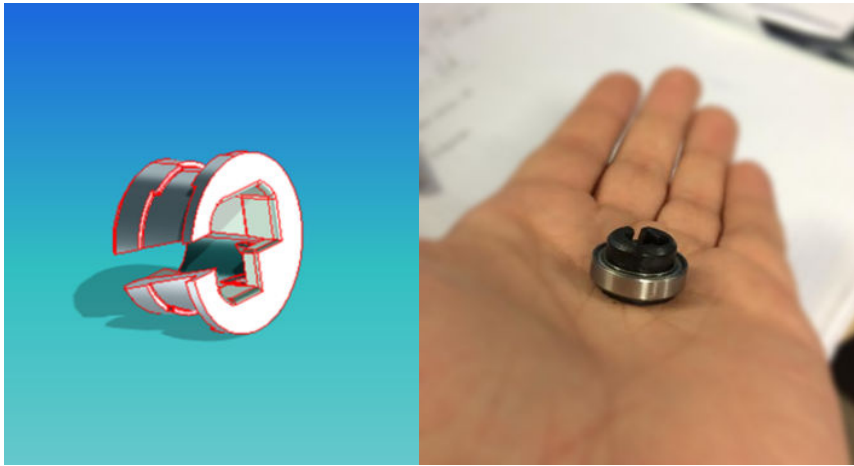
Installation

- ▲ To install, perform the removal operation in reverse.

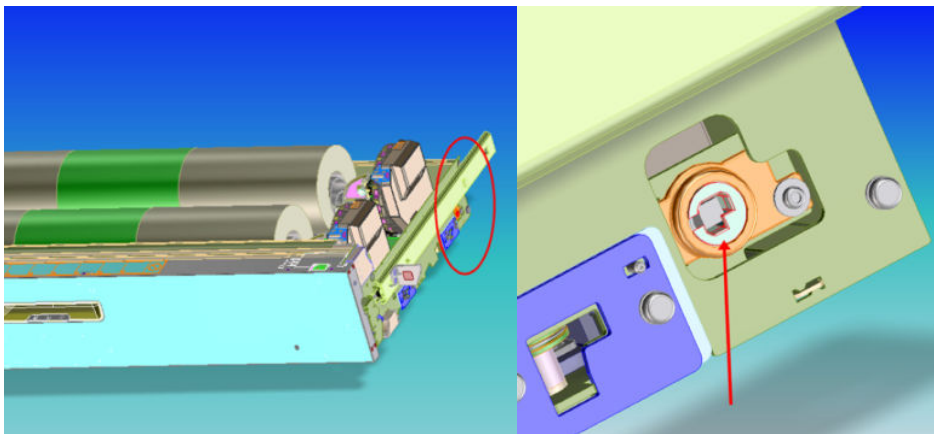
Axis holder (CZ309-67319)

Picture on right with bearing:

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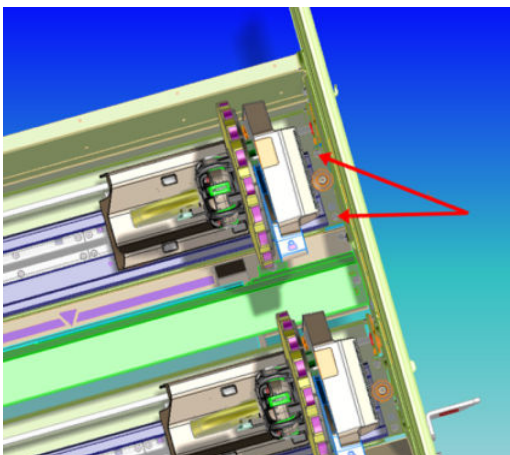


Location:

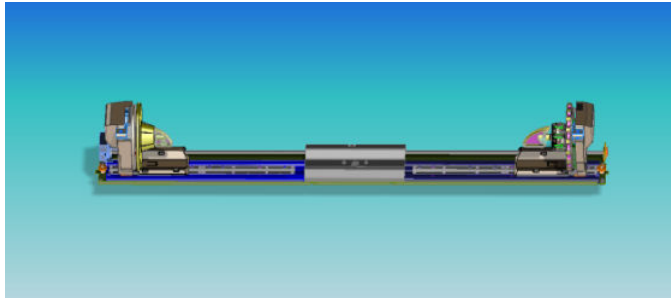


Removal

1. Begin detaching the roll assist (4 screws; 2 each side).



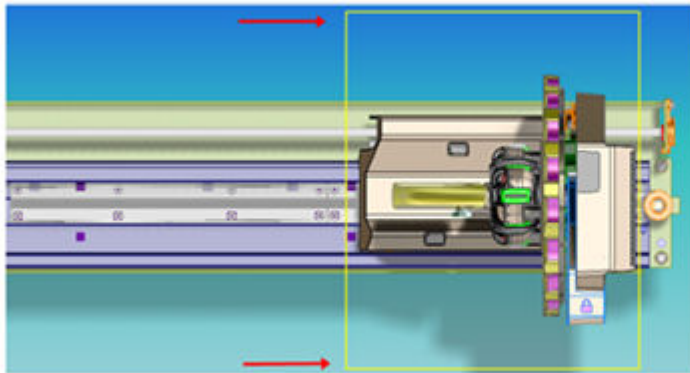
2. Continue detaching roll assist. Take it out of the structure. It has a small gap, so manually look for the correct position to extract it, with its left side to be pulled up first.



3. Loosen the screw holding the cover (pictured below) and take it out, being ready to exchange the axis holder.

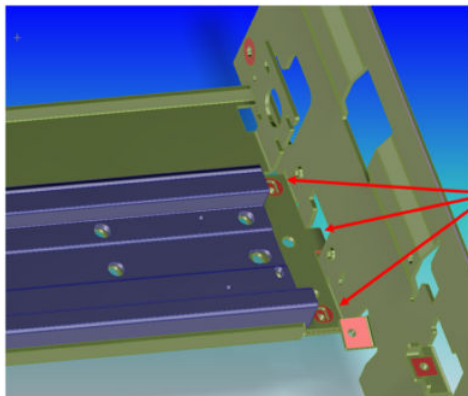


4. Once the new service kit is assembled and before tightening the cover screw, in order to limit the freedom of movement in the assembly axle cover holder structure, get the roll assist assembly as close as possible to the axis holder, thereby centering the axle to prevent possible buckling. Then tighten the screw.



Approach the axis holder with the roll assist assembly, limiting axle displacement from its nominal position

5. Exchange the bearing, axis holder and put back the roll assist, respecting said order. The metal pads will go into the plate holes. Place the right side down first.



Right side down first

Pad and holes in correct places

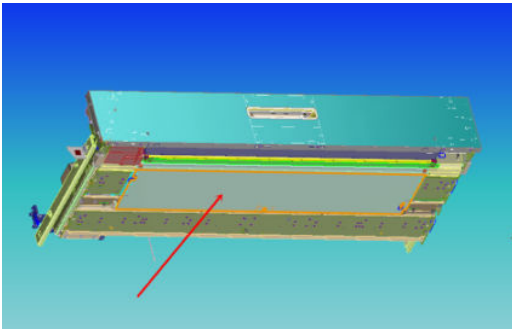
6. Run the following after replacement:

From the Service Menu, go to **Calibrations**, then:

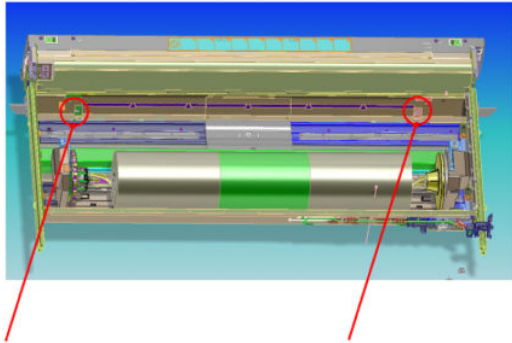
- Run the **Roll assist friction calibration** for the corresponding rolls of that drawer
- Run the **Feed roller calibration**
- Run the **TOF calibration**

Bottom drawer plate (CZ318-67004)

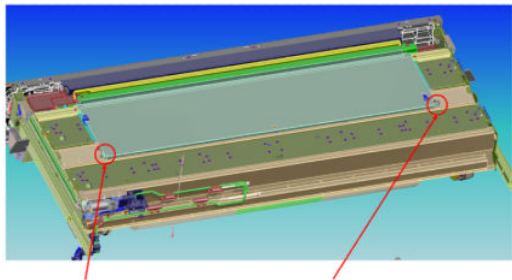
Bottom plate located here:



Location and constraints:



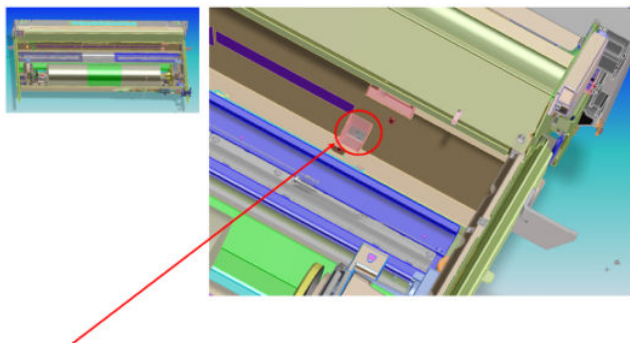
As you can see in above image, the upper side is tightened by a couple of screws. They are accessible by screwdriver via the holes in the plates.



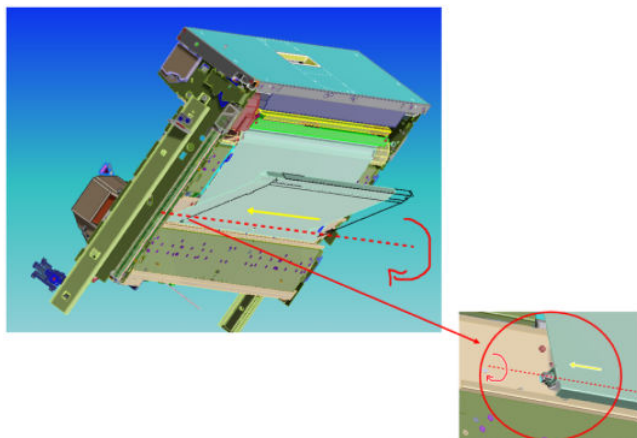
As per above, in the bottom area we find two pins holding the plate in place.

Removal

1. Begin by loosening both screws on the upper side.



2. After releasing screws the plate is able to be rotated (see the red arrows); you just need to release it from its pins along the X-axis first (see yellow marks).





Installation

- ▲ Follow this order when installing a new bottom plate:
 1. Insert the plate on the bottom side using its pin-holes.
 2. Displace it along the X-axis.
 3. Rotate it until it is in the correct position.
 4. Tighten the screws on the upper side.

EE subsystem

Hard Disk Drive W/ FW HE Service Kit (PageWide XL 8000/5100/6000)(CZ309-67306)

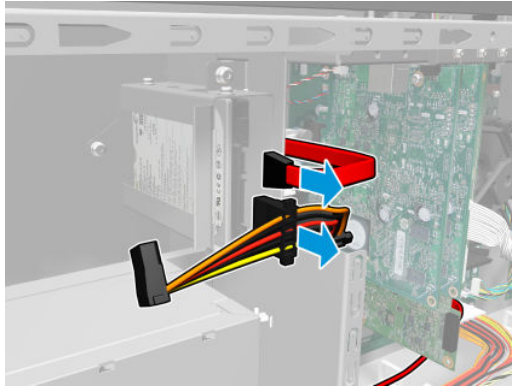
 **NOTE:** The Hard Disk Drive W/ FW HE Service Kit (CZ309-67306) is very similar to the LE Hard Disk Drive W/ FW Service Kit (CZ309-67436); they can be removed and installed in the same way.

 **IMPORTANT:** Right after installing the Hard Disk Drive W/ FW HE Service Kit (CZ309-67306), proceed to install the same FW version as the one that the printer had or above.

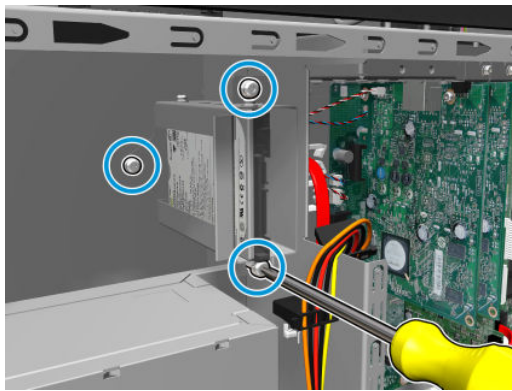
Removal

1. Remove the [E-box cover \(CZ309-67056\)](#) on page 656.

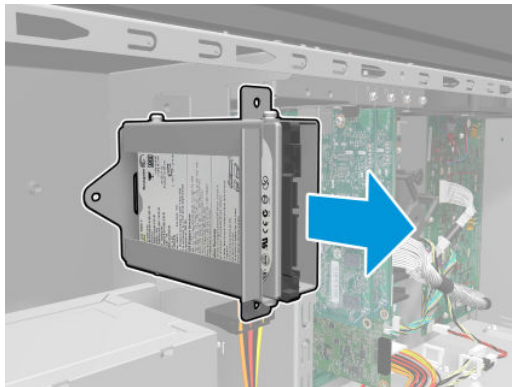
2. Unplug two cables.



3. Remove three screws.

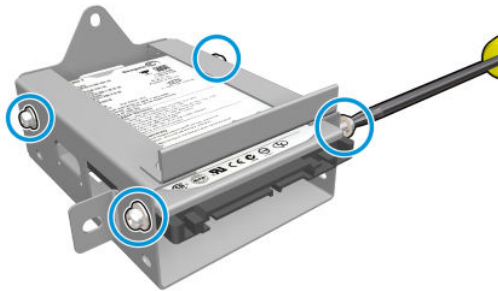


4. Remove the hard disk drive holder.

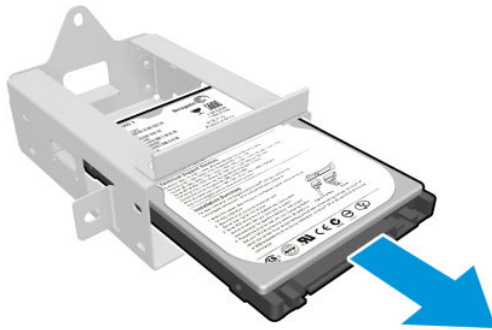


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5. Remove two screws.



6. Remove the hard disk drive.



Installation

- ▲ To install, perform the removal operation in reverse.

 **IMPORTANT:** Right after installing the Hard Disk Drive W/ FW HE Service Kit (CZ309-67306), proceed to install the same FW version as the one that the printer had or above.

Hard Disk Drive W/ FW LE Service Kit (PageWide XL 5000/4x00/3900)(CZ309-67436)

Please follow the same instructions as in [Hard Disk Drive W/ FW HE Service Kit \(PageWide XL 8000/5100/6000\) \(CZ309-67306\) on page 788](#) as the HDDs can be removed (and installed) in the same way.



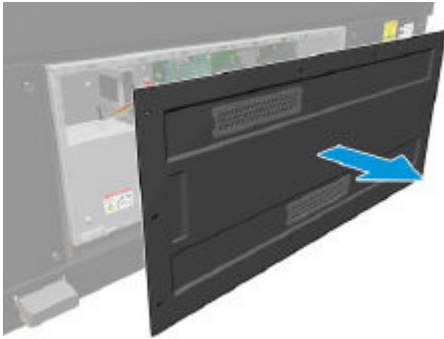
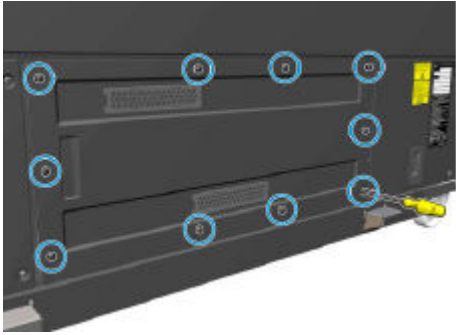
Removable Hard Disk Drive W/ FW HE Service Kit (PageWide XL 8000/5000/4x00/3900) (CZ309-67383)

Removal

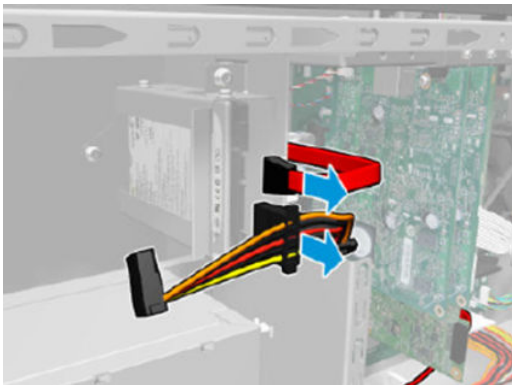
1. Switch the machine off.
2. Remove the [Left E-box cover \(CZ309-67057, CZ309-67260\)](#) on page 655.



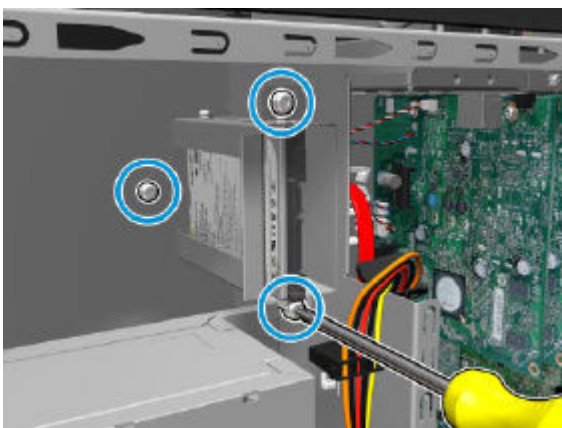
3. Remove the [E-box cover \(CZ309-67056\)](#) on page 656.



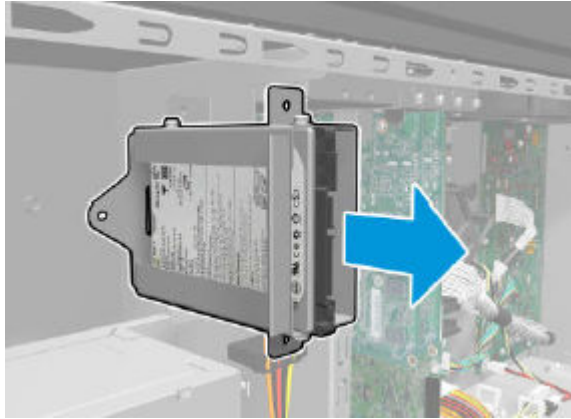
4. Unplug two cables (CZ309-67384).



5. Remove 3 screws.



6. Remove the Hard Disk Drive holder.



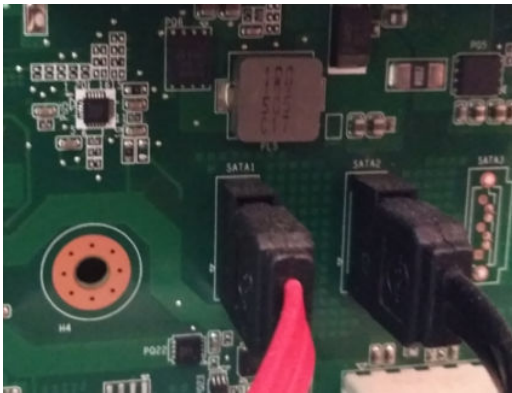
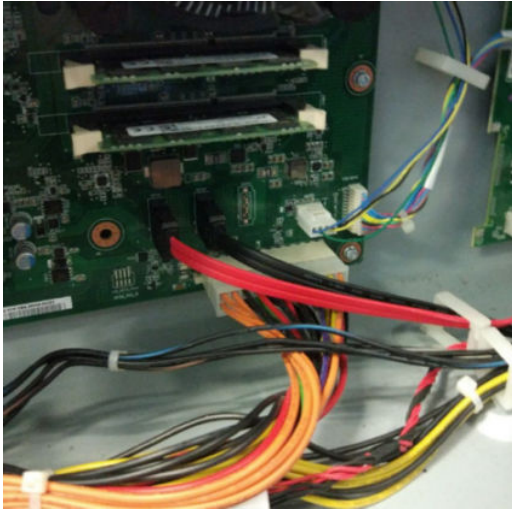
7. Remove 2 screws.




8. Remove the HDD.



9. Connect the cables (CZ309-67384) as in the pictures below:



 **NOTE:** Please be aware that if the kit is installed in an LE printer (5000/4x00/3900) there will only be one cable: the red one. The black one will be missing.

10. Connect the cable extension to ensure that the cable reaches the new metal support.

11. Remove the previous metal support (CZ309-67346) by removing 6 screws.



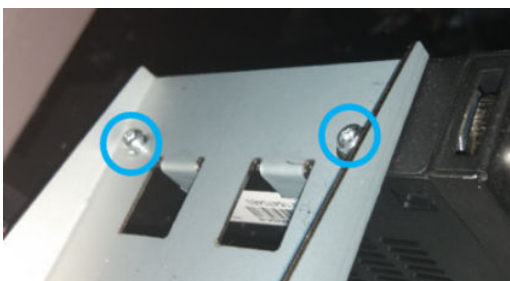
12. Install the disks on the racks:

RACK 1: 500GB (the red cable); RACK 2: 128GB (the black cable). Cables: CZ309-67384.

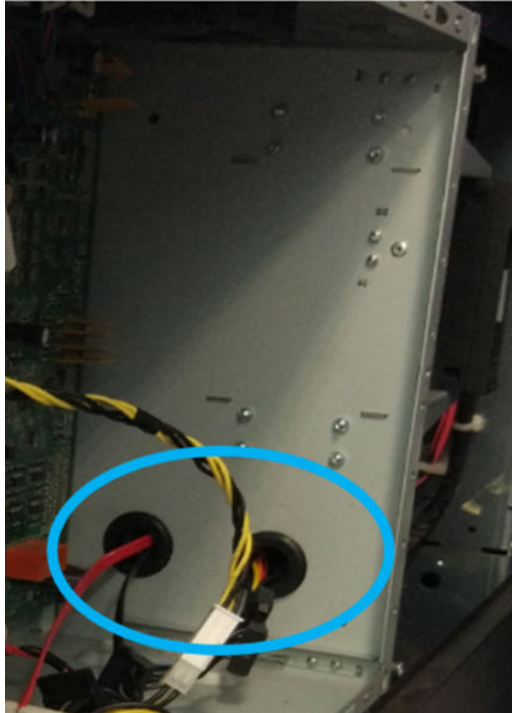




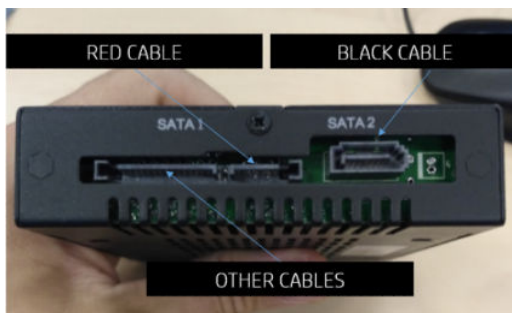
13. Fix the rack on the new support (CZ309-67346). 2 screws on each side. Here is a view from above:



14. Route the cables through the new support (CZ309-67346).



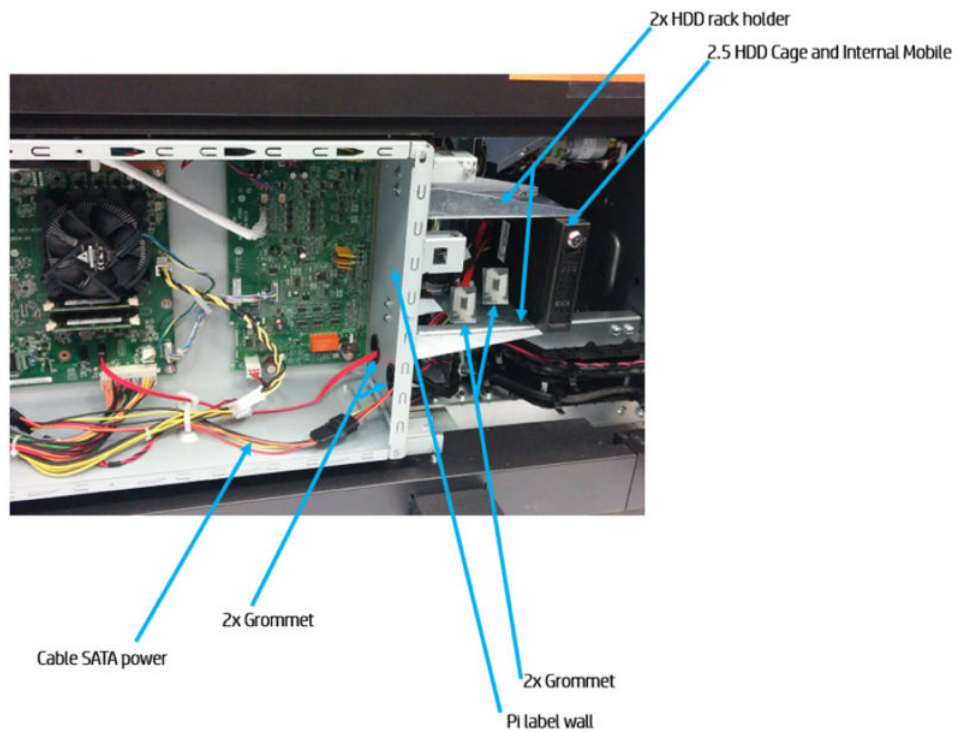
15. Connect the cables (CZ309-67384) as shown in the picture:



NOTE: Please be aware that if the kit is installed in an LE printer (5000/4x00/3900) there will only be one cable: the red one. The black one will be missing.

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16. Fix the new support in place by using the same 6 screws that were previously removed.
17. Check the cable routing:



18. Install the new Left E-box cover as well as the E-box cover (??? link to CZ309-67345).

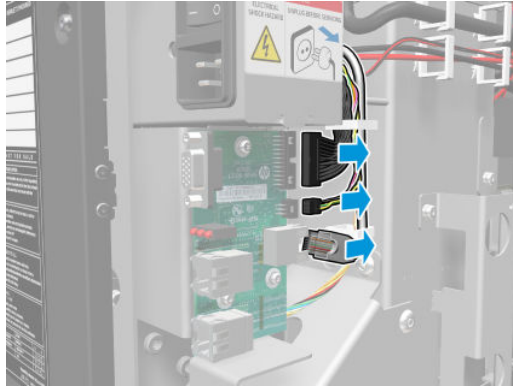


Connections Panel PCA (CZ309-67003)

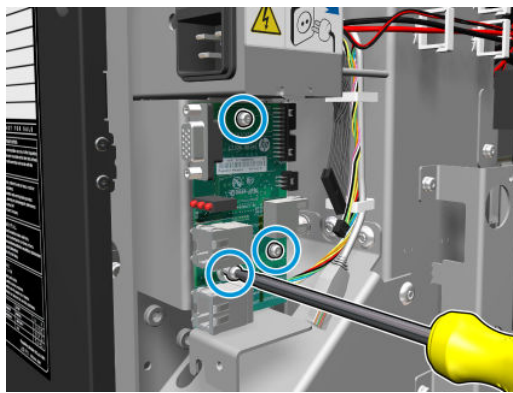
Removal

1. Remove the [Rear-left cover connector \(CZ309-67043\)](#) on page 644.

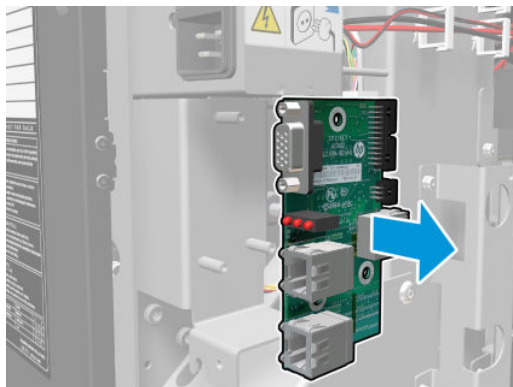
2. Unplug three cables.



3. Remove three screws.



4. Remove the Connections Panel PCA.



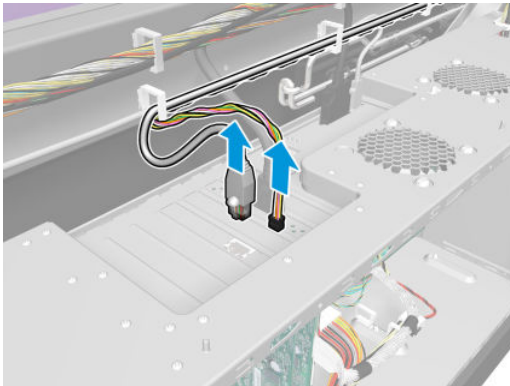
Installation

- ▲ To install, perform the removal operation in reverse.

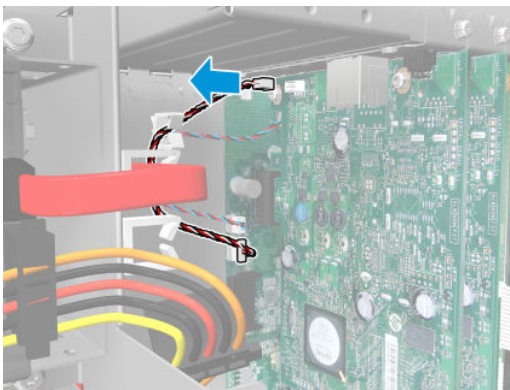
Jester JDI PCA (CZ309-67013)

Removal

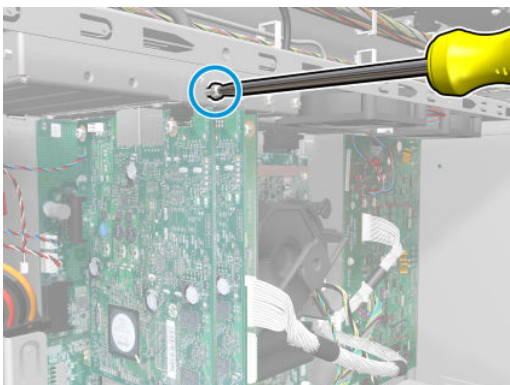
1. Remove the [Right E-box cover \(CZ309-67058, CZ309-67261\)](#) on page 654.
2. Remove the [Left E-box cover \(CZ309-67057, CZ309-67260\)](#) on page 655.
3. Remove the [Top E-box cover \(CZ309-67059, CZ309-67262\)](#) on page 656.
4. Remove the [E-box cover \(CZ309-67056\)](#) on page 656.
5. Unplug two cables.



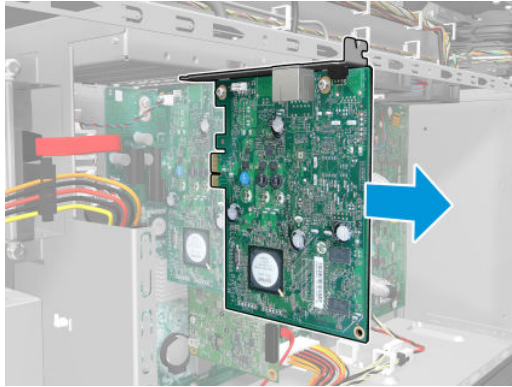
6. Unplug another cable.



7. Remove a screw.



8. Remove the Jester JDI PCA.



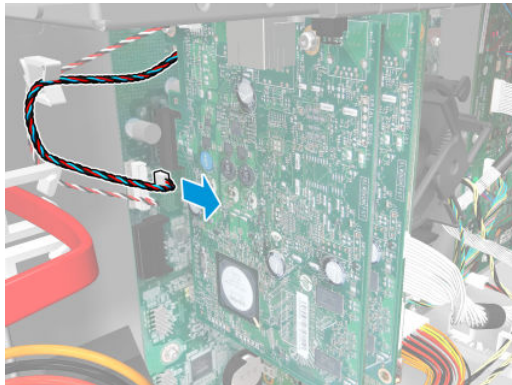
Installation

- ▲ To install, perform the removal operation in reverse.

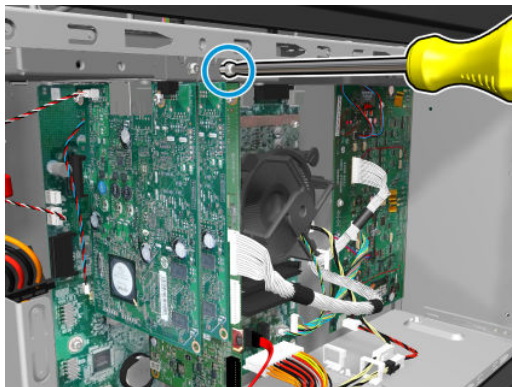
Jester JPE PCA (CZ309-67012)

Removal

1. Remove the [E-box cover \(CZ309-67056\)](#) on page 656.
2. Unplug a cable.

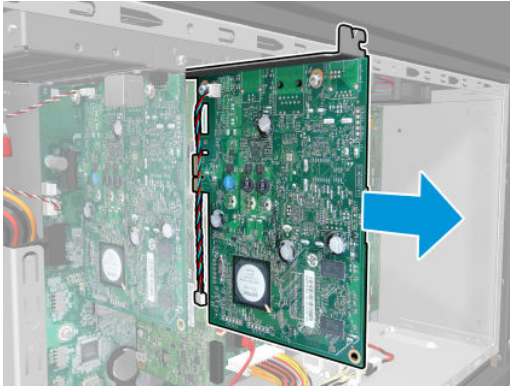


3. Remove a screw.



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4. Remove the Jester JPE PCA.



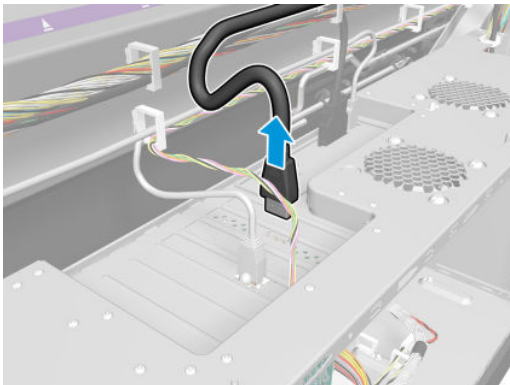
Installation

- ▲ To install, perform the removal operation in reverse.

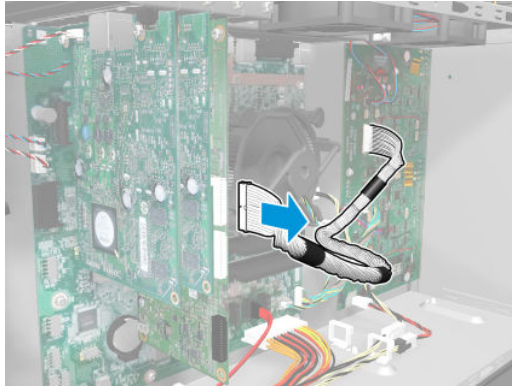
Engine PCA (CZ309-67011)

Removal

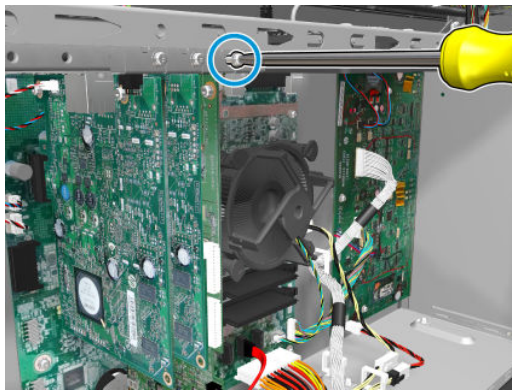
1. Remove the [Right E-box cover \(CZ309-67058, CZ309-67261\) on page 654](#).
2. Remove the [Left E-box cover \(CZ309-67057, CZ309-67260\) on page 655](#).
3. Remove the [Top E-box cover \(CZ309-67059, CZ309-67262\) on page 656](#).
4. Remove the [E-box cover \(CZ309-67056\) on page 656](#).
5. Unplug a cable.



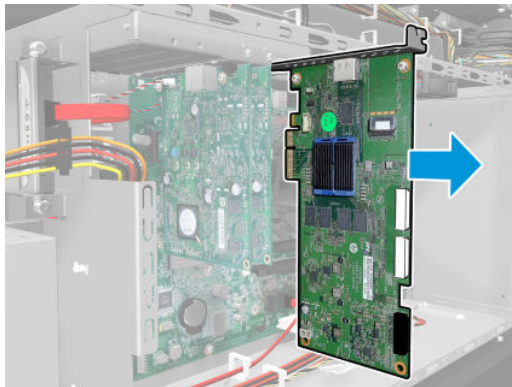
6. Unplug another cable.



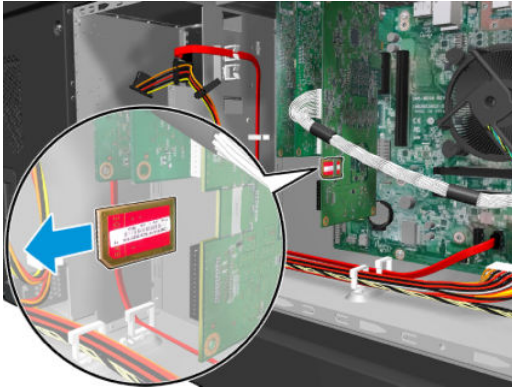
7. Remove a screw.



8. Remove the Engine PCA.





9. Remove the CryptASIC PCA.



Installation

- ▲ To install, perform the removal operation in reverse.

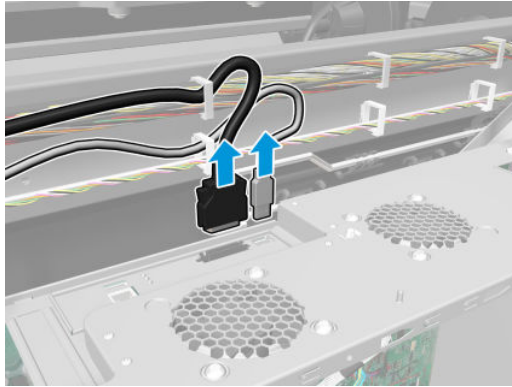
Formatter PCA (CZ309-67009, CZ309-67010)

-  **NOTE:** The Formatter PCA HE Service Kit (CZ309-67009) is very similar to the Formatter PCA LE Service Kit (CZ309-67010); they can be removed and installed in the same way.
-  **NOTE:** The new formatter comes without RAM. To request RAM memory you need to request the following service kit: CZ309-67304 Memory Bank 8GB Service Kit.

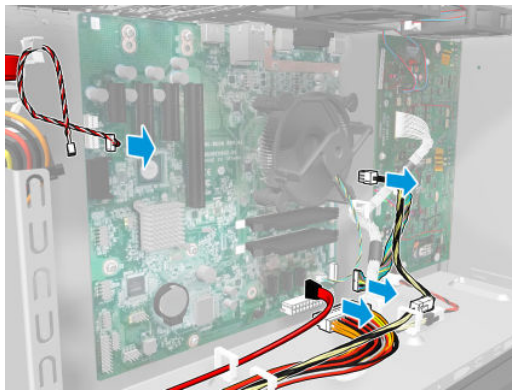
Removal

1. Remove the [Right E-box cover \(CZ309-67058, CZ309-67261\) on page 654](#).
2. Remove the [Left E-box cover \(CZ309-67057, CZ309-67260\) on page 655](#).
3. Remove the [Top E-box cover \(CZ309-67059, CZ309-67262\) on page 656](#).
4. Remove the [E-box cover \(CZ309-67056\) on page 656](#).
5. Remove the [Jester JDI PCA \(CZ309-67013\) on page 800](#).
6. Remove the [Jester JPE PCA \(CZ309-67012\) on page 801](#).
7. Remove the [Engine PCA \(CZ309-67011\) on page 802](#).

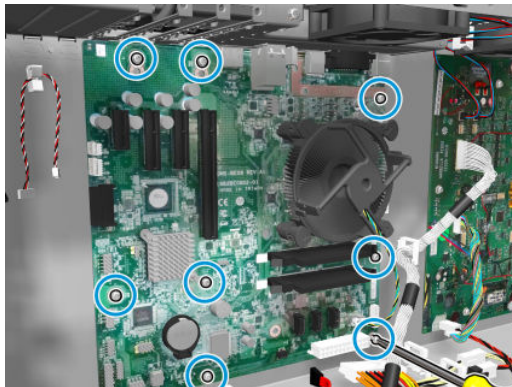
8. Unplug two cables.



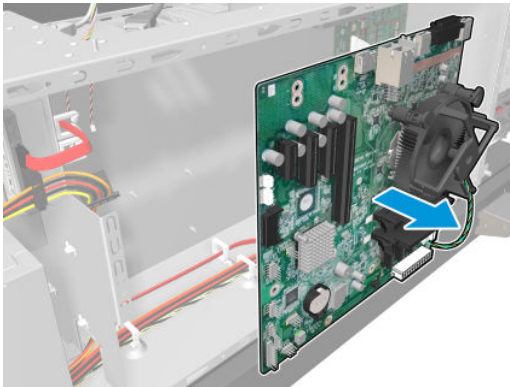
9. Unplug all cables.



10. Remove eight screws.



11. Remove the Formatter PCA.



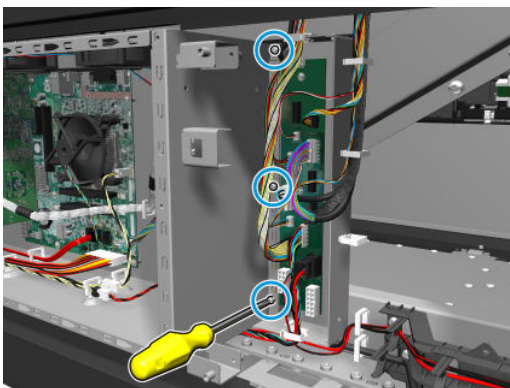
Installation

- ▲ To install, perform the removal operation in reverse.

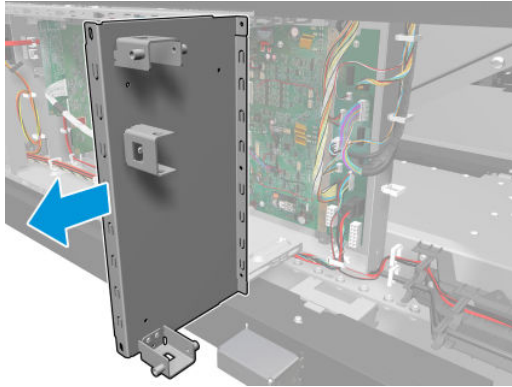
Central Distribution PCA (CZ309-67008) and new Central distribution PCA (CZ309-67314)

Removal

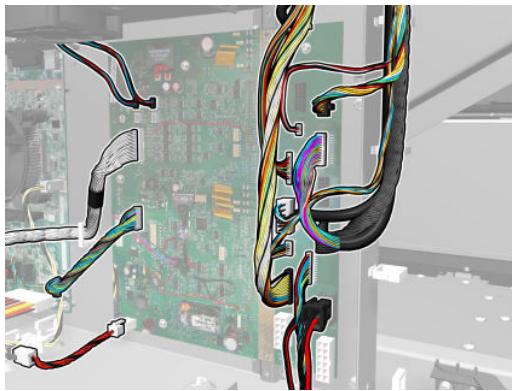
1. Remove the [Left E-box cover \(CZ309-67057, CZ309-67260\)](#) on page 655.
2. Remove the [E-box cover \(CZ309-67056\)](#) on page 656.
3. Remove three screws.



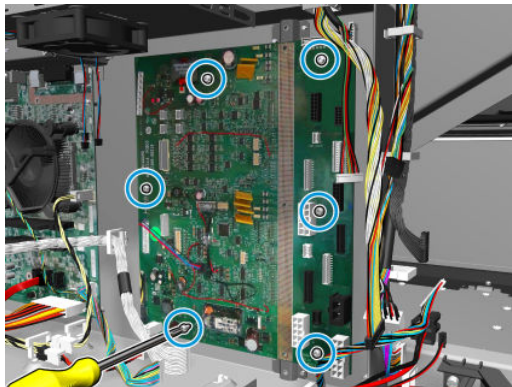
4. Remove the P label wall.



5. Unplug all cables.

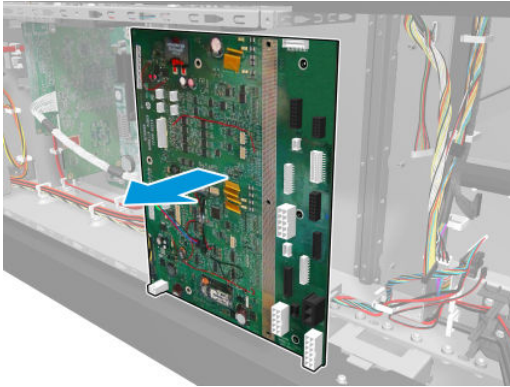


6. Remove six screws.



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7. Remove the Central Distribution PCA.



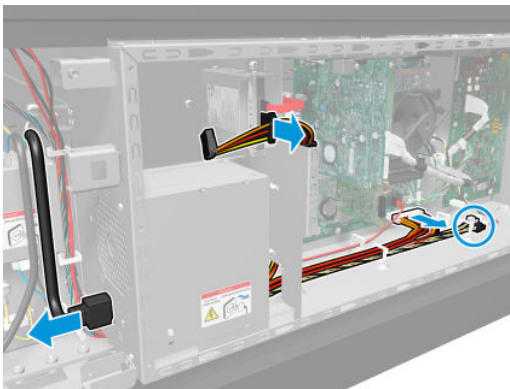
Installation

- ▲ To install, perform the removal operation in reverse.

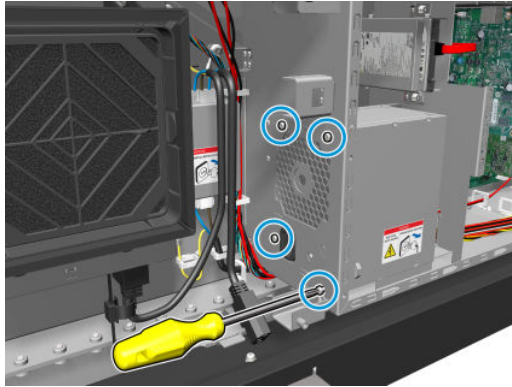
ATX PSU PICOLIT 180W Service Kit (CZ309-67402)

Removal

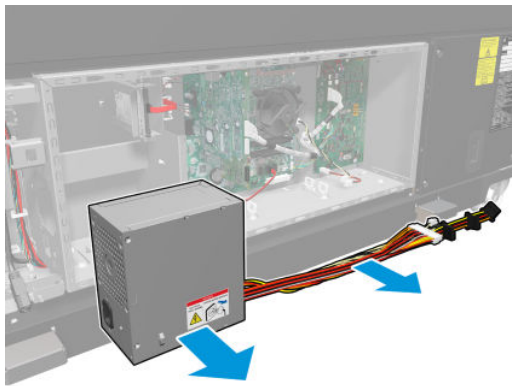
1. Remove the [Right E-box cover \(CZ309-67058, CZ309-67261\)](#) on page 654.
2. Remove the [E-box cover \(CZ309-67056\)](#) on page 656.
3. Unplug and unroute cables.



4. Remove four screws.



5. Remove the ATX PSU.



Installation

- ▲ To install, perform the removal operation in reverse.

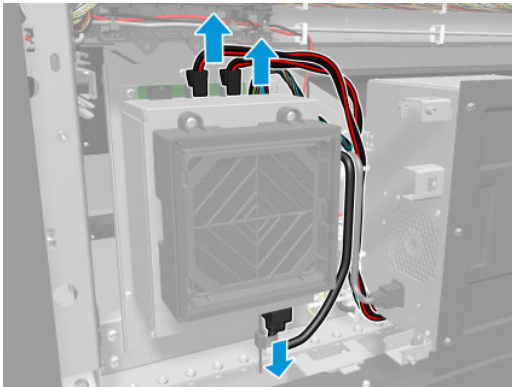
Mechatronics PSU (CZ309-67015)

Removal

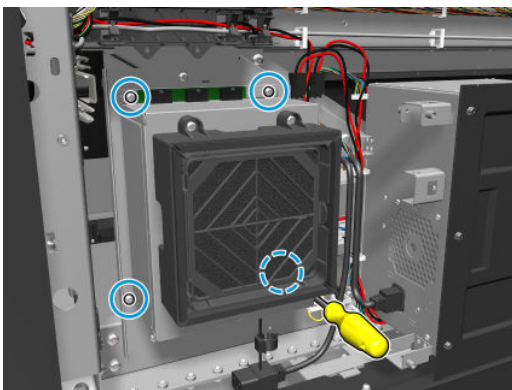
1. Remove the [Right E-box cover \(CZ309-67058, CZ309-67261\)](#) on page 654.
2. Remove the [Top E-box cover \(CZ309-67059, CZ309-67262\)](#) on page 656.

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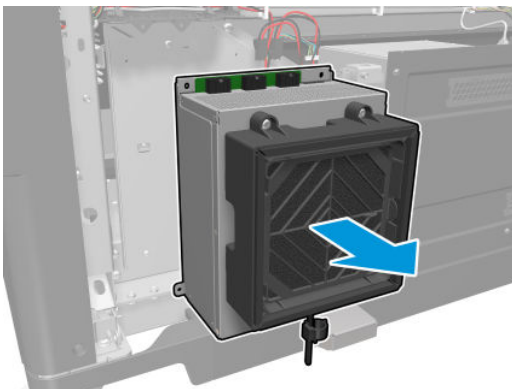
3. Unplug four cables.



4. Remove four screws.



5. Remove the Mechatronics PSU.



Installation

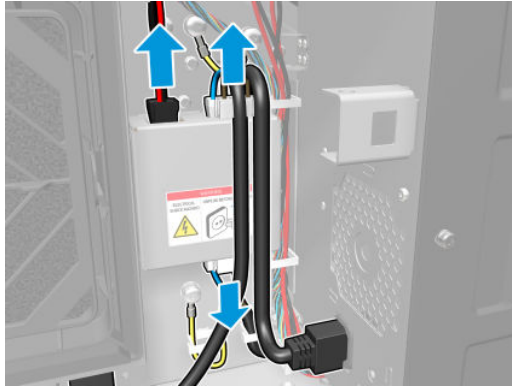
- ▲ To install, perform the removal operation in reverse.

Power Distribution PCA (CZ309-67209)

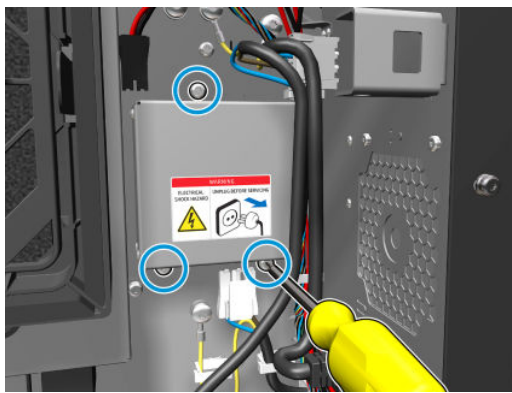
Removal

1. Remove the [Right E-box cover \(CZ309-67058, CZ309-67261\)](#) on page 654.

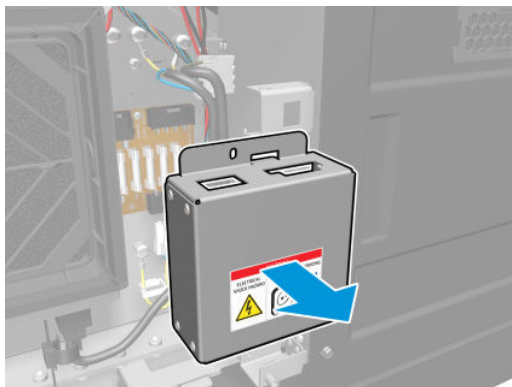
2. Unplug three cables.



3. Remove three screws.

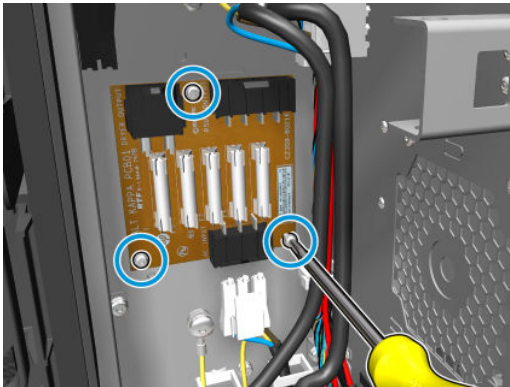


4. Remove the power distributor cover.

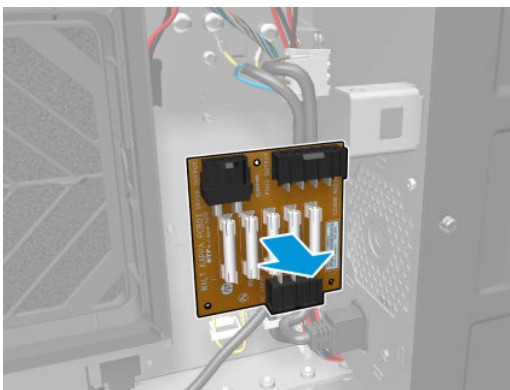


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5. Remove three screws.



6. Remove the Power Distribution PCA.



Installation

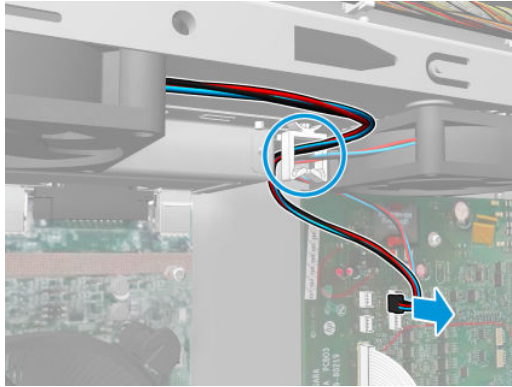
- ▲ To install, perform the removal operation in reverse.

E-box fan (CZ309-67152)

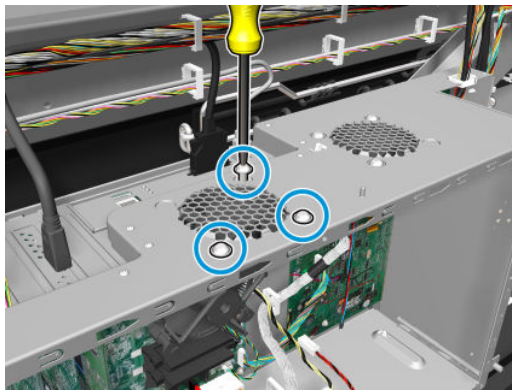
Removal

1. Remove the [Top E-box cover \(CZ309-67059, CZ309-67262\)](#) on page 656.
2. Remove the [E-box cover \(CZ309-67056\)](#) on page 656.

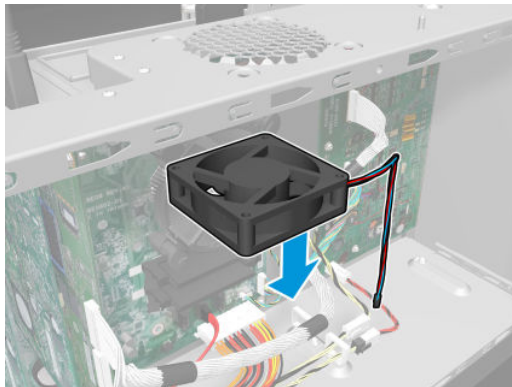
3. Unplug and unclip a cable.



4. Remove three screws.



5. Remove the fan.



Installation

- ▲ To install, perform the removal operation in reverse.

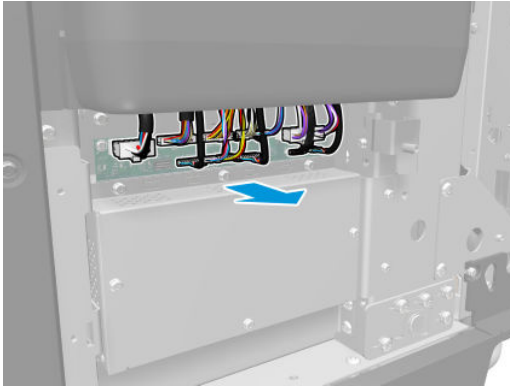
Bottom Mechatronics PCA (CZ309-67002)

Removal

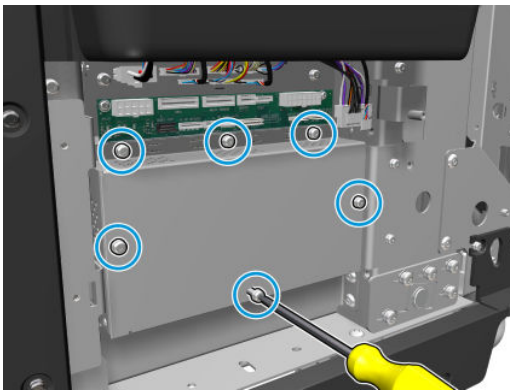
1. Remove the [Lateral front L – 3 drawers \(CZ309-67230\) on page 664](#).

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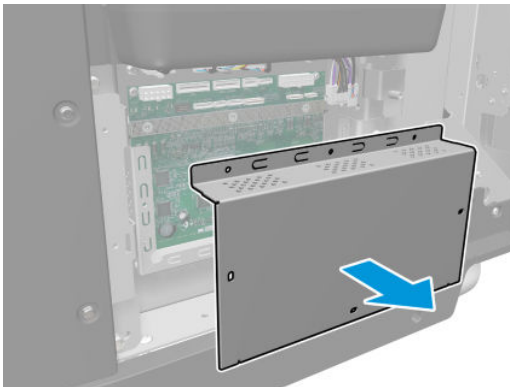
2. Unplug all cables.



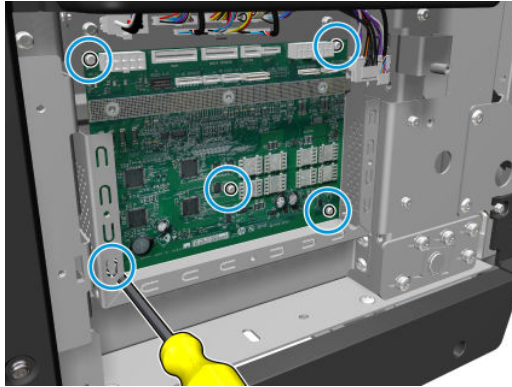
3. Remove six screws from the enclosure cover.



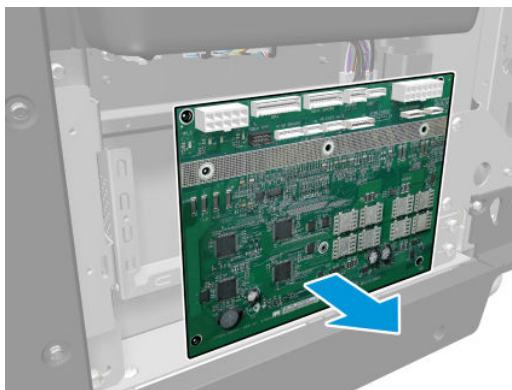
4. Remove the enclosure cover.



5. Remove five screws from the PCA.



6. Remove the Bottom Mechatronics PCA.



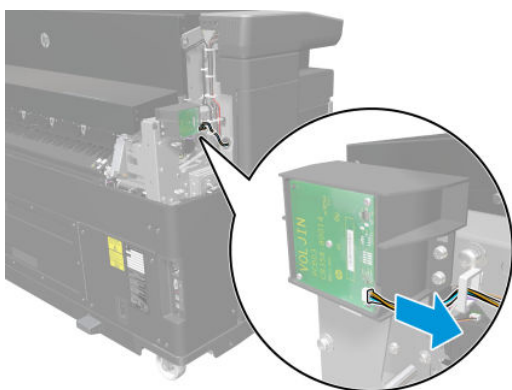
Installation

- ▲ To install, perform the removal operation in reverse.

RFID PCA (CZ309-67019)

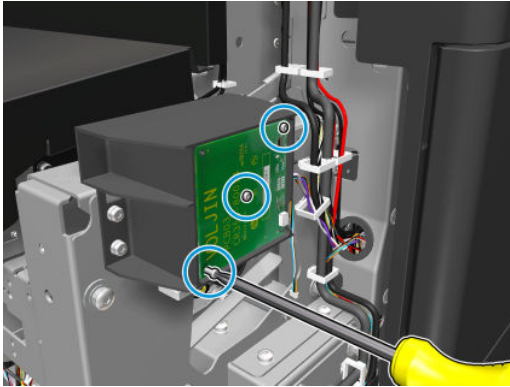
Removal

1. Remove the [Rear-left cover \(CZ309-67042\)](#) on page 644.
2. Unplug the RFID PCA cable.

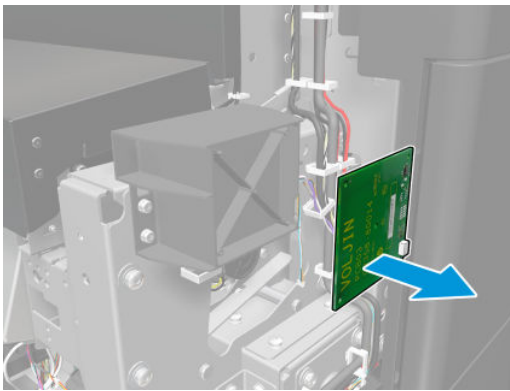


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3. Remove three screws from the RFID PCA.



4. Remove the RFID PCA.



Installation

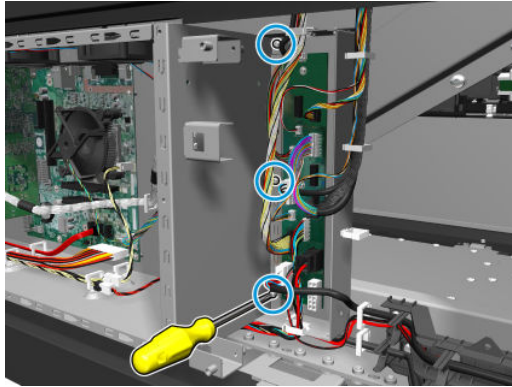
- ▲ To install, perform the removal operation in reverse.

P label wall assembly (CZ309-67007)

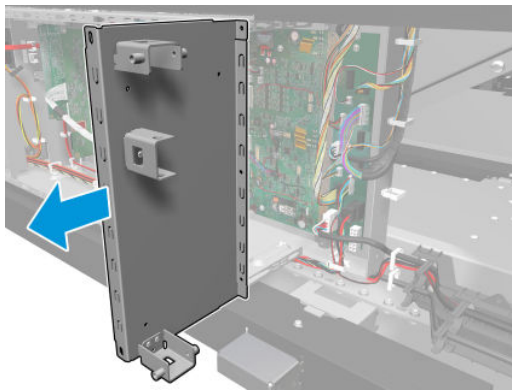
Removal

1. Remove the [Left E-box cover \(CZ309-67057, CZ309-67260\)](#) on page 655.
2. Remove the [E-box cover \(CZ309-67056\)](#) on page 656.

3. Remove three screws.



4. Remove the P label wall.



Installation

- ▲ To install, perform the removal operation in reverse.

Solid-state disk (CZ309-67006, CZ309-67308)

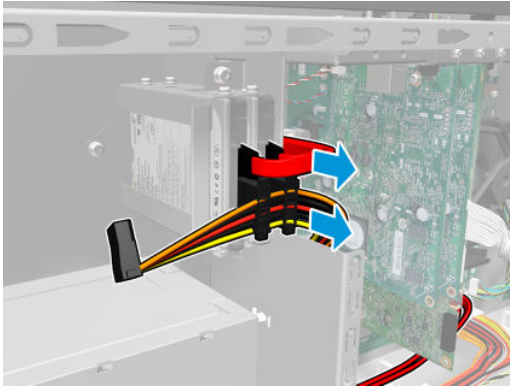
 **NOTE:** CZ309-67308 is for the PageWide XL 5100/6000/8000.

Removal

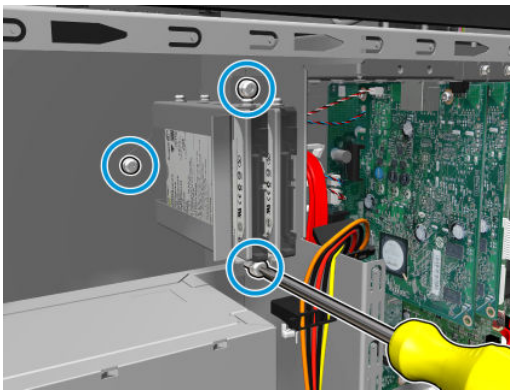
1. Remove the [E-box cover \(CZ309-67056\)](#) on [page 656](#).

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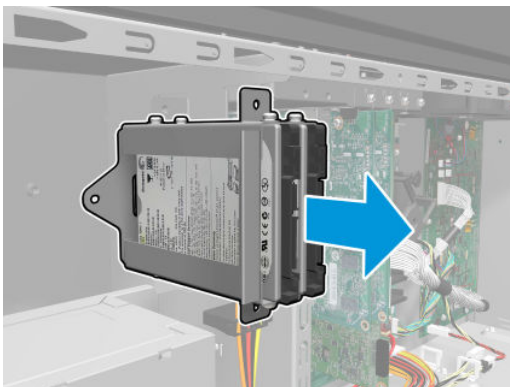
2. Unplug two cables.



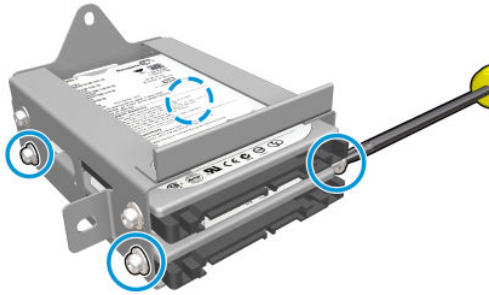
3. Remove three screws.



4. Remove the hard-disk holder.



5. Remove two screws on each side.



6. Remove the solid-state disc.



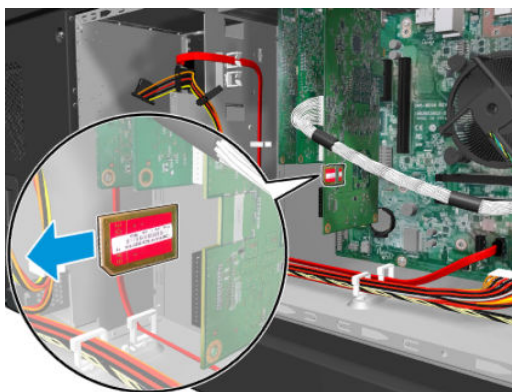
Installation

- ▲ To install, perform the removal operation in reverse.

CryptASIC PCA service kit (CZ309-67300)

Removal

1. Remove the [E-box cover \(CZ309-67056\)](#) on [page 656](#).
2. Remove the CryptASIC PCA.



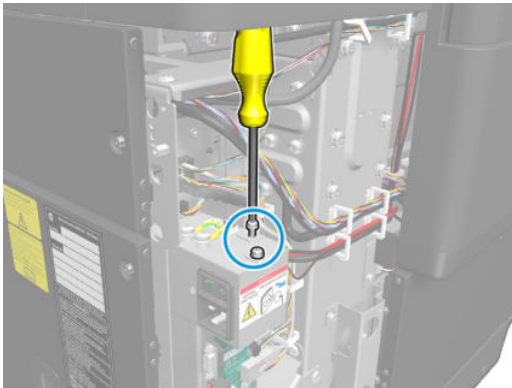
Installation

- ▲ Replace the CryptASIC PCA.

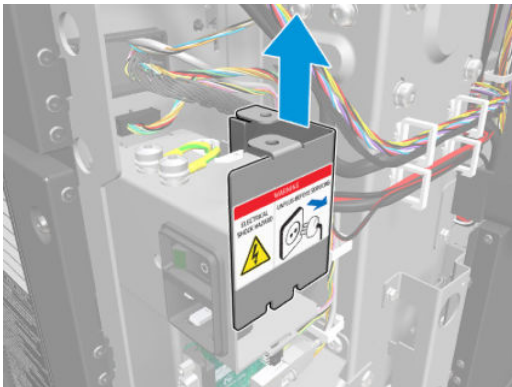
Power Distribution Cable and Inlet Service Kit (CZ309-67398)

Removal

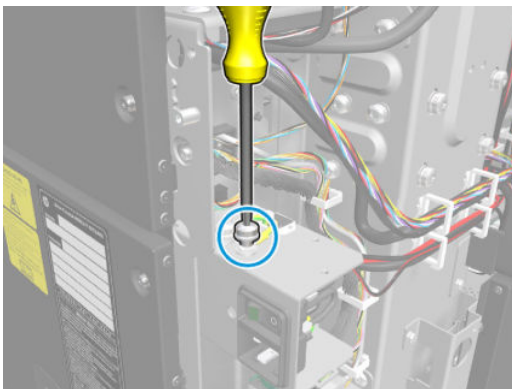
1. Remove the [Rear-left cover connector \(CZ309-67043\)](#) on page 644.
2. Remove the 2 screws.



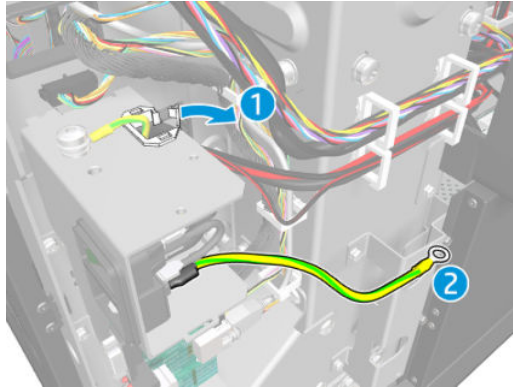
3. Remove the metal cover.



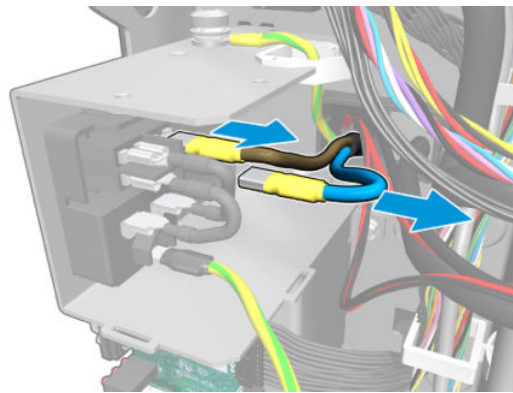
4. Remove the 1 screw and 2 washers.



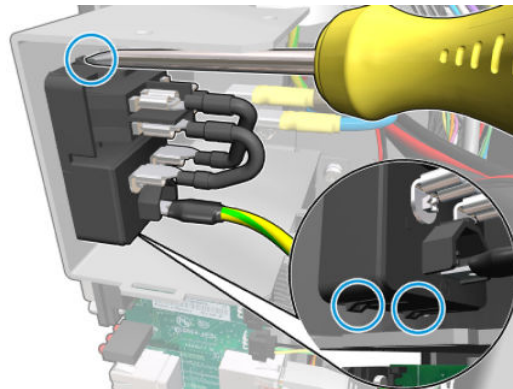
5. Open the clamp and unroute the grounding cable.



6. Disconnect the 2 power cables.

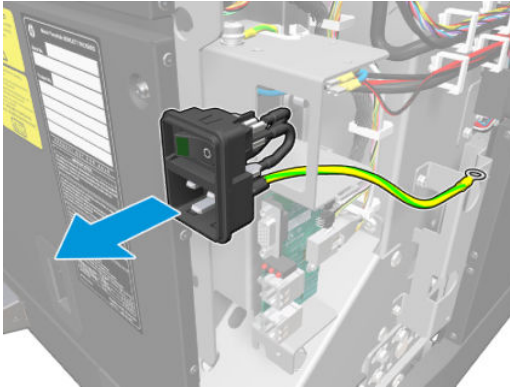


7. Unclip the AC Power Inlet (1 clip on top / 2 clips on the bottom).



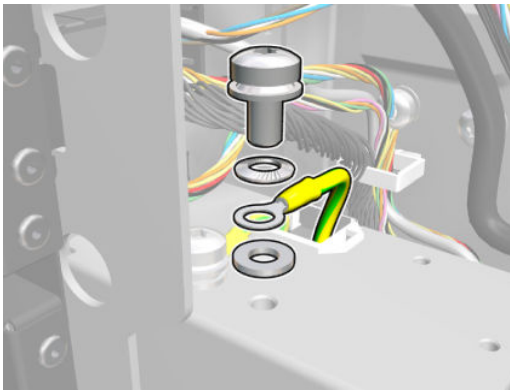
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8. Remove the AC power inlet.



Installation

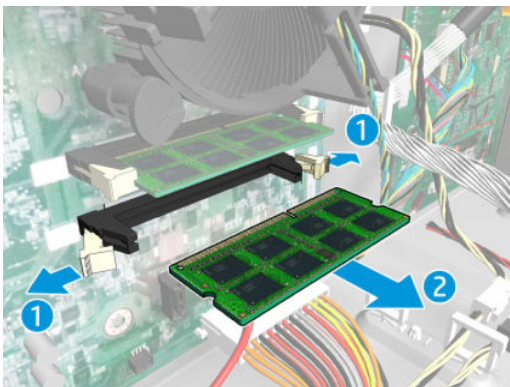
- ▲ Here is the correct position of the washers:



8GB Memory bank service kit (CZ309-67304)

Removal

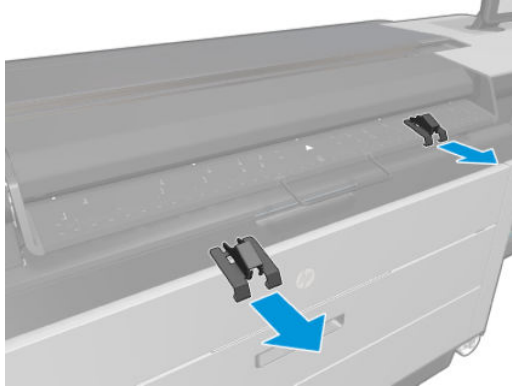
1. Remove the [E-box cover \(CZ309-67056\)](#) on page 656.
2. Unclip and remove the Memory bank.



Scanner media guide service kit (CZ309-67305)

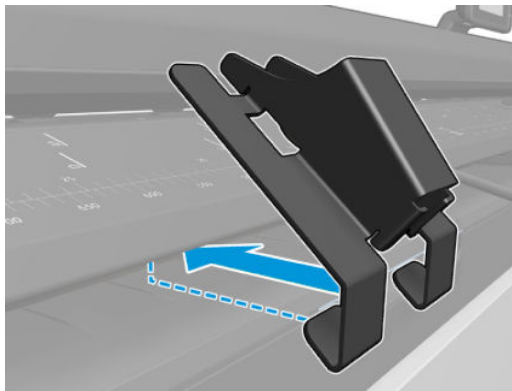
Removal

- ▲ Remove the Scanner media guide.

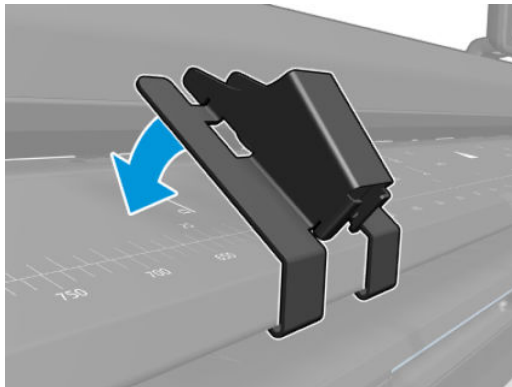


Installation

1. Replace the Scanner media guide, adjusting for the bottom rail.

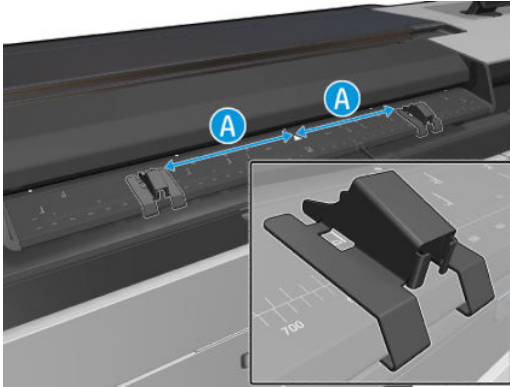


2. Rotate it; the Scanner media guide has magnets.



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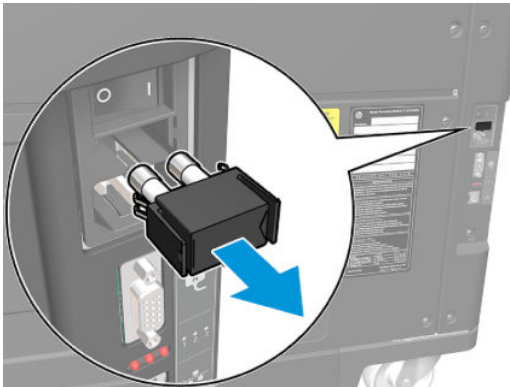
3. Here is the correct position:



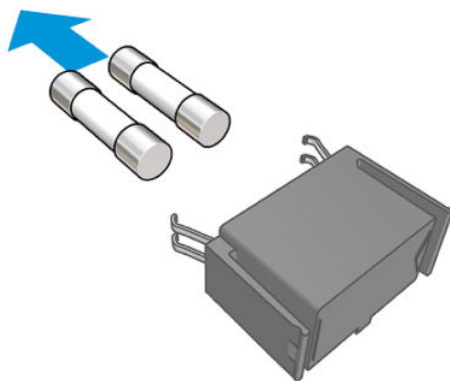
Fuse (CZ309-67398)

Removal

1. Unclip the Fuse cover.



2. Remove the fuse(s).

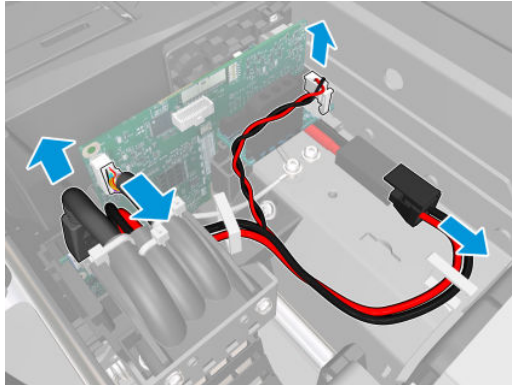


IDS subsystem

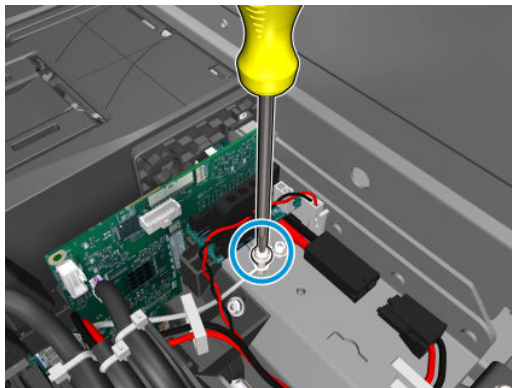
Print-bar power cable (CZ309-67211)

Removal

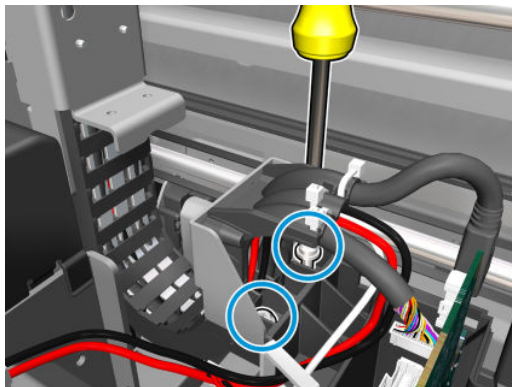
1. Remove the [Menorca cover \(CZ309-67017\)](#) on page 696.
2. Remove the [Top cover cylinder \(CZ309-67236\)](#) on page 691.
3. Disconnect the cables from the Menorca PCA.



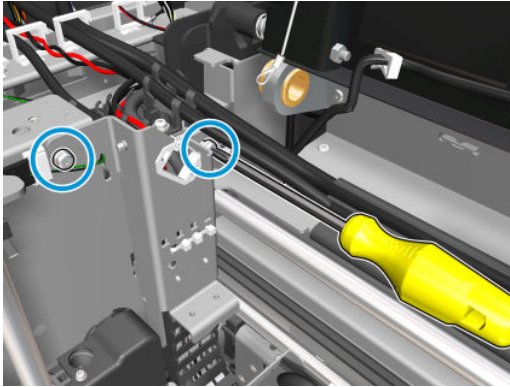
4. Remove the grounding cable screw.



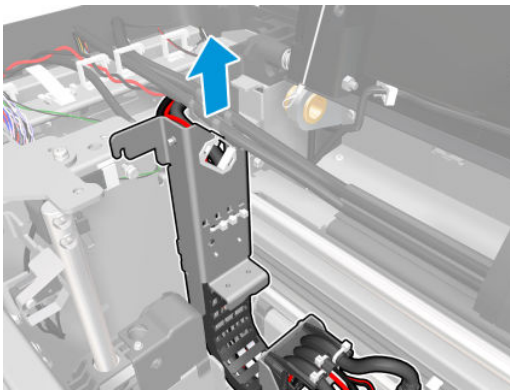
5. Remove two screws from the bar end left top.



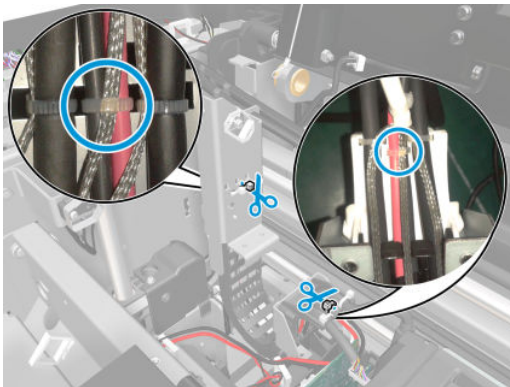
6. Loosen two screws without removing them.




7. Dislodge the bracket.



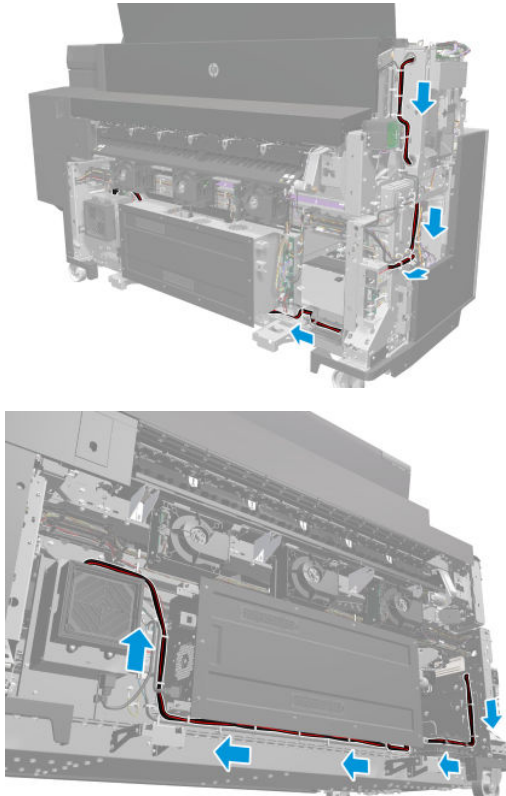
8. Remove the middle cable ties without damaging the cables.



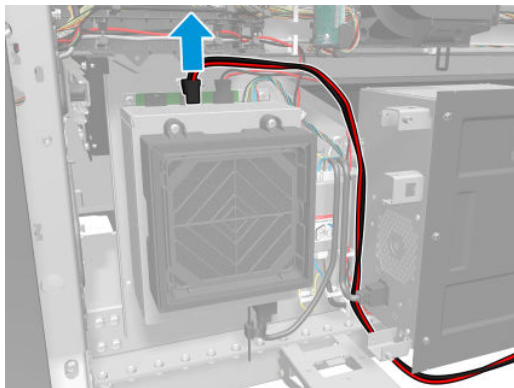
9. Remove the [Left cover assembly \(CZ309-67039\)](#) on page 639.
10. Remove the [Rear-left cover \(CZ309-67042\)](#) on page 644.
11. Remove the [Top E-box cover \(CZ309-67059, CZ309-67262\)](#) on page 656.
12. Remove the [Foot cover rear LE \(CZ309-67247\)](#) on page 697.

 **NOTE:** Skip this step for PWXL 4x00/3900s with SNs \geq MY7688Q008.

13. Unroute the print-bar power cable.



14. Disconnect the print-bar power cable from the power supply.



Installation

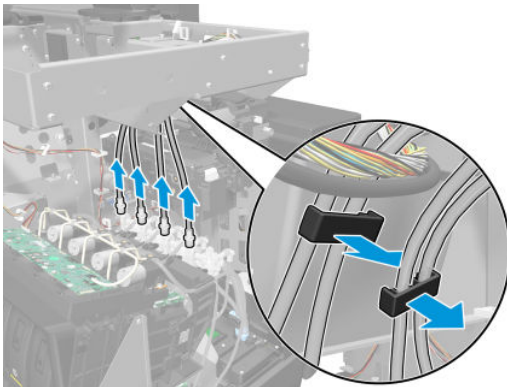
- ▲ To install, perform the removal operation in reverse.

Print-bar tubing system HE CZ309-67123, LE (CZ309-67124) and LE enterprise (CZ309-67125)

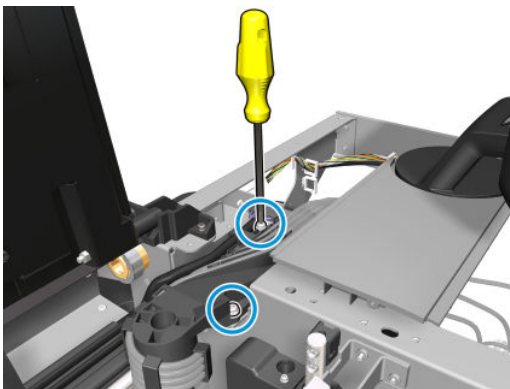
Please note that the Print-bar tubing system LE enterprise (CZ309-67125) applies to PWXL 4x00/3900 units with SNs \geq MY7688Q008.

Removal

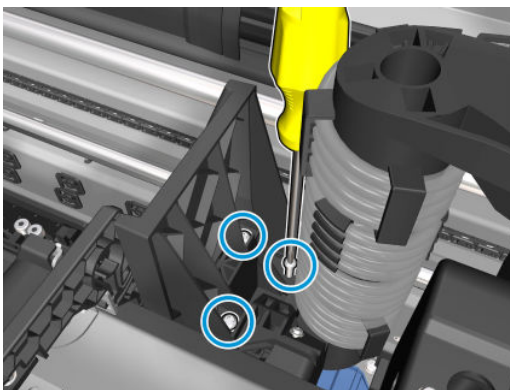
1. Remove the printheads as described in [Printheads on page 633](#).
2. Remove the [Right cover assembly \(CZ309-67047\) on page 649](#).
3. Remove the [Bottom right cover \(CZ309-67048\) on page 651](#).
4. Put the ISS into the service position.
5. Unplug the tubes from the ISS and unclip them.



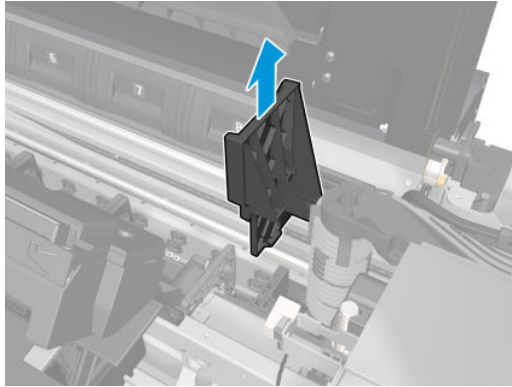
6. Remove the [Right printhead bezel \(CZ309-67061\) on page 659](#).
7. Remove two plastic tube routing screws from the metal structure on the right.



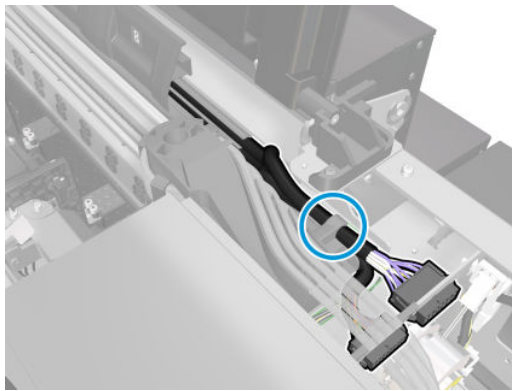
8. Remove three screws from the vertical right black cover.



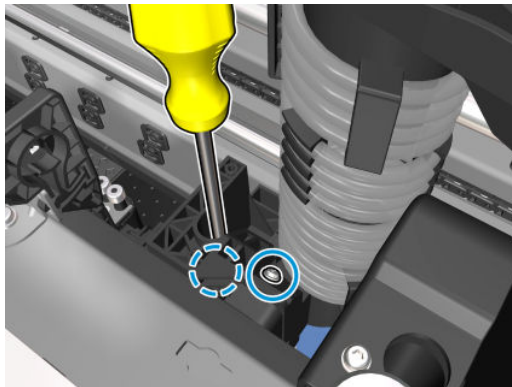
9. Remove the vertical right black cover from the vicinity of the print bar.



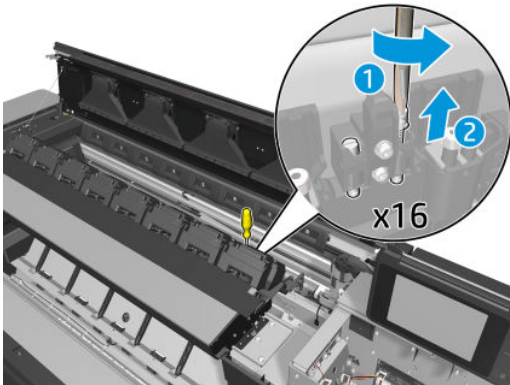
10. Remove the plastic tube routing from the middle.



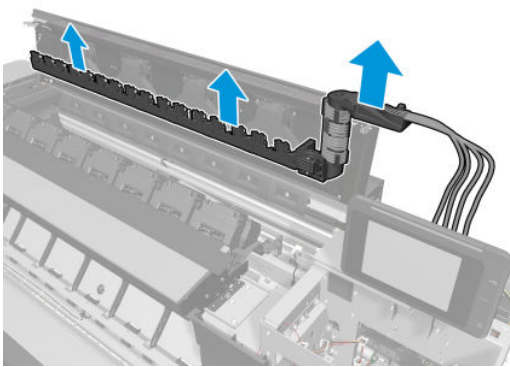
11. Remove two screws from the support tube coil bottom.



12. Remove all plungers from the tubing system structure.




13. Remove the tubing system from the print bar.



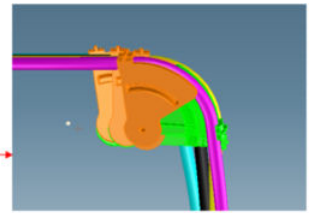
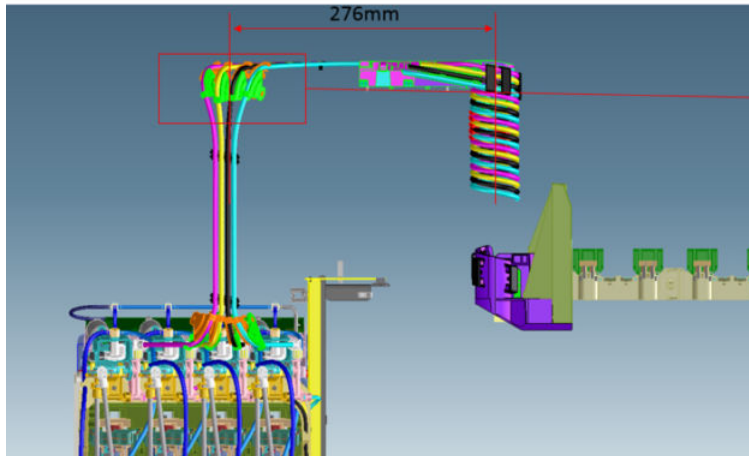
Installation – overview

- ▲ To install, perform the removal operation in reverse.

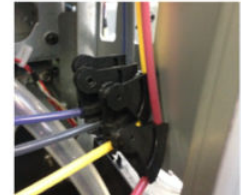
 **NOTE:** The tubing system should be formed (folded) during installation with the measures below and they have to be purged as well.

Installation – bend the tubes

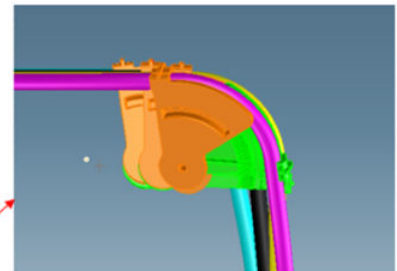
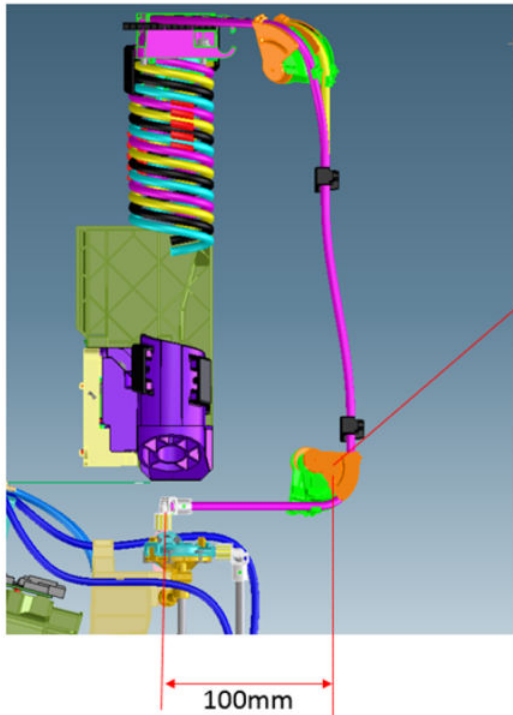
1. Use part number CZ309-67123 – HE tubing.



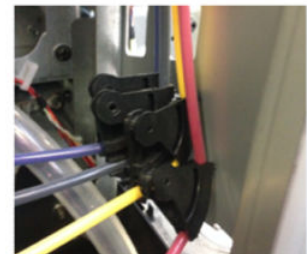
Place the clamps in position (approx. 276mm) and open them



Correct clamp position to adapt to the structure



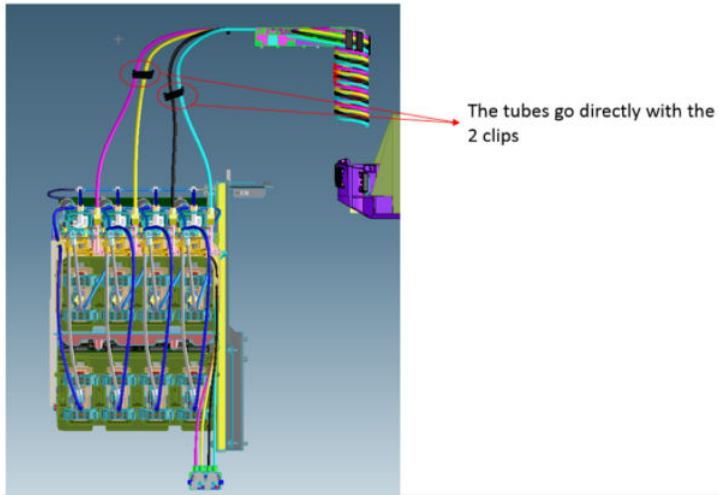
Place the clamps in position (approx. 100mm) and open them



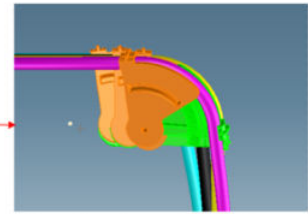
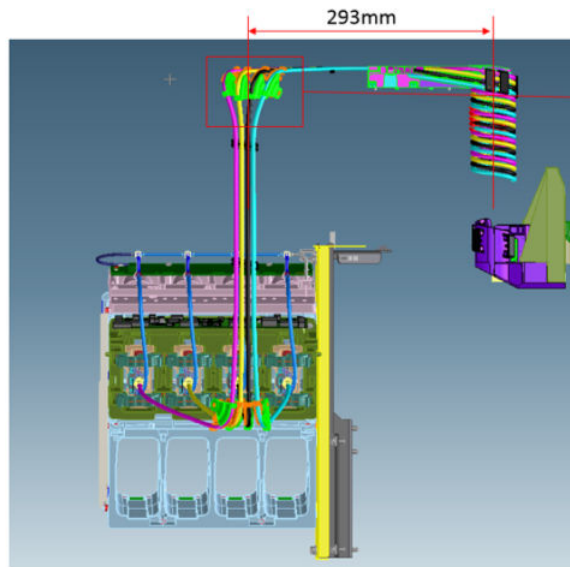
Correct clamp position to adapt to the structure

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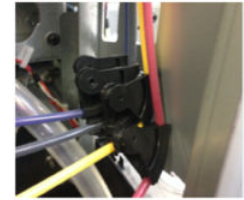
2. Use part number CZ309-67124 – LE tubing.



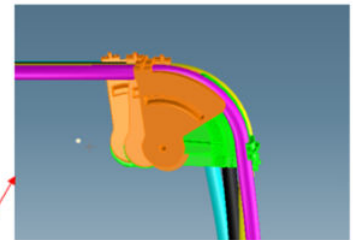
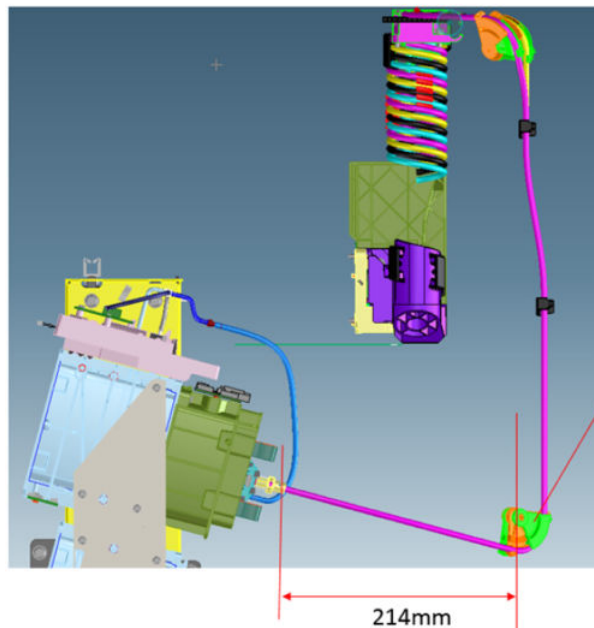
3. Use part number CZ309-67125 – LE ENT tubing.



Place the clamps in position (approx. 293mm) and open them



Correct clamp position to adapt to the structure



Place the clamps in position (approx. 214mm) and open them

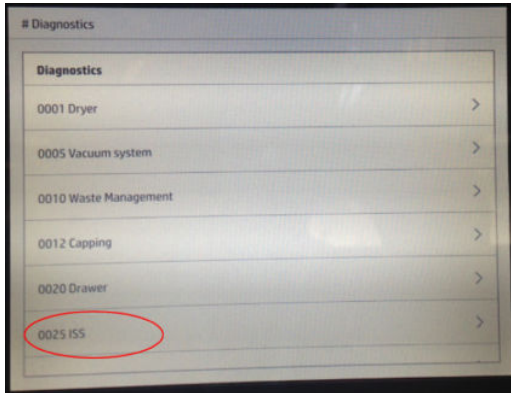


Correct clamp position to adapt to the structure

Installation – purge the tubes

1. Use the Front Panel to access the Diagnostics menu (see [Entering the Diagnostics menu on page 458](#)).

2. Tap **0025 ISS**.

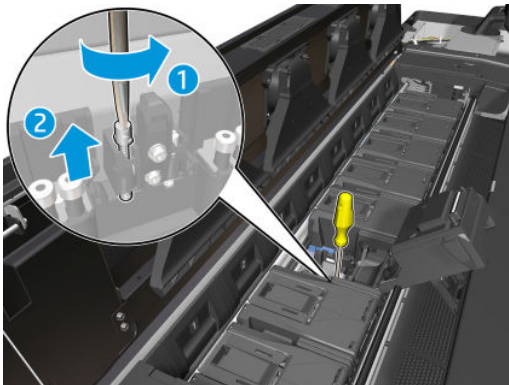


3. Tap **0025-08 Set Ink Tubes as Purged/Empty**.
4. The machine begins purging (following steps 46–52 of the Setup poster). It will then power off in continuation.
5. Power ON the machine (following the instructions in [Start the printer on page 112](#), steps 5–11).

ISS plunger assembly (CZ309-67132)

Removal

1. Remove the printheads as described in [Printheads on page 633](#).
2. Remove the plunger from the tubing system structure.



Installation

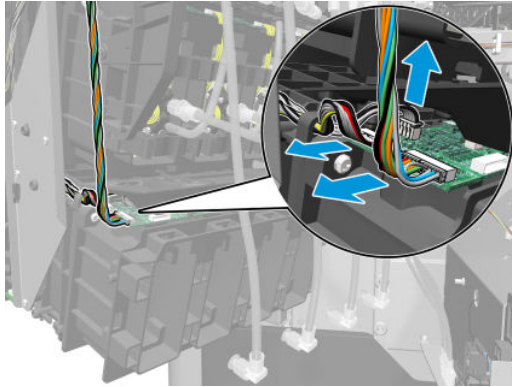
- ▲ To install, perform the removal operation in reverse.

ISS backplate (CZ309-67122)

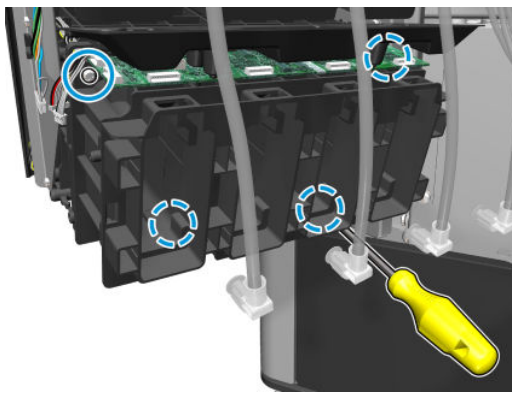
Removal

1. Remove all bottom PIPs and floaters. See [PIP and floater with tubes \(CZ309-67130\) on page 847](#).

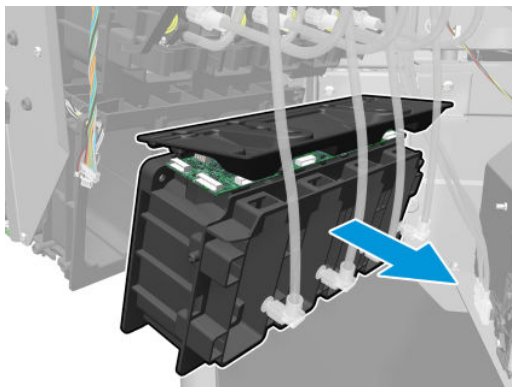
2. Disconnect three cables from the Ink Supply PCA.



3. Remove four screws from the backplate.

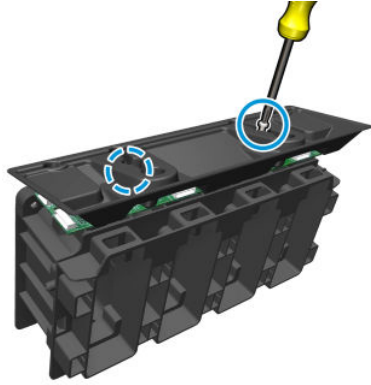


4. Remove the backplate.

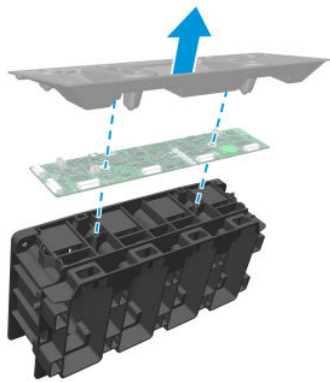


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5. Remove two screws from the PCA roof.



6. Remove the PCA roof and the Ink Supply PCA.



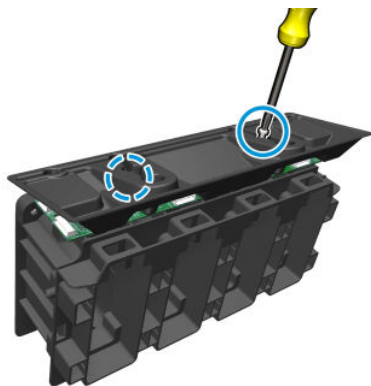
Installation

- ▲ To install, perform the removal operation in reverse.

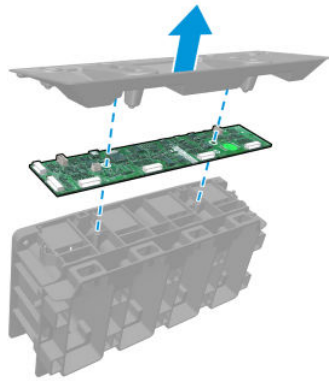
Ink Supply PCA (CZ309-67119)

Removal

1. Remove the [ISS backplate \(CZ309-67122\) on page 834](#).
2. Remove two screws from the PCA roof.



3. Remove the PCA roof and the Ink Supply PCA.



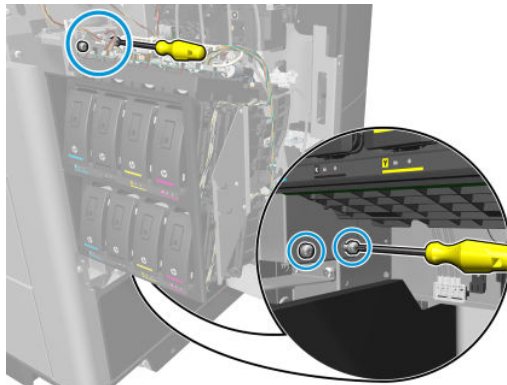
Installation

- ▲ To install, perform the removal operation in reverse.

Air Control PCA with APS HE (CZ309-67120)

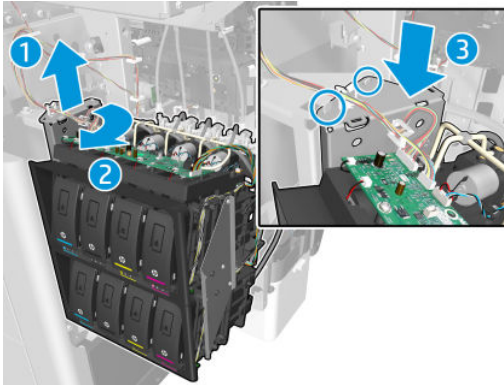
Removal

1. Remove the [Top-right exterior cover \(CZ309-67044\) on page 646](#).
2. Remove the printheads (see [Printheads on page 633](#)).
3. Remove the [Right cover assembly \(CZ309-67047\) on page 649](#).
4. Remove the [Bottom right cover \(CZ309-67048\) on page 651](#).
5. Remove four left-bracket ISS screws.

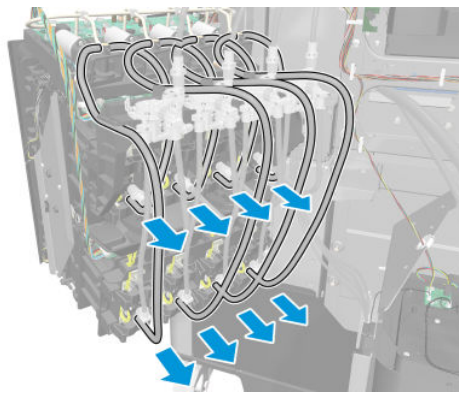


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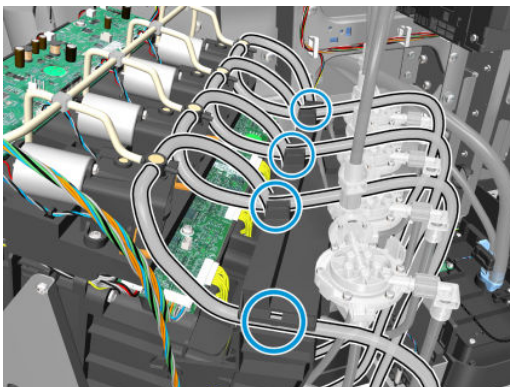
- Put the ISS into the service position.



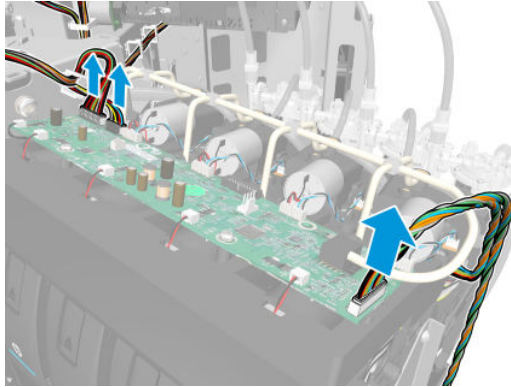
- Unplug all air tubes from each pip.



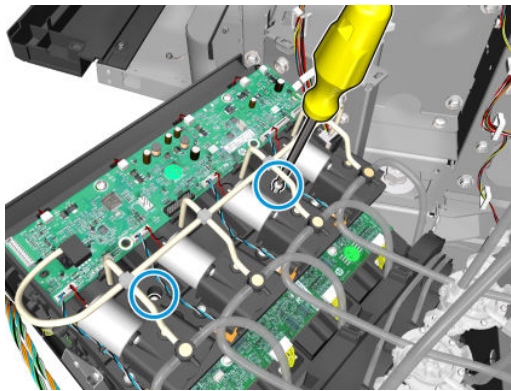
- Unroute the air tubes from the bracket valve.



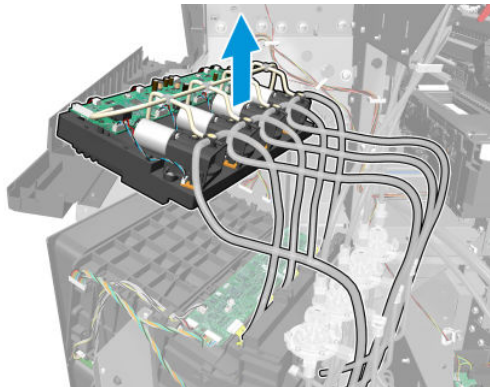
9. Disconnect three cables from the Clara PCA.



10. Remove two screws from the black support.



11. Pull out the Air Control PCA.



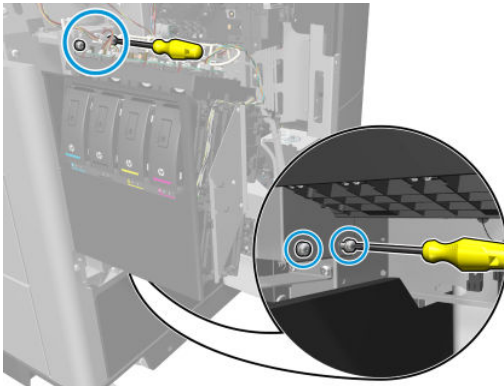
Installation

- ▲ To install, perform the removal operation in reverse.

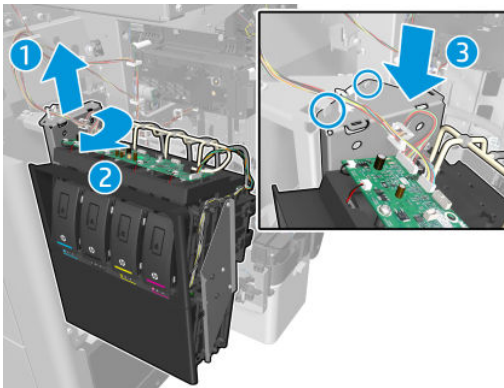
Air Control PCA with APS LE (CZ309-67121)

Removal

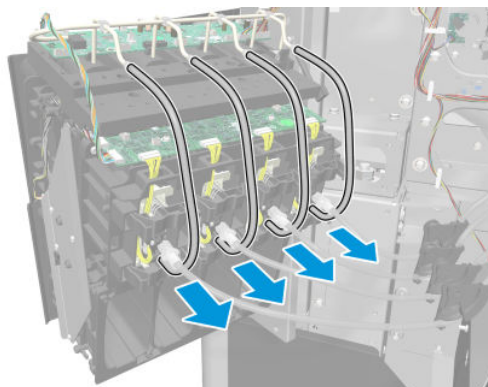
1. Remove the [Top-right exterior cover \(CZ309-67044\)](#) on page 646.
2. Remove the printheads (see [Printheads on page 633](#)).
3. Remove the [Right cover assembly \(CZ309-67047\)](#) on page 649.
4. Remove the [Bottom right cover \(CZ309-67048\)](#) on page 651.
5. Remove four left-bracket ISS screws.



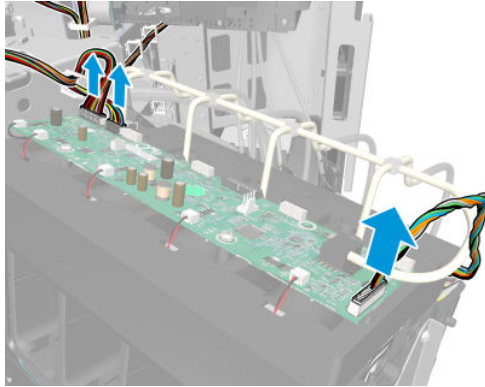
6. Put the ISS into the service position.



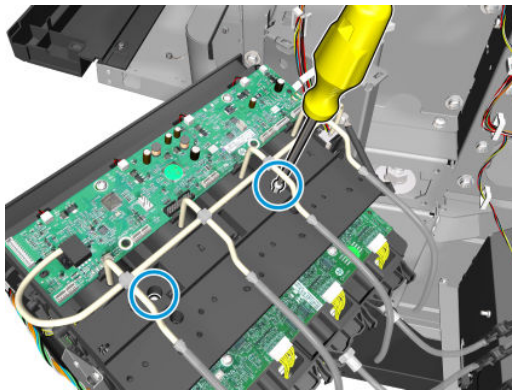
7. Unplug all air tubes from each pip.



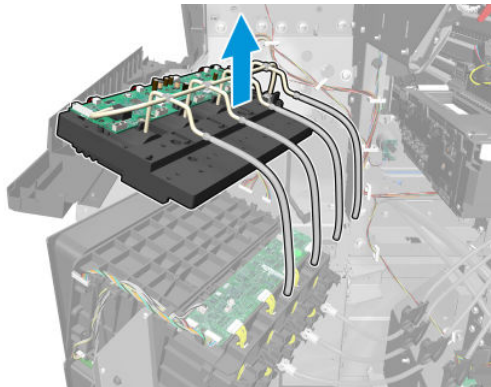
8. Disconnect three cables from the Clara PCA.



9. Remove two screws from the black support.



10. Pull out the Air Control PCA.



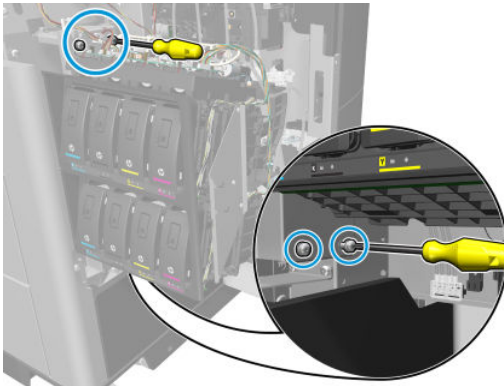
Installation

- ▲ To install, perform the removal operation in reverse.

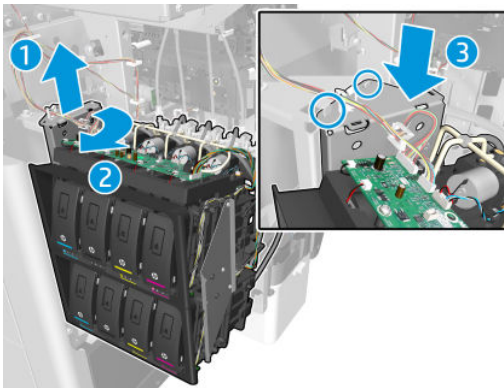
CID valve (CZ309-67126)

Removal

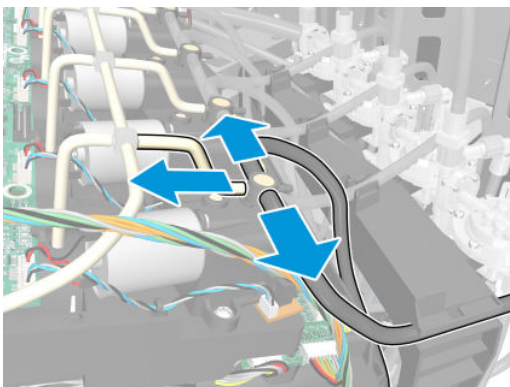
1. Remove the [Top-right exterior cover \(CZ309-67044\)](#) on page 646.
2. Remove the printheads (see [Printheads on page 633](#)).
3. Remove the [Right cover assembly \(CZ309-67047\)](#) on page 649.
4. Remove the [Bottom right cover \(CZ309-67048\)](#) on page 651.
5. Remove four left-bracket ISS screws.



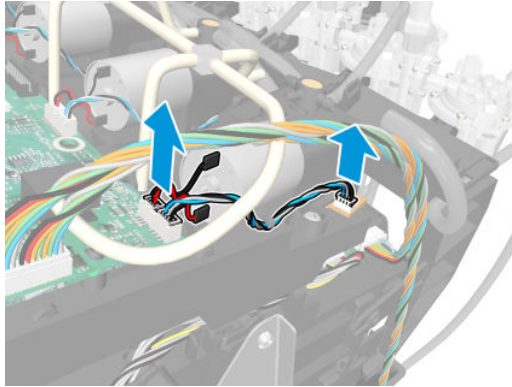
6. Put the ISS into the service position.



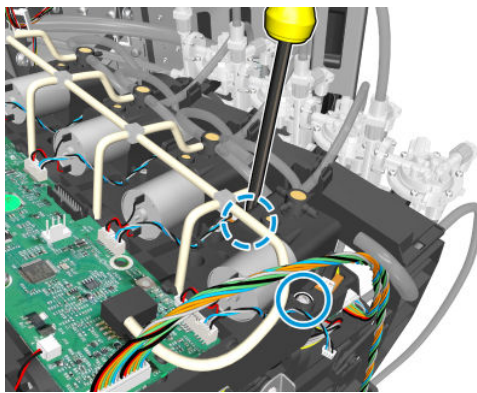
7. Unplug three tubes.



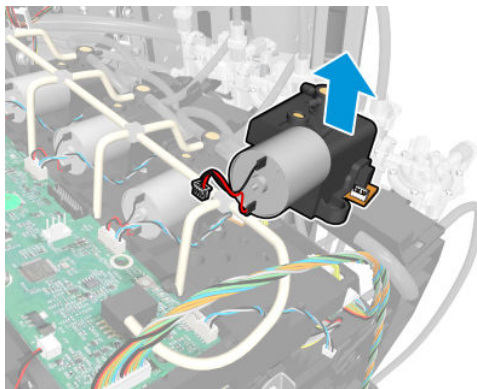
8. Unplug two CID valve cables.



9. Remove two chassis valve screws.



10. Remove the CID valve.



Installation

- ▲ To install, perform the removal operation in reverse.

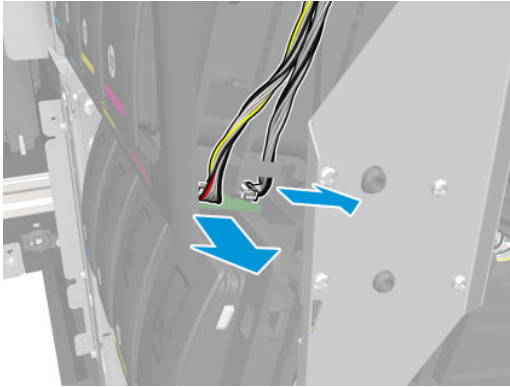
Ink Supply Indicator PCA (CZ309-67128)

Removal (top)

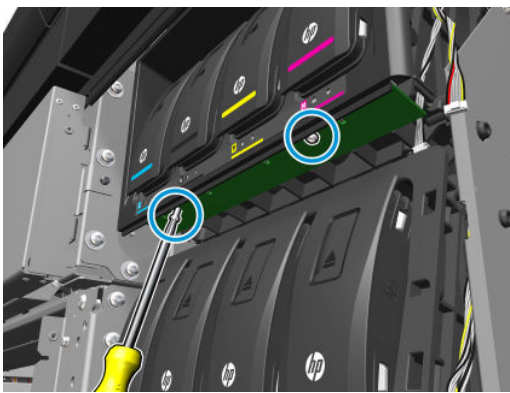
1. Remove the [ISS bottom bezel \(CZ309-67240\) on page 694](#).

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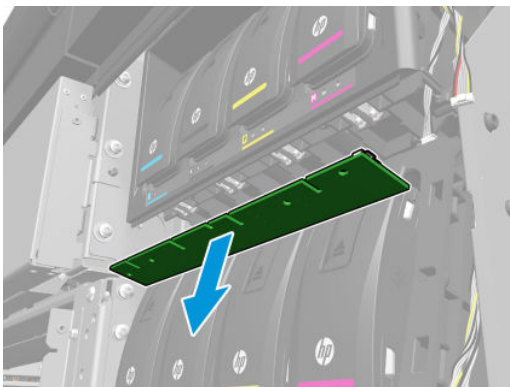
2. Unplug two cables.



3. Remove two screws.



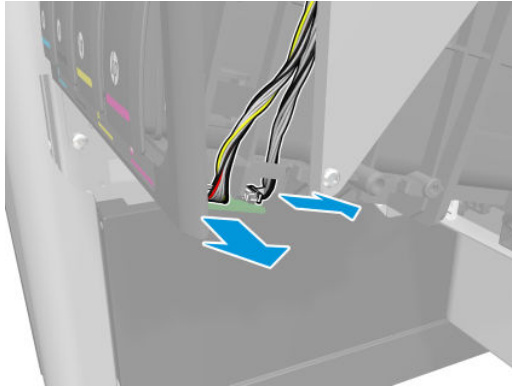
4. Remove the Ink Supply Indicator PCA.



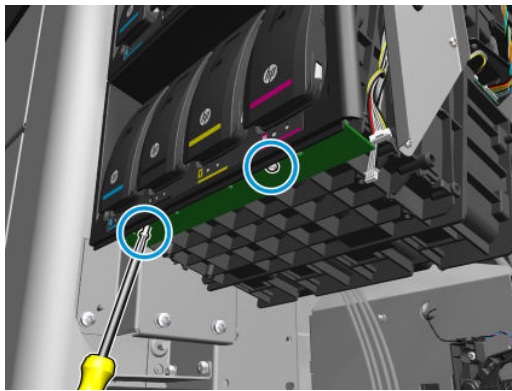
Removal (bottom)

1. Remove the [Bottom right cover \(CZ309-67048\)](#) on page 651.

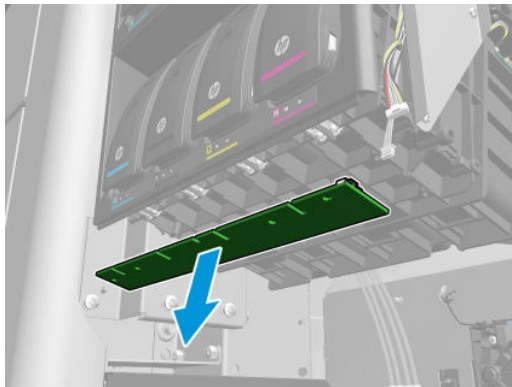
2. Unplug two cables.



3. Remove two screws.



4. Remove the Ink Supply Indicator PCA.



Installation

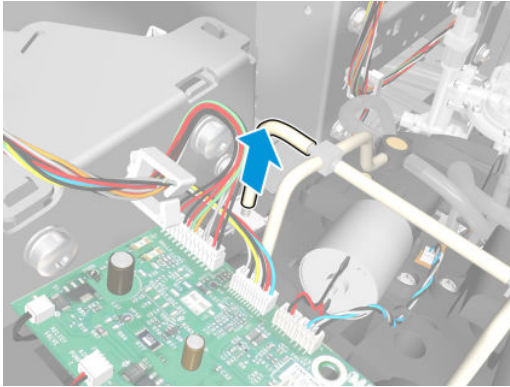
- ▲ To install, perform the removal operation in reverse.

Relief valve (CZ309-67129)

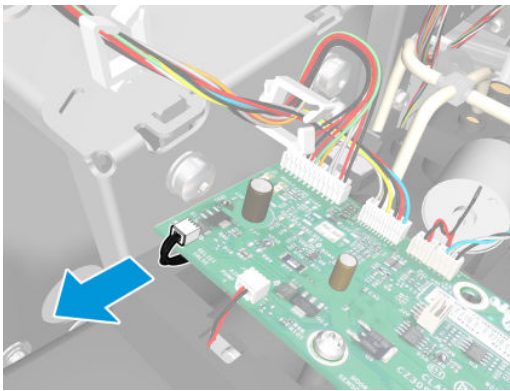
Removal

1. Remove the [Right cover assembly \(CZ309-67047\) on page 649](#).

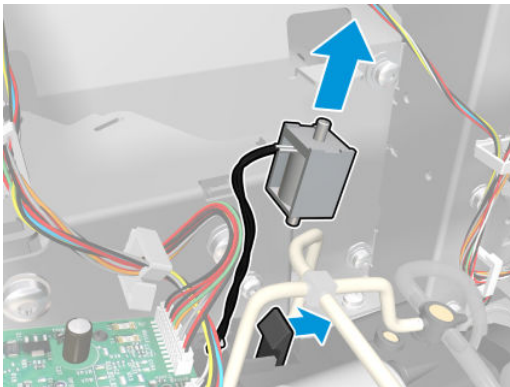
2. Unplug the Santropene tube.



3. Disconnect the cable from the Clara PCA.



4. Remove the relief valve.



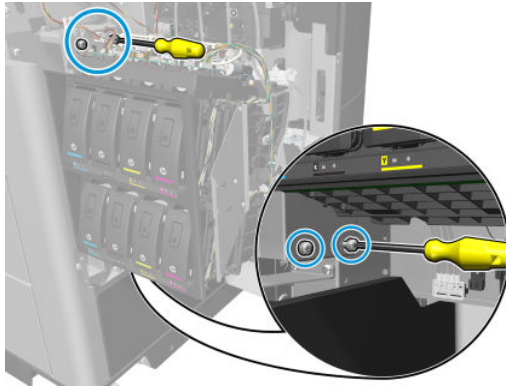
Installation

- ▲ To install, perform the removal operation in reverse.

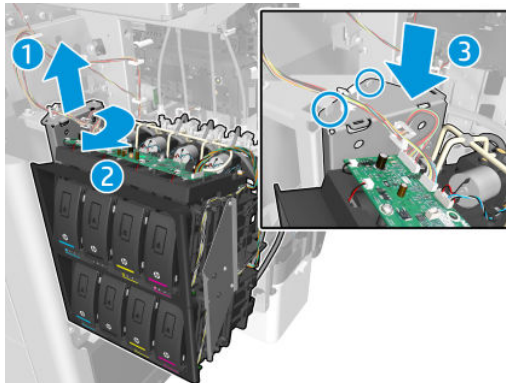
PIP and floater with tubes (CZ309-67130)

Removal

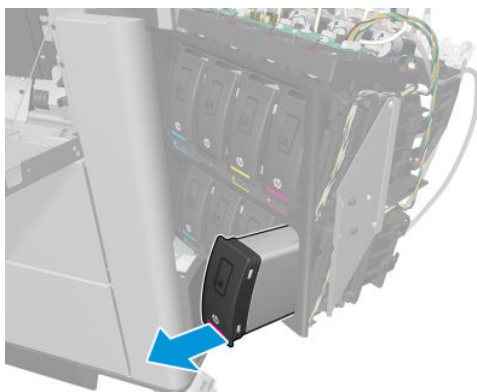
1. Remove the [Top-right exterior cover \(CZ309-67044\)](#) on page 646.
2. Remove the [Right cover assembly \(CZ309-67047\)](#) on page 649.
3. Remove the [Bottom right cover \(CZ309-67048\)](#) on page 651.
4. Remove four left-bracket ISS screws.



5. Put the ISS into the service position.

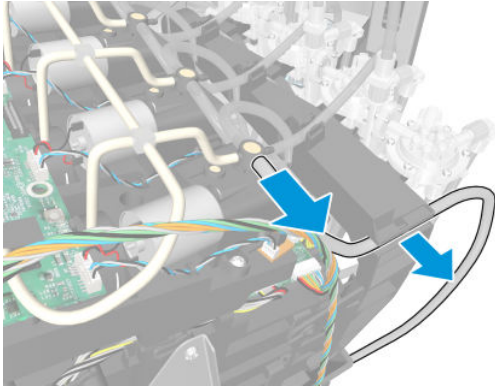


6. Remove the corresponding cartridge.

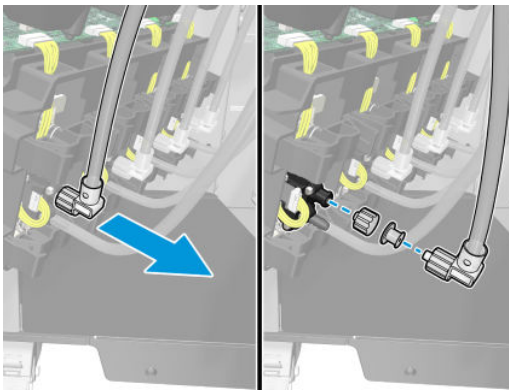


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7. Unplug the tube from the valve, and unroute it.

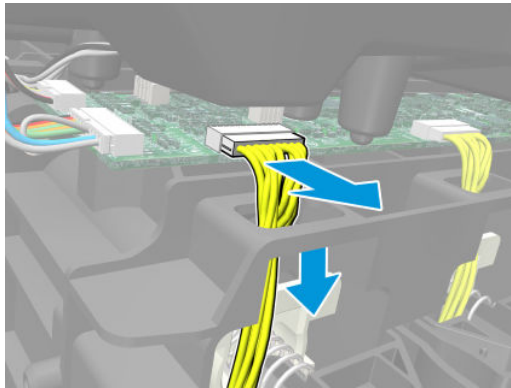


8. Unplug the ink tube from the PIP, and insert plugs into the tube and PIP to prevent leakage.

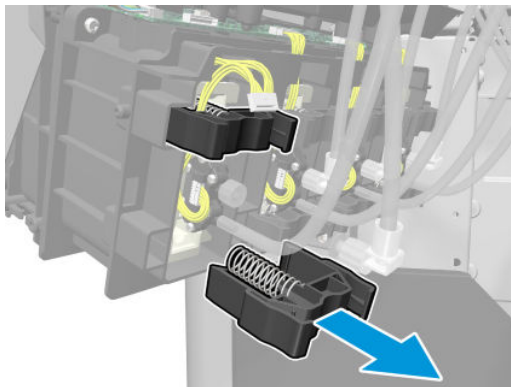


9. Unplug the cable from the Ink Supply PCA, and unroute it.

 **NOTE:** It is very important to have the two air purger parts mounted. Besides that, please make sure that you have the two air tubes (upper and lower one).

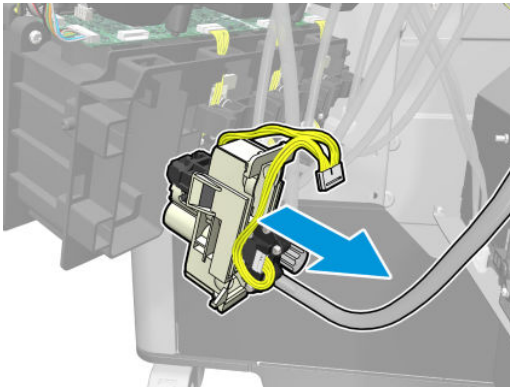


10. Remove two spring retainers from the PIP.



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11. Remove the PIP and the floater.



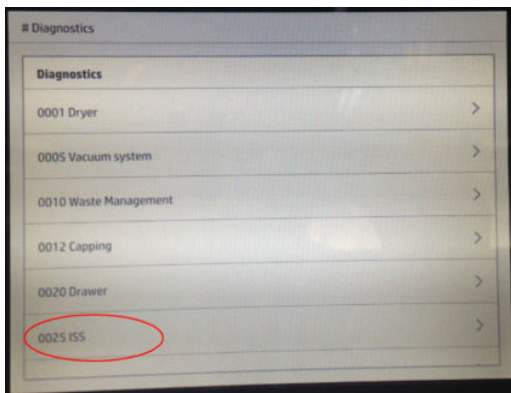
Installation

- ▲ To install, perform the removal operation in reverse. Read the calibration values from service PIP.

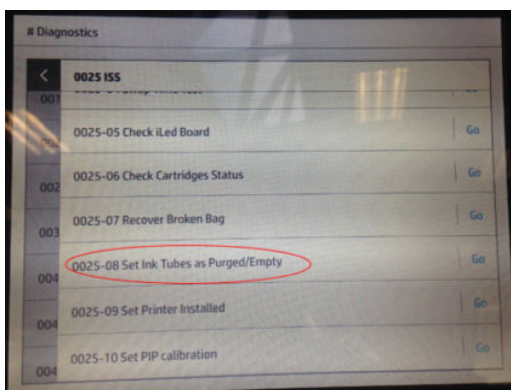
 **NOTE:** PIP has to be purged and calibrated. See below.

Installation – Purge the PIP

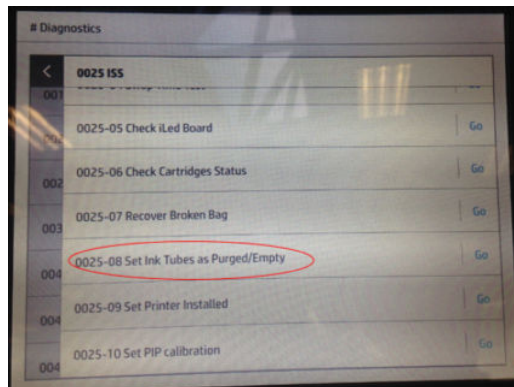
1. Go to the Diagnostics menu from the Front panel. See [Entering the Diagnostics menu on page 458](#).
2. Tap 0025-ISS.



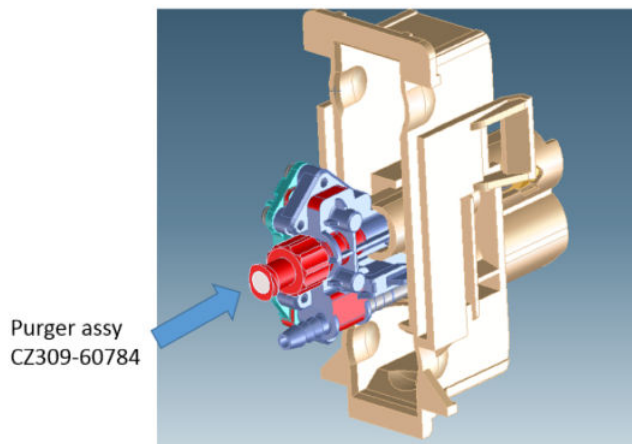
3. Tap 0025-08 Set Ink Tubes as Purged/Empty.



4. Printer will perform a purge as described in the Setup poster from steps 46 to 52. It will only purge the top PIP if it has been replaced. In continuation it will power off.



5. Once the printer is finished with the top PIP, you can continue with the bottom PIP if it has been replaced.



Installation – Calibrate the PIP

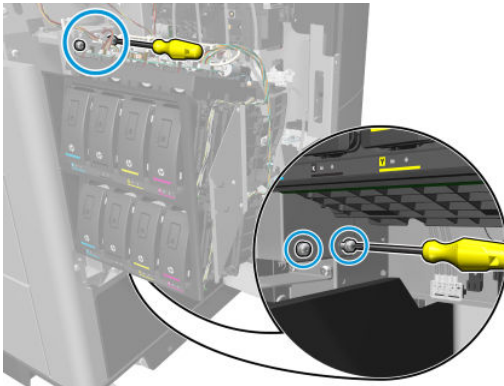
1. Go to the **Service menu** > **ISS utilities** > **PIP calibration**.
2. Select the new PIP's number and enter in the offset (O) and gain (G) values as stated on the label.



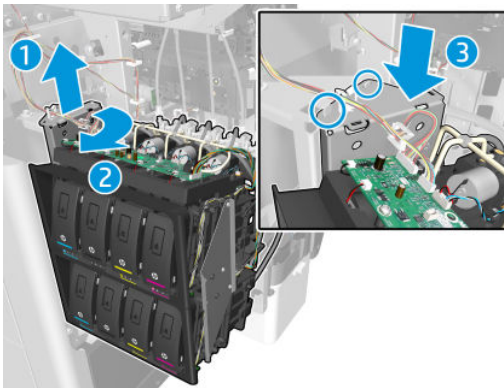
ISS support, bi-valve, purge HE (CZ309-67131)

Removal

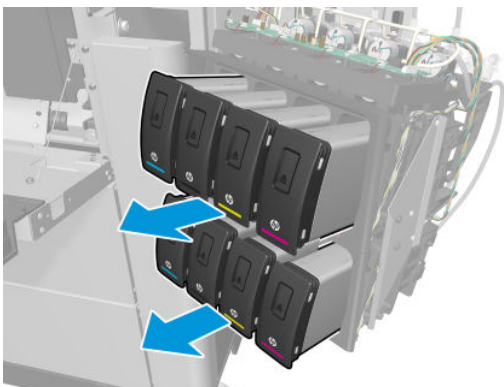
1. Remove the [Top-right exterior cover \(CZ309-67044\)](#) on page 646.
2. Remove the printheads (see [Printheads on page 633](#)).
3. Remove the [Right cover assembly \(CZ309-67047\)](#) on page 649.
4. Remove the [Bottom right cover \(CZ309-67048\)](#) on page 651.
5. Remove four left-bracket ISS screws.



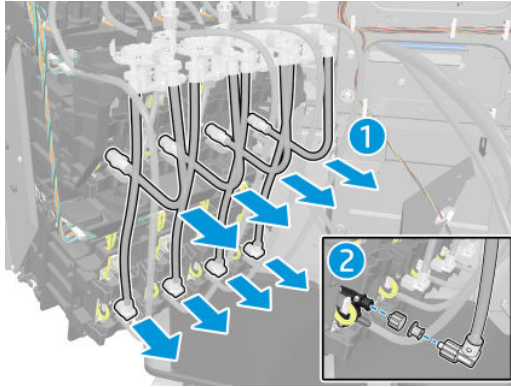
6. Put the ISS into the service position.



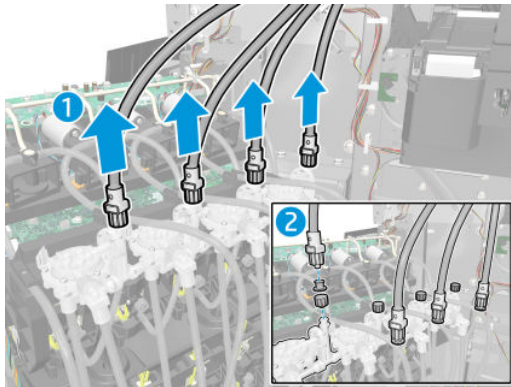
7. Remove all cartridges.



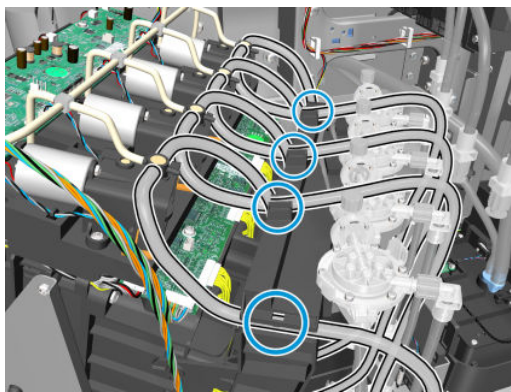
8. Unplug the ink tubes from the PIPs, and insert plugs into the tubes and PIPs to prevent leakage.



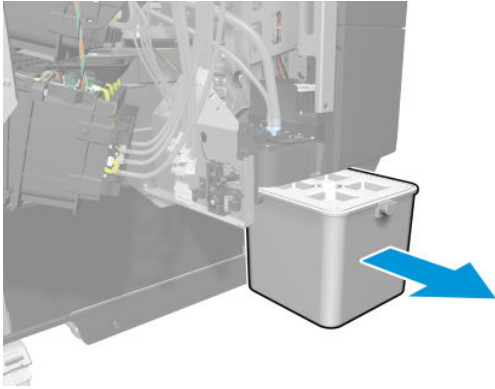
9. From the bi-valves, unplug the tubes connecting to the end of the print bar (upper tubes). Insert plugs to prevent leakage.



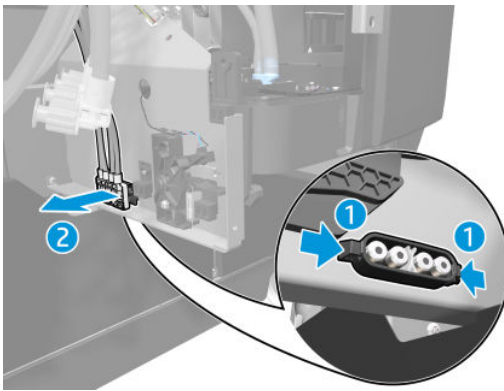
10. Unroute the air tubes from the bracket valve.



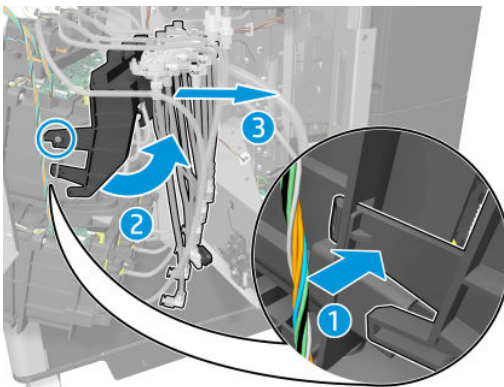
11. Remove the waste container.



12. Remove the support purgers.



13. Remove the whole assembly, unclipping both sides.



Installation

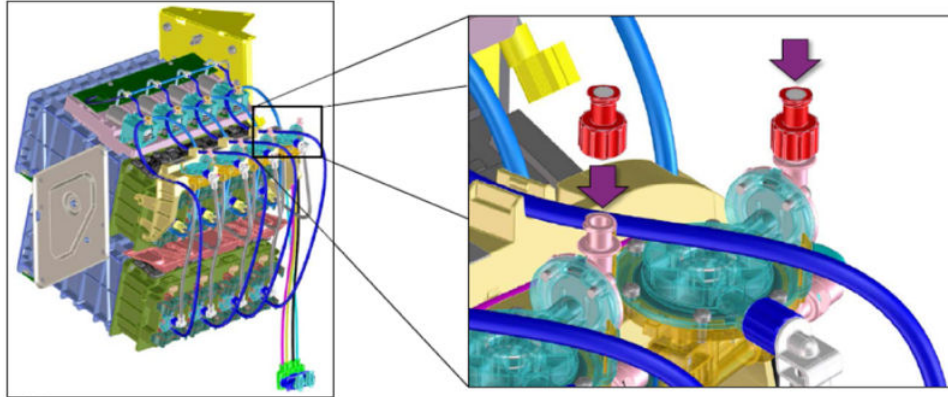
- ▲ To install, perform the removal operation in reverse.

 **NOTE:** Bi-valve has to be purged.

Installation – Purge bi-valve

IMPORTANT: Please, follow this process step by step without deviation, otherwise the process will fail. The Purge process is very important to eliminating the maximum amount of air that can be eliminated inside the circuit of tubes and components that fill with ink.

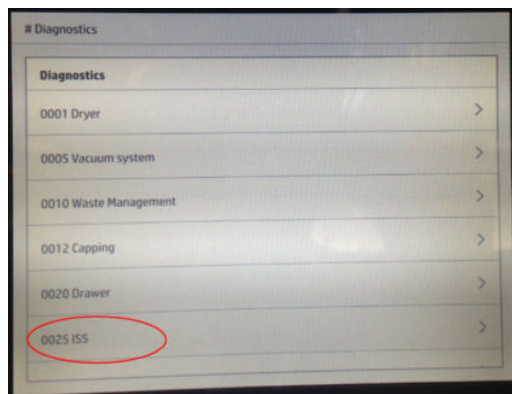
1. Put the Purger Assy Service Kit on the output port of the bi-valves (x4):



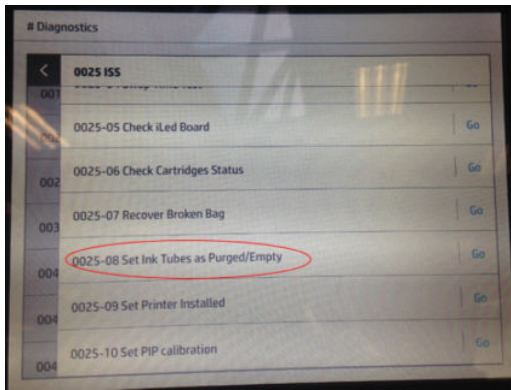
NOTE: It is very important to have the two air purger parts mounted. Besides that, please make sure that you have the two air tubes (upper and lower one).



2. Enter the Diagnostics menu through the Front panel (see [Entering the Diagnostics menu on page 458](#)).
3. Tap 0025-1IS.



4. Tap 0025-08 Set Ink Tubes as Purged/Empty.



- You have to set the “ink tubes as Empty” and confirm that this is what you want.



NOTE: Disregard the message when the printer asks for the 16 purgers.

- No diagnostics will be performed at this point.
 - Reboot the machine.
5. During boot up, the purging of the tubes will be initiated. At this point, the purging process will start and the Front Panel will show the steps to perform.
 6. Insert the 4 supplies in the **upper** row only.



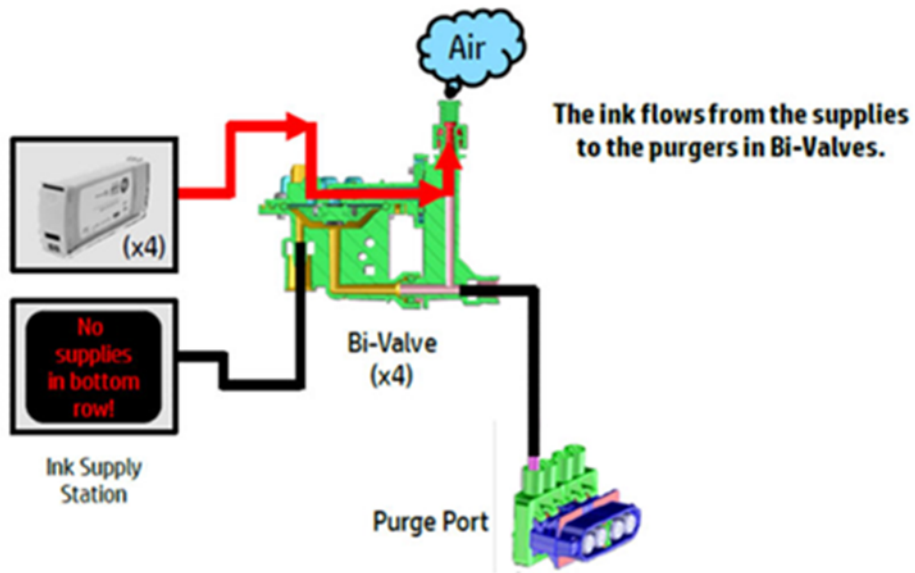
Insert each supply and push it as far as it will go.



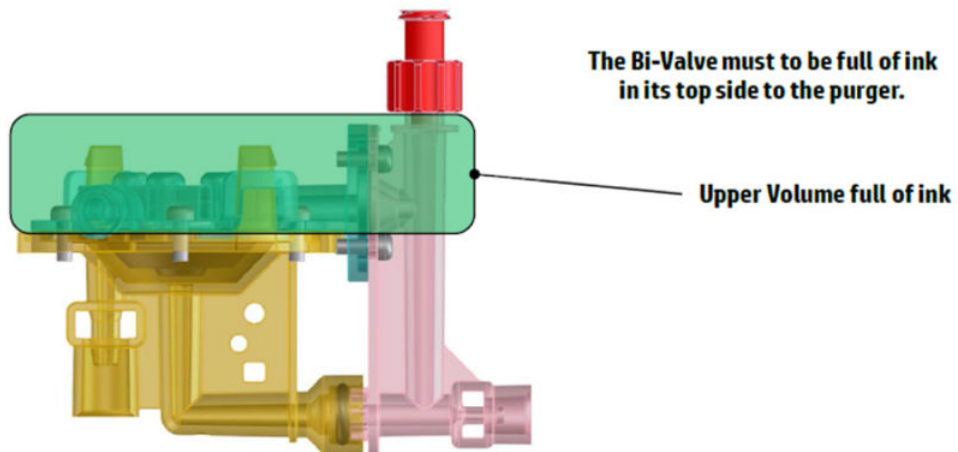
*** VERY IMPORTANT:** Insert the supplies only in the upper row, not in the bottom row. Otherwise, the purge process will fail and the air will not be removed from the circuit.



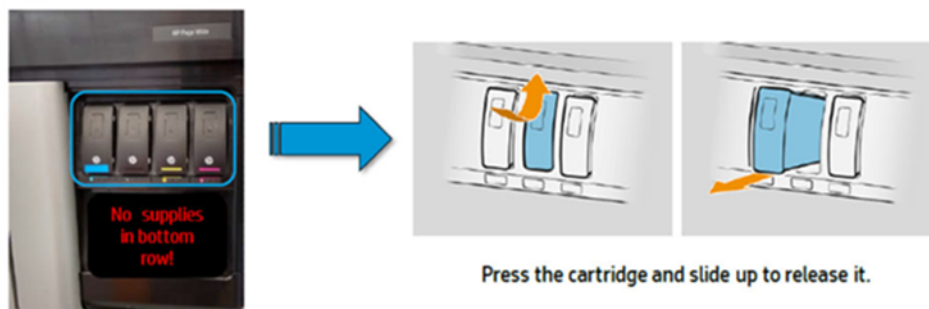
- 7. The system pressurizes to 1.2 psi.



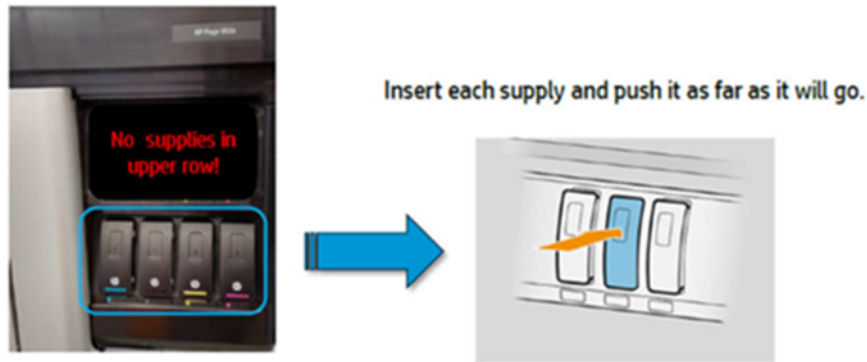
- 8. Check that the ink has arrived to all the purgers.




- 9. The system depressurizes.
- 10. Extract the 4 supplies from the upper row.

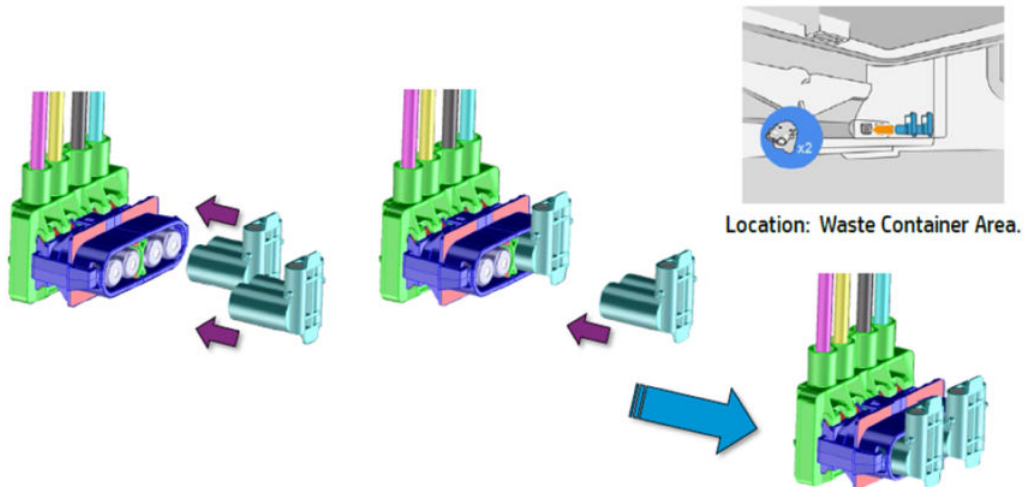


11. Insert the 4 supplies in the **bottom** row only.

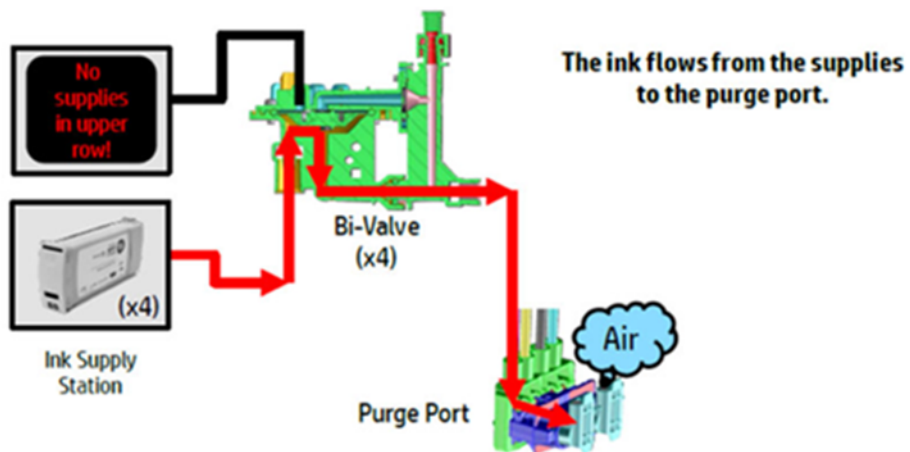


 *** VERY IMPORTANT:** Insert the supplies only in the bottom row, not in the upper row. Otherwise, the purge process will fail and the air will not be removed from the circuit.

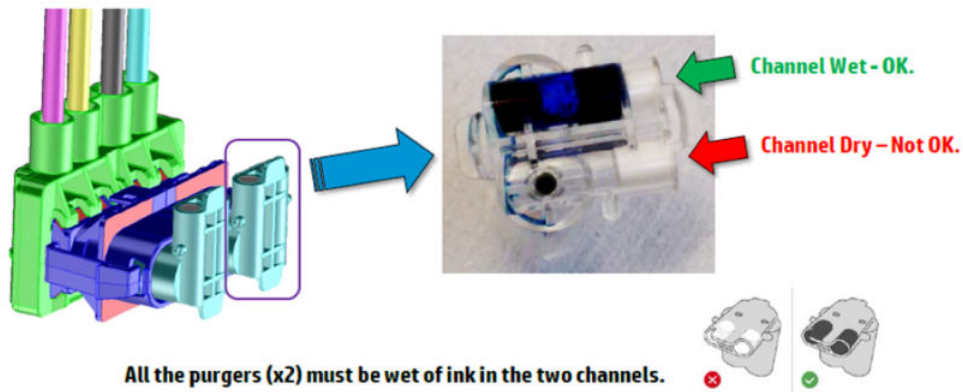
12. Put the purgers in the purge ports (x2).



13. The system pressurize to 2.0 psi.

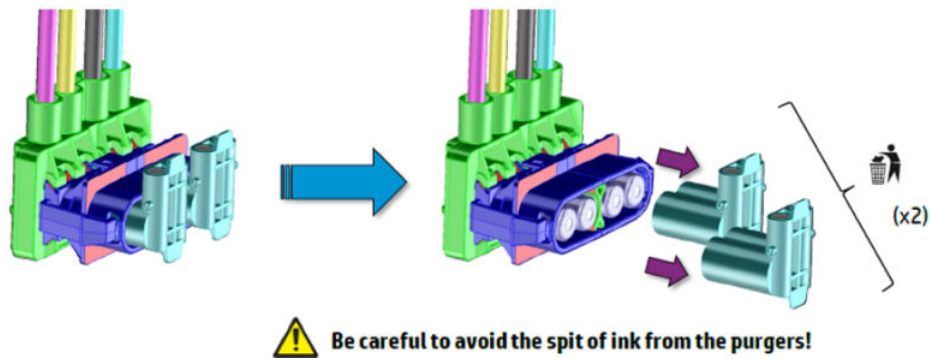


14. Check that the ink has arrived to all the purgers.



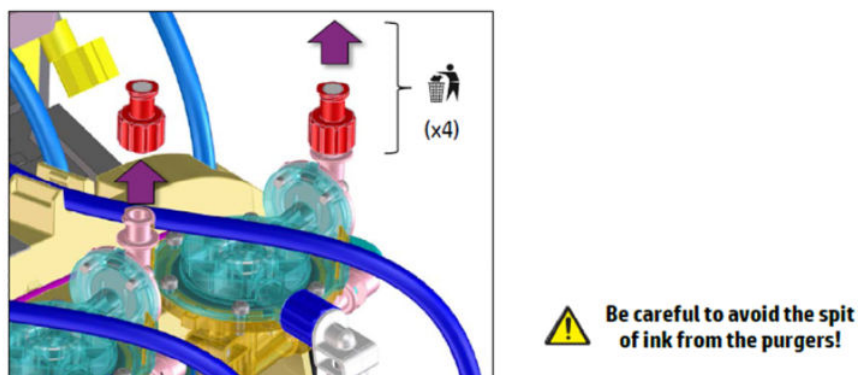
15. The system depressurizes.

16. Extract the purgers from the purge ports and discard them.




17. Extract all the supplies from the ISS.

18. Extract the Purger Assy Service Kit from the bi-valves and discard them.



19. Reconnect the Printbar tubes to the bi-valves. The process will end here.



 Be careful to avoid the spit of ink from the tubes or the ingestion of air!

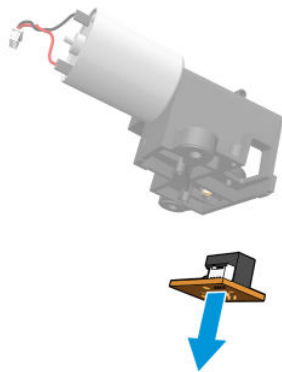
CID Valve PCA (CZ309-67127)

Removal

1. Remove the [CID valve \(CZ309-67126\)](#) on page 842.
2. Remove a screw from the PCA.

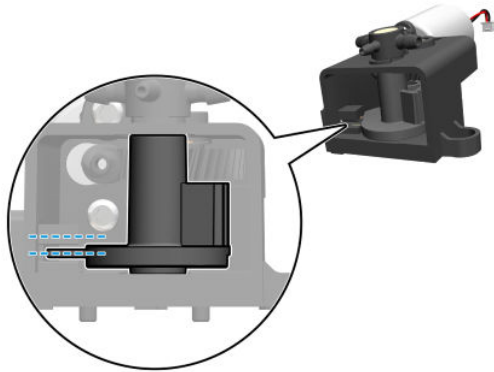


3. Remove the CID Valve PCA.



Installation

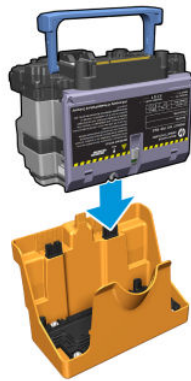
1. To install, perform the removal operation in reverse.
2. Install the new pinch-roller top cover.



Printhead cap (CZ309-67192)

Removal

- ▲ Unlock the print-bar brake.



Installation

- ▲ To install, perform the removal operation in reverse.

Broken bag

 **NOTE:** Do not use a broken bag ink cartridge in a different slot; there is a high risk of affecting the other PIP.

Procedure

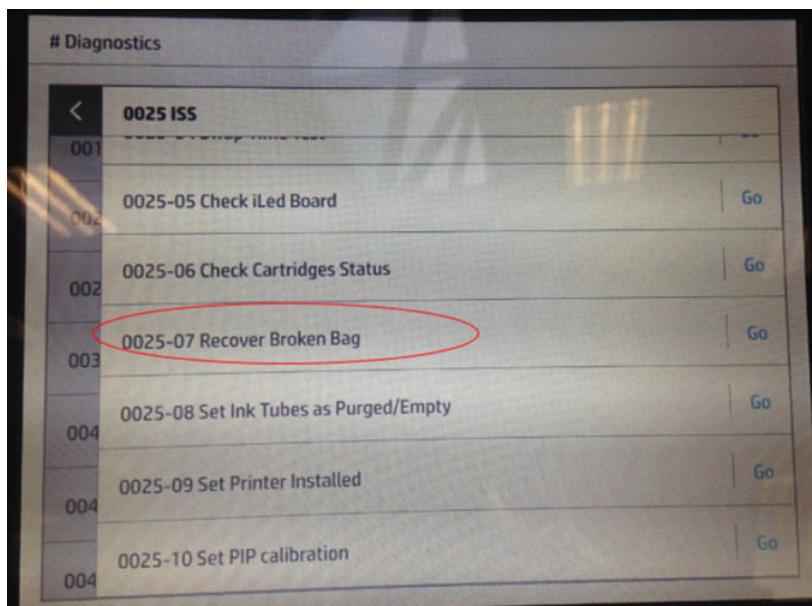
1. Verify that it is really a broken bag. In order for it to be, you will need to observe ink through the plastic. Here is the procedure:
 1. Shake the supply a few times.
 2. Hold the supplies with ink tower down.

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3. Check for ink in Air Tower and Chassis.
4. Mark the supply as “checked” with a marker or pen. This will help to debug, in the future, whether the supply was already leaking before being inserted or if the leak happened during printer operation.



2. If you have a broken bag, the PIP CZ309–67130 and Air control PCA CZ309–67120 must be changed and the existing supplies disposed of.
3. If it is a false broken bag, only the PIP must be replaced.
4. Run 0025-07 Recover broken bag.

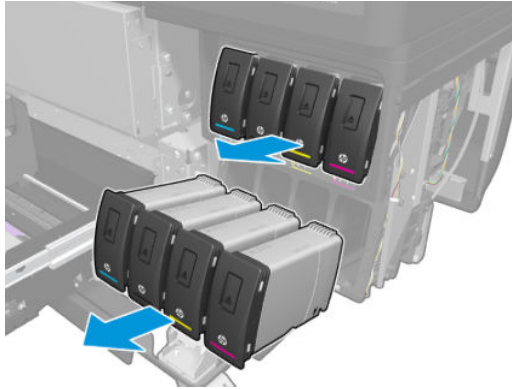


Minnow IDS support part service kit (CZ309-67315)

Removal

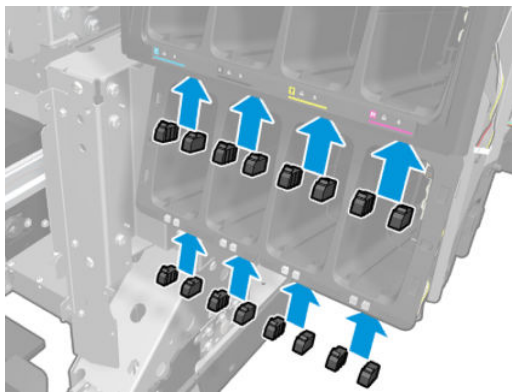
1. Remove the [Ink Supply Indicator PCA \(CZ309-67128\)](#) on page 843.

2. Remove the cartridges.

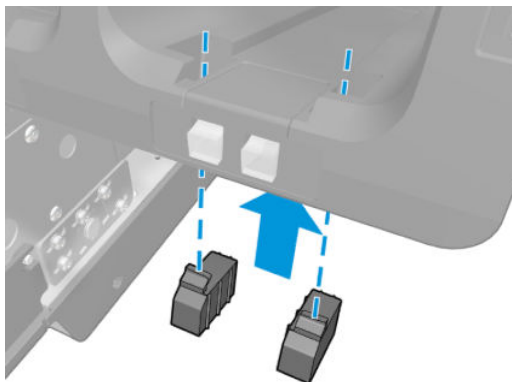


Installation

1. Place the 16 Minnow IDS supports.

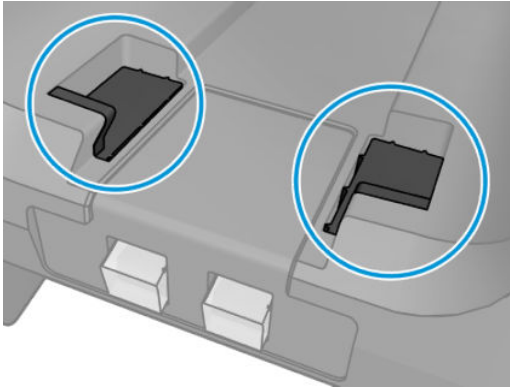


2. Attention: the LEFT Minnow IDS support is different from the right.



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3. Be sure to mount the Minnow IDS supports as the image shows.



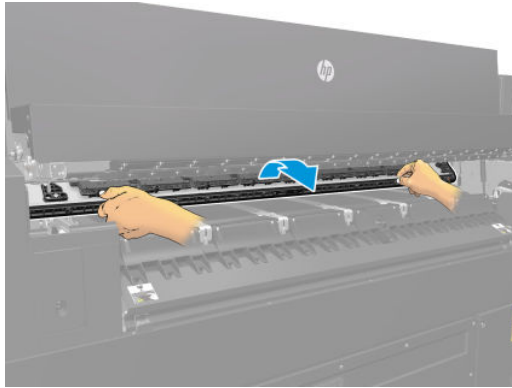
Lift mechanism subsystem

Lift mechanism motor assembly (CZ309-67028)

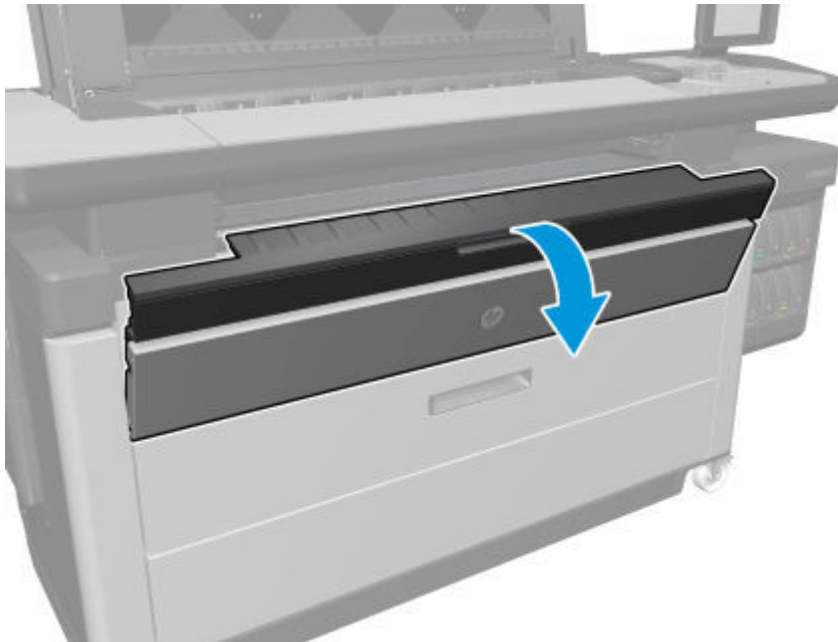
Removal

1. Remove the [Top-right exterior cover \(CZ309-67044\)](#) on page 646.
2. Remove the printheads (see [Printheads on page 633](#)).

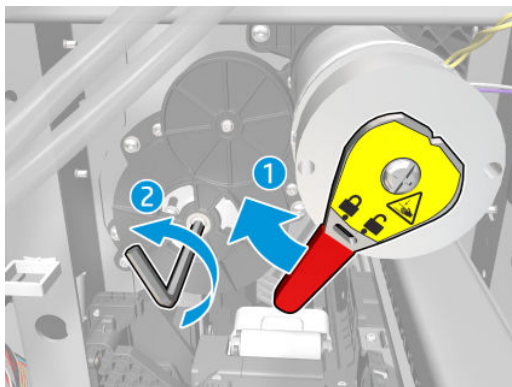
3. Close the printhead latches and the top door. Open the door structure and manually put the cap tray into the uncapped position.



Please note: For PWXL 4x00/3900 units with SNs \geq MY7688Q008, open the Front paper-loop door, and manually put the cap tray into the uncapped position.

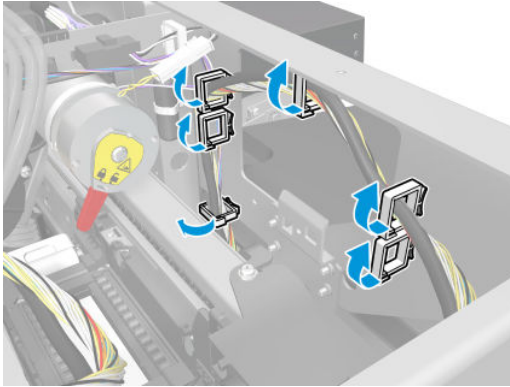


4. Holding the print bar with the tool, release the brake and slowly lower the print bar to the print position.

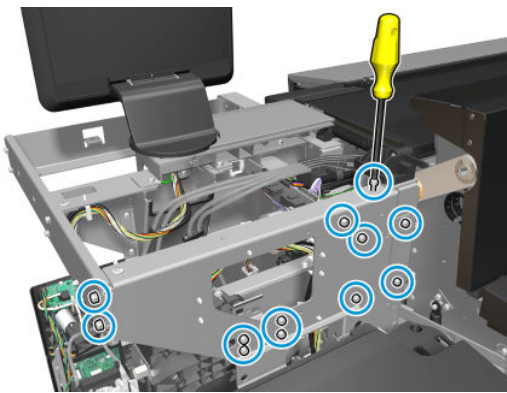


5. Remove the [Right cover assembly \(CZ309-67047\)](#) on page 649.

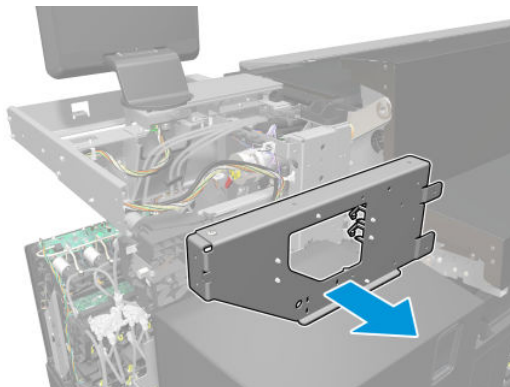
6. Open the clamps and unroute all cables from the rear steel brace.



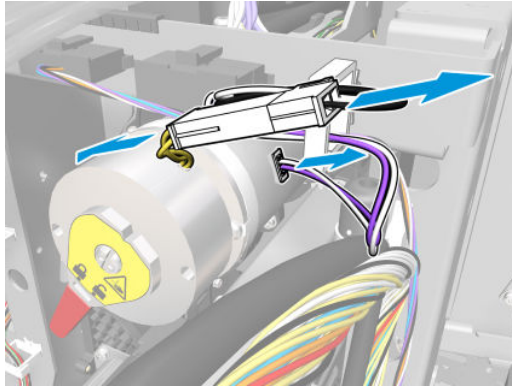
7. Remove twelve screws from the rear steel brace.



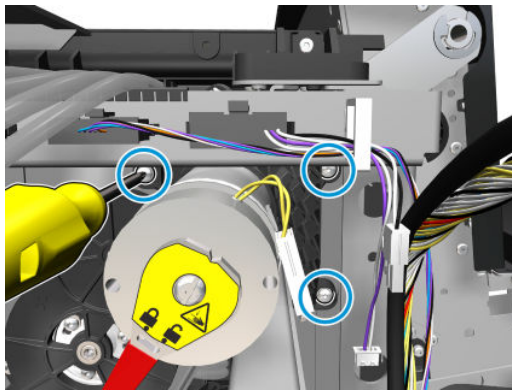
8. Remove the rear steel brace.



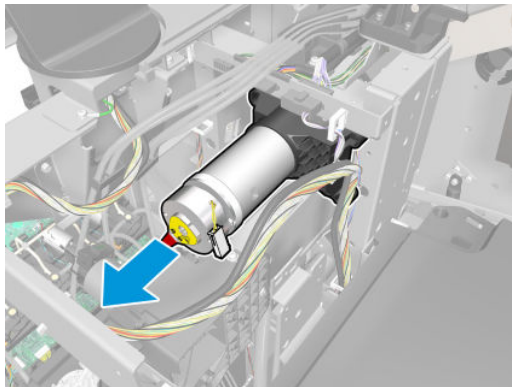
9. Unplug two cables from the lift motor.



10. Remove three screws from the lift motor.



11. Remove the lift motor.



Installation

- ▲ To install, perform the removal operation in reverse.

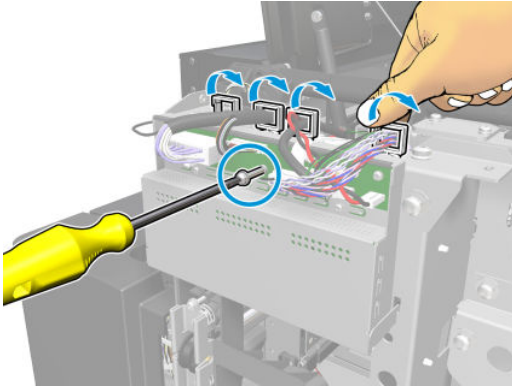
Lift mechanism encoder assembly (CZ309-67033)

Removal

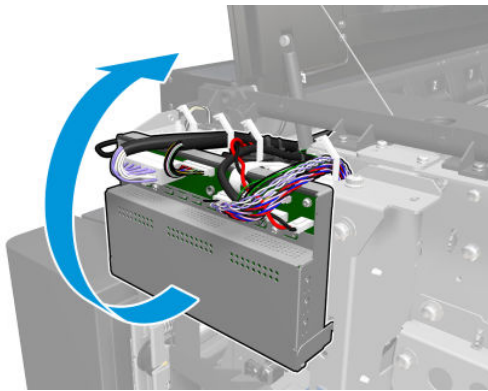
1. Remove the [Left cover assembly \(CZ309-67039\) on page 639](#).

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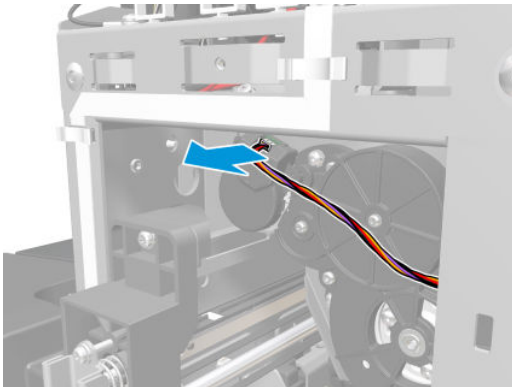
2. Remove a screw from the Montjoi e-box base, and open the clamps.



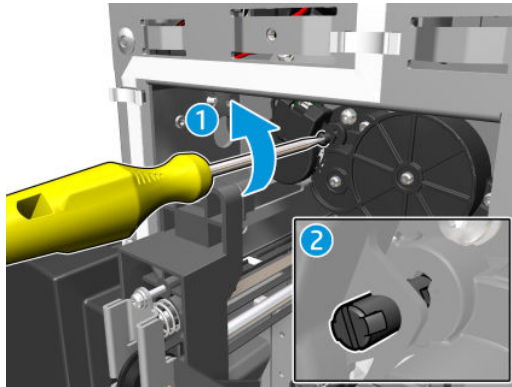
3. Lift up the Montjoi e-box base.



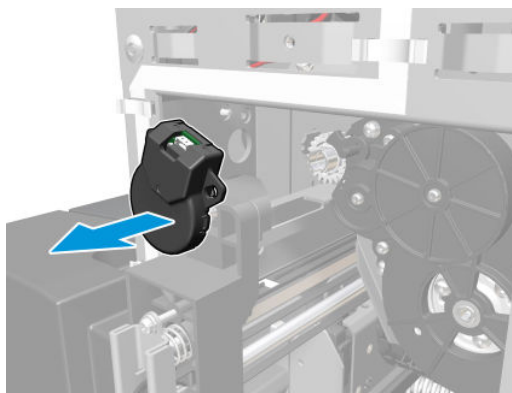
4. Unplug the encoder cable.



5. Use a flat-bladed screwdriver to unlock the pin: turn it 90° anticlockwise.



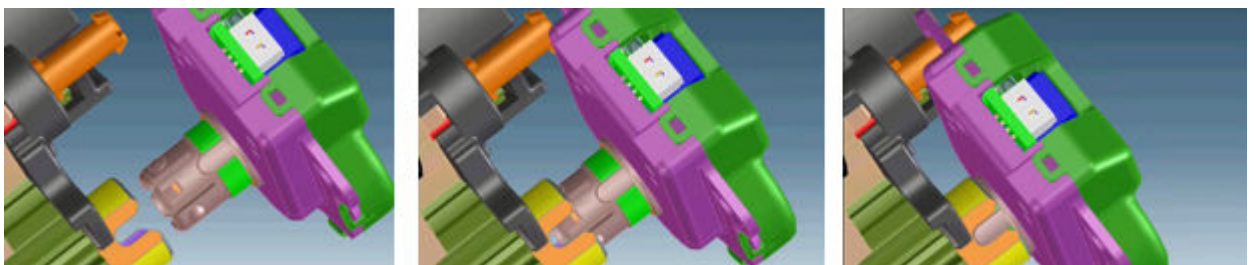
6. Remove the analog encoder.



Installation

- ▲ To install, perform the removal operation in reverse.

To ensure that the installation goes smoothly, please follow the steps below:



- a. For the model without Top stackers, you can have a view of this junction through a hole highlighted with the red arrow in the picture under.



- b. Place the motor in the unlocked position so that the print bar can move freely up and down by hand (the position used in transport), and place the print bar in the printing/low position so that you can rotate the synchronization bar $\frac{1}{2}$ turn – 1 turn by hand.

Orient yourself as shown in the picture: on your left should be the Encoder assy, and your right hand should be touching the synchronization bar. While trying to place the Encoder assy, rotate the synchronization bar smoothly until you feel that the Encoder assy is in place.

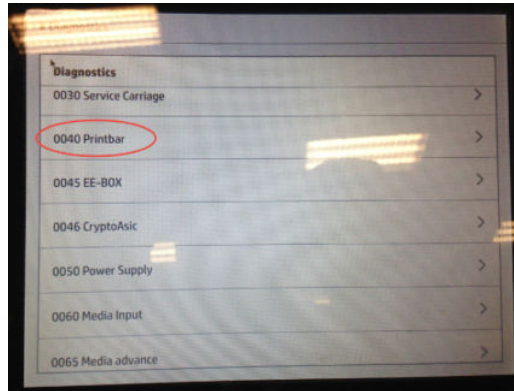


Lift mechanism right transmission (CZ309-67030)

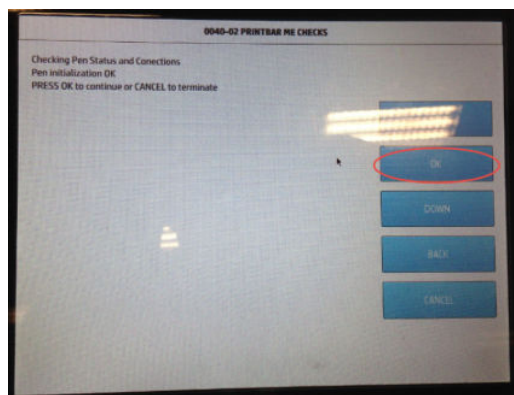
Removal

- ▲ Prepare the Transmission for removal. This process also applies to the left transmission.
 1. Remove the printheads. See [Printheads on page 633](#).
 2. Go to the Diagnostics menu via the Front panel. See [Entering the Diagnostics menu on page 458](#).

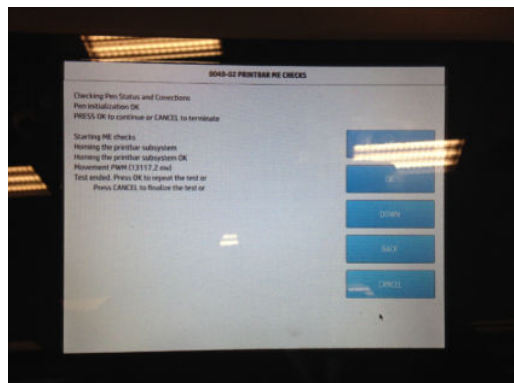
3. Tap 0040-Printbar, then 0040-02 Check ME.



4. Tap OK.



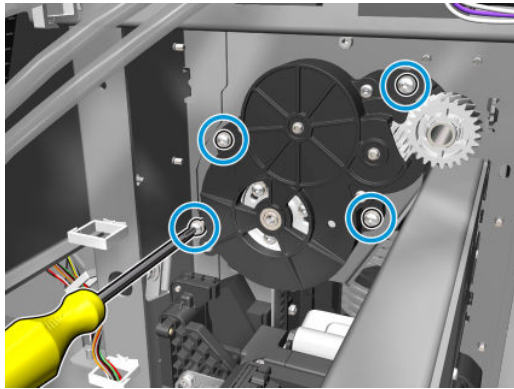
5. Once the following message appears, the printbar is diagnosed. Printer will power off in continuation.



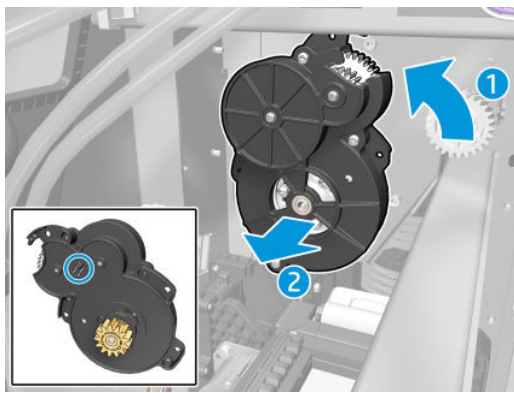
6. Disassemble the Transmission:

1. Remove the [Lift mechanism motor assembly \(CZ309-67028\) on page 864.](#)

2. Remove four screws from the lift mechanism's right transmission housing.



3. Rotate and remove the lift mechanism's right transmission housing (notice the pin).



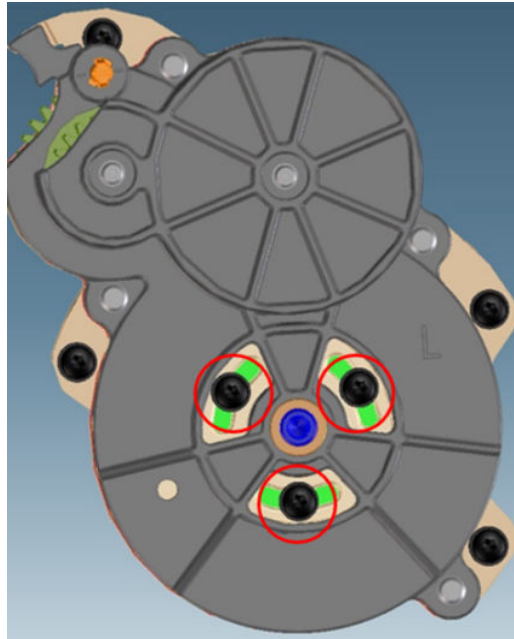
7. Assemble the Transmission.

8. Synchronize the Transmission.

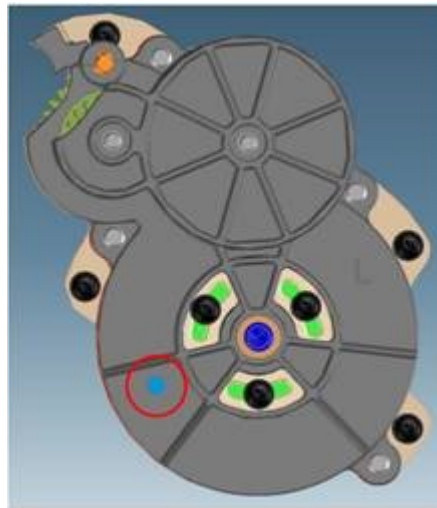
On each side, once the syncrobar is in place and the lift motor is in break position:

- a. Ensure that the Print bar is in the lower position. No printheads should be removed.
- b. On the left side, remove the gear mechanism from the printer.

- c. Loosen the 3 center screws, rotate using the gear on the upper left (as in the picture) with a screwdriver on one corner until the screw is in the middle of the arc, then screw back in the 3 black screws.



- d. Align the hole and then insert screw:



- o Hole not aligned:



- Hole aligned:



- e. Then, insert the screw (to prevent movement):



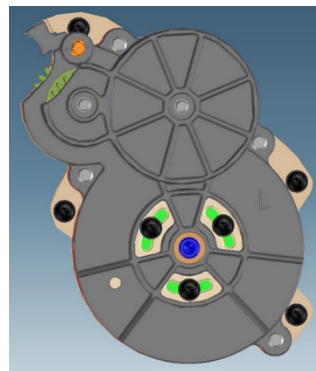
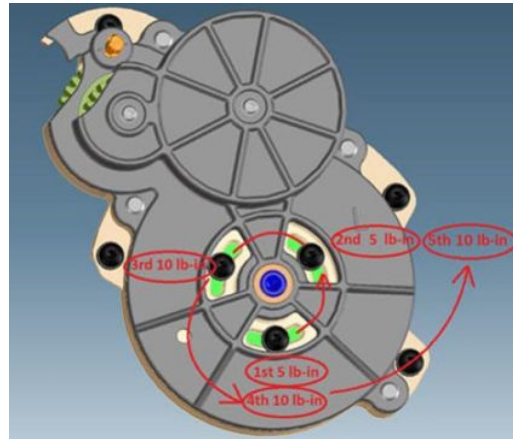
- f. Then put the gear lift assy back in place.
- g. Before performing the 20-30 degree rotation, remove the screw that you just inserted.

And once the left and right gear boxes are in place:

- Unscrew the central screws: this will put the internal spring under tension.
- Screw them back in place.

h. Then:


1. Loosen the 3 x screws highlighted with red circles in the image below.
2. Then re-tighten them, gently one screw after the other (no importance which one first), increasing the force applied.



9. Run the PPS calibration (see [Service utilities on page 539](#)).
10. Run the Drop detector calibration as described ([Service utilities on page 539](#)).
11. The process is complex; please follow each step as indicated in the procedure, and when replacing one side with a new gear mechanism, it is recommended to replace the other side with a new gear mechanism as well.

Installation

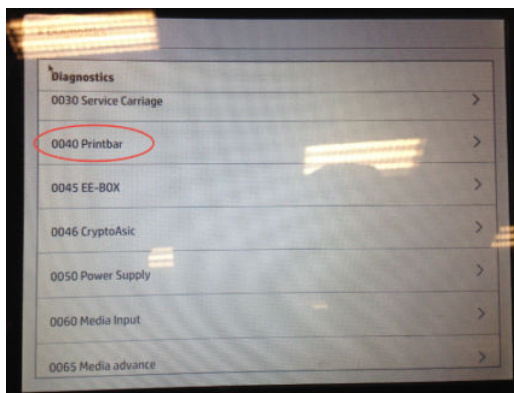
- ▲ To install, perform the removal operation in reverse.

 **NOTE:** When placing the transmission gear in place, it is really easy to skip one tooth from the gear wheel, which results in an approximately 3 mm difference between one transmission and the other one.

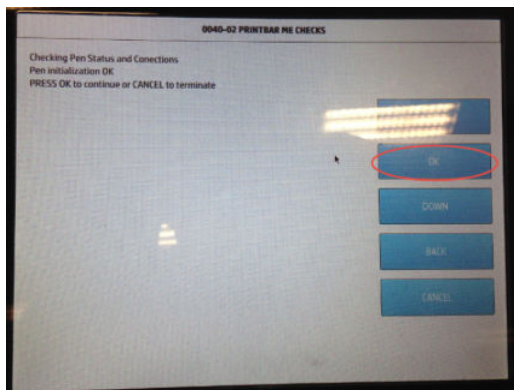
Lift mechanism left transmission (CZ309-67031)

Removal

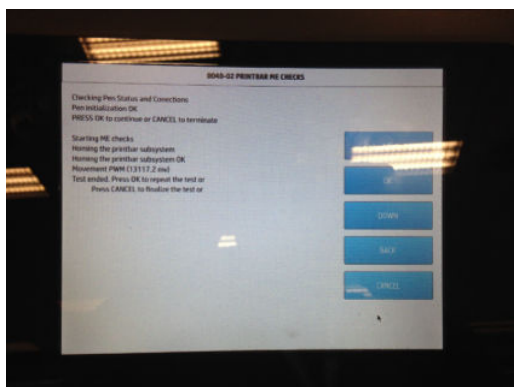
- ▲ Prepare the Transmission for removal. This process also applies to the right transmission.
 1. Remove the printheads. See [Printheads on page 633](#).
 2. Go to the Diagnostics menu via the Front panel. See [Entering the Diagnostics menu on page 458](#).
 3. Tap **0040-Printbar**, then **0040-02 Check ME**.



4. Tap **OK**.

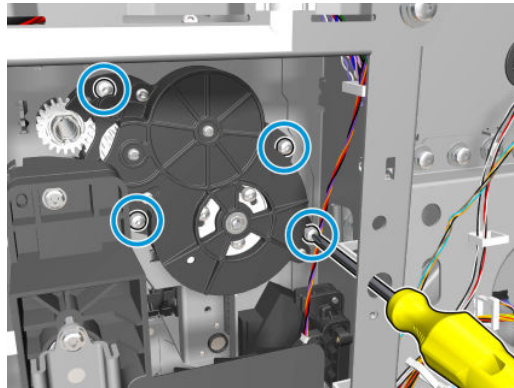


5. Once the following message appears, the printbar is diagnosed. Printer will power off in continuation.

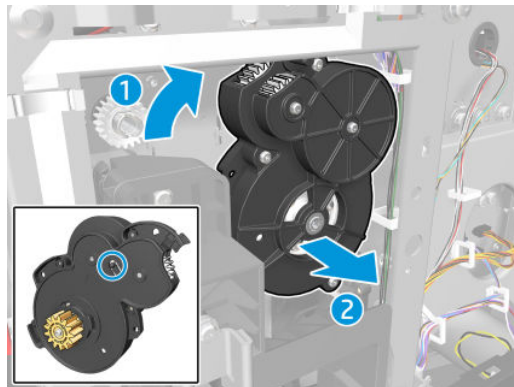


6. Disassemble the Transmission:

1. Remove the [Lift mechanism encoder assembly \(CZ309-67033\)](#) on page 867.
2. Remove four screws from the lift mechanism's left transmission housing.



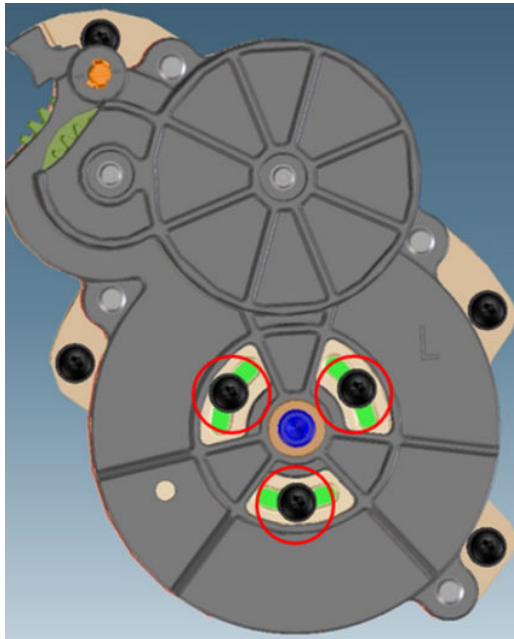
3. Rotate and remove the lift mechanism's left transmission housing (notice the pin).



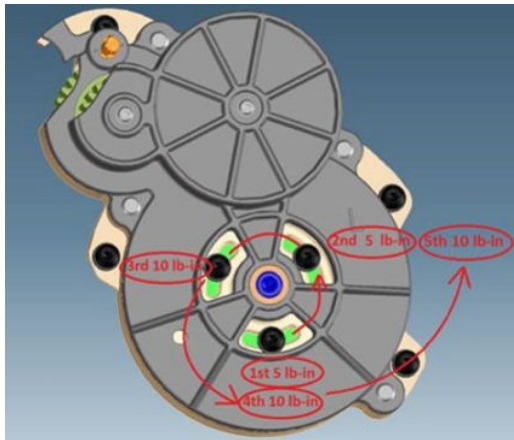
7. Assemble the Transmission.
8. Synchronize the Transmission.

On each side, once the syncrobar is in place and the lift motor is in break position:

1. Loosen the 3 x screws highlighted with red circles in the image below.



2. Then re-tighten them, gently one screw after the other (no importance which one first), increasing the force applied.



9. Run the PPS calibration (see [Service utilities on page 539](#)).
10. Run the Drop detector calibration as described in ([Service utilities on page 539](#)).
11. The process is complex; please follow each step as indicated in the procedure, and when replacing one side with a new gear mechanism, it is recommended to replace the other side with a new gear mechanism as well.

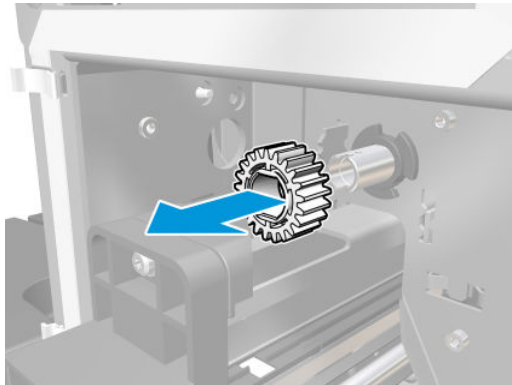
Installation

- ▲ To install, perform the removal operation in reverse.

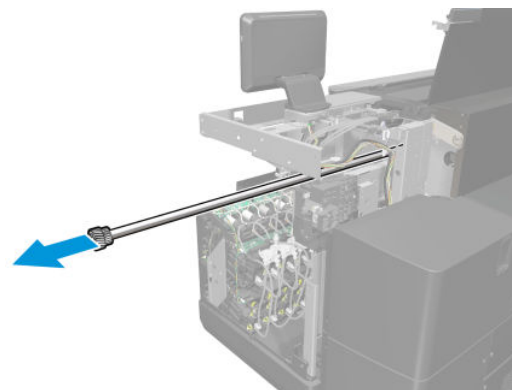
Synchro bar with bushing (CZ309-67032)

Removal

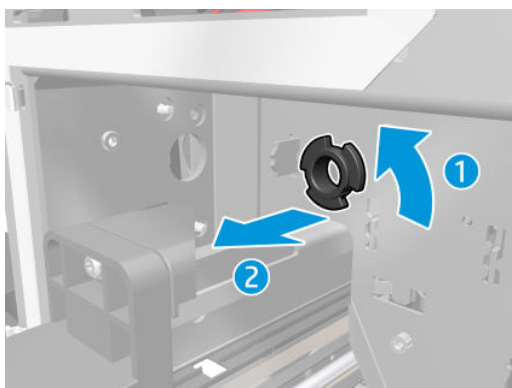
1. Remove the [Lift mechanism right transmission \(CZ309-67030\)](#) on page 870.
2. Remove the [Lift mechanism left transmission \(CZ309-67031\)](#) on page 876.
3. Remove the synchro bar gear on the left-hand side.



4. Pull out the synchro bar.

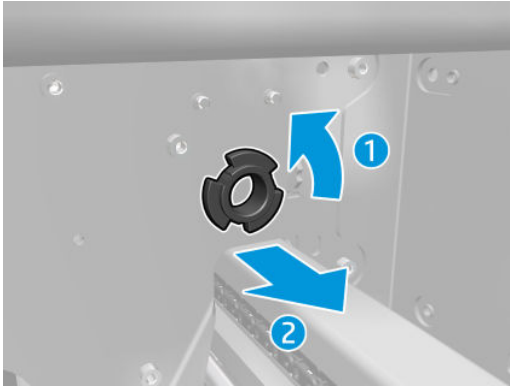


5. Turn the left bushing anticlockwise and pull it out.



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6. Turn the right bushing clockwise and pull it out.



Installation

- ▲ To install, perform the removal operation in reverse.

Paper loop subsystem

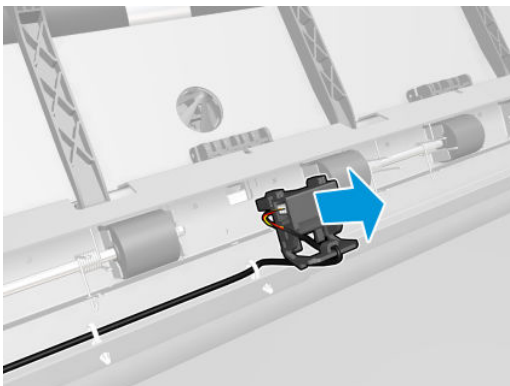
Feed sensor (CZ309-67073)

Removal

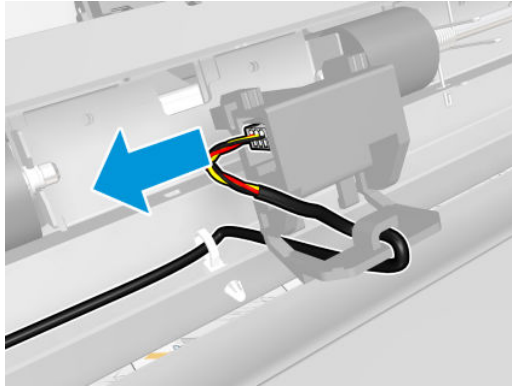
1. Open the paper-loop front cover.



2. Unclip the feed sensor holder.



3. Disconnect the cable.



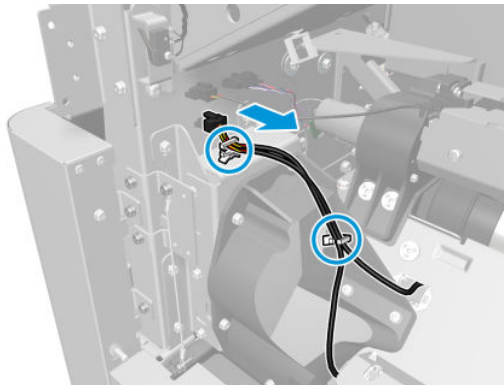
Installation

- ▲ To install, perform the removal operation in reverse.

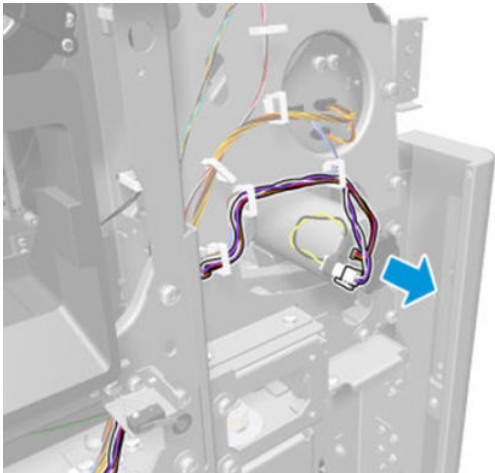
Paper-loop bottom assembly (CZ309-67076)

Removal

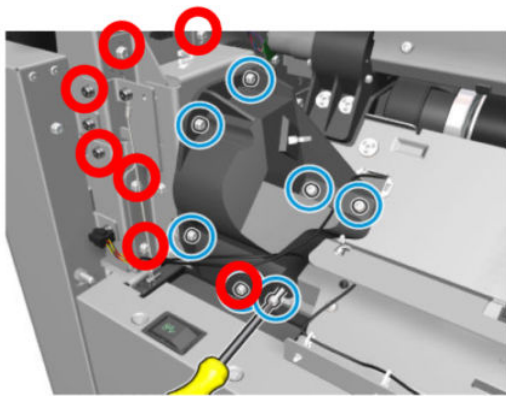
1. Remove the [Lower-left cover \(CZ309-67041\)](#) on page 641.
2. Remove the [Front paper-loop door \(CZ309-67051\)](#) on page 661.
3. Remove the [Left-interior side cover \(CZ309-67053\)](#) on page 662.
4. Remove the [Right-interior side cover \(CZ309-67054\)](#) on page 663.
5. Disconnect the paper-loop sensor and feed sensor cables and unrout them.




6. Disconnect the feed motor cables.



7. Remove the following screws highlighted in red:



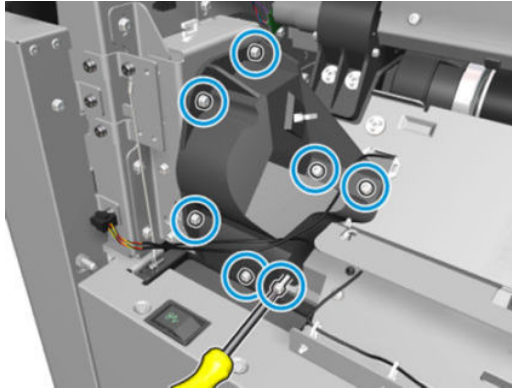
 **NOTE:** Also remove the 2 screws + the L-shaped part on the left which forms a (metal) line that retains the Front cover when opening it.

8. Remove 5 screws: 2 on the right and one on the left + the 2 screws highlighted in red which form an L shape on which the Front cover is maintained by a metal line.



9. Now remove the whole assembly, starting first by rotating it, lifting up on the right side.
10. Place the assembly on a table.

11. Then remove the black cover.



Now you can separate the motor assembly from the Paper-loop bottom assembly.

Installation

- ▲ To install, perform the removal operation in reverse. Run the following after replacement.

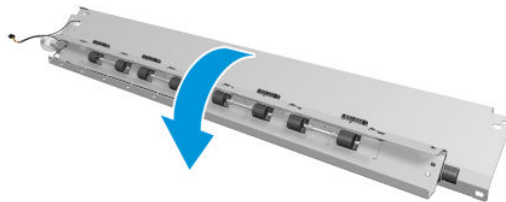
From the Service Menu, go to Calibrations.

- Run the: Feed roller calibration.
- Run the: TOF calibration.
- Then, unload and reload media in order to trigger a Media advance calibration.

Paper-loop sensor assembly (CZ309-67077)

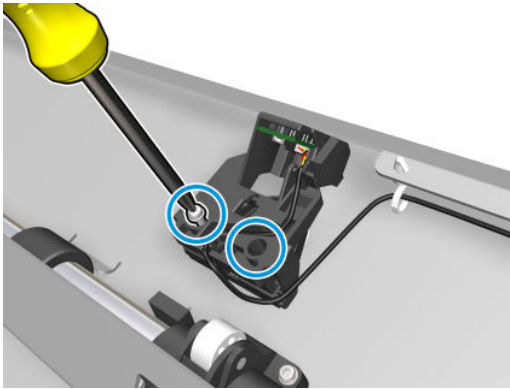
Removal

1. Remove the [Paper-loop bottom assembly \(CZ309-67076\)](#) on page 881.
2. Place the paper-loop bottom assembly on a flat surface, upside down, so that you can access the loop sensor screws.

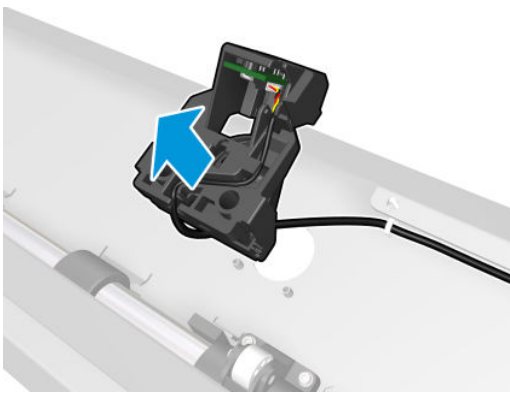


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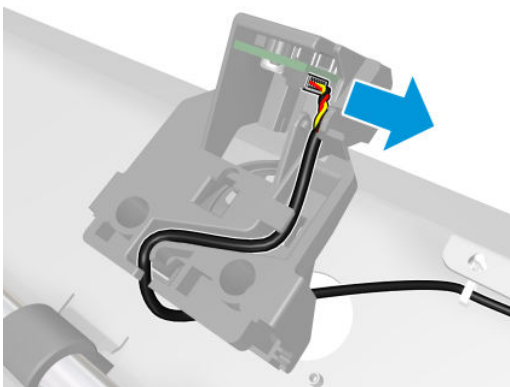
3. Remove two screws.



4. Detach the loop sensor.



5. Disconnect the cable.



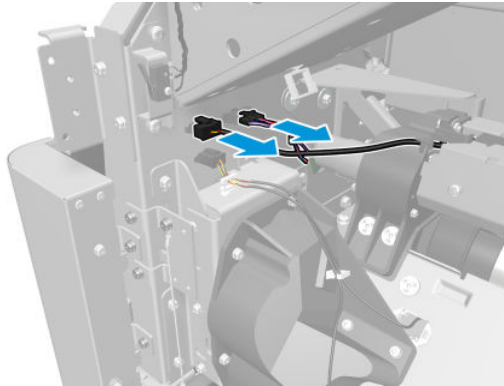
Installation

- ▲ To install, perform the removal operation in reverse.

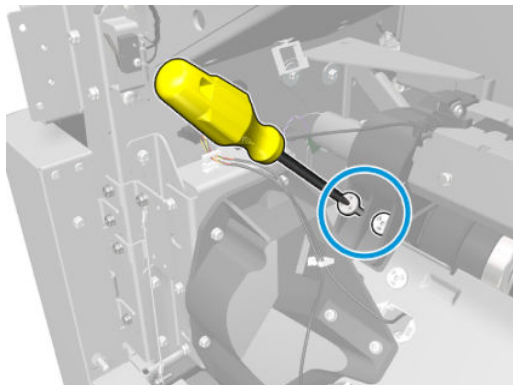
Paper-loop roof sheet-metal (CZ309-67437/CZ309-67434)

Removal

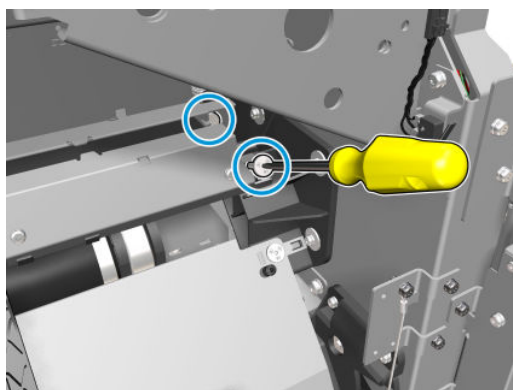
1. Remove the [Front paper-loop door \(CZ309-67051\)](#) on page 661.
2. Remove the [Left-interior side cover \(CZ309-67053\)](#) on page 662.
3. Remove the [Right-interior side cover \(CZ309-67054\)](#) on page 663.
4. Disconnect the TOF-sensor and baffles-motor cables.



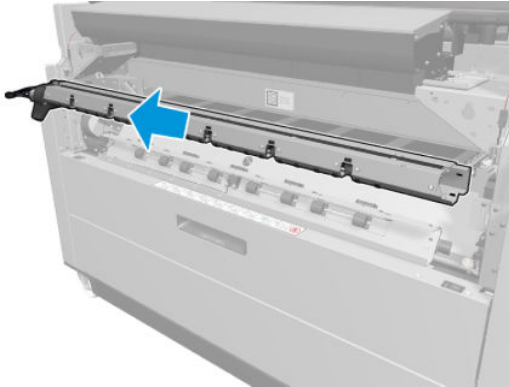
5. Remove two screws on the left.



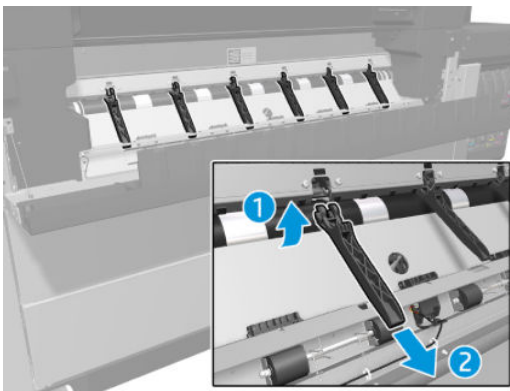
6. Remove two screws on the right.



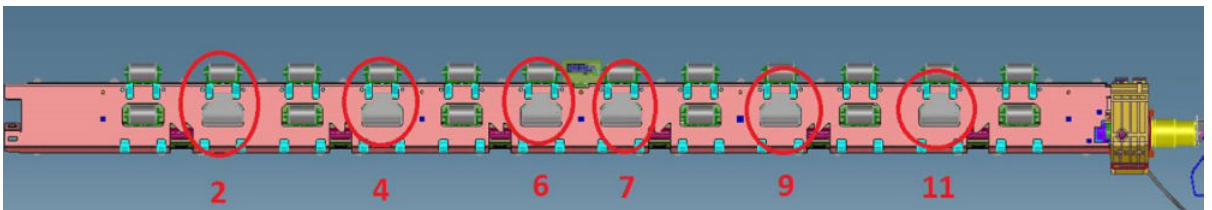
7. Remove the paper-loop roof and place it on a flat surface.



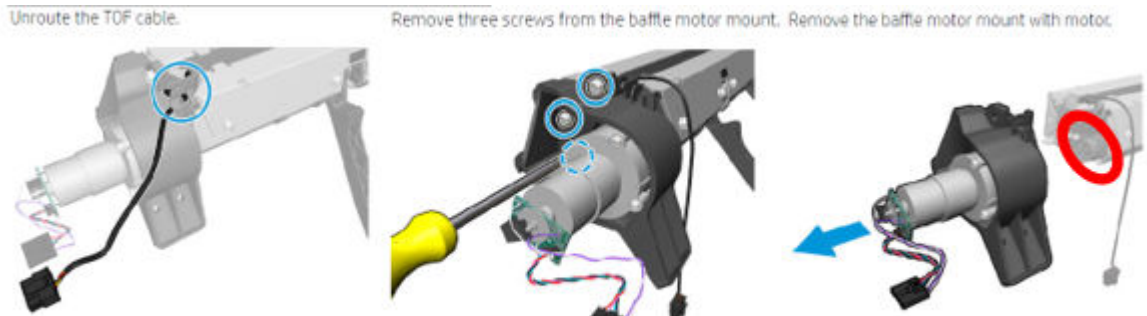
8. Remove the 6 media loop baffles.



9. If the SFSU is installed in the unit. Place lifters on the pinches wheels of the paper-loop roof (pinches on position: 2, 4, 6, 7, 9 and 11) as shown in the picture).



10. For printers with six belts and SFSU installed, the motor's cam shaft must be replaced by the grey cam shaft included in the service kit. Follow these steps.



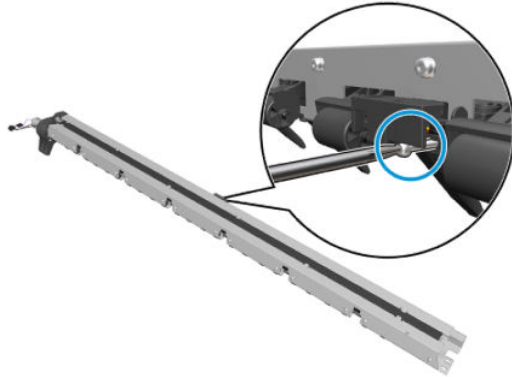
Installation

- ▲ To install, perform the removal operation in reverse. Please run the Image length calibration after installation.

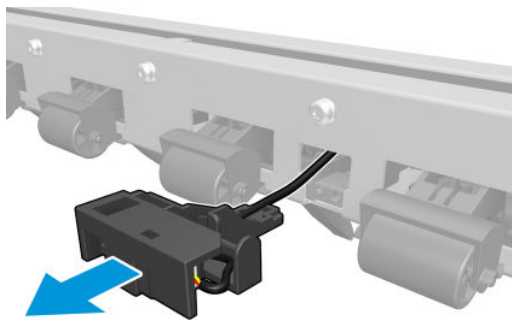
TOF sensor assembly (CZ309-67078)

Removal

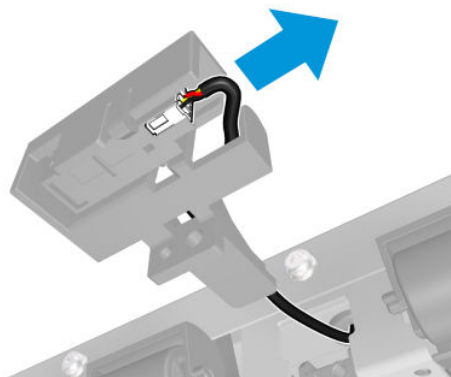
1. Remove the [Paper-loop roof sheet-metal \(CZ309-67437/CZ309-67434\)](#) on page 885.
2. Remove the screw from the TOF sensor support.



3. Remove the TOF sensor support.



4. Disconnect the cable.



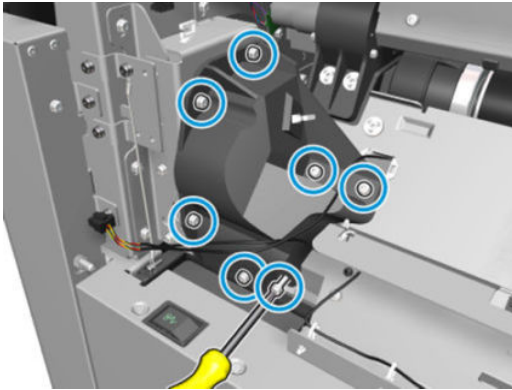
Installation

- ▲ To install, perform the removal operation in reverse. Run TOF calibration and run the Image length calibration after assembling the TOF Sensor (after replacement).

Feed motor assembly (CZ309-67080)

Removal

1. Remove the [Paper-loop bottom assembly \(CZ309-67076\) on page 881](#).
2. Place the assembly on a table.
3. Remove the black cover.



Then you can separate the motor assembly from the Paper-loop bottom assembly.

Installation

- ▲ To install, perform the removal operation in reverse. Run the following after replacement.

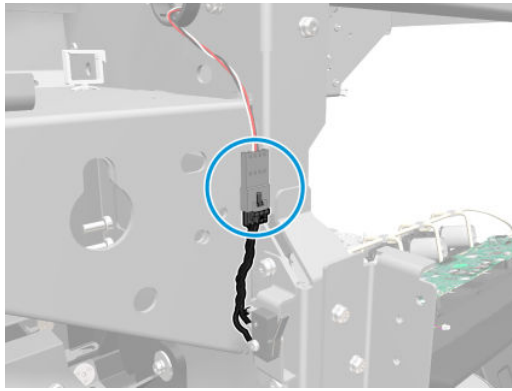
From the Service Menu, go to Calibrations.

- Run the: Feed roller calibration.
- Run the: TOF calibration.
- Then, unload and reload media in order to trigger a Media advance calibration.

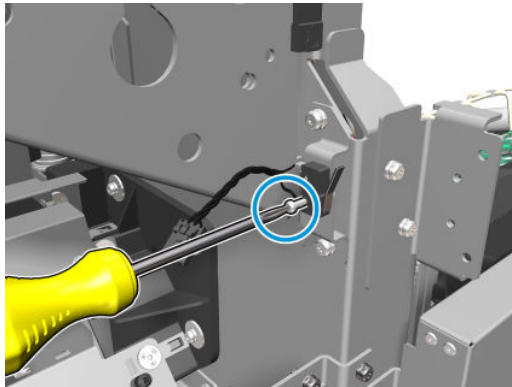
Sensor safety assembly (CZ309-67034)

Removal

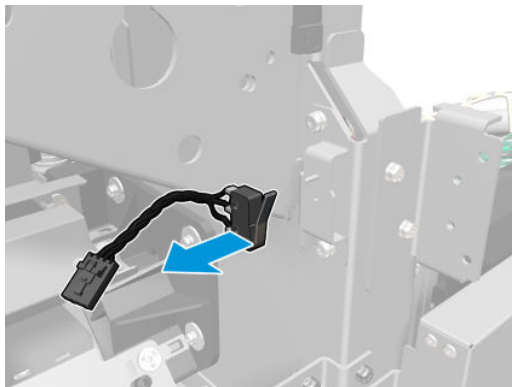
1. Disconnect the sensor cable.



2. Remove a screw from the sensor.



3. Remove the sensor safety.



Installation

- ▲ To install, perform the removal operation in reverse.

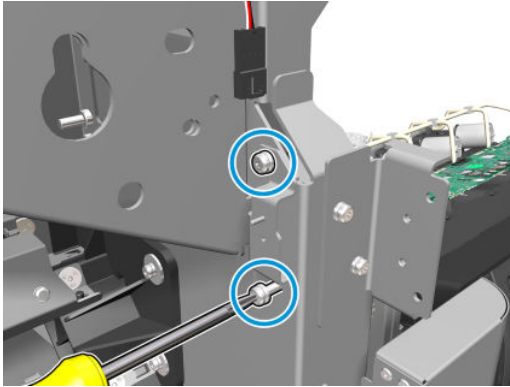
Paper-loop door-switch support right (CZ309-67074)

Removal

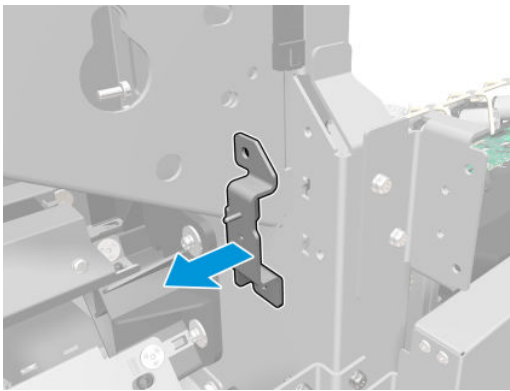
1. Remove the [Right-interior side cover \(CZ309-67054\)](#) on page 663.
2. Remove the [Sensor safety assembly \(CZ309-67034\)](#) on page 888.

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3. Remove two screws.



4. Remove the right-hand door switch support.



Installation

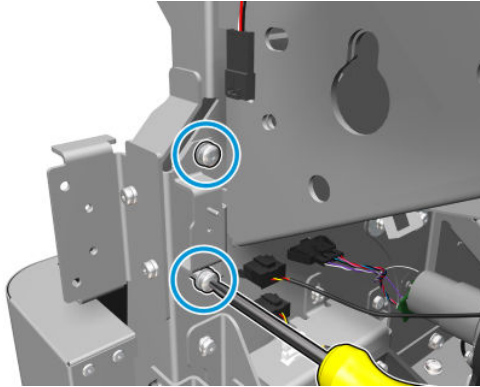
- ▲ To install, perform the removal operation in reverse.

Paper-loop door-switch support left (CZ309-67075)

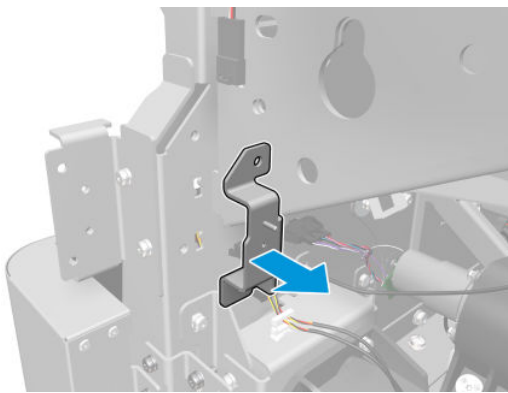
Removal

1. Remove the [Left-interior side cover \(CZ309-67053\)](#) on page 662.
2. Remove the [Sensor safety assembly \(CZ309-67034\)](#) on page 888.

3. Remove two screws.



4. Remove the left-hand door switch support.



Installation

- ▲ To install, perform the removal operation in reverse.

Paper-loop baffles (CZ309-67241)

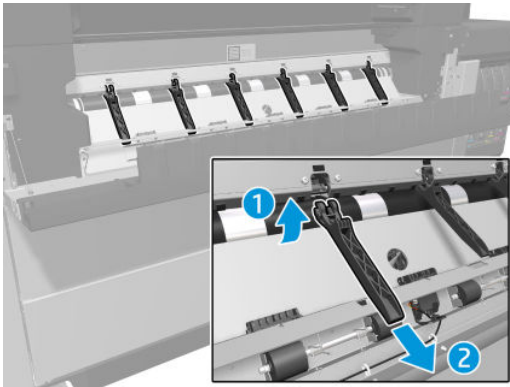
Removal

1. Open the paper input cover.



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2. Remove the paper-loop baffles.



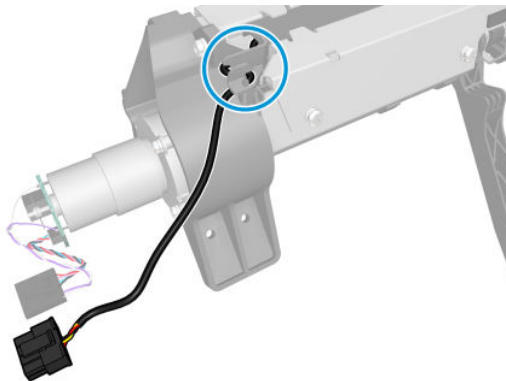
Installation

- ▲ To install, perform the removal operation in reverse.

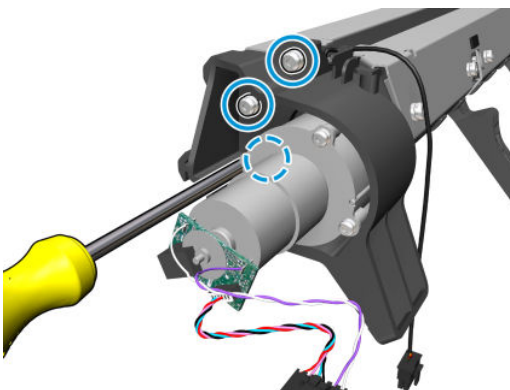
Paper-loop baffle shaft drive (CZ309-67081)

Removal

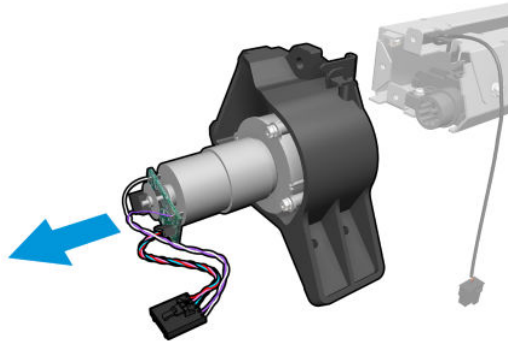
1. Remove the [Paper-loop roof sheet-metal \(CZ309-67437/CZ309-67434\)](#) on page 885.
2. Unroute the TOF cable.



3. Remove three screws from the baffle motor mount.



4. Remove the baffle motor mount with motor.



Installation

- ▲ To install, perform the removal operation in reverse.

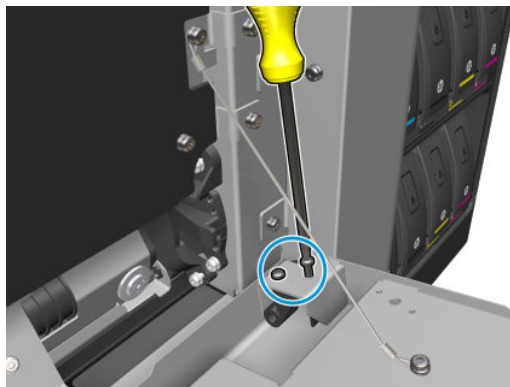
Paper-loop front-door hinge and spring (CZ309-67216)

Removal

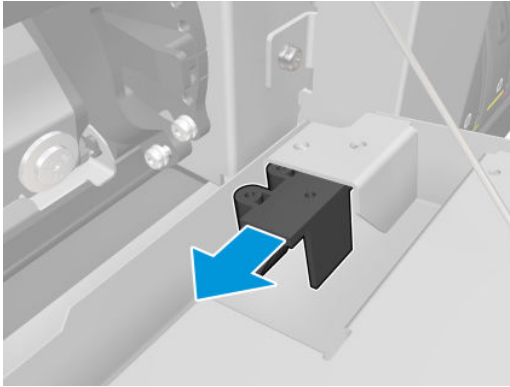
1. Open the paper input cover.



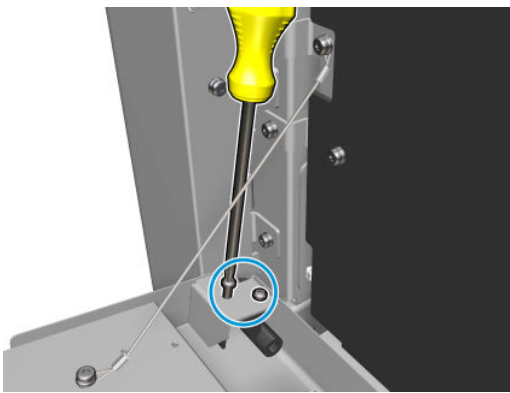
2. Remove two screws from the cover shaft right reinforcement.



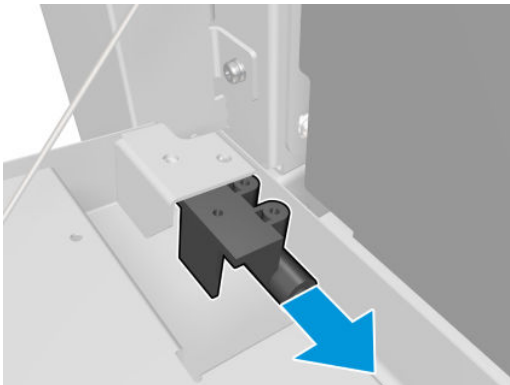
3. Remove the right support closure. Insert the new one before removing the old one.



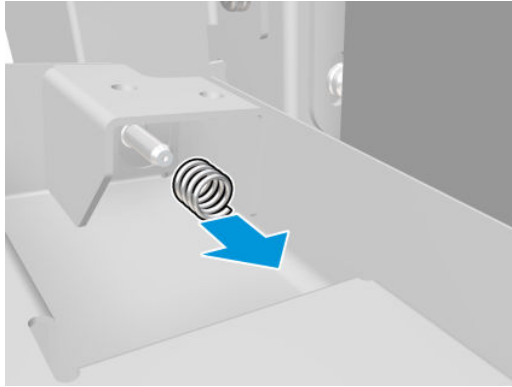
4. Remove two screws from the cover shaft left reinforcement.



5. Remove the left support closure.



6. Remove the spring.



Installation

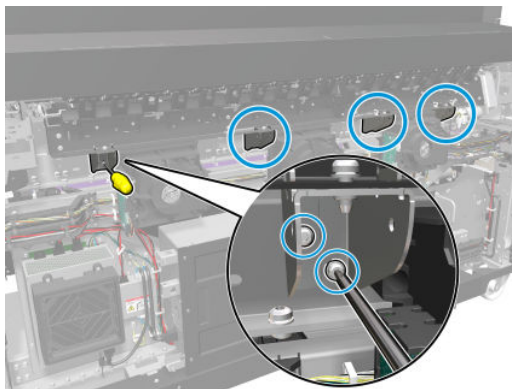
- ▲ To install, perform the removal operation in reverse.

Paper output subsystem

Diverter assembly (CZ309-67148)

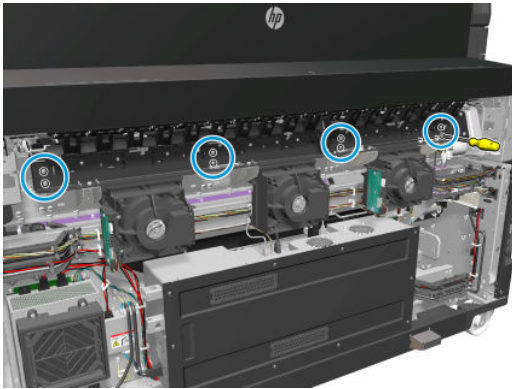
Removal

1. Remove the [Diverter cover \(CZ309-67147\)](#) on page 698.
2. Remove the [Rear-left cover \(CZ309-67042\)](#) on page 644.
3. Remove the [Rear-right cover \(CZ309-67050\)](#) on page 653.
4. Remove the [Top E-box cover \(CZ309-67059, CZ309-67262\)](#) on page 656.
5. Remove eight gusset screws.

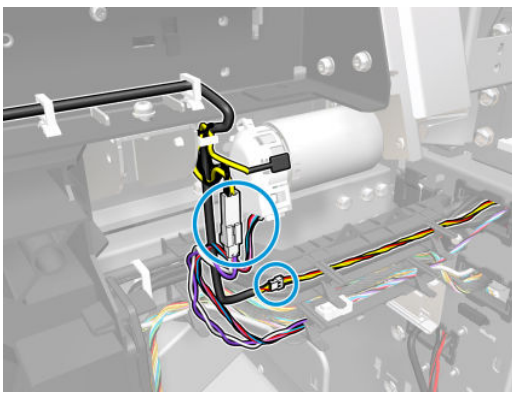


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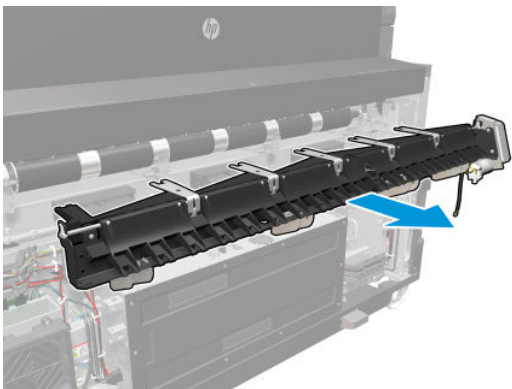
6. Remove eight beam-diverter sheet-metal screws.



7. Disconnect three cables.



8. Remove the diverter.



Installation

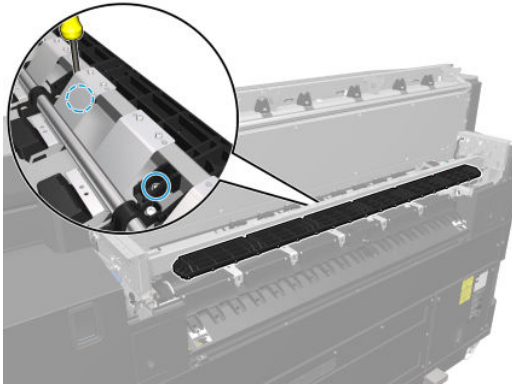
- ▲ To install, perform the removal operation in reverse.

Paper-output starwheels (CZ309-67140)

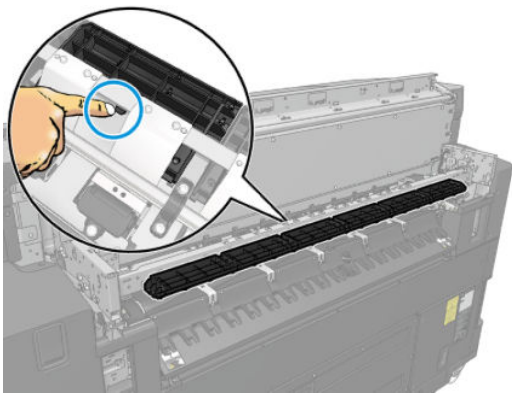
Removal

1. Remove the [Pinch roller top cover \(CZ309-67133\) on page 693](#).

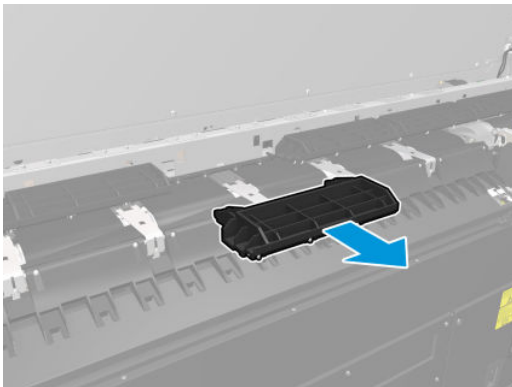
2. Remove two screws from the starwheels.



3. Unclip M0 starwheels.



4. Remove the starwheels.



Installation

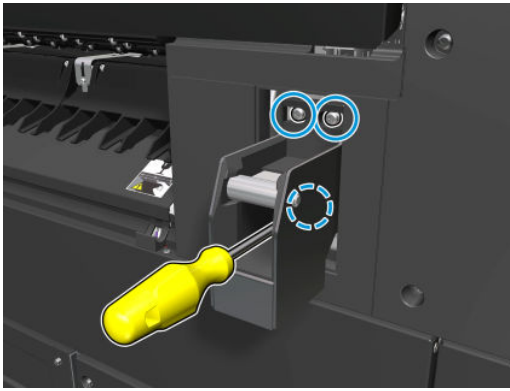
- ▲ To install, perform the removal operation in reverse.

Accessory adapters (CZ309-67212)

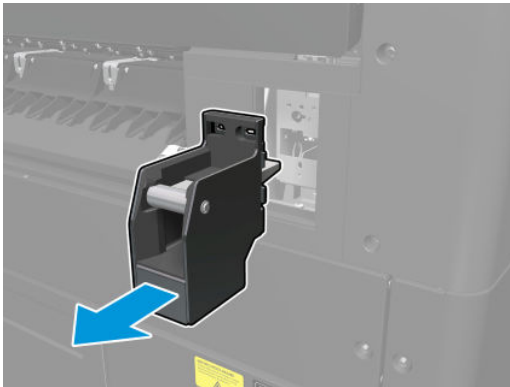
Removal

1. Remove three screws from the accessory adapter.

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2. Remove the accessory adapter.



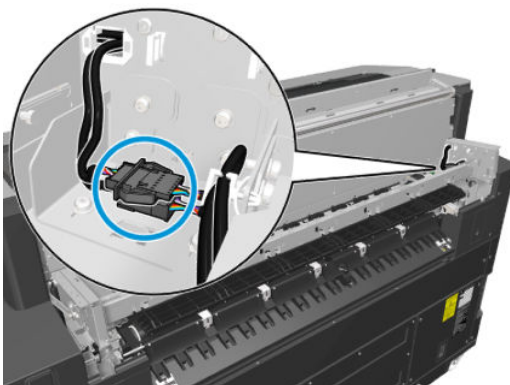
Installation

- ▲ To install, perform the removal operation in reverse.

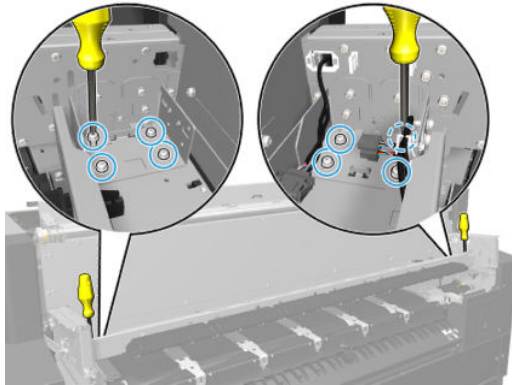
Paper-output pinches motor (CZ309-67142)

Removal

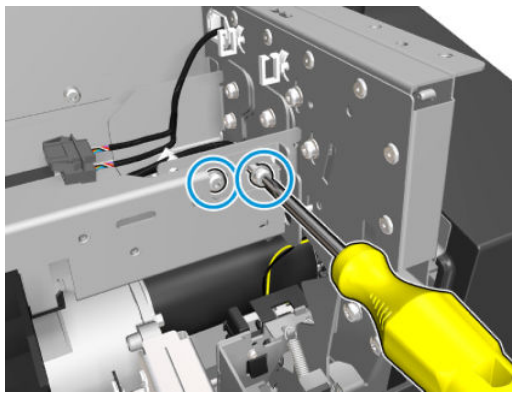
1. Open door structure and remove the [Dryer top cover \(CZ309-67238\)](#) on page 692.
2. Remove the [Pinch roller top cover \(CZ309-67133\)](#) on page 693.
3. Unplug two cables.



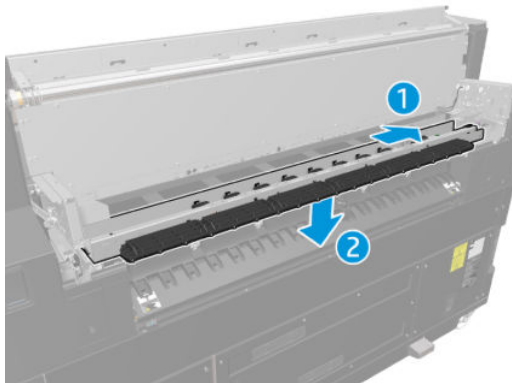
4. Unscrew 4 screws from each side.



5. Loosen 2 screws.



6. Remove the Paper output pinches motor.



Installation

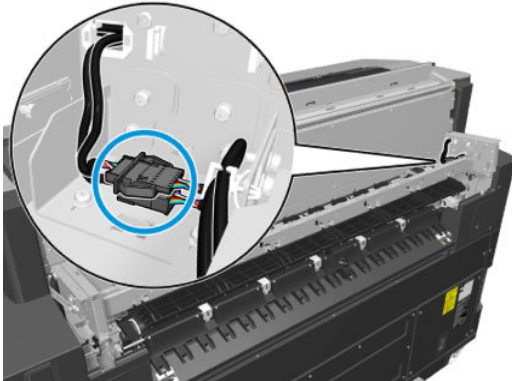
- ▲ To install, perform the removal operation in reverse.

⚠ CAUTION: Hold the assembly when removing it and do not hit the belts.

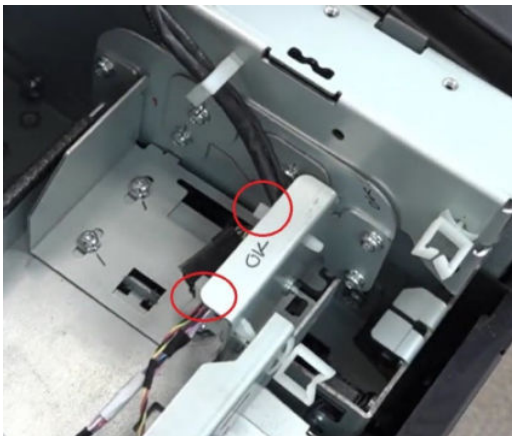
Paper-output pinches motor (CZ309-67142) (PWXL 4x00/3900s with SNs \geq MY7688Q008)

Removal

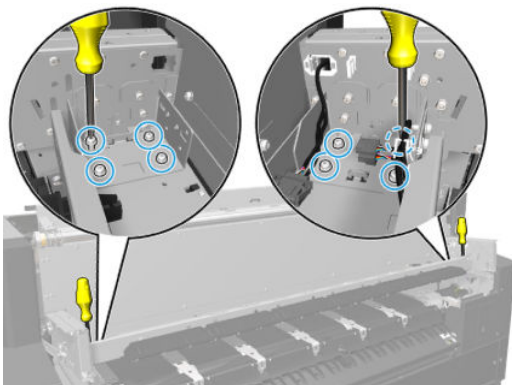
1. Remove the Top stacker assembly: [Top stacker assembly \(PWXL 4x00/3900s with SNs \$\geq\$ MY7688Q008\) on page 1322](#).
2. Unplug two cables.



3. Release the cables that are routed through the clamps.



4. Loosen 4 screws from each side.



5. Remove 4 screws from each side.



6. Slide the metal plates off.



CAUTION: Hold the assembly when removing it and do not hit the belts

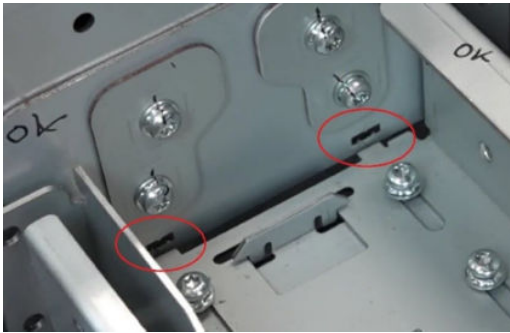
7. Remove the Paper-output pinches motor.



CAUTION: Be careful with its undersurface; it has several gearwheels that can give you small cuts.

Installation

- ▲ Install the Paper-output pinches motor, making sure that two pins at each end of the metal plates go into the holes in the structure.

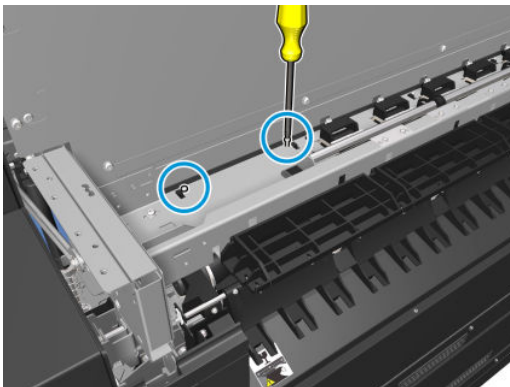


CAUTION: Hold the assembly when removing it and do not hit the belts

Paper-output pinch starwheels (CZ309-67143)

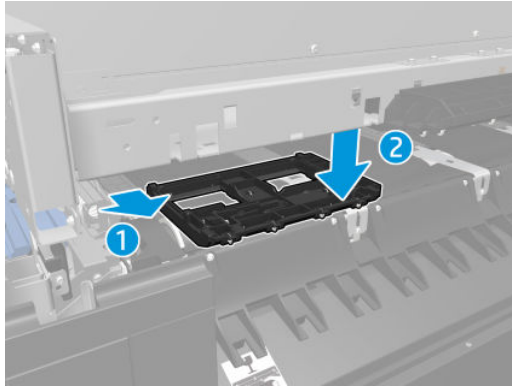
Removal

1. Remove the [Dryer top cover \(CZ309-67238\)](#) on page 692.
2. Remove the [Pinch roller top cover \(CZ309-67133\)](#) on page 693.
3. Remove two bracket screws.



4. Remove the [Paper-output starwheels \(CZ309-67140\)](#) on page 896.

5. Remove the pinch starwheels.



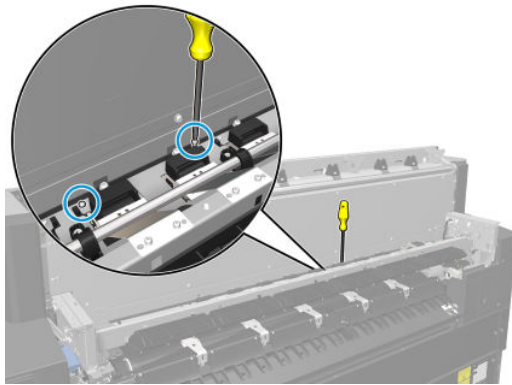
Installation

- ▲ To install, perform the removal operation in reverse.

Paper presence sensor (CZ309-67145)

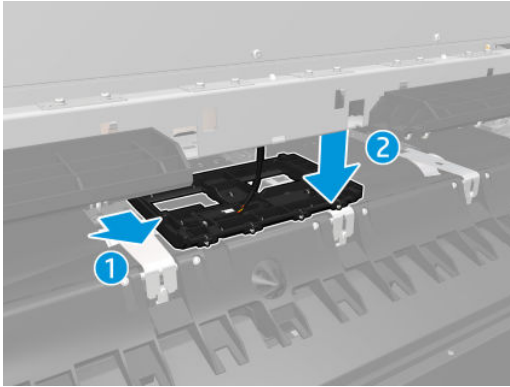
Removal

1. Remove the [Dryer top cover \(CZ309-67238\)](#) on page 692.
2. Remove the [Pinch roller top cover \(CZ309-67133\)](#) on page 693.
3. Remove two central bracket screws.

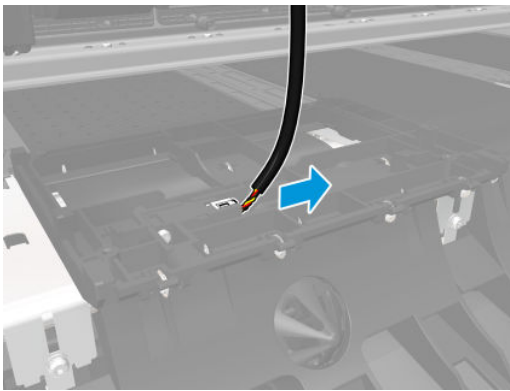


4. Remove the [Paper-output starwheels \(CZ309-67140\)](#) on page 896.

5. Remove the central pinch starwheels.



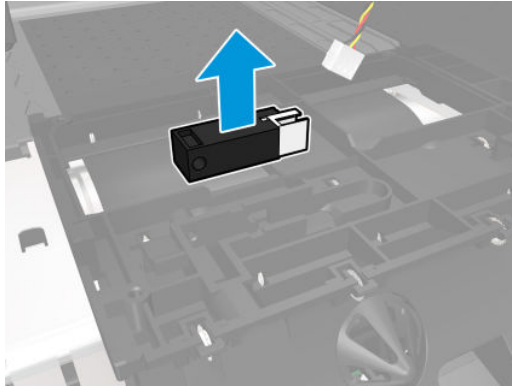
6. Unplug the sensor cable.



7. Remove a screw from the paper presence sensor.



8. Remove the paper presence sensor.



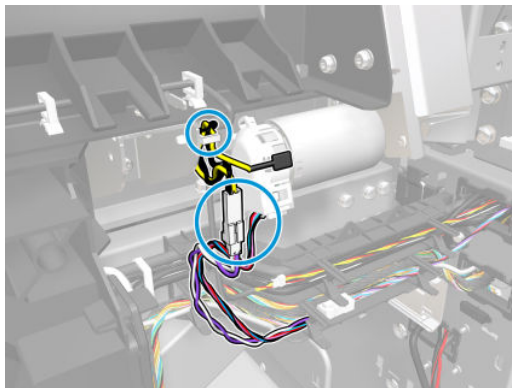
Installation

- ▲ To install, perform the removal operation in reverse.

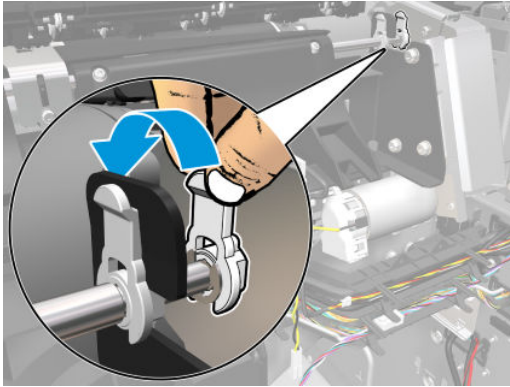
Paper-output driver transmission (CZ309-67144)

Removal

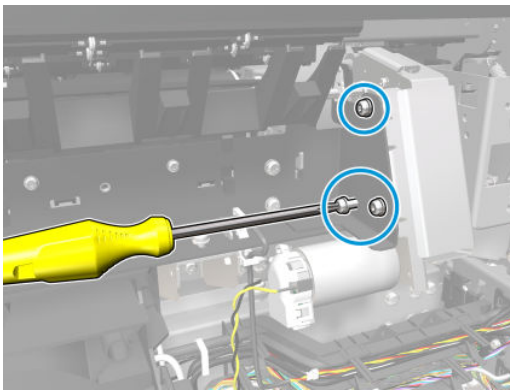
1. Remove the [Rear-left cover \(CZ309-67042\)](#) on page 644.
2. Remove the [Diverter cover \(CZ309-67147\)](#) on page 698.
3. Remove the [Top E-box cover \(CZ309-67059, CZ309-67262\)](#) on page 656.
4. Disconnect and unclip two cables.



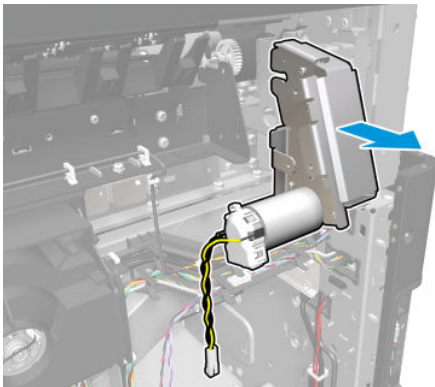
5. Unclip the bearing overdrive.



6. Remove three screws.



7. Remove the driver transmission.



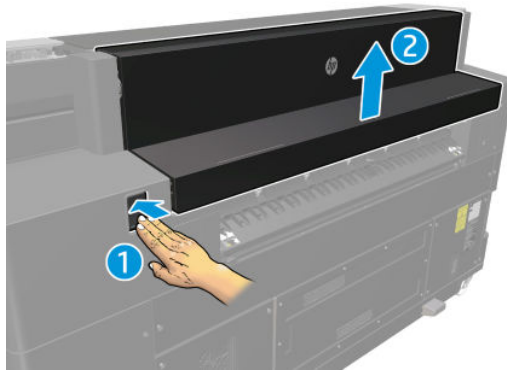
Installation

- ▲ To install, perform the removal operation in reverse.

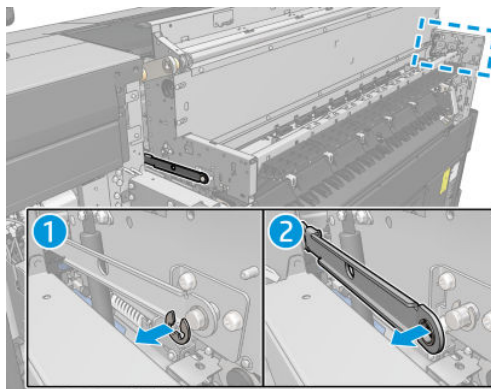
Gas spring (CZ309-67149)

Removal

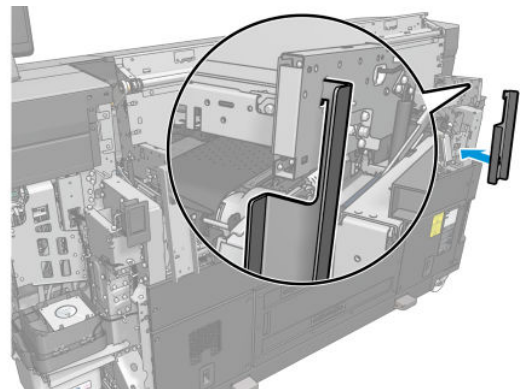
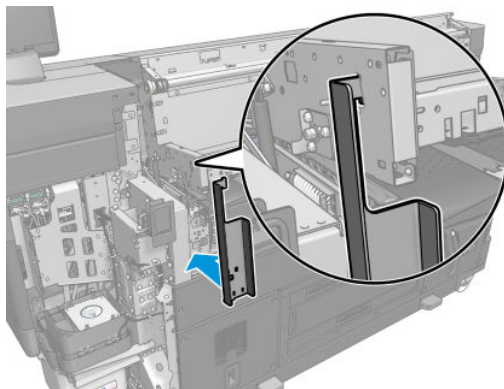
1. Open the output module.



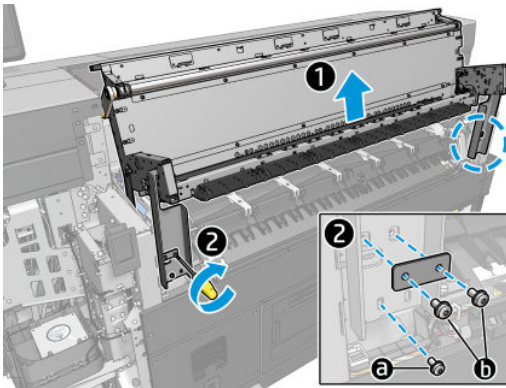
2. Remove the [Pinch roller top cover \(CZ309-67133\)](#) on page 693.
3. Remove the [Rear-left cover \(CZ309-67042\)](#) on page 644.
4. Remove the [Rear-right cover \(CZ309-67050\)](#) on page 653.
5. Remove the circlip from both sides and release the crank.



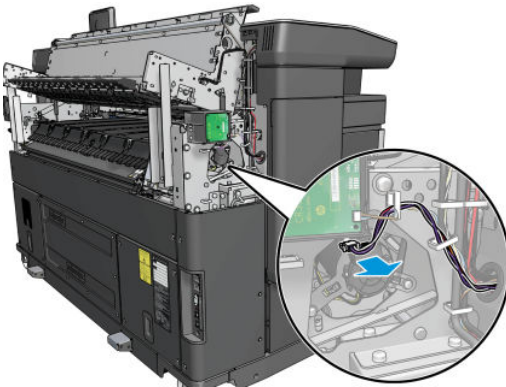
6. Hang one holding tool on each side.



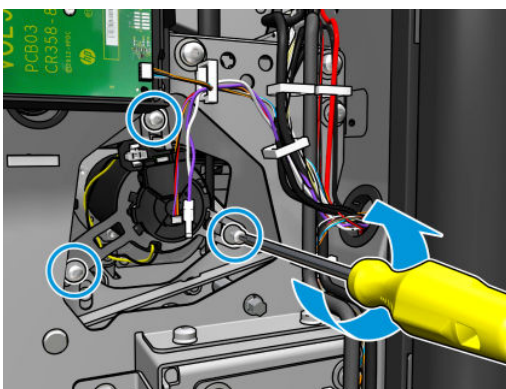
7. Move the output module up until the holes align, then attach the holding tools with one screw at the bottom, and the metal strip and two screws above.



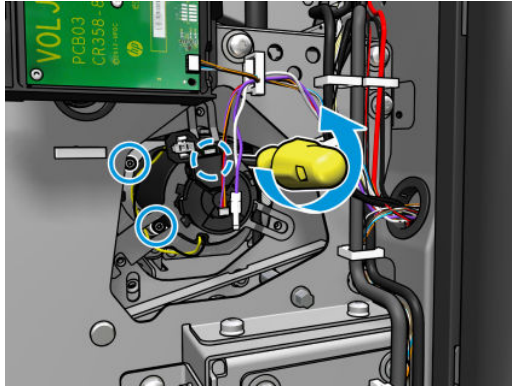
8. Unplug the cables from the belt motor.



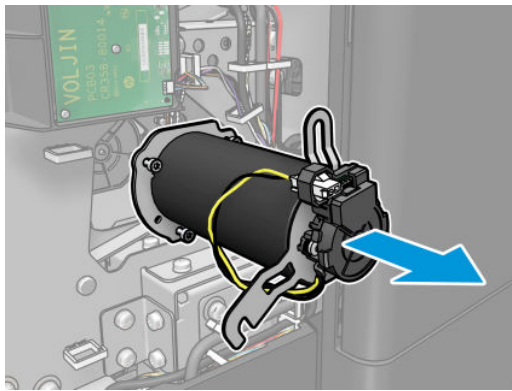
9. Remove three screws from the outer area.



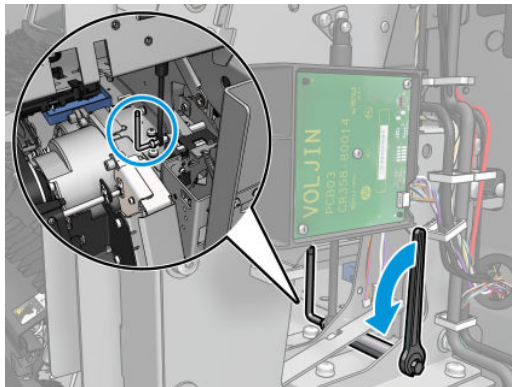
10. Loosen three screws in the inner area.



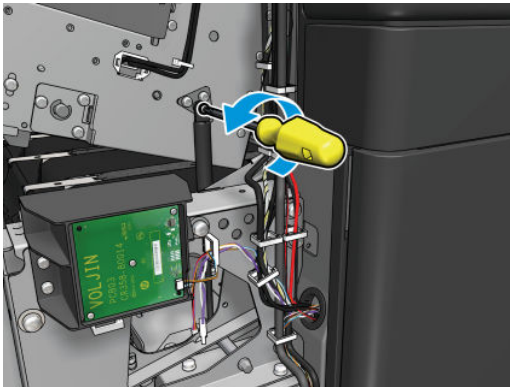
11. Remove the belt motor.



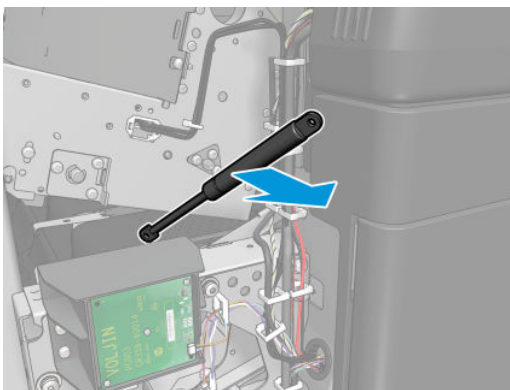
12. Remove the bottom screw from the gas spring.



13. Remove the top screw from the gas spring.



14. Remove the gas spring.



Installation

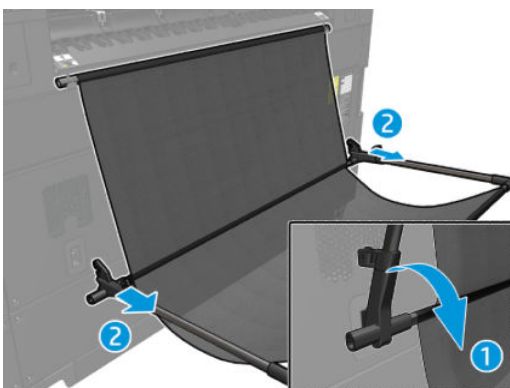
- ▲ To install, perform the removal operation in reverse.

Basket HE and LE service kit (CZ309-67316)

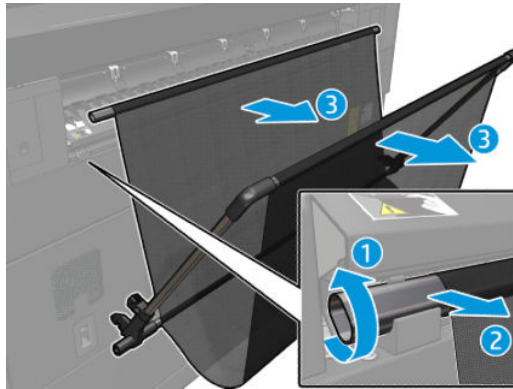
 **NOTE:** Please note that the Basket LE Service Kit (CZ309-67316) is *not* available for PWXL 4x00/3900 units with SNs \geq MY7688Q008.

Removal

1. Open the basket until the bottom cross pieces unclip.

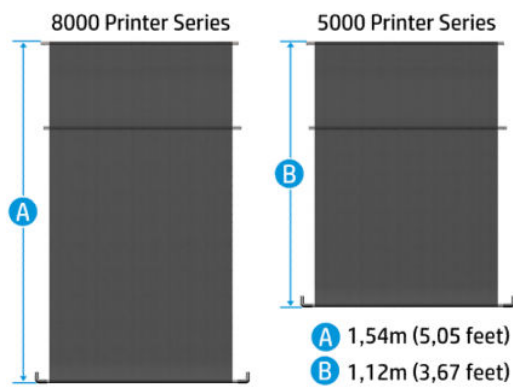


2. Rotate the bar until it unclips from the slot and remove the basket.

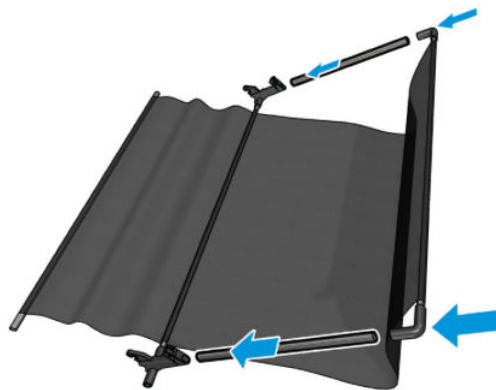


Installation

1. There are two baskets (one for 8000 & one for 5000 Printer series).

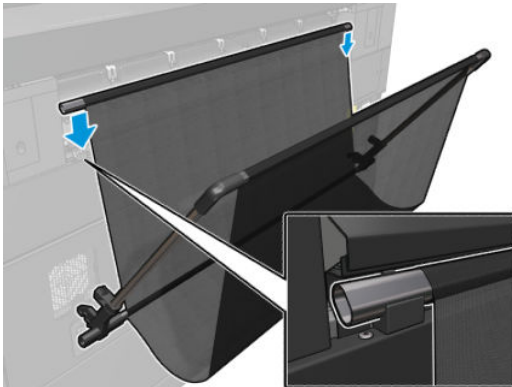


2. Assemble the Basket.

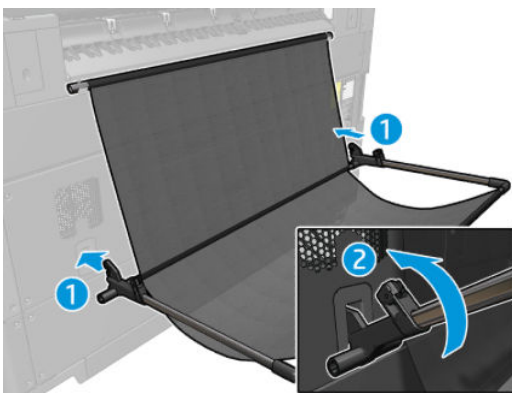


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3. Insert the bar into the printer slot.



4. Place the cross pieces in the printer slot.

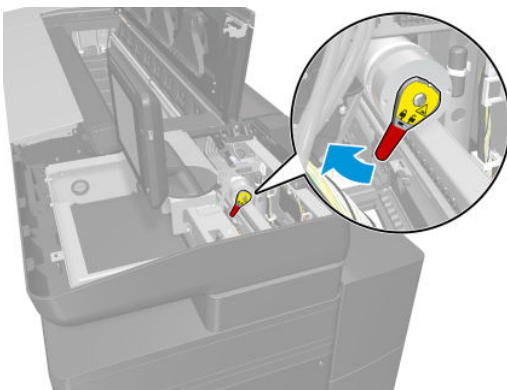


PEM subsystem

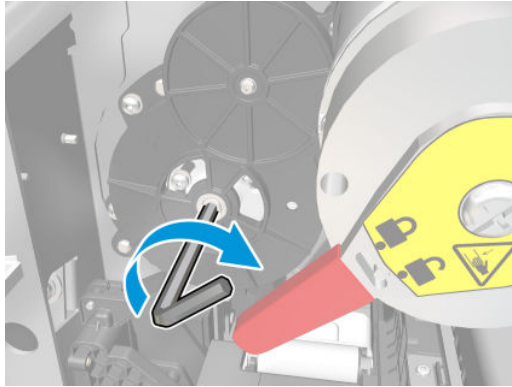
PEM cable loop assembly (CZ309-67072)

Removal

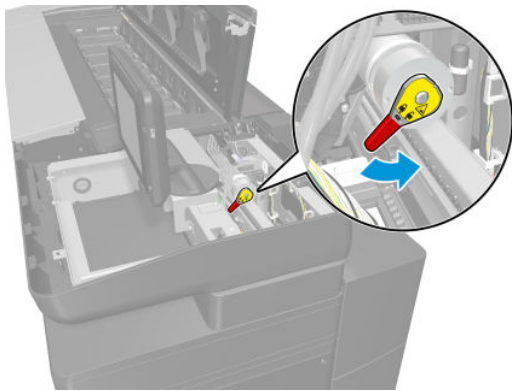
1. Remove the [Top-right exterior cover \(CZ309-67044\)](#) on page 646.
2. Unlock the print-bar brake.



3. Turn the brake screw with the tool to lift the print bar to the top position.

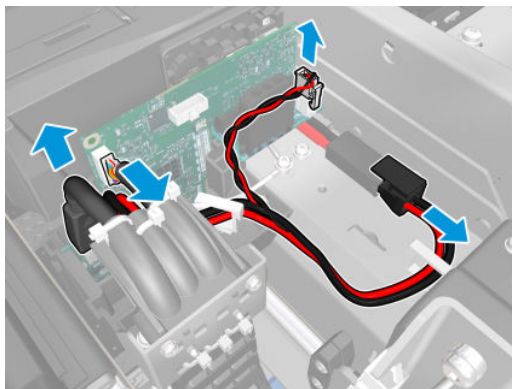


4. Lock the print-bar brake.



5. Remove the [Menorca cover \(CZ309-67017\) on page 696](#).

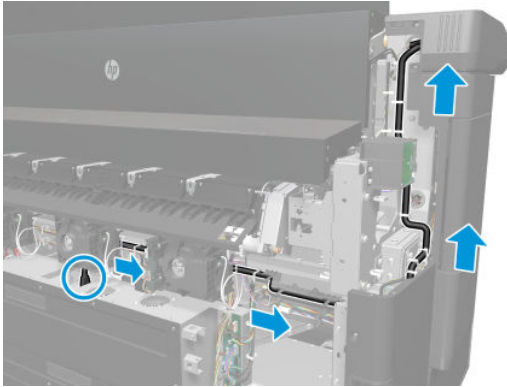
6. Unplug all cables from the Print Bar Hub PCA.



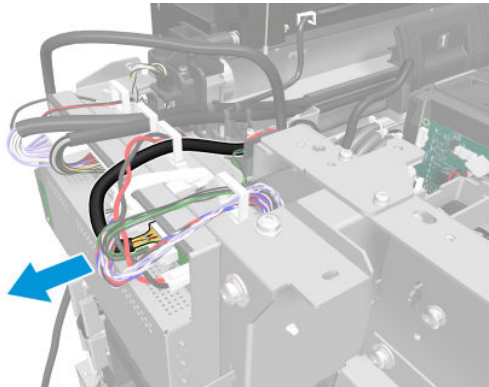
7. Remove the [Rear-left cover \(CZ309-67042\) on page 644](#).

8. Remove the [Top E-box cover \(CZ309-67059, CZ309-67262\) on page 656](#).


9. Unplug and unroute the black N1 print-bar data cable.



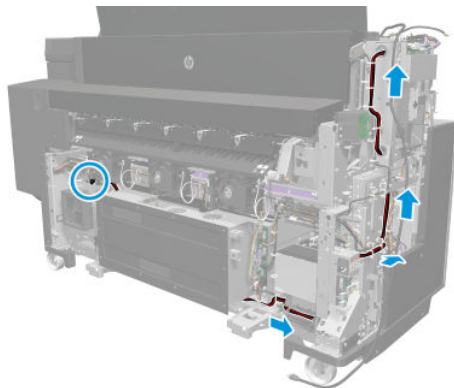
10. Remove the [Left cover assembly \(CZ309-67039\)](#) on page 639.
11. Unplug N10 from the Print Bar Mechatronics PCA.



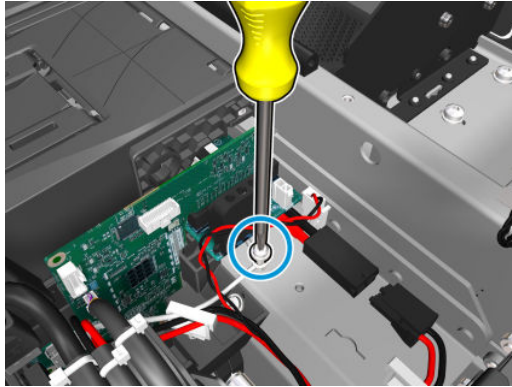
12. Remove the [Rear-left cover connector \(CZ309-67043\)](#) on page 644.
13. Remove the [Foot cover rear LE \(CZ309-67247\)](#) on page 697.

 **NOTE:** Skip this step for PWXL 4x00/3900s with SNs \geq MY7688Q008.

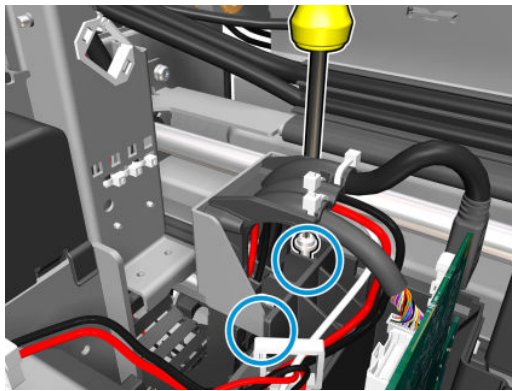
14. Unplug and unroute the print-bar power cable from the power supply.



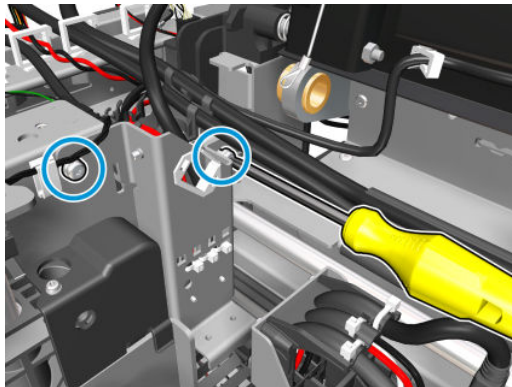
15. Unscrew the cable-loop assembly ground.



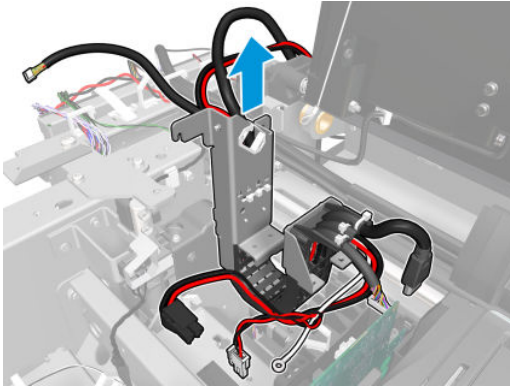
16. Remove two screws from the bar end left top.



17. Loosen two screws without removing them.



18. Remove the PEM cable loop.



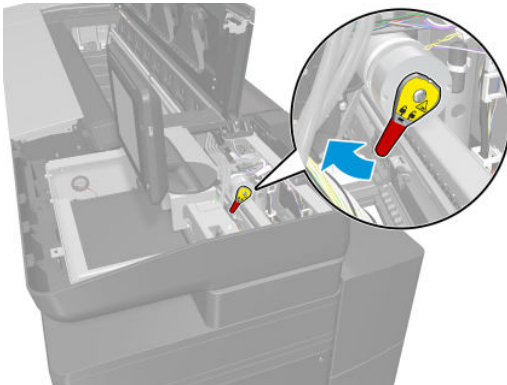
Installation

- ▲ To install, perform the removal operation in reverse.

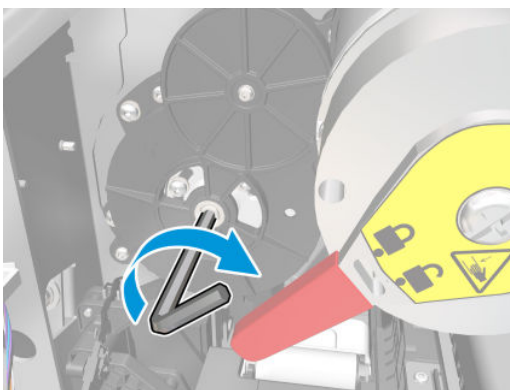
Printhead PCA with primer pump (CZ309-67021)

Removal

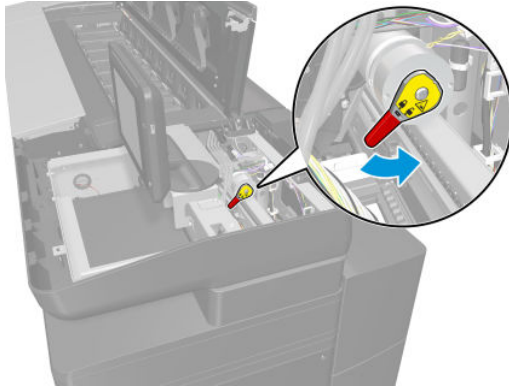
1. Remove the [Top-right exterior cover \(CZ309-67044\)](#) on page 646.
2. Unlock the print-bar brake.



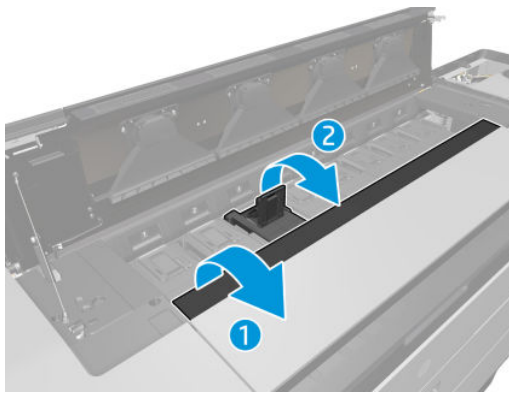
3. Turn the brake screw with the tool to lift the print bar to its top position.



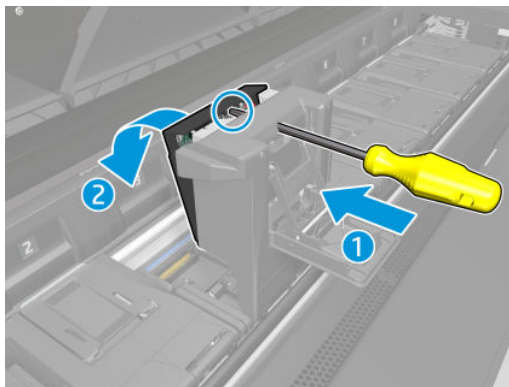
4. Lock the print-bar brake.



5. Open the printhead latch.

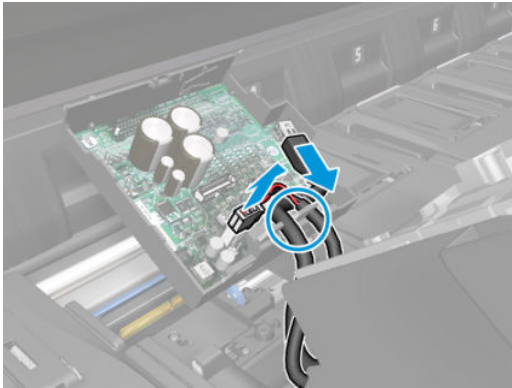


6. Separate the Printhead PCA support from the latch, by pushing with a screwdriver.



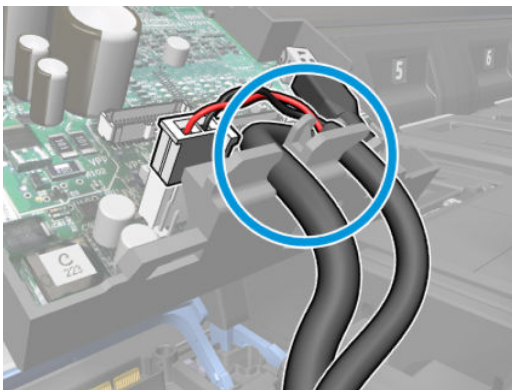
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7. Unplug and unrout the cables from the Printhead PCA in order to free the PCA and its support from the latch.



Installation

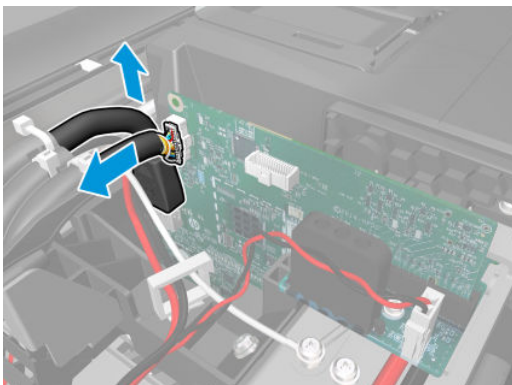
1. To install, perform the removal operation in reverse.
2. Cable routing details:.



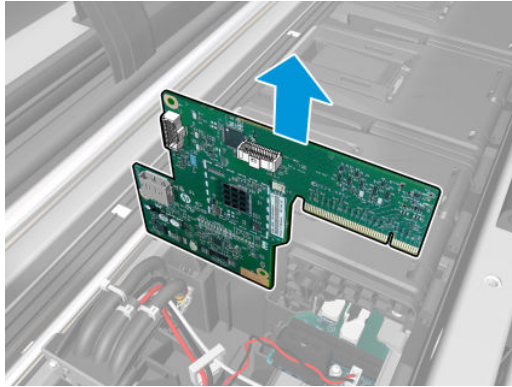
Print Bar Hub PCA (CZ309-67025)

Removal

1. Remove the [Menorca cover \(CZ309-67017\)](#) on page 696.
2. Unplug two cables.



3. Remove the Print Bar Hub PCA.



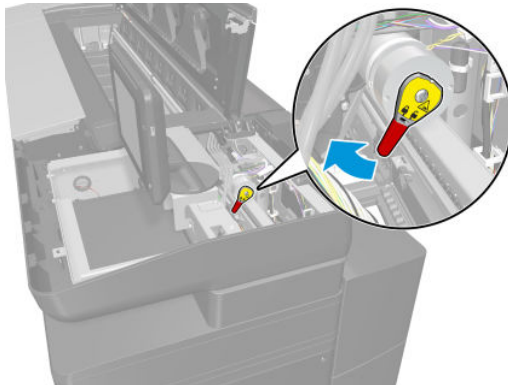
Installation

- ▲ To install, perform the removal operation in reverse.

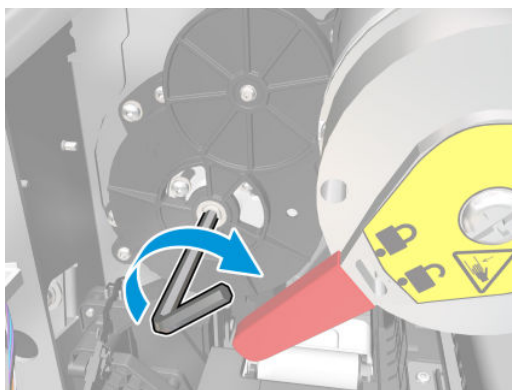
Latch cable lid (CZ309-67022)

Removal

1. Remove the [Top-right exterior cover \(CZ309-67044\)](#) on page 646.
2. Unlock the print-bar brake.

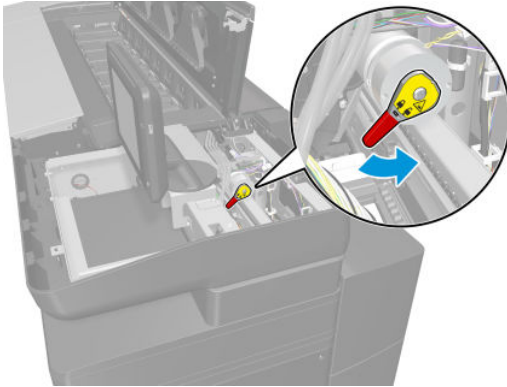


3. Turn the brake screw with the tool to lift the print bar to its top position.

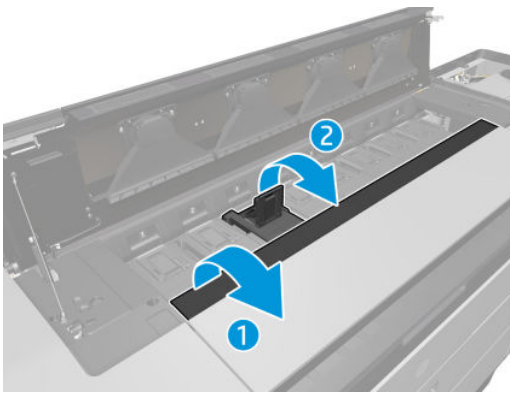


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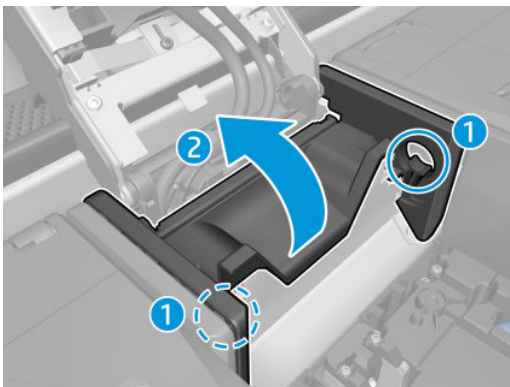
4. Lock the print-bar brake.



5. Open the printhead latch.



6. Push and rotate to remove the latch cable lid.



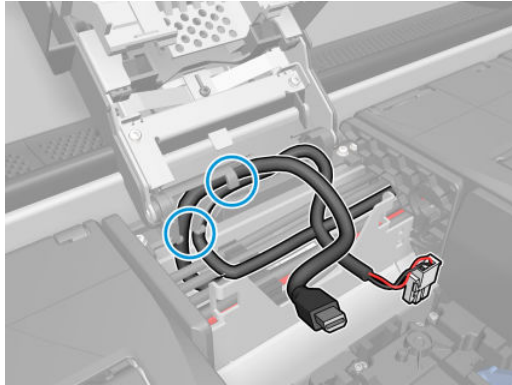
Installation

- ▲ To install, perform the removal operation in reverse.

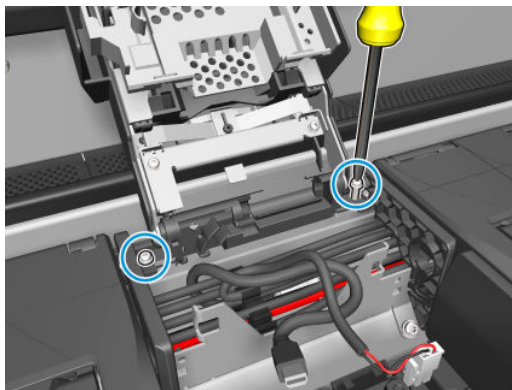
Latch full (CZ309-67023)

Removal

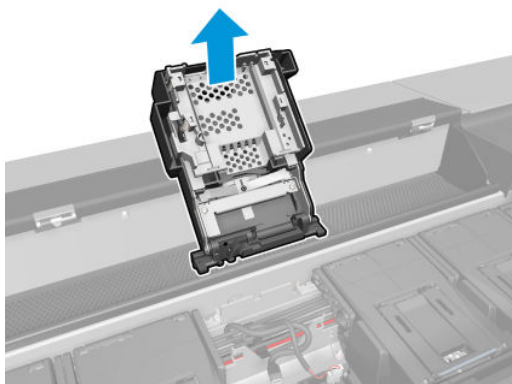
1. Remove the [Latch cable lid \(CZ309-67022\)](#) on page 919.
2. Remove the [Printhead PCA with primer pump \(CZ309-67021\)](#) on page 916.
3. Unroute the data and power cables.



4. Remove two screws from the hinge support.



5. Remove the latch full.



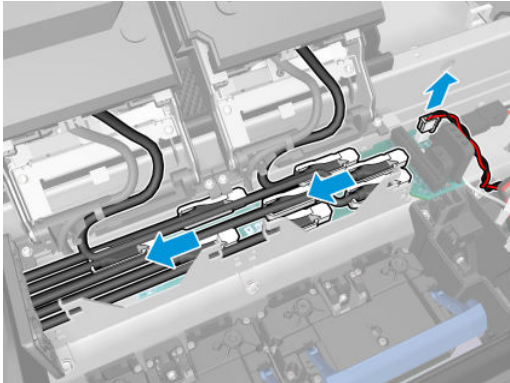
Installation

- ▲ To install, perform the removal operation in reverse.

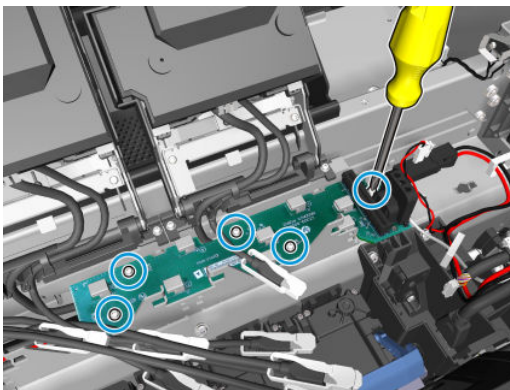
Data Distribution PCA (CZ309-67024)

Removal

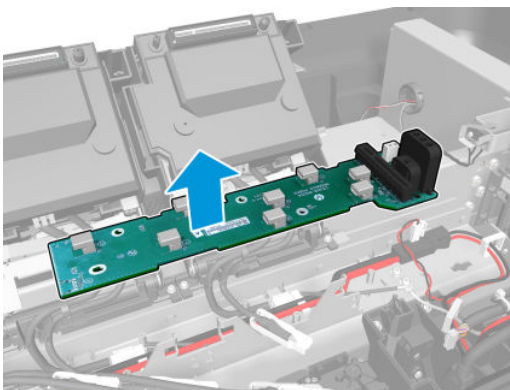
1. Remove the two leftmost latch cable lids; see [Latch cable lid \(CZ309-67022\) on page 919](#).
2. Remove the [Print Bar Hub PCA \(CZ309-67025\) on page 918](#).
3. Unplug the cables from the Data Distribution PCA.



4. Remove five screws from the Data Distribution PCA.



5. Remove the Data Distribution PCA.



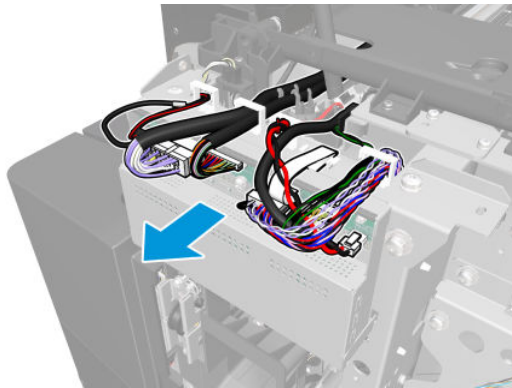
Installation

- ▲ To install, perform the removal operation in reverse.

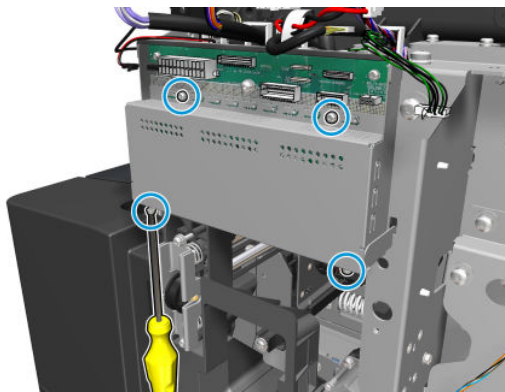
Print Bar Mechatronics PCA (CZ309-67001)

Removal

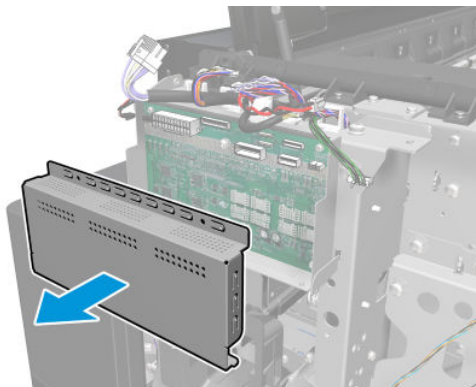
1. Remove the [Left cover assembly \(CZ309-67039\)](#) on page 639.
2. Unplug all cables.



3. Remove four screws from the e-box cover.

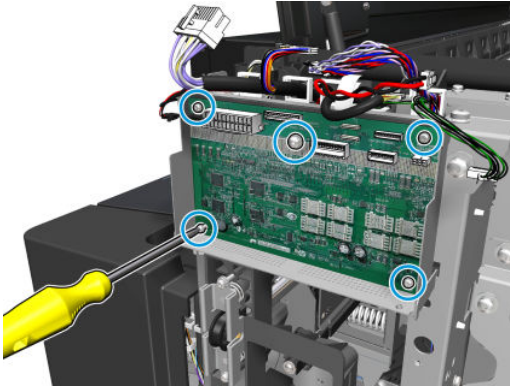


4. Remove the e-box cover.

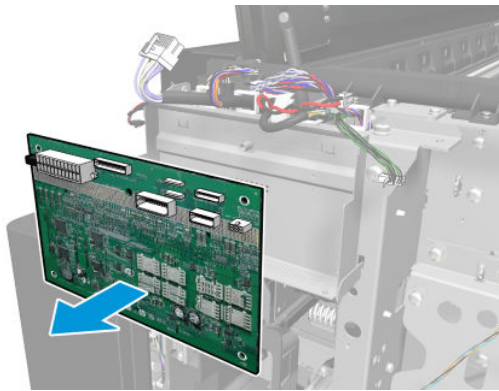


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5. Remove five screws from the Print Bar Mechatronics PCA.



6. Remove the Print Bar Mechatronics PCA.



Installation

- ▲ To install, perform the removal operation in reverse.

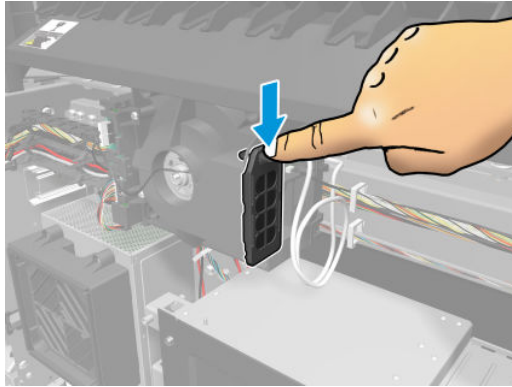
Print zone subsystem

Vacuum filter (CZ309-67086)

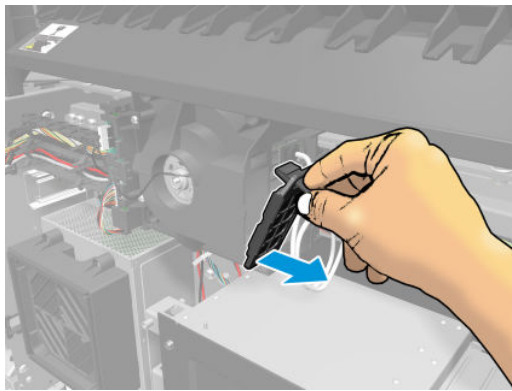
Removal

1. Remove the [Top E-box cover \(CZ309-67059, CZ309-67262\)](#) on page 656.

2. Unclip the vacuum filter.



3. Remove the vacuum filter.



Installation

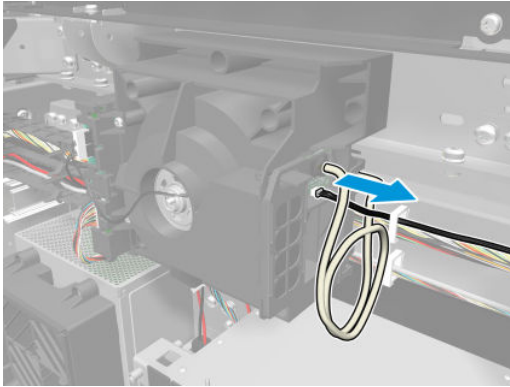
- ▲ To install, perform the removal operation in reverse.

Vacuum fan assembly (CZ309-67087)

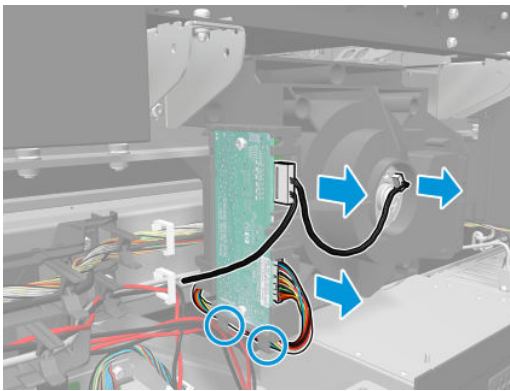
Removal

1. Remove the [Top E-box cover \(CZ309-67059, CZ309-67262\)](#) on page 656.
2. Remove the [Diverter cover \(CZ309-67147\)](#) on page 698.

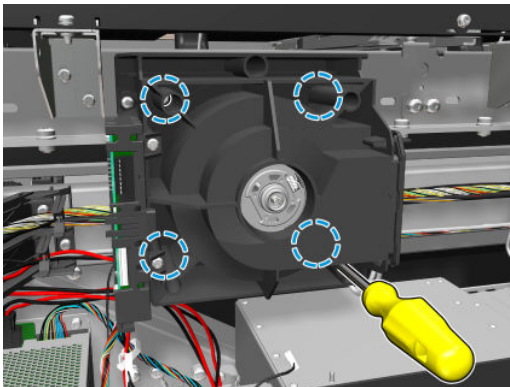
3. Unplug the vacuum tube and cable from the Vacuum Sensor PCA.



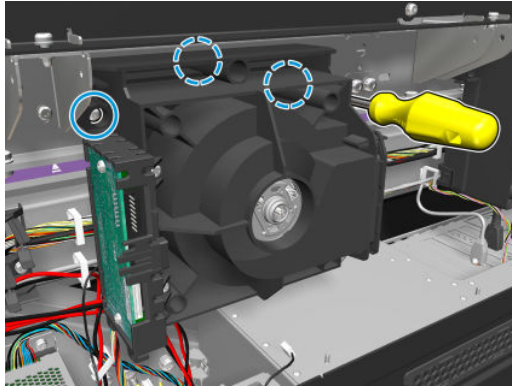
4. Unplug and unroute two cables from the EOLA board and fan blower.



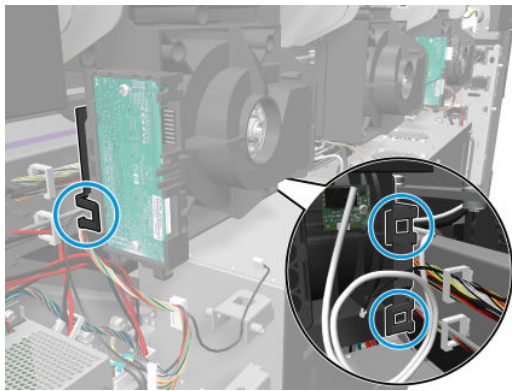
5. Remove four screws (vacuum fan to vacuum fan inlet).



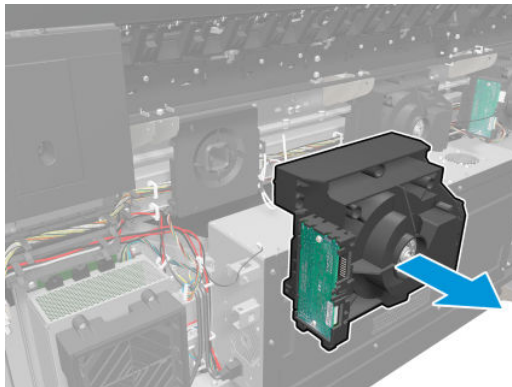
6. Remove three vacuum fan screws.



7. Unclip the vacuum fan from its inlet.

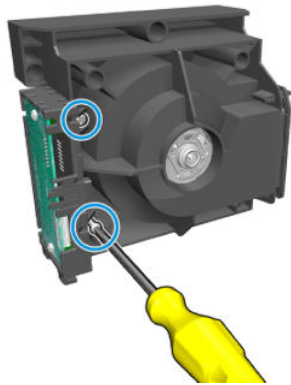


8. Remove the vacuum fan.

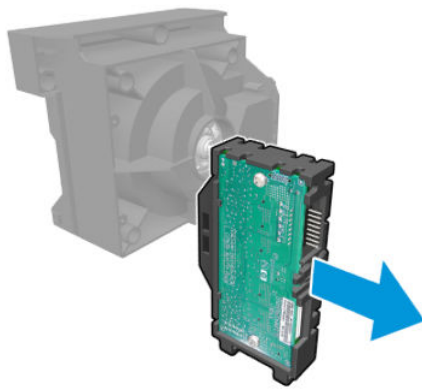


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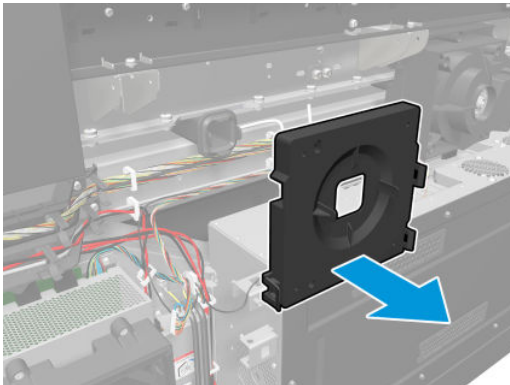
9. Unscrew 2 support screws.



10. Remove vacuum fan driver PCA.



11. Remove the vacuum fan inlet.



Installation

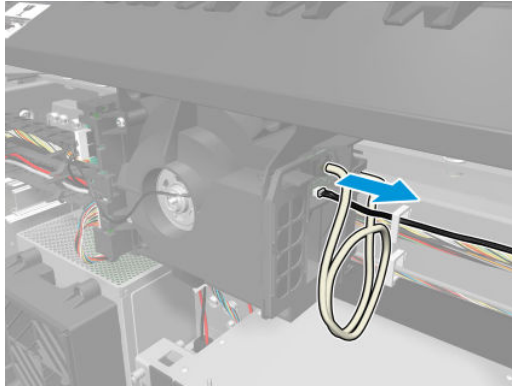
- ▲ To install, perform the removal operation in reverse.

Vacuum Sensor PCA (CZ309-67088)

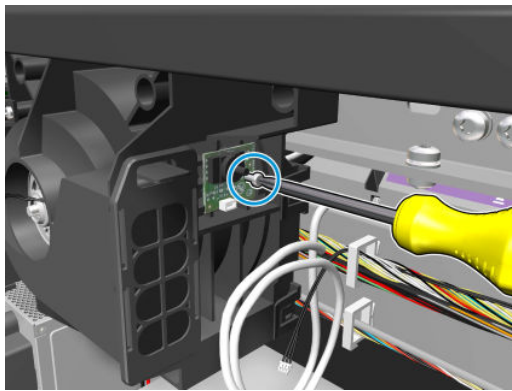
Removal

1. Remove the [Top E-box cover \(CZ309-67059, CZ309-67262\)](#) on page 656.

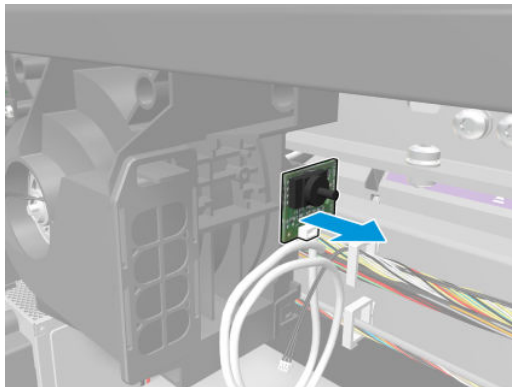
2. Unplug the vacuum tube and cable from the Vacuum Sensor PCA.



3. Remove a screw from the PCA.



4. Remove the Vacuum Sensor PCA.



Installation

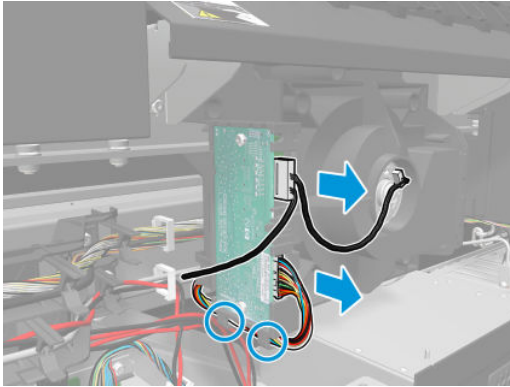
- ▲ To install, perform the removal operation in reverse. Run the Vacuum calibration service test through the Service Menu when finished with installation.

Vacuum Fan Driver PCA (CZ309-67089)

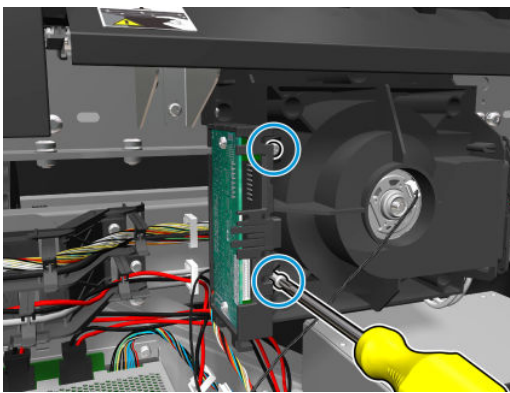
Removal

1. Remove the [Top E-box cover \(CZ309-67059, CZ309-67262\)](#) on page 656.

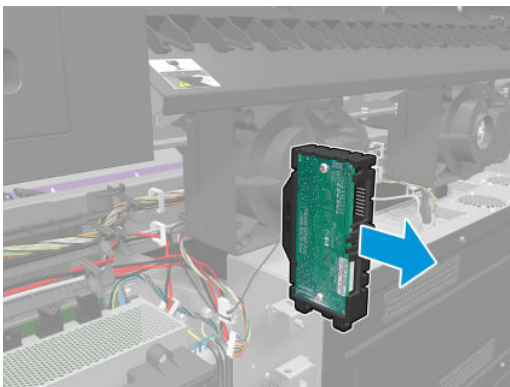
2. Unplug and unroute two cables from the Fan Driver PCA.



3. Remove two support screws.



4. Remove the Vacuum Fan Driver PCA.



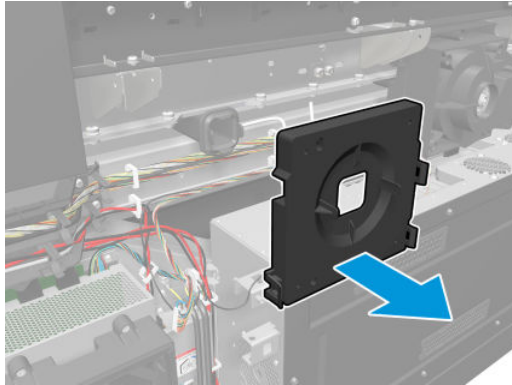
Installation

- ▲ To install, perform the removal operation in reverse. Run the Vacuum calibration service test through the Service Menu when finished with installation.

Vacuum fan inlet (CZ309-67091)

Removal

1. Remove the [Top E-box cover \(CZ309-67059, CZ309-67262\)](#) on page 656.
2. Remove the [Vacuum fan assembly \(CZ309-67087\)](#) on page 925.
3. Remove the vacuum fan inlet.



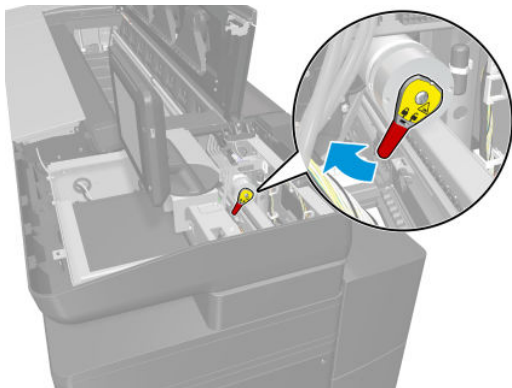
Installation

- ▲ To install, perform the removal operation in reverse.

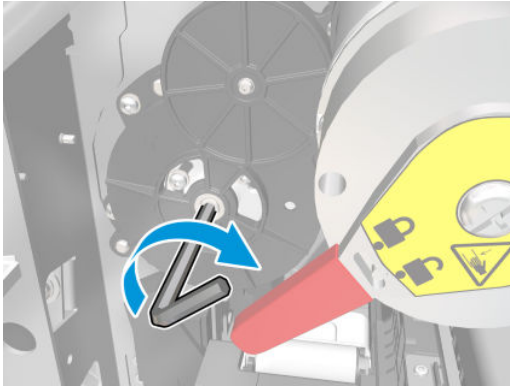
Belt motor assembly (CZ309-67084)

Removal

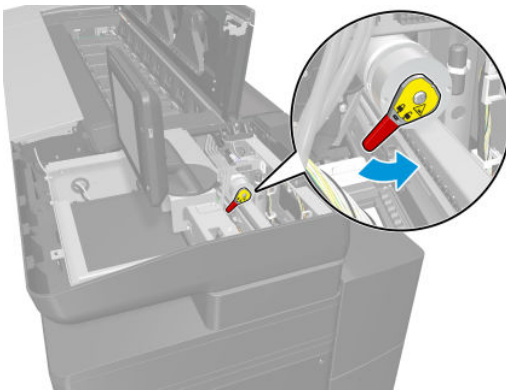
1. Remove the [Top-right exterior cover \(CZ309-67044\)](#) on page 646.
2. Unlock the print-bar brake.



3. Turn the brake screw with the tool to lift the print bar to the top position.

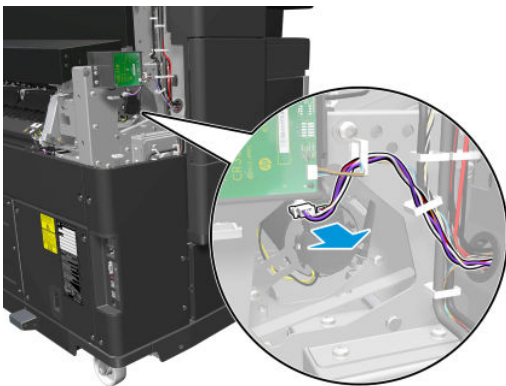


4. Lock the print-bar brake.

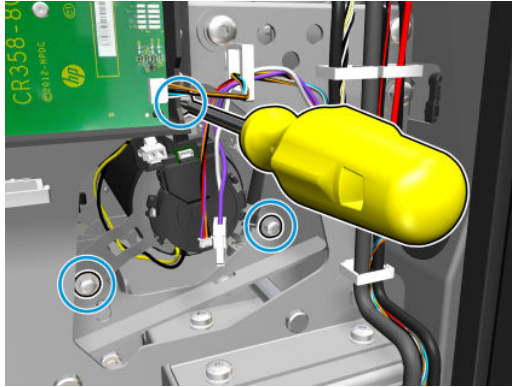


5. Remove the [Rear-left cover \(CZ309-67042\) on page 644](#).

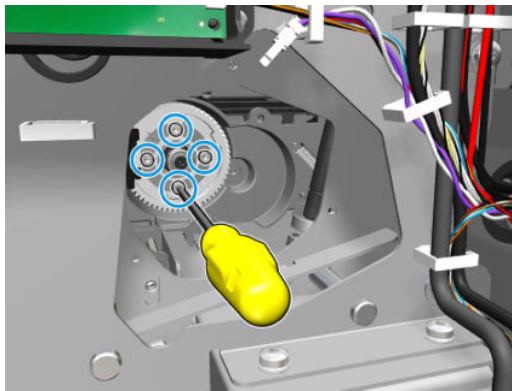
6. Disconnect two motor cables.



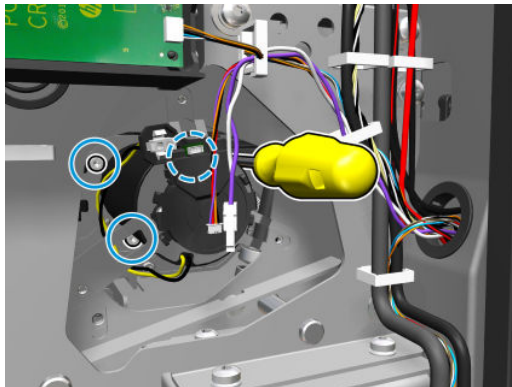
7. Remove three holder screws.



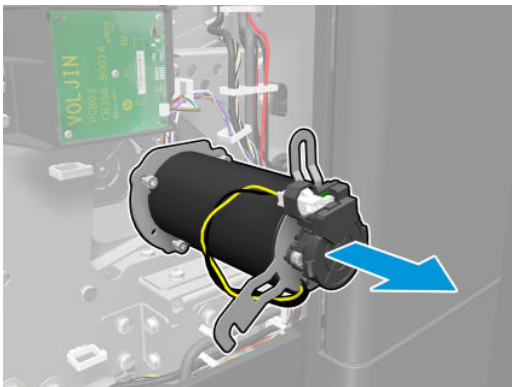
8. Remove 4 screws.



9. Remove three front-plate screws.

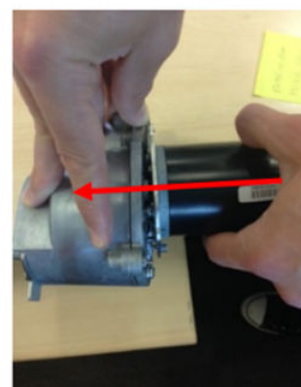
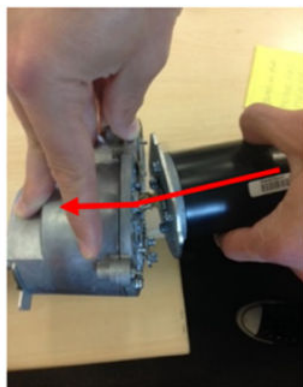
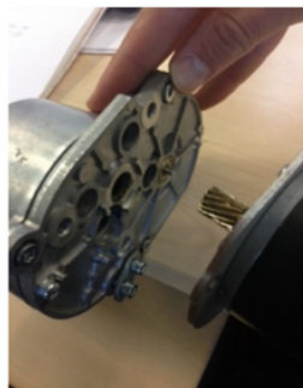


10. Remove the belt motor.



Installation

- ▲ To install, perform the removal operation in reverse. Warning: Be careful when assembling the belt motor: do not assemble from the front, you must do it laterally (see pictures below). Run the Belt Motor test after assembly.

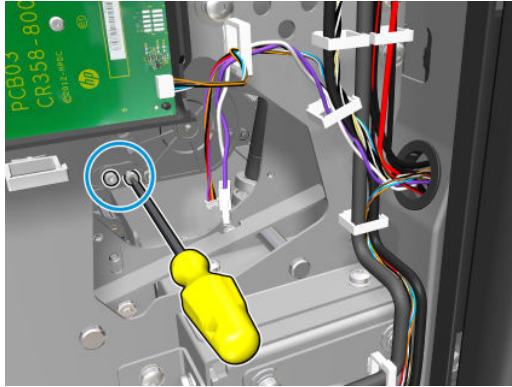


Belt gearbox (CZ309-67085)

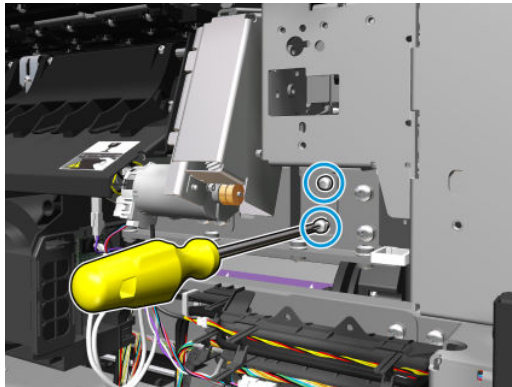
Removal

1. Remove the [Belt motor assembly \(CZ309-67084\)](#) on page 931.

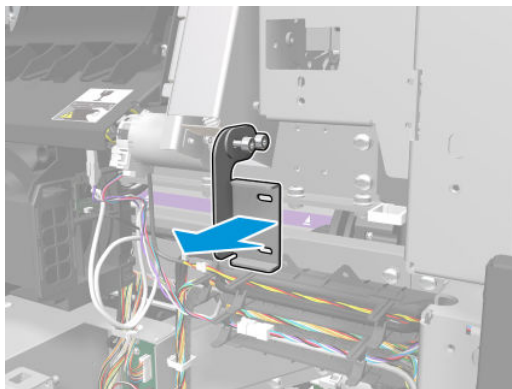
2. Remove two belt-motor mount-holder washer screws.



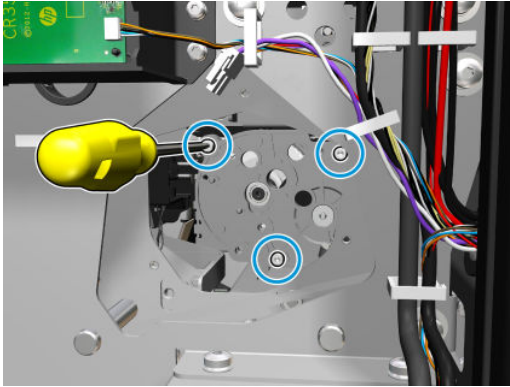
3. Remove the [Top E-box cover \(CZ309-67059, CZ309-67262\)](#) on page 656.
4. Remove two belt-motor mount-holder screws.



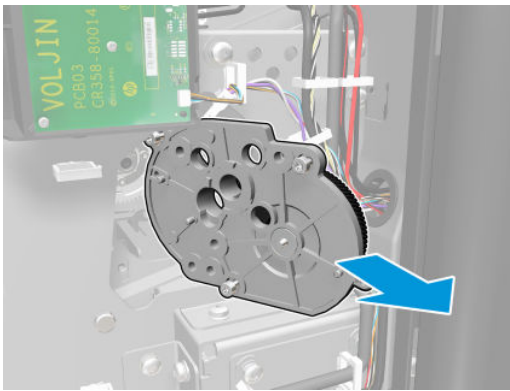
5. Remove the belt-motor mount holder.



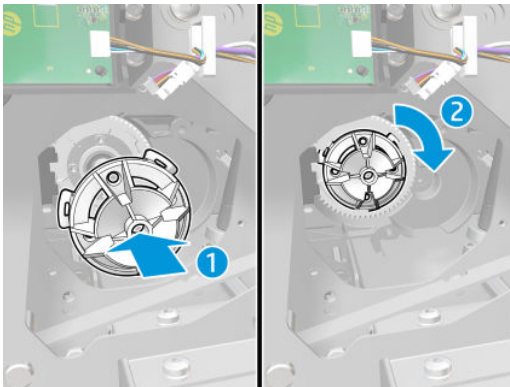
6. Remove three belt-motor mount-lid screws (CZ309-60566).



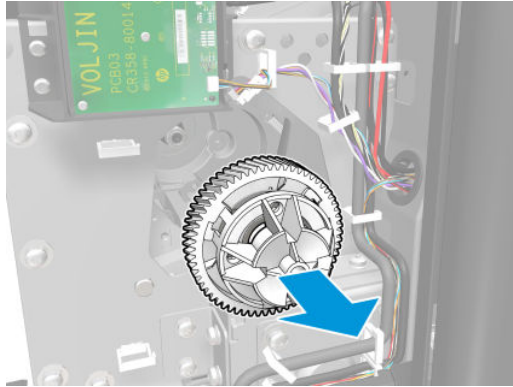
7. Remove the belt-motor mount lid with cluster gear.



8. Fit the tool to the gearbox.



9. Remove the gearbox.



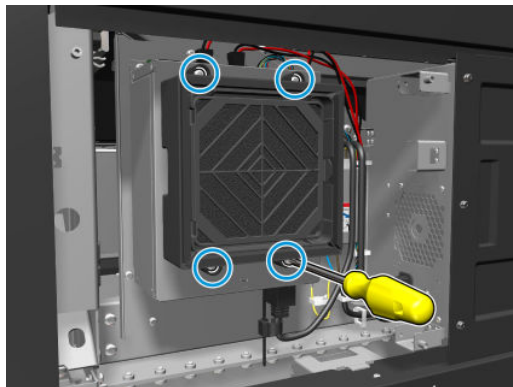
Installation

- ▲ To install, perform the removal operation in reverse. Run the Belts motor PWM test (check) upon assembly.

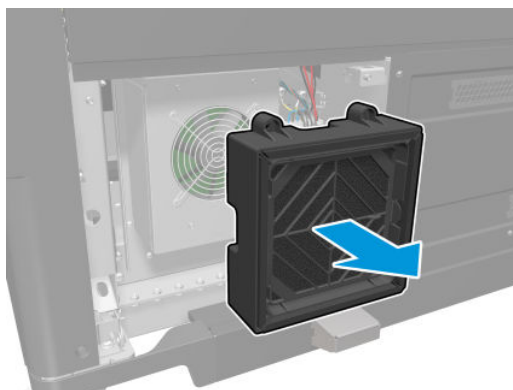
Air dust filter mechatronics PSU (CZ309-67016)

Removal

1. Remove the [Right E-box cover \(CZ309-67058, CZ309-67261\)](#) on page 654.
2. Remove four screws.



3. Remove the air dust filter mechatronics PSU.



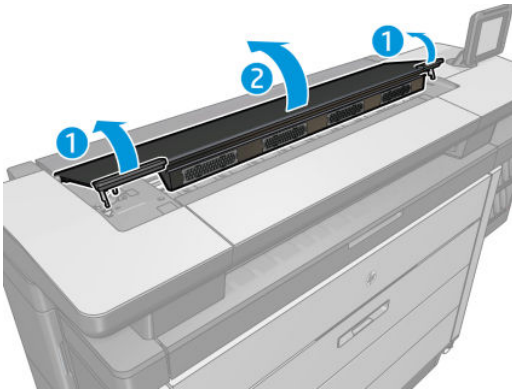
Installation

- ▲ To install, perform the removal operation in reverse.

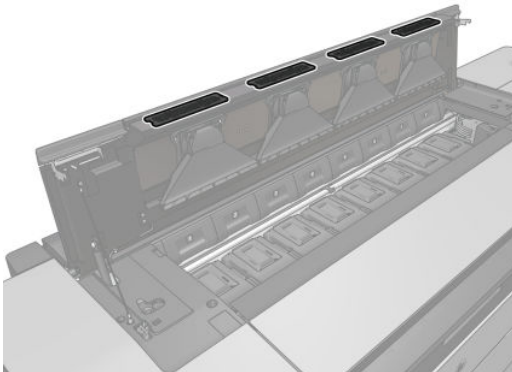
Aerosol fan filter (CZ309-67113)

Removal

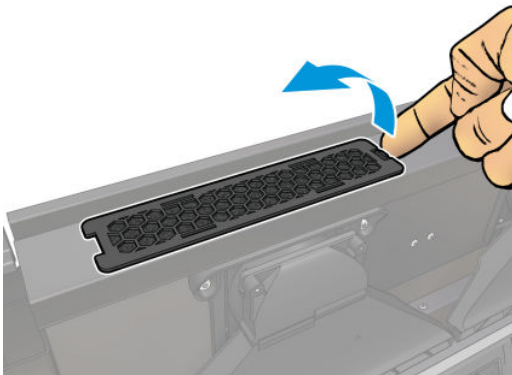
1. Open the top cover door.



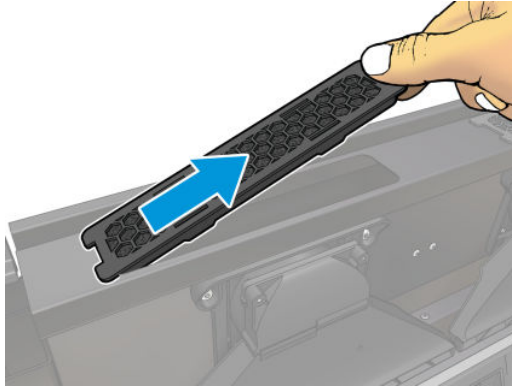
2. Locate four fan filters.



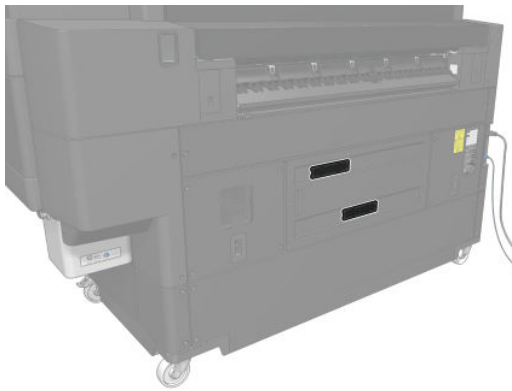
3. Unclip each fan filter.



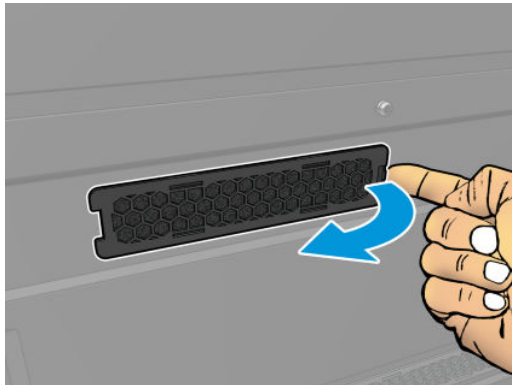
4. Remove each fan filter.



5. Locate two more fan filters.

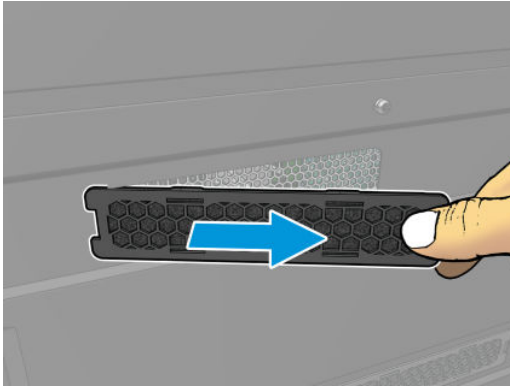


6. Unclip each fan filter.



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7. Remove fan filter.



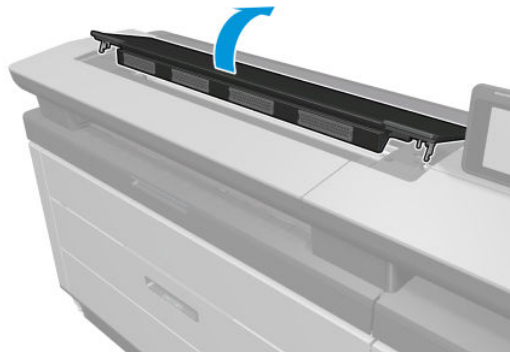
Installation

- ▲ To install, perform the removal operation in reverse.

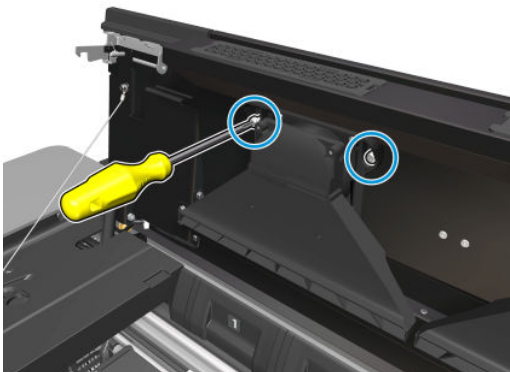
Aerosol fan assembly (CZ309-67112)

Removal

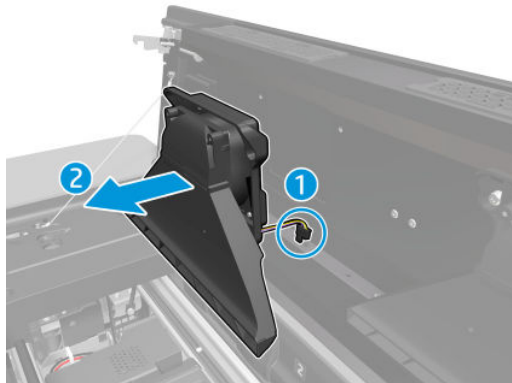
1. Open the top cover door.



2. Remove two screws from the aerosol fan.



3. Unplug the aerosol fan cable and remove the aerosol fan.



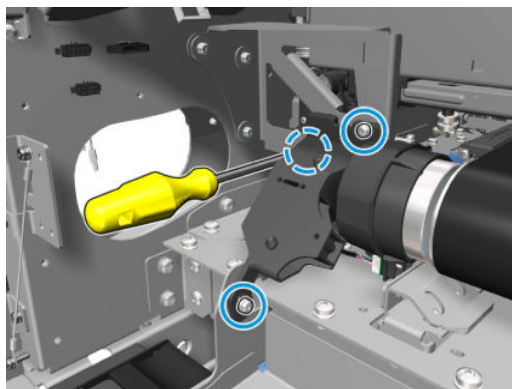
Installation

- ▲ To install, perform the removal operation in reverse.

Analog encoder and extra part assembly (CZ309-67082)

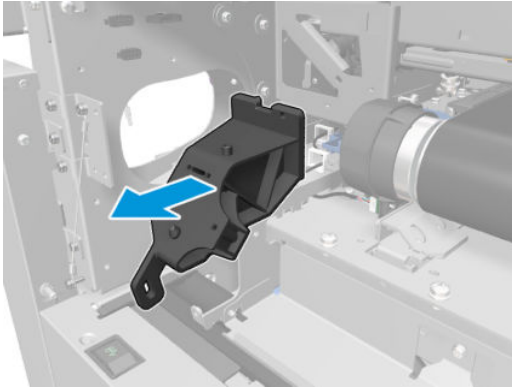
Removal

1. Remove the [Paper-loop roof sheet-metal \(CZ309-67437/CZ309-67434\) on page 885](#).
2. Remove the [Feed motor assembly \(CZ309-67080\) on page 888](#).
3. Remove three screws from the roof lower reference left.

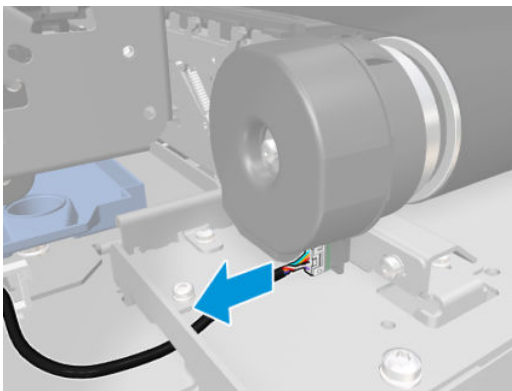


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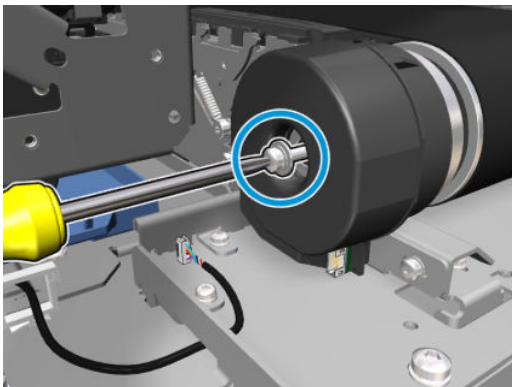
4. Remove the roof lower reference left.



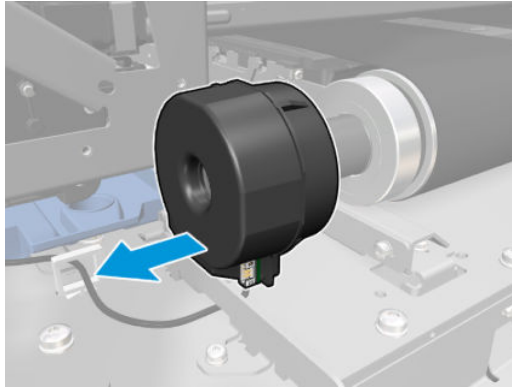
5. Unplug the encoder cable.



6. Remove the encoder screw.

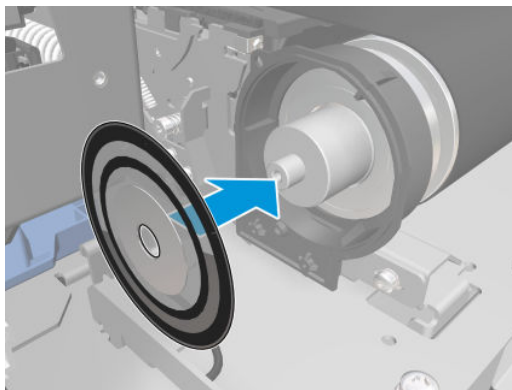


7. Remove the Print zone encoder assembly.

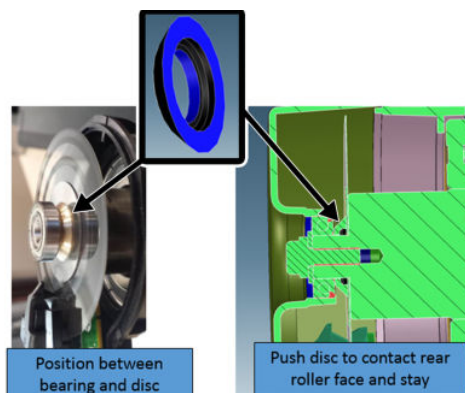


Installation

1. Place the new encoder disc. Run the Analog encoder calibration after servicing.



2. Add the plastic spacer over the encoder disc.



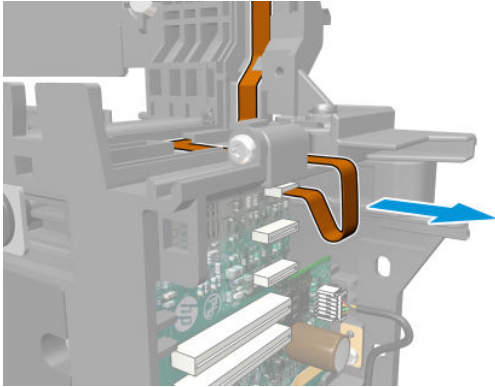
3. Perform the removal operation in reverse.

Linear encoder sensor (CZ309-67104)

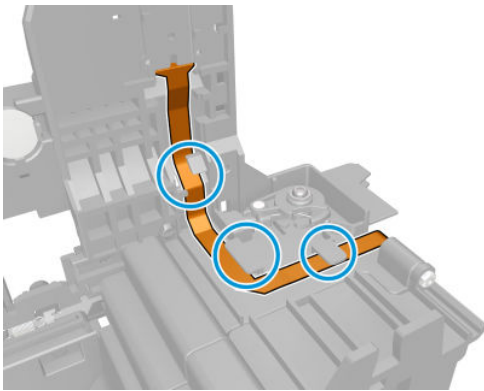
Removal

1. Remove the [Service carriage assembly \(CZ309-67105\)](#) on page 961.

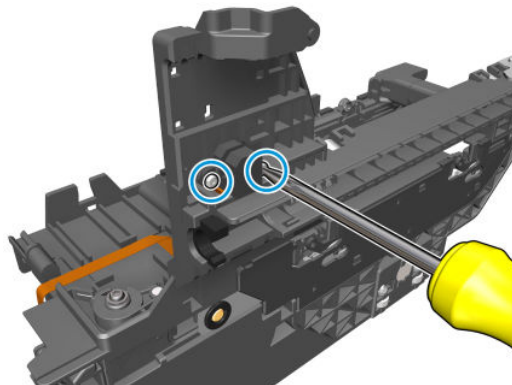
2. Disconnect the linear encoder sensor cable.



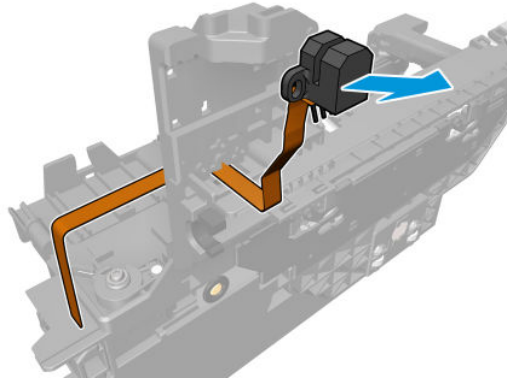
3. Unroute the linear encoder sensor cable.



4. Remove two optical encoder sensor screws.



5. Remove the linear encoder sensor.



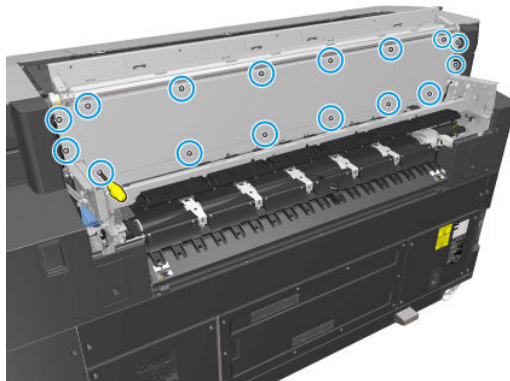
Installation

- ▲ To install, perform the removal operation in reverse.

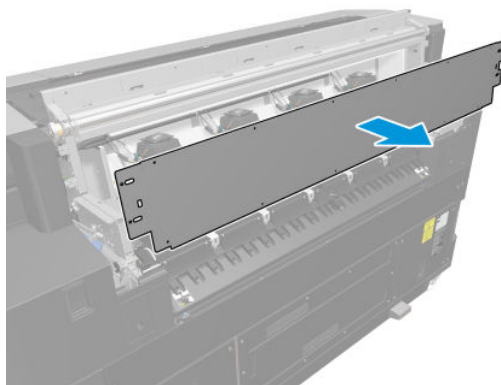
Dryer assembly (CZ309-67184)

Removal

1. Remove the [Pinch roller top cover \(CZ309-67133\)](#) on page 693.
2. Remove sixteen screws.

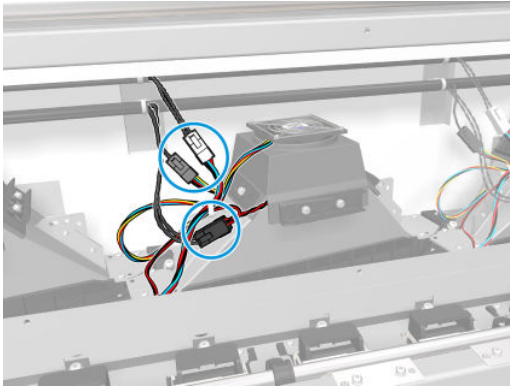


3. Remove the sheet of metal.

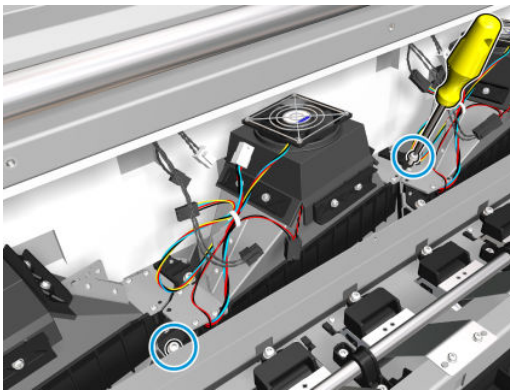


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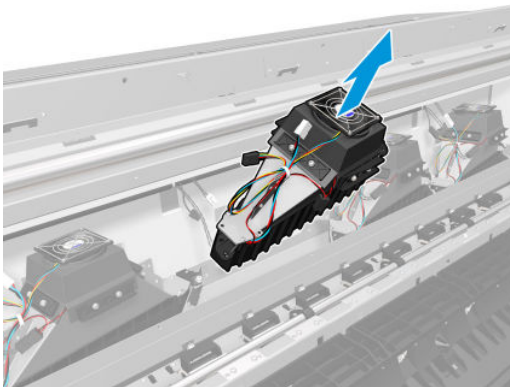
4. Unplug three dryer cables.



5. Remove two screws from the dryer.



6. Remove the dryer assembly.



Installation

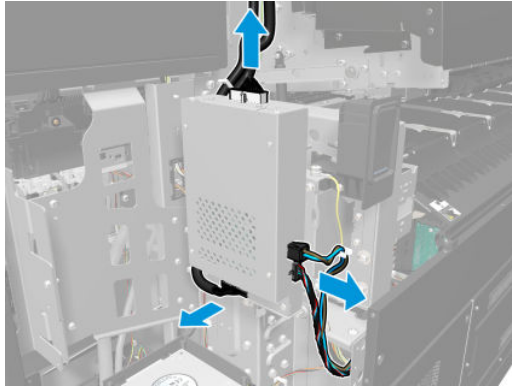
- ▲ To install, perform the removal operation in reverse.

Dryer PCA (CZ309-67139)

Removal

1. Remove the [Rear-right cover \(CZ309-67050\) on page 653](#).

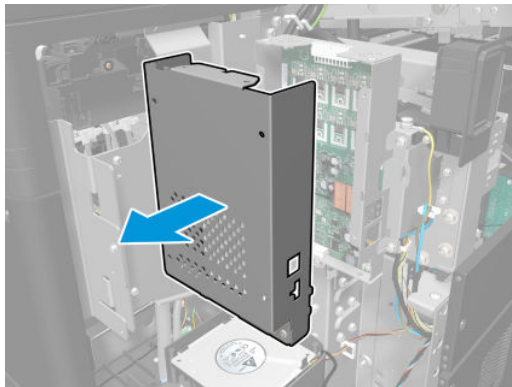
2. Unplug four cables.



3. Remove eight screws from the Petrie top box.

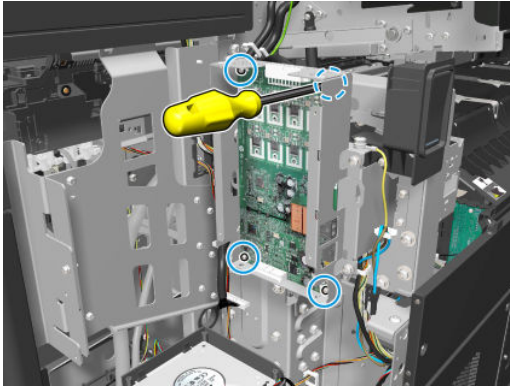


4. Remove the Petrie top box.

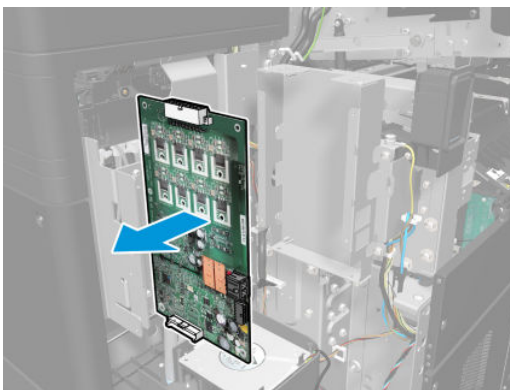


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5. Remove four screws from the Dryer PCA.



6. Remove the Dryer PCA.



Installation

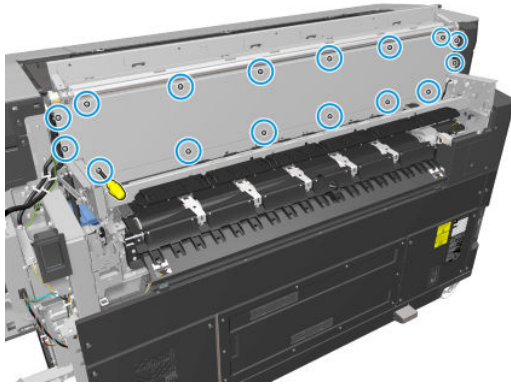
- ▲ To install, perform the removal operation in reverse.

Dryer Harness assembly – Dryer cables (CZ309-60772)

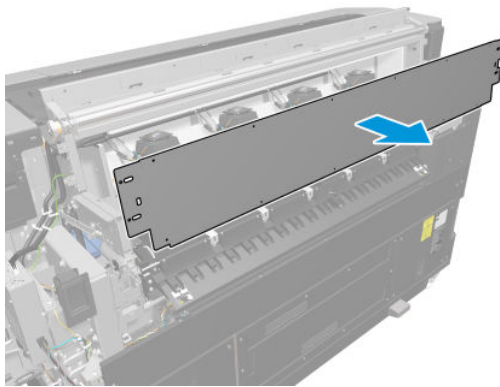
Removal

1. Remove the [Rear-right cover \(CZ309-67050\) on page 653](#).
2. Remove the [Pinch roller top cover \(CZ309-67133\) on page 693](#).

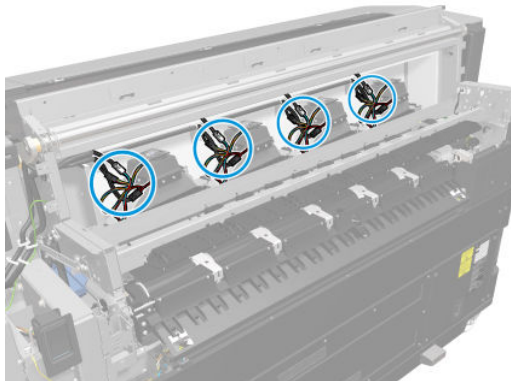
3. Remove 16 screws.



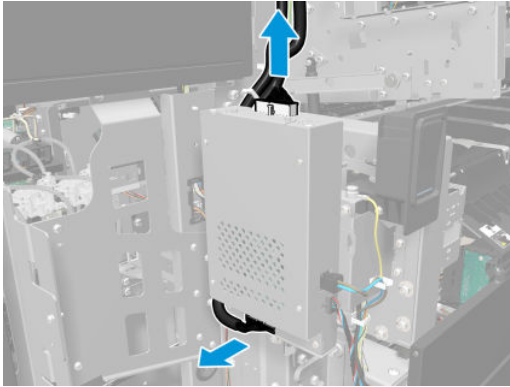
4. Remove the sheet of metal.



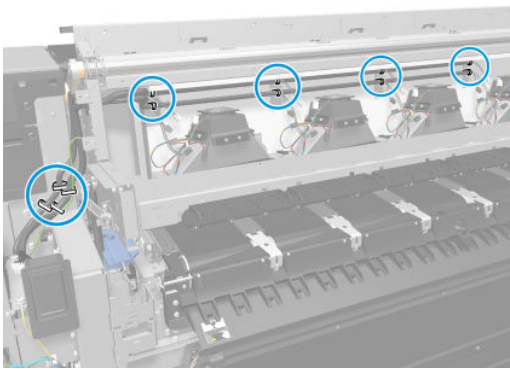
5. Unplug three cables from each dryer.



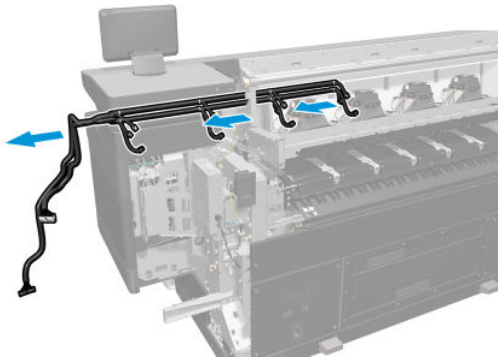
6. Unplug two cables from the Dryer PCA.



7. Unclip and open clamps.



8. Remove the cables from the right.



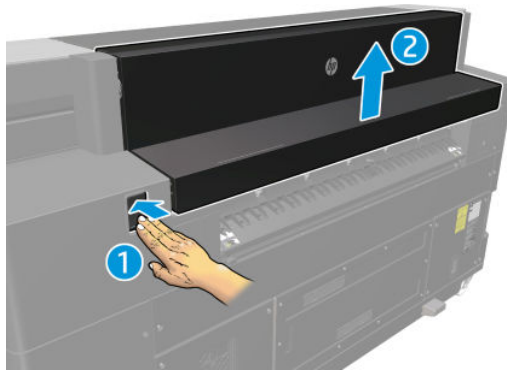
Installation

- ▲ To install, perform the removal operation in reverse.

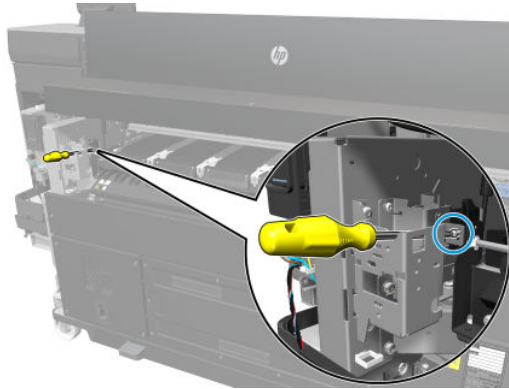
Dryer switch (CZ309-67138)

Removal (right switch)

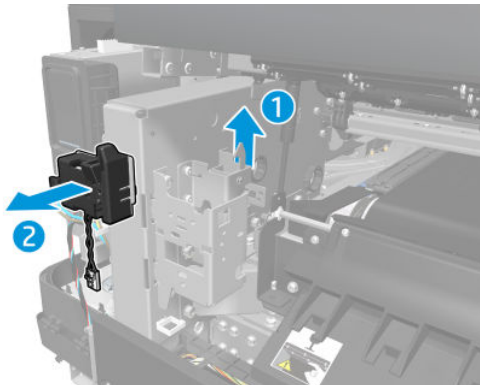
1. Open the door.



2. Remove the [Rear-right cover \(CZ309-67050\) on page 653](#).
3. Remove a screw from the holder.

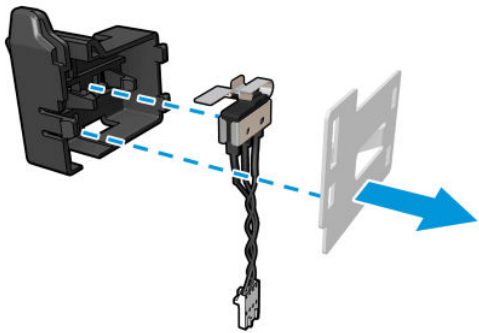


4. Unplug the cable and remove the dryer switch.



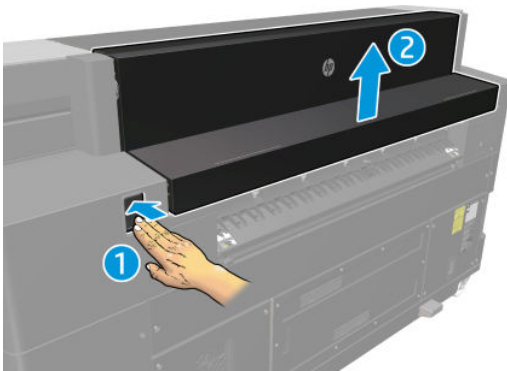
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5. Remove the switch from the switch holder.

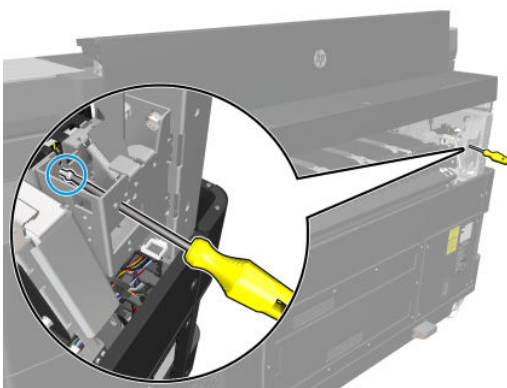


Removal (left switch)

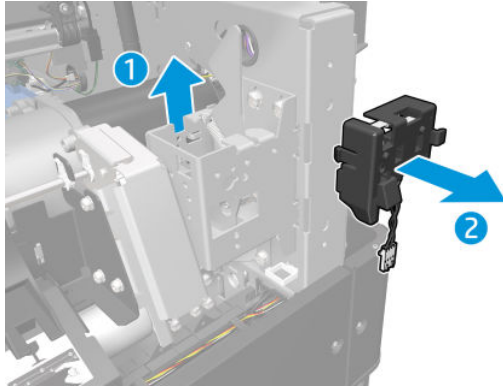
1. Open the door.



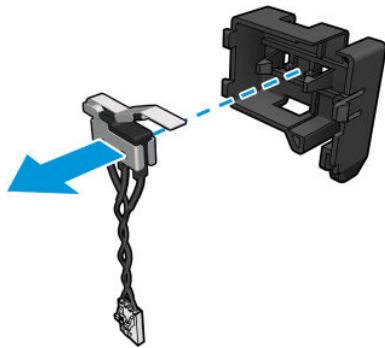
2. Remove the [Rear-left cover \(CZ309-67042\)](#) on page 644.
3. Remove a screw from the holder.



4. Unplug the cable and remove the dryer switch.



5. Remove the switch from the switch holder.



Installation

- ▲ To install, perform the removal operation in reverse.

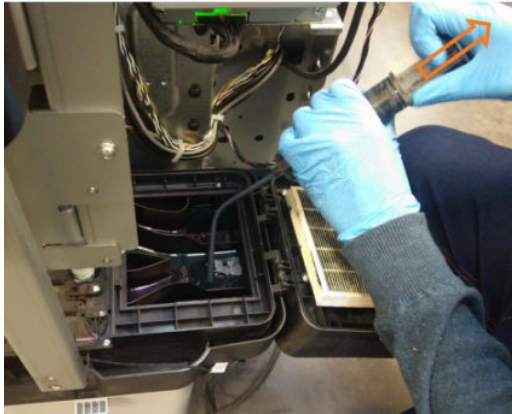
Clean waste diverter

Removal

1. Remove the [Right panel cover \(CZ309-67150\)](#) on page 648.
2. Remove the [Rear-right cover \(CZ309-67050\)](#) on page 653.
3. Open fan housing (see [Waste system \(CZ309-67117\)](#) on page 1010).
4. Unclip and remove fan housing (see [Waste system \(CZ309-67117\)](#) on page 1010).
5. Remove ink:
 - Put on gloves (part number 9300-0963).

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- Insert the syringe (part number CZ309-60862) in the waste diverter cavity and extract the waste ink.



- The ink extracted with the syringe must be deposited in the Cleaning container.



Installation

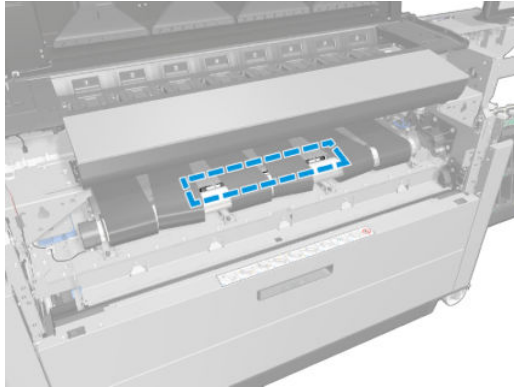
- ▲ To install, perform removal steps 3, 2 and 1 in that order.

Intermediate support (CZ309-67322)

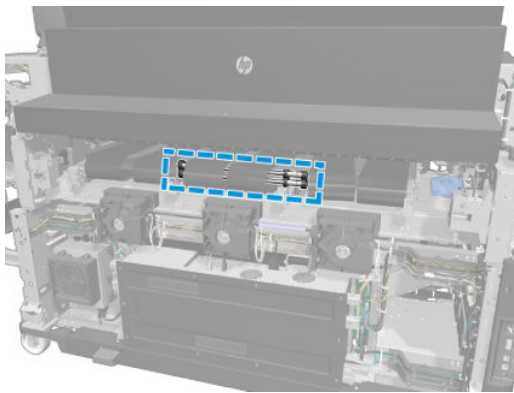
Removal

1. Follow steps 1–13 in [Belts and platen – CZ309-67092 \(Non-APJ\), CZ309-67324 \(APJ machines\) on page 990](#).

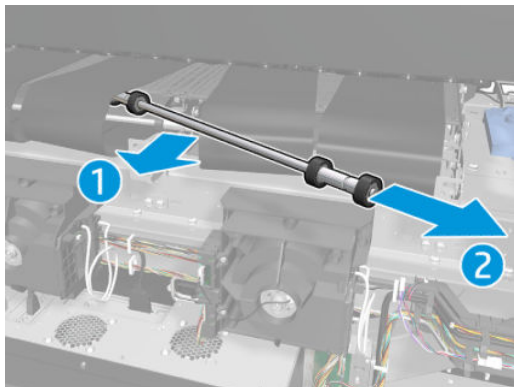
2. At the front PZ Intermediate supports, check if they are broken.



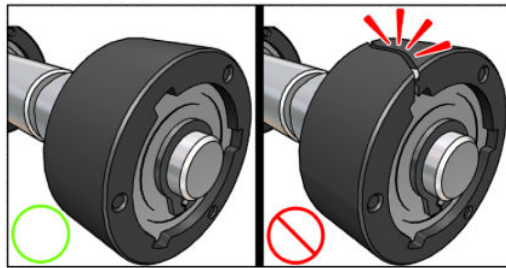
3. Check if the rear PZ Intermediate supports are broken.



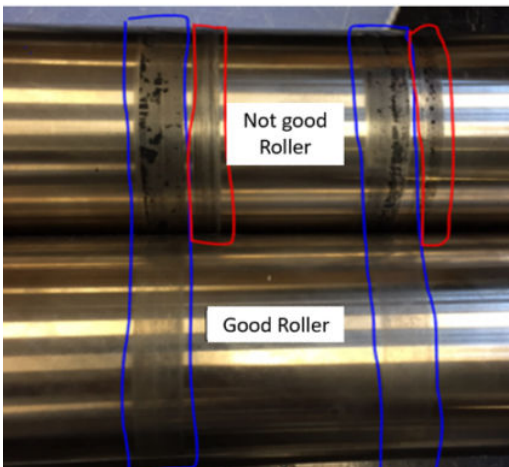
4. Remove, for example, the upper rear PZ Intermediate support.



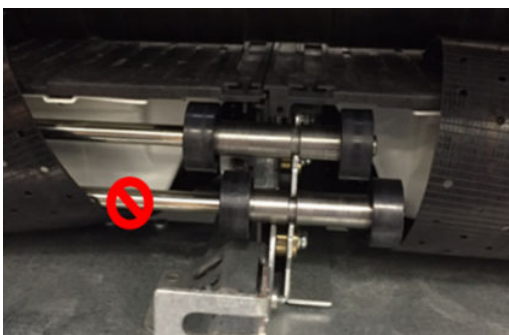
5. Check if broken.



6. Check the statuses of the Front roller and the Rear roller. Clean the Front roller with alcohol to remove any plastic particles that may be in contact with the Intermediate support roller



7. Ensure that the bottom shaft was properly placed back during installation. Both Intermediate support rollers should be in contact with one another.



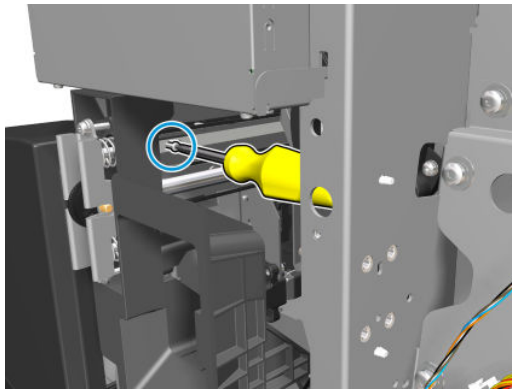
8. Perform the Feed roller Calibration.

Servicing subsystem

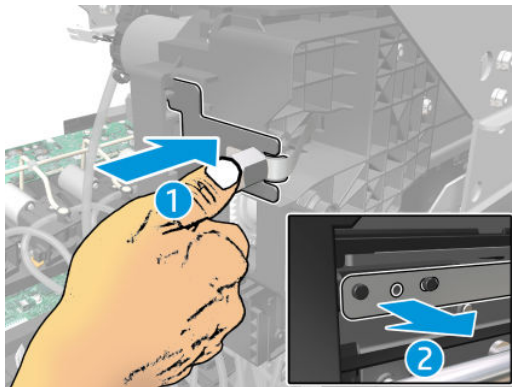
Carriage encoder strip (CZ309-67101)

Removal

1. Remove the printheads as described in [Printheads on page 633](#).
2. Remove the [Left cover assembly \(CZ309-67039\) on page 639](#).
3. Remove the [Right cover assembly \(CZ309-67047\) on page 649](#).
4. Remove a screw from the metallic strip encoder.

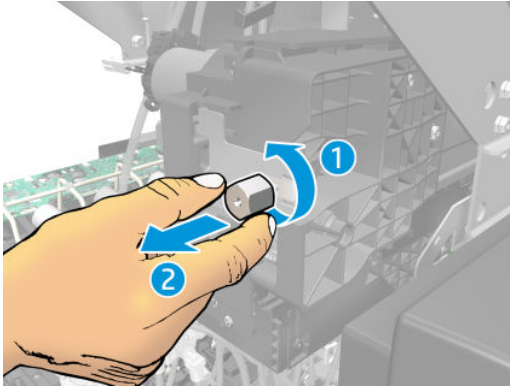


5. Push the encoder spring.

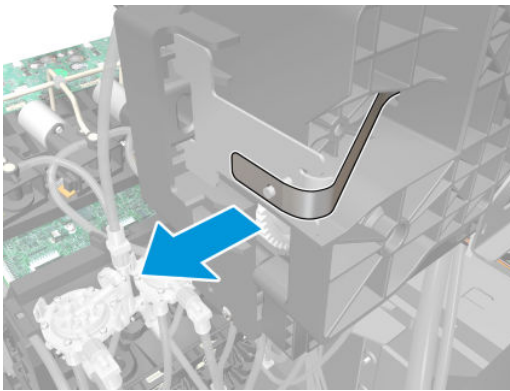


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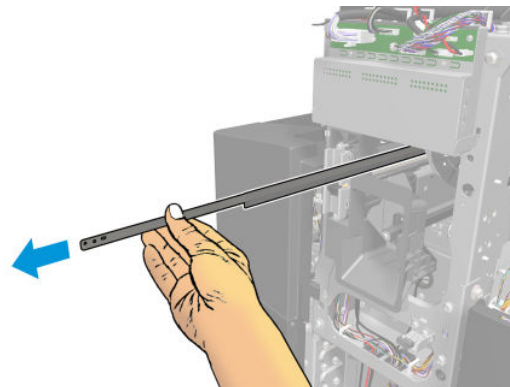
6. Remove a nut from the encoder spring.



7. Remove the metallic strip encoder.



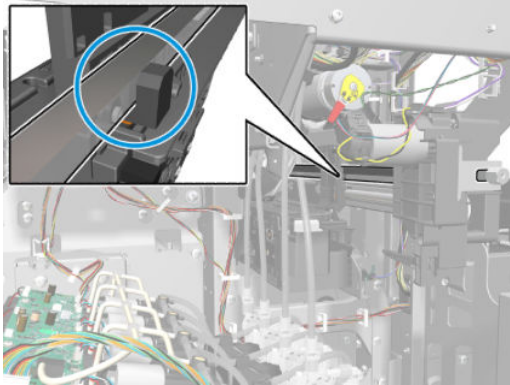
8. Remove the encoder strip.



Installation

1. To install, perform the removal operation in reverse.

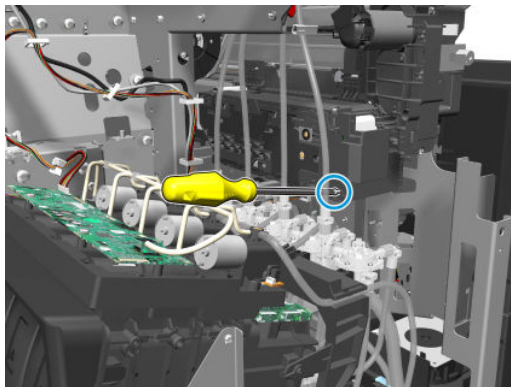
2. Be sure the Encoder Strip is properly aligned with the sensor.



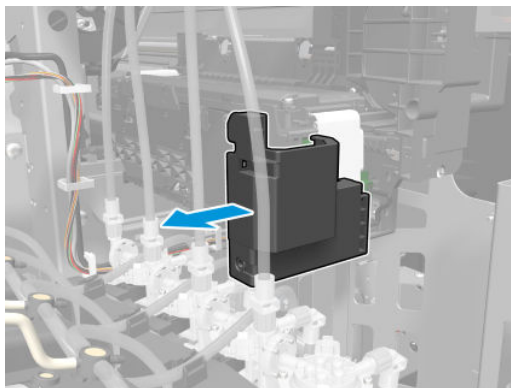
Carriage Sensor PCA (CZ309-67111)

Removal

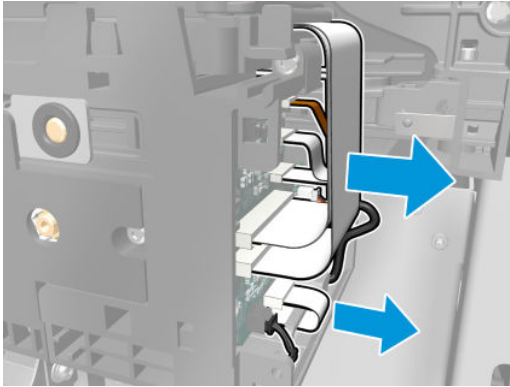
1. Remove the [Left cover assembly \(CZ309-67039\)](#) on page 639.
2. Remove the [Right cover assembly \(CZ309-67047\)](#) on page 649.
3. Remove a screw from the Carriage Sensor PCA cover.



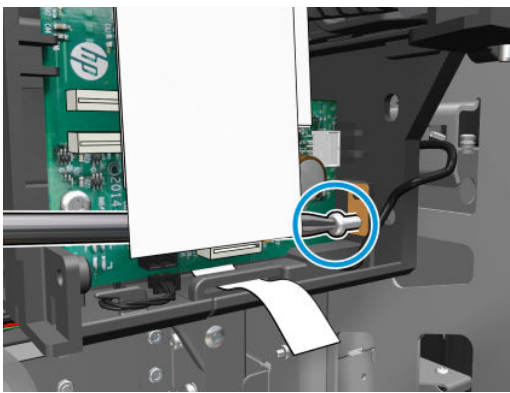
4. Remove the Carriage Sensor PCA cover.



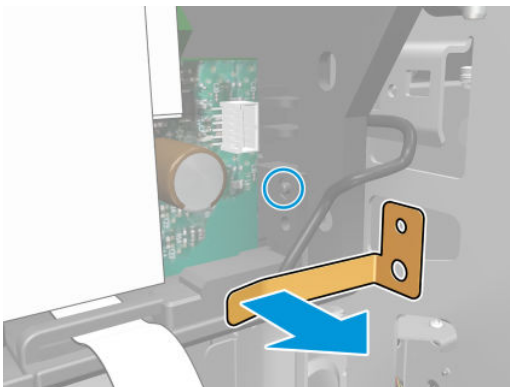
5. Disconnect all cables.



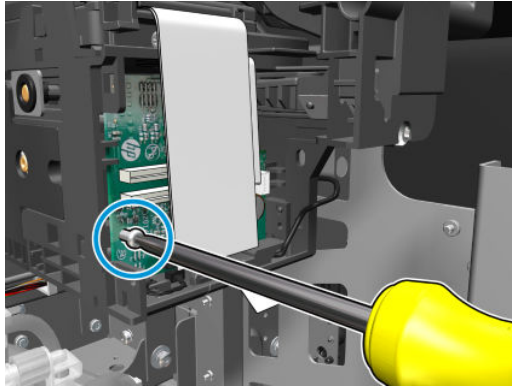
6. Remove the grounding screw.



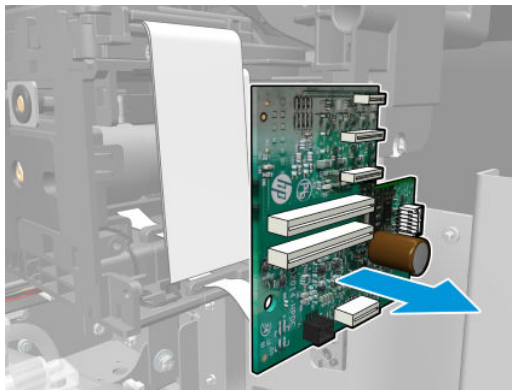
7. Remove the sheet-metal spring.



8. Remove a screw from the Carriage Sensor PCA.




9. Remove the Carriage Sensor PCA.



Installation

- ▲ To install, perform the removal operation in reverse.

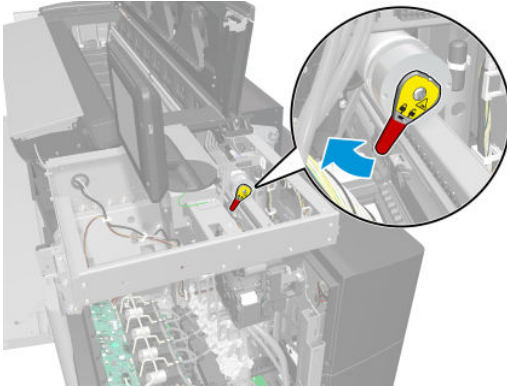
Service carriage assembly (CZ309-67105)

 **NOTE:** Each time the Service Carriage is replaced you need to install a new Carriage Oiler (CZ309-67333). Don't forget to order it. See the assembly instructions attached.

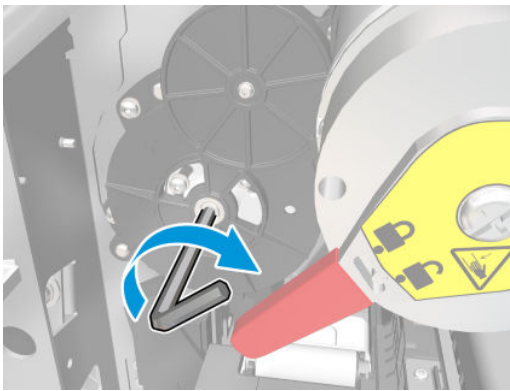
Removal

1. Remove the printheads as described in [Printheads on page 633](#).
2. Remove the [Left cover assembly \(CZ309-67039\) on page 639](#).
3. Remove the [Right cover assembly \(CZ309-67047\) on page 649](#).

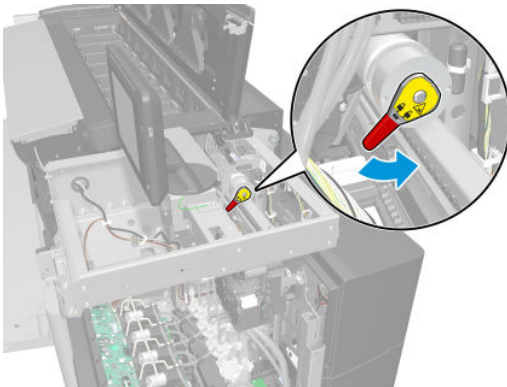
4. Set the print-bar brake to the unlock position.



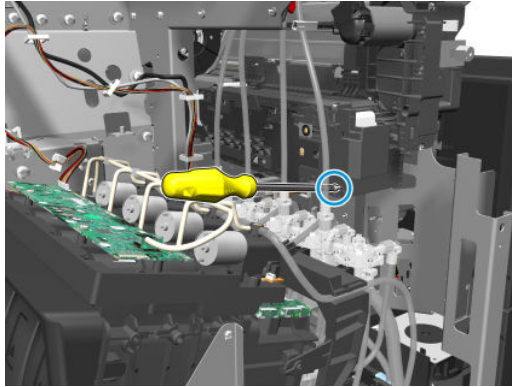
5. Lift the print bar to its top position by turning the brake screw with the tool.



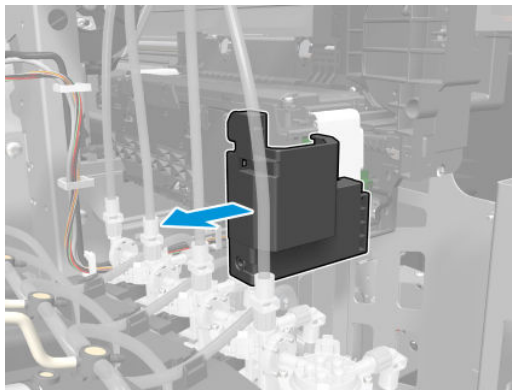
6. Set the print-bar brake to the lock position.



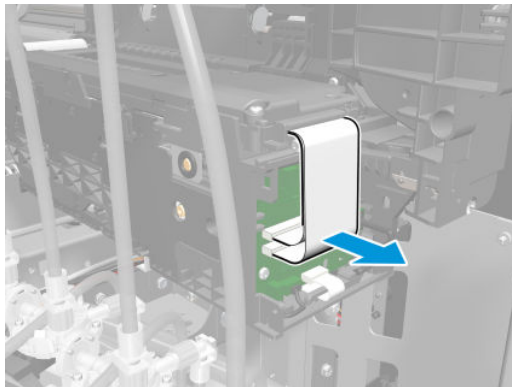
7. Remove a screw from the RedStar PCA cover.



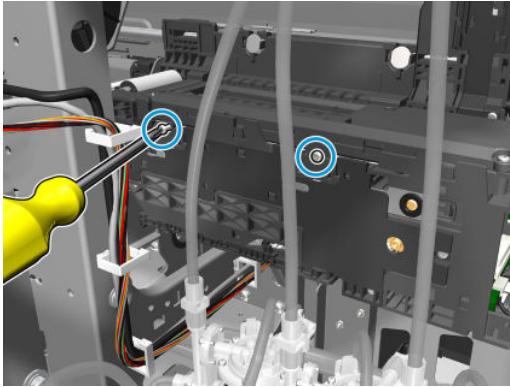
8. Remove the RedStar PCA cover.



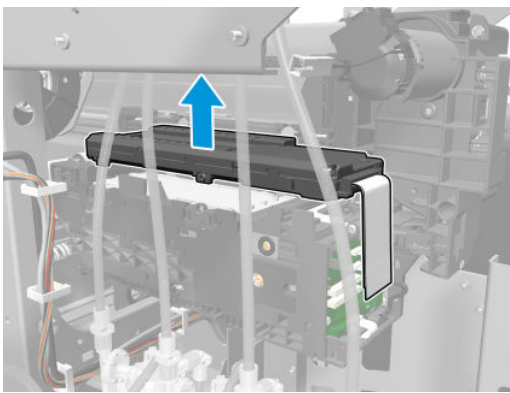
9. Unplug the cables connecting the sensor to the drop detector.



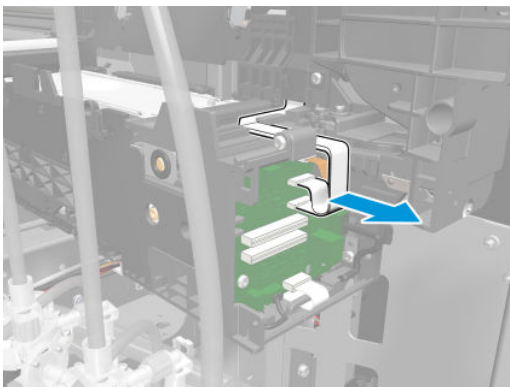
10. Remove two screws from the drop-detector bottom case.



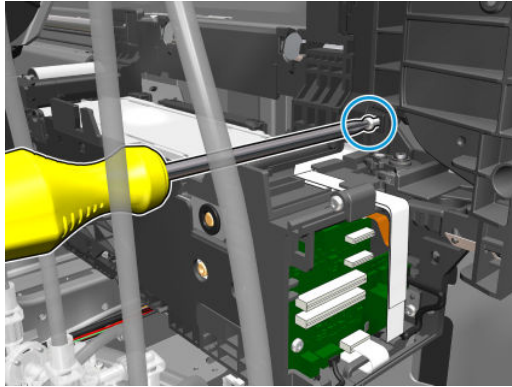
11. Remove the drop-detector bottom case.



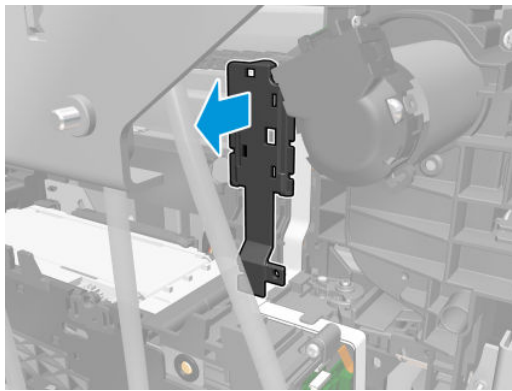
12. Unplug two trailing cables.



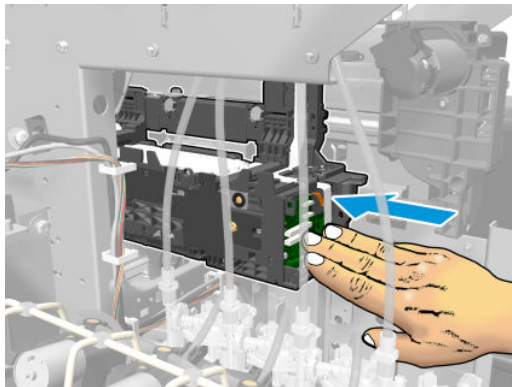
13. Remove a screw from the trailing cable cover.



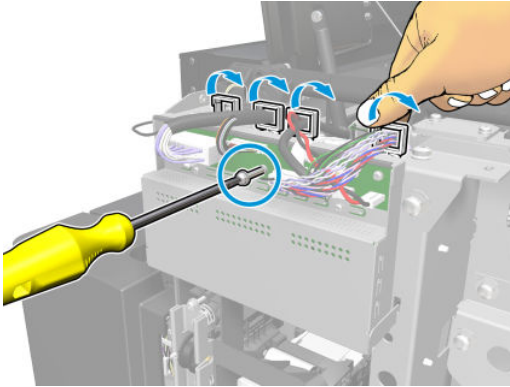
14. Remove the trailing cable cover.



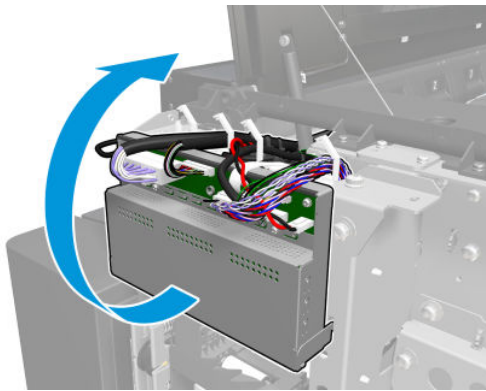
15. Move the carriage to the left.



16. Remove a screw from the Montjoi e-box base and open clamps.

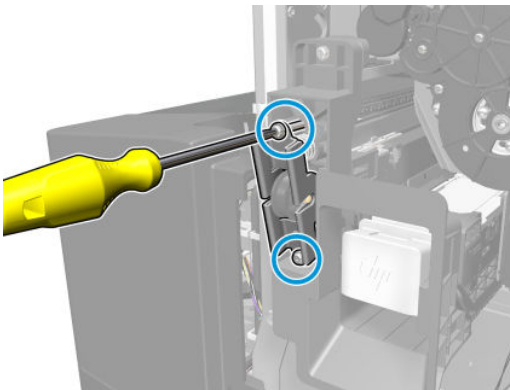


17. Raise the Montjoi e-box base.

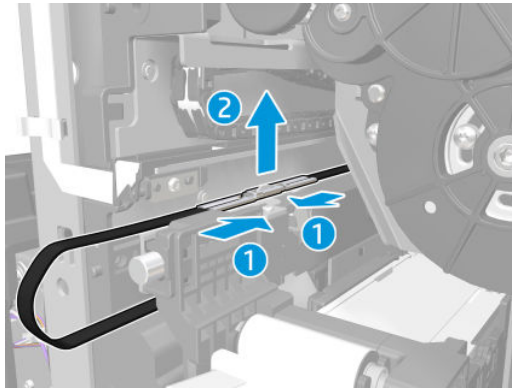


18. Screw in the two pulley holder screws.

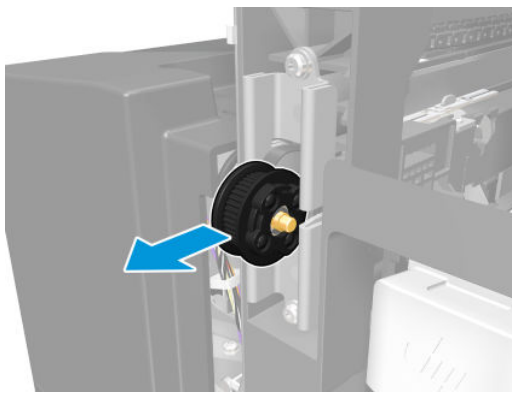
 **NOTE:** Screws included in Service Kit and must be used screwed-in; pulley holder helps with disassembly.



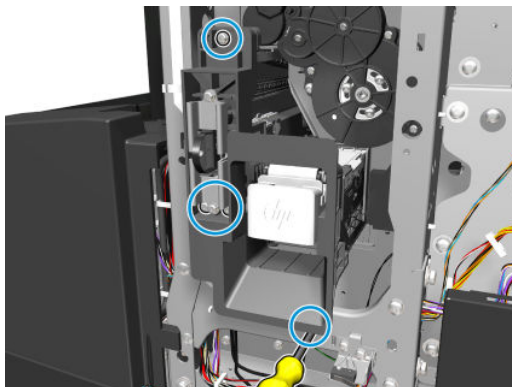
19. Remove the belt hook from the carriage.



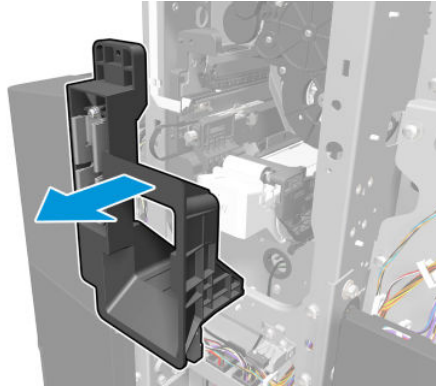
20. Remove the pulley drive.



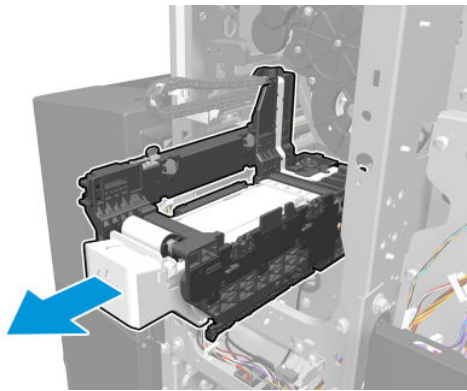
21. Remove 5 screws.



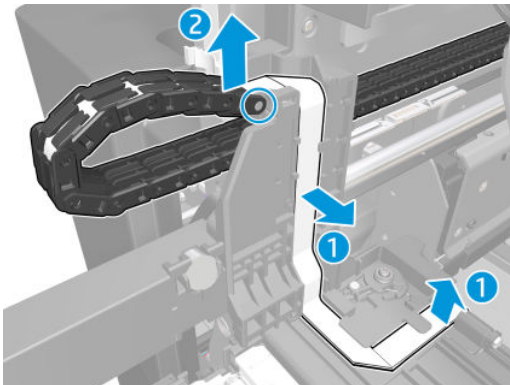
22. Remove the belt tensioner support.



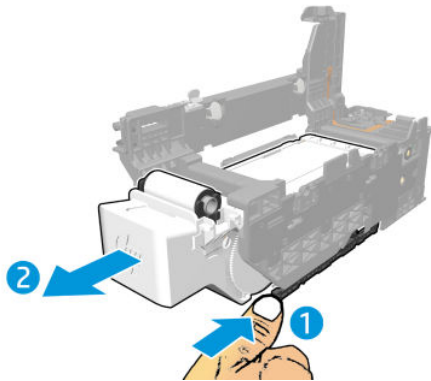
23. Pull out the carriage.



24. Unroute the cables and unclip the last trailing cable chain link from the carriage.




25. Remove the carriage.



Installation

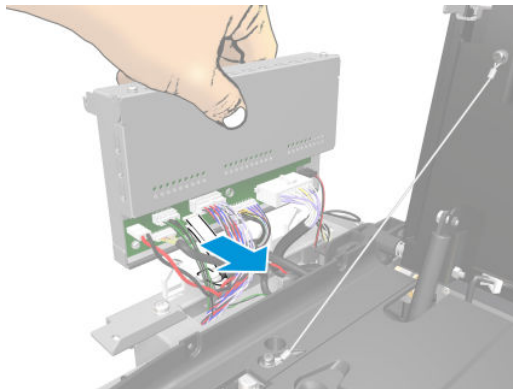
- ▲ To install, perform the removal operation in reverse.

 **NOTE:** Before installing the Cleaning carriage, please lubricate the rod.

Trailing cable (CZ309-67103)

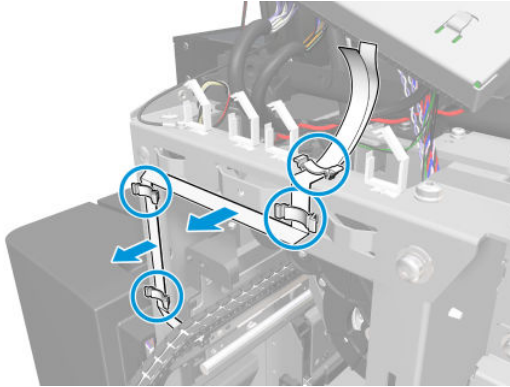
Removal

1. Remove the printheads as described in [Printheads on page 633](#).
2. Remove the [Service carriage assembly \(CZ309-67105\) on page 961](#).
3. Unplug two cables.

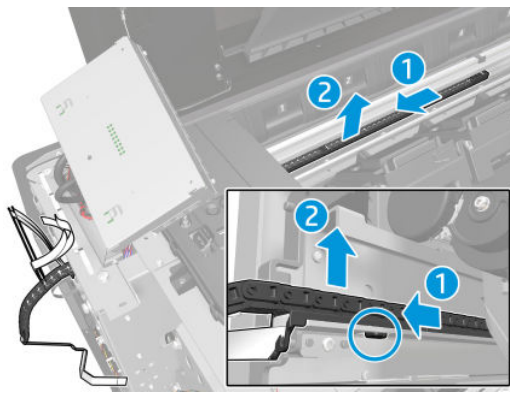


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4. Unclip and unroute two cables.



5. Remove the trailing cable.



Installation

- ▲ To install, perform the removal operation in reverse.

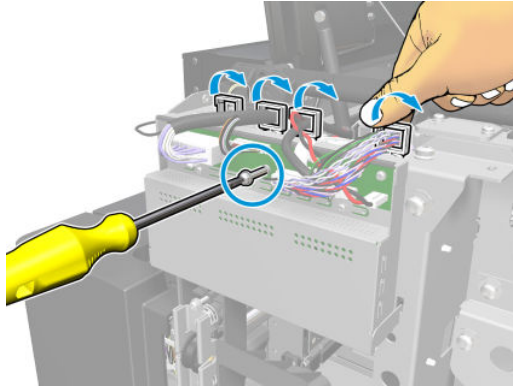
CAUTION: Ensure the trailing cable remains totally flat and well clipped on when mounting the new cable.

Service belt tensioner (CZ309-67107)

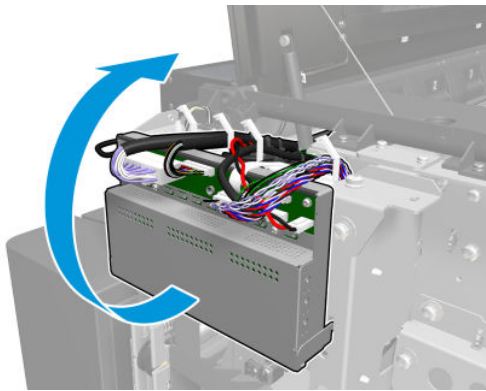
Removal

1. Remove the [Left cover assembly \(CZ309-67039\)](#) on page 639.


2. Remove a screw from the Montjoi e-box base, and open the clamps.

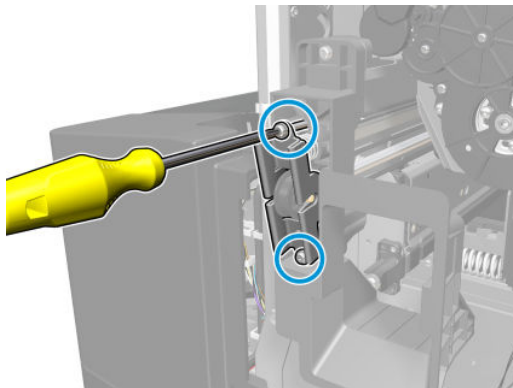


3. Lift up the Montjoi e-box base.



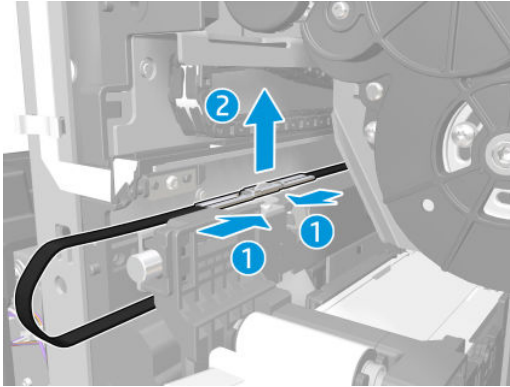
4. Screw in the two pulley holder screws.

 **NOTE:** Screws included in Service Kit and must be used screwed-in; pulley holder helps with disassembly.

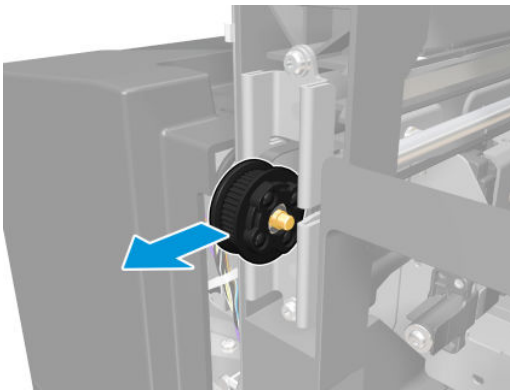


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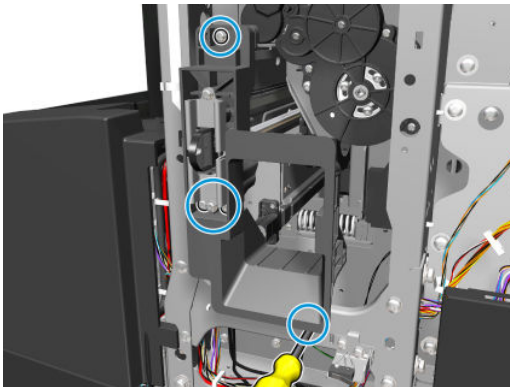
5. Remove the belt hook from the carriage.



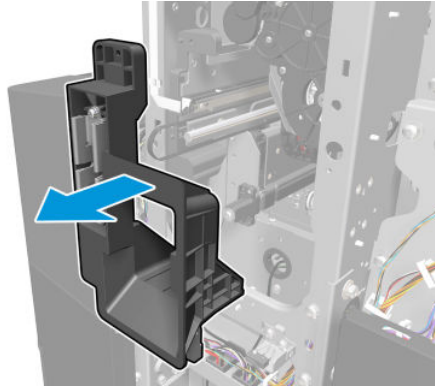
6. Remove the pulley driver.



7. Remove 5 screws.



8. Remove the belt tensioner support.



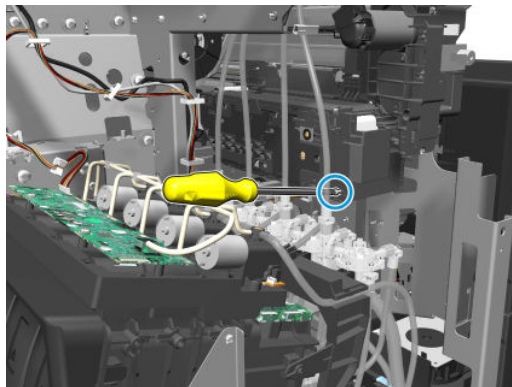
Installation

- ▲ To install, perform the removal operation in reverse.

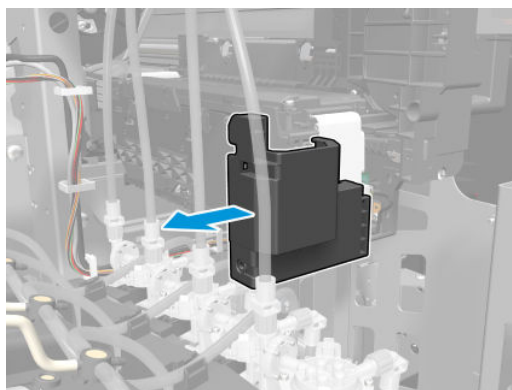
Drop Detector PCA (CZ309-67110)

Removal

1. Remove the [Right cover assembly \(CZ309-67047\)](#) on page 649.
2. Remove a screw from the RedStar Cover PCA.



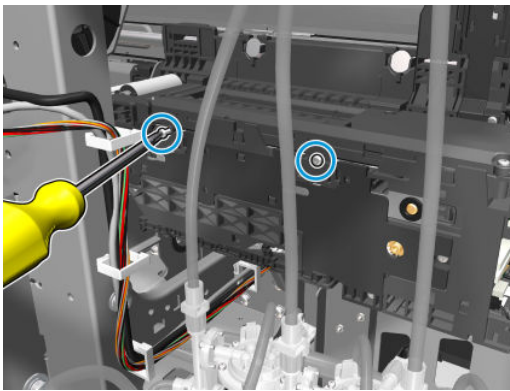
3. Remove the RedStar Cover PCA.



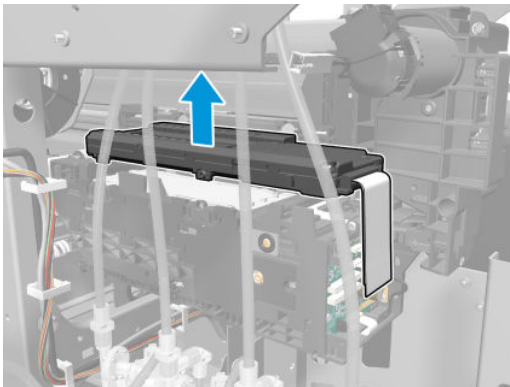
4. Unplug the drop-detector cables.



5. Remove two screws from the drop-detector bottom case.




6. Remove the drop-detector bottom case.



Installation

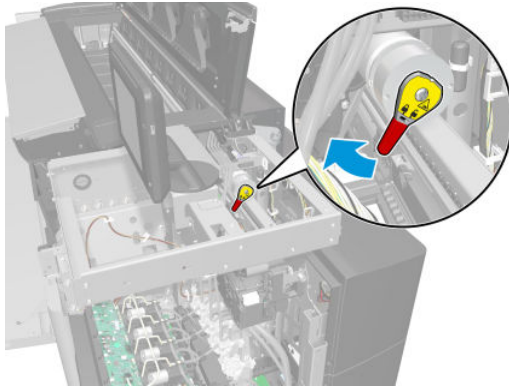
- ▲ To install, perform the removal operation in reverse.

 **NOTE:** Drop detector calibration should be done afterwards, through the service menu.

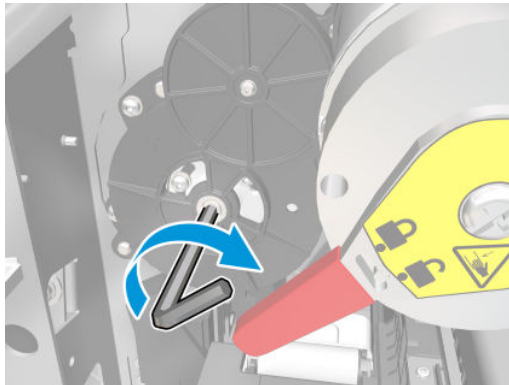
Service belt (CZ309-67108)

Removal

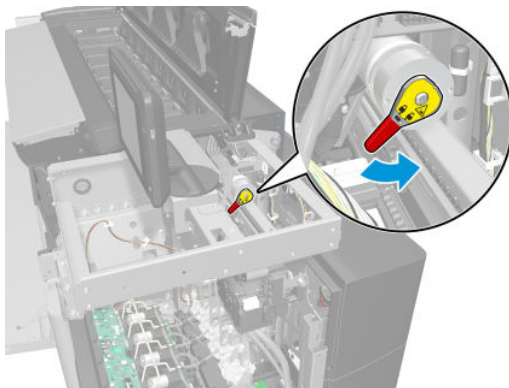
1. Remove the printheads as described in [Printheads on page 633](#).
2. Remove the [Left cover assembly \(CZ309-67039\) on page 639](#).
3. Remove the [Right cover assembly \(CZ309-67047\) on page 649](#).
4. Unlock the print-bar brake.



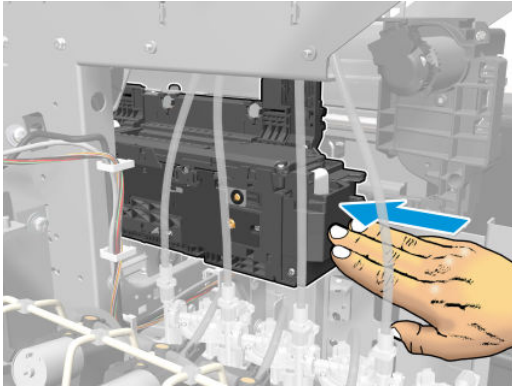
5. Turn the brake screw with the tool to lift the print bar to the top position.



6. Lock the print-bar brake.

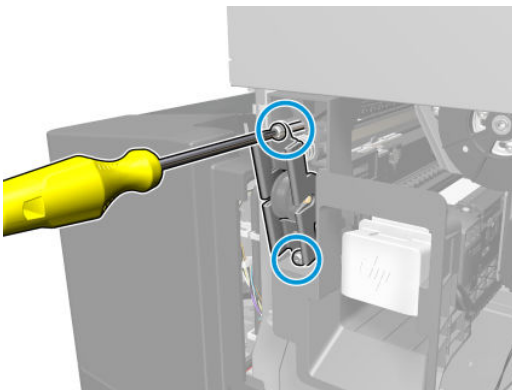


7. Move the carriage to the left.

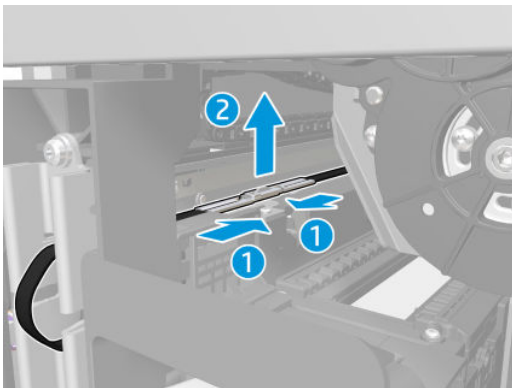


8. Screw in the two pulley holder screws.

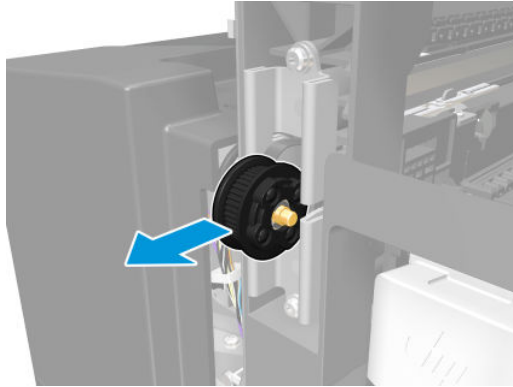
 **NOTE:** Screws included in Service Kit and must be used screwed-in; pulley holder helps with disassembly.



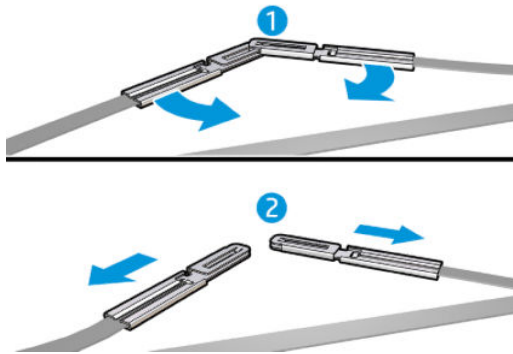
9. Unplug the belt hook.



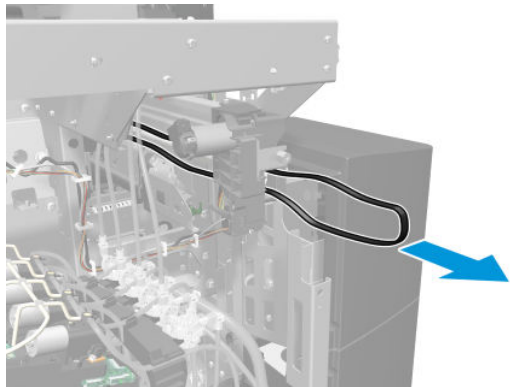
10. Remove the pulley driver.



11. Separate the belt hook.



12. Pull the belt carefully from the right transmission.



Installation

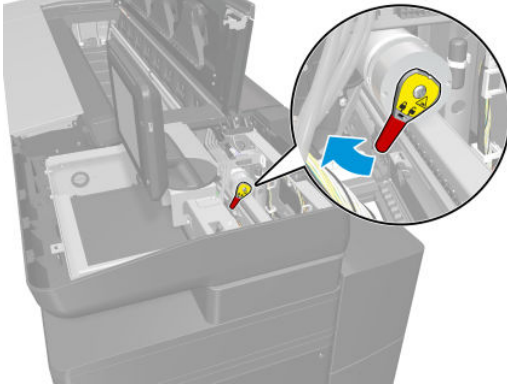
- ▲ To install, perform the removal operation in reverse.

Capping platform (CZ309-67093)

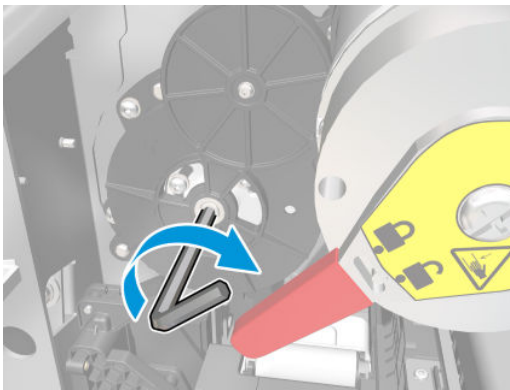
Please note that for PWXL 4x00/3900 units, this procedure only applies for SNs < MY7688Q008.

Removal

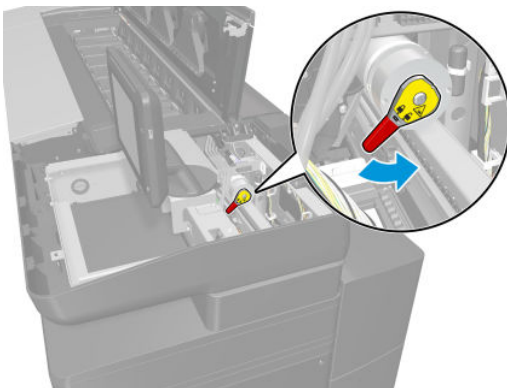
1. Remove the printheads as described in [Printheads on page 633](#).
2. Remove the [Top-right exterior cover \(CZ309-67044\) on page 646](#).
3. Unlock the print-bar brake.



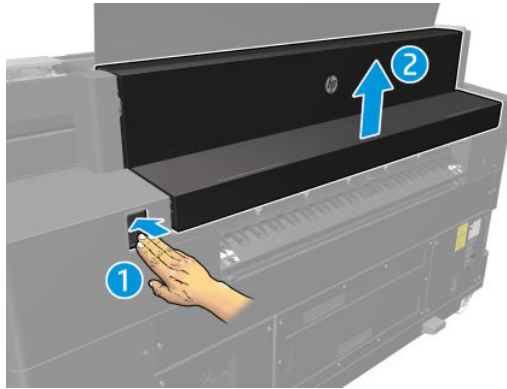
4. Turn the brake screw with the tool to lift the print bar to the top position.



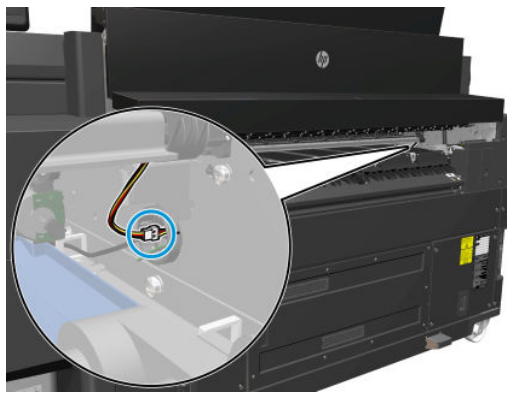
5. Lock the print-bar brake.



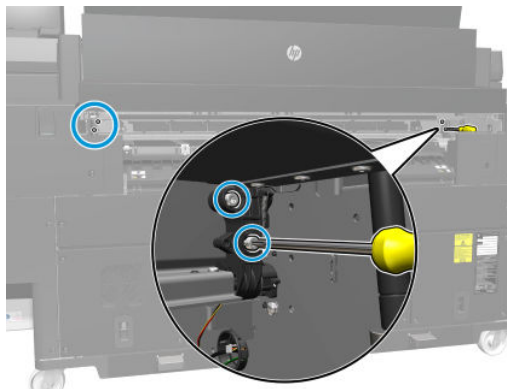
6. Open the door structure.



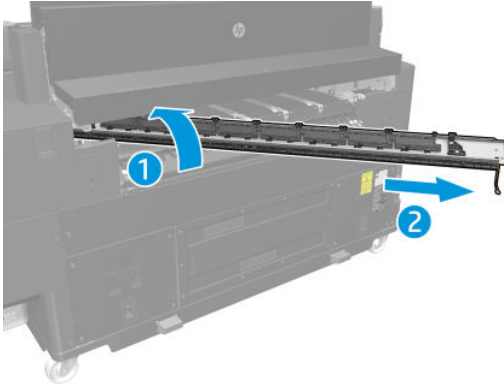
7. Disconnect the sensor cable.



8. Unscrew two captive screws from each side of the capping station.



9. Remove the capping platform.



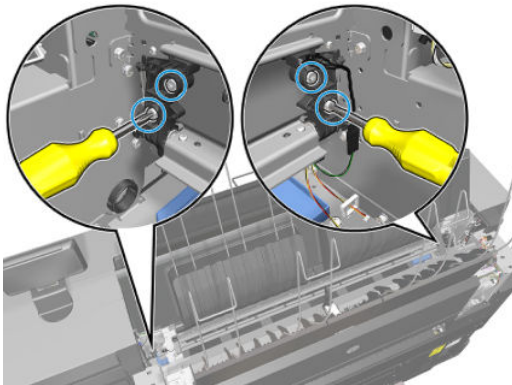
Installation

- ▲ To install, perform the removal operation in reverse.

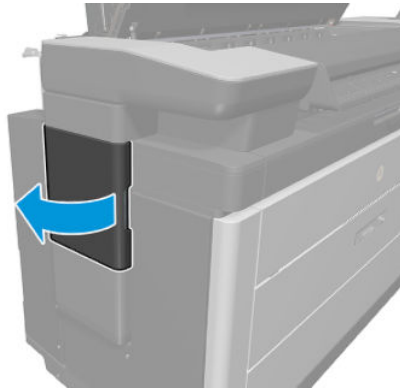
Capping platform (CZ309-67093) (PWXL 4x00/3900s with SNs \geq MY7688Q008)

Removal

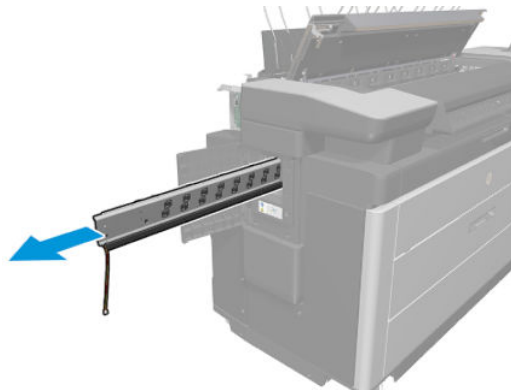
1. Remove the Spittoon beam. See [Spittoon beam \(CZ309-67095\) \(PWXL 4x00/3900s with SNs \$\geq\$ MY7688Q008\) on page 984](#).
2. Remove the Right stacker cover. See [Paper-output stacker cover right \(CZ309-67203\) on page 1242](#).
3. Remove the Left stacker cover. See [Paper-output stacker cover left \(CZ309-67202\) on page 1241](#).
4. Unscrew two captive screws from each side of the capping station.



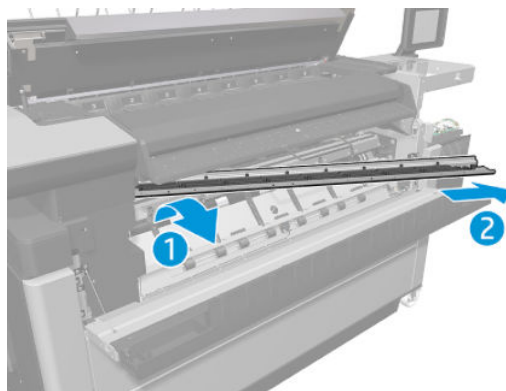
5. Now there are two ways to remove the capping platform:
 - Option A:
 1. Open the Service door.



2. Remove the capping platform from the left side.



- Option B:
 1. Remove the Right-interior side cover. See [Right-interior side cover \(CZ309-67054\) on page 663](#).
 2. Remove the capping platform from the front.



Installation

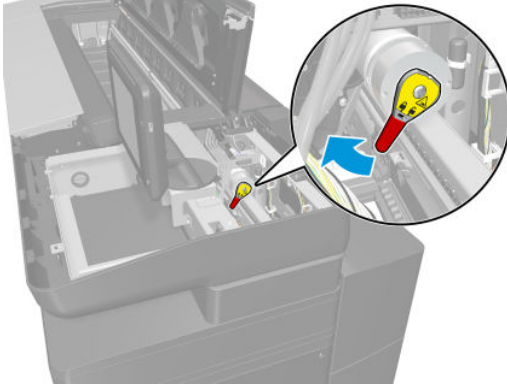
- ▲ To install, perform the removal operation in reverse.

Spittoon beam (CZ309-67095)

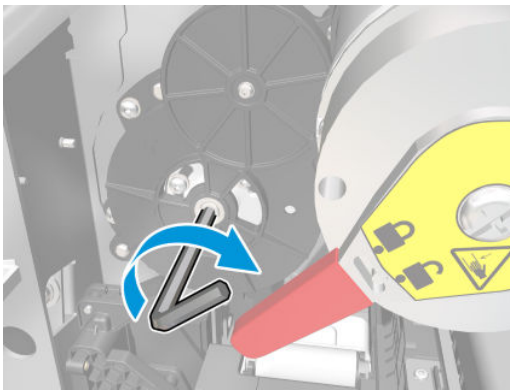
Please note that for PWXL 4x00/3900 units, this procedure only applies for SNs < MY7688Q008.

Removal

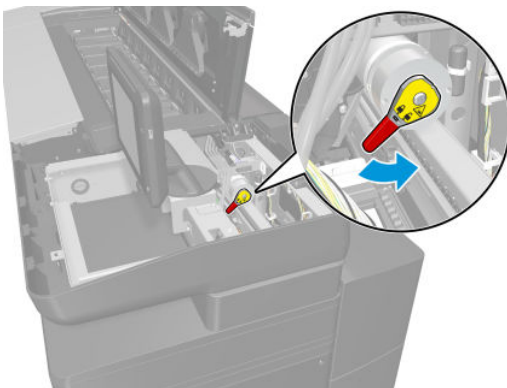
1. Remove the printheads as described in [Printheads on page 633](#).
2. Remove the [Top-right exterior cover \(CZ309-67044\) on page 646](#).
3. Unlock the print-bar brake.



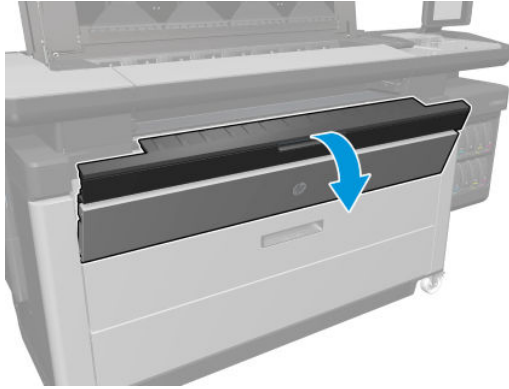
4. Turn the brake screw with the tool to lift the print bar to the top position.



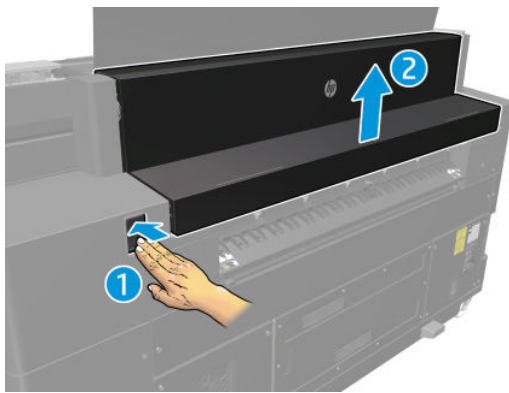
5. Lock the print-bar brake.



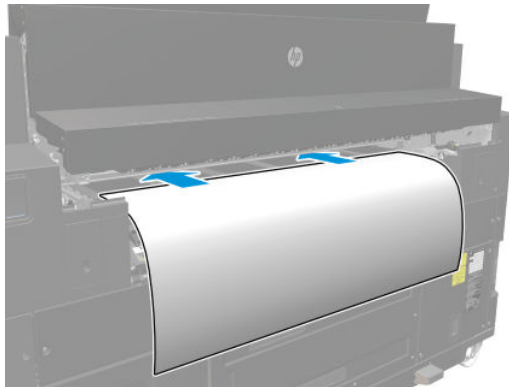
6. Open the paper input cover.



7. Open the door structure.

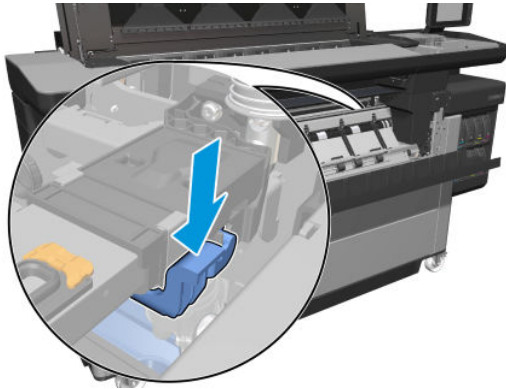


8. Put paper on the platen to protect it from leakage from the spittoon beam.

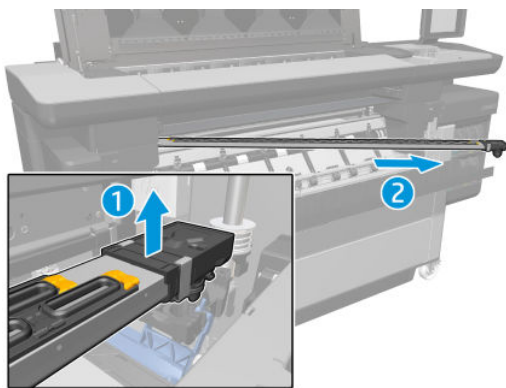


9. Undo the spittoon beam from the left-hand side.

10. Unlatch the spittoon beam from the right-hand side.



11. Lift up and pull out the spittoon beam.



Installation

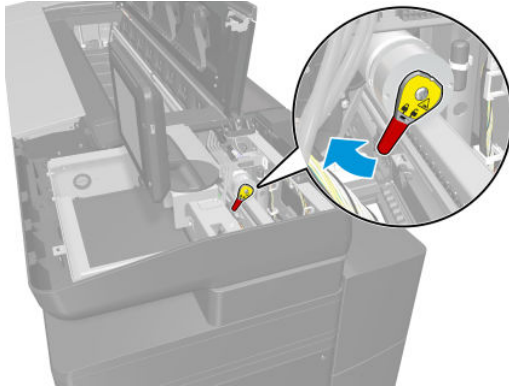
- ▲ To install, perform the removal operation in reverse.

Spittoon beam (CZ309-67095) (PWXL 4x00/3900s with SNs \geq MY7688Q008)

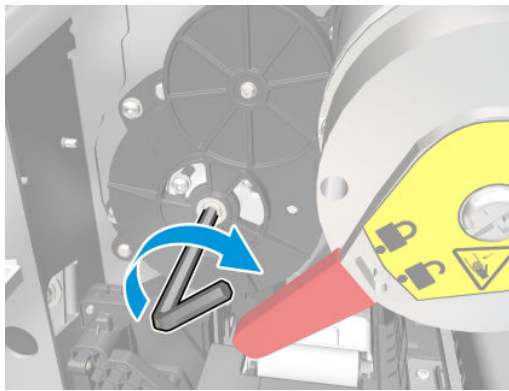
Removal

1. Remove the printheads as described in [Printheads on page 633](#).
2. Remove the [Top-right exterior cover \(CZ309-67044\) on page 646](#).

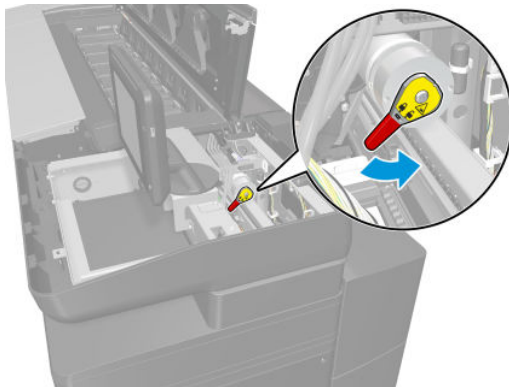
3. Unlock the print-bar brake.



4. Turn the brake screw with the tool to lift the print bar to the top position.

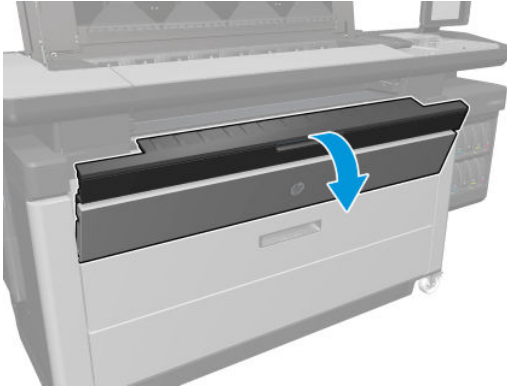


5. Lock the print-bar brake.

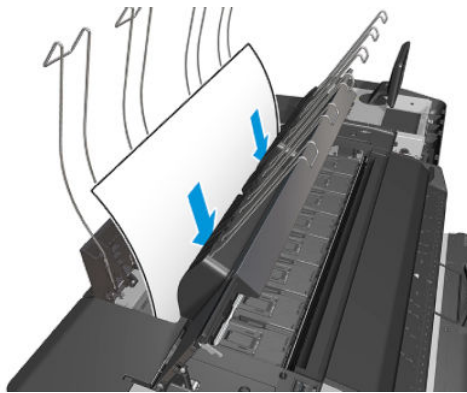


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6. Open the paper input cover.

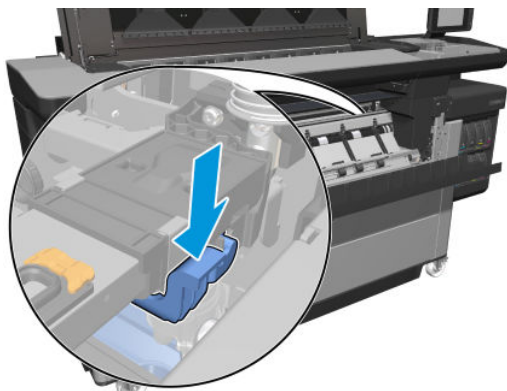


7. Put paper on the platen to protect it from leakage from the spittoon beam.

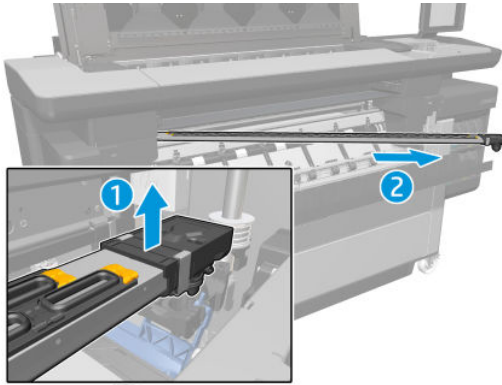


8. Undo the spittoon beam from the left-hand side.

9. Unlatch the spittoon beam from the right-hand side.



10. Lift up and pull out the spittoon beam.



Installation

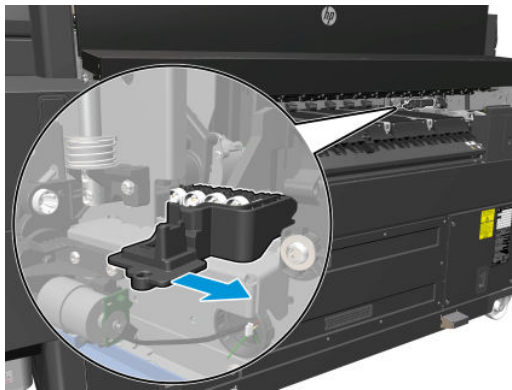
- ▲ To install, perform the removal operation in reverse.

Spittoon chain assembly left (CZ309-67096)

Please note that for PWXL 4x00/3900 units, this procedure only applies for SNs < MY7688Q008.

Removal

1. Remove the [Capping platform \(CZ309-67093\)](#) on page 977.
2. Remove the [Spittoon beam \(CZ309-67095\)](#) on page 981.
3. Remove the left spittoon chain.



Installation

- ▲ To install, perform the removal operation in reverse.

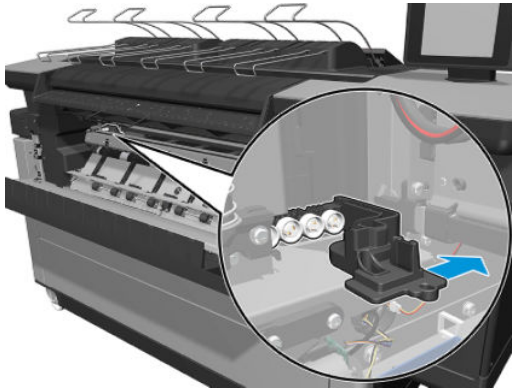
Spittoon chain assembly left (CZ309-67096) (PWXL 4x00/3900s with SNs ≥ MY7688Q008)

Removal

1. Remove the [Spittoon beam \(CZ309-67095\)](#) (PWXL 4x00/3900s with SNs ≥ MY7688Q008) on page 984.

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2. Remove the left spittoon chain.



Installation

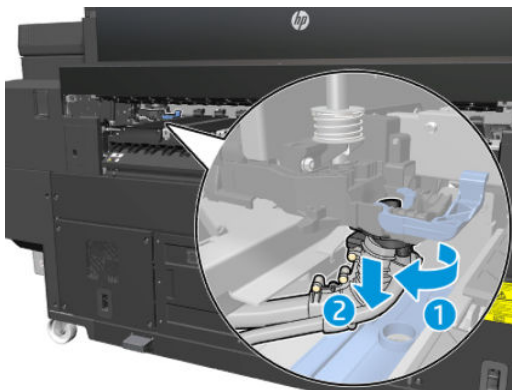
- ▲ To install, perform the removal operation in reverse.

Spittoon chain assembly right (CZ309-67097)

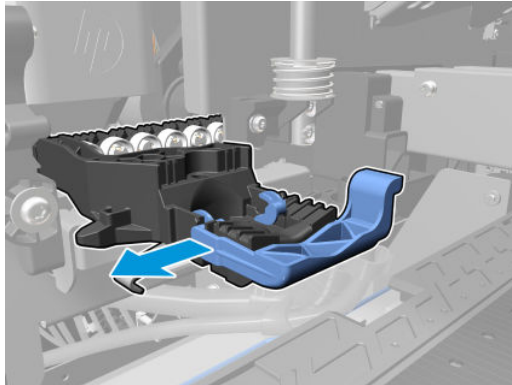
Please note that for PWXL 4x00/3900 units, this procedure only applies for SNs < MY7688Q008.

Removal

1. Remove the [Capping platform \(CZ309-67093\) on page 977](#).
2. Remove the [Spittoon beam \(CZ309-67095\) on page 981](#).
3. Unplug the waste tube by turning it 45° clockwise, locking down the top, and pulling down the tube.



4. Remove the left spittoon chain.



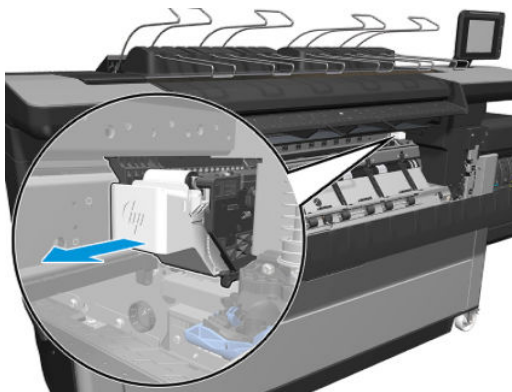
Installation

- ▲ To install, perform the removal operation in reverse.

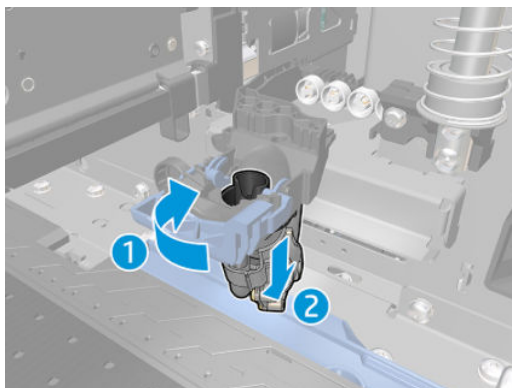
Spittoon chain assembly right (CZ309-67097) (PWXL 4x00/3900s with SNs \geq MY7688Q008)

Removal

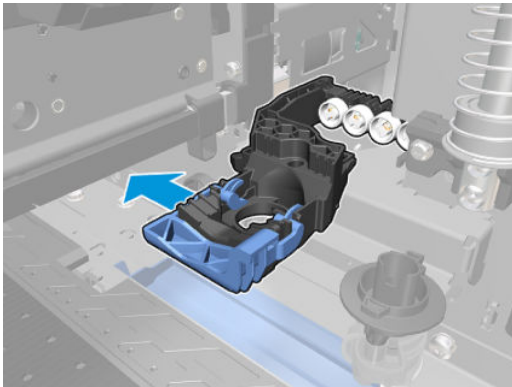
1. Remove the [Spittoon beam \(CZ309-67095\) \(PWXL 4x00/3900s with SNs \$\geq\$ MY7688Q008\) on page 984.](#)
2. Move the printbar carriage.



3. Unplug the waste tube by turning it 45° clockwise, locking down the top, and pulling down the tube.




4. Remove the right spittoon chain assy from the front.




Installation

- ▲ To install, perform the removal operation in reverse.

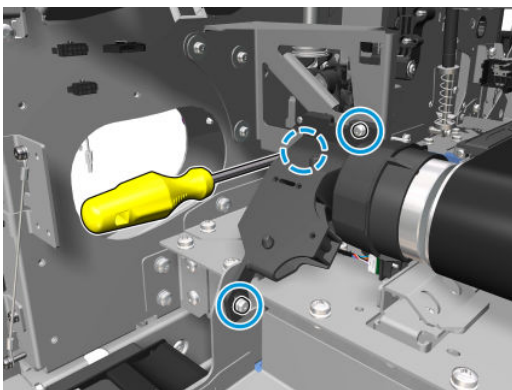
Belts and platen – CZ309-67092 (Non-APJ), CZ309-67324 (APJ machines)

 **NOTE:** We recommend using PMK 9/PMK 9B rather than either of these service kits as it is more complete.

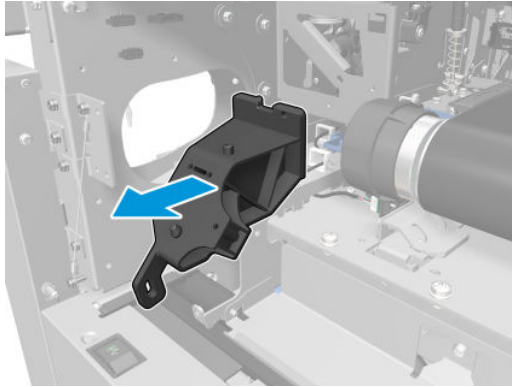
 **WARNING!** A flyer is included in the Belt and Platen Kit (CZ309-67092 & CZ309-67324) indicating the order to be followed during the belt assembly process (see attached pdf).

Removal

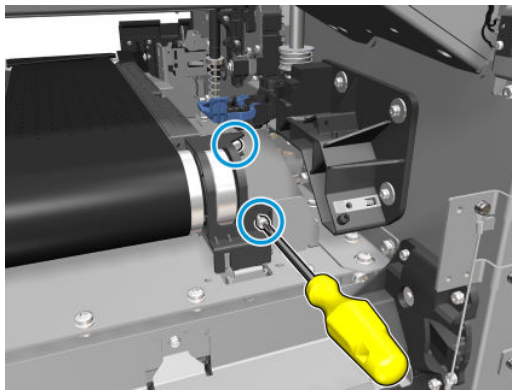
1. Remove the [Paper-loop roof sheet-metal \(CZ309-67437/CZ309-67434\) on page 885](#).
2. Remove the [Feed motor assembly \(CZ309-67080\) on page 888](#).
3. Remove the [Capping platform \(CZ309-67093\) on page 977](#).
4. Remove the [Spittoon beam \(CZ309-67095\) on page 981](#).
5. Remove the [Diverter assembly \(CZ309-67148\) on page 895](#).
6. Remove three screws from the roof lower reference left.



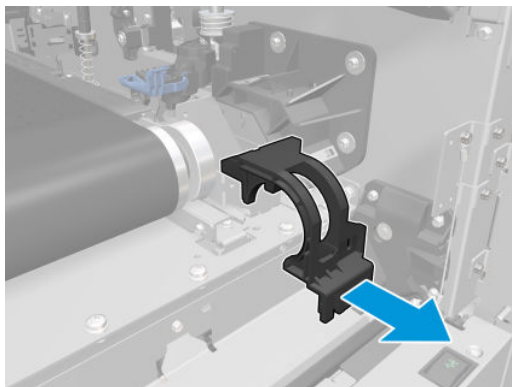
7. Remove the roof lower reference left.



8. Remove two screws from the BRG cover retainer.

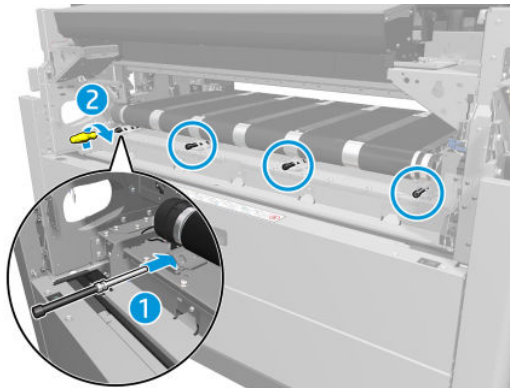


9. Remove the BRG cover retainer.

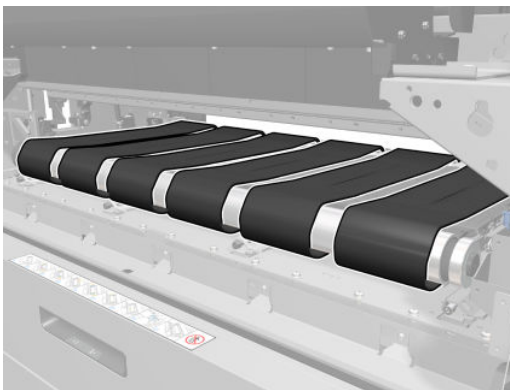


10. Insert and tighten four screws to release the tension of the belts.

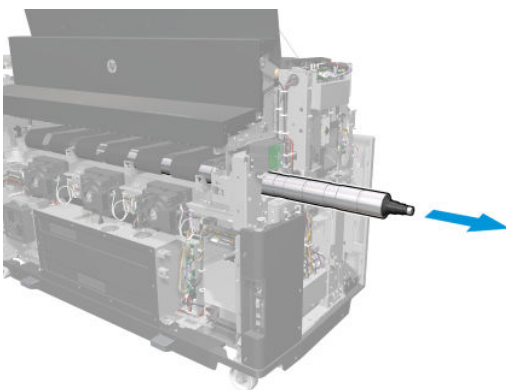
⚠ WARNING! Do not use any oil to lubricate the tensioner screw. This tensioner screw is already greased, if you use another lubricant such as WD-40 or even the oil delivered in the Service Kits, the tensor block will break and the printer will be rendered useless.



The detensioned belts:

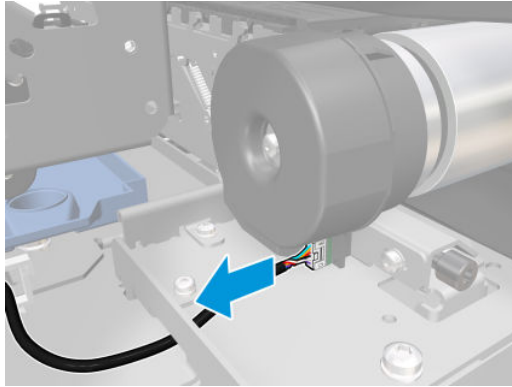


11. Remove the [Belt motor assembly \(CZ309-67084\)](#) on page 931.
12. Remove the [Belt gearbox \(CZ309-67085\)](#) on page 934.
13. Remove the rear roller through the hole in the side.

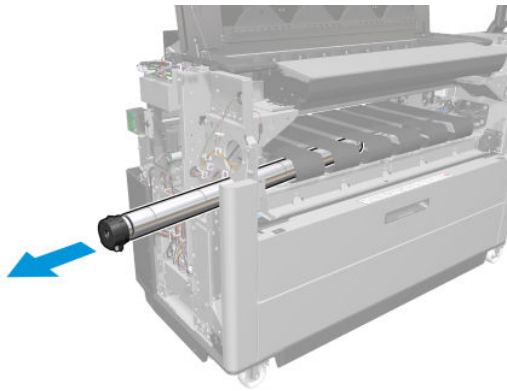


14. Clean the Rear roller with alcohol to remove any plastic particles that may be in contact with the Intermediate support roller.

15. Disconnect the analog encoder cable.

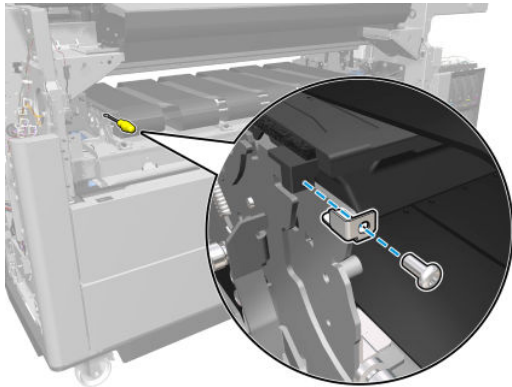


16. Remove the front roller at an angle through the hole in the side.

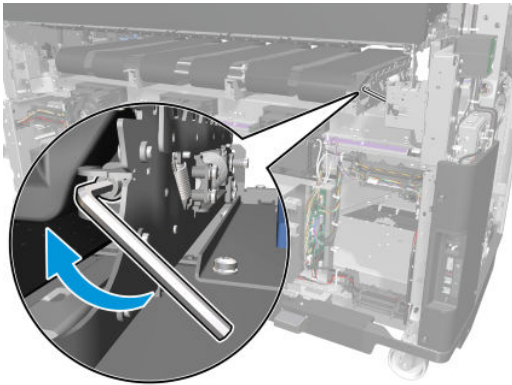


17. Clean the Front roller with alcohol to remove any plastic particles that may be in contact with the Intermediate support roller.

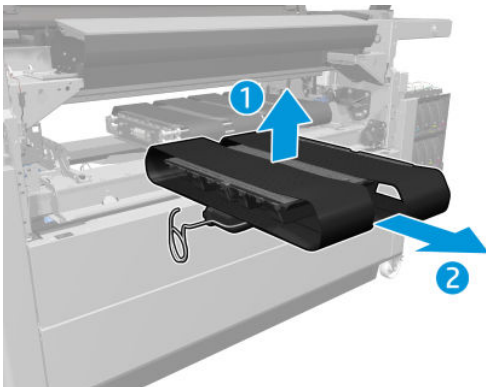
18. Remove the grounding.



19. Tighten the short screws to remove the tension of the spring from the platen.

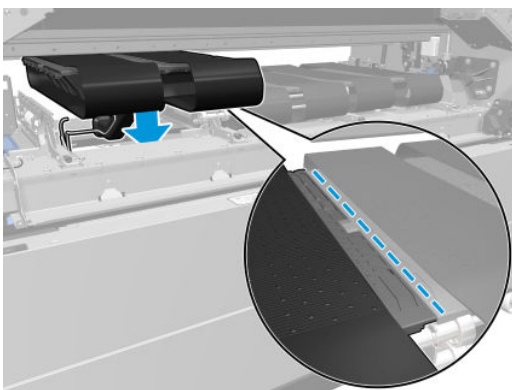


20. Remove the [Vacuum fan assembly \(CZ309-67087\)](#) on page 925.
21. Remove the platen with two belts.

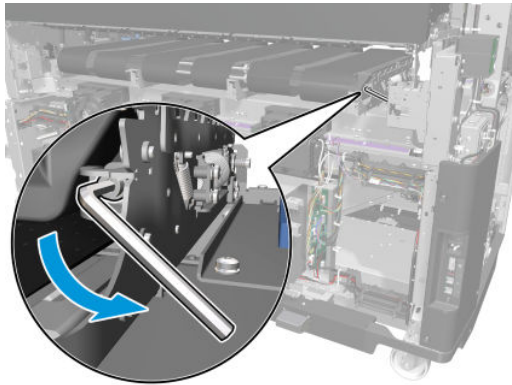


Installation

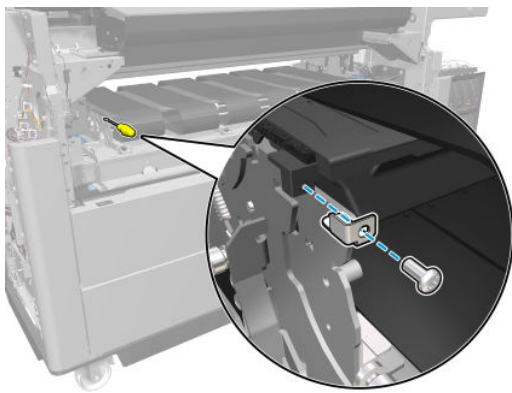
1. Put the platen back, ensuring that it is level.



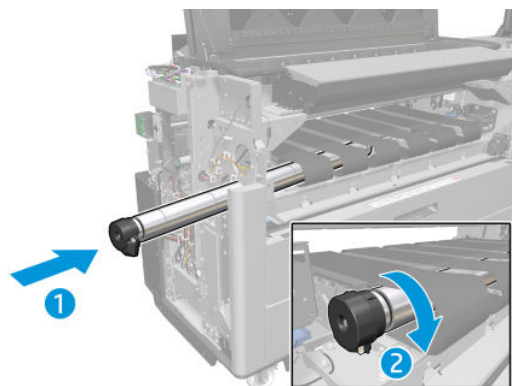
2. Untighten the short screws to add tension to the spring from the platen.



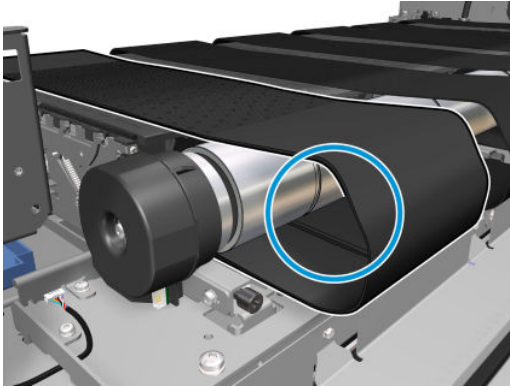
3. Place the grounding.



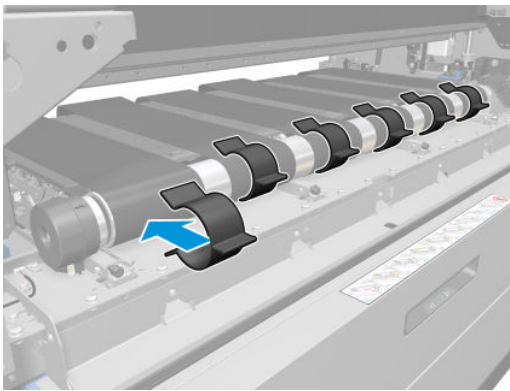
4. Put back the front roller, and rotate it into position.



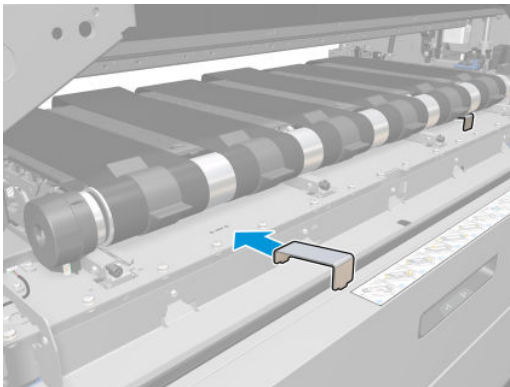
5. Ensure that the belt is well positioned on the roller.



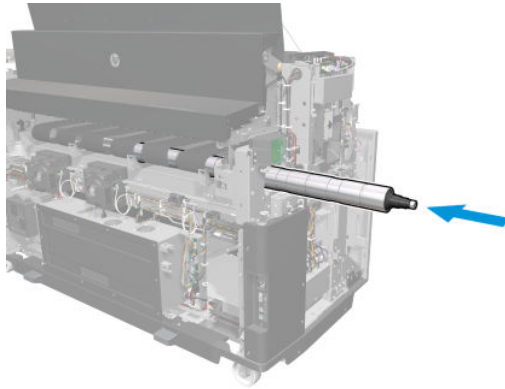
6. Use the plastic tool to position the belt.



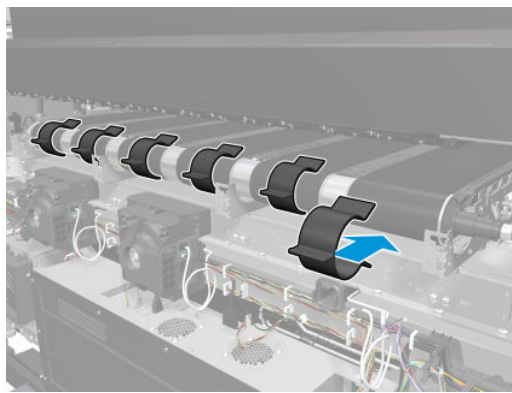
7. Insert the extra tool to hold the roll inserted.



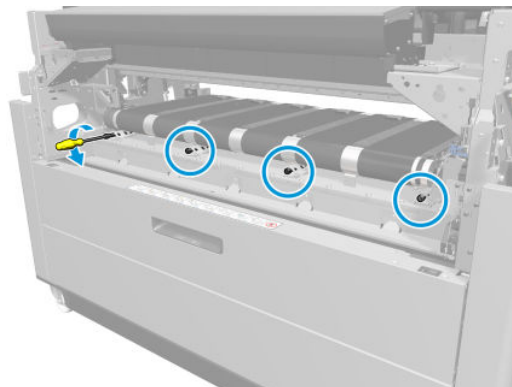
8. Insert the other roller.



9. Change the plastic tools to the other side.



10. Remove the extra tools (from step 7), then loosen the long screws.



Belts and platen – CZ309-67092 (Non-APJ), CZ309-67324 (APJ machines)(PWXL 4x00/3900s with SNs \geq MY7688Q008)

Removal

1. Remove the [Paper-loop roof sheet-metal \(CZ309-67437/CZ309-67434\) on page 885](#).
2. Remove the [Feed motor assembly \(CZ309-67080\) on page 888](#).
3. Remove the [Spittoon beam \(CZ309-67095\) \(PWXL 4x00/3900s with SNs \$\geq\$ MY7688Q008\) on page 984](#).

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4. Remove the [Capping platform \(CZ309-67093\) \(PWXL 4x00/3900s with SNs ≥ MY7688Q008\) on page 980.](#)
5. Remove the [Paper-output pinches motor \(CZ309-67142\) \(PWXL 4x00/3900s with SNs ≥ MY7688Q008\) on page 900.](#)
6. Follow Removal steps 5–19 in [Belts and platen – CZ309-67092 \(Non-APJ\), CZ309-67324 \(APJ machines\) on page 990.](#)

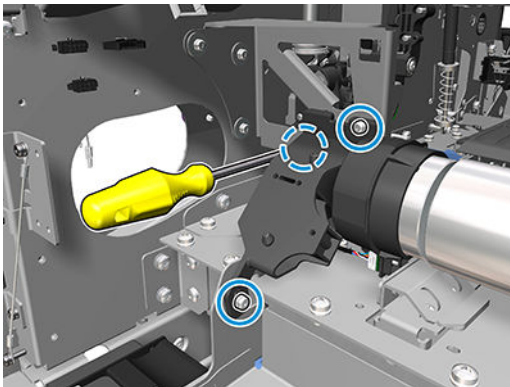
Installation

- ▲ Follow Installation steps 1–10 in [Belts and platen – CZ309-67092 \(Non-APJ\), CZ309-67324 \(APJ machines\) on page 990.](#)

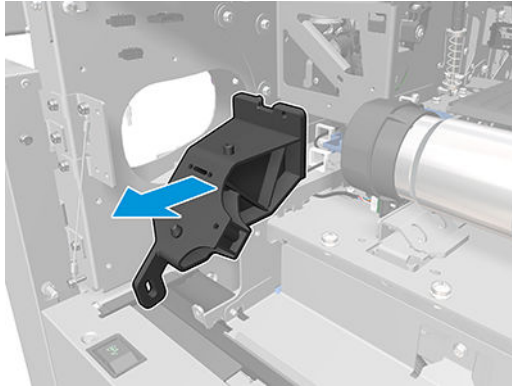
Belts and platen – CZ309-67433 (WW machines)(PWXL 4x00/3900s with SNs ≥ MY89JCQ00B, PageWide XL 5100/6000 with SN ≥ MY94UDQ00F from AMS and APJ)

Removal

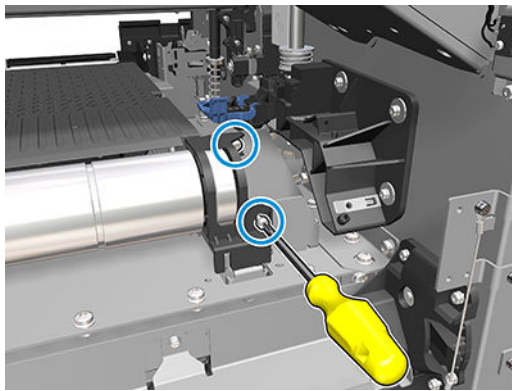
1. Remove the [Paper-loop roof sheet-metal \(CZ309-67437/CZ309-67434\) on page 885.](#)
2. Remove the [Feed motor assembly \(CZ309-67080\) on page 888.](#)
3. Remove the [Spittoon beam \(CZ309-67095\) \(PWXL 4x00/3900s with SNs ≥ MY7688Q008\) on page 984.](#)
4. Remove the [Capping platform \(CZ309-67093\) \(PWXL 4x00/3900s with SNs ≥ MY7688Q008\) on page 980.](#)
5. Remove the [Paper-output pinches motor \(CZ309-67142\) \(PWXL 4x00/3900s with SNs ≥ MY7688Q008\) on page 900.](#)
6. Remove the [Diverter assembly \(CZ309-67148\) on page 895.](#)
7. Remove three screws from the roof lower reference left.



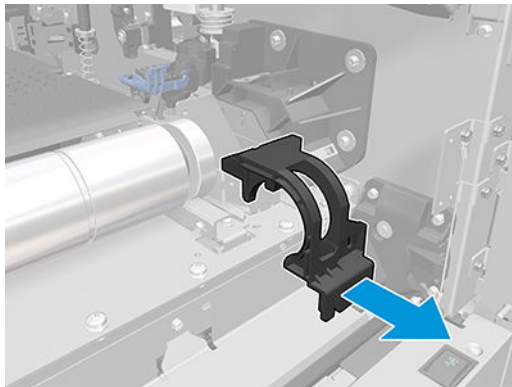
8. Remove the roof lower reference left.



9. Remove two screws from the BRG cover retainer.

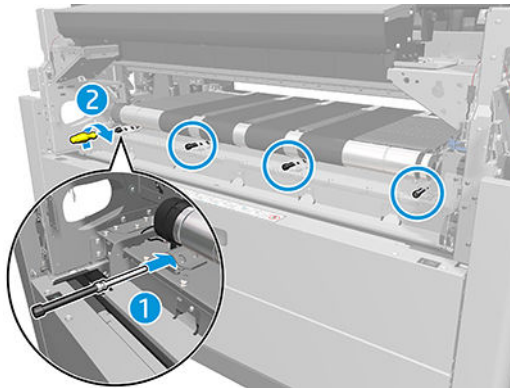


10. Remove the BRG cover retainer.

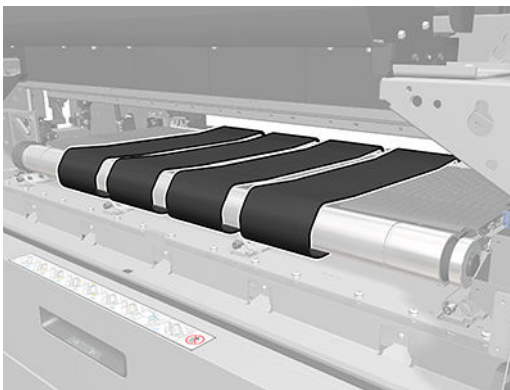


11. Insert and tighten four screws to release the tension of the belts.

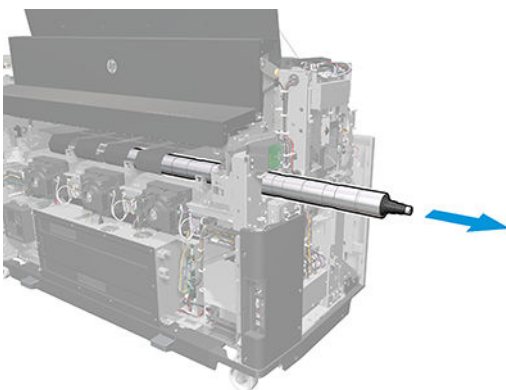
⚠ WARNING! Do not use any oil to lubricate the tensioner screw. This tensioner screw is already greased, if you use another lubricant such as WD-40 or even the oil delivered in the Service Kits, the tensor block will break and the printer will be rendered useless.



The detensioned belts:

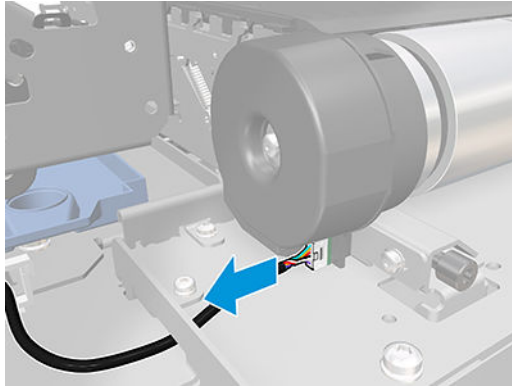


12. Remove the [Belt motor assembly \(CZ309-67084\)](#) on page 931.
13. Remove the [Belt gearbox \(CZ309-67085\)](#) on page 934.
14. Remove the rear roller through the hole in the side.

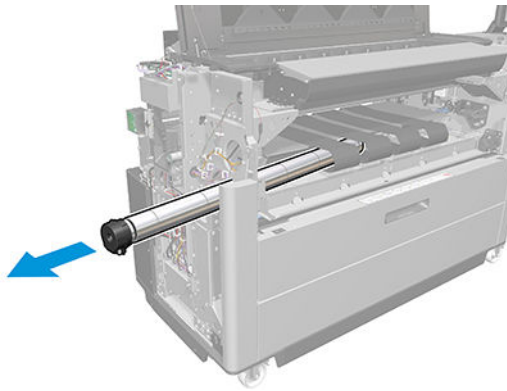


15. Clean the Rear roller with alcohol to remove any plastic particles that may be in contact with the Intermediate support roller.

16. Disconnect the analog encoder cable.

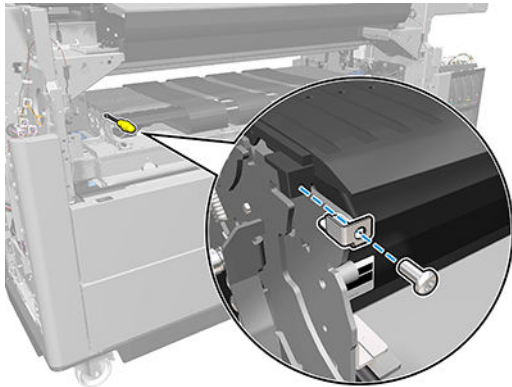


17. Remove the front roller at an angle through the hole in the side.

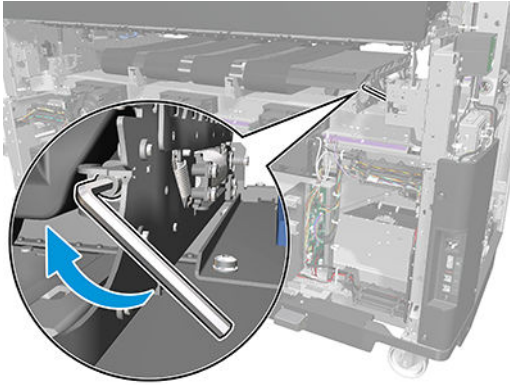


18. Clean the Front roller with alcohol to remove any plastic particles that may be in contact with the Intermediate support roller.

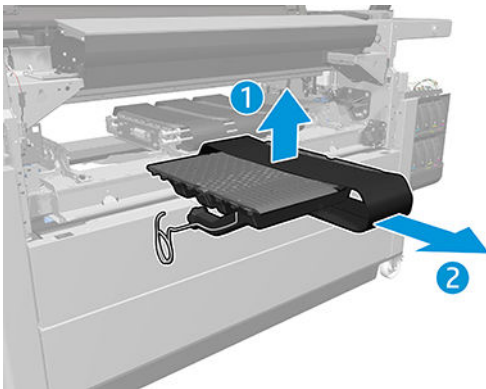
19. Remove the grounding.



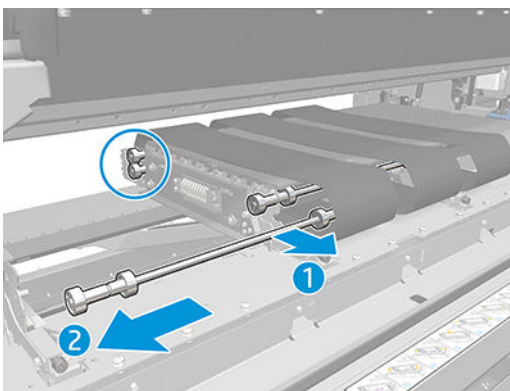
20. Tighten the short screws to remove the tension of the spring from the platen.



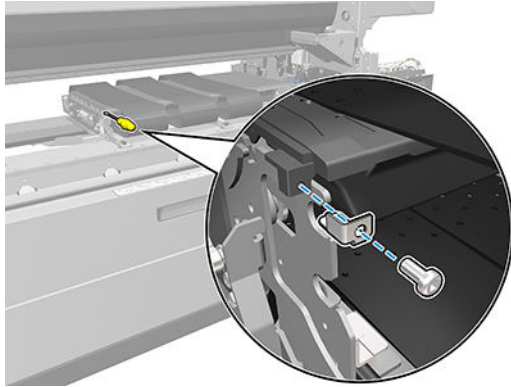
21. Remove the [Vacuum fan assembly \(CZ309-67087\)](#) on page 925.
22. Remove the left platen with one belt.



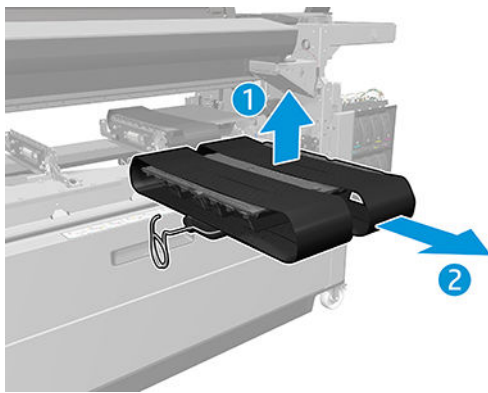
23. Remove the two front and rear bars.



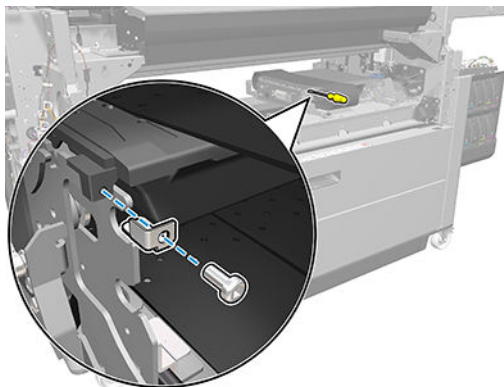
24. Remove the grounding.



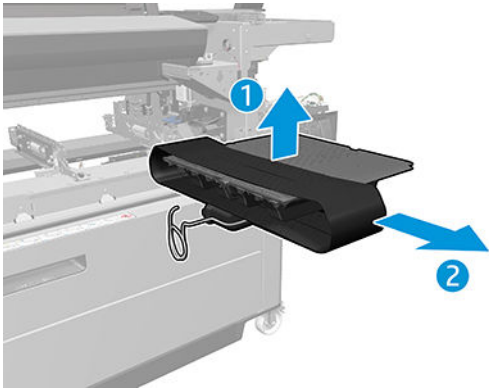
25. Remove the middle platen with two belts.



26. Remove the grounding.

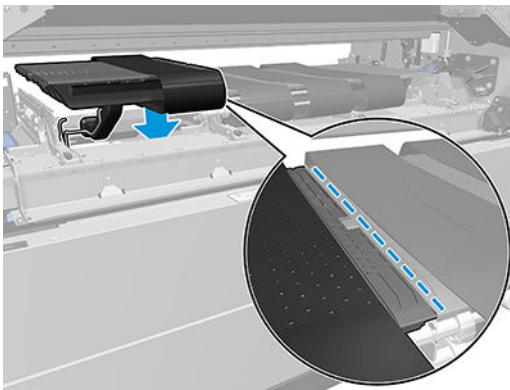


27. Remove the right platen with one belt.

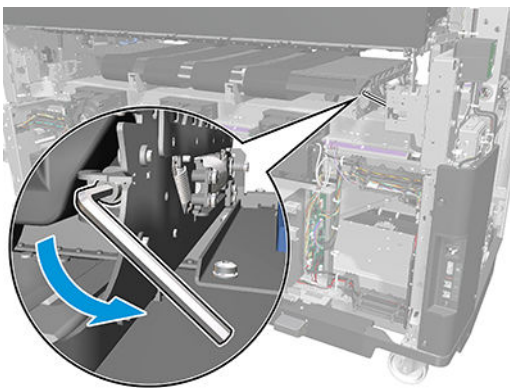


Installation

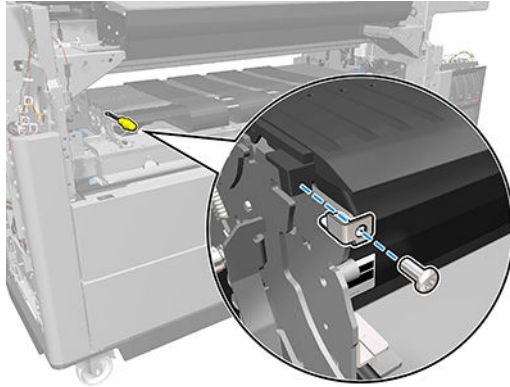
1. Put the platen back, ensuring that it is level.



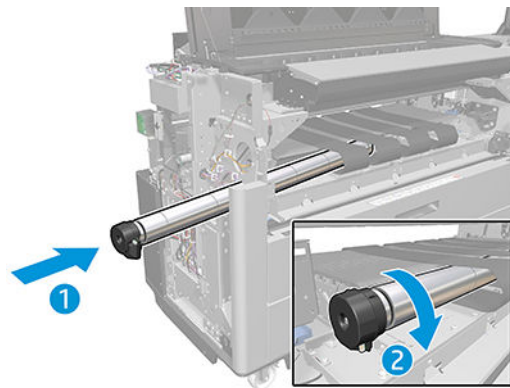
2. Untighten the short screws to add tension to the spring from the platen.



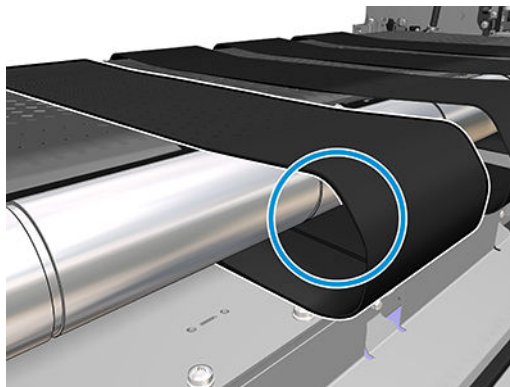
3. Place the grounding.



4. Put back the front roller, and rotate it into position.

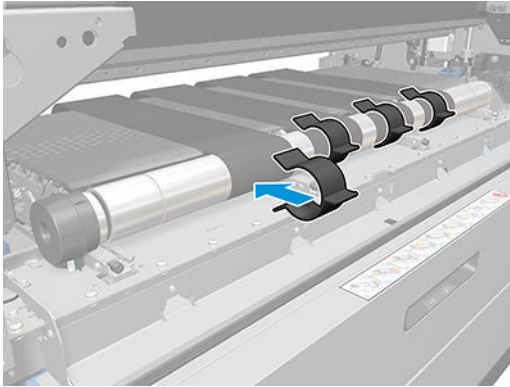


5. Ensure that the belt is well positioned on the roller.

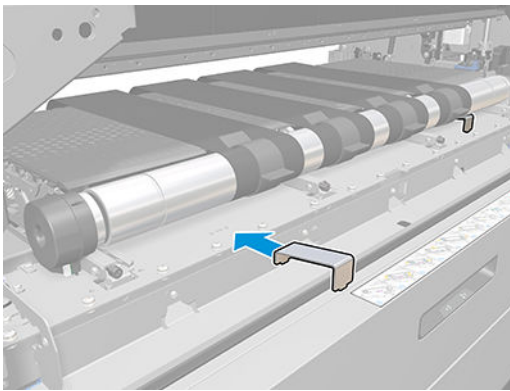


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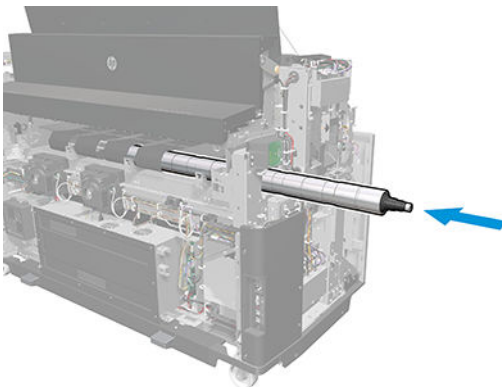
6. Use the plastic tool to position the belt.



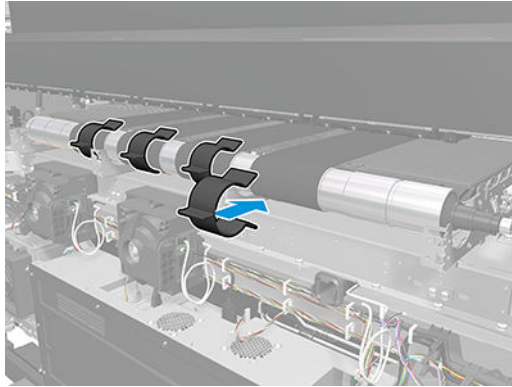
7. Insert the extra tool to hold the roll inserted.



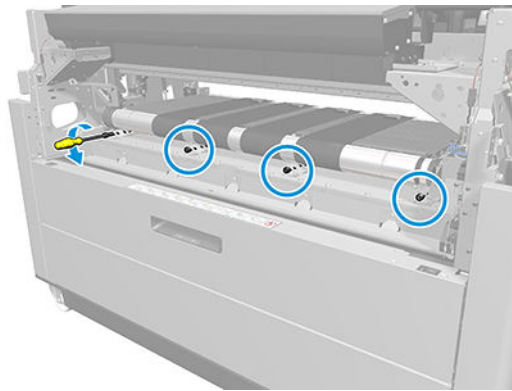
8. Insert the other roller.



9. Change the plastic tools to the other side.



10. Remove the extra tools (from step 7), then loosen the long screws.



Waste management tubes (CZ309-67210)

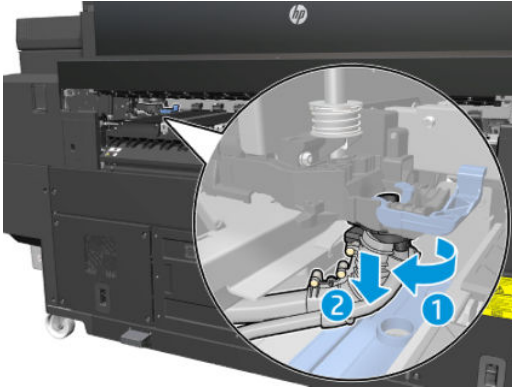
Please note that for PWXL 4x00/3900 units, this procedure only applies for SNs < MY7688Q008.

Removal

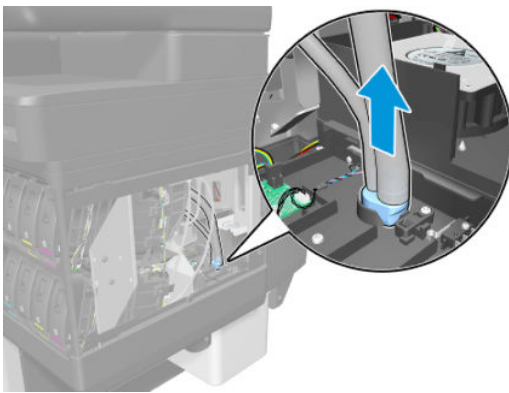
1. Remove the [Right panel cover \(CZ309-67150\)](#) on page 648.
2. Remove the [Capping platform \(CZ309-67093\)](#) on page 977.
3. Remove the [Spittoon beam \(CZ309-67095\)](#) on page 981.

For HP-authorized personnel only

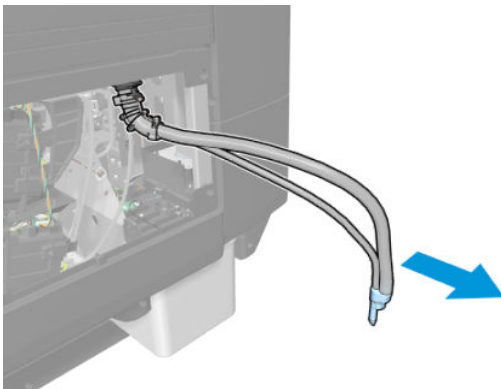
4. Unplug the waste tube from the Spittoon beam support.



5. Unplug the waste tube from the Diverter.



6. Remove the waste tube.



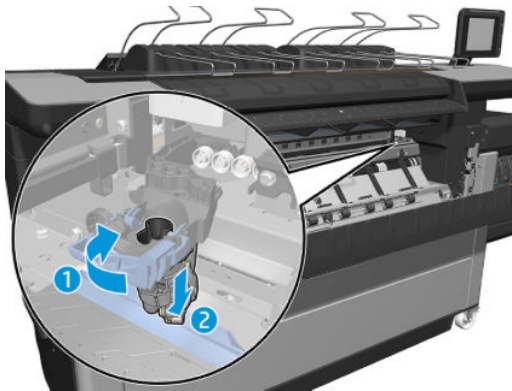
Installation

- ▲ To install, perform the removal operation in reverse.

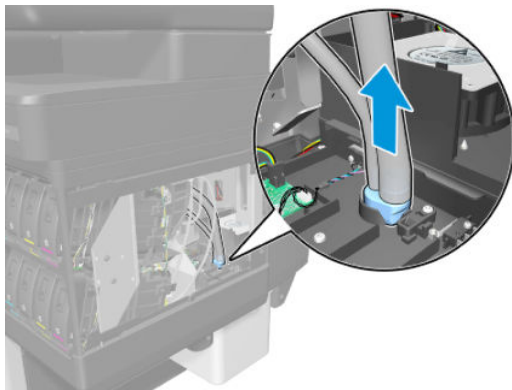
Waste management tubes (CZ309-67210) (PWXL 4x00/3900s with SNs \geq MY7688Q008)

Removal

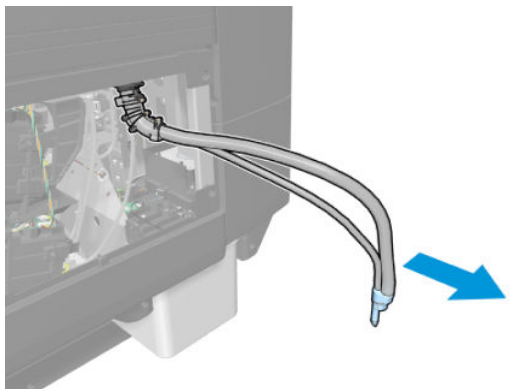
1. Remove the [Right panel cover \(CZ309-67150\)](#) on page 648.
2. Remove the [Spittoon beam \(CZ309-67095\)](#) (PWXL 4x00/3900s with SNs \geq MY7688Q008) on page 984.
3. Unplug the waste tube from the Spittoon beam support.



4. Unplug the waste tube from the Diverter.




5. Remove the waste tube.



Installation

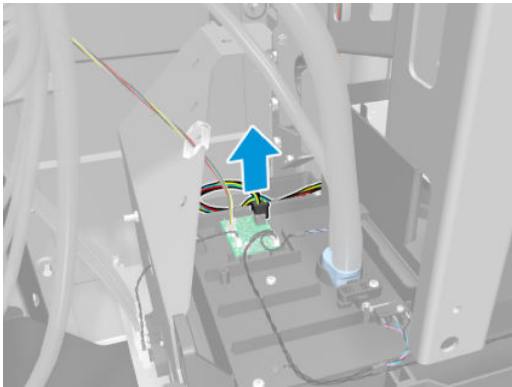
- ▲ To install, perform the removal operation in reverse.

Waste system (CZ309-67117)

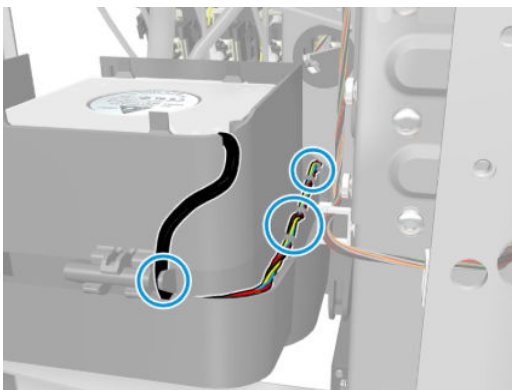
 **IMPORTANT:** Please acquire CZ309-67331 - Waste System Foam Service Kit in order to complete this activity.

Removal

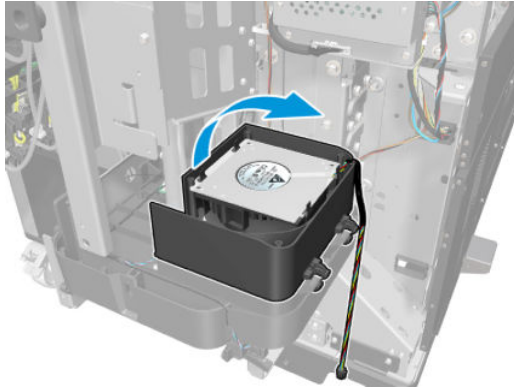
1. Remove the [Bottom right cover \(CZ309-67048\) on page 651](#).
2. Remove the [Rear-right cover \(CZ309-67050\) on page 653](#).
3. Unplug fan housing cable from pcb spider.



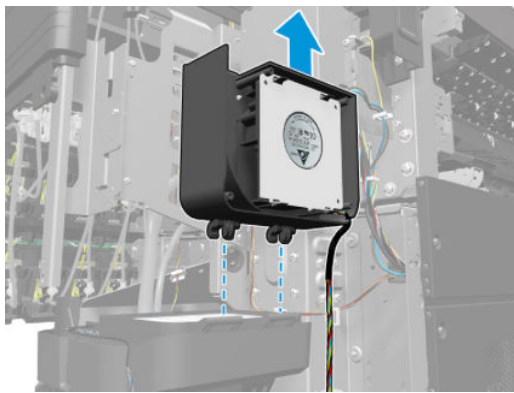
4. Unroute fan housing cable.



5. Open fan housing.



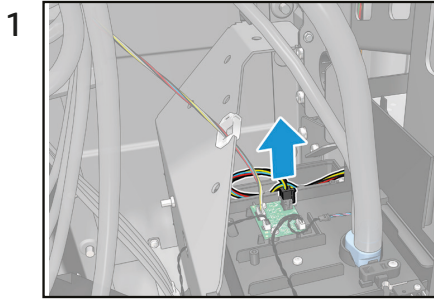
6. Unclip and remove fan housing.



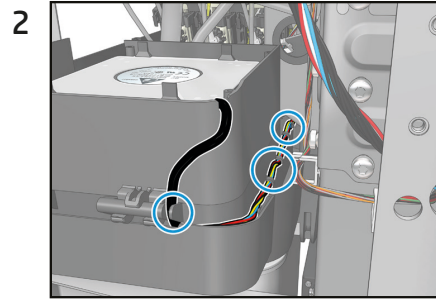
Installation

- ▲ To install, perform the removal operation in reverse.

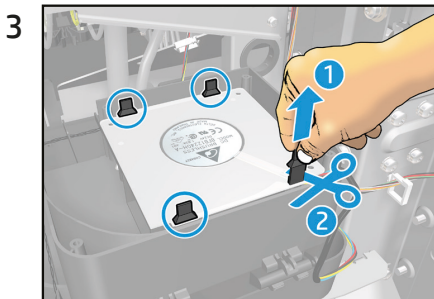
Waste system foam (CZ309-67331)



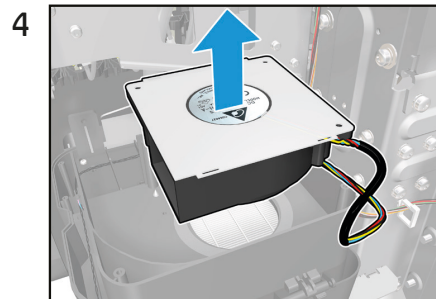
1 Open the WM chassis and unplug the connector.



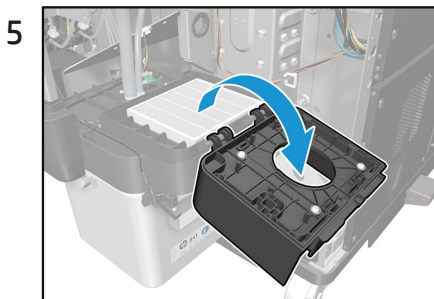
2 Unroute the cables.



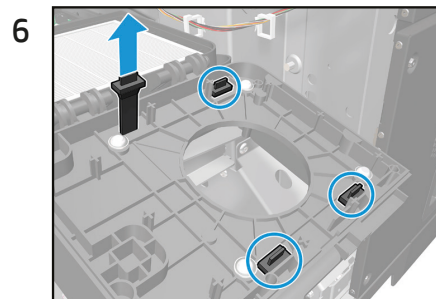
3 Caution! You need to cut the 4 standoffs carefully.



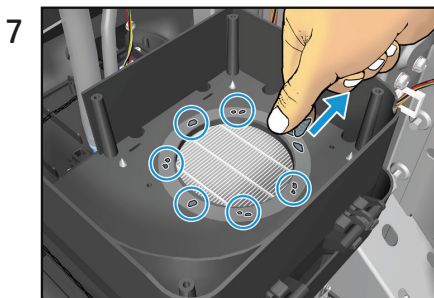
4 Remove the fan assy (the fan with its plastic cover).



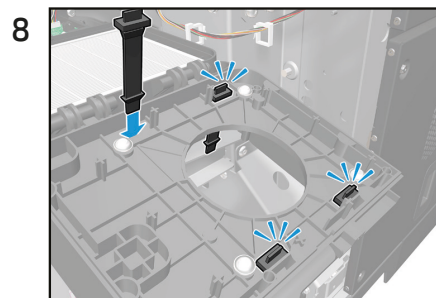
5 Open the chassis.



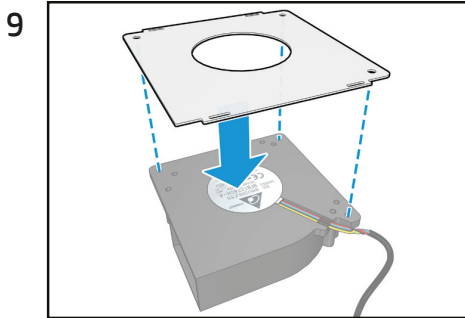
6 Remove the 4 x standoffs.



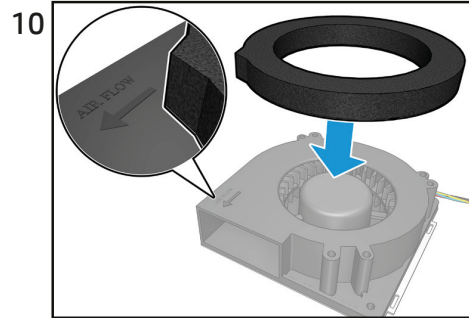
7 Caution! Remove any remaining fan foam on the chassis.



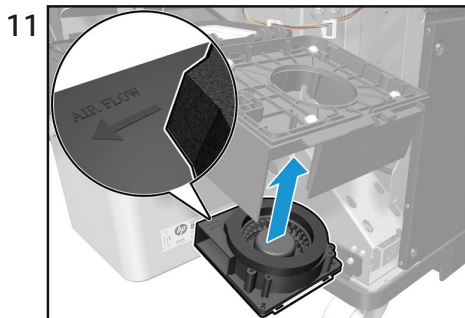
8 Put the 4 x new standoffs in position.



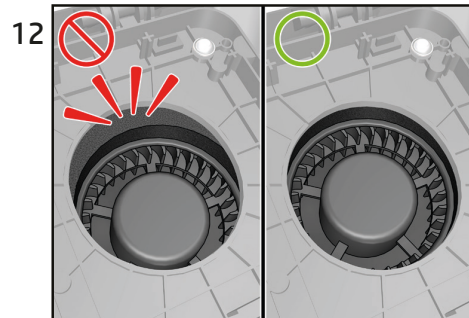
Assemble the new plastic cover with the new fan. Caution! Align the 3 holes. Only 1 position is possible.



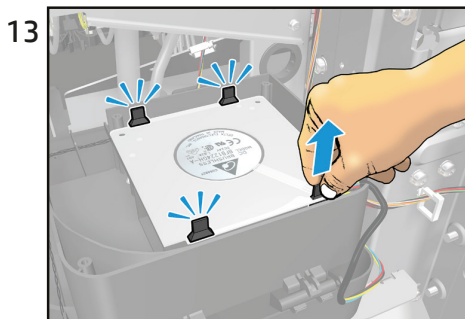
Stick the foam on the fan.



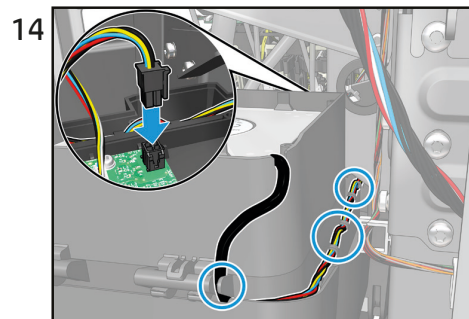
Stick the foam on the chassis.



Caution! The fan hole needs to be aligned with the chassis hole.



Insert the standoff through the plastic fan cover.




Route the cables again and connect them.

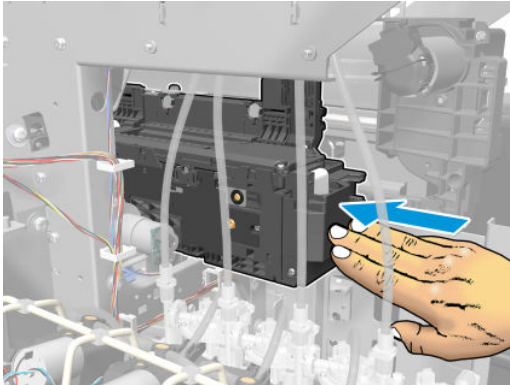
Capping motor and idle (CZ309-67094)

Removal

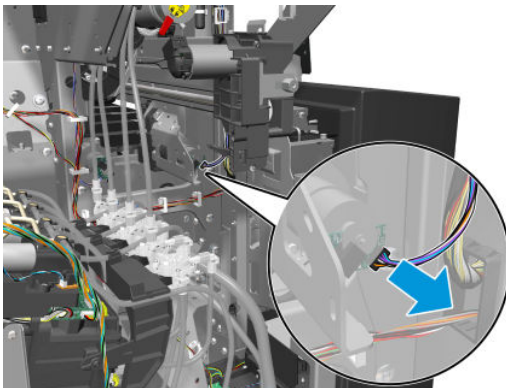
1. Remove the [Right cover assembly \(CZ309-67047\)](#) on page 649.
2. Remove the [Capping platform \(CZ309-67093\)](#) on page 977.

 **NOTE:** For PWXL 4x00/3900 units with SNs \geq MY7688Q008, remove the [Capping platform \(CZ309-67093\)](#) (PWXL 4x00/3900s with SNs \geq MY7688Q008) on page 980.

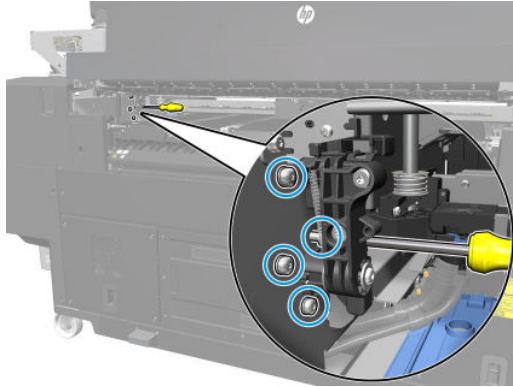
3. Move the carriage to the center.




4. Disconnect the encoder board cable.

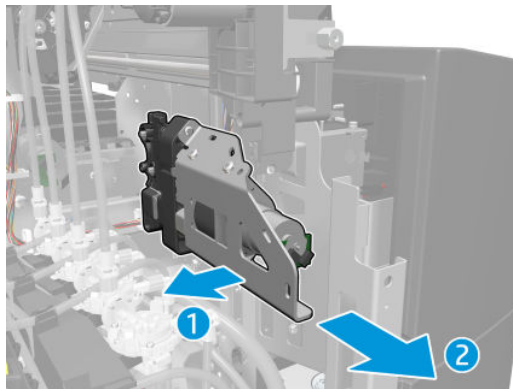


5. Remove four screws from the right cap tray bracket spacer.

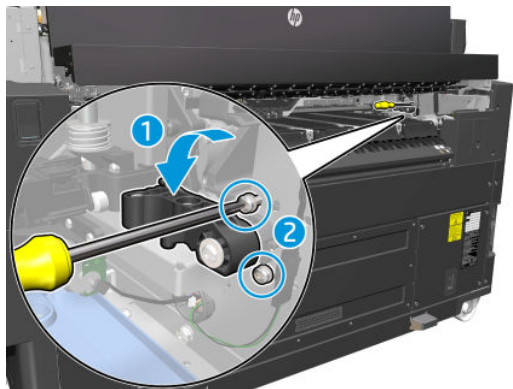



 **NOTE:** For PWXL 4x00/3900s with SNs \geq MY7688Q008, open the Service door and remove them from there.

6. Remove the right cap.



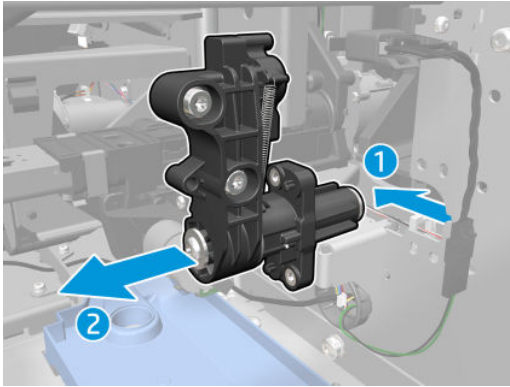
7. Remove two screws from the left cap tray bracket spacer.



 **NOTE:** For PWXL 4x00/3900s with SNs \geq MY7688Q008, open the MO arms and the Top cover and remove them from there.

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8. Remove the left cap.



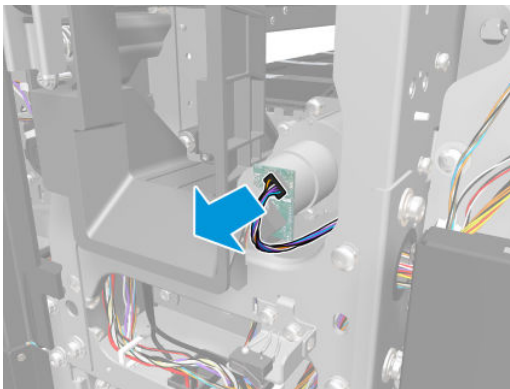
Installation

- ▲ To install, perform the removal operation in reverse.

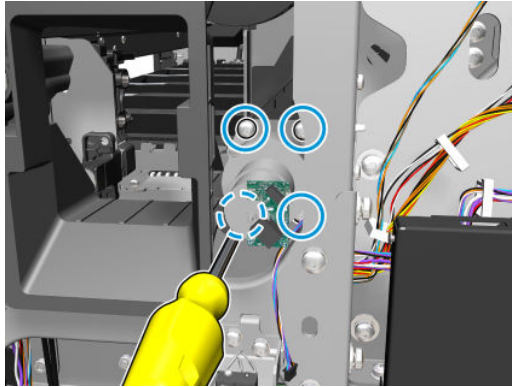
Spittoon guide assembly left (CZ309-67098)

Removal

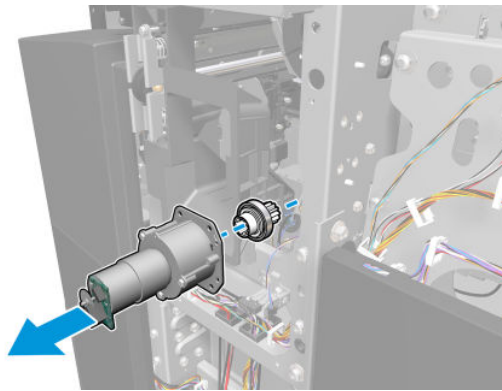
1. Remove the [Spittoon chain assembly left \(CZ309-67096\) on page 987](#).
2. Remove the [Left cover assembly \(CZ309-67039\) on page 639](#).
3. Disconnect the encoder board cable.



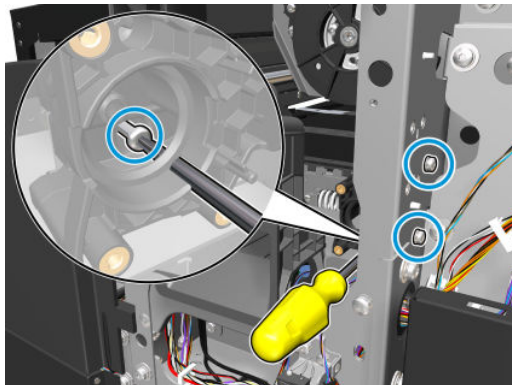
4. Remove four screws from the motor.



5. Remove the motor and the output gear.

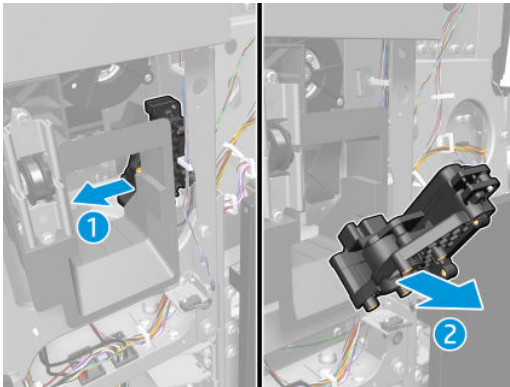


6. Remove three screws from the left spittoon guide.



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7. Remove the left spittoon guide.



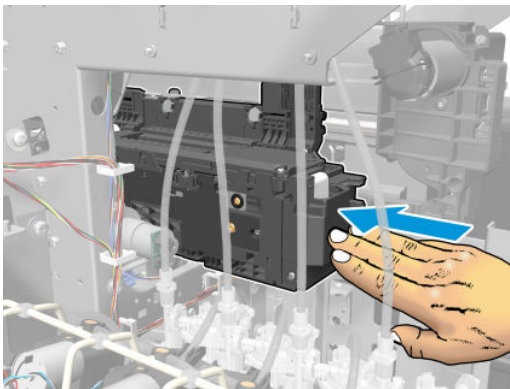
Installation

- ▲ To install, perform the removal operation in reverse.

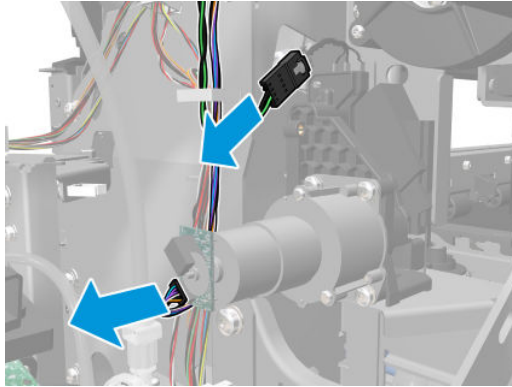
Spittoon guide assembly right (CZ309-67099)

Removal

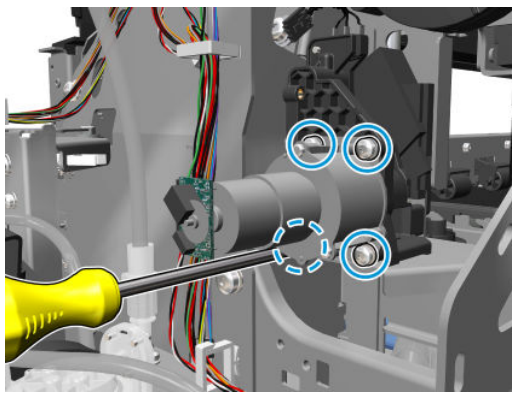
1. Remove the [Spittoon chain assembly right \(CZ309-67097\)](#) on page 988.
2. Remove the [Right cover assembly \(CZ309-67047\)](#) on page 649.
3. Move the carriage to the center.



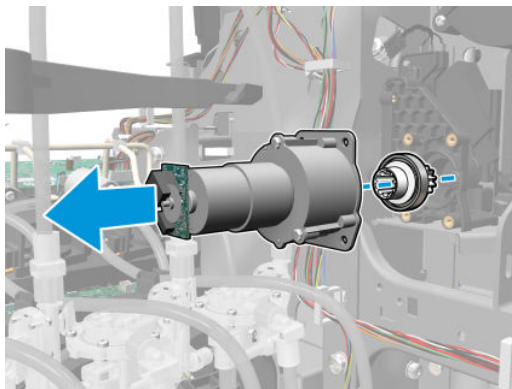
4. Disconnect the encoder board cable and the switch safety cable.



5. Remove four screws from the motor.

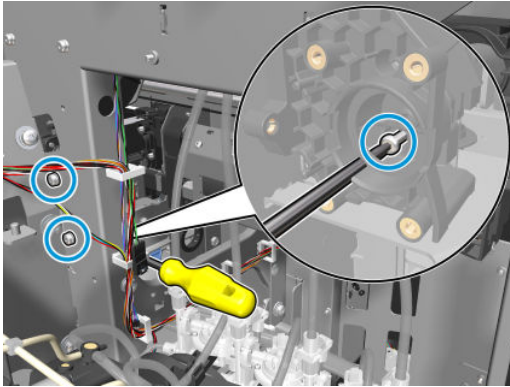


6. Remove the motor and the output gear.

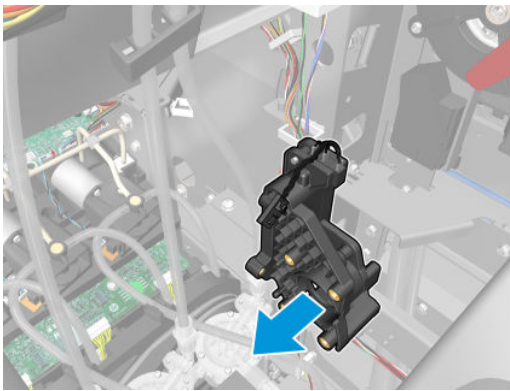


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7. Remove three screws from the left spittoon guide.



8. Remove the left spittoon guide.



Installation

- ▲ To install, perform the removal operation in reverse.

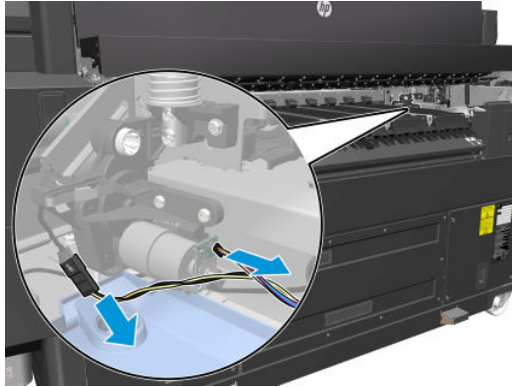
Spittoon static transmission (CZ309-67100)

Please note that for PWXL 4x00/3900 units, this procedure only applies for SNs < MY7688Q008.

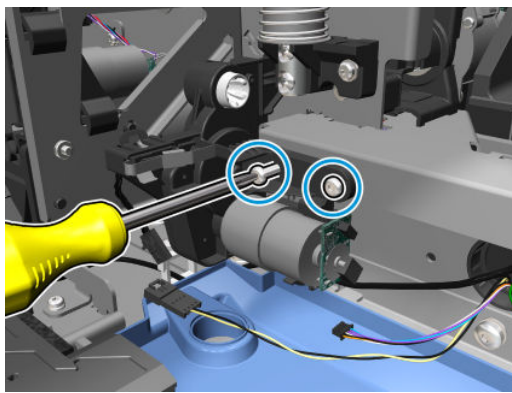
Removal

1. Remove the [Spittoon chain assembly left \(CZ309-67096\) on page 987](#).

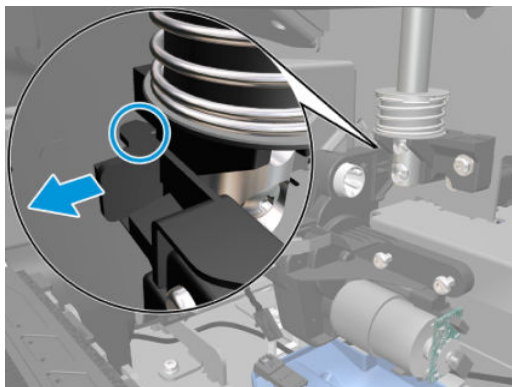
2. Disconnect the encoder board cable and the switch safety cable.



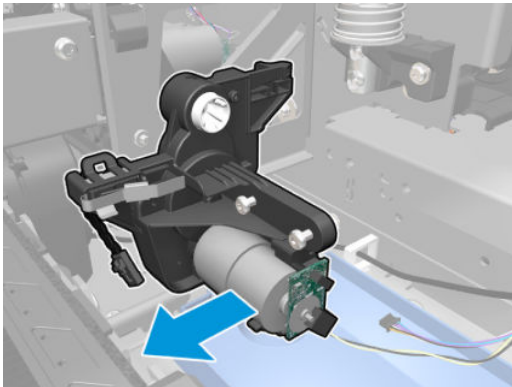
3. Unscrew two (captive) screws from the static transmission support.



4. Unclip it.



5. Remove the spittoon static transmission.



An alternative way to remove the Spittoon static transmission

1. Raise the print bar. In most cases an intermittent error can occur. You can cycle the power, and let the printer enter a Ready state. If you bypass the 2 Top paper loop door sensors and the printer still initializes, wait for the print bar to go all the way up and then turn off the printer using the power switch on the back. If it does not get that far and it errors out before that, raise the print bar in service mode.
2. Remove the [Top paper-loop door \(CZ309-67052\) on page 660](#).
3. Remove the [Top-right exterior cover \(CZ309-67044\) on page 646](#).
4. Remove the [Top-left exterior cover \(CZ309-67036\) on page 637](#).
5. Loosen the [Top-right cover \(CZ309-67046\) on page 647](#) and the [Top-left cover \(CZ309-67038\) on page 638](#).
6. Remove the [Right-interior side cover \(CZ309-67054\) on page 663](#).

Installation

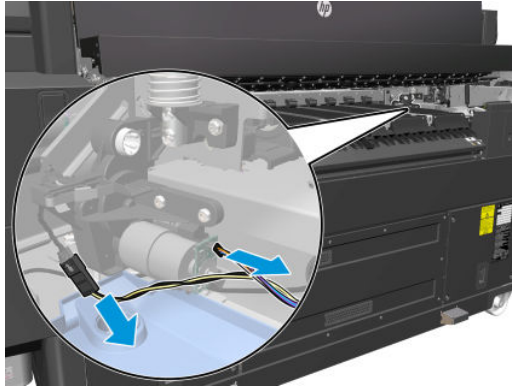
- ▲ To install, perform the removal operation in reverse.

Spittoon static transmission (CZ309-67100) (PWXL 4x00/3900s with SNs \geq MY7688Q008)

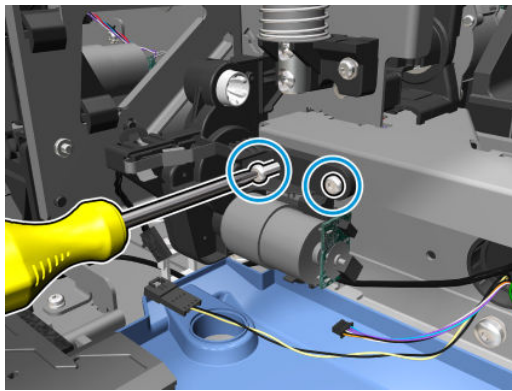
Removal

1. Remove the [Spittoon chain assembly left \(CZ309-67096\) \(PWXL 4x00/3900s with SNs \$\geq\$ MY7688Q008\) on page 987](#).
2. Remove the [Capping platform \(CZ309-67093\) \(PWXL 4x00/3900s with SNs \$\geq\$ MY7688Q008\) on page 980](#).

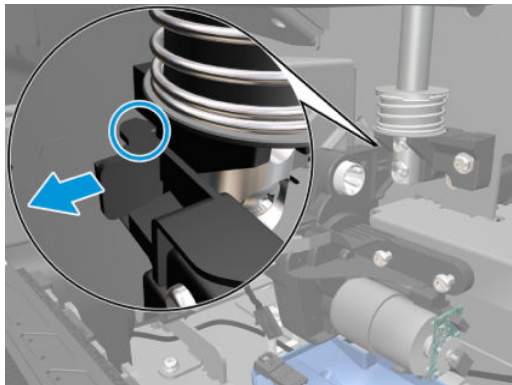
3. Disconnect the encoder board cable and the switch safety cable.



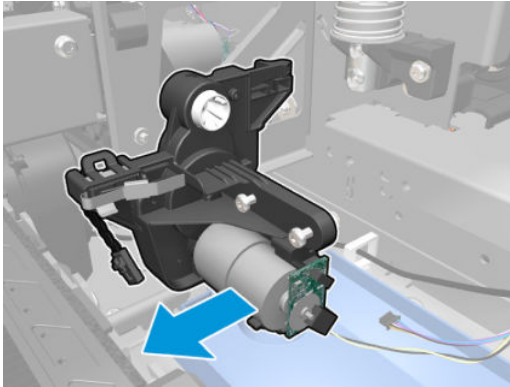
4. Unscrew two (captive) screws from the static transmission support.



5. Unclip it.



6. Remove the spittoon static transmission.



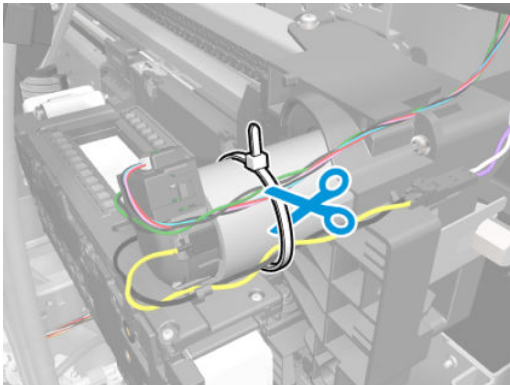
Installation

- ▲ To install, perform the removal operation in reverse.

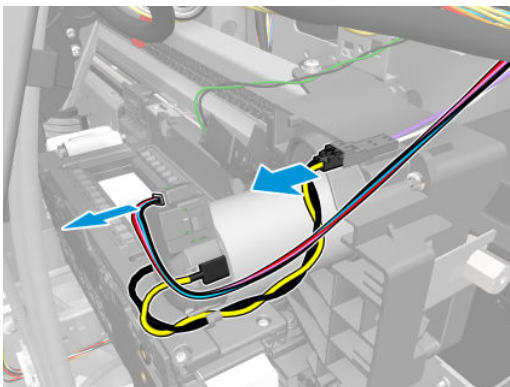
Service carriage motor (CZ309-67106)

Removal

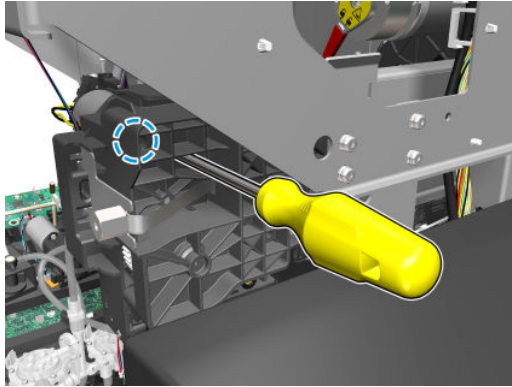
1. Remove the [Right cover assembly \(CZ309-67047\)](#) on page 649.
2. Cut the latch.



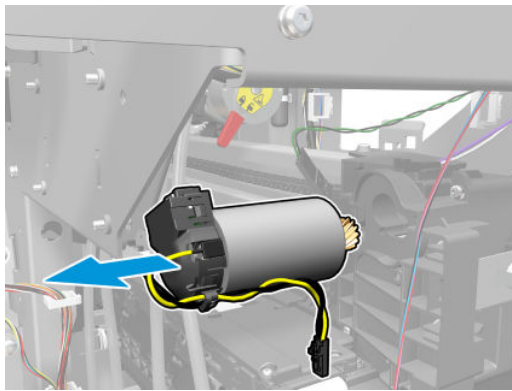
3. Disconnect two cables from the motor.



4. Remove two screws from the rear of the support.



5. Remove the service carriage motor.



Installation

- ▲ To install, perform the removal operation in reverse.

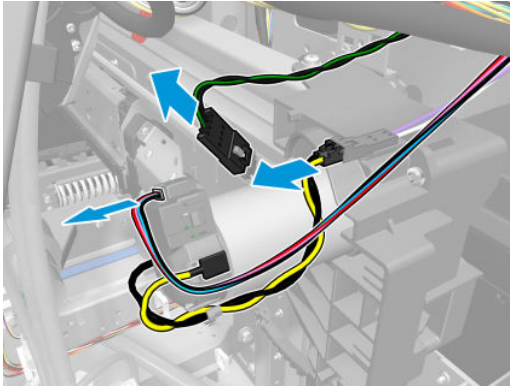
Belt transmission assembly (CZ309-67114)

Removal

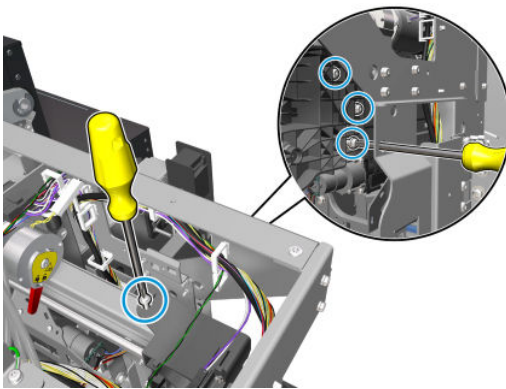
1. Remove the printheads as described in [Printheads on page 633](#).
2. Remove the [Rear-right cover \(CZ309-67050\) on page 653](#).
3. Remove the [Service belt \(CZ309-67108\) on page 975](#).
4. Remove the [Carriage encoder strip \(CZ309-67101\) on page 957](#).

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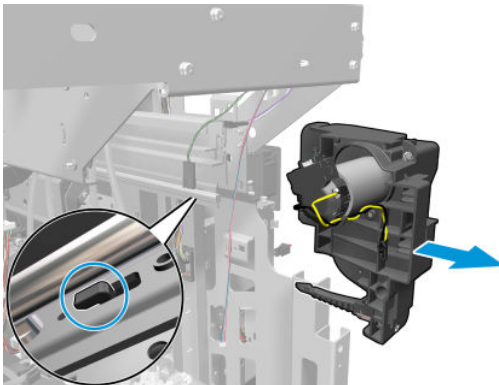
5. Disconnect three cables.



6. Remove four screws from the belt transmission assembly.



7. Remove the belt transmission assembly.



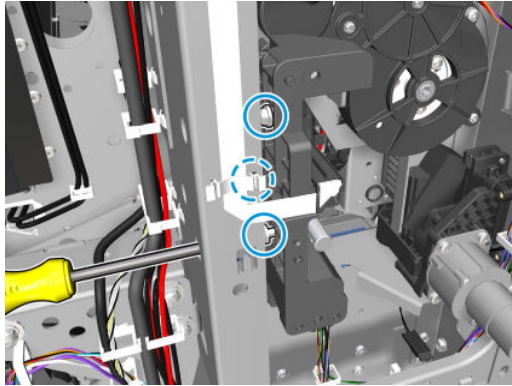
Installation

- ▲ To install, perform the removal operation in reverse.

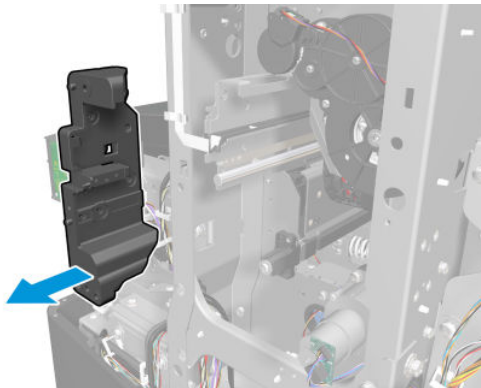
Carriage impelling assembly (CZ309-67102)

Removal

1. Remove the printheads as described in [Printheads on page 633](#).
2. Remove the [Rear-left cover \(CZ309-67042\) on page 644](#).
3. Remove the [Service belt tensioner \(CZ309-67107\) on page 970](#).
4. Remove the [Belt transmission assembly \(CZ309-67114\) on page 1025](#).
5. Remove three screws from the belt tensioner base.



6. Remove the belt tensioner base.



Installation

- ▲ To install, perform the removal operation in reverse.

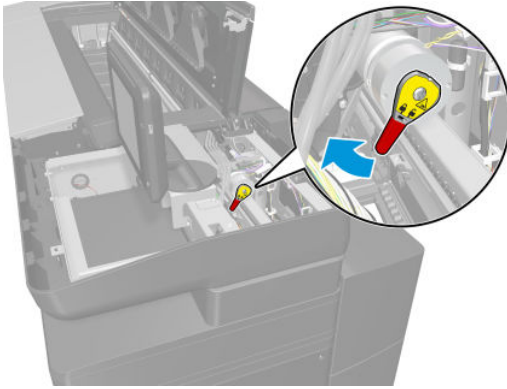
Capping station stopper (CZ309-67118)

Removal

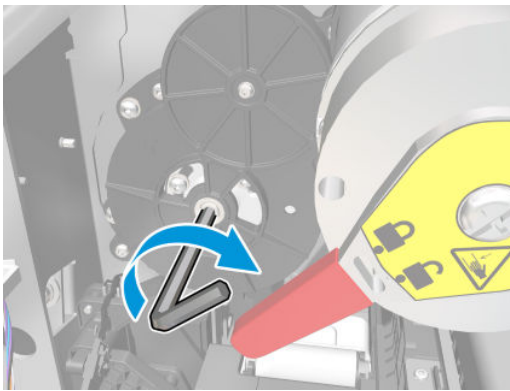
1. Remove the printheads as described in [Printheads on page 633](#).
2. Remove the [Top-right exterior cover \(CZ309-67044\) on page 646](#).

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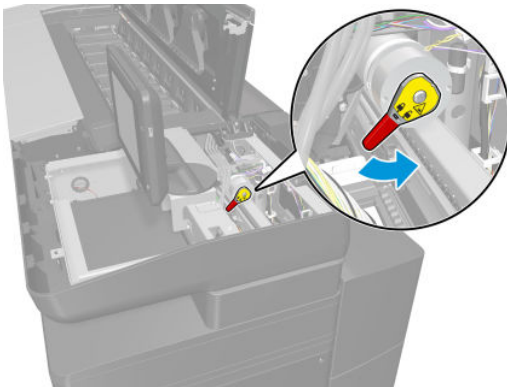
3. Unlock the print-bar brake.



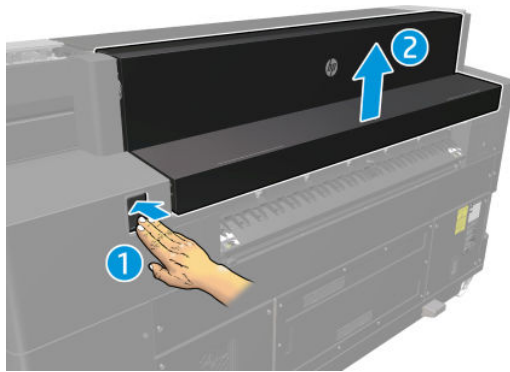
4. Turn the brake screw with the tool to lift the print bar to its top position.



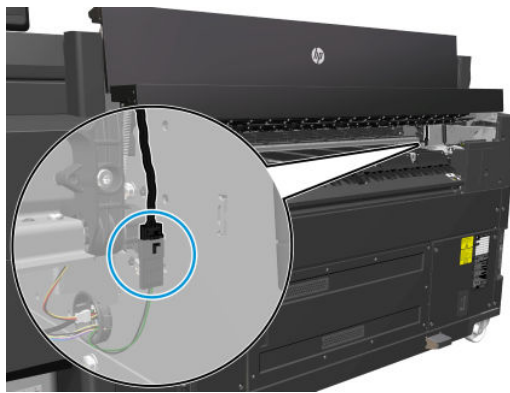
5. Lock the print-bar brake.



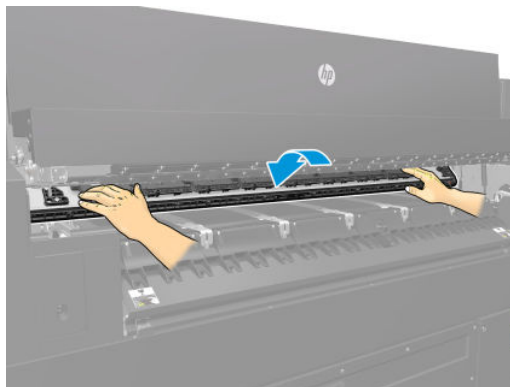
6. Close the printhead latches and the top door. Open the door structure.



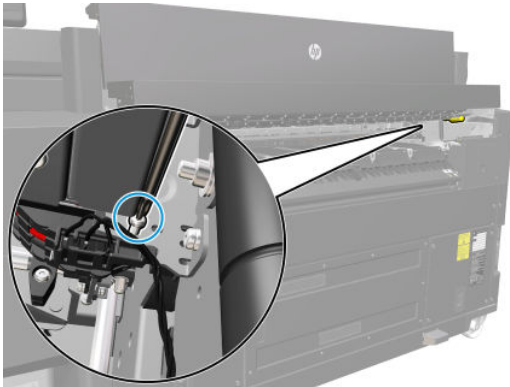
7. Unplug the sensor cable.



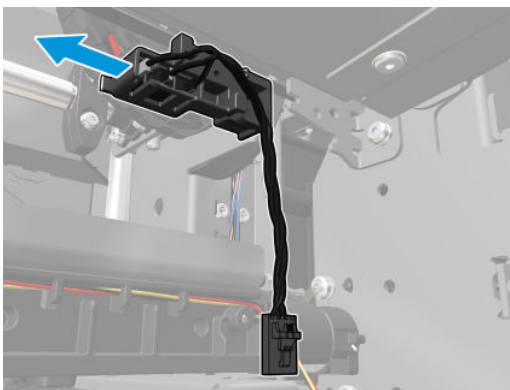
8. Manually lower the cap tray.



9. Remove a screw from the capping station stopper.



10. Remove the capping station stopper.



Installation

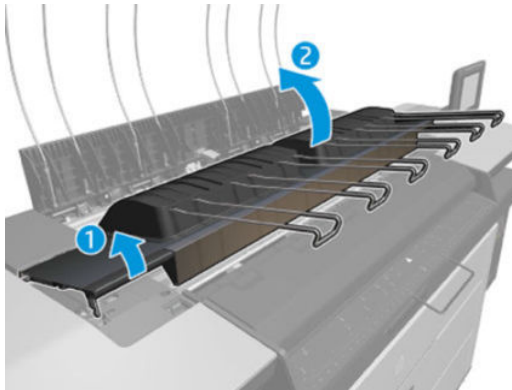
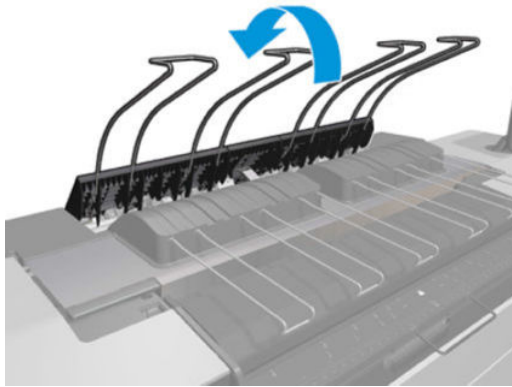
- ▲ To install, perform the removal operation in reverse.

Capping station stopper (CZ309-67118) (PWXL 4x00/3900s with SNs \geq MY7688Q008)

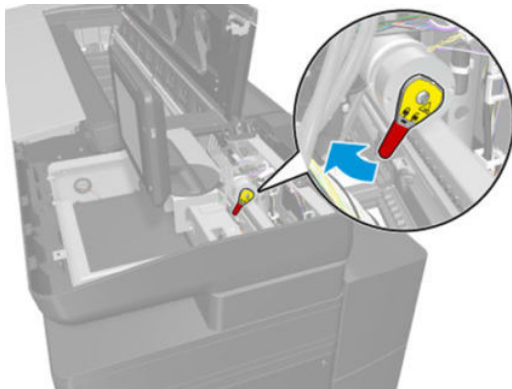
Removal

1. Remove the printheads as described in [Printheads on page 633](#).
2. Remove the [Top-right exterior cover \(CZ309-67044\) on page 646](#).
3. Remove the Left stacker cover. See [Paper-output stacker cover left \(CZ309-67202\) on page 1241](#).

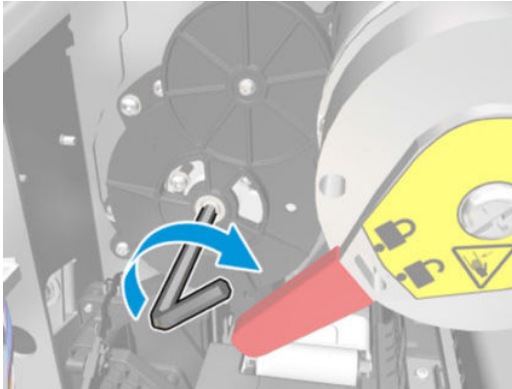
4. Open the M0 arms and the Top cover.



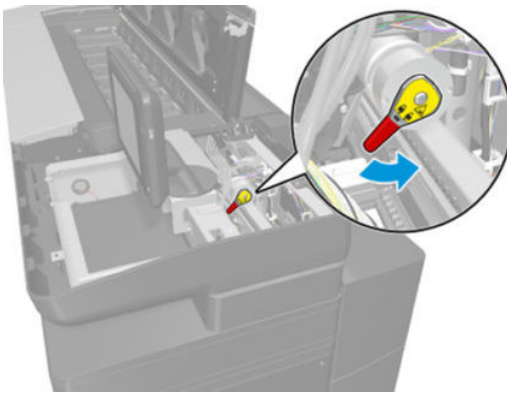
5. Unlock the print-bar brake.



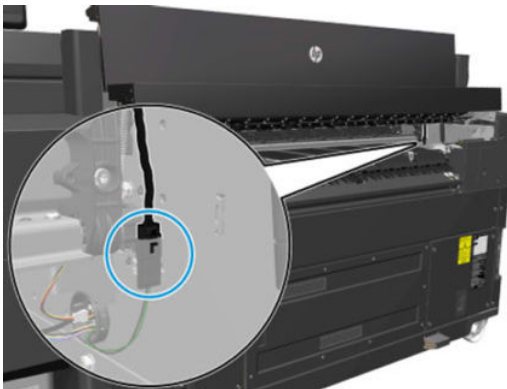
6. Turn the brake screw with the tool to lift the print bar to its top position.



7. Lock the print-bar brake.

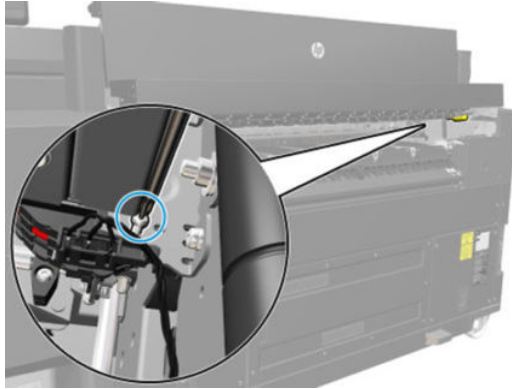


8. Unplug the sensor cable from the front.

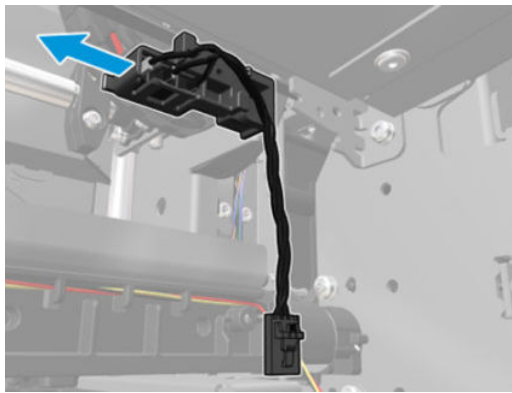


9. Open the Front paper-loop door and manually lower the cap tray.

10. Remove a screw from the Capping station stopper from the Service door.



11. Remove the Capping station stopper.



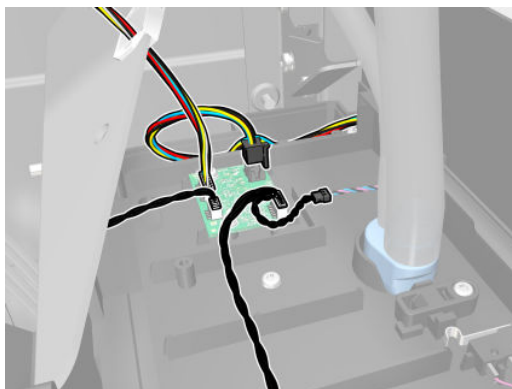
Installation

- ▲ To install, perform the removal operation in reverse.

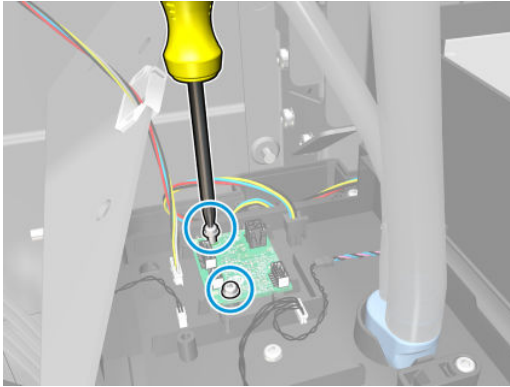
Waste Management PCA (CZ309-67116)

Removal

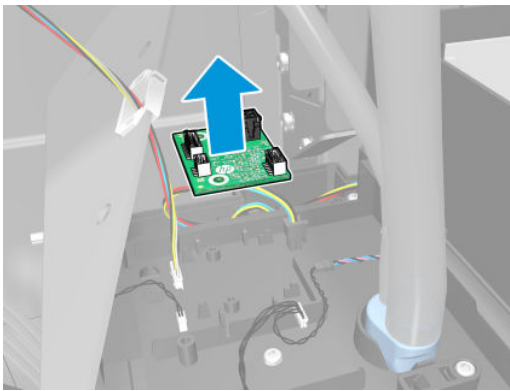
1. Remove the [Right panel cover \(CZ309-67150\)](#) on page 648.
2. Unplug all cables from the PCA.



3. Remove two screws from the PCA.



4. Remove the waste management PCA.



Installation

- ▲ To install, perform the removal operation in reverse.

Front panel (CZ309-67020, CZ309-67029, CZ309-67219)

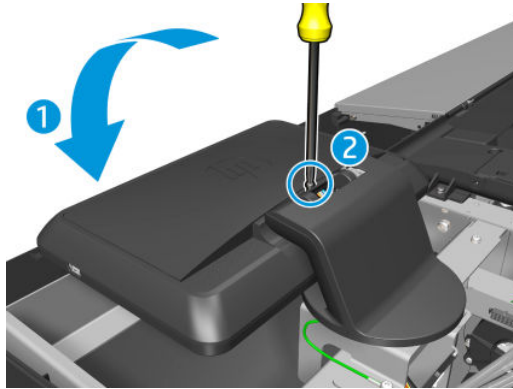
 **NOTE:** To replace the front panel, you will need three service kits:

- Front Panel – No Covers Service Kit (CZ309-67020)
- Front Panel Support Assembly Service Kit (CZ309-67029)
- Front Panel Structure Service Kit (CZ309-67219)

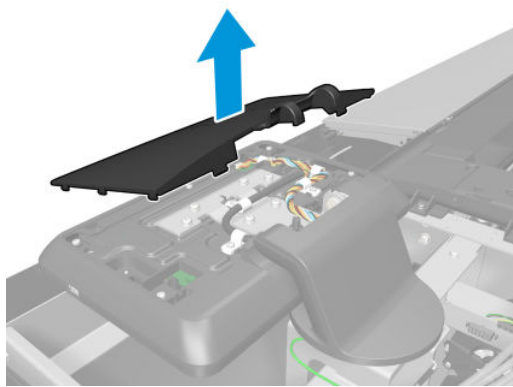
Removal

1. Remove the [Top-right exterior cover \(CZ309-67044\)](#) on page 646.
2. Remove the [Top-right exterior cover fixed trim \(CZ309-67062\)](#) on page 658.

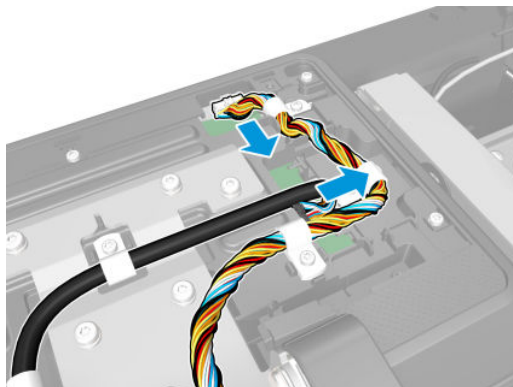
3. Fold the front panel and remove a screw from its rear cover.



4. Remove the front panel's rear cover.

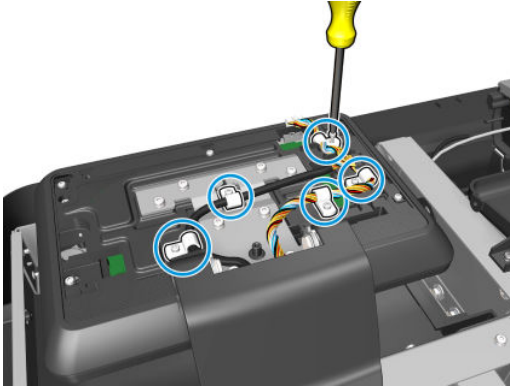


5. Unplug cables.

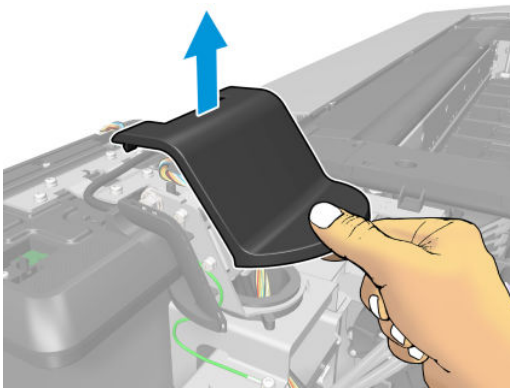


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6. Remove five clamps.



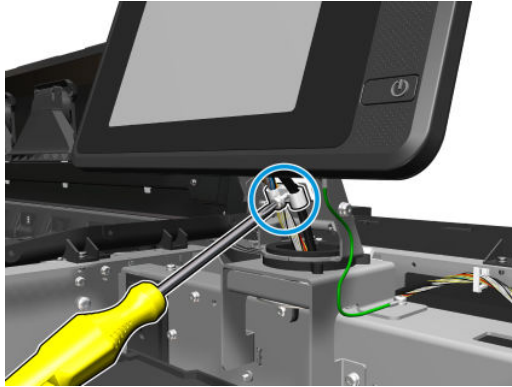
7. Remove the upper cover of the front-panel support.



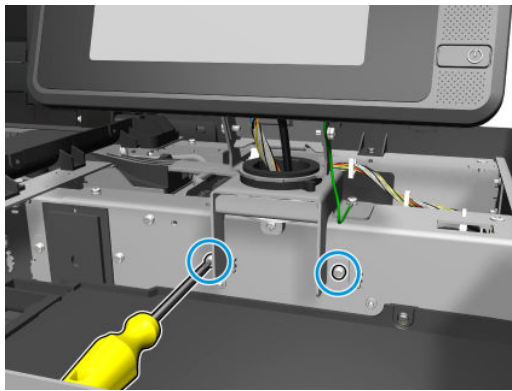
8. Unfold the front cover and remove the lower cover.



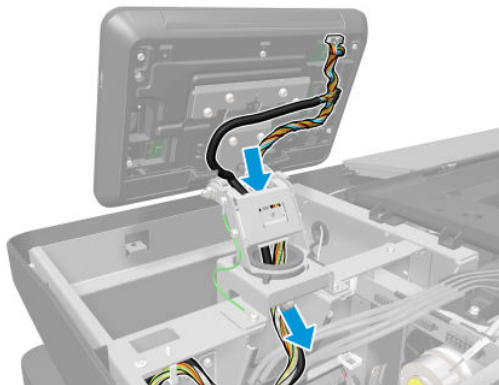
9. Remove another clamp.



10. Remove two screws from the front.

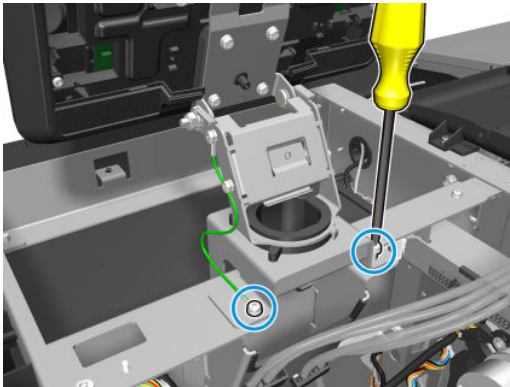


11. Unroute cables.

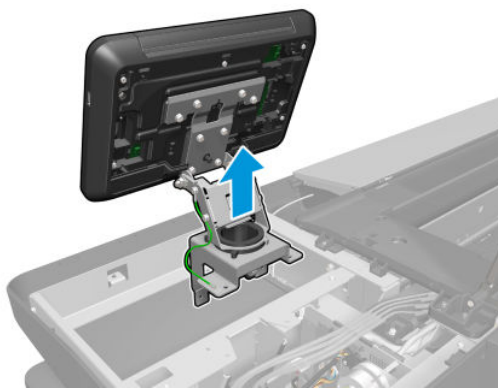


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12. Remove two screws from the rear.



13. Remove the front panel.



Installation

- ▲ To install, perform the removal operation in reverse.

Anti-vibration wheels (CZ309-67193)

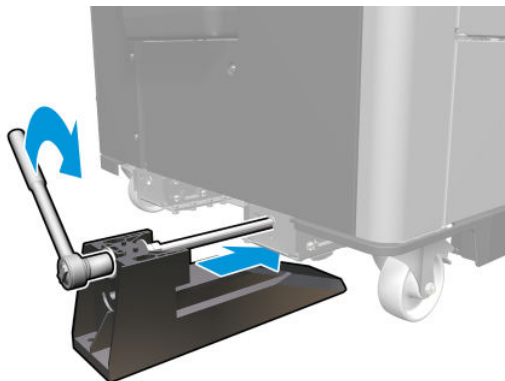
Installation

1. Remove the [Foot cover plate L \(CZ309-67222\)](#) on page 683.
2. Remove the [Foot cover plate R \(CZ309-67223\)](#) on page 684.

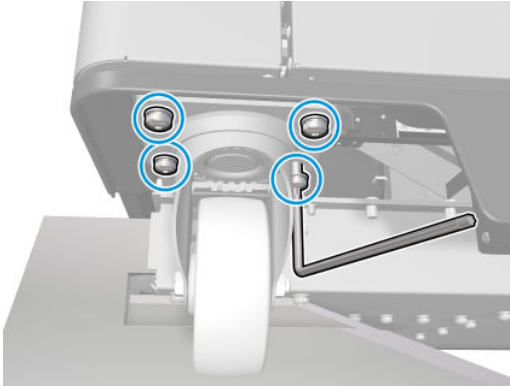
3. Select a plastic wedge (CZ309-40447) to lift the printer. Use only one wedge to lift one wheel at a time; do not lift two or more wheels simultaneously.



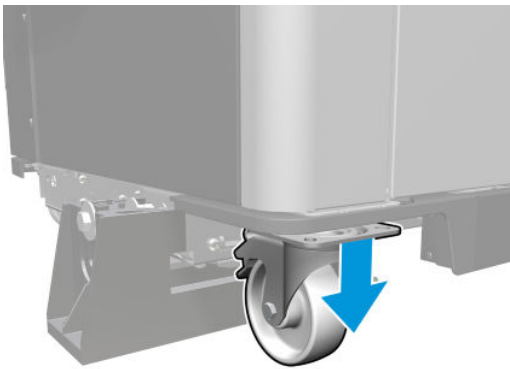
4. Place the wedge under the printer and lift the printer by tightening the M10x250 screw to the M10 rivet nut in the reinforcement strap (CZ309-00264).




5. Remove the four M6x12 screws that attach the wheel to the wheel pad top plate.

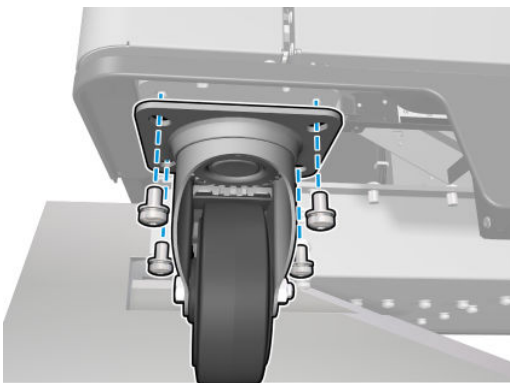


6. Remove the wheel.



7. Place the wheel from the vibration kit and attach it to the wheel pad top plate with the four screws that you just removed.

 **NOTE:** Bear in mind that the two front wheels (CZ309-60768) include a brake, but the two rear wheels (CZ309-60769) do not include a brake.



8. Remove the plastic wedge by loosening the M10x250 screw that attaches it to the M10 rivet nut in the reinforcement strap.
9. Repeat for each wheel.
10. Reinstall the left and right foot cover plates.

Removal

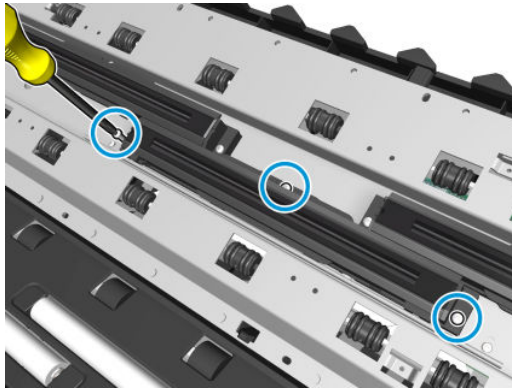
- ▲ To remove, perform the installation operation in reverse.

Scanner

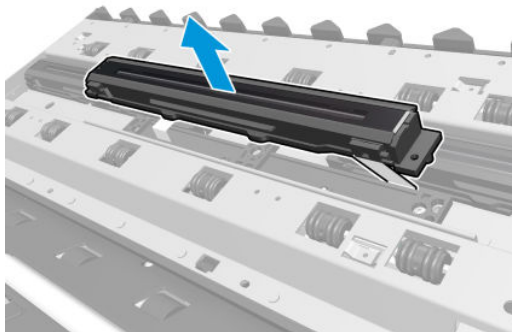
PageWide XL CIS module x5u (CZ309-67336)

Removal

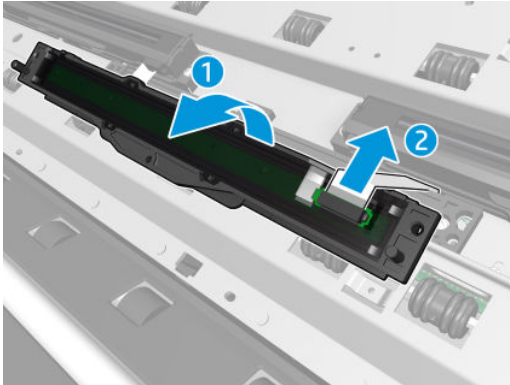
1. Remove the CIS tiles. See [T2500/T3500 Tiles kit \(CR359-67014\) on page 1058](#).
2. Unscrew the 3 CIS module screws.



3. Remove the CIS module.

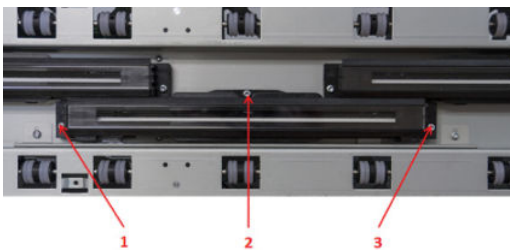


4. Rotate the module and unplug the cable.



Installation


1. Replace the CIS module and tighten the screws in order 1 to 3.



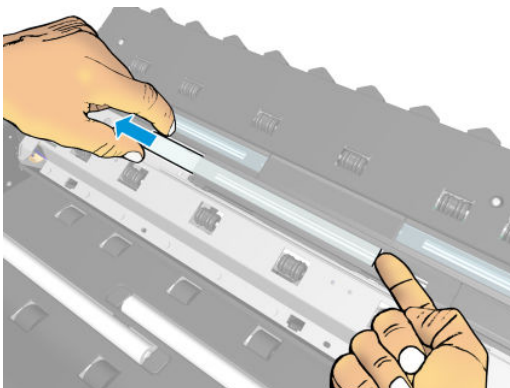
2. Re-calibrate the scanner.

PageWide XL Glass Plate (5 units) (CZ309-67342)

Removal

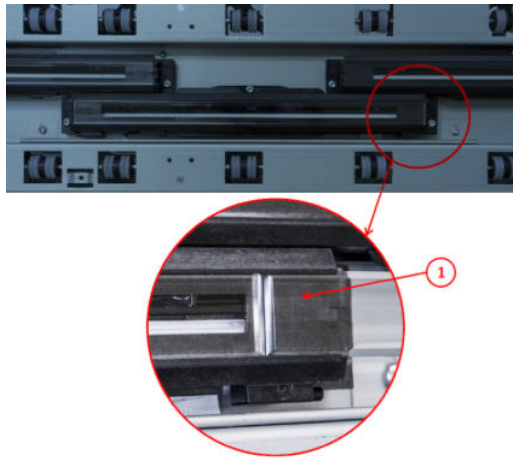
 **IMPORTANT:** Only replace the glass when in a “clean” environment, and be careful not to touch the underside of the glass.

1. Remove the CIS tiles. See [T2500/T3500 Tiles kit \(CR359-67014\)](#) on page 1058.
2. Slide the glass plate to remove it.



Replacement

1. Replace by carefully inserting the new glass, pushing the old one out.

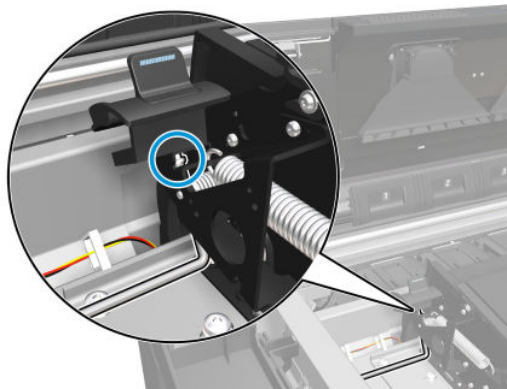


2. Re-calibrate the scanner.

Scanner latch button (CZ309-67251)

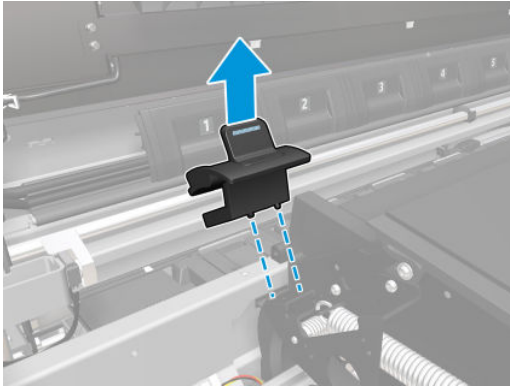
Removal

1. Remove the [Let printhead bezel \(CZ309-67060\)](#) on page 657.
2. Remove the latch button screw.



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3. Remove the scanner latch button.



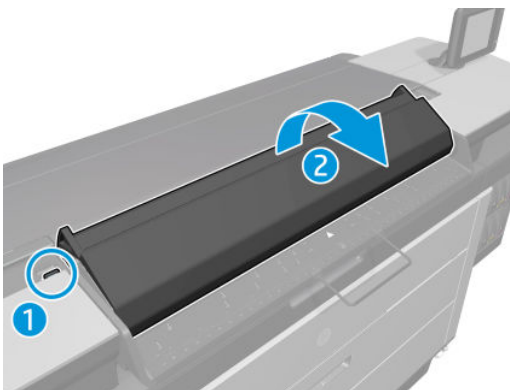
Installation

- ▲ To install, perform the removal operation in reverse.

Scanner cover (CZ309-67249)

Removal

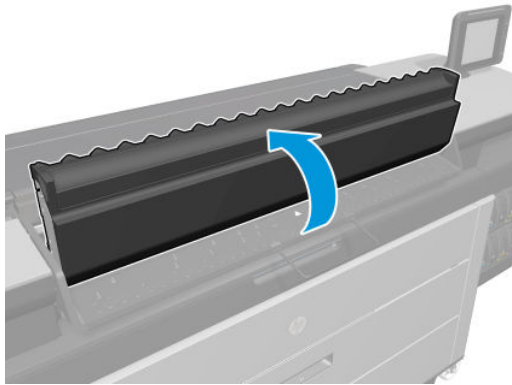
1. Open the scanner cover.



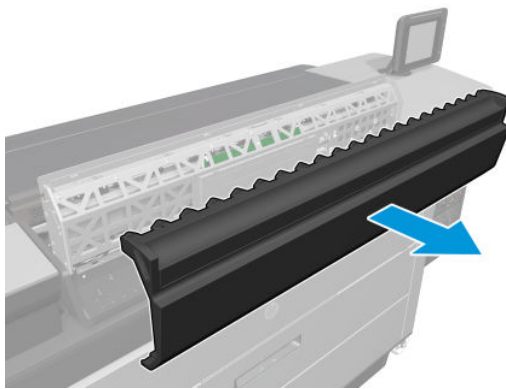
2. Remove four screws.



3. Close the scanner cover.



4. Remove the scanner cover.



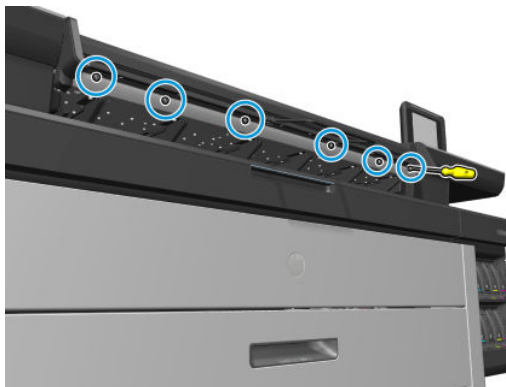
Installation

- ▲ To install, perform the removal operation in reverse.

Loading table (CZ309-67252)

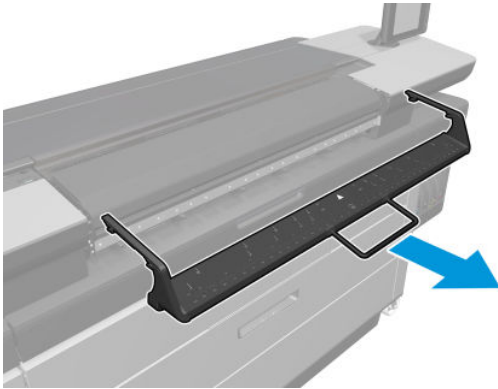
Removal

1. Loosen six screws.



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2. Pull out the loading table.



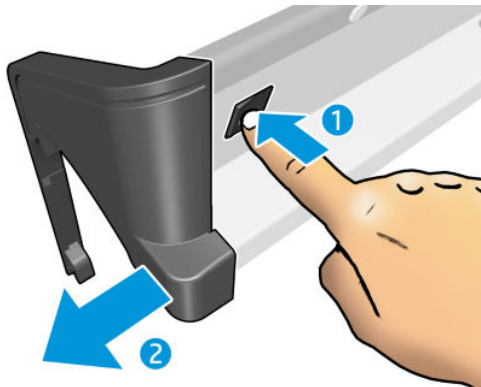
Installation

- ▲ To install, perform the removal operation in reverse.

Scanner shelf supports (CZ309-67250)

Removal

1. Remove the [Loading table \(CZ309-67252\) on page 1045](#).
2. Press the clip and simultaneously pull out the scanner shelf support.



Installation

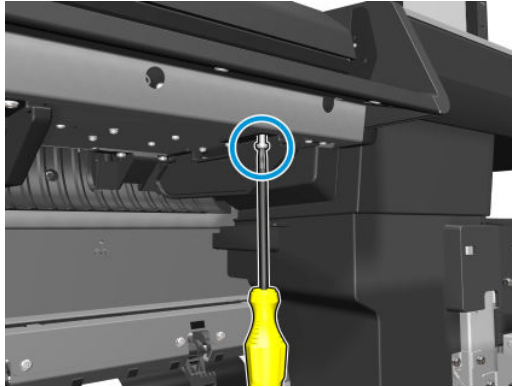
- ▲ To install, perform the removal operation in reverse.

Scanner BMP top rib (CZ309-67257)

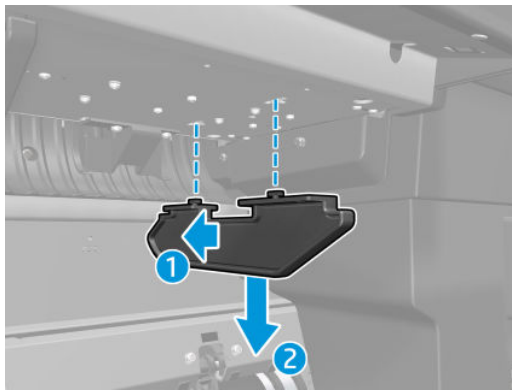
Removal

1. Remove the [Top paper-loop door \(CZ309-67052\) on page 660](#).

2. Remove a screw.



3. Remove the scanner BMP top rib.



Installation

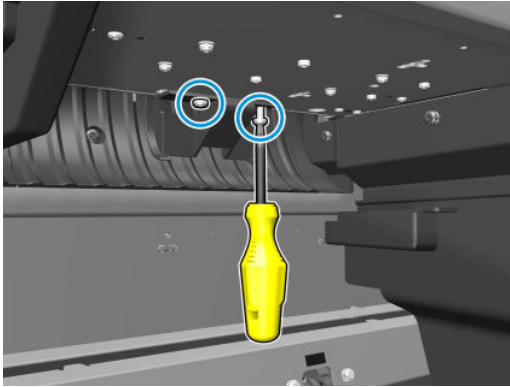
- ▲ To install, perform the removal operation in reverse.

Scanner paper path (CZ309-67258)

Removal

1. Remove the [Top paper-loop door \(CZ309-67052\)](#) on page 660.
2. Remove the [Scanner BMP top rib \(CZ309-67257\)](#) on page 1046.

3. Remove two screws.



4. Remove the scanner paper path wall support.



Installation

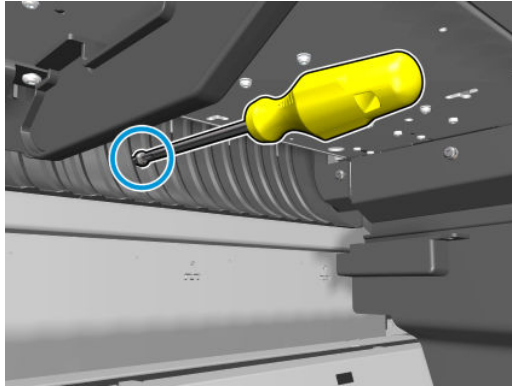
- ▲ To install, perform the removal operation in reverse.

U-turn cover (CZ309-67253)

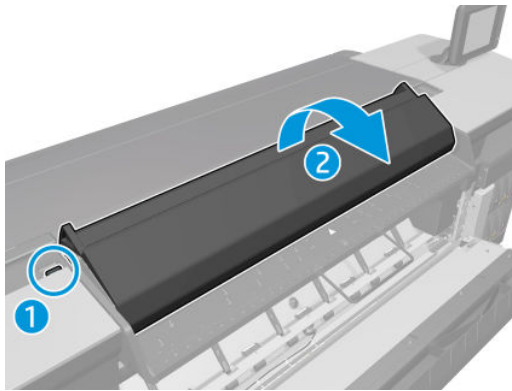
Removal

1. Remove the [Top paper-loop door \(CZ309-67052\)](#) on page 660.
2. Remove the [Scanner BMP top rib \(CZ309-67257\)](#) on page 1046.
3. Remove the [Scanner paper path \(CZ309-67258\)](#) on page 1047.

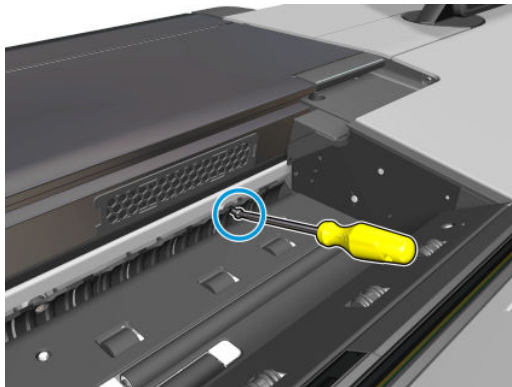
4. Remove a screw from the bottom of the U-turn cover.



5. Open the scanner cover.

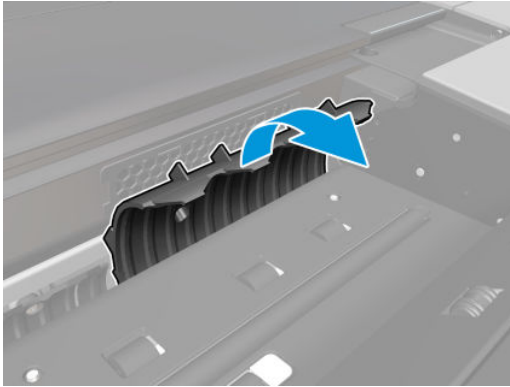


6. Remove a screw from the top of the U-turn cover.



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7. Remove the U-turn cover.



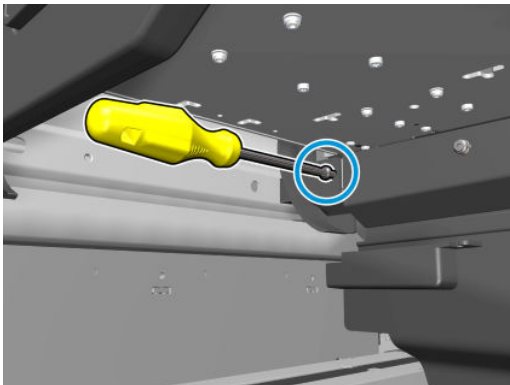
Installation

- ▲ To install, perform the removal operation in reverse.

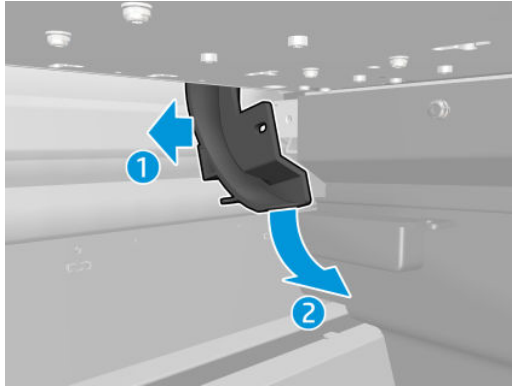
U-turn cover L and R (CZ309-67256)

Removal

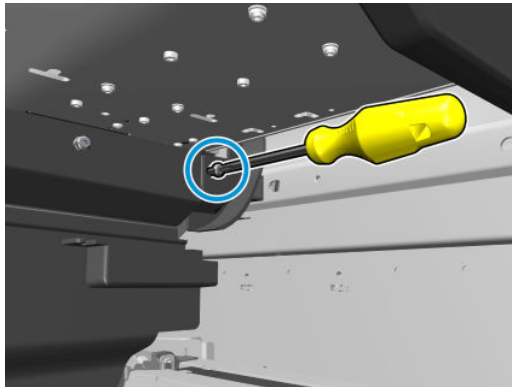
1. Remove the [Top paper-loop door \(CZ309-67052\)](#) on page 660.
2. Remove the [Scanner BMP top rib \(CZ309-67257\)](#) on page 1046.
3. Remove the [Scanner paper path \(CZ309-67258\)](#) on page 1047.
4. Remove the [U-turn cover \(CZ309-67253\)](#) on page 1048.
5. Remove a screw from the right U-turn cover.



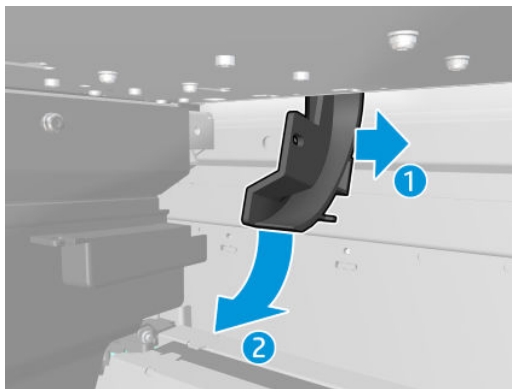
6. Remove the right U-turn cover.



7. Repeat steps 2 to 4 on the left-hand side.
8. Remove a screw from the left U-turn cover.



9. Remove the left U-turn cover.



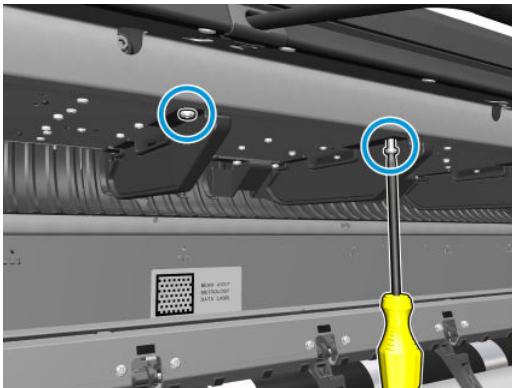
Installation

- ▲ To install, perform the removal operation in reverse.

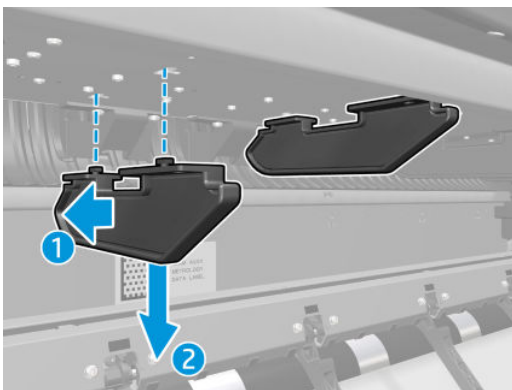
U-turn sensor cover (CZ309-67254)

Removal

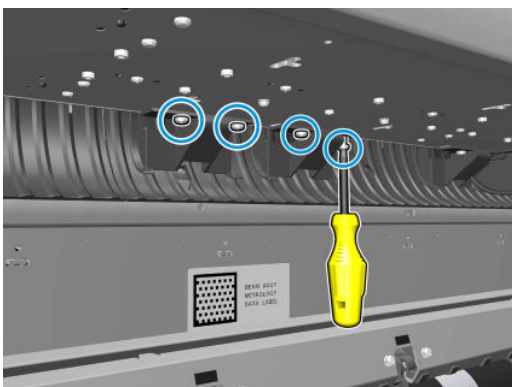
1. Remove the [Top paper-loop door \(CZ309-67052\)](#) on page 660.
2. Remove two screws from the scanner BMP top ribs.



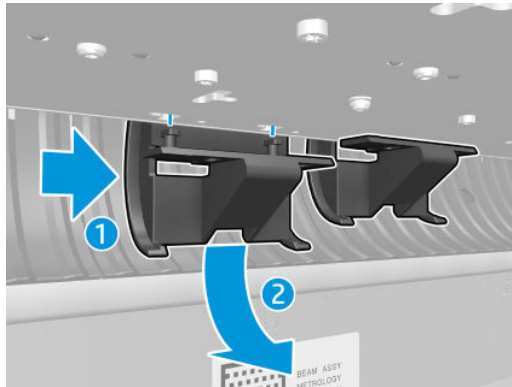
3. Remove two scanner BMP top ribs.



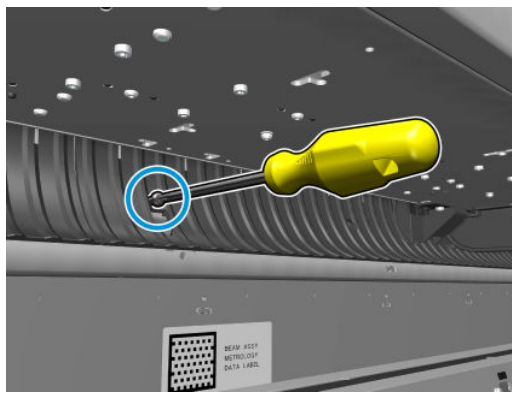
4. Remove four screws from the scanner paper path wall supports.



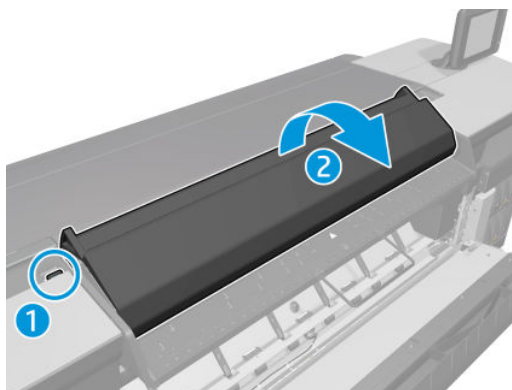
5. Remove two scanner paper path wall supports.



6. Remove a screw from the bottom of the U-turn cover.

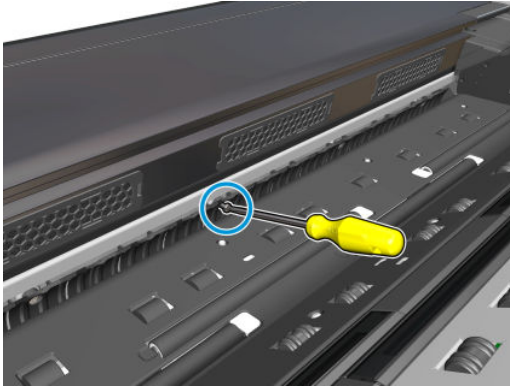


7. Open the scanner cover.

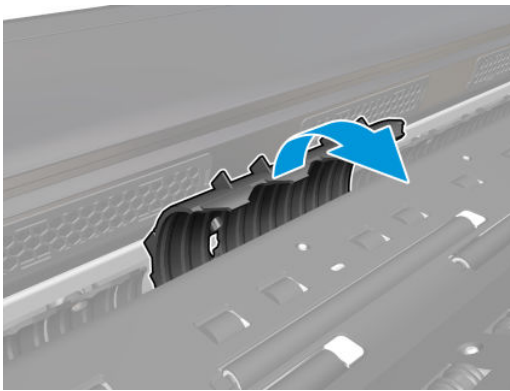


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8. Remove a screw from the top of the U-turn cover.



9. Remove the U-turn sensor cover.



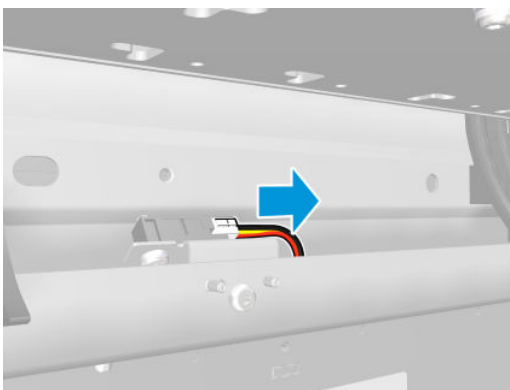
Installation

- ▲ To install, perform the removal operation in reverse.

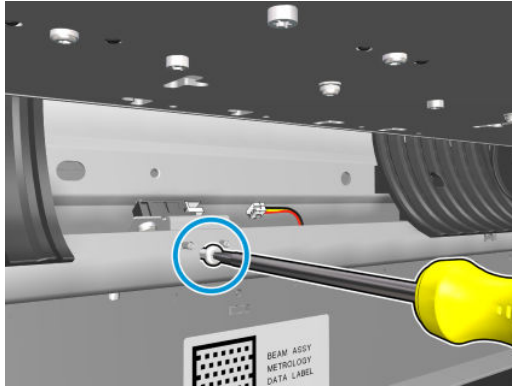
Scanner U-turn sensor (CZ309-67259)

Removal

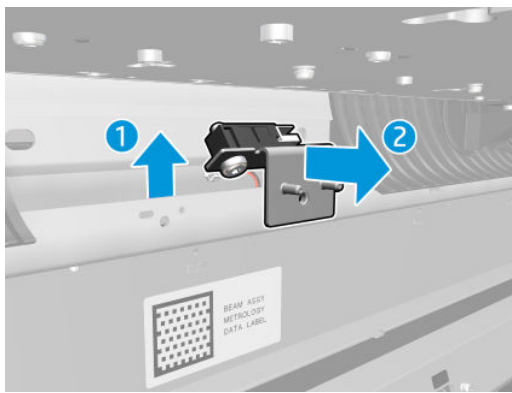
1. Remove the [U-turn sensor cover \(CZ309-67254\)](#) on page 1052.
2. Unplug the sensor cable.



3. Remove the sensor screw.



4. Remove the scanner U-turn sensor.



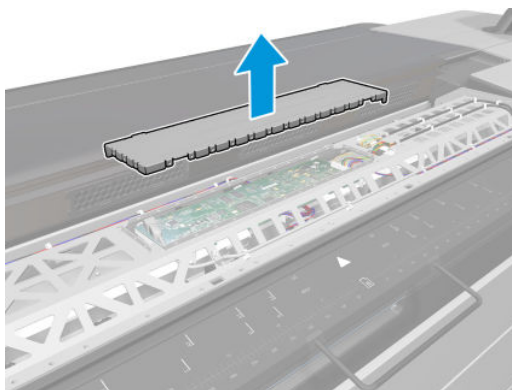
Installation

- ▲ To install, perform the removal operation in reverse.

LW3 PCA (CZ309-67185)

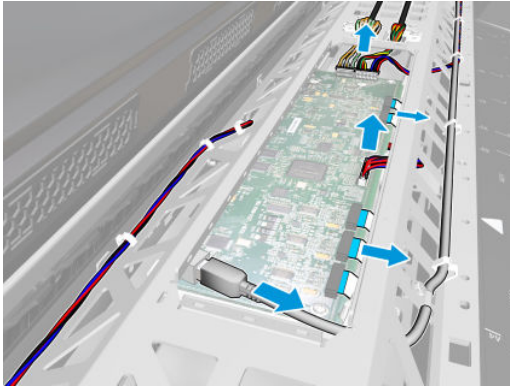
Removal

1. Remove the [Scanner cover \(CZ309-67249\)](#) on page 1044.
2. Remove the PCA cover.

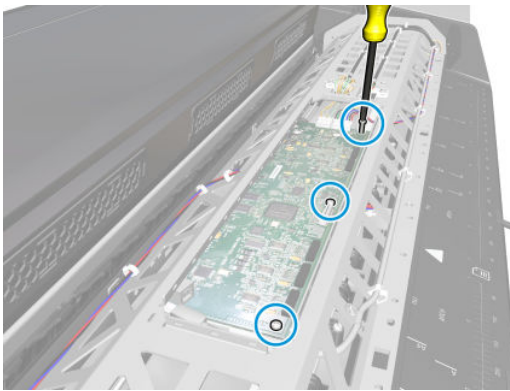


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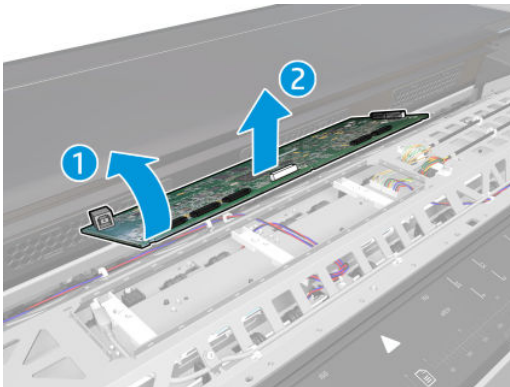
3. Disconnect all PCA cables.



4. Remove three screws from the PCA.



5. Remove the scanner controller PCA.



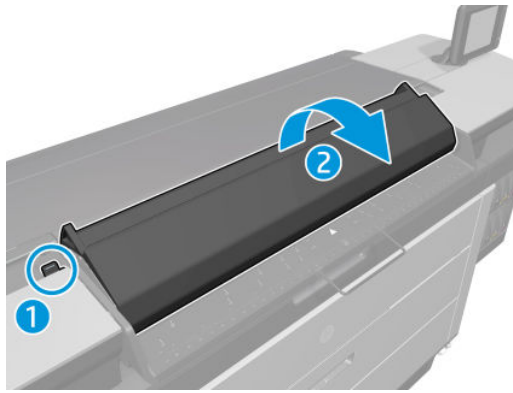
Installation

- ▲ To install, perform the removal operation in reverse.

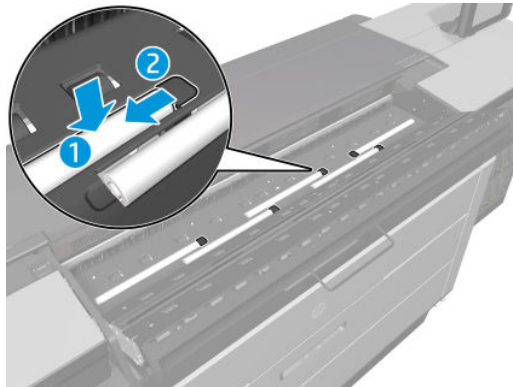
Pressure roller (CZ309-67187)

Removal

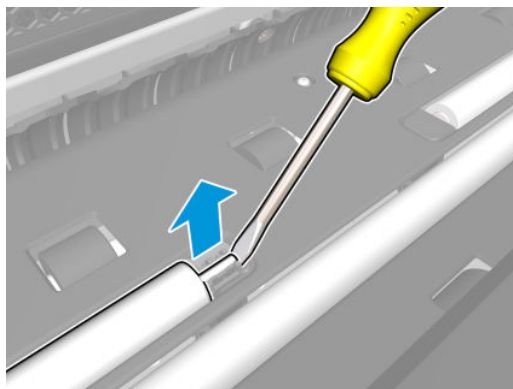
1. Open the scanner cover.



2. Push down the roller and slide off the small plastic cover.

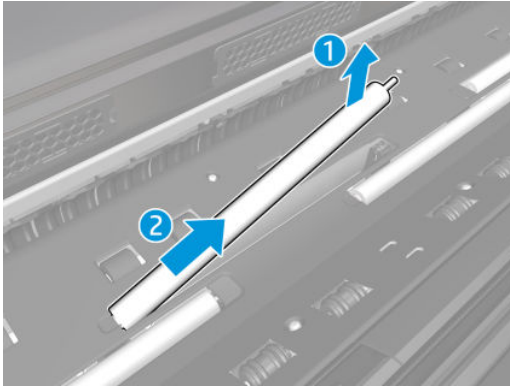


3. Use a flat screwdriver to unclip one end of the roller.



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4. Remove the pressure roller.



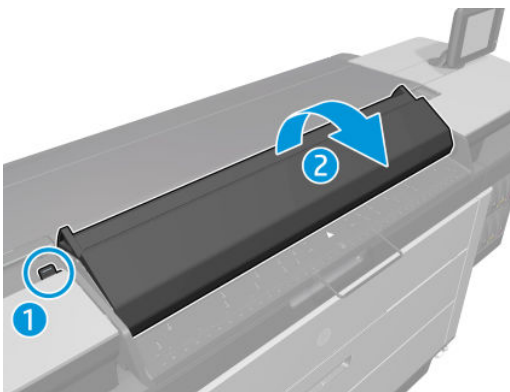
Installation

- ▲ To install, perform the removal operation in reverse.

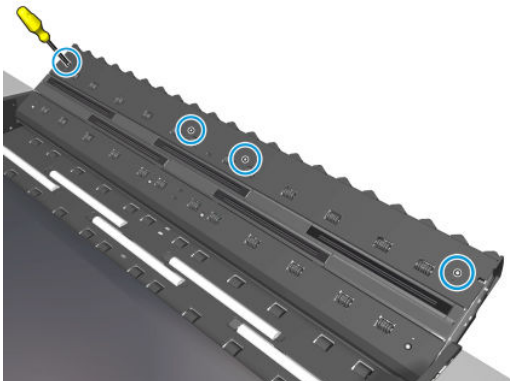
T2500/T3500 Tiles kit (CR359-67014)

Removal

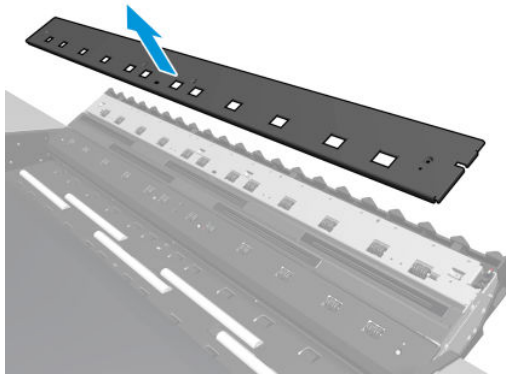
1. Open the scanner cover.



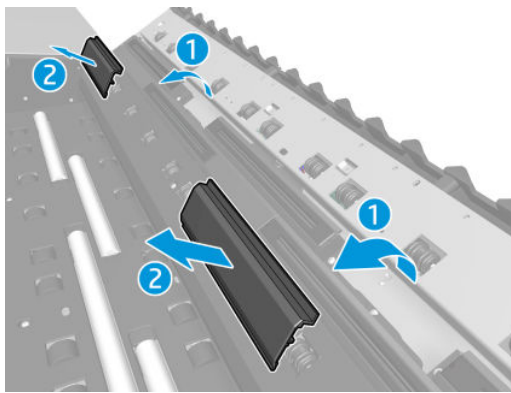
2. Remove four screws from the rear idler cover.



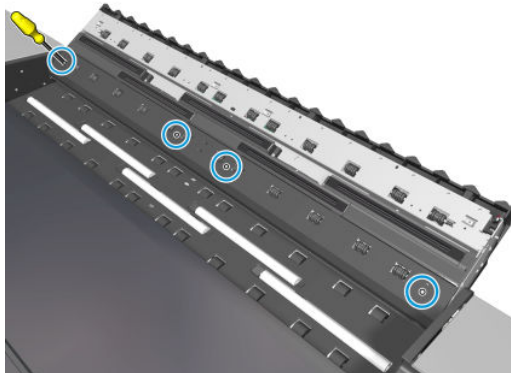
3. Remove the rear idler cover.



4. Remove two rear CIS tiles.

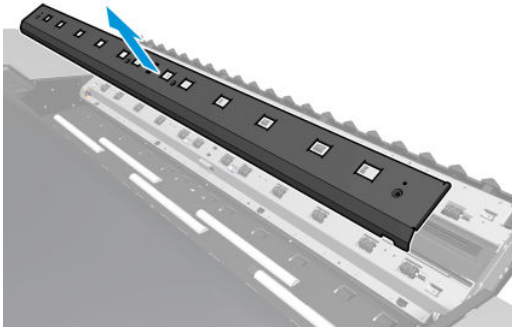


5. Remove four screws from the front idler cover.

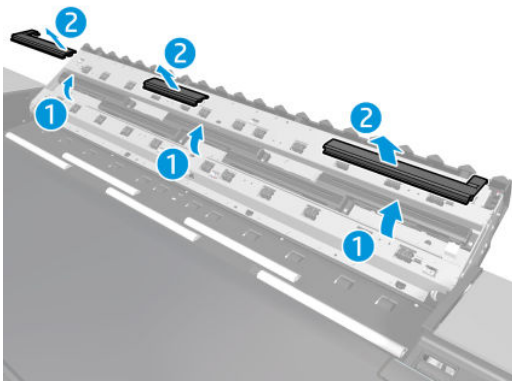


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6. Remove the front idler cover.



7. Remove three CIS tiles: front center, front right, and front left.



Installation

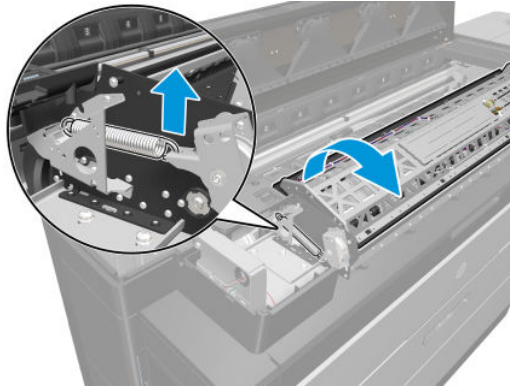
- ▲ To install, perform the removal operation in reverse.

T2500/T3500 Torsioner dump (CR359-67019)

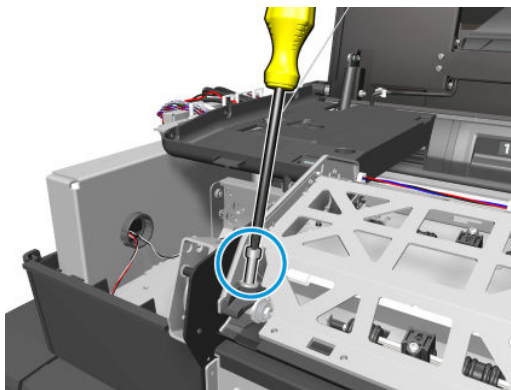
Removal

1. Remove the [Top-left cover \(CZ309-67038\)](#) on page 638.
2. Remove the [Scanner cover \(CZ309-67249\)](#) on page 1044.
3. Remove the [Loading table \(CZ309-67252\)](#) on page 1045.

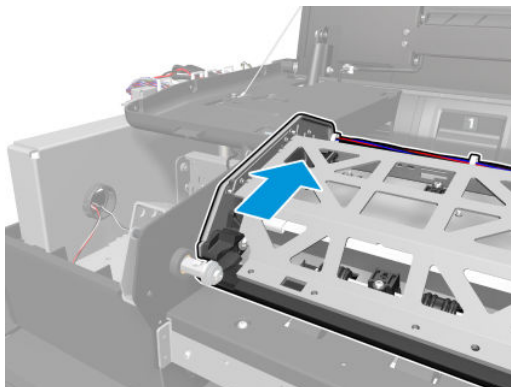
4. Open the scanner to reduce the spring tension, and unhook the spring from the lever arm.



5. Remove a screw from the damper shaft.

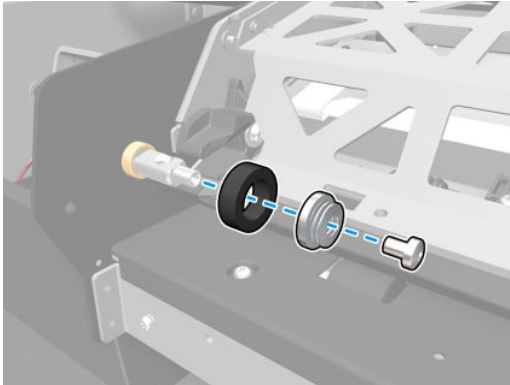


6. Carefully free the CIS bridge.

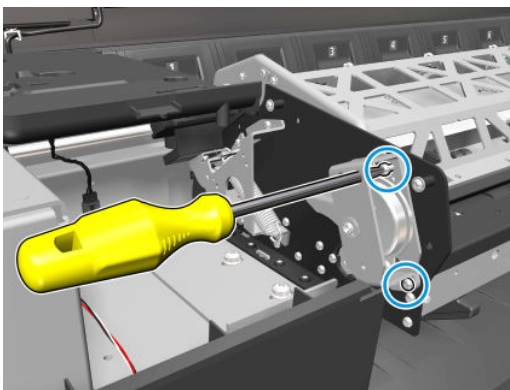


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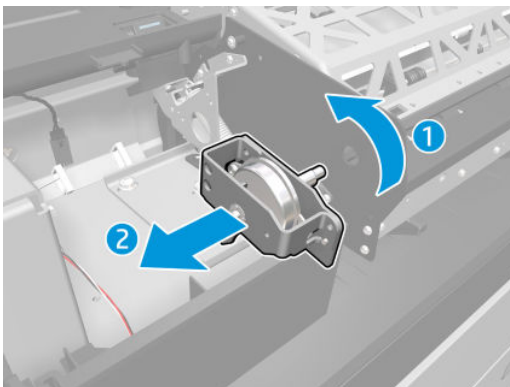
7. Remove another screw from the damper shaft. Also remove the washers and plastic ring.



8. Remove two more screws.



9. Rotate and remove the bridge damper.



Installation

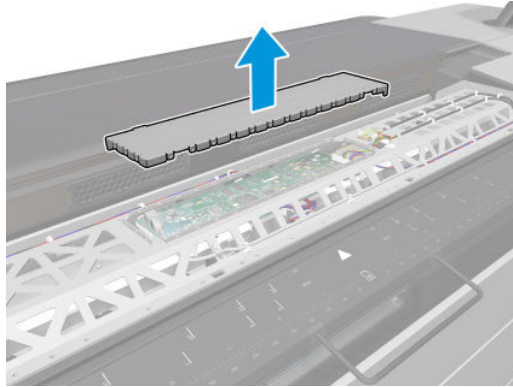
- ▲ To install, perform the removal operation in reverse.

FFC cable set-scan (CZ309-67189)

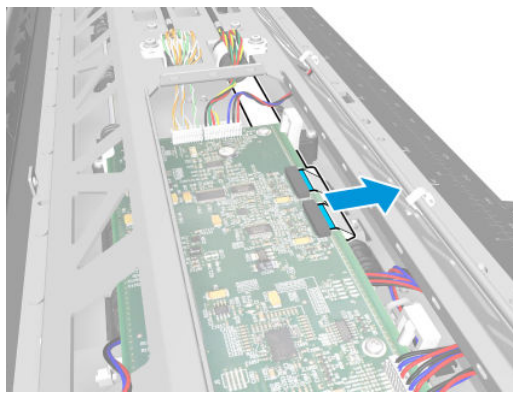
Removal

1. Remove the [Scanner cover \(CZ309-67249\)](#) on [page 1044](#).

2. Remove the sup lid.

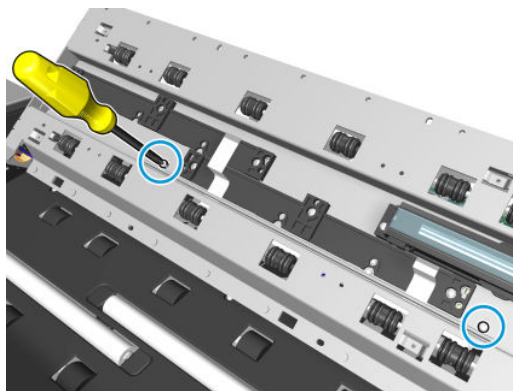


3. Disconnect the CIS FFC cables from the scanner controller.



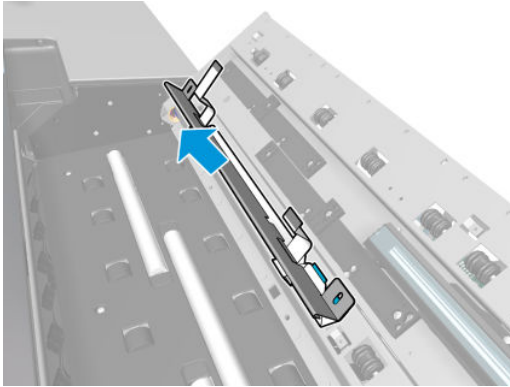
4. Remove the corresponding CIS modules: see [PageWide XL CIS module x5u \(CZ309-67336\) on page 1041](#).

5. Remove two screws from the rail flex cables.



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6. Remove the CIS FFC cable with the plate.



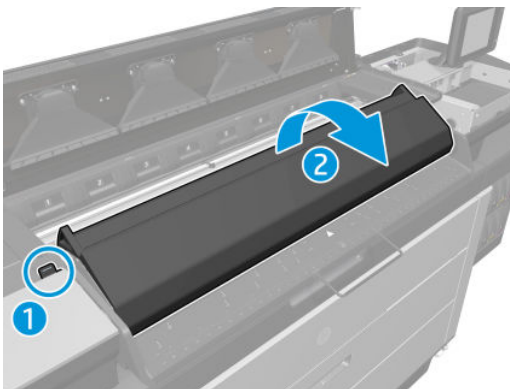
Installation

- ▲ To install, perform the removal operation in reverse.

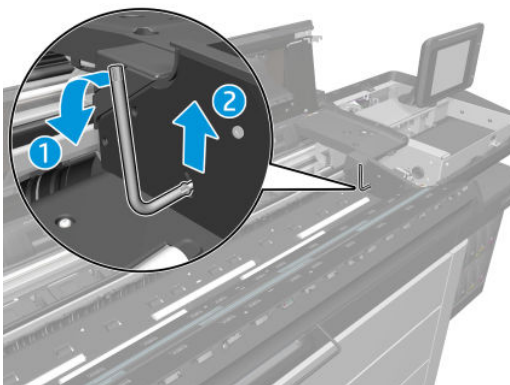
Stepper motor (CZ309-67186)

Removal

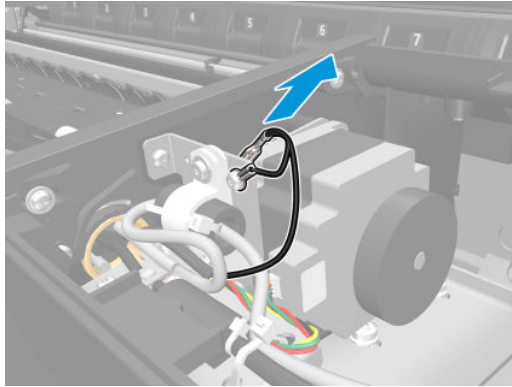
1. Remove the [Top-right exterior cover \(CZ309-67044\)](#) on page 646.
2. Open the scanner.



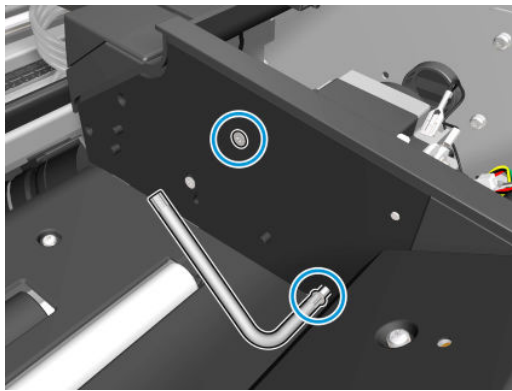
3. Turn the gear to loosen the belt.



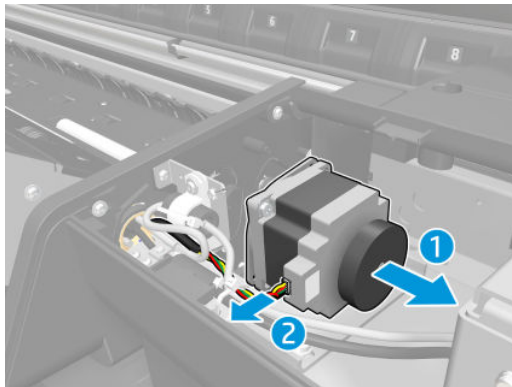
4. Unplug a cable.



5. Remove two screws from the motor.

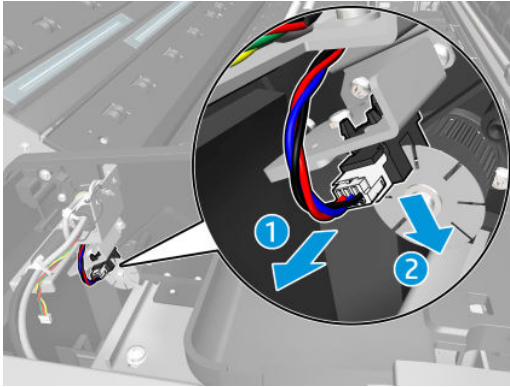


6. Remove the motor and unplug the motor cable.

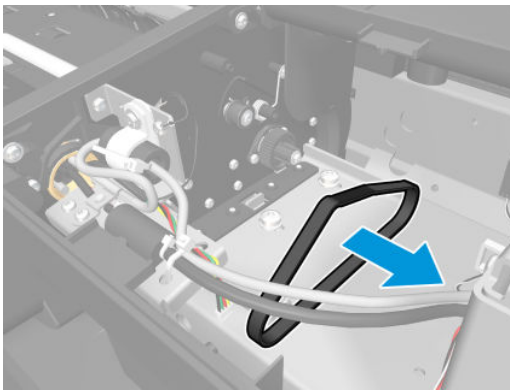


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7. Unclip and remove the sensor.



8. Remove the belt.



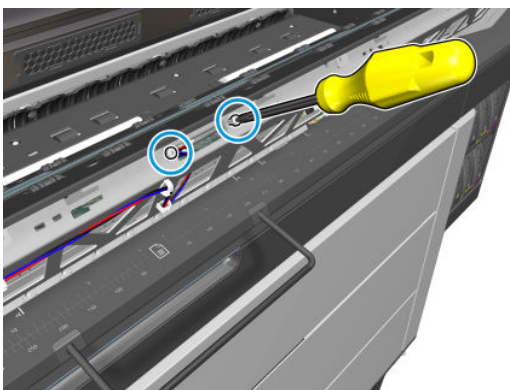
Installation

- ▲ To install, perform the removal operation in reverse.

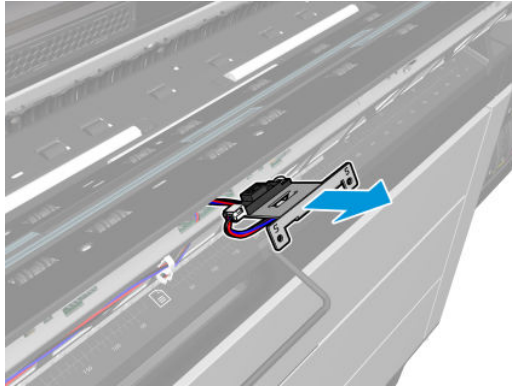
T2500/T3500 Paper sensor (CR359-67018)

Removal

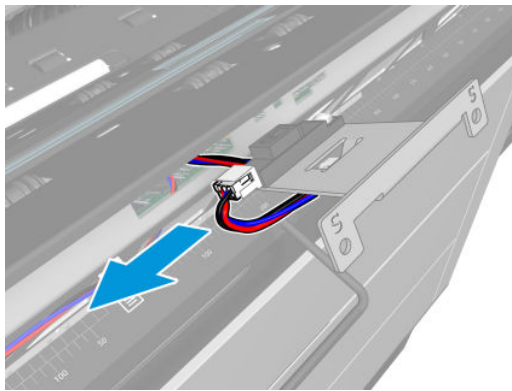
1. Remove the [Scanner cover \(CZ309-67249\)](#) on page 1044.
2. Remove a screw from the sensor holder.



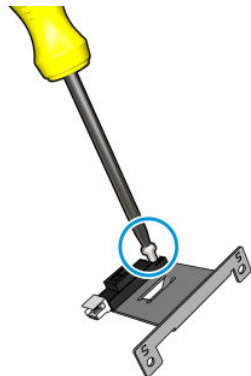
3. Remove the single sensor plate.



4. Unplug the sensor cable.

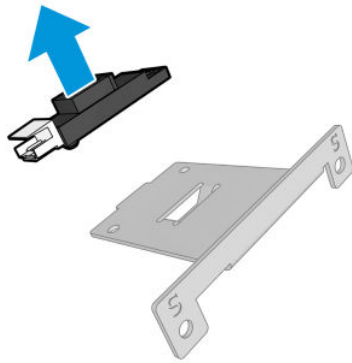


5. Remove a screw from the paper sensor.

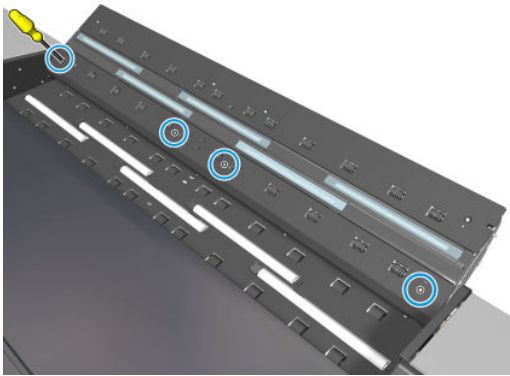


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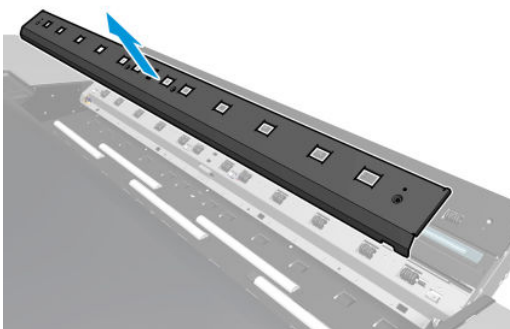
6. Remove the paper sensor.



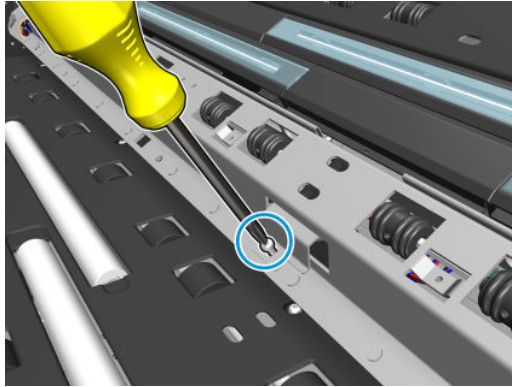
7. Remove four screws from the front idler cover.



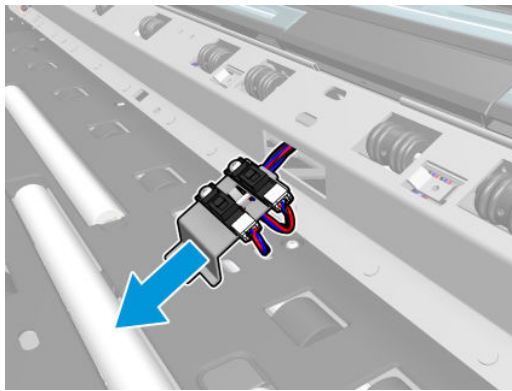
8. Remove the front idler cover.



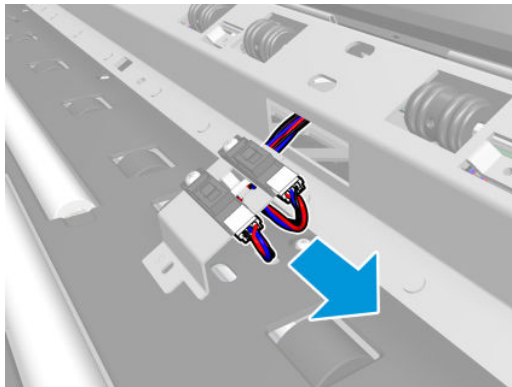
9. Remove a screw from the sensor holder.



10. Remove the twin sensor plate.

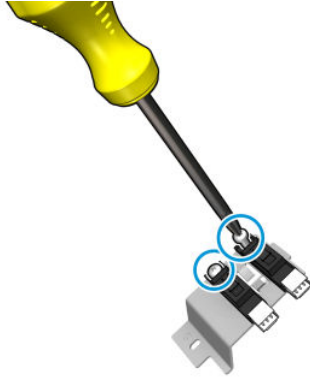


11. Unplug the sensor cables.



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12. Remove the screws from the paper sensors.



13. Remove the paper sensors.



Installation

- ▲ To install, perform the removal operation in reverse.

Cable kits

- CZ309-67399: Power Cables Upgrade Service Kit
 - CZ309-50015: PRINTHEAD_POWER. See [CZ309-50015 on page 2064](#)
 - CZ309-50028: PD to AC DRYER. See [CZ309-50028 on page 2066](#)
 - CZ309-50091: PD_TO_PSUs. See [CZ309-50091 on page 2070](#)
 - CZ309-50092: INLET TO POWER DISTRIBUTOR. See [CZ309-50092 on page 2070](#)
 - CZ309-50112: 32V_PSU_POWER. See [CZ309-50112 on page 2073](#)
- CZ309-67400: EEbox Cables - split from ATX
 - CZ309-50001: PRINTBAR_DATA. For the replacement of this cable, first follow the instructions in [PEM cable loop assembly \(CZ309-67072\) on page 912](#). Then see [CZ309-50001 on page 2062](#)
 - CZ309-50039: CI_TO_CIS_SUPPLY_CONTROL. See [CZ309-50039 on page 2067](#)
 - CZ309-50090: CAN BULLI DRYER WIRE. See [CZ309-50090 on page 2070](#)
 - CZ309-50094: LAN TO USER INLET. See [CZ309-50094 on page 2071](#)
 - CZ309-50098: JESTER POWER-JDI. See [CZ309-50098 on page 2071](#)
 - CZ309-50101: 32V_PSU_CONTROL. See [CZ309-50101 on page 2072](#)
 - CZ309-50108: CI_to_MEDIA_INPUT_HE. See [CZ309-50108 on page 2072](#)
 - CZ309-50109: CENTRAL_INTERCONNECT_TO_MO. See [CZ309-50109 on page 2072](#)
 - CZ309-50111: CI_TO_EOLA. See [CZ309-50111 on page 2073](#)
 - CZ309-50148: ENGINE TO CENTRAL_INTERCONNECT. See [CZ309-50148 on page 2075](#)
 - CZ309-50153: CENTRAL_INTERCONNECT_TO_PORT. See [CZ309-50153 on page 2076](#)
 - CZ309-50154: U-TURN SCANNER JAM SENSOR. See [CZ309-50154 on page 2076](#)
 - CZ309-50156: CENTRAL_INTERCONNECT_TO_SEMAPH. See [CZ309-50156 on page 2076](#)
 - CZ309-50157: CENTRAL_INTERCONNECT_TO_PB_MEC. See [CZ309-50157 on page 2076](#)
 - CZ309-50158: CENTRAL_INTERCONNECT_TO_SWITCH. See [CZ309-50158 on page 2077](#)
 - CZ309-50159: CENTRAL_INTERCONNECT_TO_SAFETY. See [CZ309-50159 on page 2077](#)
 - CZ309-50165: JESTER POWER-JPE. See [CZ309-50165 on page 2078](#)
 - CZ309-50168: FORMATTER_LED_DEBUG. See [CZ309-50168 on page 2078](#)
 - CZ309-50176: JESTER LED EXTENSION. See [CZ309-50176 on page 2080](#)
 - CZ309-50186: PSU to CENTRAL INTERCONNECT 12. See [CZ309-50186 on page 2081](#)
 - CZ309-50187: PSU to Formatter P2 split. See [CZ309-50187 on page 2081](#)
 - CZ309-50192: HDD_SATA_CABLE. See [CZ309-50192 on page 2081](#)

- CZ309-50194: SSD_SATA_600mm_BLACK. See [CZ309-50194 on page 2082](#)
- CZ310-50001: CI_to_MEDIA_INPUT_LE. See [CZ310-50001 on page 2082](#)
- CZ309-67287: Media Advance Cables Service Kit
 - CZ309-50049: MA TO BELTS AND FEED MOT+ENC. See [CZ309-50049 on page 2068](#)
 - CZ309-50050: MEDIA ADVANCE PCA_to_AEROSOL_F. See [CZ309-50050 on page 2068](#)
 - CZ309-50053: MA TO AERIAL RIBS MOTOR_ENC. See [CZ309-50053 on page 2068](#)
 - CZ309-50057: MA TO MEDIA LOOP AERIAL SENS. See [CZ309-50057 on page 2069](#)
 - CZ309-50058: AERIAL TO LOOP AND FEED MEDIA. See [CZ309-50058 on page 2069](#)
 - CZ309-50063: MEDIA_LOOP_AERIAL_TOF_SENSOR. See [CZ309-50063 on page 2069](#)
 - CZ309-50066: MA TO BELT ANALAG_ENC. See [CZ309-50066 on page 2069](#)
 - CZ309-50099: AERIAL TO AEROSOL FAN 1to4. See [CZ309-50099 on page 2071](#)
 - CZ309-50113: VACUUM PRESSURE SENSOR. See [CZ309-50113 on page 2073](#)
 - CZ309-50134: AERIAL TO JAM SENSOR. See [CZ309-50134 on page 2074](#)
 - CZ309-50135: MA TO AERIAL DIV. LOOP SENS. See [CZ309-50135 on page 2074](#)
 - CZ309-50136: AERIAL TO LOOP SENSOR. See [CZ309-50136 on page 2074](#)
 - CZ309-50139: MA TO AERIAL DIV. MOT+ENC. See [CZ309-50139 on page 2074](#)
 - CZ309-50140: AERIAL to Diverter Motor+Enc. See [CZ309-50140 on page 2075](#)
 - CZ309-50141: MA TO AERIAL PINCH MOT+ENC. JA. See [CZ309-50141 on page 2075](#)
 - CZ309-50142: See [CZ309-50142 on page 2075](#)
 - CZ309-50163: AERIAL_TO_RIBS_MOTOR_ENC. See [CZ309-50163 on page 2078](#)
 - CZ309-50180: CENTRAL_INTERCONNECT TO MA POW. See [CZ309-50180 on page 2080](#)
 - CZ309-50181: CENTRAL_INTERCONNECT TO MA PCA. See [CZ309-50181 on page 2080](#)
- CZ309-67288: Printbar Cables Service Kit
 - CZ309-50005: PRINTHEAD_DATA_8. See [CZ309-50005 on page 2062](#)
 - CZ309-50006: PRINTHEAD_DATA_7. See [CZ309-50006 on page 2063](#)
 - CZ309-50007: PRINTHEAD_DATA_6. See [CZ309-50007 on page 2063](#)
 - CZ309-50008: PRINTHEAD_DATA_5. See [CZ309-50008 on page 2063](#)
 - CZ309-50009: PRINTHEAD_DATA_4. See [CZ309-50009 on page 2063](#)
 - CZ309-50010: PRINTHEAD_DATA_3. See [CZ309-50010 on page 2063](#)
 - CZ309-50011: PRINTHEAD_DATA_2. See [CZ309-50011 on page 2064](#)
 - CZ309-50012: PRINTHEAD_DATA_1. See [CZ309-50012 on page 2064](#)

- CZ309-50014: PB_PRINTHEAD_POWER. See [CZ309-50014 on page 2064](#)
- CZ309-50016: PRINTBAR_POWER_DISTRIBUTOR. See [CZ309-50016 on page 2065](#)
- CZ309-50017: PRINTBAR_PCA_CONTROL. See [CZ309-50017 on page 2065](#)
- CZ309-50020: PRINTBAR_MECH_DATA. See [CZ309-50020 on page 2065](#)
- CZ309-50021: PB_RIGHT_SIDE_MOTOR_ENC. See [CZ309-50021 on page 2065](#)
- CZ309-50022: PB_RIGHT_SIDE_SENSOR. See [CZ309-50022 on page 2066](#)
- CZ309-50023: PB_LEFT_SIDE_SENSOR. See [CZ309-50023 on page 2066](#)
- CZ309-50029: PB_LEFT_SIDE_MOTOR_ENC. See [CZ309-50029 on page 2066](#)
- CZ309-50071: PRINTBAR_MECH_PWM_SHIELDED. See [CZ309-50071 on page 2069](#)
- CZ309-50097: PRINT_BAR_GROUNDING. See [CZ309-50097 on page 2071](#)
- CZ309-50120: PICOBLADE_MOTOR_SPLIT. See [CZ309-50120 on page 2073](#)
- CZ309-67289: Cables Miscellany Service Kit
 - CZ309-50040: CID_to_2xISS_LINK. See [CZ309-50040 on page 2067](#)
 - CZ309-50041: CID_TO_iLED_LINK. See [CZ309-50041 on page 2068](#)
 - CZ309-50089: CID_VALVE_SENSOR. See [CZ309-50089 on page 2070](#)
 - CZ309-50100: AIR_PUMP_AND_CID_VALVE_MOTORS. See [CZ309-50100 on page 2071](#)
 - CZ309-50103: ISS_TO_WASTE_SYSTEM. See [CZ309-50103 on page 2072](#)
 - CZ309-50122: VACUUM_FAN_TO_EOLA_1. See [CZ309-50122 on page 2074](#)
 - CZ309-50156: CENTRAL_INTERCONNECT_TO_SEMAPH. See [CZ309-50156 on page 2076](#)
 - CZ309-50160: VACUUM_FAN_TO_EOLA_2. See [CZ309-50160 on page 2077](#)
 - CZ309-50162: WASTE_SWITCH_SENSOR_B. See [CZ309-50162 on page 2077](#)
 - CZ309-50164: WASTE_SWITCH_SENSOR_A. See [CZ309-50164 on page 2078](#)
 - CZ309-50169: Aerial to Stacker Kicker motor. See [CZ309-50169 on page 2079](#)
 - CZ309-50170: Aerial to Stacker Arms. See [CZ309-50170 on page 2079](#)
 - CZ309-50171: Aerial to Stacker Tray. See [CZ309-50171 on page 2079](#)
 - CZ309-50172: Aerial to Stacker Media Path. See [CZ309-50172 on page 2079](#)
 - CZ309-50173: MO to Stacker and Arms and tray. See [CZ309-50173 on page 2080](#)
 - CZ309-50174: Stacker Tray and Media Path SP. See [CZ309-50174 on page 2080](#)
 - CZ309-50190: FRONT PANEL. See [CZ309-50190 on page 2081](#)
 - CZ309-50193: ISS GROUNDING. See [CZ309-50193 on page 2082](#)
- CZ309-67317: Pinch Cable Service Kit

For HP-authorized personnel only

Reseller kits

- Reseller Service Kit: CZ309-67411

10 Preventive maintenance

- [The preventive maintenance program \(PMK\) concept](#)
- [Following the preventive maintenance program](#)
- [Clean the scanner's glass plate](#)
- [Replace the scanner's glass plate](#)

The preventive maintenance program (PMK) concept

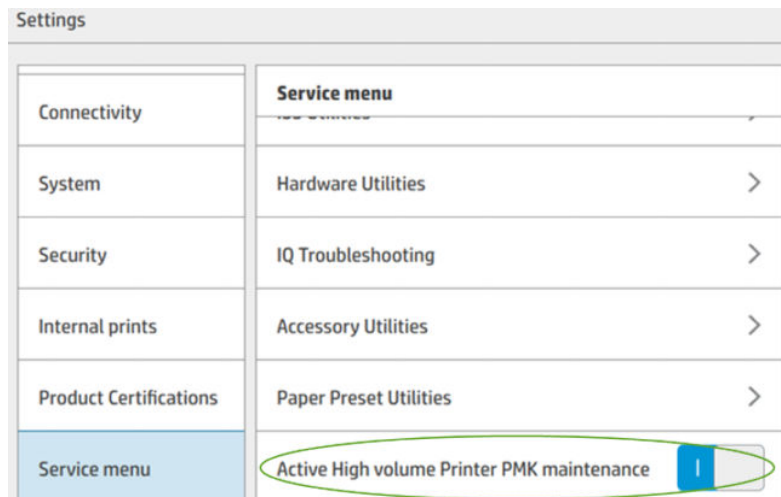
HP PageWide XL technology has been designed to maximize printer uptime and minimize running costs. To ensure all printer subsystems are working as well as their nominal design and to minimize unexpected failures, preventive maintenance has to be executed based on the automatic triggers that are embedded in PageWide XL technology.

In the PageWide XL preventive maintenance program, a printer can be set as a:

- low/mid volume printer PMK (default), or as a
- high volume printer PMK

Low/mid volume PMK: By default, all PageWide XL printers are configured from the factory as Low/Mid volume printer PMK maintenance trigger program printers. This means that each PMK will be triggered based on different counters that measure the degradation of each specific subsystem. This PMK method should be used for printers with copy volumes below 200,000 sqm (2,000,000 sqf) / year as well as for customers printing high coverage prints (an average ink density of more than 2ml/sqm 0,2ml/sqf). Once each individual PMK is triggered, a warning is displayed on the printer's front panel, in EWS and in HP Partnerlink. To carry out the PMK action that is requested, the engineer has to follow the guidelines [Following the preventive maintenance program on page 1079](#). Once a PMK action is complete, the warning has to be reset through the Service menu > **PMK reset counters**. and by selecting the number of the PMK that has been performed.

High volume PMK: Printers with copy volumes higher than 200,000 sqm (2,000,000 sqf) / year and printers not printing high coverage images can be configured as High volume printer PMK machines by enabling this option in the Service menu > **High volume printer PMK**.



NOTE: The current level of the other PMKs are not visible.

Once this setting is enabled, only one PMK, linked to a total area counter, will be triggered every 300.000 sqm (3.230.000 sqf). A warning will be displayed on every reboot once it is triggered.

System error: 0099-0010-0080

High volume Printer PMK
preventive maintenance action needed

Message text: Periodic Service Maintenance reached, with value
600000 sqm / 6458343 sqf
[bt] Execution path:



On each High volume PMK printer visit, the engineer must execute all the corresponding PMKs listed on the following table. All checks must be performed to ensure proper printer functionality.

sqm	sqf	PMK 1	PMK 2	PMK 3	PMK 4	PMK 5	PMK 6	PMK 7	PMK 8	PMK 9/PMK 9B	PMK 12
300,000	3,231,000		<input type="checkbox"/>	<input type="checkbox"/>							
600,000	6,462,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							<input type="checkbox"/>
900,000	9,693,000		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>			
1,200,000	12,924,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>					<input type="checkbox"/>
1,500,000	16,155,000		<input type="checkbox"/>	<input type="checkbox"/>							
1,800,000	19,386,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
2,100,000	22,617,000		<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>		
2,400,000	25,848,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>
2,700,000	29,079,000		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>			
3,000,000	32,310,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							<input type="checkbox"/>
3,300,000	35,541,000		<input type="checkbox"/>	<input type="checkbox"/>							
3,600,000	38,772,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
3,900,000	42,003,000		<input type="checkbox"/>	<input type="checkbox"/>							
4,200,000	45,234,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>		<input type="checkbox"/>
4,500,000	48,465,000		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
4,800,000	51,696,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>					<input type="checkbox"/>
5,100,000	54,927,000		<input type="checkbox"/>	<input type="checkbox"/>							
5,400,000	58,158,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
5,700,000	61,389,000		<input type="checkbox"/>	<input type="checkbox"/>							
6,000,000	64,620,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>					<input type="checkbox"/>

PMK 10: This maintenance should be executed on APJ, Dryer-only printers as a break and fix repair procedure.

PMK 11: Should be executed at 8,000,000 sqm (86,160,000 sqf).

Once all individual PMK actions are finished, the printer has to be manually reset. Select **Settings > Service Menu > PMK reset counters > Additional life repair parts > Mark repair done for: Periodic Service Maintenance.**

For HP-authorized personnel only

The image shows two screenshots from an HP printer's service menu. The top screenshot is titled "Settings" and shows a list of menu items. The "Service menu" item is highlighted in blue. The bottom screenshot is titled "REQUIRED REPAIRS CONFIGURATION" and shows a selection screen with several options and navigation buttons.

Category	Item	Link
Connectivity	< PMK Reset Counters	
System	IQ T PMK8 Printbar Lift And Ink Tubing System	↗
Security	Acc PMK9 Belts And Platen	↗
Internal prints	Pap PMK10 Dryer	↗
Product Certifications	Acti PMK11 Vacuum Pump Fan	↗
Service menu	PMK12 Service Carriage Spittoon Beam	↗
Partner menu	Pro Additional life repair parts	↗

REQUIRED REPAIRS CONFIGURATION

Select option:

>>> Mark repair done for: Service Part CZ309-67322, PZ Intermediate Support Assy

Activate repair extension for: Periodic Service Maintenance

Mark repair done for: Periodic Service Maintenance

Change selection using keys UP or DOWN
Press OK to confirm selection or BACK to terminate

UP

DOWN

OK

BACK

CANCEL

The preventive maintenance warning will pop up again after the next multiple of 300,000 sqm (3,230,000 sqf). Maintenance warnings are based on the total area counter (which counts in absolute numbers).

Following the preventive maintenance program



Follow the actions in the tables below for each individual PMK service.

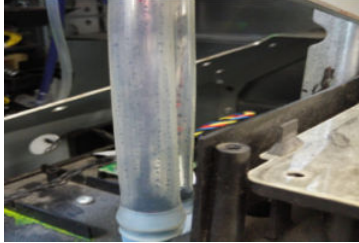

It is mandatory for some parts to be replaced every time a PMK is triggered.


Other parts are optional: they need to be checked every time a PMK is triggered. If the part meets the pass criteria, it is okay to leave it in the machine; otherwise it needs to be replaced. In case of doubts about the part status, please replace the part.

If the setting is disabled, each PMK counter will be available through partner link and the service plot. If any preventive maintenance is reaching its threshold or has surpassed it; the corresponding warning will be displayed on the front panel. Notice that the counter is just shown at its current real level (and not starting from 0).



The actions below apply to both Low/Mid and High volume PMK preventive maintenance programs.

PMK number	PMK part number	PMK name	PMK contents	Service Kit name / disassembly instructions
PMK1	CZ309-67273	Filters	Aerosol removal filters, E-box filters	Aerosol fan filter (CZ309-67113) on page 938
Mandatory parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
None		N/A	N/A	N/A
Optional parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
E-box filters, Aerosol fan filter (CZ309-67113) on page 938		Clogged filters	Visual inspection	Check dirtiness of filters. If they are dirtier than the sample in the pictures, replace them.  

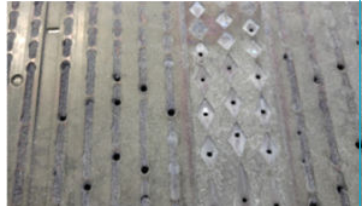

PMK number	PMK part number	PMK name	PMK contents	Service Kit name / disassembly instructions
Waste tube, see Waste management tubes (CZ309-67210) on page 1007	CZ309-67210 (Not included in Service Kit PMK1)	Tube clogging	Visual inspection	<p>Check for clogged tubes. Picture is an example of an OK tube, both tubes transparent</p>  <p>In case the small waste tube is not transparent (it is solid dark), replace the Waste management tubes by following the instructions in Waste management tubes (CZ309-67210) on page 1007</p>
Clean waste diverter on page 953	CZ309-60862 (Not included in Service Kit PMK1)	Waste diverter flooding	Waste diverter flooding	<p>Check level of ink in the waste diverter. If the waste level is higher than the ribs (see arrow below), clean it.</p> 

PMK number	PMK part number	PMK name	PMK contents	Service Kit name / disassembly instructions
PMK2	CZ309-67274 (CZ309-67328 and CZ309-67210 also needed, not included in CZ309-67274)	Cleaning	Vacuum pump filters, spittoon filter, syringe, gloves and waste tube.	<p>Vacuum filter (CZ309-67086) on page 924</p> 

PMK number	PMK part number	PMK name	PMK contents	Service Kit name / disassembly instructions
Mandatory parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
Preventive lift mechanism oil maintenance on page 1092	CZ309-67328 (not included in Service Kit PMK2)	N/A	N/A	N/A
Service carriage rod lubrication on page 1091	CZ309-67328 (not included in Service Kit PMK2)	N/A	N/A	N/A
Clean paper fibers and dust		N/A	N/A	N/A
Waste tube, see Waste management tubes (CZ309-67210) on page 1007	CZ309-67210	N/A	N/A	N/A
Optional parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
Vacuum filter (CZ309-67086) on page 924		Clogged filter	Visual inspection	Check dirtiness of filters. Replace them if they are clogged.

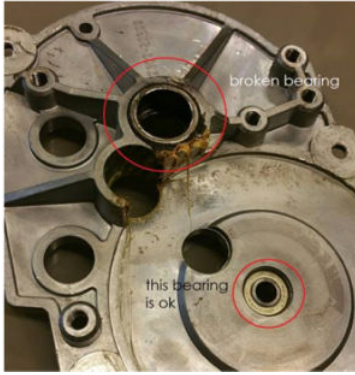
PMK number	PMK part number	PMK name	PMK contents	Service Kit name / disassembly instructions
Spittoon filter		Clogged filter	Visual inspection	<p>Check dirtiness of filters. If they are dirtier than the samples on the pictures, replace them.</p> 
Clean waste diverter on page 953		Waste diverter flooding	Visual inspection	<p>Check level of ink in the waste diverter. If the waste level is higher than the ribs (see arrow below), proceed to clean it.</p> 

PMK number	PMK part number	PMK name	PMK contents	Service Kit name / disassembly instructions
PMK3	CZ309-67275	Cutter	Automatic cutter	Cutter assembly (CZ309-67155) on page 734
Mandatory parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
None		N/A	N/A	N/A
Optional parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
Cutter assembly (CZ309-67155) on page 734		Compromised cutting quality	Visual inspection	Check cutting quality. Replace Cutter assembly if the cutting quality is low.



PMK number	PMK part number	PMK name	PMK contents	Service Kit name / disassembly instructions
PMK4	CZ309-67276	Capping	Capping station drive assembly (motor and planetary gear), N1 cable, capping tray (includes eight capping platforms), Spittoon fan capping)	Capping platform (CZ309-67093) on page 977 PEM cable loop assembly (CZ309-67072) on page 912 Capping motor and idle (CZ309-67094) on page 1014
Mandatory parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
N1 cable		N/A	N/A	N/A
Optional parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
Capping platform (CZ309-67093) on page 977		Efficiency of sealing compromised	Visual inspection	Replace if capping rubbers are damaged or worn.
Capping motor and idle (CZ309-67094) on page 1014		Motor failure	Diagnostics Menu	Diagnostics Menu > 0012 Capping > 0012-02 Check Mechatronics> move cap UP and DOWN
Platen, see Belts and platen – CZ309-67092 (Non-APJ), CZ309-67324 (APJ machines) on page 990		Platen holes clogging	Visual inspection + Diagnostics Menu	Diagnostics Menu > 0005 Vacuum system > 0005-03 Check Vacuum Holes > Check test result (PASS / NO PASS). Check if the vacuum holes are clogged as in the picture. If so, proceed to clean.
				 

PMK number	PMK part number	PMK name	PMK contents	Service Kit name / disassembly instructions
PMK5	CZ309-67277	Spittoon	Spittoon motor, planetary gears, transmission, bearings (L & R); Spittoon scrapper carriage motor, transmission (gears, bearings); Spittoon switch sensors (L & R)	Spittoon guide assembly right (CZ309-67099) on page 1018 Spittoon guide assembly left (CZ309-67098) on page 1016 Spittoon static transmission (CZ309-67100) on page 1020 Sensor safety assembly (CZ309-67034) on page 888
Mandatory parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
None		N/A	N/A	N/A
Optional parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
Spittoon guide assembly right and left, see Spittoon guide assembly left (CZ309-67098) on page 1016 and Spittoon guide assembly right (CZ309-67099) on page 1018		Spittoon guides wear	Diagnostics Menu NOTE: Printer should be in the Home position for all Service actions. In the Diagnostics menu, tap the Home button as soon as it illuminates during the booting process, then tap X, then tap Home, then "?" (in sequence).	Diagnostics Menu > 0010 Waste Management > 0010-02 Spittoon Subsystem > 0010-022 Check Mechatronics (Service Password)> Move spittoon positions (spitting and parking positions) and scrapper
Spittoon static transmission (CZ309-67100) on page 1020		Motor failure		

PMK number	PMK part number	PMK name	PMK contents	Service Kit name / disassembly instructions
PMK6	CZ309-67278	Sensors	Paper input sensors (cutter, front door, rear door); Service carriage encoder strip; ML feed motor, encoder, coupling; ML loop sensor (opto switch); Paper output valve motor, gears; Paper output roller mechanism, motor, encoder, gears, bar; ML feed motor drive transmission; ML feed sensor (opto switch); ML TOF sensor (REDI sensor); PZ drive-roller motor, mechanical coupling	Carriage encoder strip (CZ309-67101) on page 957 Feed motor assembly (CZ309-67080) on page 888 Paper-output driver transmission (CZ309-67144) on page 905 Sensor safety assembly (CZ309-67034) on page 888 Paper-loop baffle shaft drive (CZ309-67081) on page 892 Feed sensor (CZ309-67073) on page 880 Paper-loop sensor assembly (CZ309-67077) on page 883 TOF sensor assembly (CZ309-67078) on page 887 Belt motor assembly (CZ309-67084) on page 931 Belt gearbox (CZ309-67085) on page 934
Mandatory parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
None		N/A	N/A	N/A
Optional parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
Carriage encoder strip (CZ309-67101) on page 957		Aerosol accumulation	Diagnostics Menu	Diagnostics Menu > 0030 Service Carriage > 0030-01 Check Electronics, 0030-02 Check Mechatronics (check test result: PASS / NO PASS)
Feed motor assembly (CZ309-67080) on page 888		Motor failure	Diagnostics Menu	Diagnostics Menu > 0060 Media Input > 0060-03 Check Loop Feed Motor, check test and then move forward and backward
Paper-output driver transmission (CZ309-67144) on page 905		Gear wears out	Visual inspection	Diagnostics Menu > 0070 Media Output > 0070-02 Check Mechatronics with Integrated Stacker
Diverter assembly (CZ309-67148) on page 895		Gear wears out	Visual inspection	Diagnostics Menu > 0070 Media Output > 0070-02 Check Mechatronics with Integrated Stacker
Sensor safety assembly (CZ309-67034) on page 888		Sensor malfunction	Diagnostics Menu	Diagnostics Menu > 0080 User Interface > 0080-01 Check Cover Sensors
Paper-loop baffle shaft drive (CZ309-67081) on page 892		Motor failure	Diagnostics Menu	Diagnostics Menu > 0070 Media Output > 0070-02 Check Mechatronics with Integrated Stacker

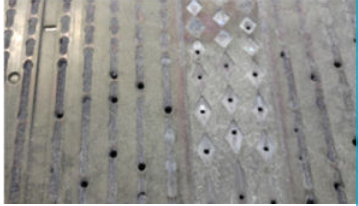
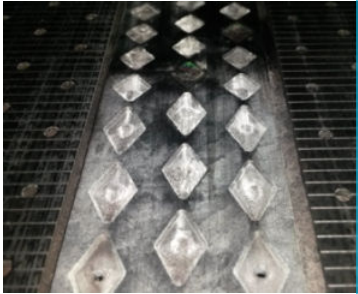
PMK number	PMK part number	PMK name	PMK contents	Service Kit name / disassembly instructions																
Feed sensor (CZ309-67073) on page 880		Sensor malfunction	Diagnostics Menu	Diagnostics Menu > 0065 Media Advance > 0065-06 Check Media Sensors: Media Feed presence (check with paper)																
Paper-loop sensor assembly (CZ309-67077) on page 883		Sensor malfunction	Diagnostics Menu	Diagnostics Menu > 0065 Media Advance > 0065-06 Check Media Sensors: Media Loop flag (check functionality)																
TOF sensor assembly (CZ309-67078) on page 887		Sensor malfunction	Diagnostics Menu	Diagnostics Menu > 0065 Media Advance > 0065-06 Check Media Sensors: TOF Media presence (check with paper)																
Belt motor assembly (CZ309-67084) on page 931		Motor failure	Diagnostics Menu	Diagnostics Menu > 0065 Media Advance > 0065-03 Check Motor and Transmission. If the values are not within the limit values on the table below, proceed to replace:																
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>SPEED 1</th> <th>SPEED 2</th> <th>SPEED 3</th> </tr> <tr> <th></th> <th>Min & max</th> <th>Min & max</th> <th>Min & max</th> </tr> </thead> <tbody> <tr> <td>UPPER LIMIT</td> <td style="text-align: center;">7500</td> <td style="text-align: center;">21500</td> <td style="text-align: center;">29000</td> </tr> <tr> <td>LOWER LIMIT</td> <td style="text-align: center;">4500</td> <td style="text-align: center;">16000</td> <td style="text-align: center;">40000</td> </tr> </tbody> </table>						SPEED 1	SPEED 2	SPEED 3		Min & max	Min & max	Min & max	UPPER LIMIT	7500	21500	29000	LOWER LIMIT	4500	16000	40000
	SPEED 1	SPEED 2	SPEED 3																	
	Min & max	Min & max	Min & max																	
UPPER LIMIT	7500	21500	29000																	
LOWER LIMIT	4500	16000	40000																	
Belt gearbox (CZ309-67085) on page 934		Gear wears out	Visual inspection	<p>Check noise level. Open cover and inspect if necessary.</p> 																

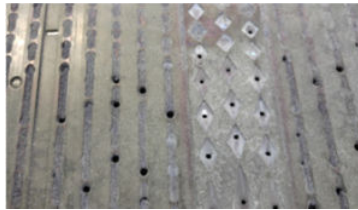
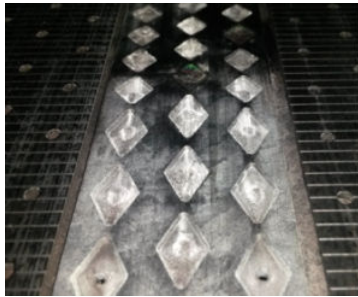
PMK number	PMK part number	PMK name	PMK contents	Service Kit name / disassembly instructions
PMK7	CZ309-67279	Drawer	Paper input roll-assist rewriter motor, encoder; drawer traction rubber rolls; Paper input roll-assist assembly	Rubber transport roller (CZ309-67156) on page 756 Paper-input motor NGR (CZ309-67153) on page 742 Roll mounting assembly (CZ309-67174) on page 740
Mandatory parts:		Risk area:	Inspection procedure:	Pass/fail criteria:

PMK number	PMK part number	PMK name	PMK contents	Service Kit name / disassembly instructions
None		N/A	N/A	N/A
Optional parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
Rubber transport roller (CZ309-67156) on page 756		Roller can wear out	Diagnostics Menu	If it is not possible to load media or media is unloaded suddenly, replace the rubber transport roller.
Paper-input motor NGR (CZ309-67153) on page 742		Motor failure	Diagnostics Menu	Diagnostics Menu > 0020 Drawer > 0020-02 Drawer, 0020-04 Move Motors
Roll mounting assembly (CZ309-67174) on page 740		Wear	Visual inspection	Check for signs of degradation  

PMK number	PMK part number	PMK name	PMK contents	Service Kit name / disassembly instructions
PMK8	CZ309-67280	Lift and ink tubing system	TRS, sarcophagus, loop; Lift mech motor, brake	Print-bar tubing system HE CZ309-67123, see Print-bar tubing system HE CZ309-67123, LE (CZ309-67124) and LE enterprise (CZ309-67125) on page 827 Print-bar tubing system LE CZ309-67124, see Print-bar tubing system HE CZ309-67123, LE (CZ309-67124) and LE enterprise (CZ309-67125) on page 827 Lift mechanism motor assembly (CZ309-67028) on page 864
Mandatory parts:		Risk area:	Inspection procedure:	Pass/fail criteria:

PMK number	PMK part number	PMK name	PMK contents	Service Kit name / disassembly instructions
Tubing system		N/A	N/A	N/A
Optional parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
Lift mechanism motor assembly (CZ309-67028) on page 864		Motor failure	Diagnostics Menu	Diagnostics Menu > 0040 Printbar > 0040-02 Check Mechatronics

PMK number	PMK part number	PMK name	PMK contents	Service Kit name / disassembly instructions
PMK9	CZ309-67281	Belts and platen	PZ idle-roller analog encoder; Belts (all 6 belts, all 3 PZ platen assembly modules), intermediate support	Analog encoder and extra part assembly (CZ309-67082) on page 941 Belts and platen (CZ309-67092), see Belts and platen – CZ309-67092 (Non-APJ), CZ309-67324 (APJ machines) on page 990
Mandatory parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
None		N/A	N/A	N/A
Optional parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
Analog encoder and extra part assembly (CZ309-67082) on page 941		Aerosol, wear	Visual inspection	Diagnostics Menu > 0065 Media Advance > 0065-03 Check Motor and Transmission
Belts and platen – CZ309-67092 (Non-APJ), CZ309-67324 (APJ machines) on page 990		Wear, fatigue, clogging	Visual inspection + Diagnostics Menu	Diagnostics Menu > 0005 Vacuum system > 0005-03 Check Vacuum Holes > Check test result (PASS / NO PASS). Check if the vacuum holes are clogged as in the picture. If so, proceed to replace.  


PMK number	PMK part number	PMK name	PMK contents	Service Kit name / disassembly instructions
PMK9B NOTE: Applicable only to PageWide XL 4x00/3900 with SN greater than MY89JCQ00B, and PageWide XL 5100/6000 with SN greater than MY94UDQ00F from AMS and APJ	CZ309-67435	Belts and platen	PZ idle-roller analog encoder; Belts (all 4 belts, all 3 PZ platen assembly modules), intermediate support	Analog encoder and extra part assembly (CZ309-67082) on page 941 Belts and platen (CZ309-67433), see Belts and platen – CZ309-67433 (WW machines)(PWXL 4x00/3900s with SNs ≥ MY89JCQ00B, PageWide XL 5100/6000 with SN ≥ MY94UDQ00F from AMS and APJ) on page 998
Mandatory parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
None		N/A	N/A	N/A
Optional parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
Analog encoder and extra part assembly (CZ309-67082) on page 941		Aerosol, wear	Visual inspection	Diagnostics Menu > 0065 Media Advance > 0065-03 Check Motor and Transmission
Belts and platen – CZ309-67092 (Non-APJ), CZ309-67324 (APJ machines) on page 990		Wear, fatigue, clogging	Visual inspection + Diagnostics Menu	Diagnostics Menu > 0005 Vacuum system > 0005-03 Check Vacuum Holes > Check test result (PASS / NO PASS). Check if the vacuum holes are clogged as in the picture. If so, proceed to replace.
				 

PMK number	PMK part number	PMK name	PMK contents	Service Kit name / disassembly instructions
PMK10 (only APJ printers)	CZ309-67282	Dryer	Dryer module	Dryer assembly (CZ309-67184) on page 945
Mandatory parts:		Risk area:	Inspection procedure:	Pass/fail criteria:

PMK number	PMK part number	PMK name	PMK contents	Service Kit name / disassembly instructions
None		N/A	N/A	N/A
Optional parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
Dryer assembly (CZ309-67184) on page 945		N/A	N/A	Replace it if Dryer is failing or some dryer errors exist on history list

PMK number	PMK part number	PMK name	PMK contents	Service Kit name / disassembly instructions
PMK11	CZ309-67283	Vacuum pump	Vacuum pump fans	Vacuum fan assembly (CZ309-67087) on page 925
Mandatory parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
None		N/A	N/A	N/A
Optional parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
Vacuum fan assembly (CZ309-67087) on page 925		N/A	N/A	Replace it if it is not working correctly or there are related errors on the history list

PMK number	PMK part number	PMK name	PMK contents	Service Kit name / disassembly instructions
PMK12	CZ309-67284	Spittoon and carriage	Spittoon beam; Service carriage (with Tetris and Drop detector)	Spittoon beam (CZ309-67095) on page 981 Service carriage assembly (CZ309-67105) on page 961
Mandatory parts:		Risk area:	Inspection procedure:	Pass/fail criteria:
Spittoon beam (CZ309-67095) on page 981		N/A	N/A	N/A
Optional parts:		Risk area:	Inspection procedure:	Pass/fail criteria:

PMK number	PMK part number	PMK name	PMK contents	Service Kit name / disassembly instructions
Waste tube, see Waste management tubes (CZ309-67210) on page 1007		Clogged tube	Visual inspection	Check tube for clogging (the picture is an example of an OK tube) 
Service carriage assembly (CZ309-67105) on page 961		Wear	Diagnostics Menu	Diagnostics Menu > 0030 Service Carriage > 0030-01 Check Electronics, 0030-02 Check Mechatronics (check test result: PASS / NO PASS)

Service carriage rod lubrication

1. Turn off the printer.
2. Remove the top right sheet cover.
3. Lock the print-bar brake.
4. Turn the brake screw with the tool to lift the print bar to its top position.
5. Lock the print-bar brake.
6. Remove all printheads from the print-bar beam and put them into their protectors.
7. Lubricate the whole service carriage rod with oil, including at the back. Also lubricate the carriage home position area (push the service carriage to the left).



8. Remove the oil excess with a cloth or tissue. Be careful not to stain the encoder strip.

 **IMPORTANT:** Use some material that will not leave fibers on the rod.



9. Move the service carriage from its home position to the left-hand side of the printer, three times, to ensure that the whole rod is properly lubricated.
10. Return the service carriage to its home position.
11. Reinstall the printheads, by performing the removal operation in reverse.

Preventive lift mechanism oil maintenance

Associated PMK

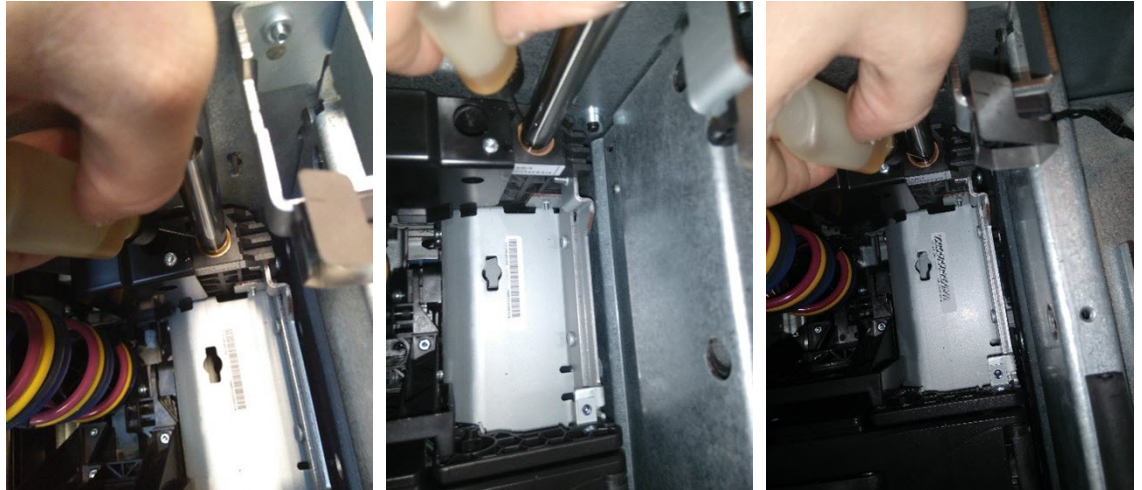
PMK2 (see the second table in [Following the preventive maintenance program on page 1079](#)).

Material needed

- Oil: part number 6040-1101
- Oil with needle dispenser
- T-20 & T-15 screwdrivers

Procedure

1. Ensure that the Printbar is in a downwards position (cap position is the best choice because it reflects the position of the Printbar with the printer switched off).
2. Open the Top door.
3. Remove the [Top-left exterior cover \(CZ309-67036\) on page 637](#) and the [Left printhead bezel \(CZ309-67060\) on page 657](#).
4. Apply between 6-8 drops oil in all the perimeter of the left lift upper bushing with the oil dispenser. See images below:

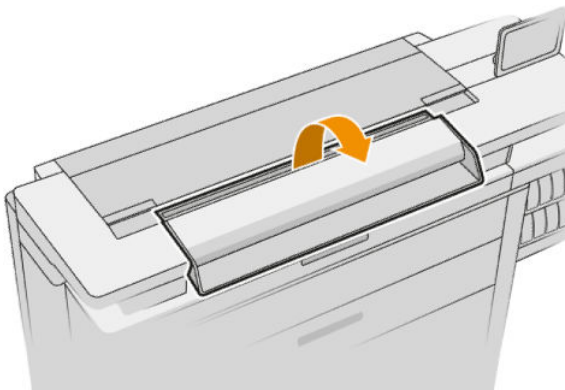
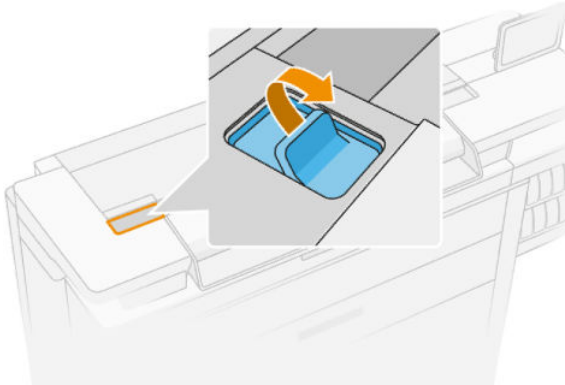


5. Repeat the process at the right side of the machine. In this case remove the [Top-right exterior cover \(CZ309-67044\) on page 646](#), [Top-right exterior cover fixed trim \(CZ309-67062\) on page 658](#) and the [Right printhead bezel \(CZ309-67061\) on page 659](#).
6. Apply between 6-8 drops of oil along the perimeter of the Right lift upper bushing with the oil dispenser.
7. Put all the covers back on again and switch on the printer. The oil will be dispersed along the Printbar rods during normal printbar movements.

Clean the scanner's glass plate

You are recommended to clean the scanner's glass plate periodically, depending on how often you use the scanner.

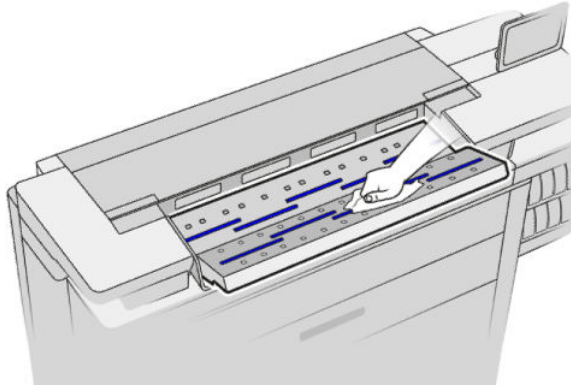
1. Turn off the printer using the power key at the front, then also turn off the power switch at the rear and disconnect the power cable.
2. There is a small lever at the rear left of the scanner. Slide the lever up and open the scanner cover.



⚠ WARNING! Do not lift the scanner while the scanner cover is open. Your fingers or hand may be trapped or crushed.

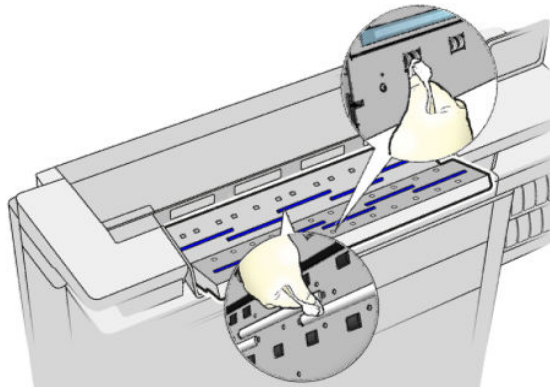
3. Gently wipe the glass plate and the surrounding area with a lint-free cloth dampened with water and then wrung dry. A suitable cloth is provided with the printer.

⚠ CAUTION: Do not use abrasives, acetone, benzene or fluids that contain these chemicals. Do not spray liquids directly onto the scanner glass plate or anywhere else in the scanner.

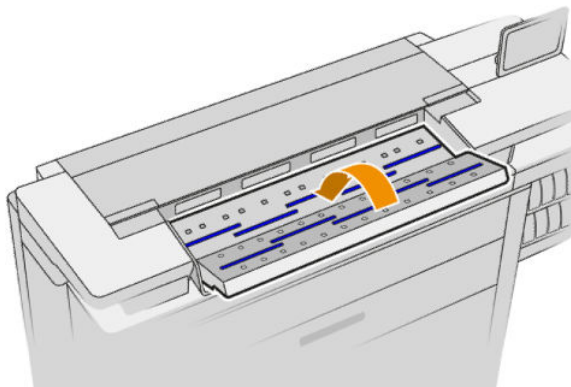


Do not worry about tiny droplets of water left on the glass: they will evaporate.

4. Optionally, for more thorough cleaning:
 - Remove the glass plate and clean it on both sides. See [Replace the scanner's glass plate on page 1096](#).
 - Clean the pressure rollers and the feed rollers.



5. Close the scanner cover and gently push it down to lock it into place.

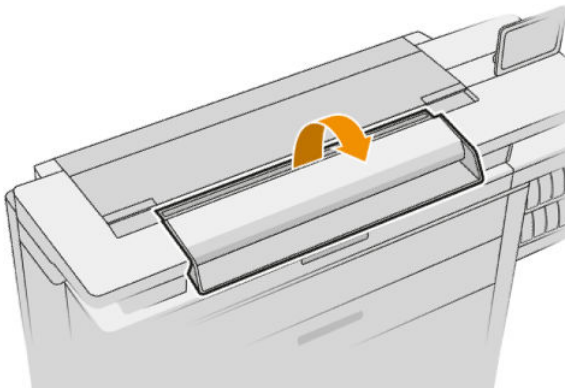
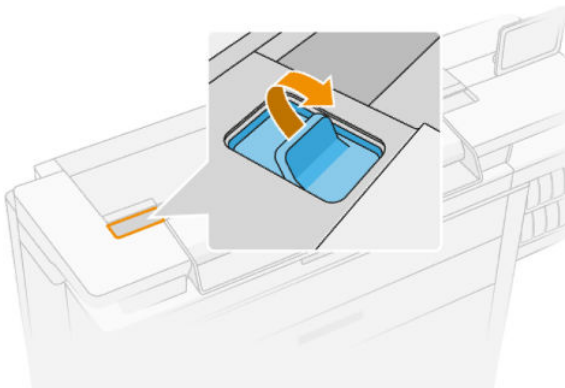


6. Clean the area immediately in front of the scanner, where the scanned sheet rests before scanning.
7. Reconnect the printer's power cable, turn on the power switch at the rear, and turn on the printer using the power key.

Replace the scanner's glass plate

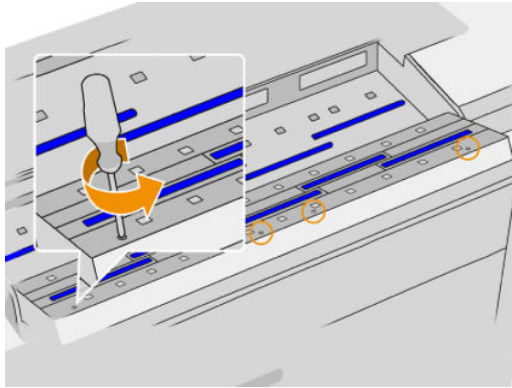
Over time, the condition of the glass plate can deteriorate. Small scratches on the surface of the glass can reduce image quality. Contact your support representative to order a new glass plate.

1. Turn off the printer using the power key at the front, then also turn off the power switch at the rear and disconnect the power cable.
2. There is a small lever at the rear left of the scanner. Slide the lever up and open the scanner cover.

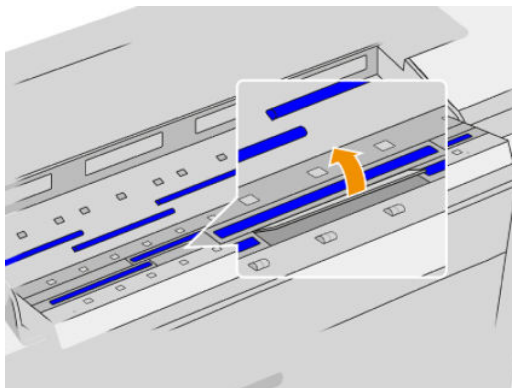
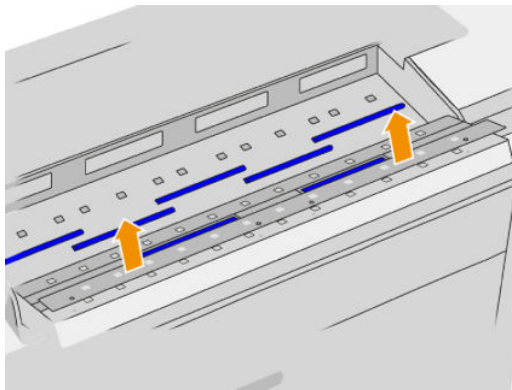


WARNING! Do not lift the scanner while the scanner cover is open. Your fingers or hand may be trapped or crushed.

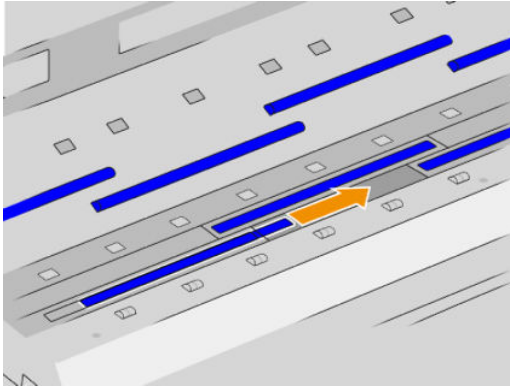
3. Unscrew 4 screws from the upper part if you intend to replace any of the three upper glasses; or unscrew the 4 screws of the lower part for the two lower glasses.



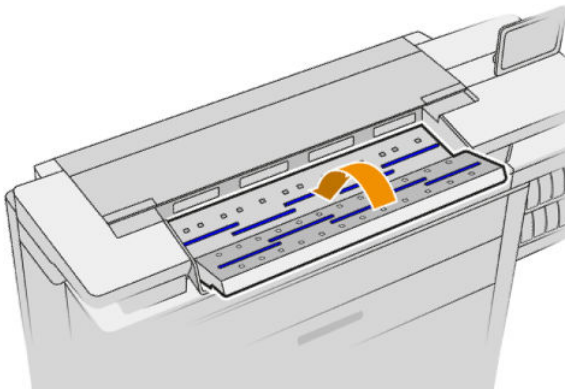
4. Remove the plastic piece (upper or lower as appropriate), and the plastic tabs next to the glass you intend to remove.



5. Slide the glass laterally to remove it.



6. Slide the new glass into place.
7. Put back the plastic tabs you removed earlier.
8. Put back and screw in the plastic piece you removed earlier.
9. Close the scanner cover and gently push it down to lock it into place.



10. Reconnect the printer's power cable, turn on the power switch at the rear, and turn on the printer using the power key.

11 Reshipping

- [Reseller requirements](#)
- [Transport procedure if the site preparation guide is not accomplished](#)
- [Rotation procedure](#)
- [Reshipping procedure](#)

Reseller requirements

Reshipping preparations

- Remove additional accessory drawers.
- In the 8000 printer, if the top stacker is installed, remove the stacker arms and tray and ship them in their own packaging.
- Leave the ink cartridges in the printer: do not remove them.
- Several service kits and consumables are needed for reshipment. Ensure that you have all of them before starting.
 - Printhead Cap Service Kit (CZ309-67192)
 - Printheads style box service kit (CZ309-67294)
 - HP Matte Polypropylene Roll service kit (CZ309-67301)
 - Waste container
- If the PMK12 counter is over 60% you need PMK12. You should replace the spittoon beam during the reshipping procedure. The service carriage assembly can be replaced after the reshipment.

Printer reshipping conditions

- Road travel is allowed for no more than 100 miles (161 km).
- The printer's ambient temperature should be in the range -25 to 55°C (-13 to 131°F).
- The printer should be on its pallet with the wheels off the floor.
- After reshipment starts, the printer should be installed in its new location within 1 week.

Printhead reshipment conditions

- Printhead modules must be removed from the printer, placed into DI 1.5 caps (Printhead Cap Service Kit, CZ309-67192), and reshipped inside the special printhead reshipping box (Printhead style box service kit, CZ309-67294).
- DI 1.5 caps (CZ309-67192) must be clean and free from ink when you insert the printhead modules.
- The printheads should be unpacked within 1 week.
- The printheads' ambient temperature should be in the range -5 to 40°C (23 to 104°F).
- The printheads in their case should not be under 0°C (32°F) for more than 30 minutes.

Commercial ramps

Contingency plan in case there is no manual forklift to lower the printer

- Minimum load to be supported (per ramp): 600 kg
- Minimum ramp length: 1800 mm

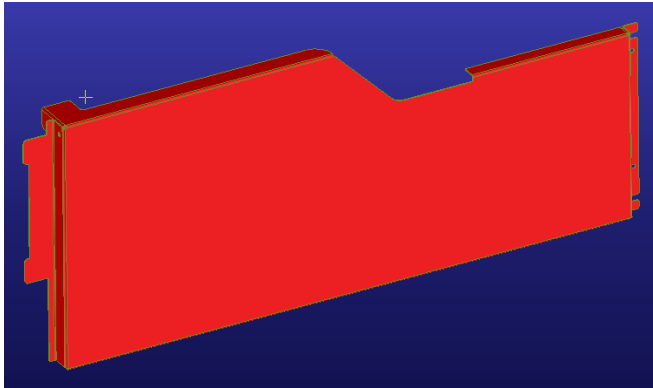
- Minimum ramp internal channel width: 90 mm
- Maximum ramp profile height (from the ramp base to top, to avoid interference with the printer): 30 mm

Transport procedure if the site preparation guide is not accomplished

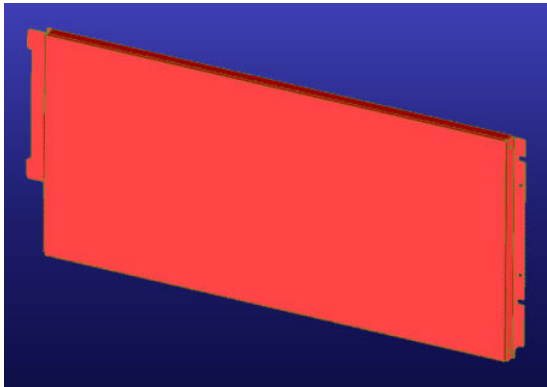
This procedure should be used if the printer is not on the ground floor and there is no elevator to bring it to the ground floor, so it must be manually lifted and carried up or down stairs.

1. Remove the printer's bottom covers:

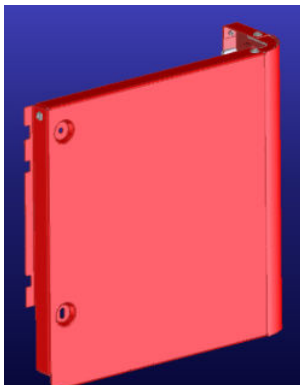
- Right lateral panel front assembly: CZ309-00884



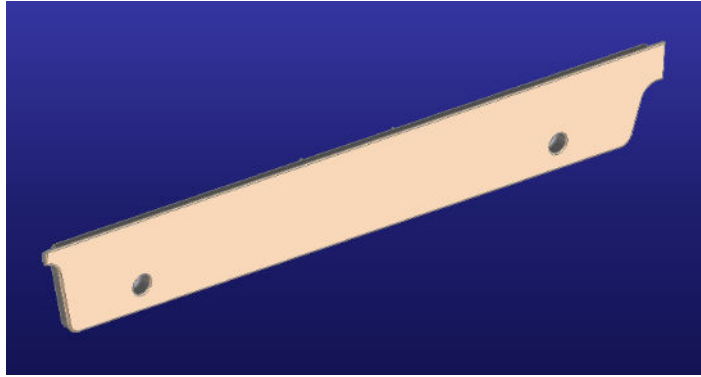
- Right lateral panel front three-drawers assembly: CZ309-00925



- Right rear three-drawers sheet-metal assembly: CZ309-60559



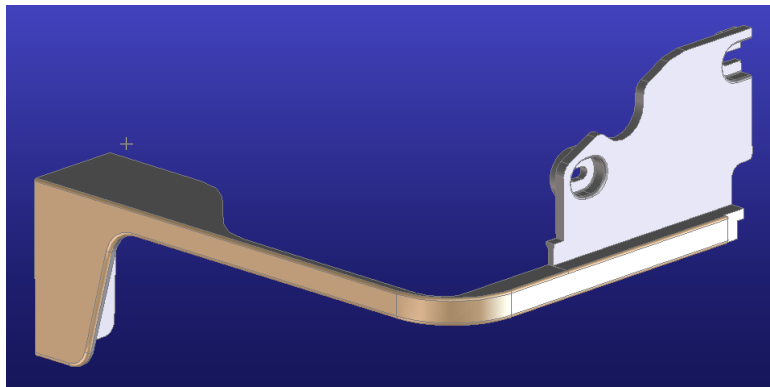
- Foot cover plate right: CZ309-40400



- Front cover right assembly: CZ309-60188

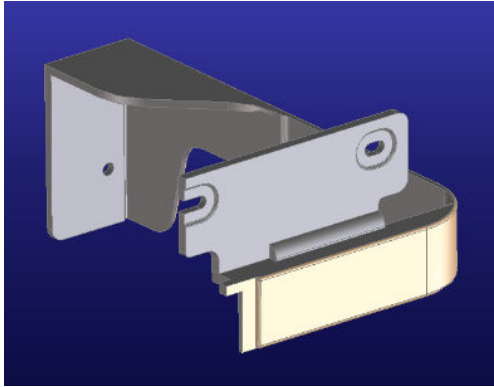


- Foot cover right plastic: CZ309-40398

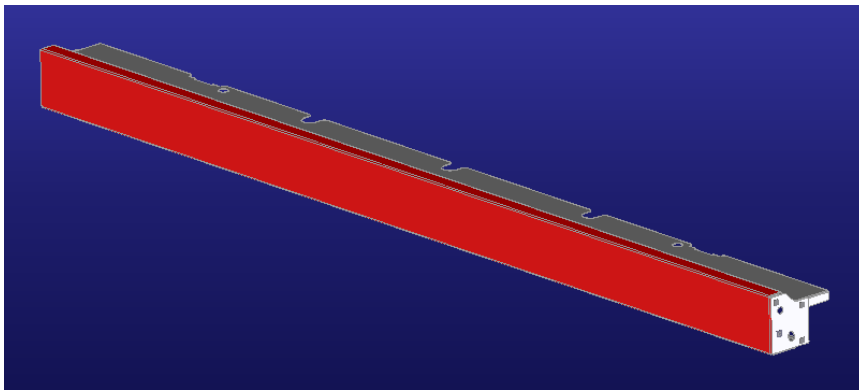


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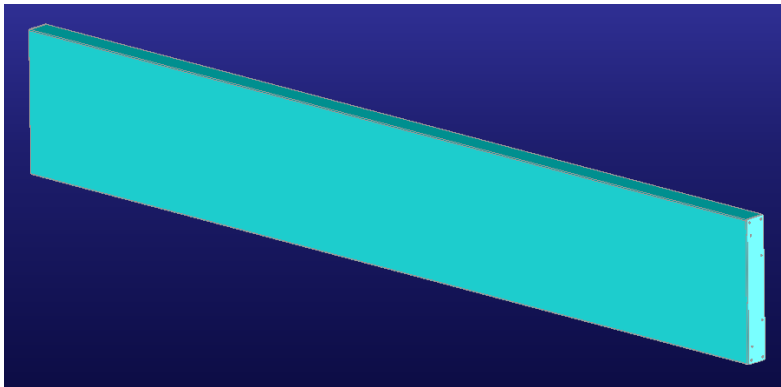
- Foot cover extension right: CZ309-40474



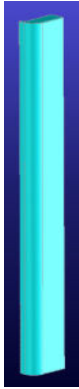
- Foot cover assembly: CZ309-00932



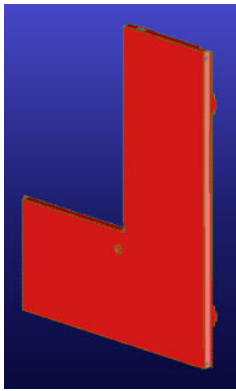
- Fake cover drawer assemblies: CZ309-60506 (2, middle and bottom drawers)



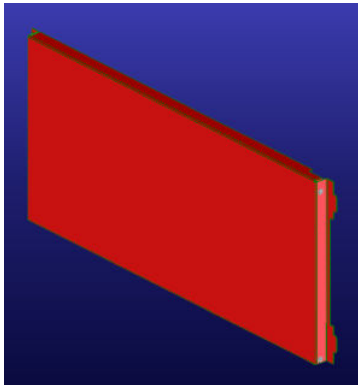
- Front cover left assembly: CZ309-00927



- Left lateral panel front assembly: CZ309-60220

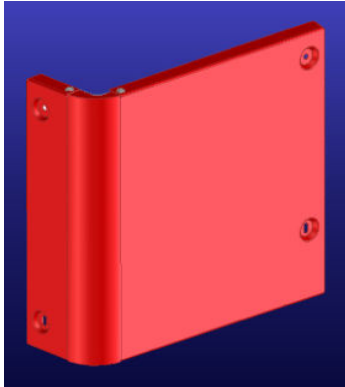


- Left lateral panel front three-drawers 2 assembly: CZ309-60221



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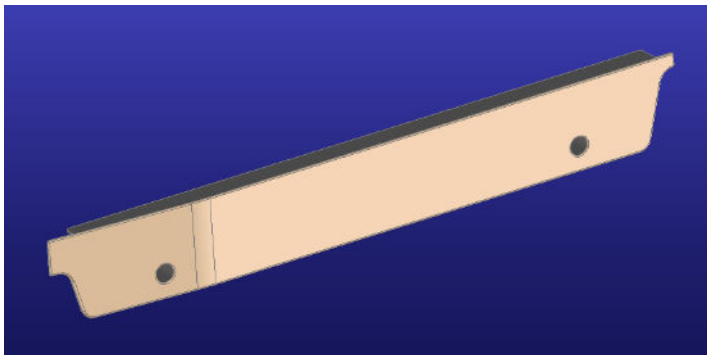
- Left rear three-drawers sheet-metal assembly: CZ309-60501



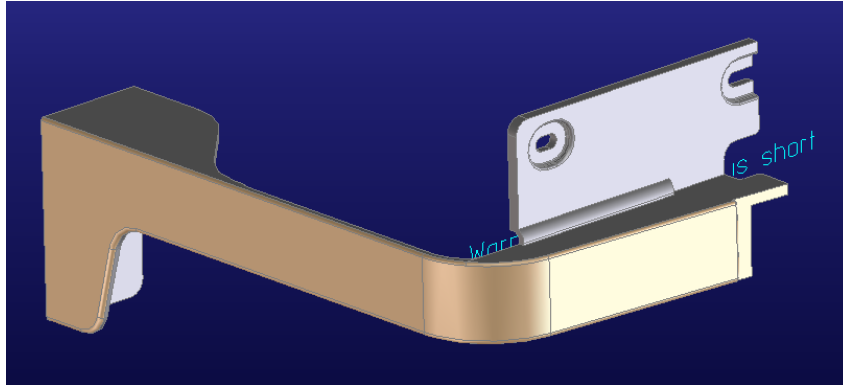
- Rear left top cover sheet-metal assembly: CZ309-60508



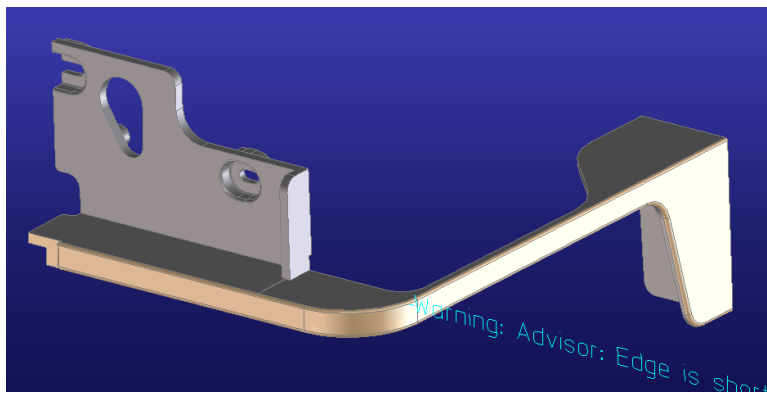
- Foot cover plate left: CZ309-40399



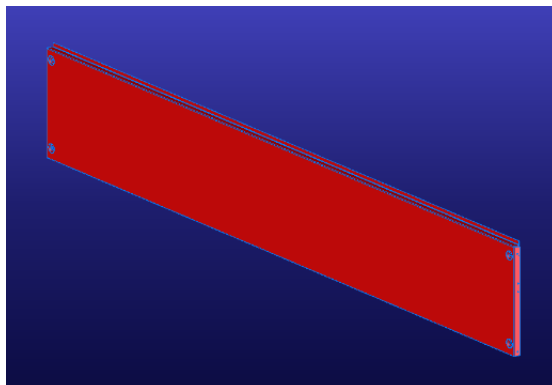
- Foot cover extension left: CZ309-40473



- Foot cover left plastic: CZ309-40397

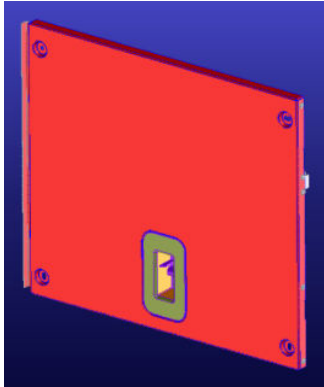


- Rear bottom panel: CZ309-00412

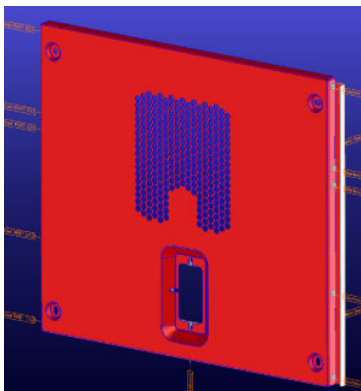


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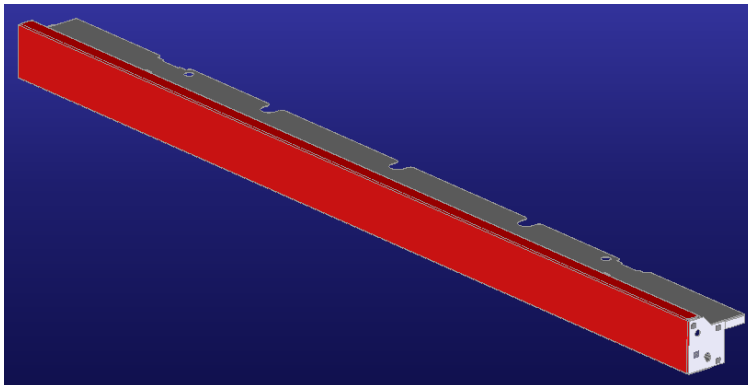
- Rear bottom panel e-box left assembly: CZ309-60197



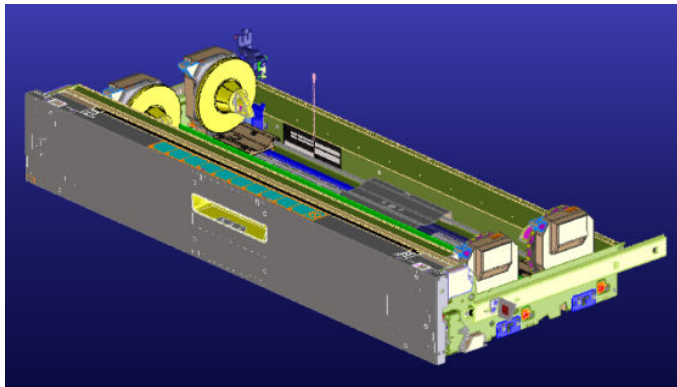
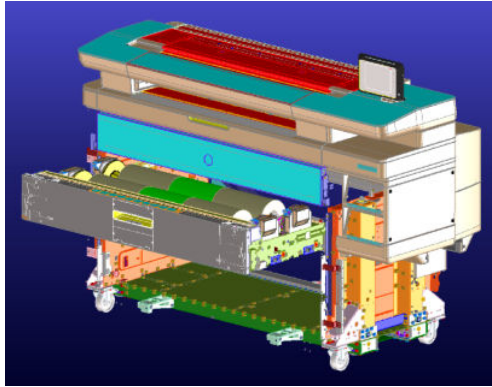
- Rear bottom panel e-box right assembly: CZ309-60196



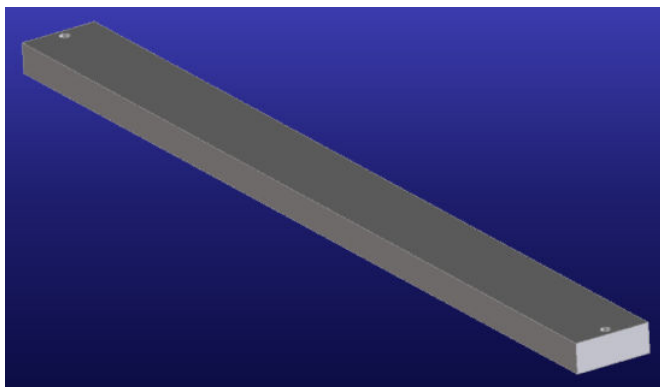
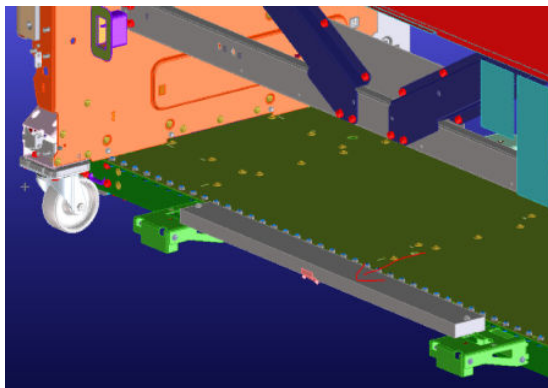
- Foot cover assembly: CZ309-00932



2. Remove the top drawer.

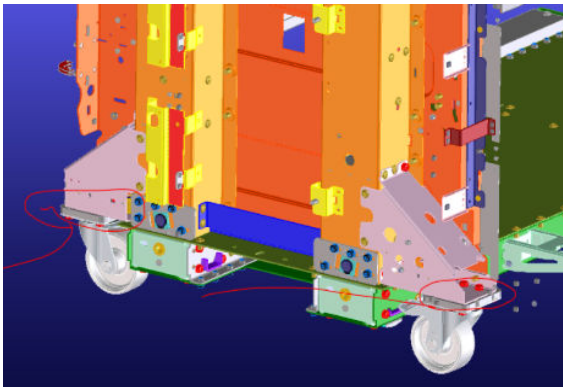
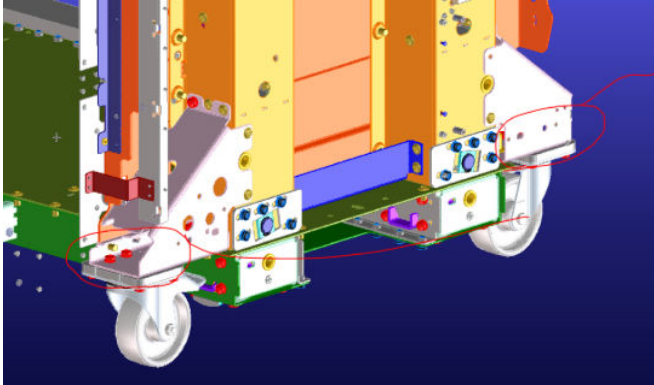


3. Remove the rear bar: Foot counterweight CZ309-20398.

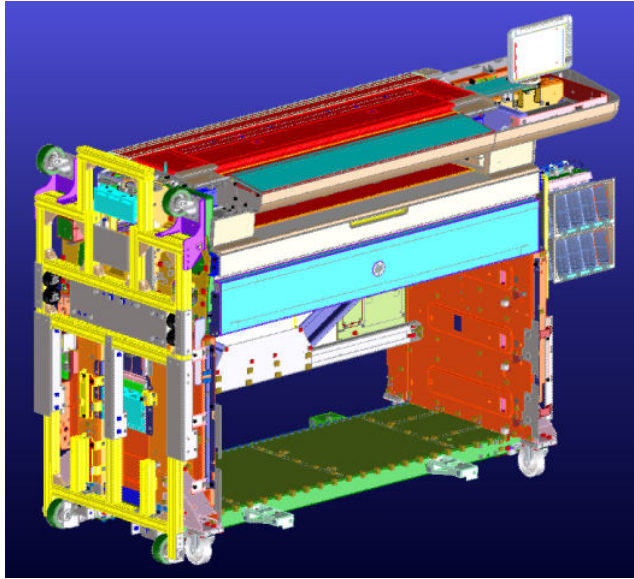


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4. Remove the printheads and ink cartridges, if they are present in the printer.
5. Ensure that all printer locks are locked:
 - Spittoon lock
 - Paper output door lock
 - Print-bar lock
 - Scanner CIS bridge lock (MFP only)
6. Attach the means of traction (rope, slings, chains) to each wheel support.



7. The printer should now look like this:



Rotation procedure

This procedure should be used if you need to rotate the printer through 90 degrees and stand it on end in order to fit it into an elevator.

⚠ CAUTION: The printer should be rotated only by specifically trained personnel. Before proceeding, read the following safety precautions and operating instructions to make sure that you can use it safely.

You are expected to have the appropriate technical training, knowledge of the service manual, and experience necessary to be aware of hazards to which you may be exposed in performing a task, and to take appropriate measures to minimize the risks to yourself and to others. Not following the service manual instructions may incur important safety risks. Operations must be supervised at all times.

📋 IMPORTANT: In case the printer is filled with ink, the following specific points must be observed, before rotating the printer:

- Ensure that all Printheads are removed from the printer.
- Remove:
 1. The spittoon
 2. The tube linking the spittoon to the cleaning container (waste management tubes).

These are parts which have ink that could spread inside the printer and outside of the printer in a vertical position.

Elevator requirements

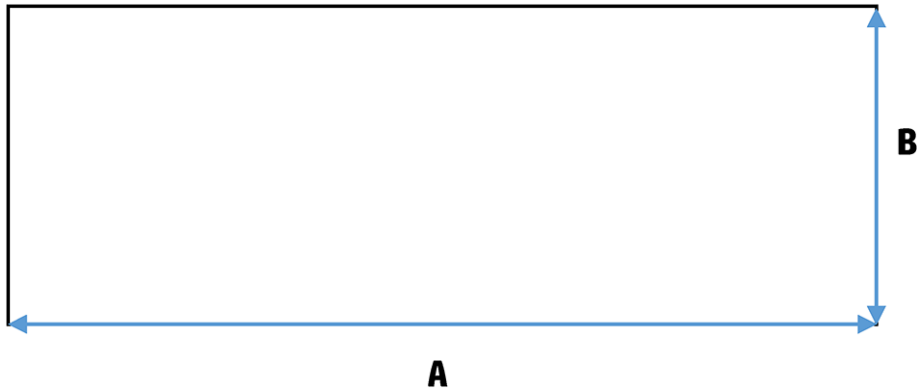
- Minimum height (A): 2 m (79 in)
- Minimum depth (B): 1.3 m (52 in)
- Minimum door width (C): 0.8–0.9 m (32–36 in)
- Minimum lifting capacity: 450 kg (992 lb, or 6 people)



Loading space outside elevator

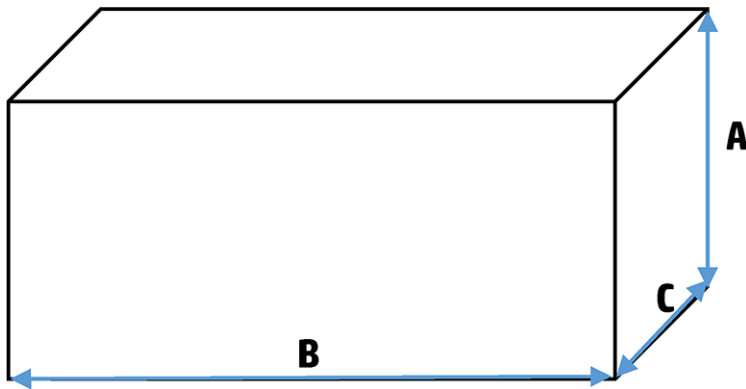
You are strongly recommended to unpack and rotate the printer as close as possible to the elevator. Once rotated, the space that needs to be moved is 900 mm (ideally 1 m) width and 2 m (ideally 2.5 m) height.

- Minimum depth (A): about 8 m (315 in)
- Minimum width (B): 2 m (79 in)



Unloading space outside elevator

- Minimum height (A): 2.7 m (107 in)
- Minimum depth (B): 6 m (237 in)
- Minimum width (C): 1 m (40 in)



Tools required

- Two hydraulic manual cranes (not provided by HP)

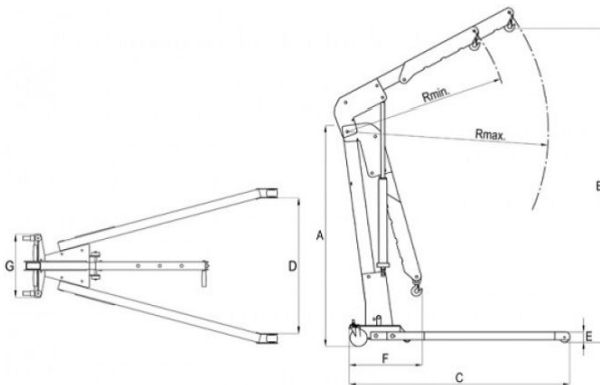
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- Nominal lifting load required: minimum 1000 kg (2205 lb), ideal 2000 kg (4409 lb)
- Portable folding crane (the leg extensions and main arm can be folded to fit into an elevator)



- Minimum height: 2510 mm (98.8 in) (B)
- Required radius: 1500 mm (59 in)
- Base feet minimum inner distance: 900 mm (35.5 in) (D)
- Allowable distance from the floor to the crane hook: 420 mm (16.5 in)

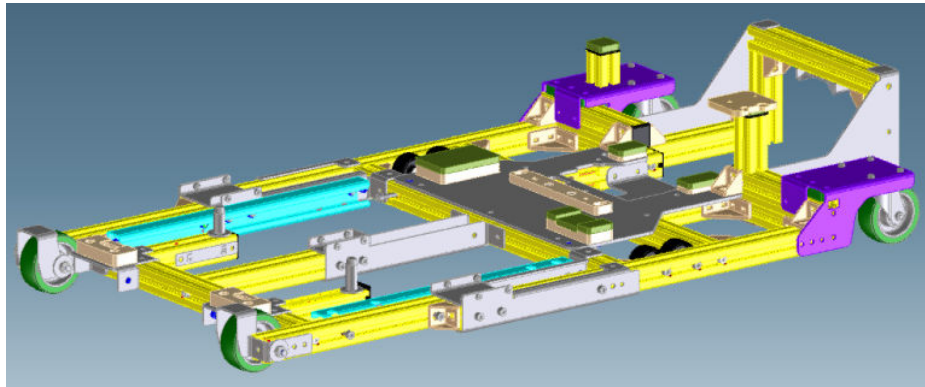


- Ratchet jack

- Nominal lifting load required: minimum 500 kg (1102 lb), ideal 1250 kg (2756 lb)
- Minimum lift from ground: < 125 mm (5 in)
- Maximum lift from ground: > 1200 mm (47 in)

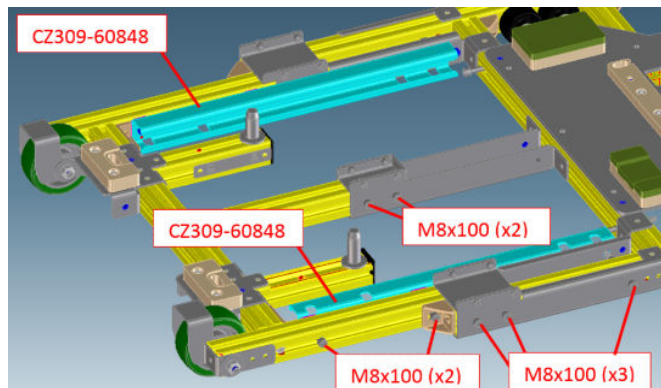


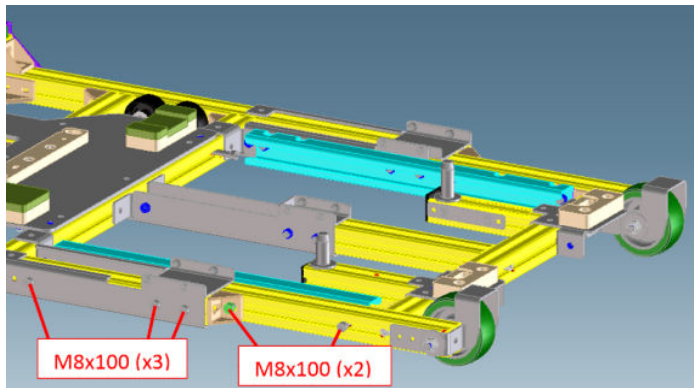
- Base frame
 - Configuration for 8000 series printers



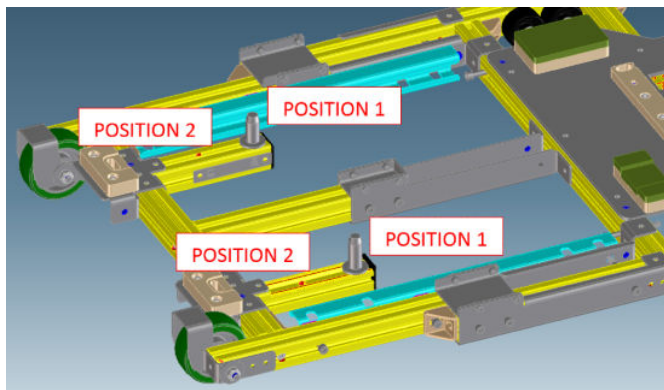
In this configuration, the two reinforcements (CZ309-60848) should be set up as shown below.

The base frame is fixed in position with twelve M8x100 screws.

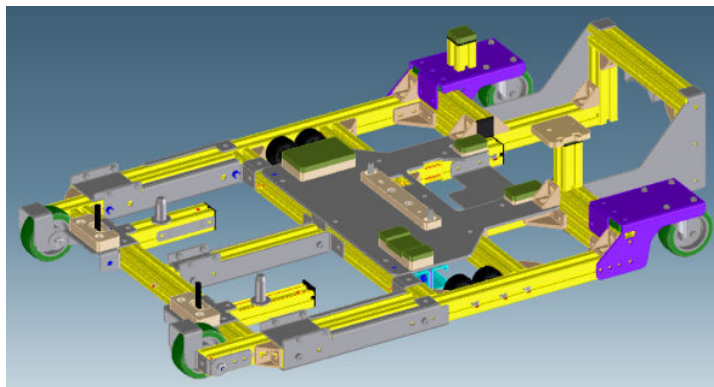




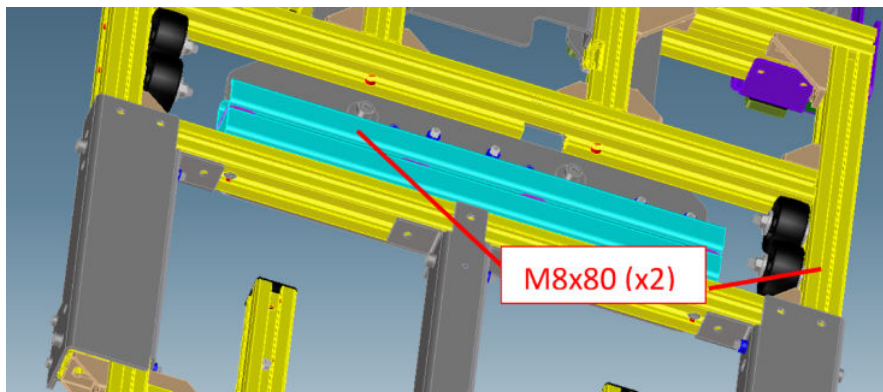
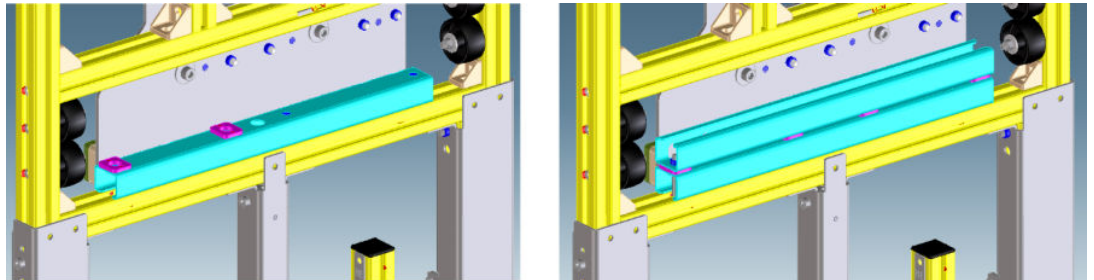
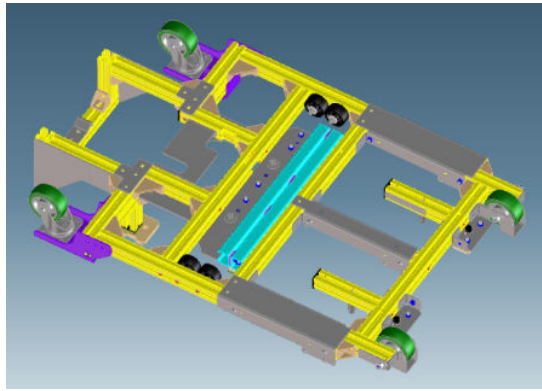
The pins shown below should be in the upper position (1), as shown.



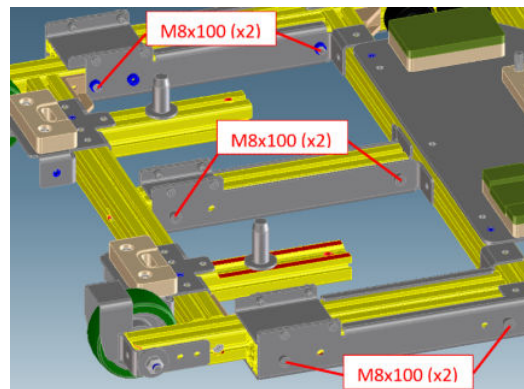
- Configuration for other 3900/4000/4100/4500/4600/5000 series printers



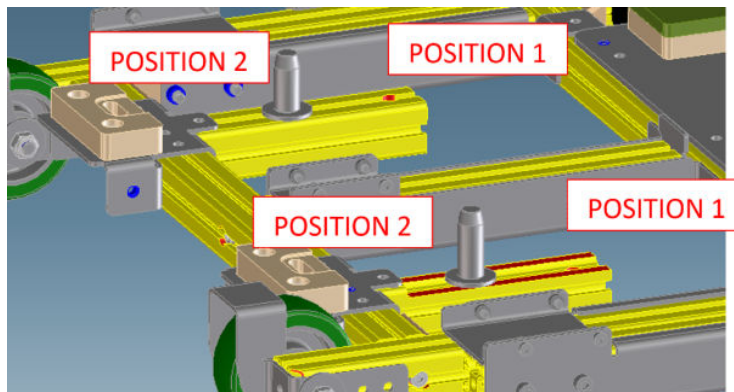
In this configuration, the reinforcements (CZ309-60848) are not used; they are stored under the base plate (CZ309-01337) as shown below, fastened by two M8x80 screws.



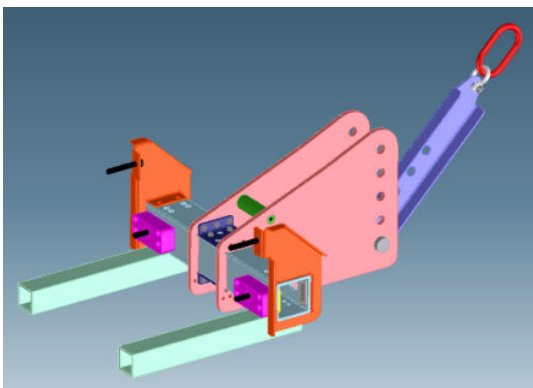
The base frame is fixed in position with six M8x100 screws.



The pins shown in the picture below must be in the lower position (2), as shown.



- Puller



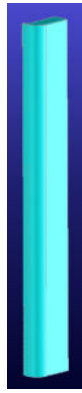
- Rope cable (sling)



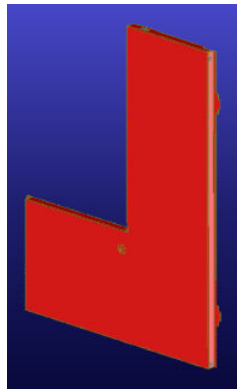
- Required sling length: 2.5 m (98.4 in)
- Minimum allowable load: 2000 kg (4409 lb)

How to rotate the printer

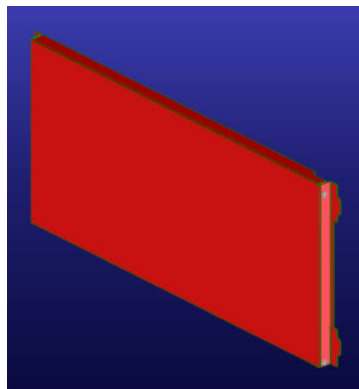
1. Remove the following components before proceeding any further.
 - a. Remove the left lateral covers.
 - Front cover left assembly: CZ309-00927



- Left lateral panel front assembly: CZ309-60220

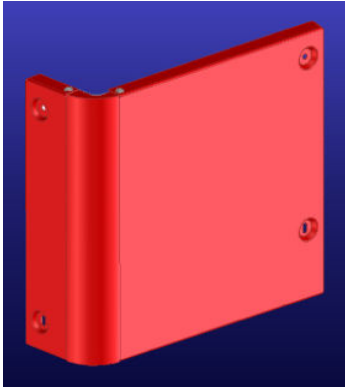


- Left lateral panel front three-drawers 2 assembly: CZ309-60221



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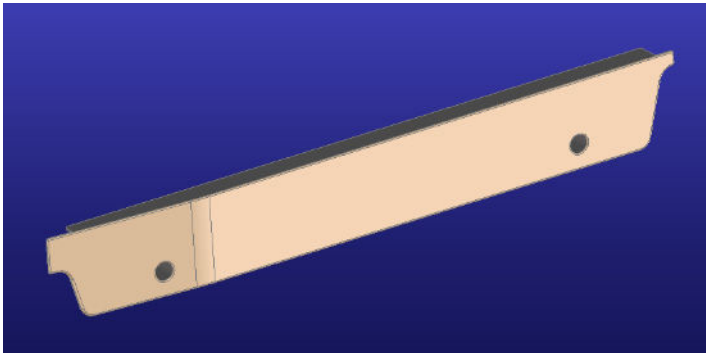
- Left rear three-drawers sheet-metal assembly: CZ309-60501



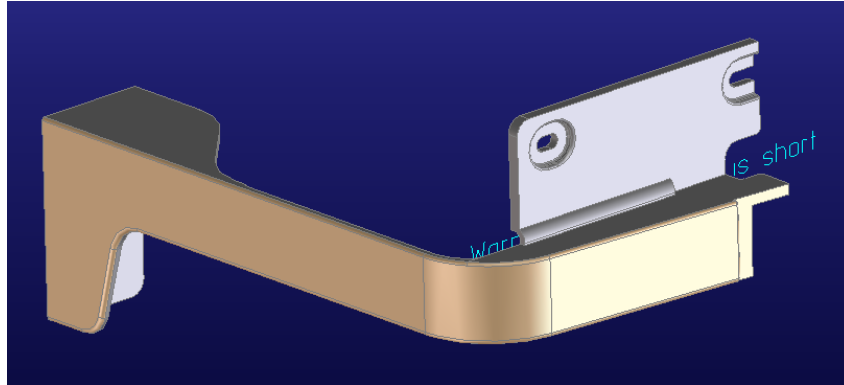
- Rear left top cover sheet-metal assembly: CZ309-60508



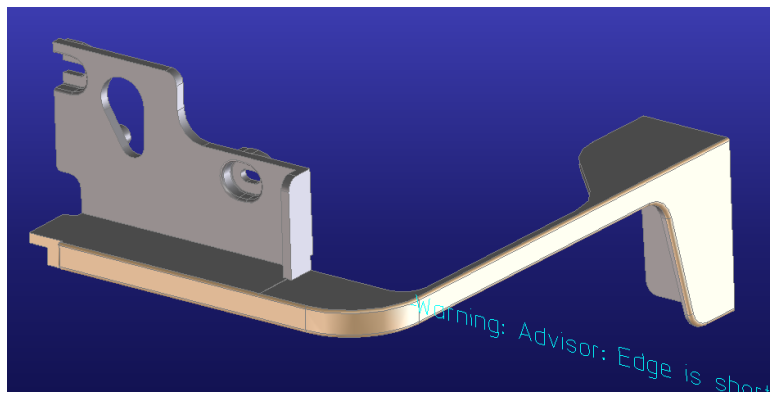
- Foot cover plate left: CZ309-40399



- Foot cover extension left: CZ309-40473



- Foot cover left plastic: CZ309-40397

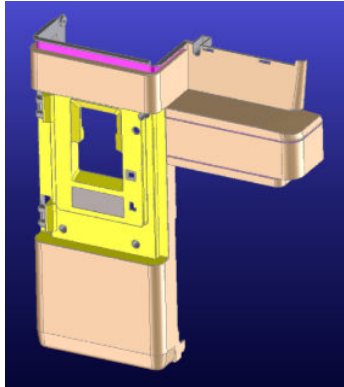


- Service door: CZ309-40378

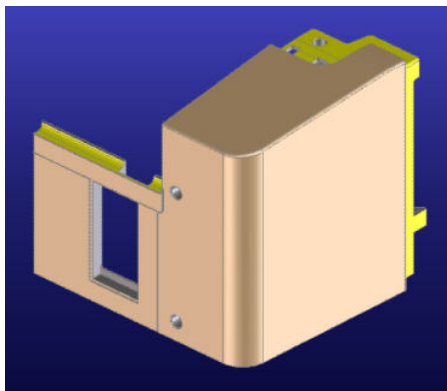


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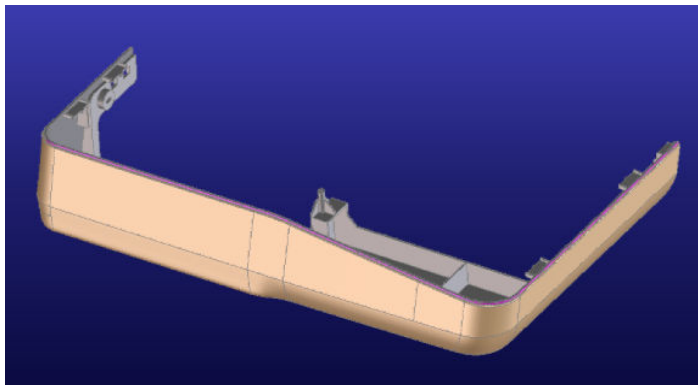
- Left cover assembly: CZ309-60351



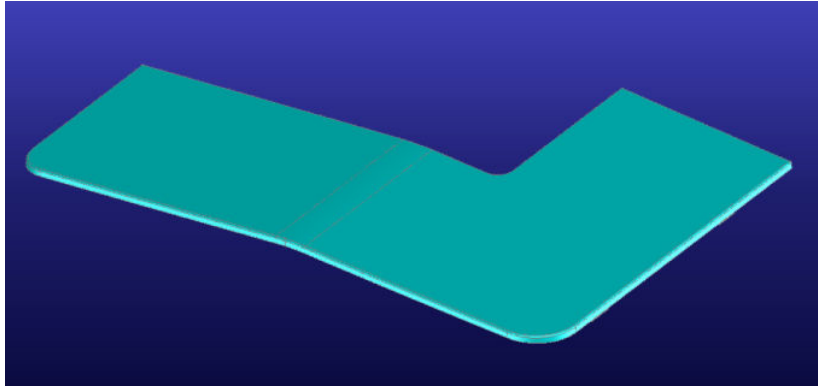
- Rear left top cover assembly: CZ309-60352



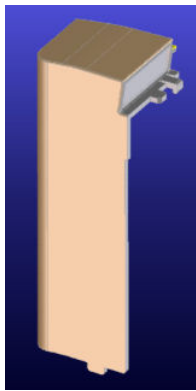
- Top left cover: CZ309-40406



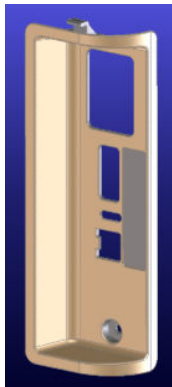
- Top left exterior sheet support: CZ309-40407



- Rear left top corner cover: CZ309-40393

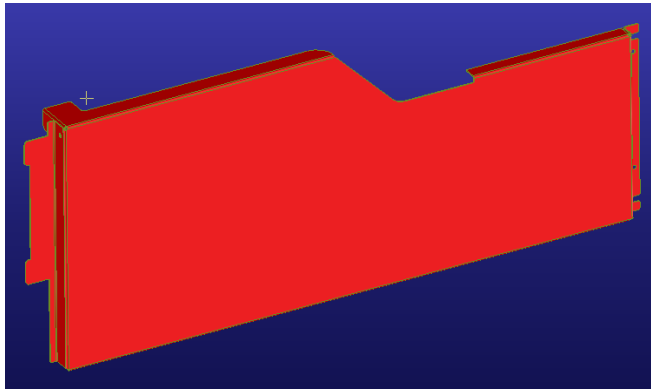


- Rear connectors bezel: CZ309-40613

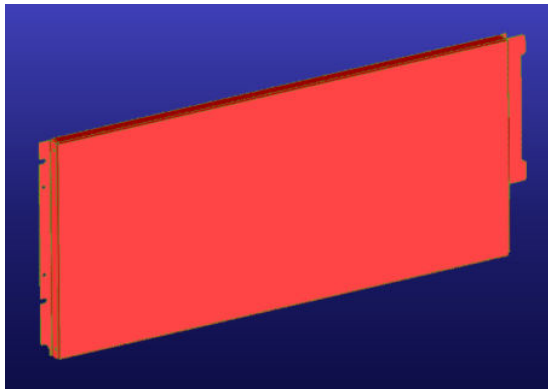


b. Remove the right lateral covers.

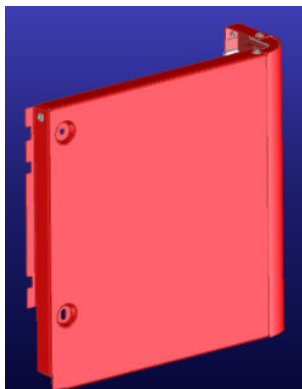
- Right lateral panel front assembly: CZ309-00884



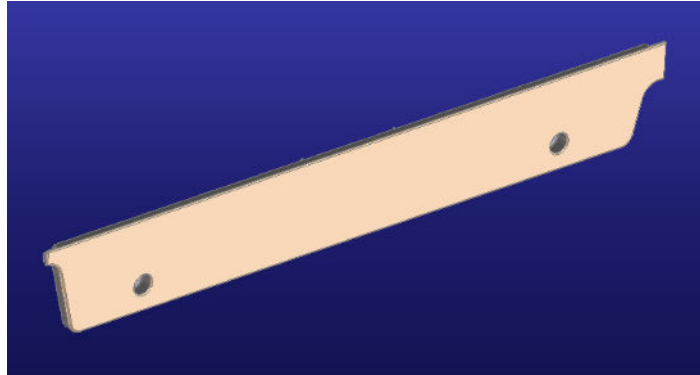
- Right lateral panel front three-drawers assembly: CZ309-00925



- Right back three-drawers sheet-metal assembly: CZ309-60559



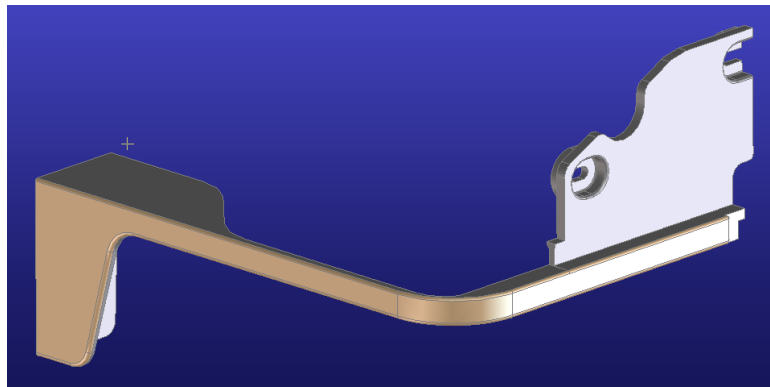
- Foot cover plate right: CZ309-40400



- Front cover right assembly: CZ309-60188

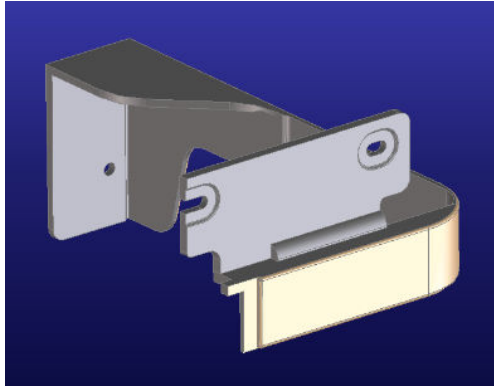


- Foot cover right plastic: CZ309-40398

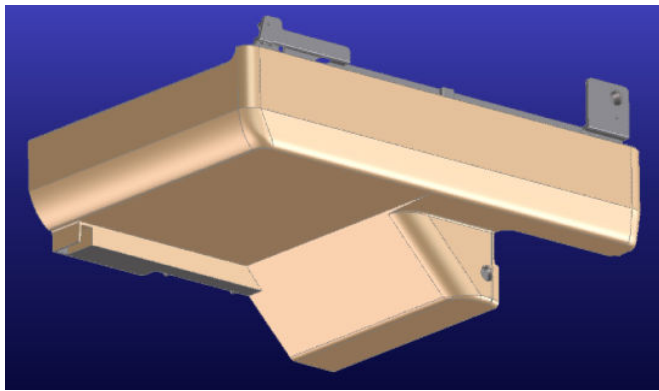


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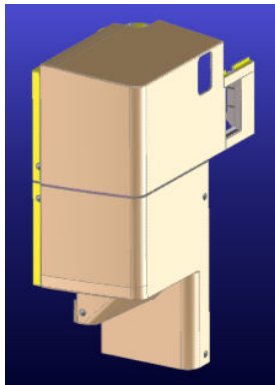
- Foot cover extension right: CZ309-40474



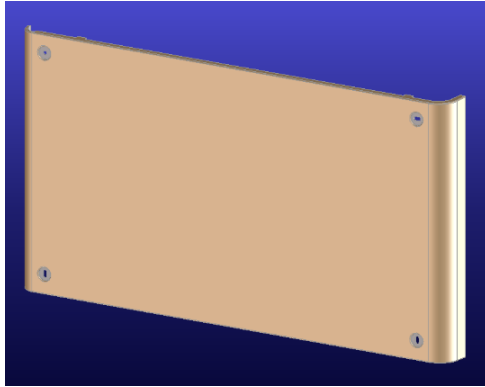
- Right cover bottom: CZ309-40712



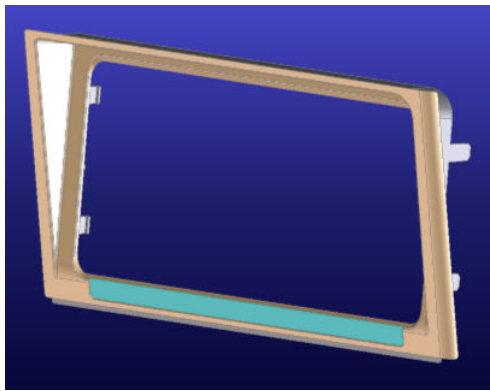
- Rear right top cover assembly: CZ309-60353



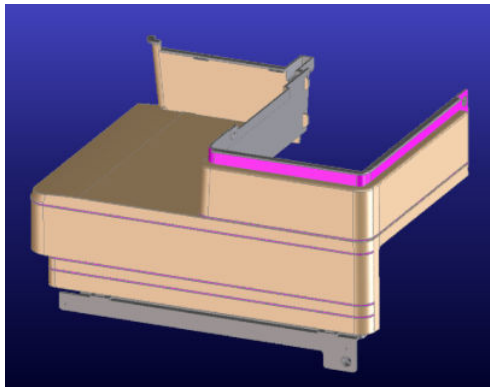
- Right cover panel plastic: CZ309-40811



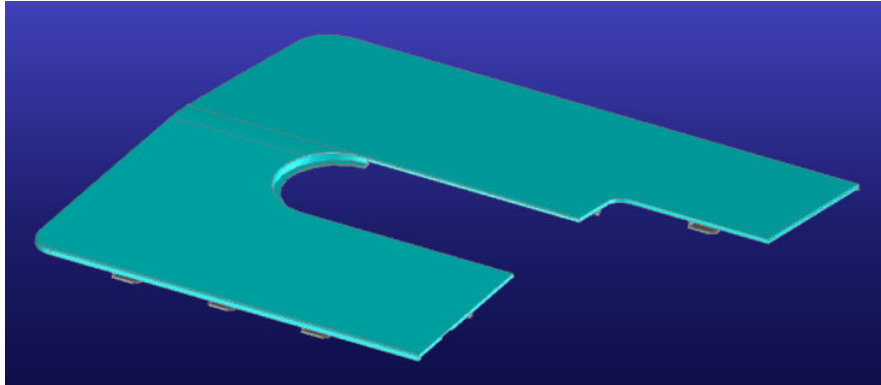
- ISS bezel: CZ309-40665 (2)



- Right cover assembly: CZ309-60546

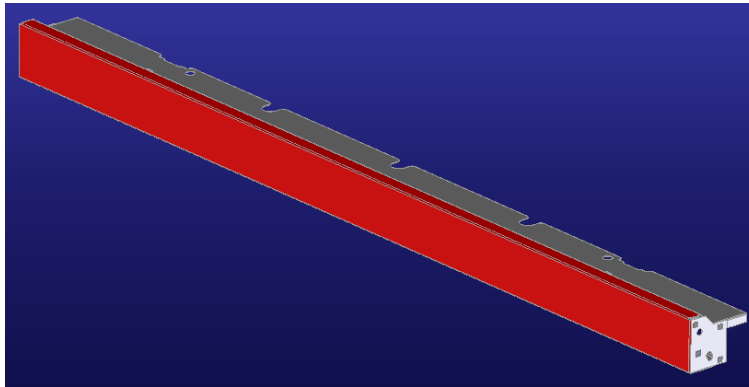


- Top right exterior sheet support

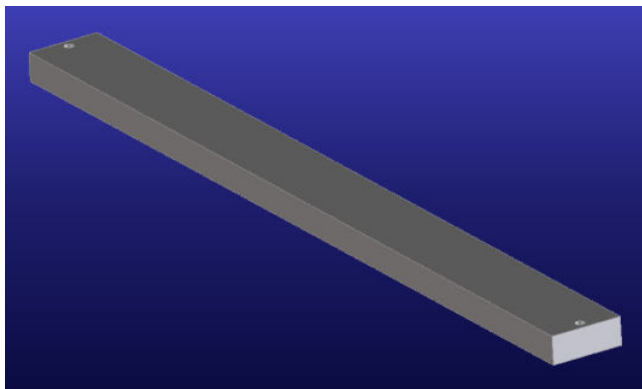


- c. Remove the following other parts.

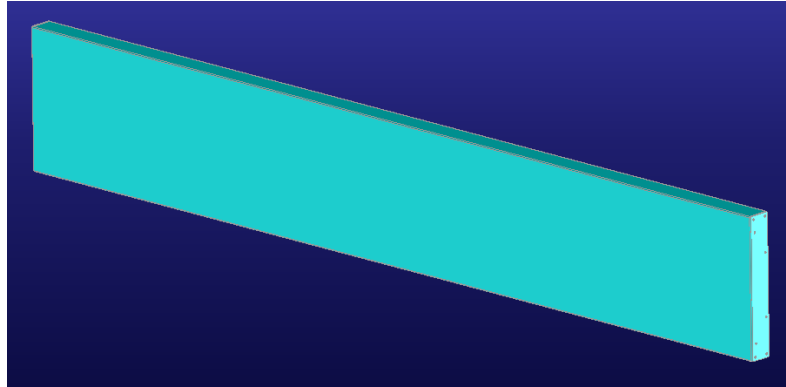
- Foot cover assemblies: CZ309-00932 (2)



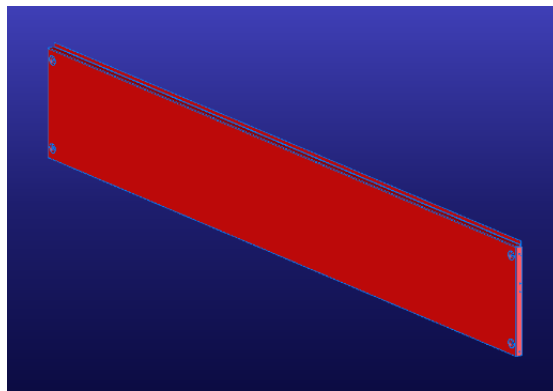
- Foot counterweight: CZ309-20398



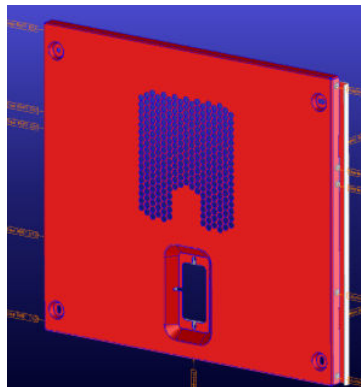
- Fake cover drawer assemblies: CZ309-60506 (2, middle and bottom drawers)



- Rear bottom panel: CZ309-00412

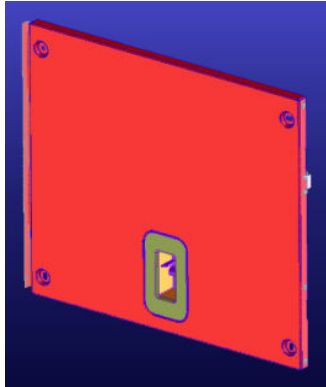


- Rear bottom panel e-box right assembly: CZ309-60196

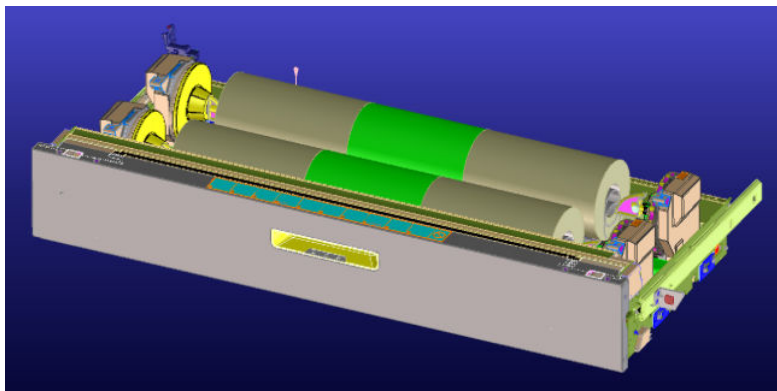


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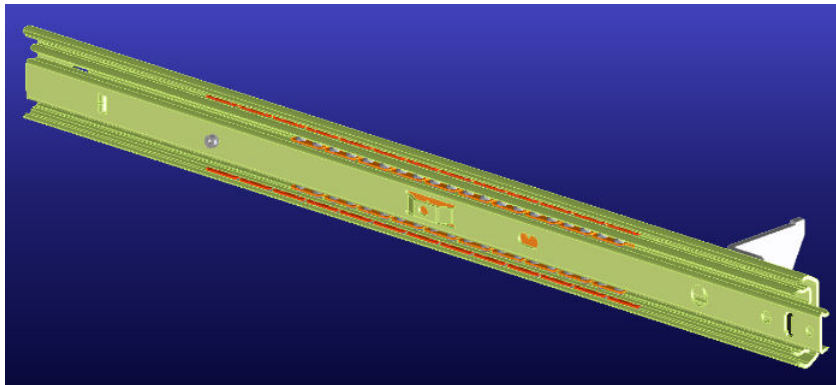
- Rear bottom panel e-box left assembly: CZ309-60197



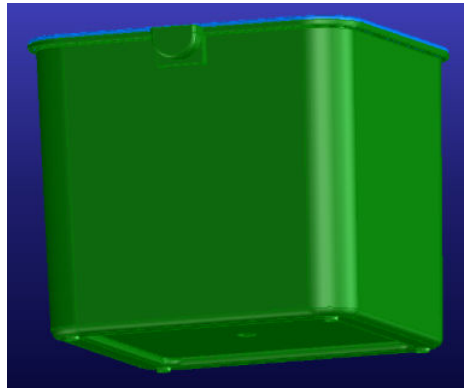
- Top drawer: CZ309-60671



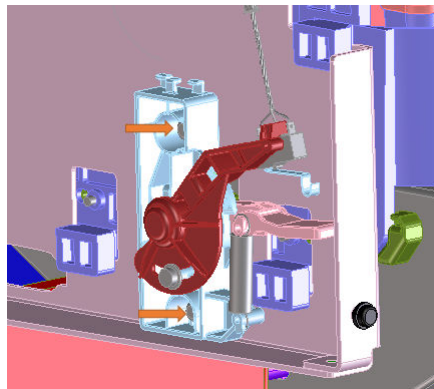
- All drawer guides: CZ309-60647



- All printheads and ink cartridges, if they are installed in the printer
- d. Disconnect and remove the waste diverter module as follows:
- i. Remove the waste container.

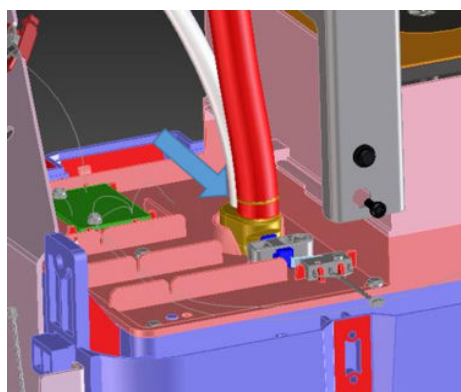


- ii. Disconnect the waste-full sensor switch cable.
- iii. Disconnect the cable that connects the Terol PCB to Clara.
- iv. Remove the two waste-full sensor screws (0515-2955) and then the waste-full sensor.

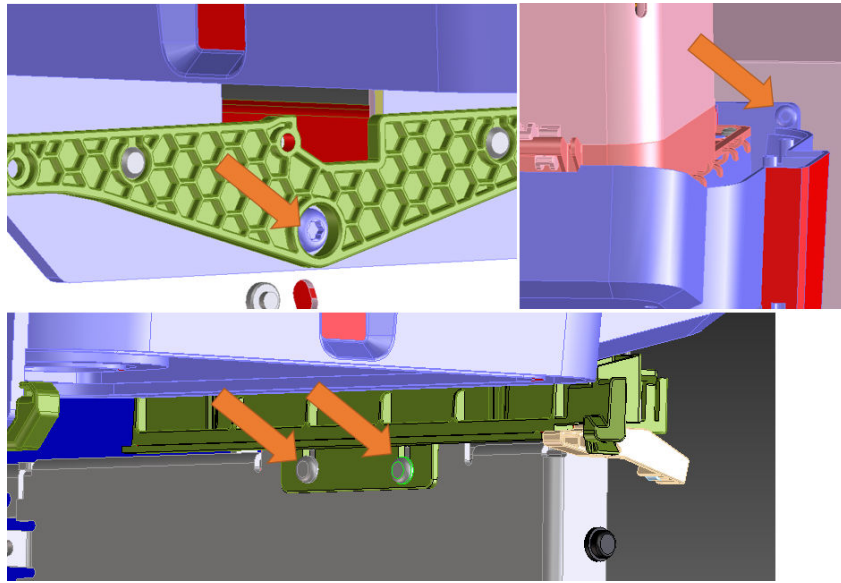


- v. Unplug the spittoon tubes.

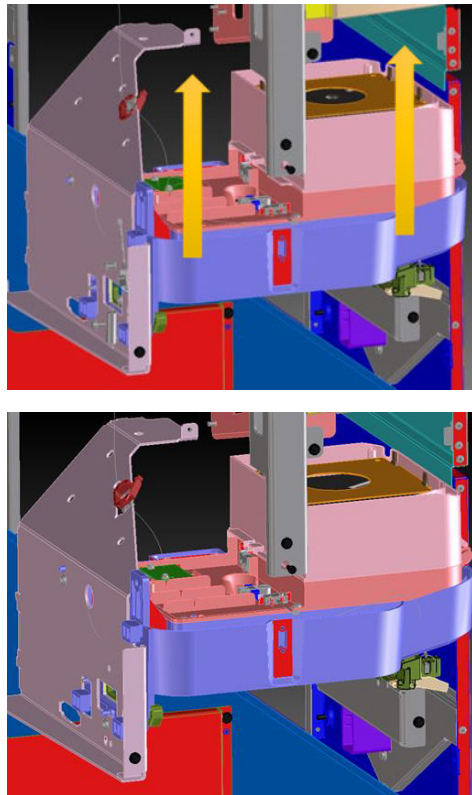
⚠ CAUTION: They will be soaked with ink.



- vi. Remove the chassis diverter screws.
 - Two M5 screws on the left: 0625-0008
 - Two M4 screws on the right: 0515-2955

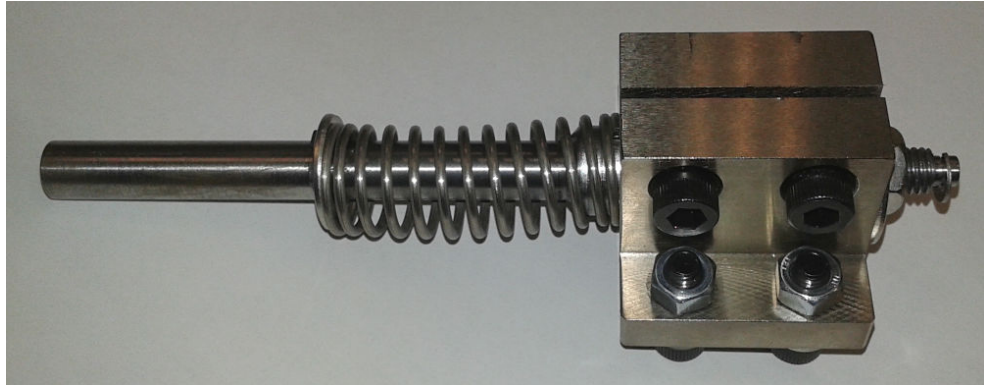


- vii. Remove the whole waste diverter assembly by pulling it up from the bottom.



2. Ensure that the following locks are installed on the printer:
- Paper-output lock

- Print-bar lock



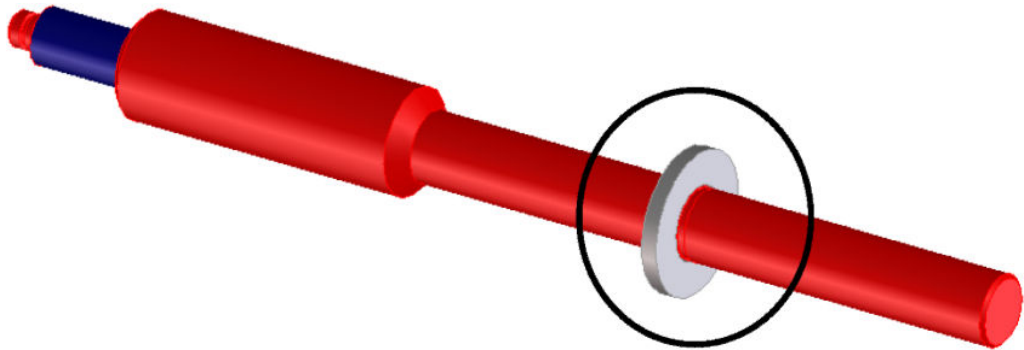
- Scanner transport lock (MFP only)

If the print-bar lock is not installed, here are the installation instructions.

Assemble the print-bar lock

If the print-bar lock is already assembled, you can skip this procedure.

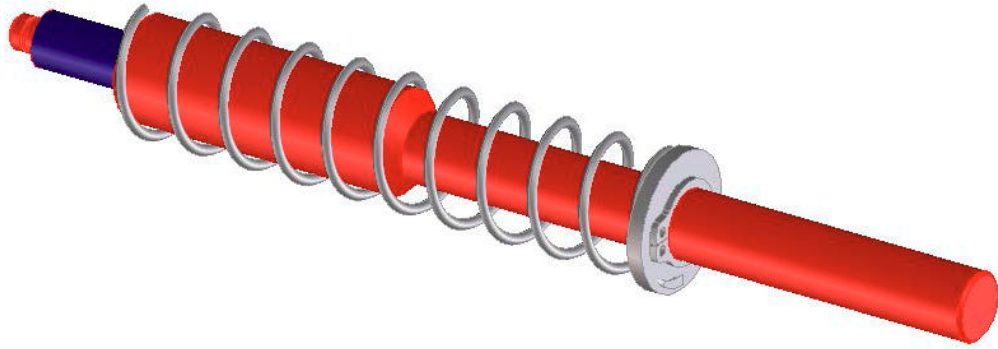
- a. Add the diameter 10 DIN 125 washer to the shaft.



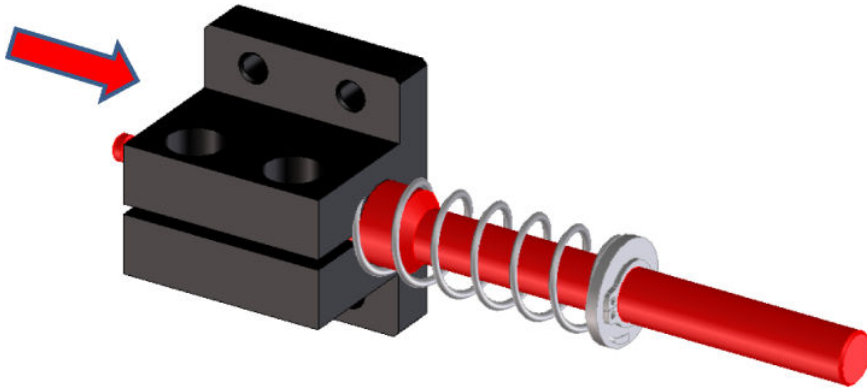
- b. Add the diameter 10 DIN 471 circlip.



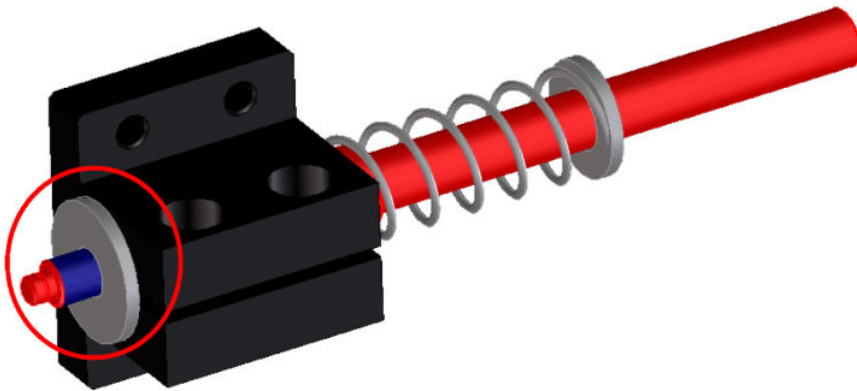
- c. Add the spring (Vanel C.190.180.0800.I).



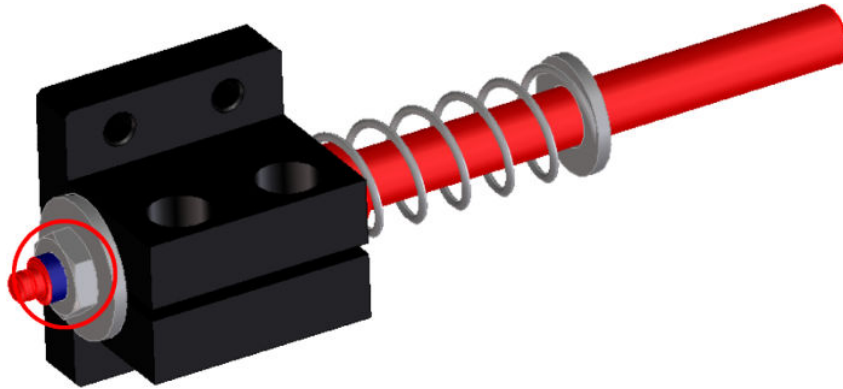
- d. Insert the shaft with the spring into the base.



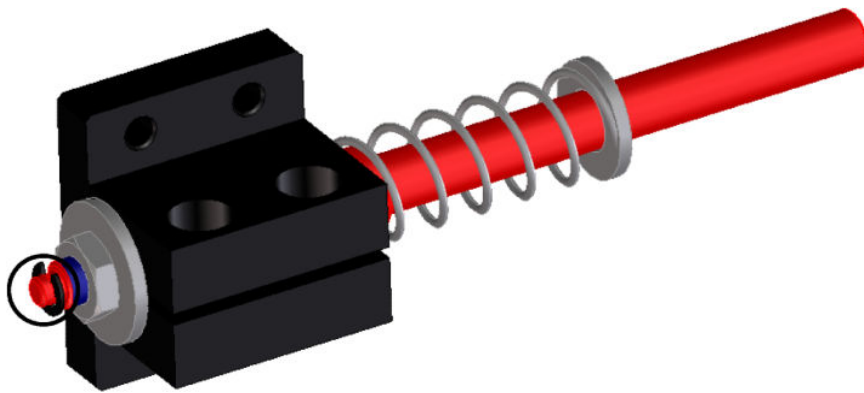
- e. Add the other washer.



- f. Tighten the M8 DIN 439B hex nut to lock the system.

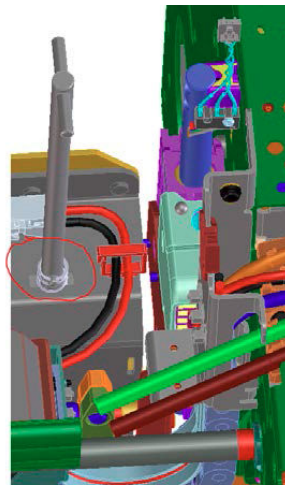
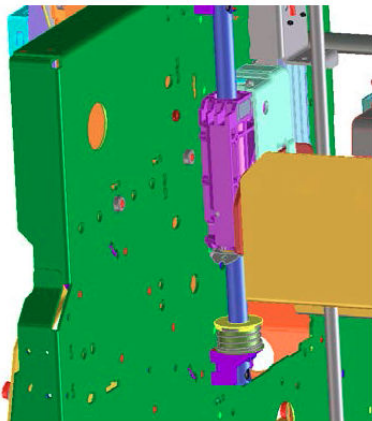


- g. Add the diameter 5–7 DIN 6799 circlip to secure the hex nut and the washer.

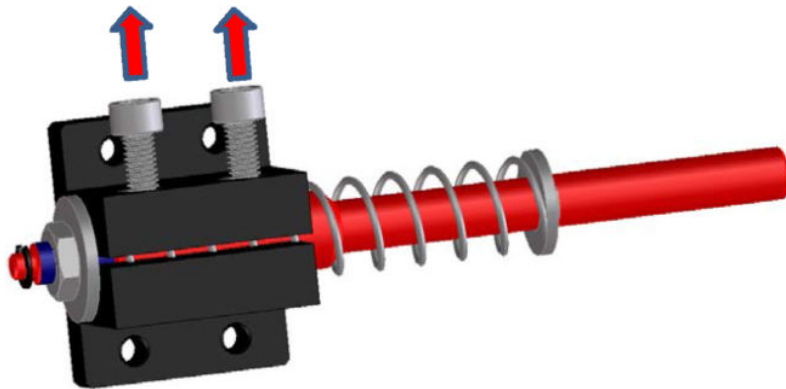


Install the print-bar lock

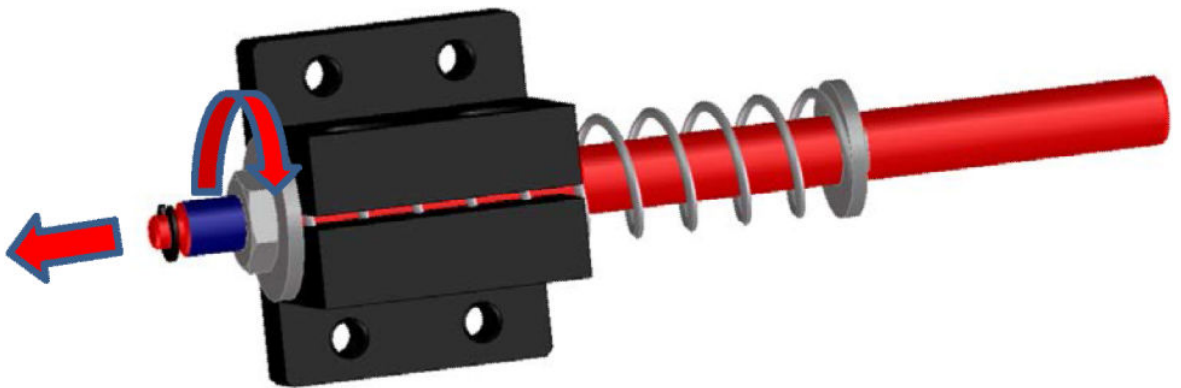
- a. Ensure that the print bar is in the packaging position.



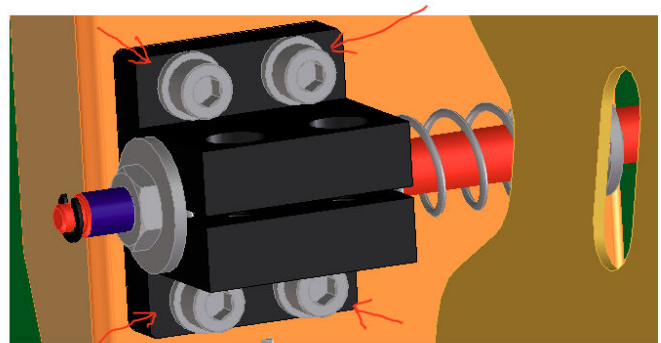
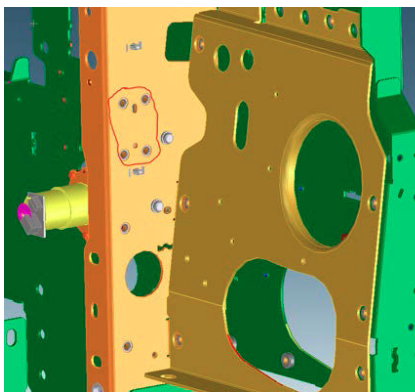
- b. If the base of the print-bar lock contains the screws shown below, remove them.



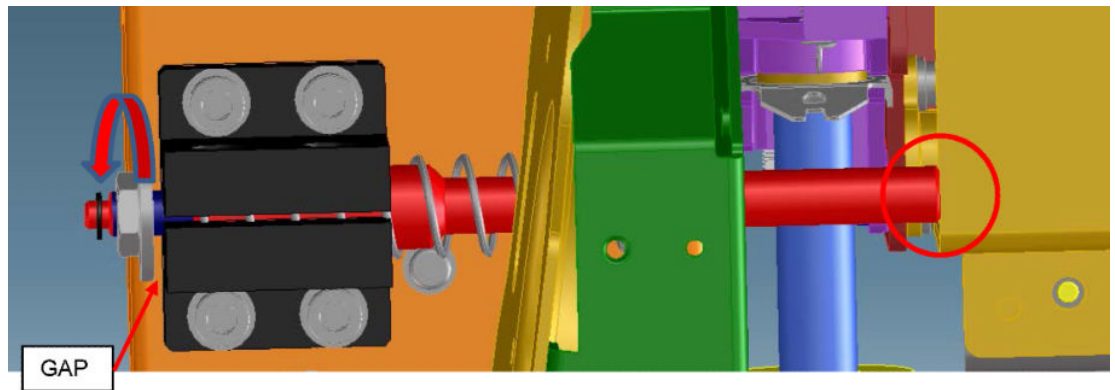
- c. Turn the M8 DIN 439B hex nut clockwise until the shaft is completely at the left.



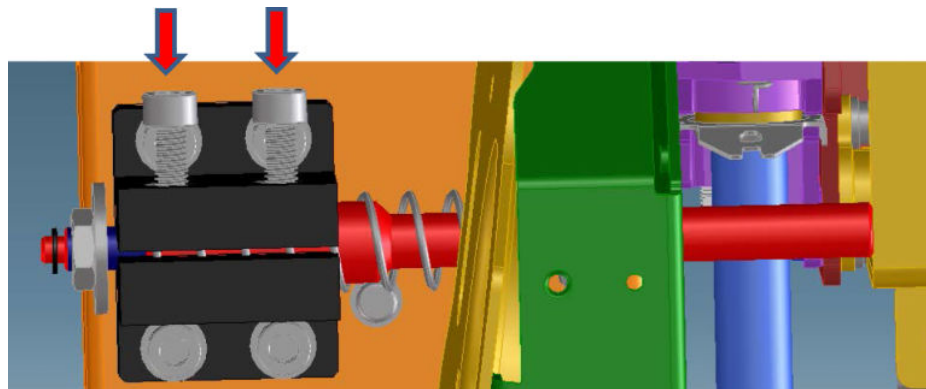
- d. Mount the print-bar lock into the structure using four M6x18 (class 12.9) screws, using a torque of 16 N·m. Remember to place a washer between each screw and the base.



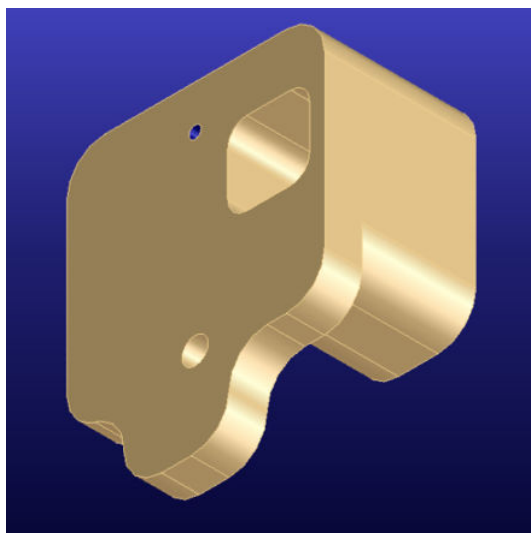
- e. Turn the M8 DIN 439B hex nut anticlockwise until the shaft presses the print bar and the nut is not in contact with the base of the print-bar lock.



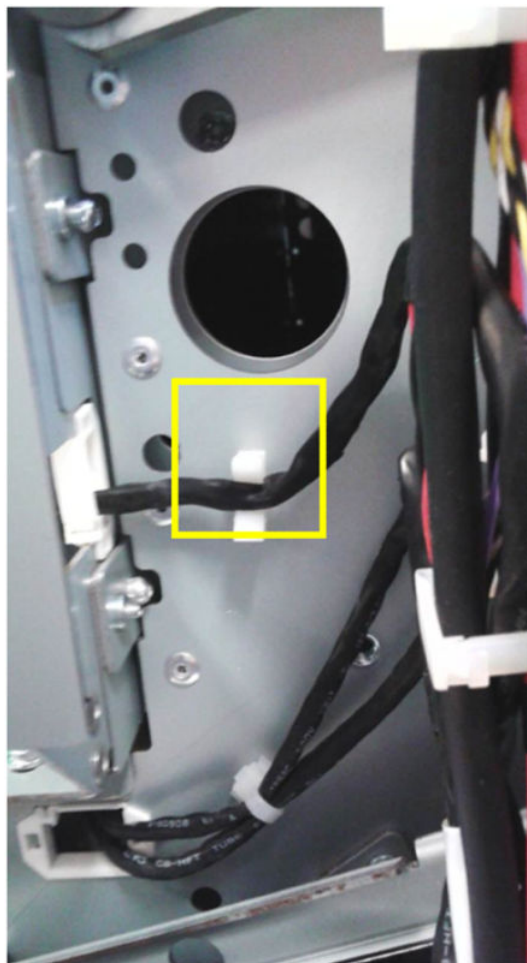
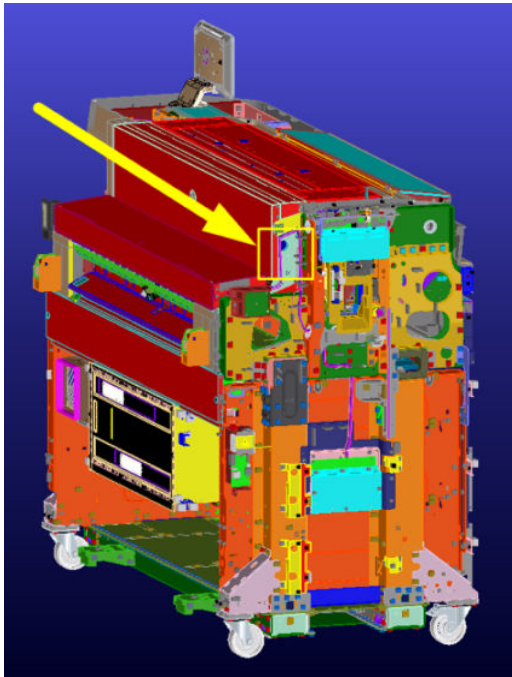
- f. Insert and tighten the upper M6x18 (class 12.9) screws, using a torque of 16 N·m.

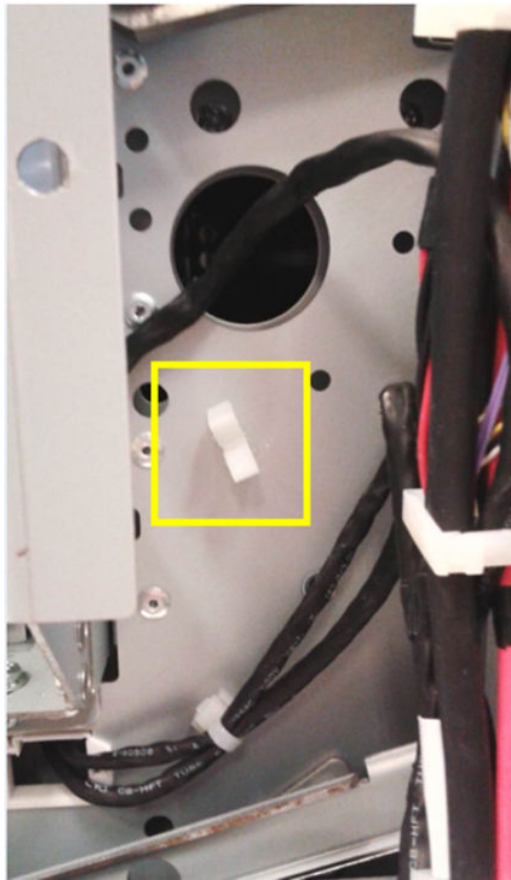


- 3. Install the MO_PAD (CZ309-20421) on the printer.

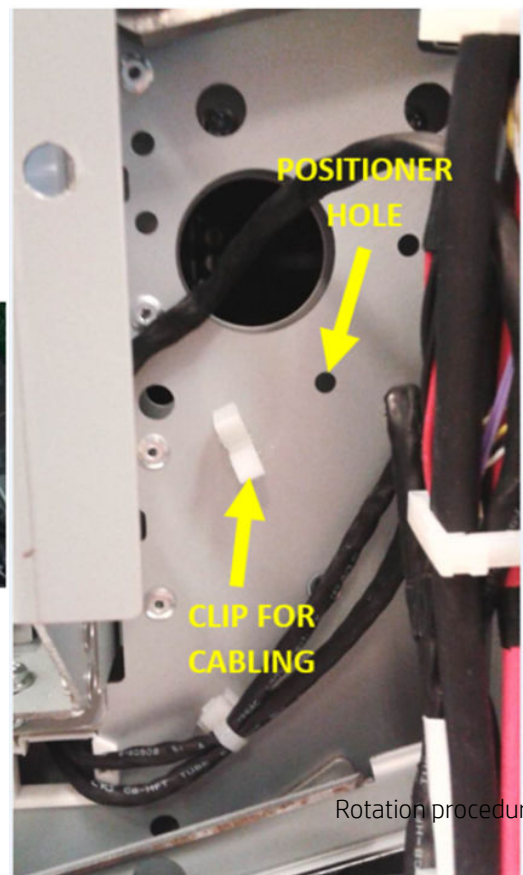
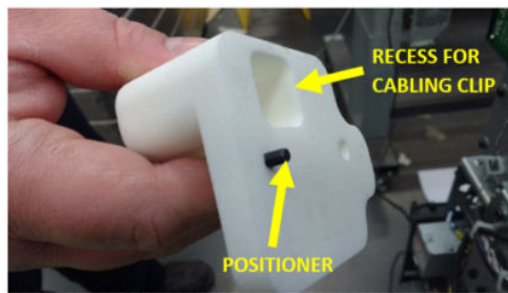


- a. It goes on the left side of the printer, fastened to the lateral sideplate left assy (CZ309-00514). First unclip the integrated stacker cable shown in the pictures.

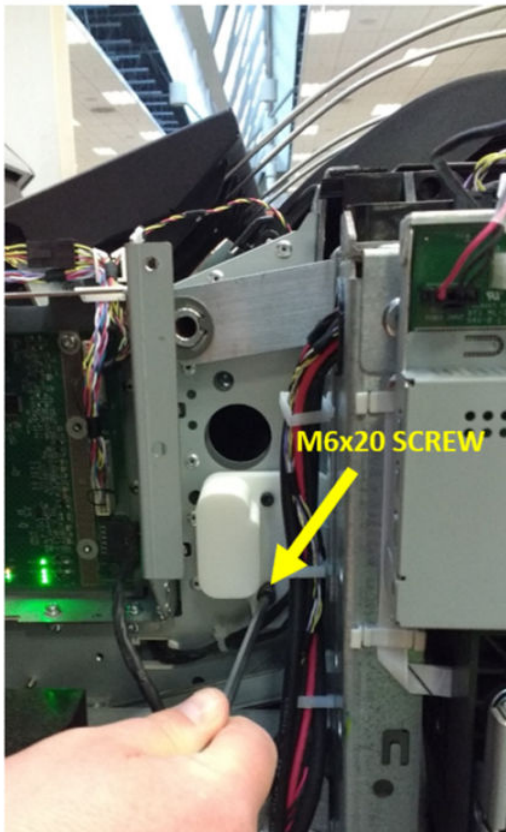
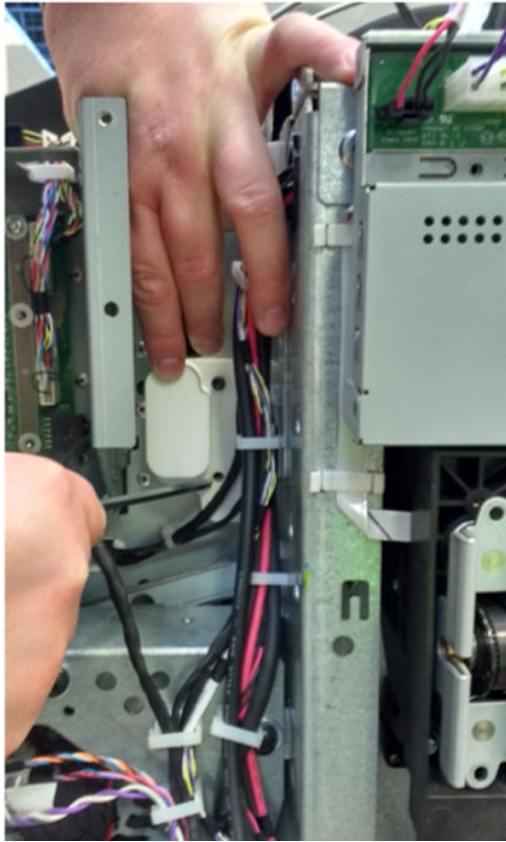




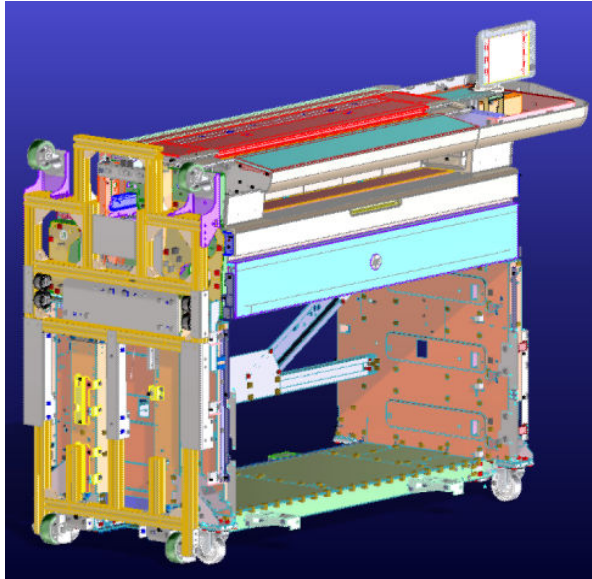
- b. Position the MO_PAD (CZ309-20421). The pad comes with a screw for positioning it in the left side plate of the media output. Be aware that the cable must be moved away in order to place the MO_PAD (CZ309-20421).



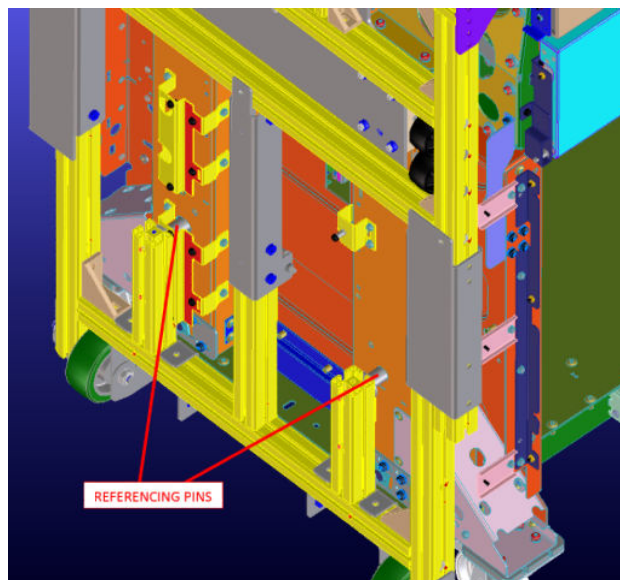
- c. Then tighten the M6x20 screw into a nut inserted from the left side plate of the media output.



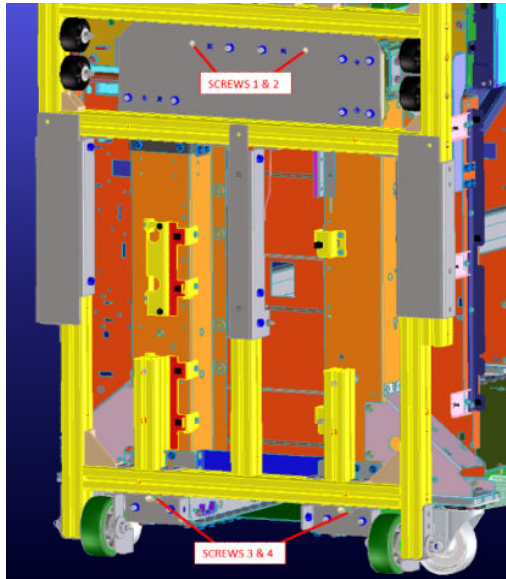
4. Install the base frame on the left side of the printer.



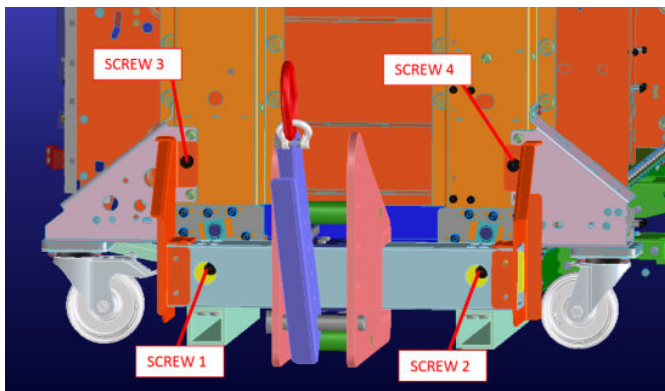
- a. Position the base frame using the referencing pins.



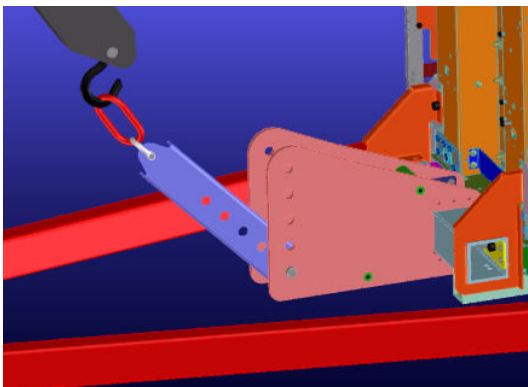
- b. Tighten the four screws.



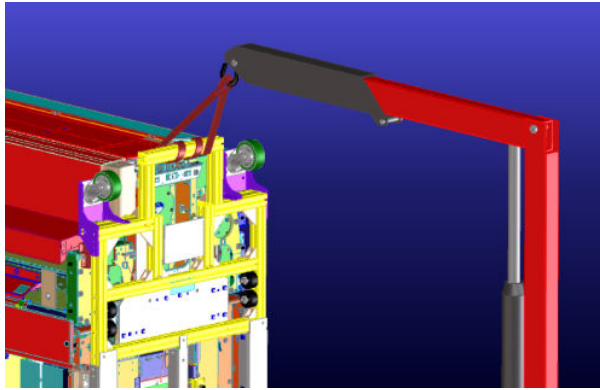
- 5. Install the puller on the right-hand side of the printer, tightening the four screws.




- 6. Place crane 1 on the right-hand side of the printer as seen from the front, and hook it up to the puller.



7. Place crane 2 on the left-hand side of the printer as seen from the front, and connect it to the base frame with the rope.



 **IMPORTANT:** Before starting to rotate the printer, check that the rope/sling is taut. Move up the crane 2 brace without lifting the printer from the floor on the left-hand side.

Crane 2



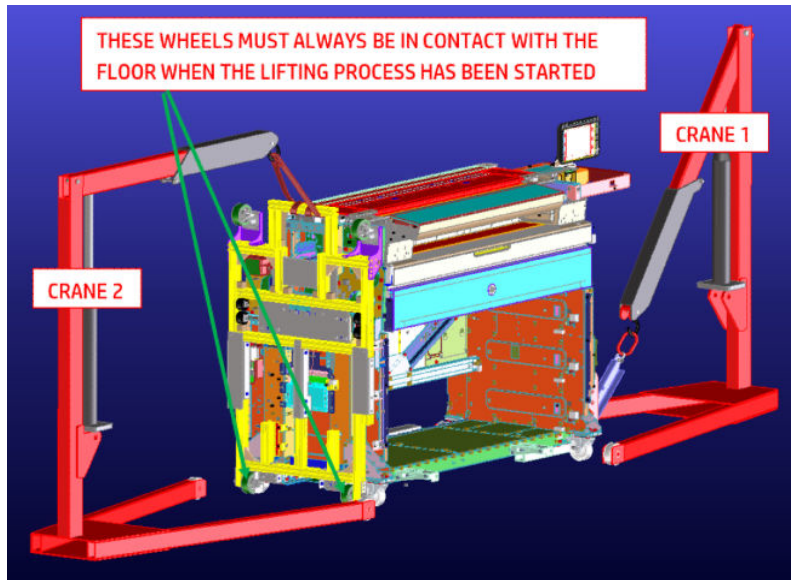
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8. Rotate the printer using both cranes at the same time, synchronously.

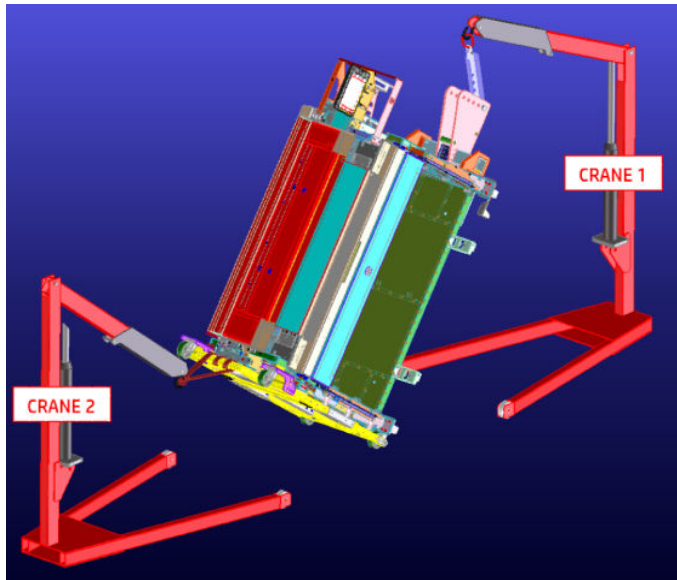
Traction crane 1, on the right-hand side, must be moved upwards to lift the printer.

Traction crane 2, on the left-hand side, must move downwards.

⚠ CAUTION: Ensure that the wheels of the base frame are always in contact with the floor. This is essential.

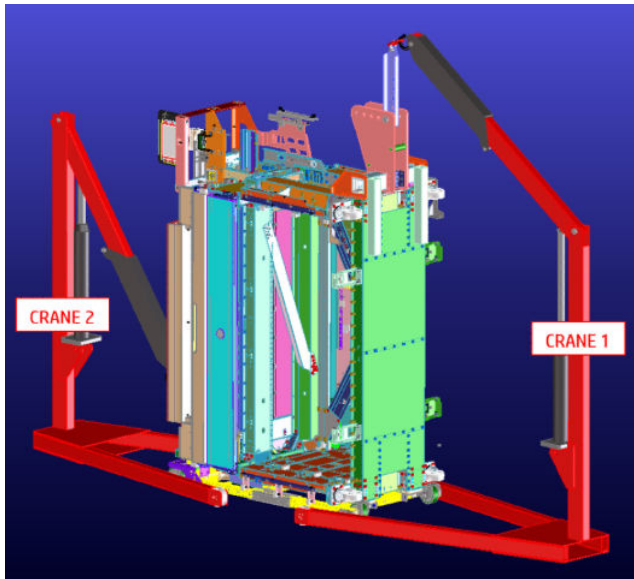


9. Crane 1 moves upwards, pulling the puller. Crane 2 moves downwards, securing the printer. The rope sling must always be kept taut.



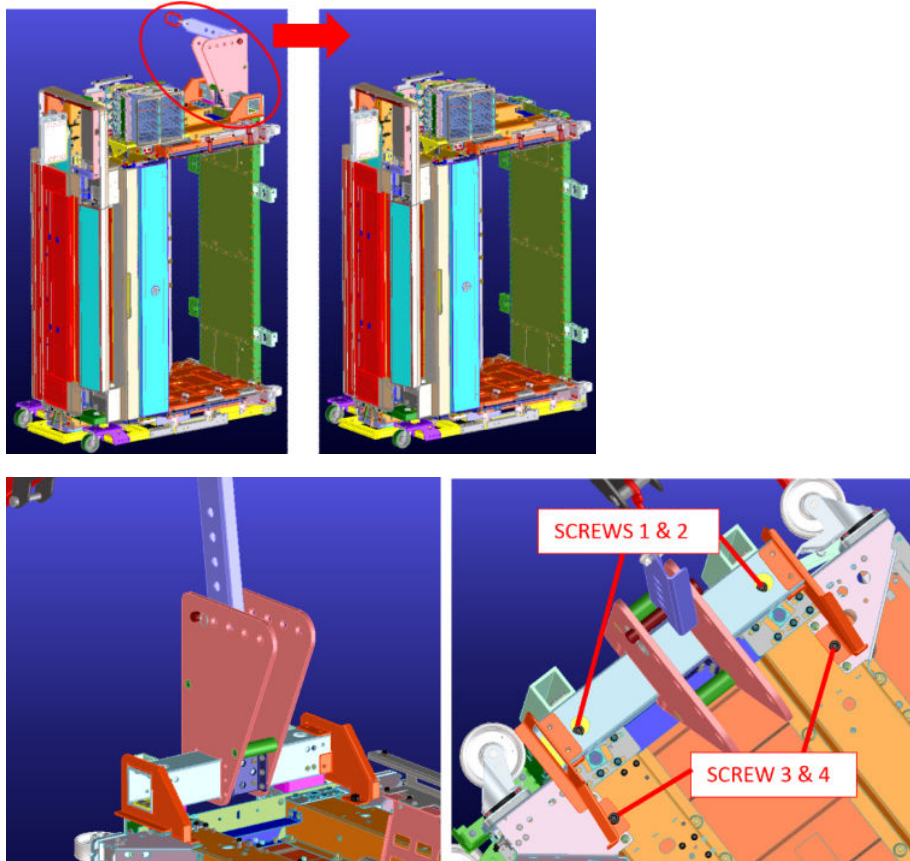
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- At an intermediate point the load will be transferred from crane 1 to crane 2, but the movement of both cranes remains the same and the rope sling must be kept taut. Crane 1 must be kept moving upwards and crane 2 downwards until the printer is completely rotated.



- Unhitch the cranes from the puller and the base frame.

12. Remove the puller by loosening the four screws.

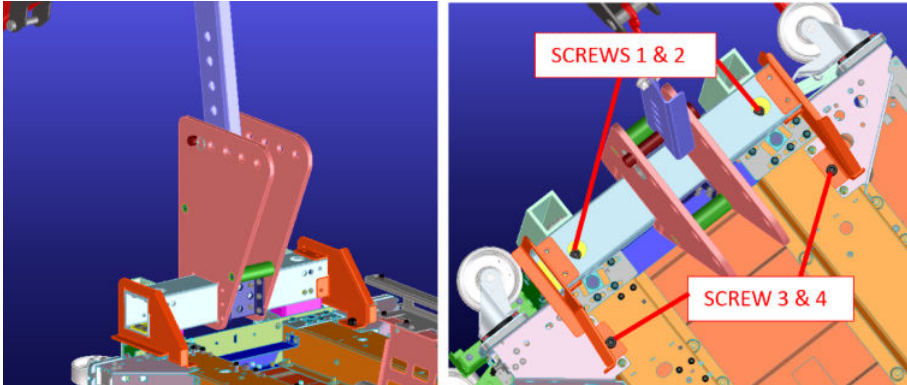


13. Place the printer in the elevator and lift it to its destination.

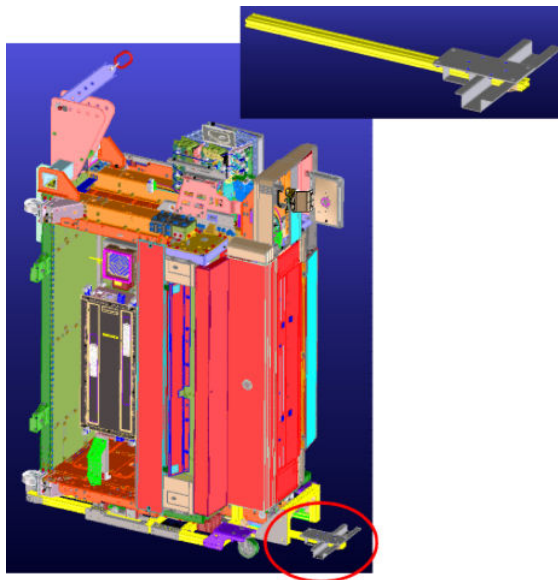


14. Take the printer out of the elevator and move it to a suitable space in which it can be rotated back to its normal orientation.

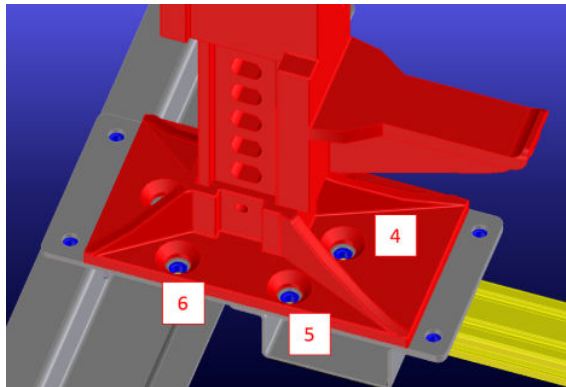
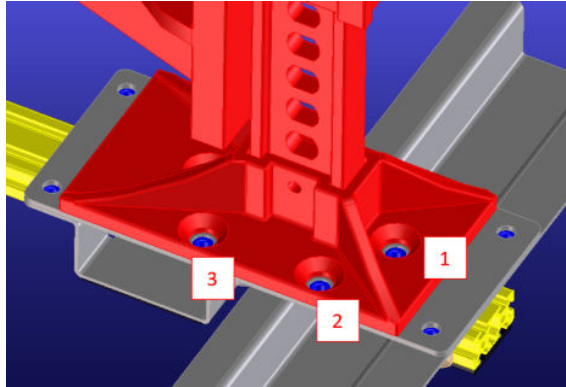
15. Reinstall the puller, tightening the four screws.



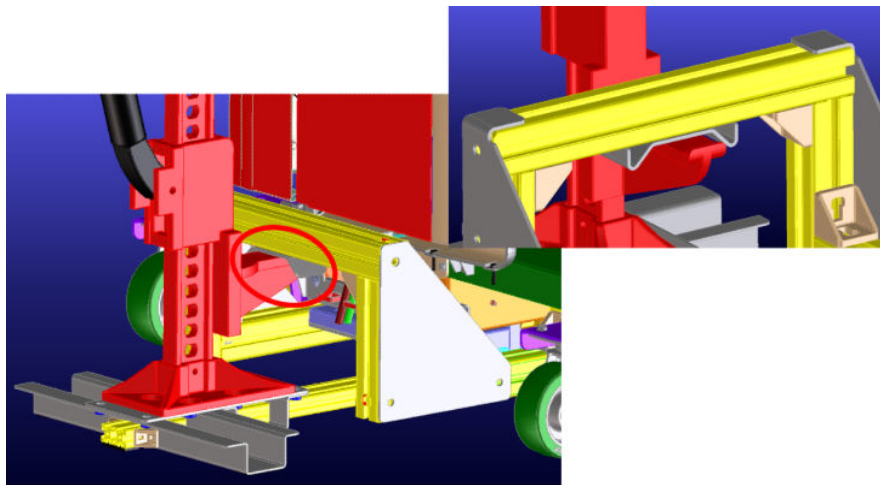
16. Prepare the ratchet jack.
 - a. Stand the ratchet jack supporting frame on the floor beside the top of the printer, partially sliding it under the printer.



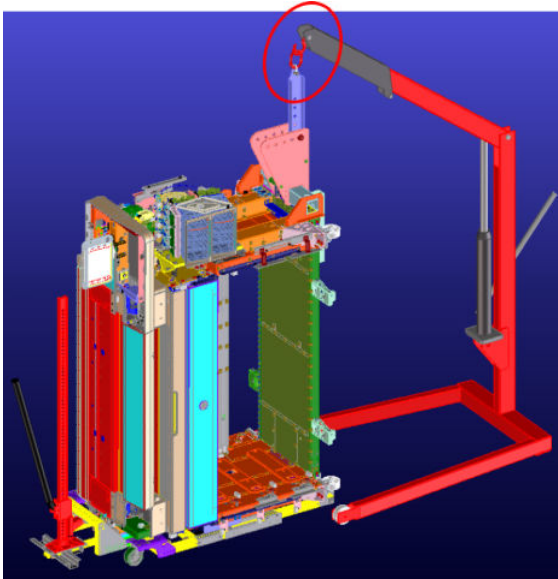
- b. Fix the ratchet jack to its base using six M8x20 screws.



- c. Make sure the toe of the ratchet jack is centered in the place where it will hold the base frame and thus the printer.

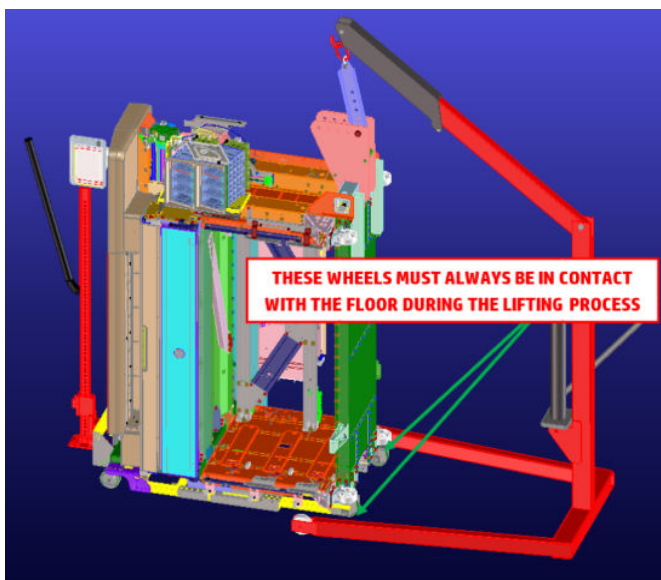


17. Place one crane beside the bottom of the printer and hook it up to the puller.

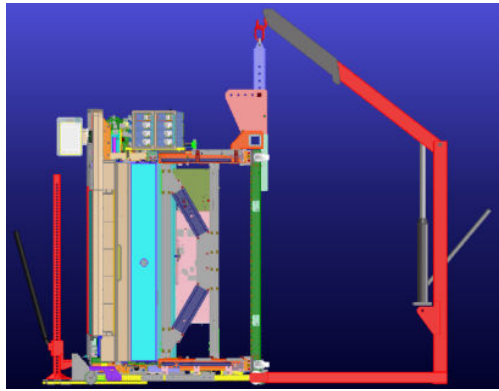


18. Rotate the printer back to its normal orientation.

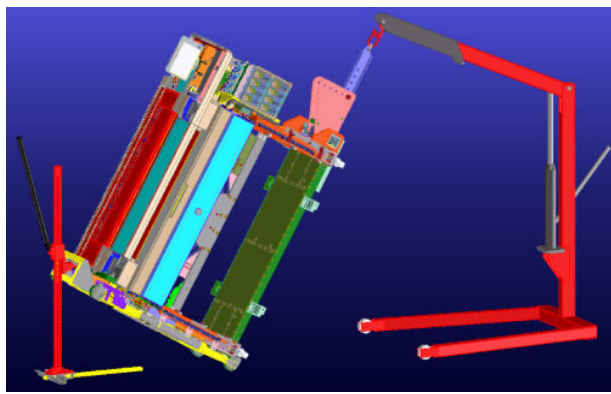
⚠ CAUTION: The wheels of the base frame must be kept in contact with the floor.



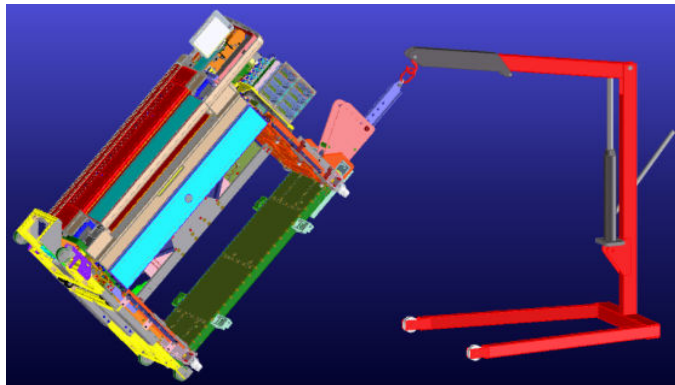
- a. Start lifting the printer from the left side using the ratchet jack. The crane must accompany the movement by moving downwards in order to secure the printer.



- b. Keep moving the ratchet jack upwards and the crane downwards synchronously. The crane must accompany the movement in order to secure the printer until the load is transferred to it.

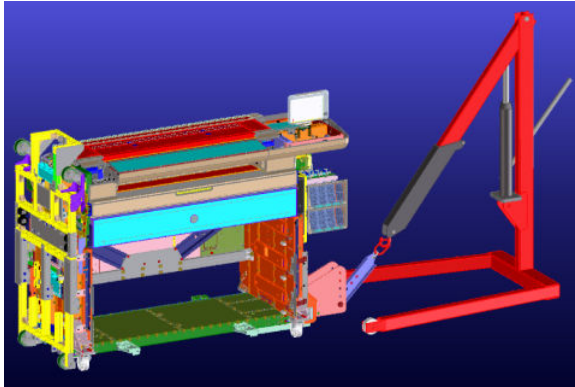


- c. When the load has been transferred from the ratchet jack to the crane, the ratchet jack can be moved away and the rotation operation can be finished by continuing to move the crane downwards.



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- d. Continue until the printer reaches its normal horizontal position.



19. Unhook the crane from the puller.
20. Remove the base frame and the puller.
21. Reinstall all the components that you removed at the start of the operation.


Reshipping procedure

This procedure can be expected to take about 45 minutes. Most of the steps can be done by one person, except lifting the printer onto the pallet, which requires at least two people.

To reship the folder and high-capacity stacker, see [Folder reshipment on page 1637](#) and [Moving and reshipping the stacker on page 2032](#).

Before turning off the printer

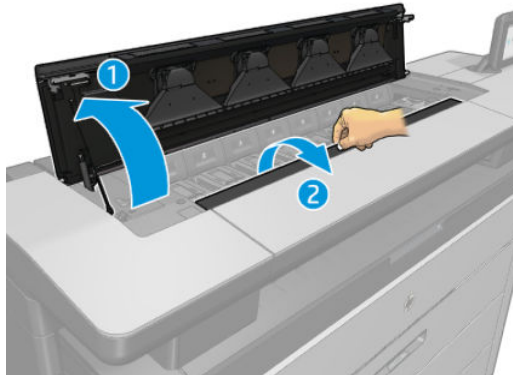
1. At the front panel, select **Settings > System > Prepare printer for reshipment**.

 **NOTE:** You may need to identify yourself by using the dongle.

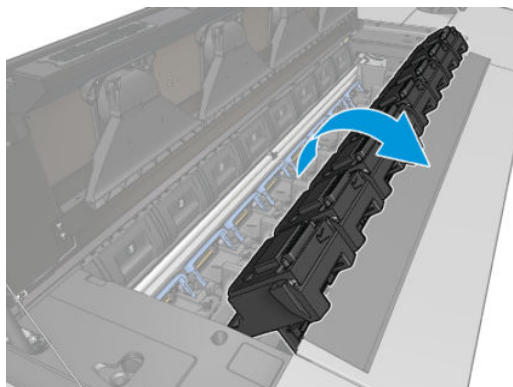
2. If the printer has additional drawers or other hardware accessories, shut down the printer and remove them.
3. If the loading table is installed, remove it.
4. Restart the printer.

Prepare for reshipping

1. Open the front door.

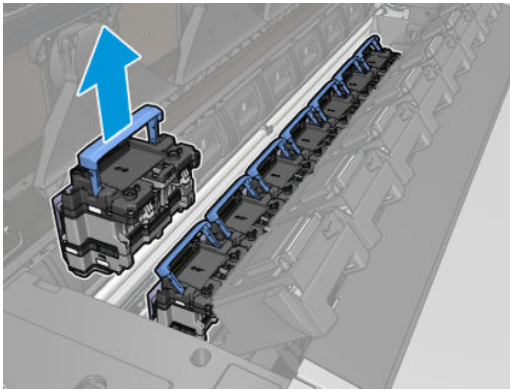


Open the printhead latches.

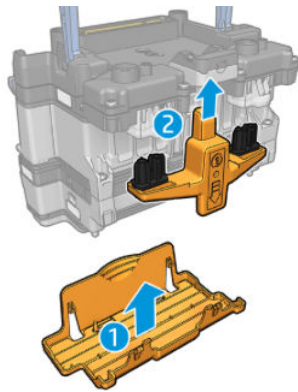


Uninstall the printheads.

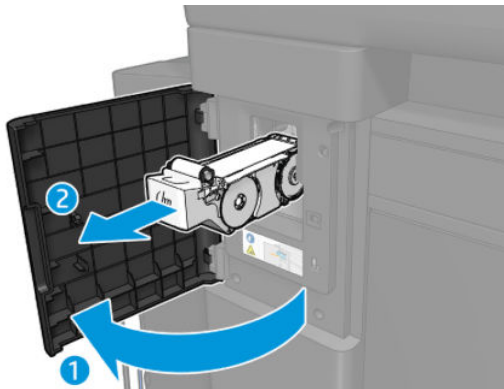
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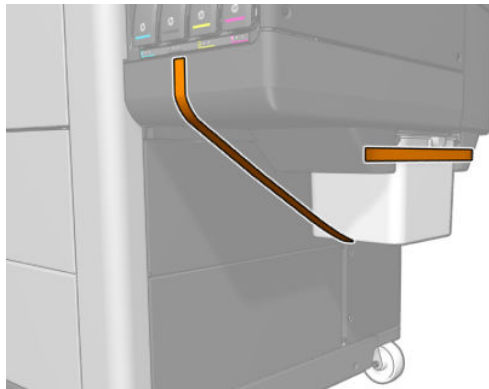
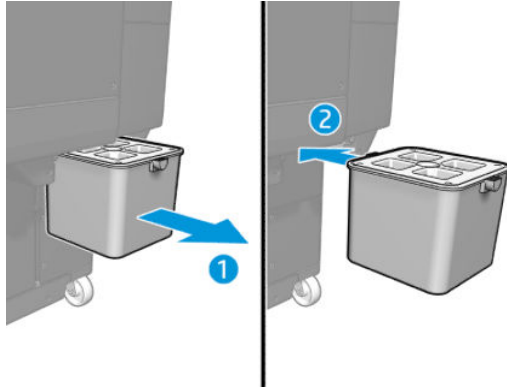
Place the printheads in their reshipping caps.



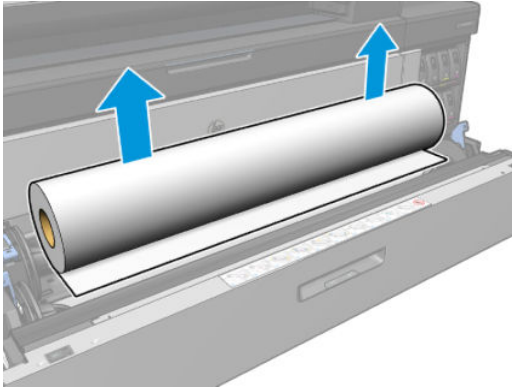
2. Remove the maintenance cartridge.



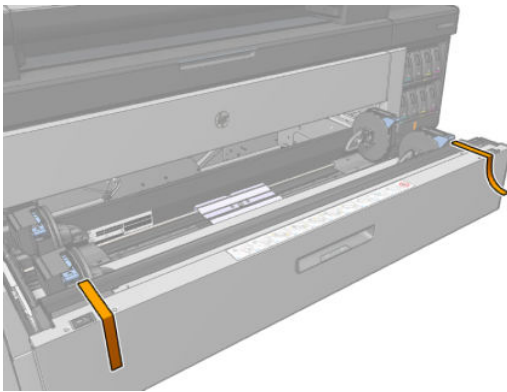
3. Replace the cleaning container with a new one and fix it to the printer with adhesive tape.



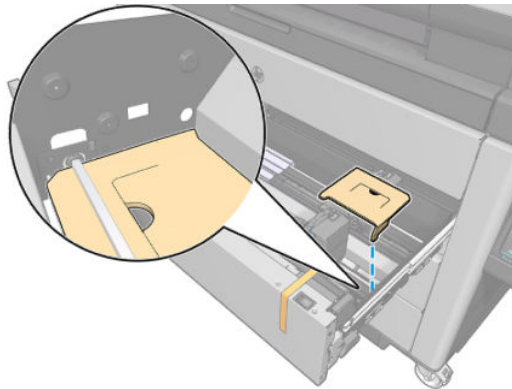
4. Unload all paper and remove the rolls from the drawer.



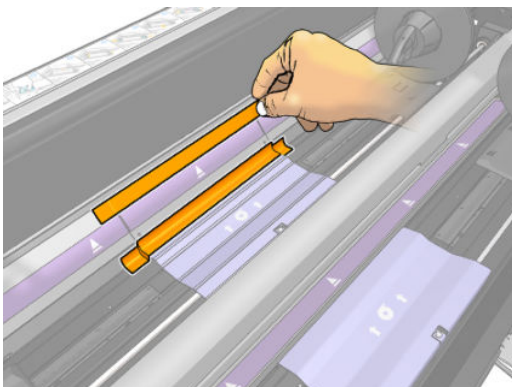
Put on the orange drawer tapes.



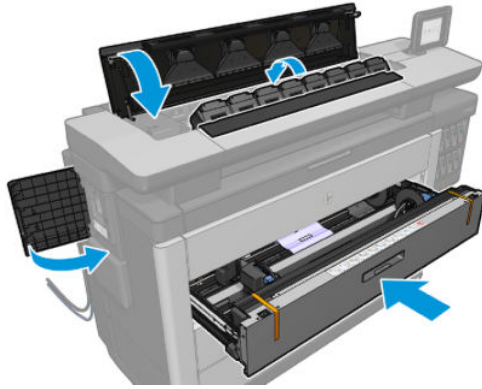
Install the Drawer Transport Pole Guide Pa CZ309-01055 on the drawer. Ensure that CZ309-01055 is not blocking the hole.



Install Q6659-80010 (420mm orange tape) on the drawer as per photo shown below.



5. Close all covers.

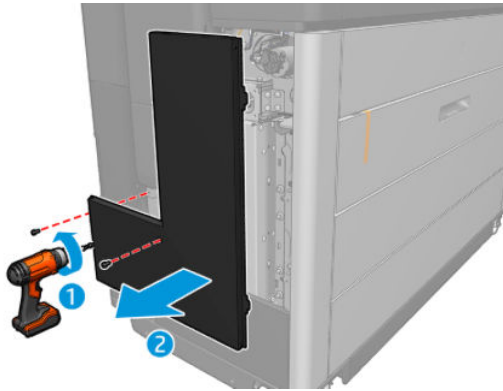


6. Make sure that all ink cartridges required by the printer are installed (some models require only four cartridges).

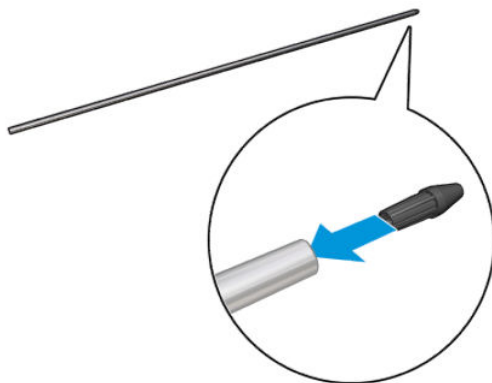


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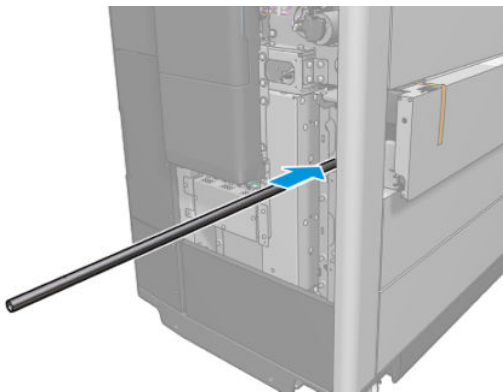
7. Remove the left cover.



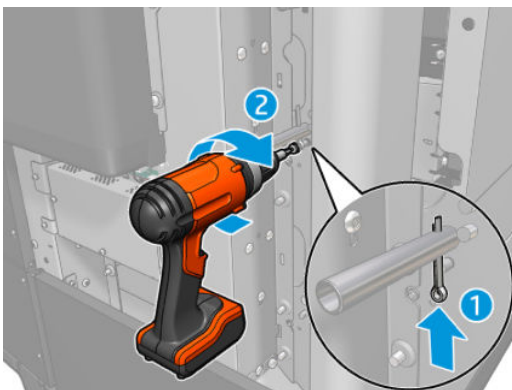
Assemble the Pole centering tip CZ309-40702 on the Drawer transport pole CZ309-20335.



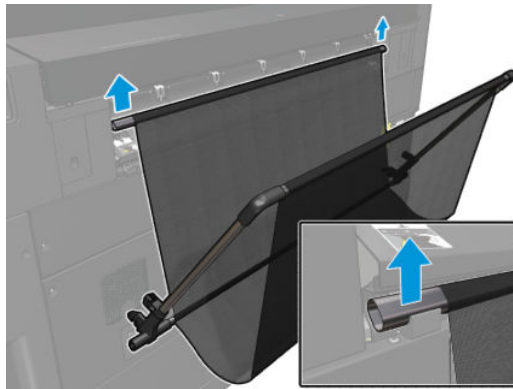
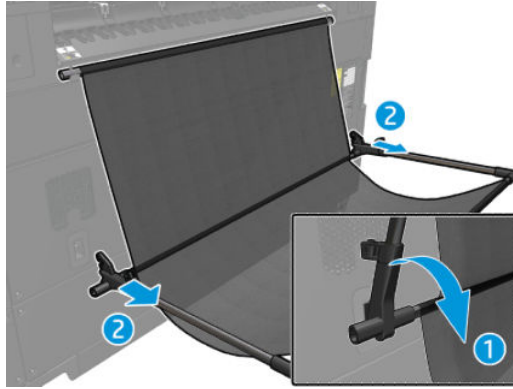
The lock printbar with enter the Drawer Transport Pole to the hole until end.



After that put the Cotter pin CZ309-80177 on as well as the screw 0515-48862.

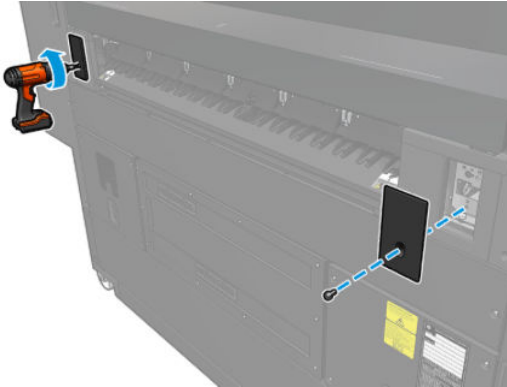


8. Remove the Basket.



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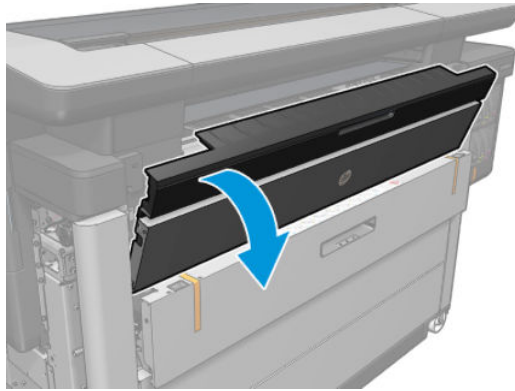
9. Remove the Top rear covers.



Place the Dryer lock plates on the printer.

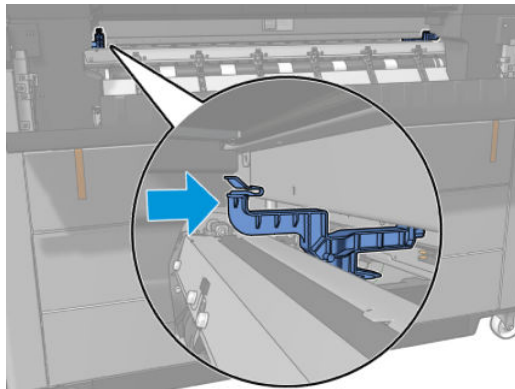


10. Open the Paper input cover

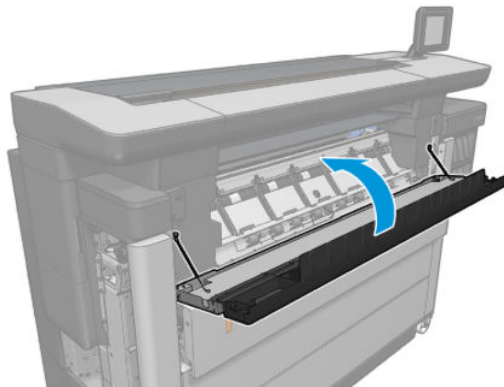


If the PMKit12 was over 60% replace the spittoon now and move it to the home position. If not, move the spittoon to the home position.

Place the spittoon locks on the printer. There are two locks: one on each side of the printer. Insert them horizontally and rotate them later inside.

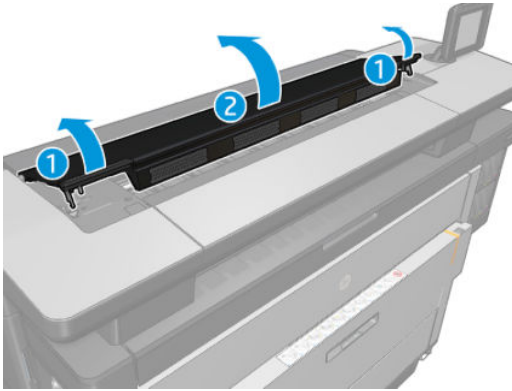


Close the Paper input cover.

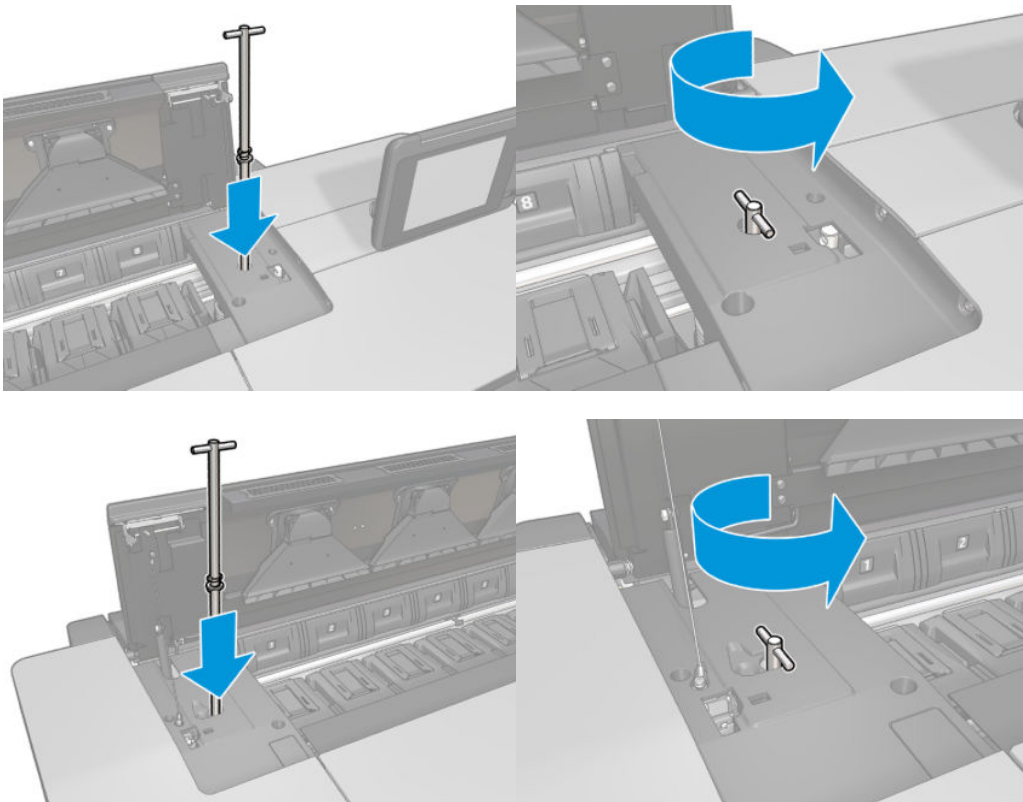


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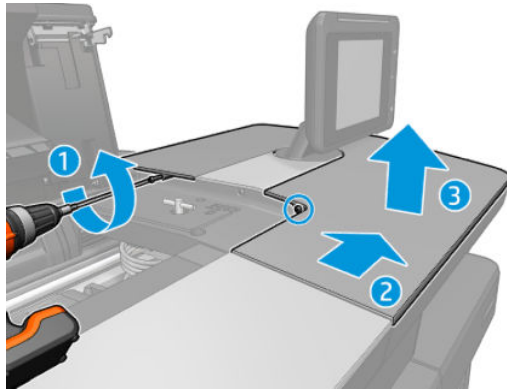
11. Open the Front door.



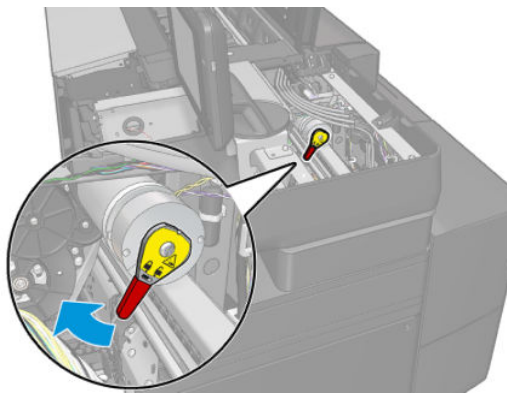
Put on the printbar locks.



12. Remove the Top cover.



Unlock the Printbar motor by moving it clockwise.



13. Close and put back all the covers.

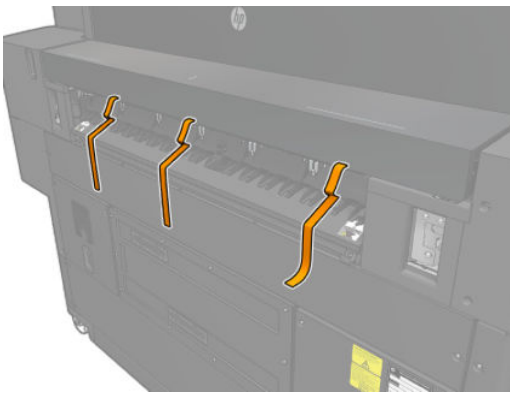


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14. For the front side taping the length of the tape is 150mm (x6).



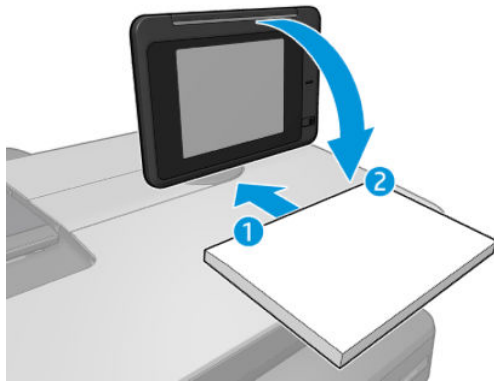
15. For the back side taping the length of the tape is 300mm (x3).



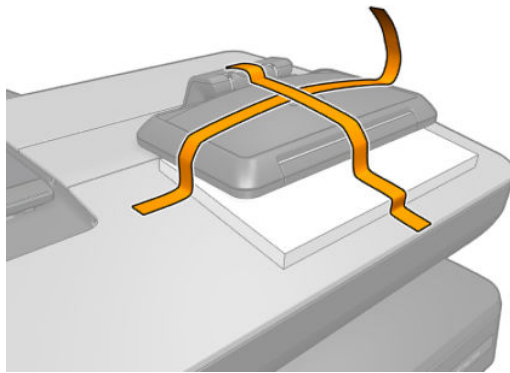
16. For the left side taping the length of the tape is 130mm (x2).



17. Add the Front panel foam.



Then, for the Front panel, the length of the tape to be used is 520mm (x2).

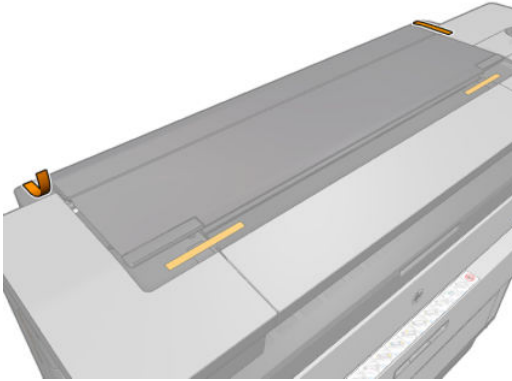


18. Tape down the Top side tape with length of 150mm (x2) as shown below.

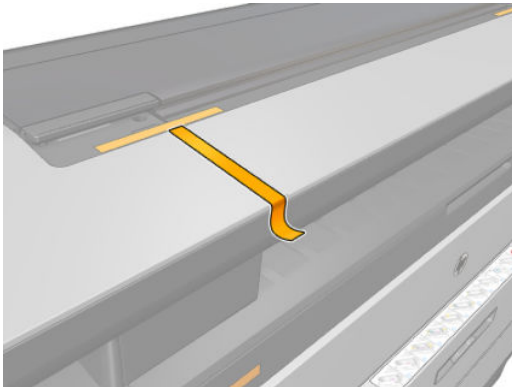


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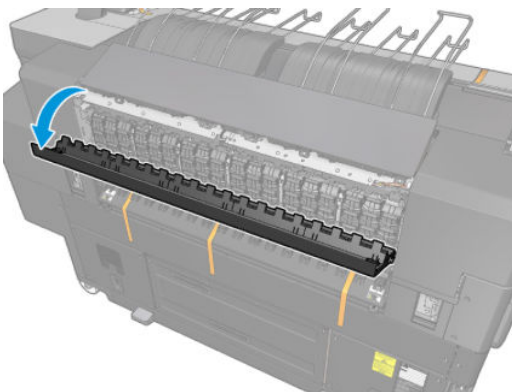
19. For the left and right side the length of taping is 170mm (x2).



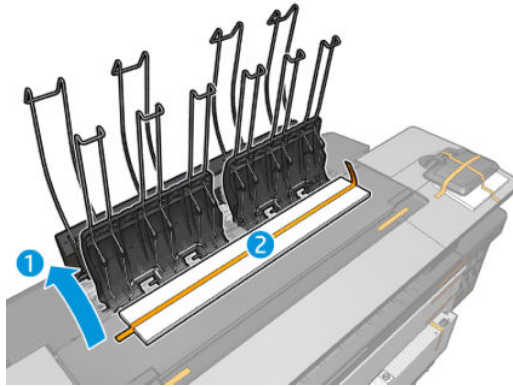
20. At the front of the Top left cover tape down the tape as per the photo; the length of the tape is 250mm (x1).



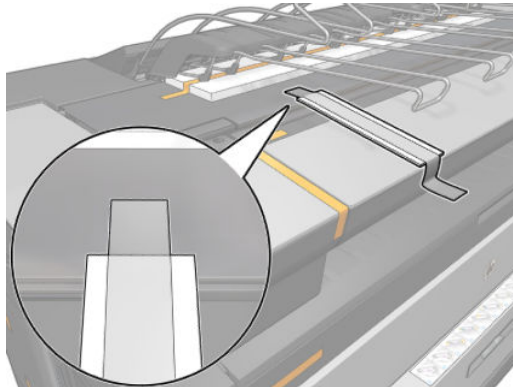
21. Install CZ309-01279 – Integrated_stackер_bubble_bag (x1) as shown.



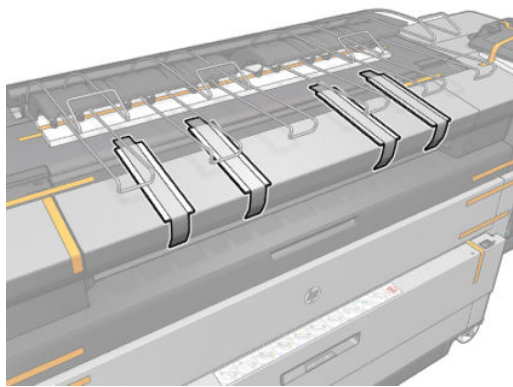
22. Install CZ309-01270 – Integrated_stackер_foam_2 (x1) as shown; use 9223-0834 – orange tape.



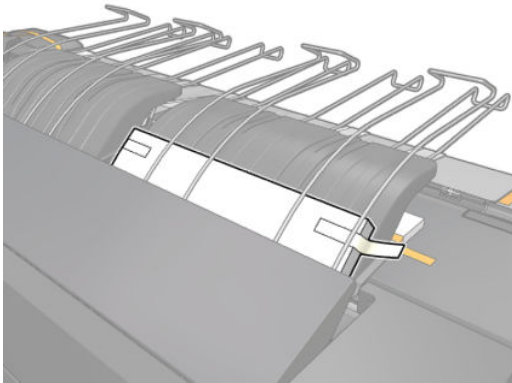
23. Install CZ309-01276 – Integrated_stackер_foam_5 (x1) as shown for front and back sides; use the 0460-3097 industrial tape.



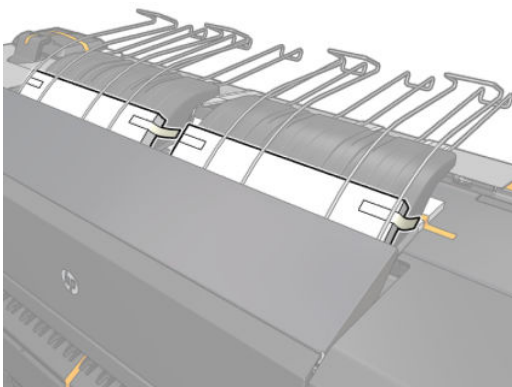
24. Continue to Install the CZ309-01276 Integrated_stackер_foam_5 (x4 more) as shown.



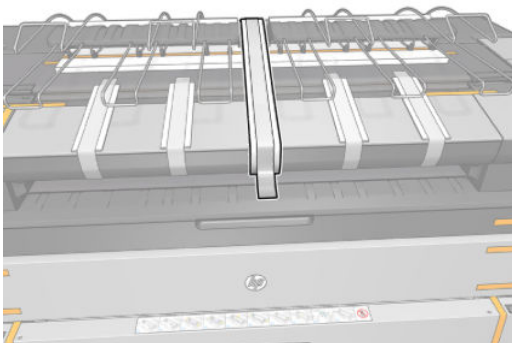
25. Install the CZ309-01269 Integrated_stackер_foam_1 (x2) as per image.



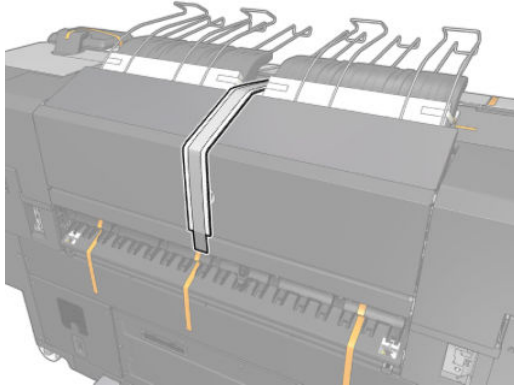
26. Continue the same process for the right side.



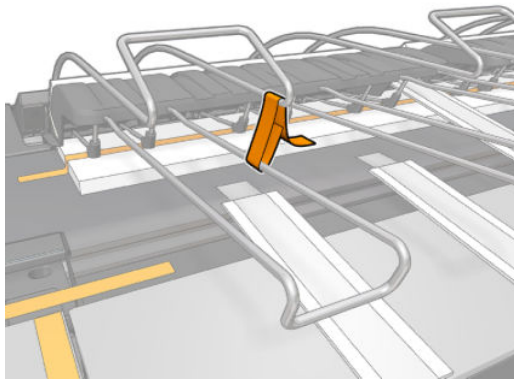
27. Install the CZ309-01275 Integrated_stackер_foam_4 (x1) as shown below.



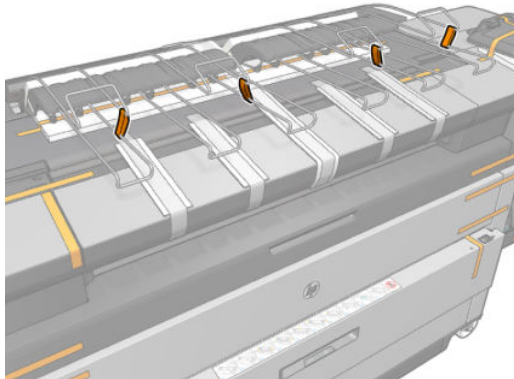
28. For the back side install as shown below.



29. Install the 9223-0834 orange 23 tape as per photo.



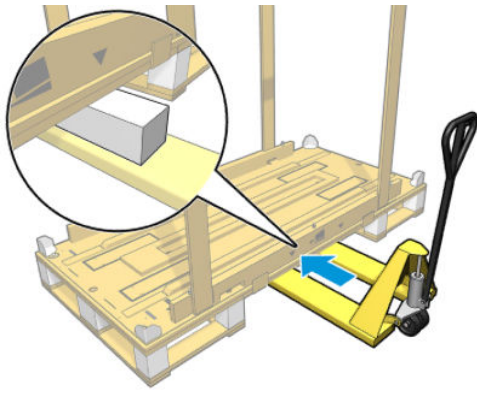
30. Continue to install the orange tape (four pieces).



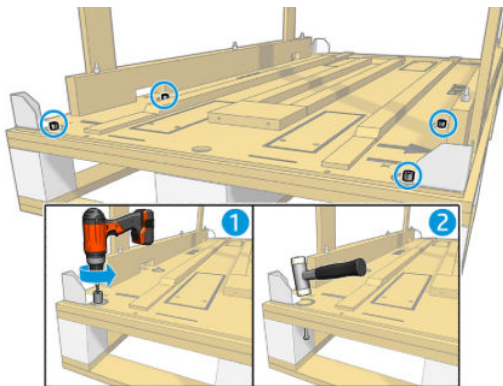
Put the printer on the pallet

1. Lift the pallet with the forklift.

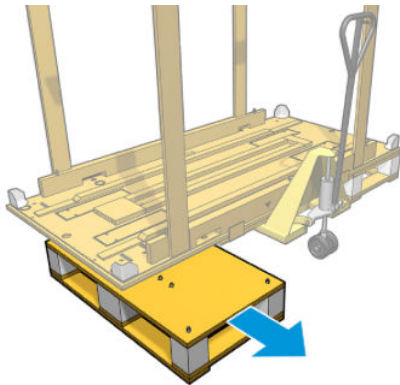
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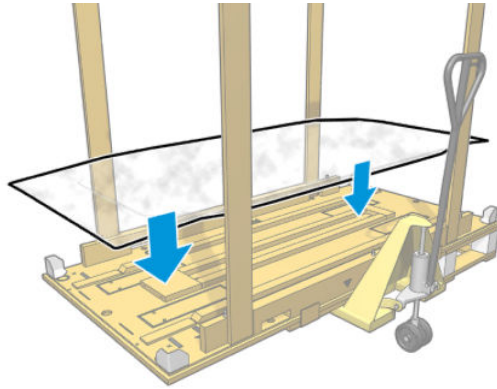
2. Detach the removable part of the pallet.



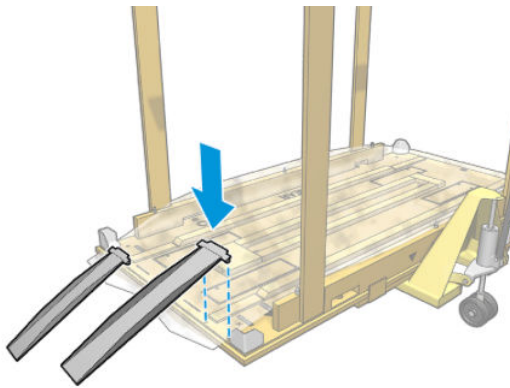
Remove the removable part of the pallet.



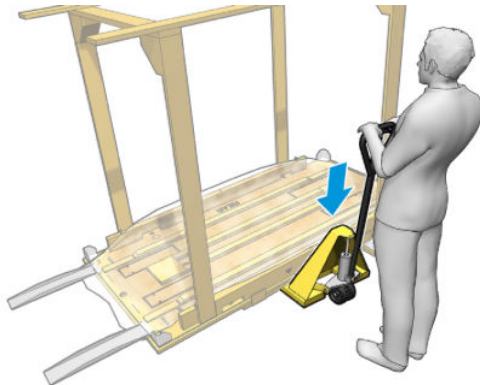
3. Place the plastic sheet on top of the pallet.



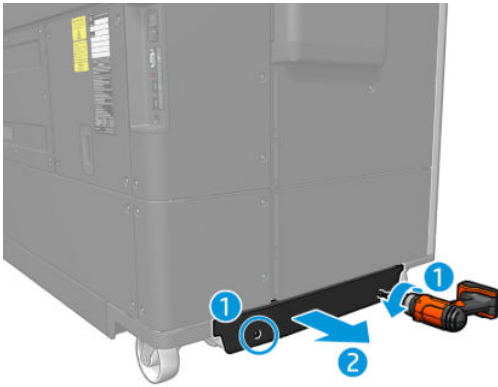
4. Place the metal plates into the holes, overlapping the plastic sheet.



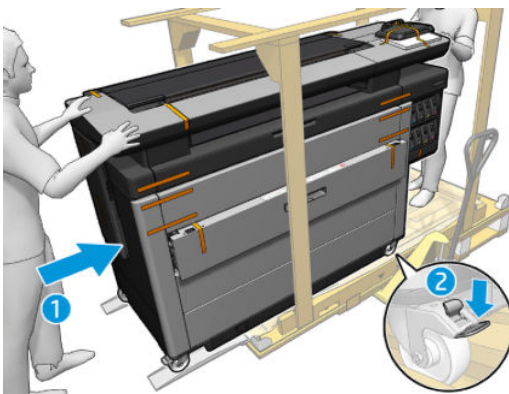
5. Lower the pallet with the forklift.



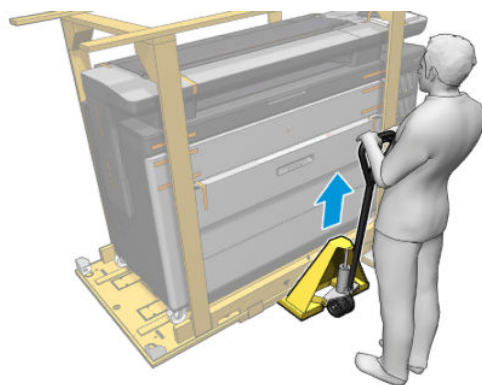
6. Remove the Bottom side covers of the printer (foot covers).



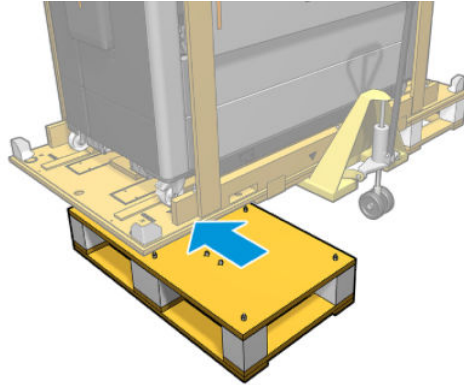
7. Move the printer into the pallet. This requires at least two people: one pushing hard, and the other aligning the printer on the rails and lifting the pallet when the printer is fully positioned on the pallet ramp. Lock the 2 front wheels.



8. Align the printer on the rails and lift the pallet with the forklift when the printer is fully positioned on it.



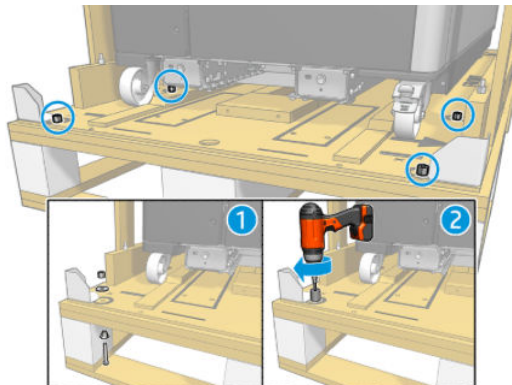
9. Reassemble the removable part of the pallet.



10. Lower the pallet.

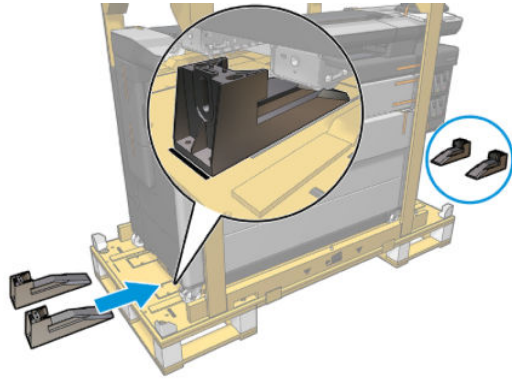


11. Tighten the removable part of the pallet. Do not forget the washer and the lock washer before the nut.

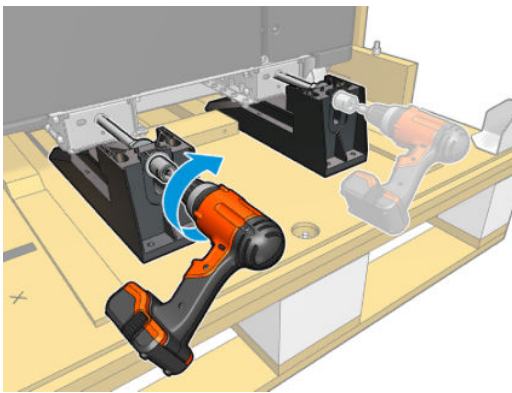


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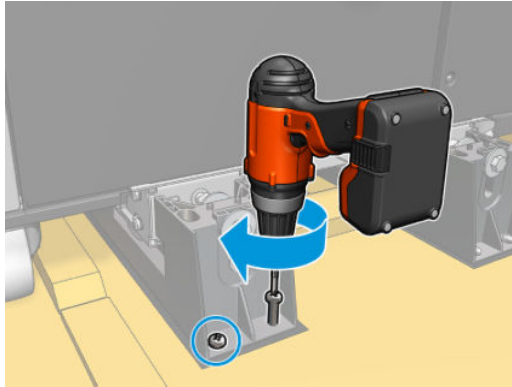
12. Place the four retainers on the marks on each side of the printer.



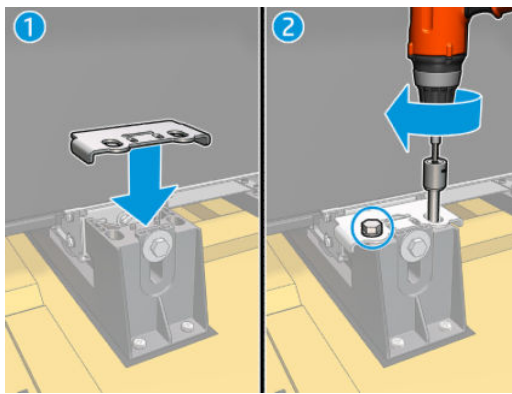
13. Screw the four retainers into position before lifting the printer (the wheels are still on the floor).



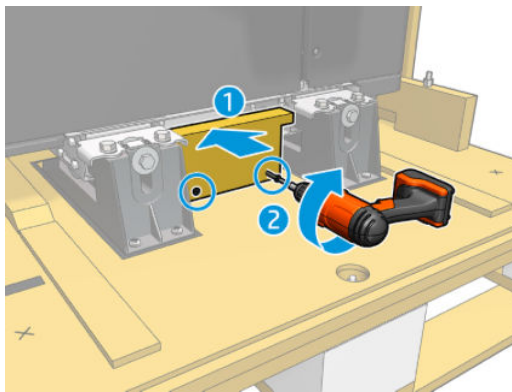
14. Tighten the 2 Phillips screws on the pallet.



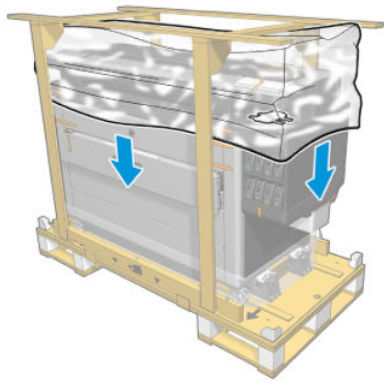
Then add the metal parts and tighten them on with the nuts provided.



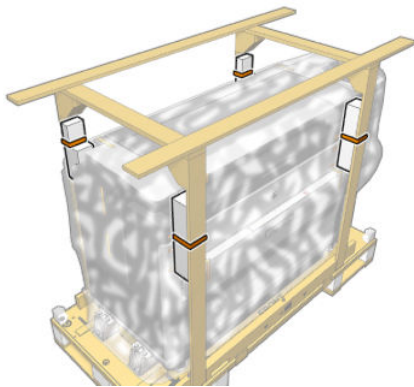
Then place the wood block in the correct position.



15. Put the protection bag over the printer. Remember to put the desiccant bag inside.

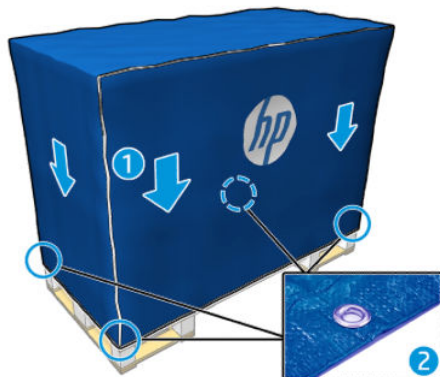


16. Attach the four foams to the pallet structure.



17. Attach the additional box in its original position with all its contents. Do not forget to put in the metal ramps.

18. Put the blue bag over the printer.



Transport the packaged printer to its destination and unpack it as described in the assembly instructions.

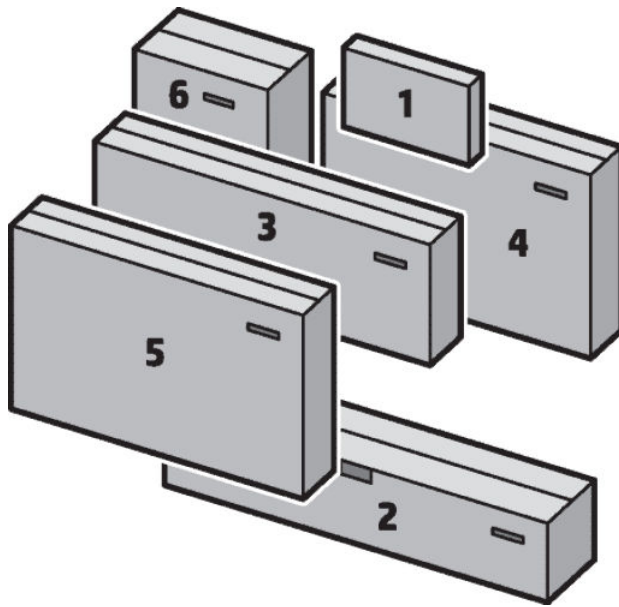
12 Top stacker

- [Top stacker assembly instructions](#)
- [Top stacker system errors](#)
 - [0075-0001-0001 Top Stacker PCA – Malfunction](#)
 - [0075-0001-0054 Top Stacker PCA – Voltage failure](#)
 - [0075-0001-0067 Top Stacker PCA – Debugging code issue](#)
 - [0075-0001-0068 Top Stacker PCA – Invalid boot loader version](#)
 - [0075-0001-0069 Top Stacker PCA – Execution error](#)
 - [0075-0001-0080 Top Stacker PCA – Voltage VPS1 failure](#)
 - [0075-0001-0081 Top Stacker PCA – Voltage VPS2 failure](#)
 - [0075-0001-0082 Top Stacker PCA – Control cable 1 issue](#)
 - [0075-0001-0083 Top Stacker PCA – Control cable 2 issue](#)
 - [0075-0001-0088 Top Stacker PCA – Voltage 32V_1 present but 32V_2 faulty](#)
 - [0075-0001-0089 Top Stacker PCA – Voltage 32V_2 present but 32V_1 faulty](#)
 - [0075-0001-0098 Top Stacker PCA – Unable to update firmware](#)
 - [0075-0002-0033 Intermed roller motor – Overcurrent](#)
 - [0075-0002-0059 Intermed roller motor – Servo shutdown](#)
 - [0075-0002-0060 Intermed roller motor – Direction test](#)
 - [0075-0002-0063 Intermed roller motor – Driver fault](#)
 - [0075-0003-0009 Top Stacker PCA/Central Distribution PCA – Connector/cable issue](#)
 - [0075-0003-0014 Top Stacker PCA to Central Distribution PCA cable – Grounding/short to ground](#)
 - [0075-0007-0033 Paper output kicker motor – Overcurrent](#)
 - [0075-0007-0059 Paper output kicker motor – Servo shutdown](#)
 - [0075-0007-0060 Paper output kicker motor – Direction test](#)
 - [0075-0007-0063 Paper output kicker motor – Driver fault](#)

- [0075-0010-0001 D-Flags sensor – Malfunction](#)
- [0075-0011-0008 Integrated Stacker – Generic jam](#)
- [0075-0012-0013 In path out sensor, paper presence sensor, and dflags sensor – Voltage zero or short-circuited](#)
- [0075-0013-0013 Int path in sensor, clean out open sensor – Voltage zero or short-circuited](#)
- [0075-0014-0087 Intermed roller encoder and paper output kicker encoder – Short-circuited](#)
- [0075-0015-0018 Clean-out sensor – Open while printing](#)
- [0075-0016-0018 Arms sensor – Open while printing](#)
- [0075-0017-0008 Integrated stacker – Paper jam detected while feeding](#)
- [0075-0018-0008 Integrated stacker – Paper jam detected while ejecting](#)
- [Service diagnostics](#)
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- [Removal and installation](#)
 - [Parts that can be repaired](#)
 - [Replace the gas spring](#)
 - [Paper-output path module](#)
 - [Remove the paper sensor \(CZ309-67145\)](#)
 - [Remove the kickers motor with transmission \(CZ309-60104\)](#)
 - [Remove the paper sensor \(CZ309-80096\)](#)
 - [Remove the handoff roller shaft assembly \(CZ309-60088\)](#)
 - [Remove the kickers \(CZ309-60090\)](#)
 - [Remove the kickers shaft assembly \(CZ309-60449\)](#)
 - [Remove the capacity sensor \(CZ309-60608\)](#)
 - [Remove the paper advance motor and transmission](#)
 - [Remove the intermediate roller transmission](#)
 - [Remove the paper input sensor](#)
 - [Remove the switch](#)
 - [Remove the tray and arms](#)

- [Paper-output fixed-tray cover central \(CZ309-67195\)](#)
- [Paper-output fixed-tray cover common \(CZ309-67196\)](#)
- [Paper-output tray module \(CZ309-67194\)](#)
- [Paper-output stacker cover left \(CZ309-67202\)](#)
- [Paper-output stacker cover right \(CZ309-67203\)](#)
- [Top Stacker PCA \(CZ309-67018\)](#)
- [Paper-output path door \(CZ309-67197\)](#)
- [Paper-output transmission \(CZ309-67198\)](#)
- [Paper-output vertical SW \(CZ309-67199\)](#)
- [Paper-output intermediate roller \(CZ309-67200\)](#)
- [Paper-output path adjustable beam \(CZ309-67201\)](#)
- [Paper-output gas spring \(CZ309-67204\)](#)
- [Paper-output arms assembly \(CZ309-67205\)](#)
- [Paper-output continuous stack sensor \(CZ309-67206\)](#)
- [Paper-output kicker motor \(CZ309-67207\)](#)
- [Paper-output handoff roller \(CZ309-67291\)](#)
- [Paper-output dampers \(CZ309-67292\)](#)
- [Paper-output kicker bracket \(CZ309-67208\)](#)
- [Sensor safety assembly \(CZ309-67034\)](#)
- [Paper presence sensor \(CZ309-67145\)](#)
- [Media guide bracket \(CZ309-67318\)](#)
- [Left & right arm modules \(CZ309-67368\)](#)
- [Central arm module \(CZ309-67369\)](#)
- [Paper-output dampers \(CZ309-67375\)](#)
- [Left & right tray modules \(CZ309-67370\)](#)
- [Stacker arm sensor \(CZ309-67409\)](#)
- [Arm closure sensor \(CZ309-67374\)](#)
- [Tray safety switch \(CZ309-67373\)](#)
- [Tray brackets \(CZ309-67376\)](#)
- [Top stacker assembly \(PWXL 4x00/3900s with SNs ≥ MY7688Q008\)](#)
- [Pinch motor cable \(CZ309-50141\) rework](#)

Top stacker assembly instructions



Box contents

1. Accessories
2. Structure
3. Paper path
4. Top tray
5. Arms
6. Cover

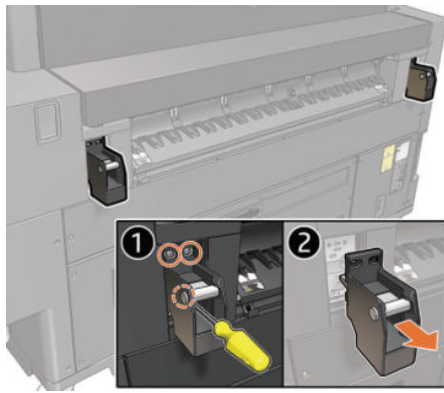


Two people are required for some assembly tasks.

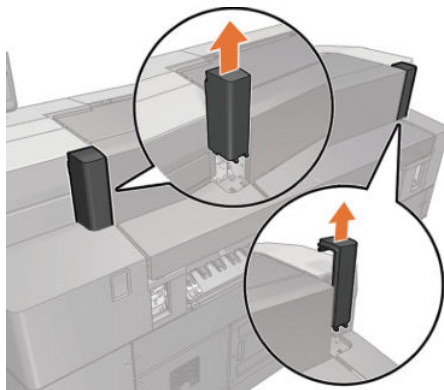


Assembling the stacker can be expected to take about 90 minutes.

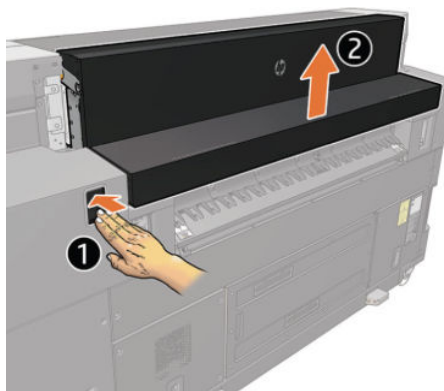
1. If the accessory hooks are installed on the printer, remove them; otherwise, remove the covers.



2. Remove the upper lateral covers, one on each side.

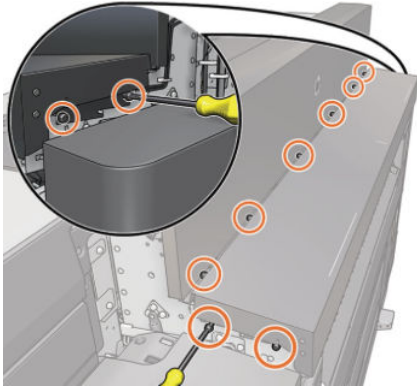


3. Open the output module at the rear.

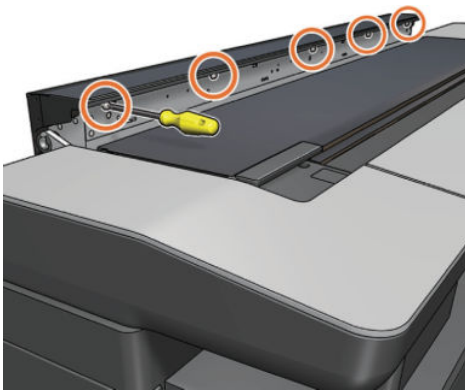


For HP-authorized personnel only

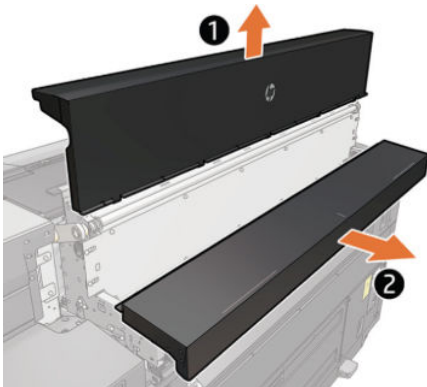
4. Remove ten black screws. Be careful not to drop them.




5. Remove five black screws. Be careful not to drop them.

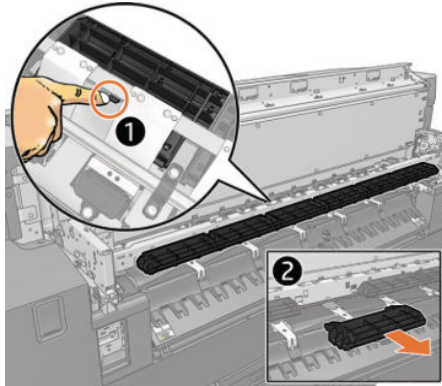


6. Remove the two output module covers, starting with the upper one.

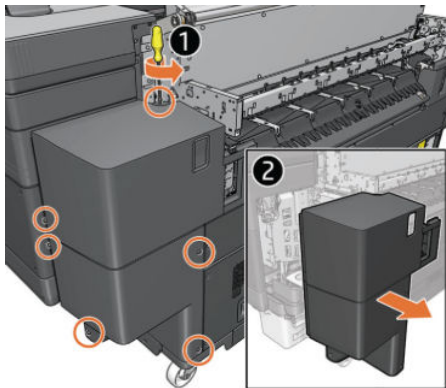


7. Remove the plastic pieces. There is a tab in the inner part, pull it down to remove the pieces easily. The tabs can then be discarded.

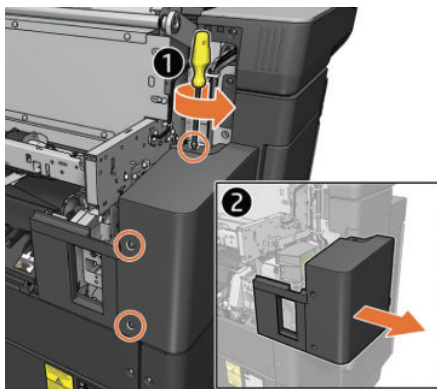
 **IMPORTANT:** Removing the tabs is NOT recommended in cases where the Top stacker is uninstalled. These pieces are necessary to prevent problems with the diverter calibration.



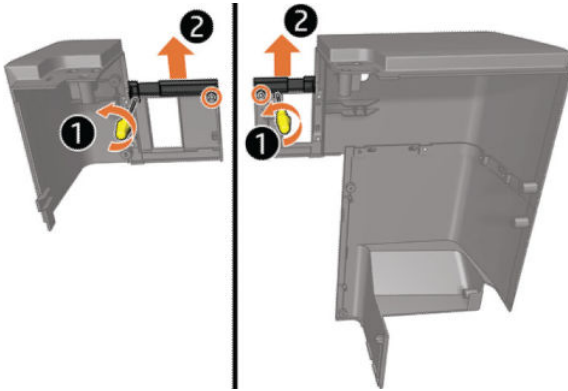
8. Remove six screws and the lateral cover from the front panel side.




9. Remove three screws and the lateral cover from the other side.

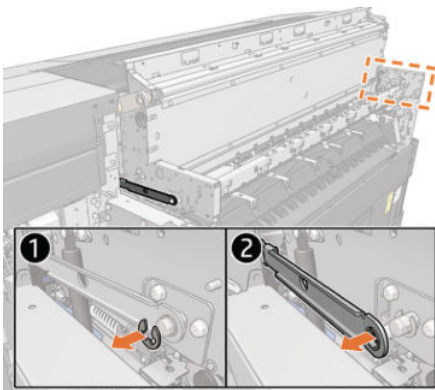


10. Remove the side piece from both covers; there are two screws on each.

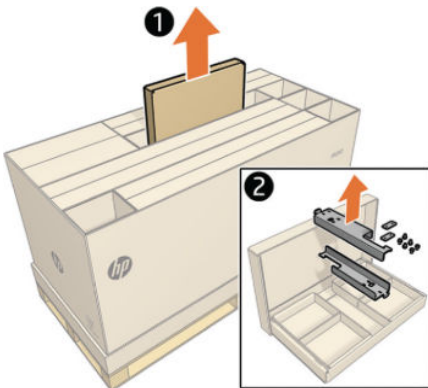


11. Remove the circlip from both sides, and release the crank.

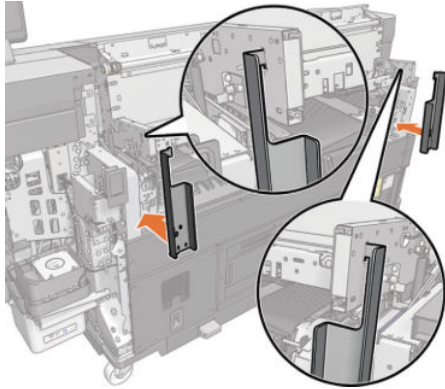
 **NOTE:** Do not discard the circlips: they will be needed later.



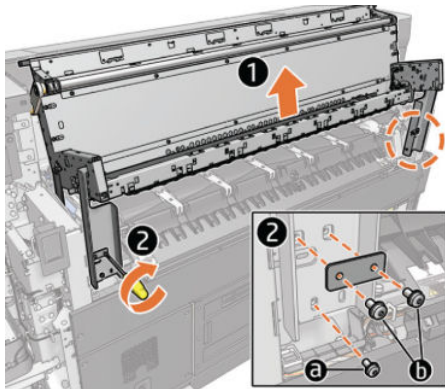
12. Remove the holding tools from the box.



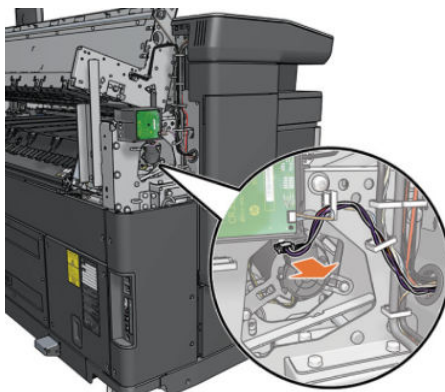
13. Hand one holding tool on each side.



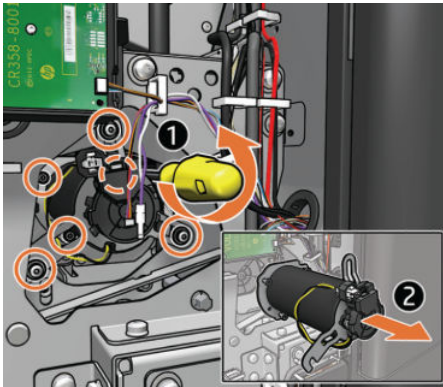
14. Attach the holding tools by moving the output module up until the holes align, then inserting one screw at the bottom, and the metal strip and two screws above. (3 M4 x 8 mm screws.)



15. Remove the cables from the belt motor.

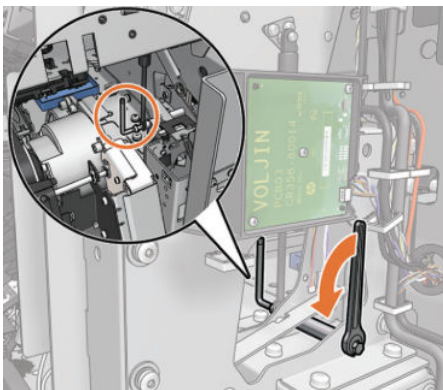


16. Remove the three outer screws, then loosen the three inner ones, and remove the belt motor.

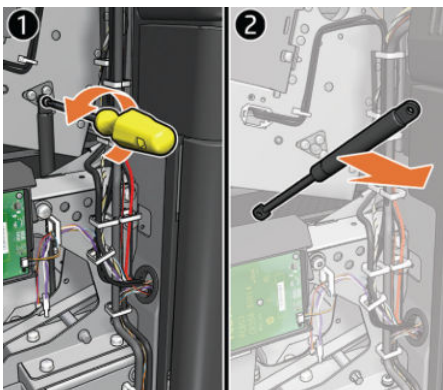


17. Remove the bottom screw from both gas springs.


 **NOTE:** You can lock it with the L screwdriver inside, and then rotate the outside.

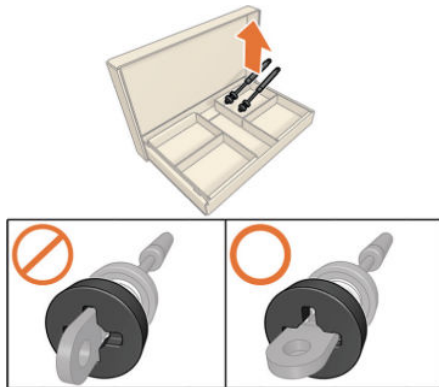


18. Remove the top screw from both gas springs, then remove the gas springs.




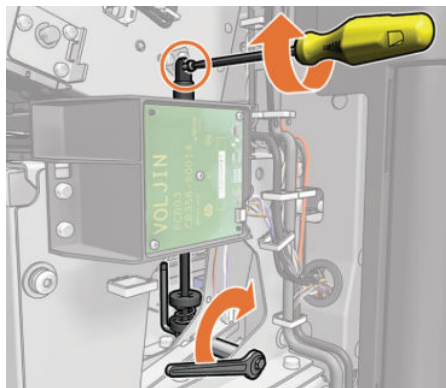
19. Take the new gas springs from the box and lock them.

 **NOTE:** The spring goes in the bottom part.

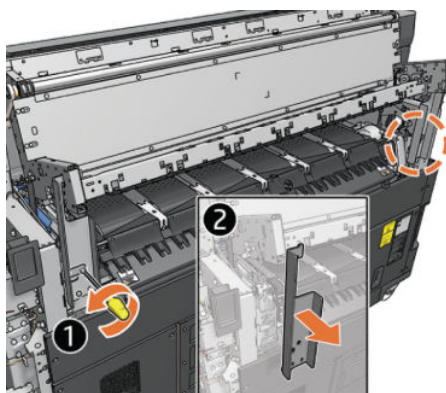


20. Install the new gas springs.

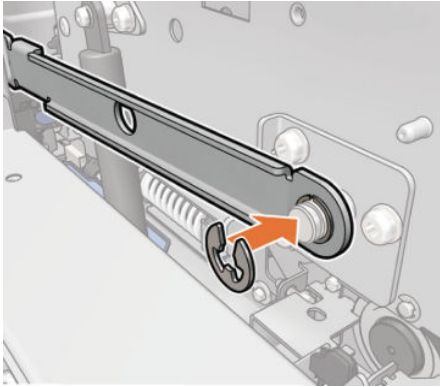
 **NOTE:** For the bottom screw, you can lock it with the L screwdriver inside, and then rotate the outside.



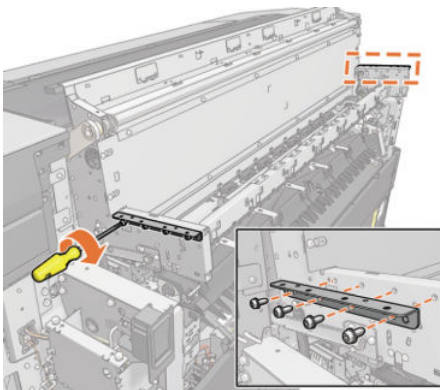
21. Remove the holding tools: first the top screws and the metal strip, then the bottom screw.



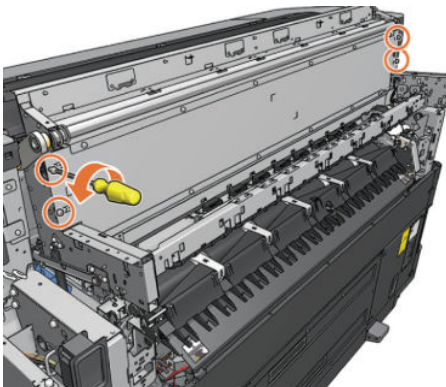
22. Close the crank, and replace the circlips that you removed earlier, on both sides.



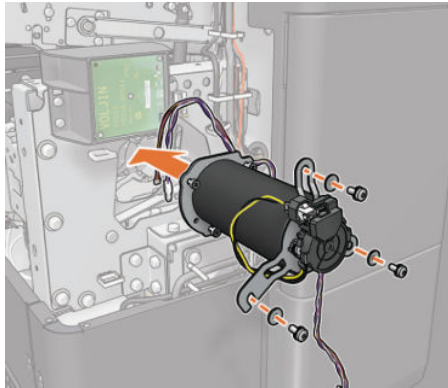
23. Attach the two L supports with four screws each. (8 M4 x 8 mm screws.)




24. Remove two screws from each side. Be careful not to drop the screws.

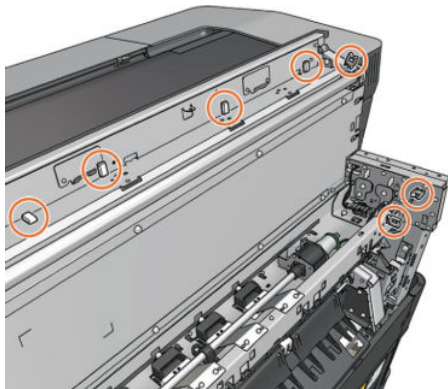


25. Install the belt motor, tightening the three inner screws and attaching it in place with the three outer ones. Then plug it in.

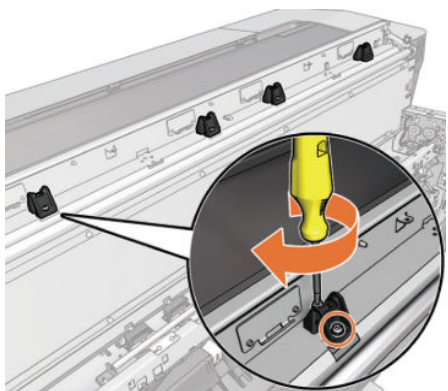


26. Install the seven white clamps.

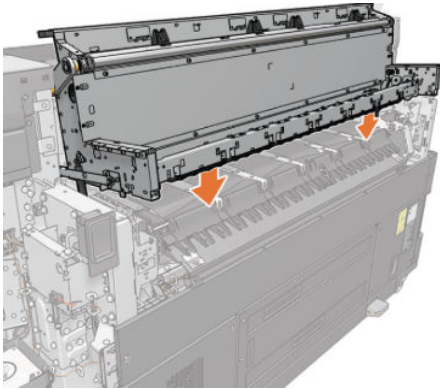
 **NOTE:** Three of the same type are placed on the side, and four on the top.



27. Install four wire-frame shaft supports (two middle ones and two external ones). Attach them with two screws in each. Be careful not to drop the screws. (8 M4 x 14 mm screws.)

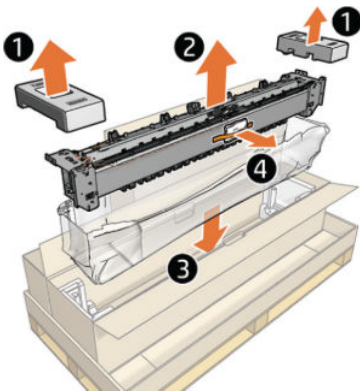


28. Close the output module.

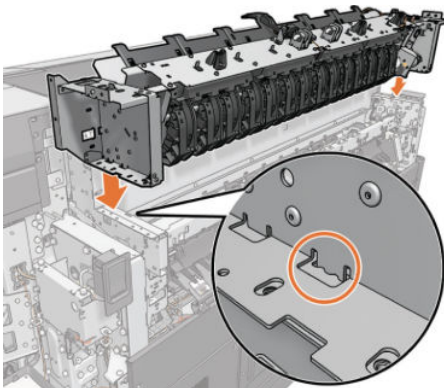


29. Take the structure from the box and remove the plastic and desiccant bags.

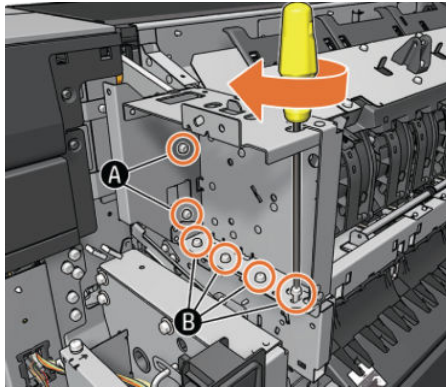
⚠ WARNING! The Top stacker should never be extracted by holding the middle part; it has to be extracted by its sides.




30. Install the structure, making sure that the pin matches on the front panel side.

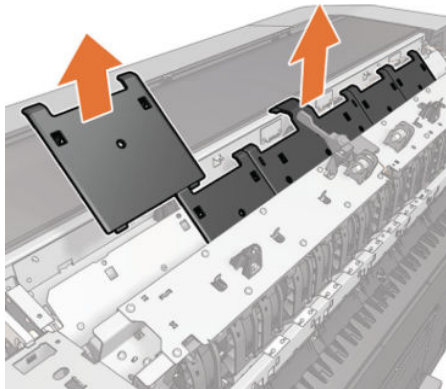


31. Attach the structure on both sides, with the two screws that you removed earlier, plus four new ones each. Do it in the order indicated. (12 M4 x 8 mm screws.)

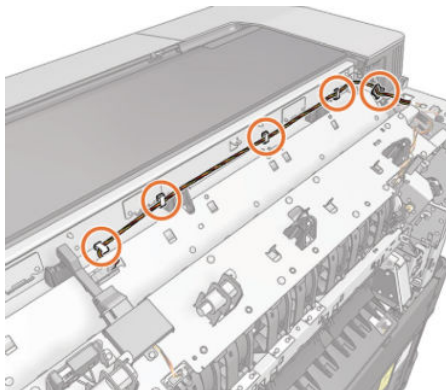


32. Remove the five plastic pieces.

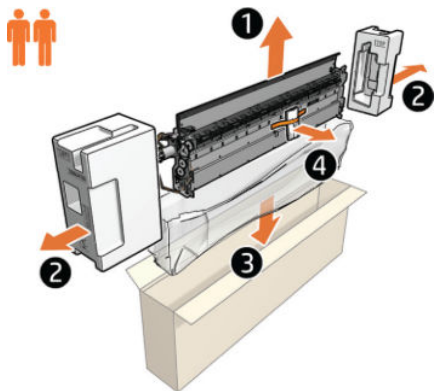
 **NOTE:** Do not discard them: they will be needed later.




33. Route the cable.

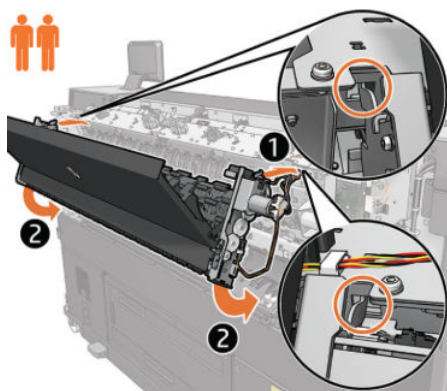


34. Remove the desiccant bag and packaging from the paper path module.

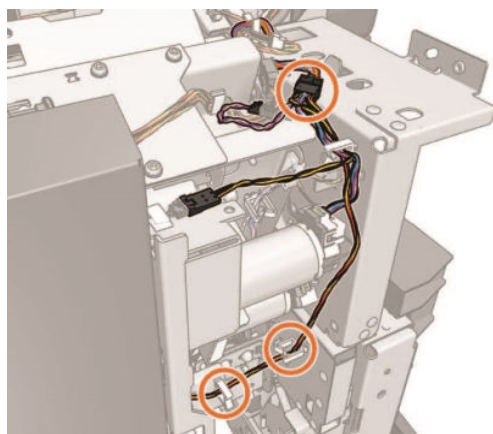


35. Install the module with the door open by inserting the top hooks.

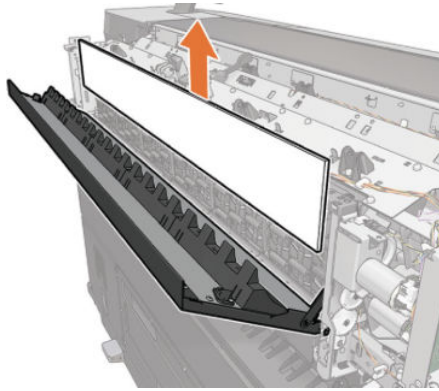
 **NOTE:** Take care not to catch or damage the cable, and also not to hurt your fingers, as the door may fall open.



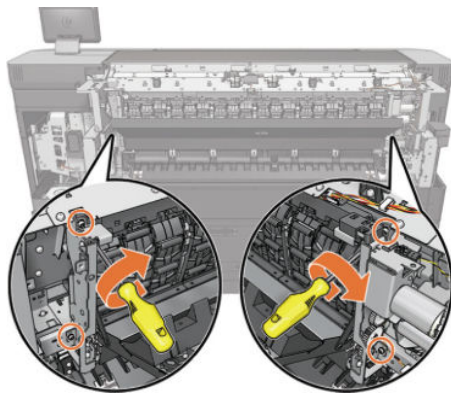
36. Plug in the cable.



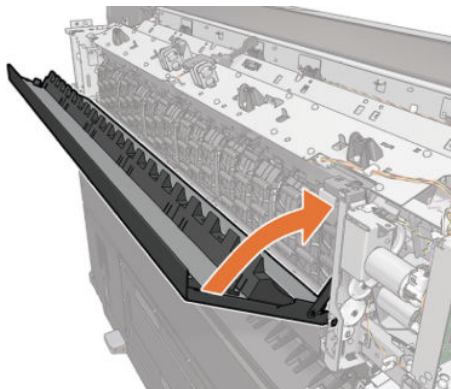
37. Remove the foam.



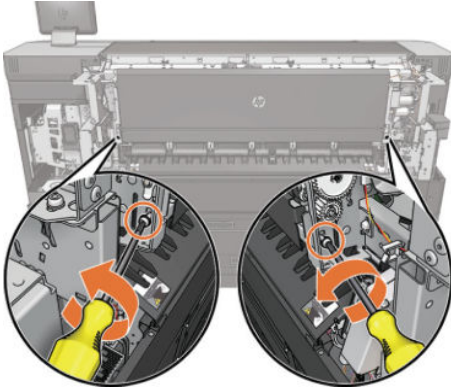
38. Attach the module with two screws at each side. (4 M4 x 8 mm screws.)



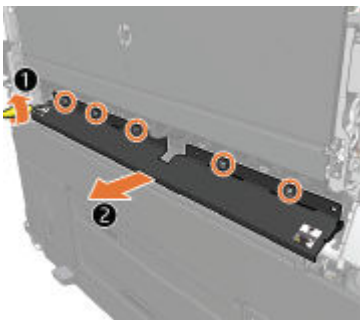
39. Close the paper-path module door.



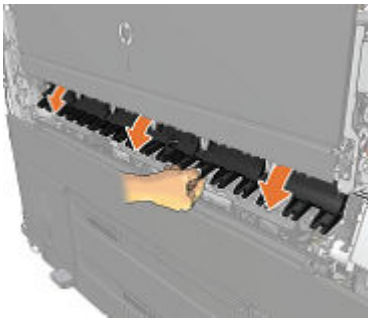
40. Loosen one screw at each side of the diverter interface.



41. Remove the diverter cover.

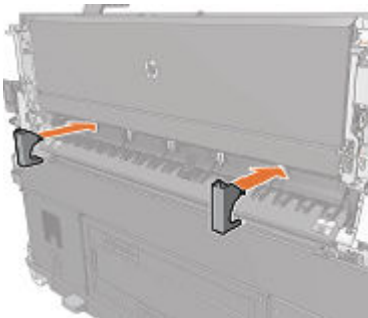


42. Lower the diverter valve.

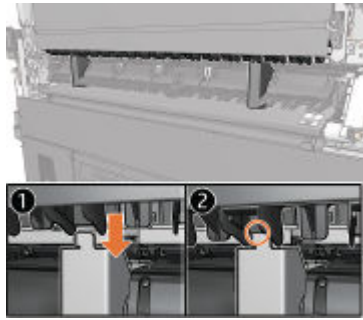


43. Place both adjustment tools under the plastic interface.

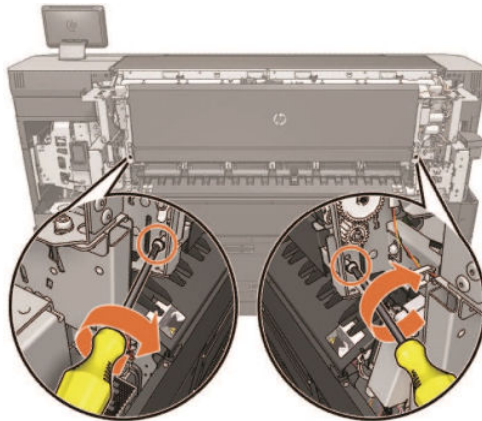
 **NOTE:** The door must be kept closed and the diverter interface in the upper position.



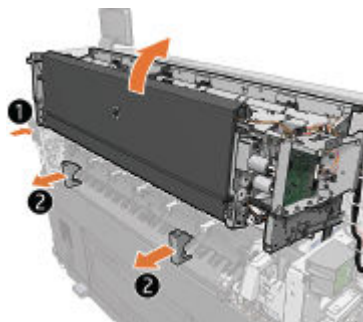
44. Pull down the plastic interface until it touches both adjustment tools.



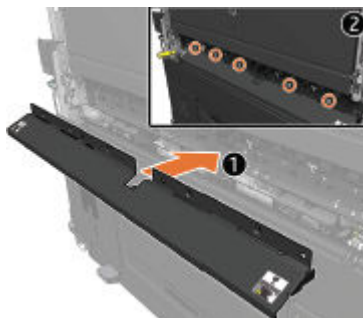
45. Fix 1 screw on each side.



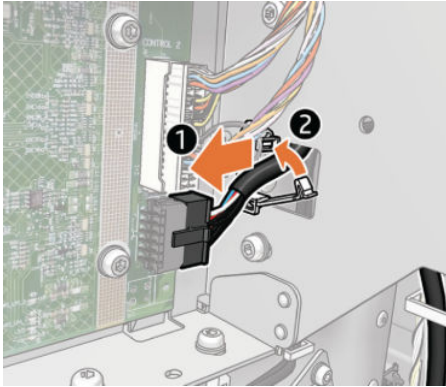
46. Open the output module by pressing the button, then remove the adjustment tools.



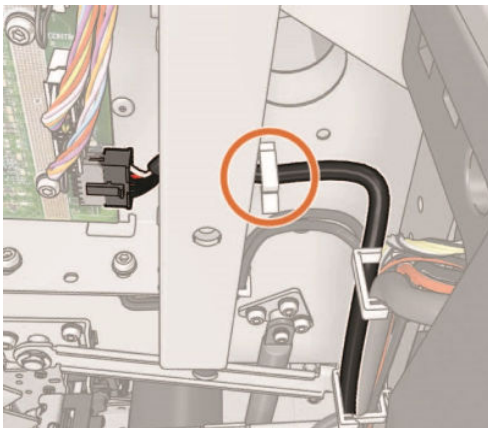
47. Replace the diverter cover.



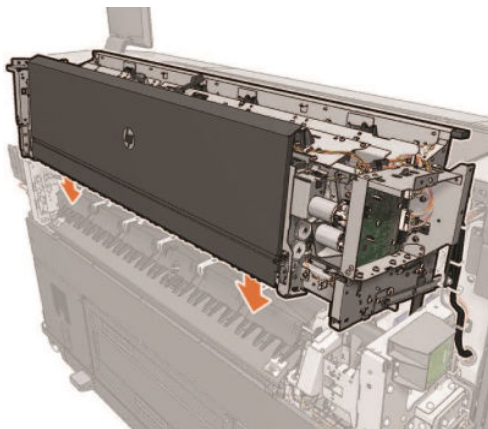
48. Pass the cable connector through the left side-plate, close the saddle part, and plug it in.



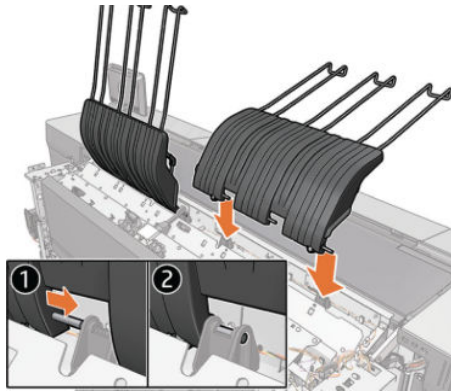
49. Route the cable through the clamps.



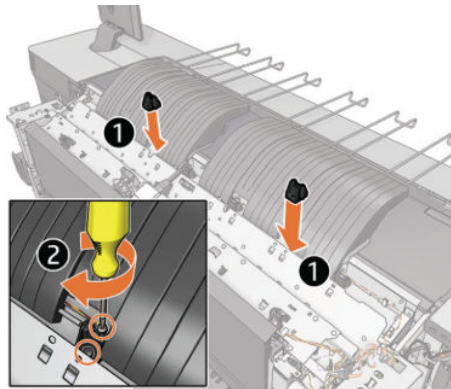
50. Close the output module.



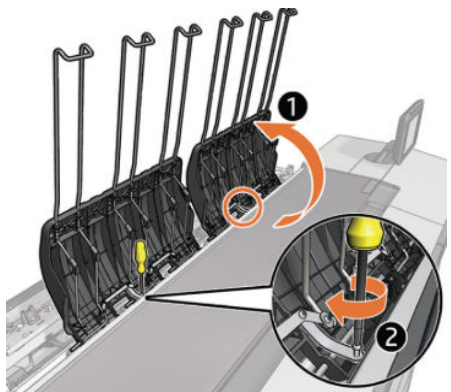
51. Place the two trays by sliding them from left to right.



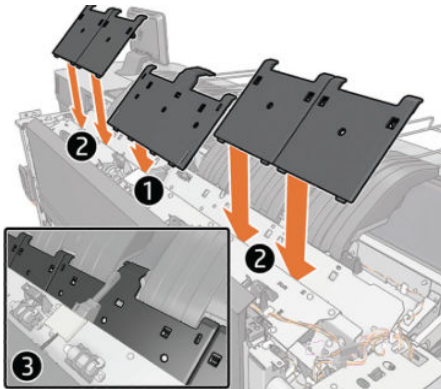
52. Close the trays. Place the two missing wire-frame shaft supports, and attach them with two screws in each. (4 M4 x 14 mm screws.)



53. Open the trays, and attach the two grounding plates on the rear side with M3 x 8 mm screws. (2 M3 x 8 mm screws.)

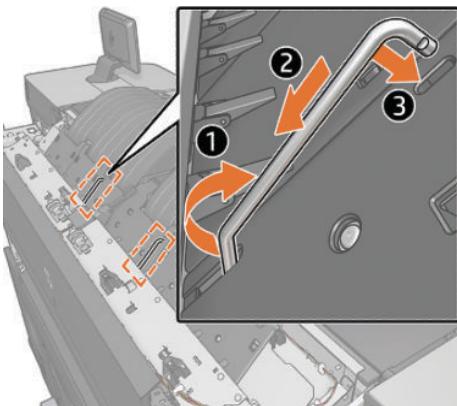


54. Replace the plastic pieces that you removed earlier, starting with the central one.

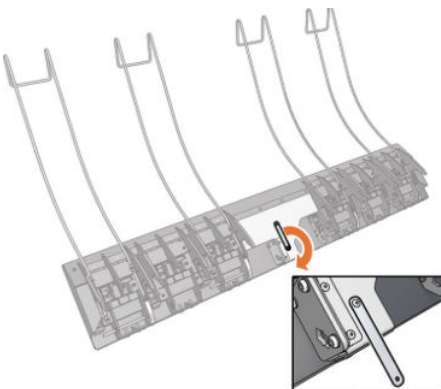


55. Insert the bottom tip into the hole, then rotate it and insert the top tip into the other hole. Slide the wire backwards to fix the position by snapping the top tip into the plastic hole.

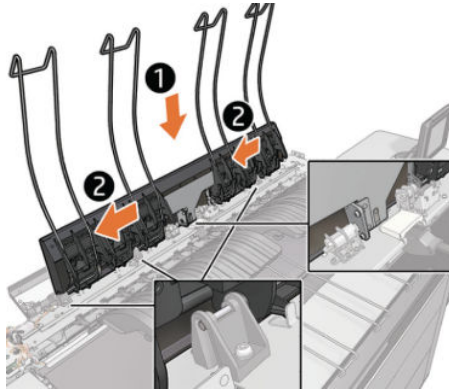
⚠ WARNING! Only to be used with NTP. (Natural Tracing Paper).



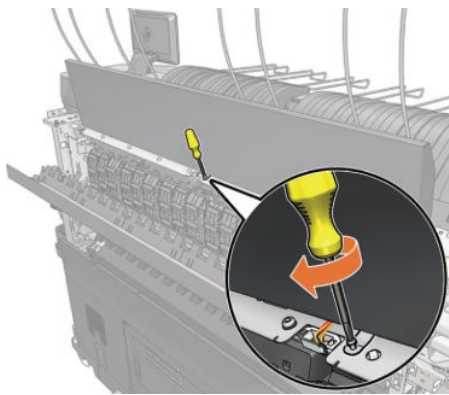
56. Rotate the grounding plate 180° from the stacker.



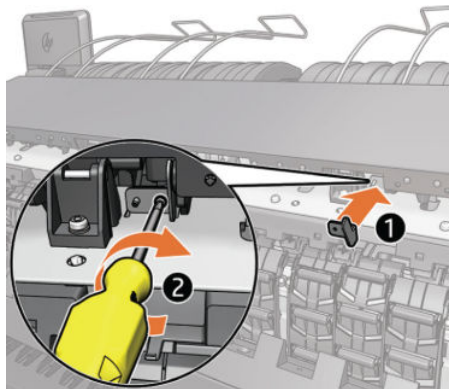
57. Open the stacker cover paper-path module door, and slide the assembly into place.



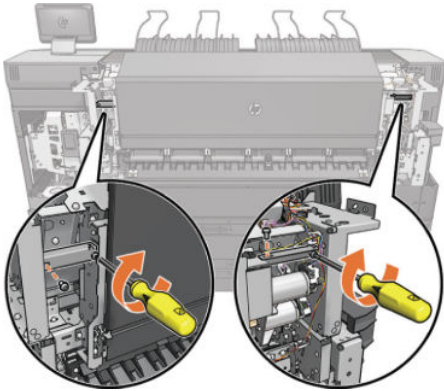
58. Attach the grounding plate with one screw. (1 M3 x 8 mm screw.)




59. Attach the part with one screw on the side indicated. (1 M3 x 8 mm screw.).

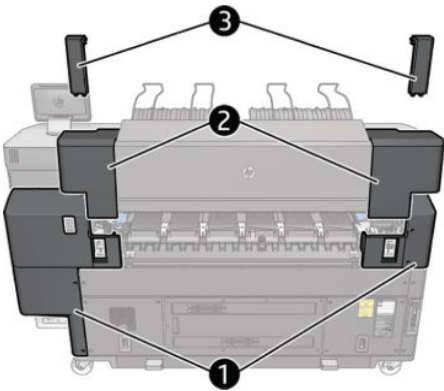


60. Attach the two struts with two screws each. (4 M4 x 8 mm screws.)

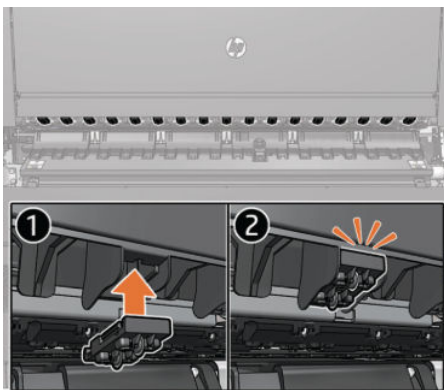


61. Replace all the covers, starting with the old ones, then the new ones, attaching them with three screws at each side. (6 M4 x 8 mm screws.)

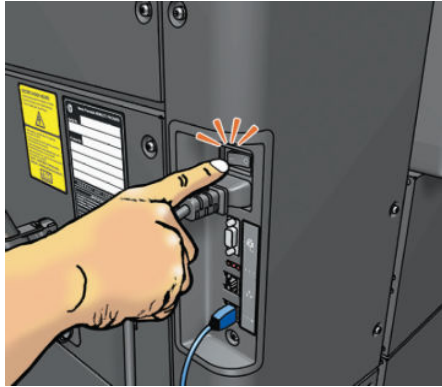
 **NOTE:** For the new covers, you must open the output module in order to access the third screw.



62. Insert the seventeen plastic parts under the module.




63. Turn on the printer.



64. If the printer is new, it will recognize the top stacker automatically and configure it.
If the printer is used, go to the Service menu.



 **NOTE:** If using the Top stacker with a Folder or High-capacity stacker, an extra diverter adjustment may be needed. See [Troubleshooting on page 125](#) for more information.

Top stacker system errors

0075-0001-0001 Top Stacker PCA – Malfunction

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.

Service engineer:

- ▲ Replace the Top Stacker PCA.

0075-0001-0054 Top Stacker PCA – Voltage failure

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.

Service engineer:

- ▲ Replace the Top Stacker PCA.

0075-0001-0067 Top Stacker PCA – Debugging code issue

Call agent:

1. Check that the printer has the latest firmware version.
2. If the issue persists after restarting, your support representative must repair the printer on site.
3. Printing using another output destination is recommended.

Service engineer:

1. Check that the printer has the latest firmware version.
2. Replace the Top Stacker PCA.

0075-0001-0068 Top Stacker PCA – Invalid boot loader version

Call agent:

1. Check that the printer has the latest firmware version.
2. If the issue persists after restarting, your support representative must repair the printer on site.
3. Printing using another output destination is recommended.

Service engineer:

1. Check that the printer has the latest firmware version.
2. Replace the Top Stacker PCA.

0075-0001-0069 Top Stacker PCA – Execution error

Call agent:

1. Check that the printer has the latest firmware version.
2. If the issue persists after restarting, your support representative must repair the printer on site.
3. Printing using another output destination is recommended.

Service engineer:

1. Check that the printer has the latest firmware version.
2. Check the Top Stacker PCA cables.
3. Check the Top Stacker PCA.
4. Replace the Top Stacker PCA.

0075-0001-0080 Top Stacker PCA – Voltage VPS1 failure

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.

Service engineer:

- ▲ Replace the Top Stacker PCA.

0075-0001-0081 Top Stacker PCA – Voltage VPS2 failure

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.

Service engineer:

- ▲ Replace the Top Stacker PCA.

0075-0001-0082 Top Stacker PCA – Control cable 1 issue

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.

Service engineer:

1. Check that the Control 1 cable (NI_205) is unbroken, undamaged, and properly connected. Replace it if necessary. See [Cable identification on page 2062](#).
2. Check that the Top Stacker PCA is unbroken and undamaged.
3. Replace the Top Stacker PCA.

0075-0001-0083 Top Stacker PCA – Control cable 2 issue

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.

Service engineer:

1. Check that the Control 1 cable (NI_205) is unbroken, undamaged, and properly connected. Replace it if necessary. See [Cable identification on page 2062](#).
2. Check that the Top Stacker PCA is unbroken and undamaged.
3. Replace the Top Stacker PCA.

0075-0001-0088 Top Stacker PCA – Voltage 32V_1 present but 32V_2 faulty

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.
3. Ask the customer whether the printer can print without the top stacker, to discard an issue in the Central Distribution PCA.

Service engineer:

1. Check the fuse in the Central Distribution PCA.
2. Check for a short-circuit in the Top Stacker PCA.
3. Check that the NI_115 cable is unbroken and undamaged. See [Cable identification on page 2062](#).
4. Replace the fuse.
5. Replace the Top Stacker PCA.
6. Replace the Central Distribution PCA.

0075-0001-0089 Top Stacker PCA – Voltage 32V_2 present but 32V_1 faulty

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.
3. Ask the customer whether the printer can print without the top stacker, to discard an issue in the Central Distribution PCA.

Service engineer:

1. Check the fuse in the Central Distribution PCA.
2. Check for a short-circuit in the Top Stacker PCA.
3. Check that the NI_115 cable is unbroken and undamaged. See [Cable identification on page 2062](#).
4. Replace the fuse.
5. Replace the Top Stacker PCA.
6. Replace the Central Distribution PCA.

0075-0001-0098 Top Stacker PCA – Unable to update firmware

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.

Service engineer:

- ▲ Check that the printer has the latest firmware version; if not, install the latest.

0075-0002-0033 Intermed roller motor – Overcurrent

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.

Service engineer:

1. Replace the Intermed roller motor.
2. Check the Central Distribution PCA.
3. Replace the Central Distribution PCA.

 **NOTE:** If a new Central Distribution PCA was installed for testing purposes, and you want to reinstall the original one, before removing it run [0045-08 Reset Central Distribution board to be removed on page 498](#).

0075-0002-0059 Intermed roller motor – Servo shutdown

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.

Service engineer:

1. Check that the mobile parts moved by the Intermed roller motor are not blocked and that they can complete the movement. See [0075-02 Check sensors and mechatronics on page 512](#).
2. Replace cable (NI_204 or NI_206) or connector as needed.
3. Replace the Intermed roller motor.
4. Replace the Top Stacker PCA.

0075-0002-0060 Intermed roller motor – Direction test

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.

Service engineer:

- ▲ Check that the encoder is unplugged; if not, replace the motor.

0075-0002-0063 Intermed roller motor – Driver fault

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.

Service engineer:

1. Check for any visible obstacles restricting the movement of the Intermed roller motor. If there is a wrinkled mass of paper inside the paper path, lift the pinchwheels (using the screw that moves the pinchwheels, or the pinchwheels diagnostic test) and clear the obstruction.
2. Check that the Intermed roller motor cable (NI_204 or NI_206) is undamaged and correctly connected to the Top Stacker PCA. See [Cable identification on page 2062](#).
3. Replace the Intermed roller motor.
4. Replace the Top Stacker PCA.

0075-0003-0009 Top Stacker PCA/Central Distribution PCA – Connector/cable issue

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.

Service engineer:

1. Check that the Top Stacker PCA to Central Distribution PCA cable (NI_115) is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
2. Check that the Top Stacker PCA is unbroken and undamaged.
3. Check that the Central Distribution PCA is unbroken and undamaged.
4. Replace the Top Stacker PCA.
5. Replace the Central Distribution PCA.

0075-0003-0014 Top Stacker PCA to Central Distribution PCA cable – Grounding/short to ground

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.

Service engineer:

1. Check that the Top Stacker PCA to Central Distribution PCA cable (NI_115) is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
2. Check that the Top Stacker PCA is unbroken and undamaged.
3. Check that the Central Distribution PCA is unbroken and undamaged.
4. Replace the Top Stacker PCA.
5. Replace the Central Distribution PCA.



NOTE: If a new Central Distribution PCA was installed for testing purposes, and you want to reinstall the original one, before removing it run [0045-08 Reset Central Distribution board to be removed on page 498](#).

0075-0007-0033 Paper output kicker motor – Overcurrent

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.

Service engineer:

1. Replace the paper output kicker motor.
2. Check the Central Distribution PCA.
3. Replace the Central Distribution PCA.

 **NOTE:** If a new Central Distribution PCA was installed for testing purposes, and you want to reinstall the original one, before removing it run [0045-08 Reset Central Distribution board to be removed on page 498](#).

0075-0007-0059 Paper output kicker motor – Servo shutdown

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.

Service engineer:

1. Check that the mobile parts moved by the kicker motor are not blocked and that they can complete the movement. See [0075-02 Check sensors and mechatronics on page 512](#).
2. Replace cable (NI_201 or NI_206) or connector as needed.
3. Replace the Intermed roller motor.
4. Replace the Top Stacker PCA.

0075-0007-0060 Paper output kicker motor – Direction test

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.

Service engineer:

- ▲ Check that the encoder is unplugged; if not, replace the motor.

0075-0007-0063 Paper output kicker motor – Driver fault

Call agent:

- ▲ If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the paper output kicker motor to Top Stacker PCA cable (NI_201 or NI_206) is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
2. Check that the paper output kicker motor is unbroken and undamaged.
3. Check that the Top Stacker PCA is unbroken and undamaged.

4. Replace the paper output kicker motor.
5. Replace the Top Stacker PCA.

0075-0010-0001 D-Flags sensor – Malfunction

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.

Service engineer:

1. Check sensors, and for any discrepancy between sensors.
2. Replace sensors.

0075-0011-0008 Integrated Stacker – Generic jam

Call agent:

1. Check that there is no paper jammed or any other agent in the paper path.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the intermediate path paper-IN and -OUT sensors are properly placed.
2. Check that the cables (NI_205 or NI_202, and NI_206 or NI_204) are undamaged and unbroken.
3. Replace the intermediate path paper-IN or -OUT Sensors.

0075-0012-0013 In path out sensor, paper presence sensor, and dflags sensor – Voltage zero or short-circuited

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.

Service engineer:

1. Check that the in path out sensor cable (NI_202) is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
2. Check that the in paper presence sensor cable (NI_203) is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
3. Check that the dflags sensor cable (NI_202) is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
4. Check that the in path out sensor is unbroken and undamaged.
5. Check that the in paper presence sensor is unbroken and undamaged.

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6. Check that the dflags sensor is unbroken and undamaged.
7. Replace the in path out sensor.
8. Replace the in paper presence sensor.
9. Replace the dflags sensor.
10. Check that the Top Stacker PCA is unbroken and undamaged.
11. Replace the Top Stacker PCA.

0075-0013-0013 Int path in sensor, clean out open sensor – Voltage zero or short-circuited

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.

Service engineer:

1. Check that the int path in sensor cable (NI_204 or NI_206) is unbroken, undamaged, and properly connected; replace it if necessary. See [Cable identification on page 2062](#).
2. Check that the clean out open sensor cable (NI_204 or NI_206) is unbroken, undamaged, and properly connected, replace it if necessary. See [Cable identification on page 2062](#).
3. Check that the int path in sensor is unbroken and undamaged.
4. Check that the clean out open sensor is unbroken and undamaged.
5. Replace the intermediate roller motor.
6. Replace the int path in sensor.
7. Replace the clean out open sensor.
8. Check that the Top Stacker PCA is unbroken and undamaged.
9. Replace the Top Stacker PCA.

0075-0014-0087 Intermed roller encoder and paper output kicker encoder – Short-circuited

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Printing using another output destination is recommended.

Service engineer:

1. Check that the kicker or Intermed motor encoders are unbroken, undamaged, and properly connected; replace the kicker or Intermed motor if necessary.
2. Replace the Top Stacker PCA.

0075-0015-0018 Clean-out sensor – Open while printing

Call agent:

1. Check that the clean-out sensor is not open while in use; if it is open, close it.
2. If the issue persists after restarting, your support representative must repair the printer on site.
3. Printing using another output destination is recommended.

Service engineer:

1. Check that the clean-out sensor is unbroken and undamaged; replace if necessary.
2. Check that the clean-out sensor cable (NI_204 or NI_206) and connector are unbroken and undamaged; replace them if necessary. See [Cable identification on page 2062](#).
3. Check that the sensor's connectors to the Top Stacker PCA are properly connected.

0075-0016-0018 Arms sensor – Open while printing

Call agent:

1. Check that the arms sensor is not open while in use; if it is open, close it.
2. If the issue persists after restarting, your support representative must repair the printer on site.
3. Printing using another output destination is recommended.

Service engineer:

1. Check that the arms sensor is not open while in use; if it is open, close it.
2. Check that the arms sensor, cables, and connectors are unbroken and undamaged; replace if necessary.
3. Check that the sensor's connectors to the Top Stacker PCA are properly connected.

0075-0017-0008 Integrated stacker – Paper jam detected while feeding

Call agent:

1. Check that there is no paper jammed or any other agent in the paper path.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the intermediate paper path IN and OUT sensors are properly placed.
2. Check that cables NI_205 or NI_202, and NI_206 or NI_204 are undamaged and unbroken.
3. Replace the intermediate paper path IN or OUT sensor.

0075-0018-0008 Integrated stacker – Paper jam detected while ejecting

Call agent:

1. Check that there is no paper jammed or any other agent in the paper path.
2. If the issue persists after restarting, your support representative must repair the printer on site.

Service engineer:

1. Check that the intermediate paper path IN and OUT sensors are properly placed.
2. Check that cables NI_205 or NI_202, and NI_206 or NI_204 are undamaged and unbroken.
3. Replace the intermediate paper path IN or OUT sensor.

Service diagnostics

0075-01 Check EE

1. Raise subsystem.
2. Check presence of top stacker.
3. Check that Morgana is connected to the data cable.
4. Check that Morgana is connected to the power cable.
5. Check that Morgana is working correctly.

0075-02 Check sensors and ME

1. Check the clean-out switch.
2. Check the arms switch.
3. Check that the intermediate path paper in and out sensors are working correctly.
4. Check that the stacker paper presence sensors are working correctly.
5. Check that the D-Flags PCA is connected to Morgana.
6. Check that the D-Flags PCA is working correctly.
7. Check that the D-Flags (capacity) sensor is working correctly.
8. Check the arm dumpers (passive test done by service engineer).
9. Check that the intermediate roller motor is connected.
10. Make an electrical test of the intermediate roller motor.
11. Make a direction test of the intermediate roller motor.
12. Check the encoder of the intermediate roller motor.
13. Move the intermediate roller motor to all possible positions.

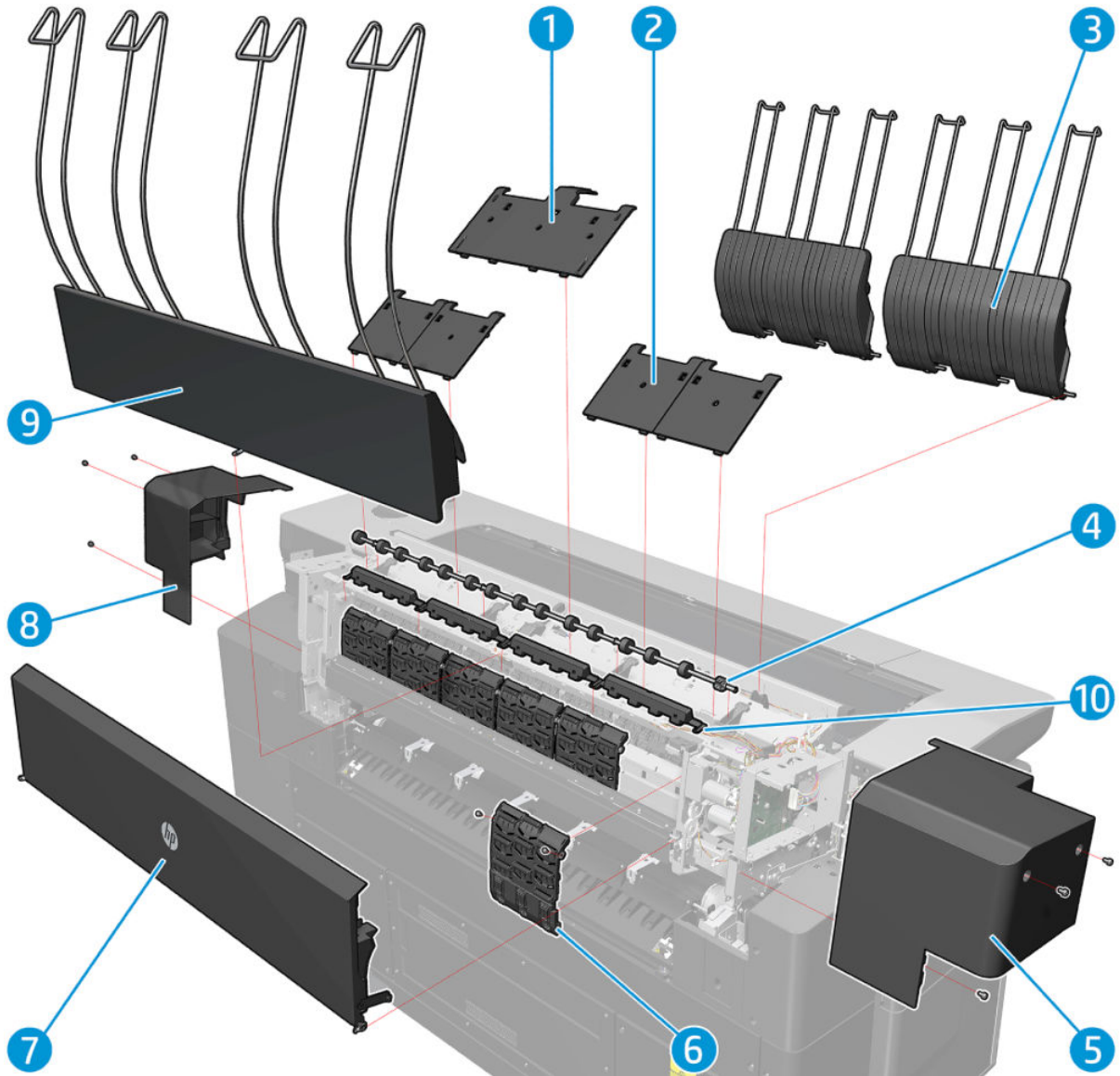
14. Set the intermediate roller motor and show its PWM and current in the front panel, with the valid range of these values.
15. Control the friction of the intermediate roller motor with the paper.
16. Stop the intermediate roller motor.
17. Check that the paper-output kicker motor is connected.
18. Make an electrical test of the paper-output kicker motor.
19. Make a direction test of the paper-output kicker motor.
20. Check the encoder of the paper-output kicker motor.
21. Move the paper-output kicker motor to all possible positions.
22. Set the paper-output kicker motor and show its PWM and current in the front panel, with the valid range of these values.
23. Control the friction of the paper-output kicker motor with the paper.
24. Stop the paper-output kicker motor.

Troubleshooting paper-handling issues

Issue	Workaround
<p>The paper has jammed in the top stacker.</p> <ul style="list-style-type: none"> • Jam in the intermediate roller • Jam in the paper advance roller • Jam in the tray 	<p>The front panel asks you to open the stacker cover or rear door and clear the jam by pulling out the paper.</p>
<p>High-density prints jamming in the stacker</p>	<p>Use thicker paper: over 80 g/m².</p> <p>Print to the basket.</p>
<p>Several stacker paper jams</p>	<p>Check whether anything is blocking the paper path.</p>
<p>Stacker capacity is lower than expected. Stacker capacity is defined as up to 100 pages of A1/D-size line-drawing prints in landscape on bond paper, but stacker capacity depends on paper thickness and page size:</p> <ul style="list-style-type: none"> • Cockle effect when printing high-density prints can produce a full-capacity state sooner than expected. • When stacking several pages of some type of paper, its curling closes the channel. Then a longer print cannot pass through the channel and could jam in the stacker. 	<p>Remove papers from the tray (if they are closing the channel) and resume the job.</p> <p>If you are printing high-density prints and they are wrinkled once stacked, that may generate a wrong full-capacity detection. Use thicker paper.</p>
<p>The stacker reports that it is permanently full.</p>	<p>Check that the capacity sensor flag is correctly assembled.</p>
<p>The stacker reports that it is permanently jammed.</p>	<p>Check that all sensors along the paper path are clean and undamaged.</p>

Top stacker parts and diagrams

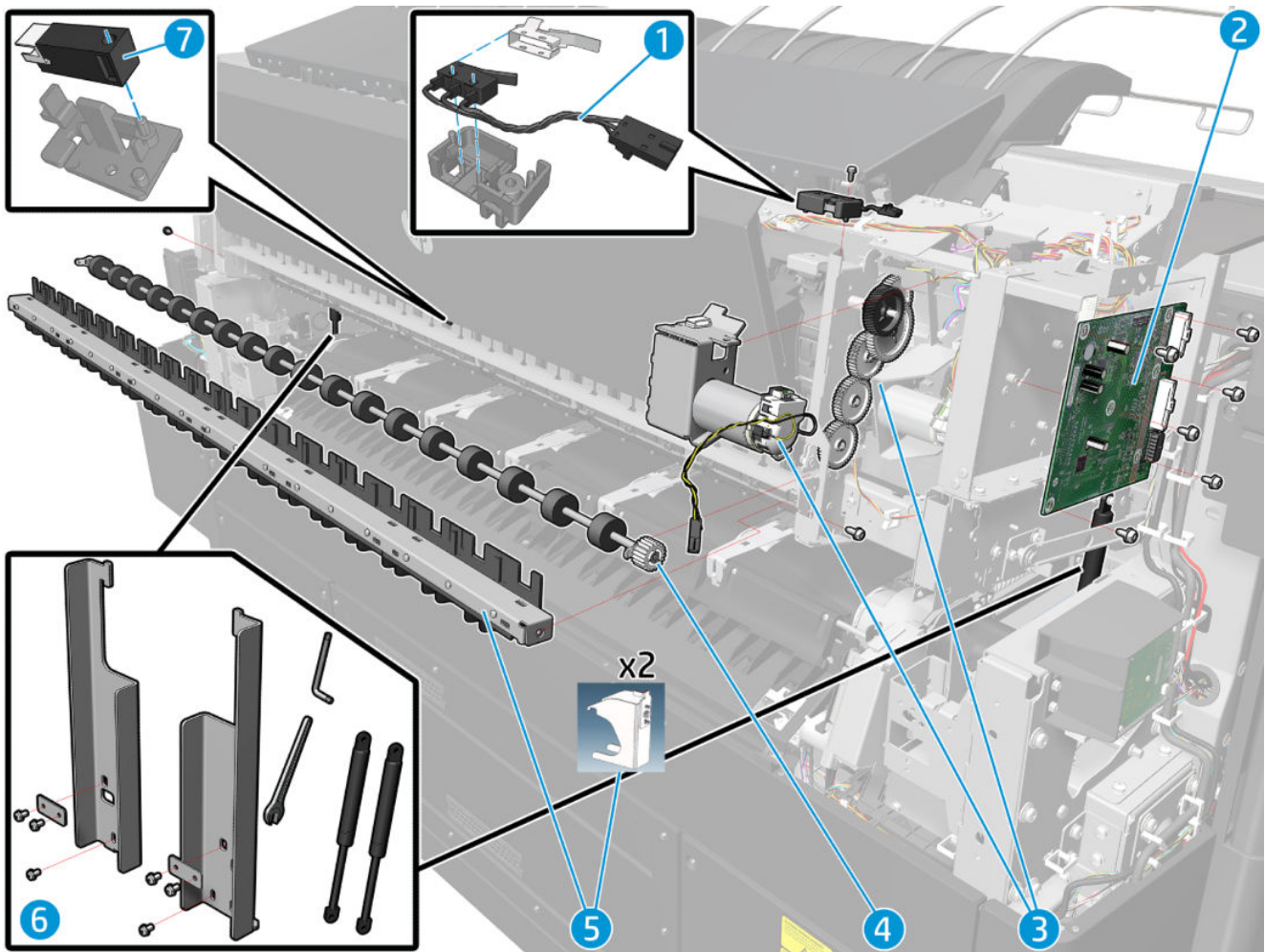
Top stacker 1



	Part number	Description
1	CZ309-67195	Paper-output fixed tray cover central
2	CZ309-67196	Paper-output fixed tray cover common
3	CZ309-67194	Paper-output tray module
4	CZ309-67291	Paper-output handoff roller
5	CZ309-67202	Paper-output stacker cover left
6	CZ309-67199	Paper-output vertical SW
7	CZ309-67197	Paper-output path door

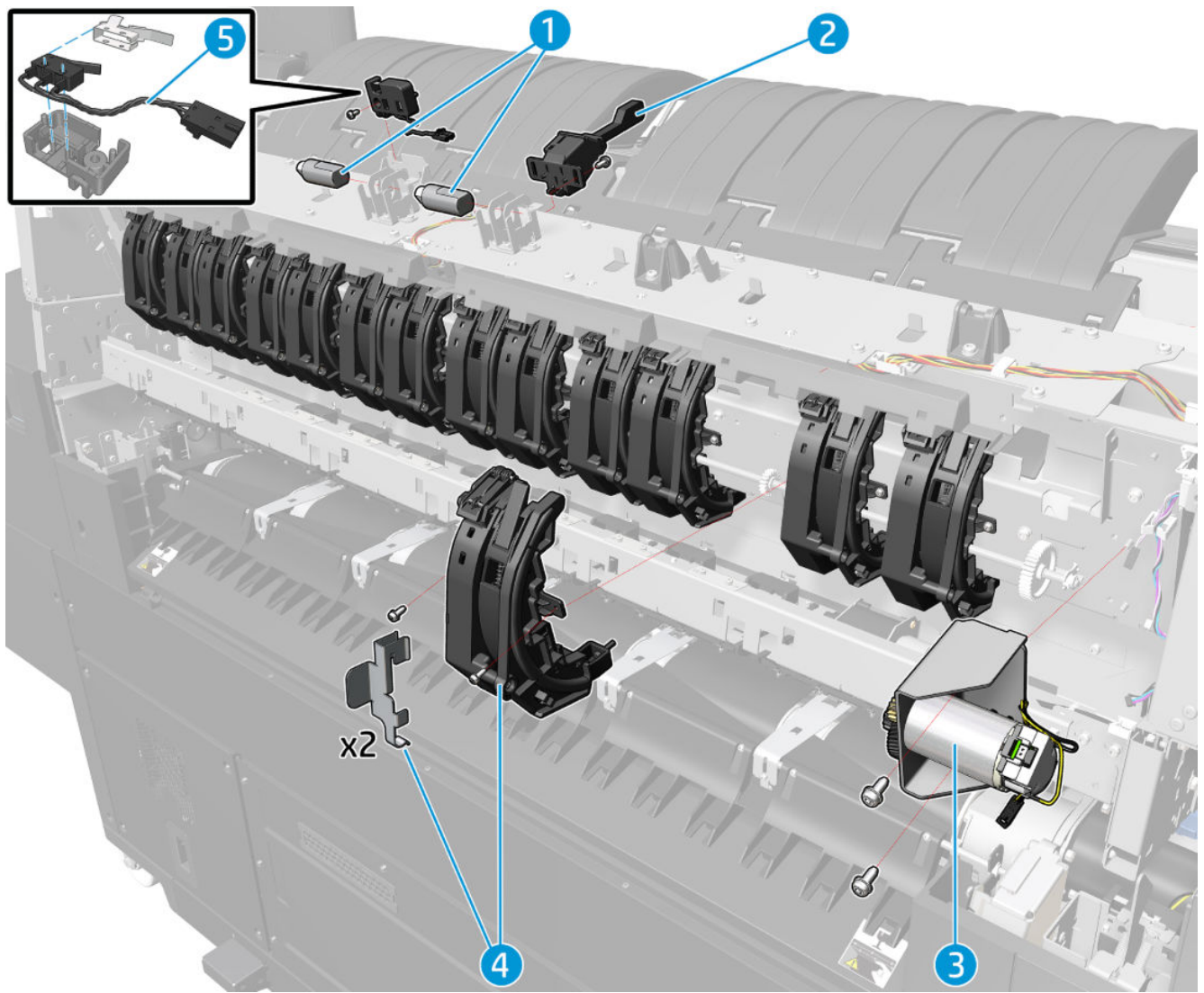
	Part number	Description
8	CZ309-67203	Paper-output stacker cover right
9	CZ309-67205	Paper-output arms assembly
10	CZ309-67318	Media-guide bracket (see Media guide bracket (CZ309-67318) on page 1297)

Top stacker 2



	Part number	Description
1	CZ309-67034	Sensor safety assembly
2	CZ309-67018	Top Stacker PCA
3	CZ309-67198	Paper-output transmission
4	CZ309-67200	Paper-output intermediate roller
5	CZ309-67201	Paper-output adjustable path
6	CZ309-67204	Paper-output gas spring
7	CZ309-67145	Paper presence sensor


Top stacker 3



	Part number	Description
1	CZ309-67292	Paper-output dampers (for SNs below MY7688Q008)
	CZ309-67375	Paper-output dampers (for SNs MY7688Q008 and above)
2	CZ309-67206	Paper-output continuous stack sensor
3	CZ309-67207	Paper-output kicker motor
4	CZ309-67208	Paper-output kicker bracket
5	CZ309-67034	Sensor safety assembly

Removal and installation

Parts that can be repaired

 **NOTE:** No calibrations are required after any part replacement.

Components that can easily be changed

- Hand off
 - Kickers motor with transmission
 - Kickers
- Paper advance
 - Paper-advance motor and transmission
 - Intermediate roller transmission
- Sensors
 - Paper sensor (structure)
 - Paper sensor (hand-off)
 - Capacity sensor (hand-off)
 - Paper-input sensor (paper advance)
 - Switch (paper advance)
 - Switch (tray)
- Dumpers

Components that require more work

- Hand-off roller shaft (hand-off)
- Kickers shaft assembly
- Gas springs

Replace the gas spring

Follow the steps described in the paper output door-upgrade section to change the gas spring.

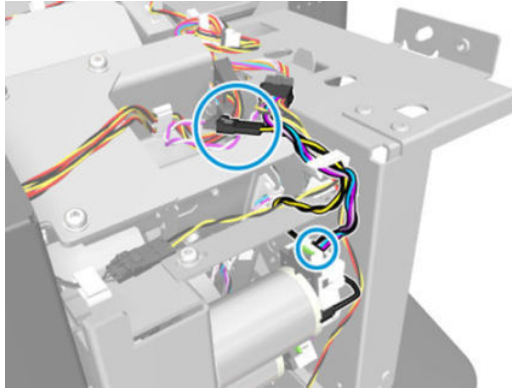
There is no need to remove any top-stacker subassembly already assembled (structure, paper path, and so on).

Paper-output path module

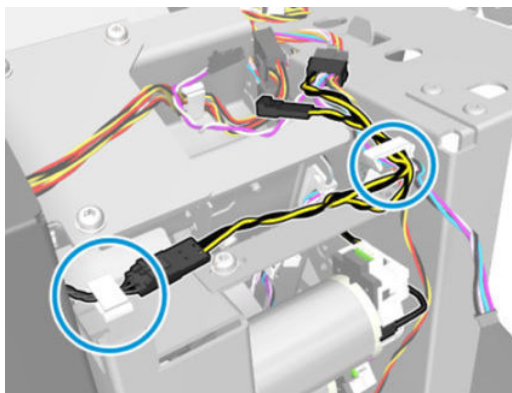
Removal

1. Remove the [Paper-output stacker cover left \(CZ309-67202\) on page 1241](#).
2. Remove the [Paper-output stacker cover right \(CZ309-67203\) on page 1242](#).

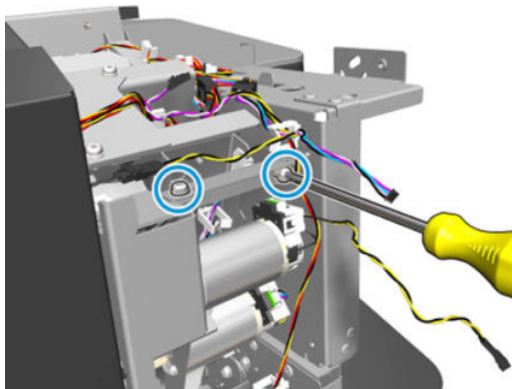
3. Unplug two cables.



4. Release the cables from the two hooks.

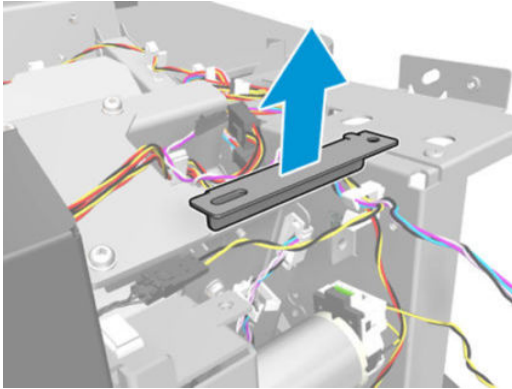


5. Remove two screws.

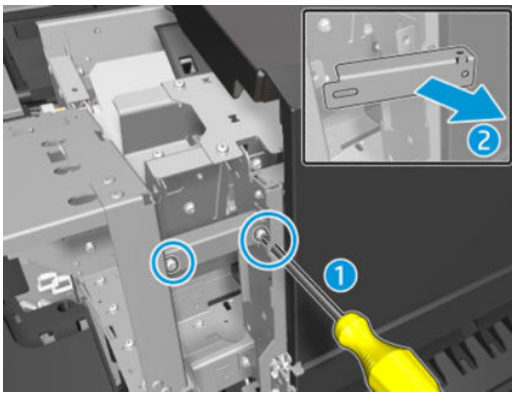


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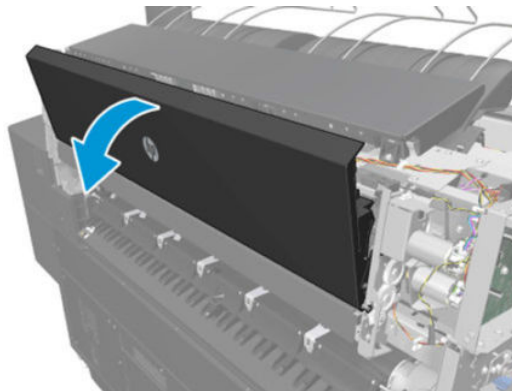
6. Remove the strut.



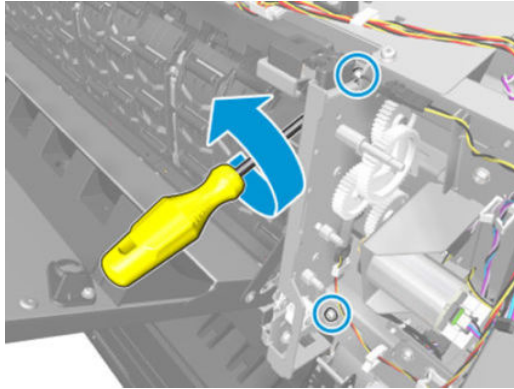
7. Remove two screws and the strut.



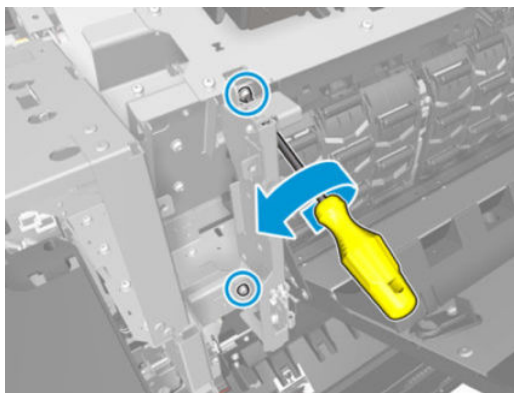
8. Open the paper-output path door.



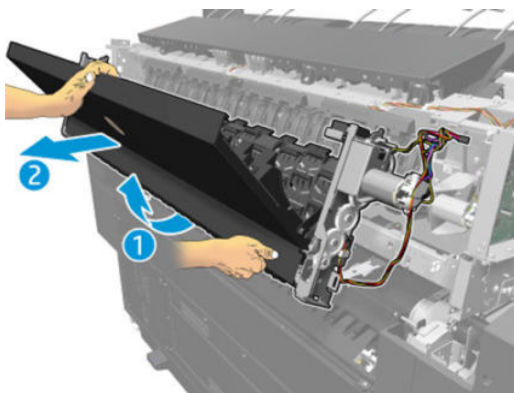
9. Remove two screws.



10. Remove two screws.



11. Rotate the Paper-output path module until you can disengage the two hooks and remove it. Be careful not to damage the cables.

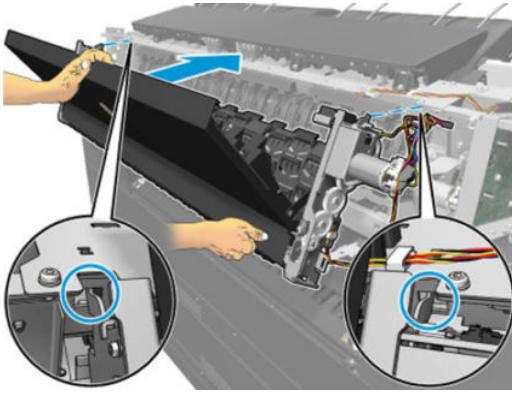


12. Rotate the Paper-output path module enough so that you can remove the gearwheel. Be careful that the Paper-output path module does not fall off.

Installation

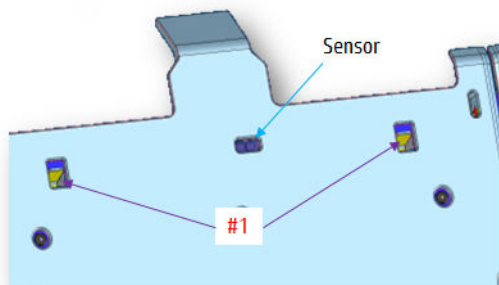
- ▲ To install, perform the removal operation in reverse. Replace the paper-output path module with the paper-output path door open, and take care to insert both hooks correctly.

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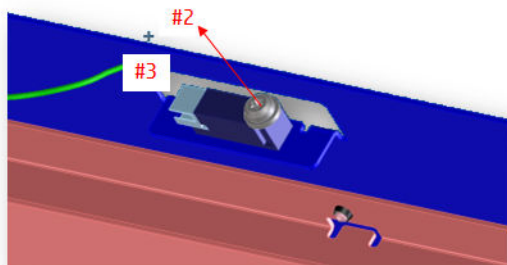


Remove the paper sensor (CZ309-67145)

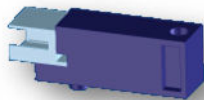
1. Unsnap the central cover and remove it.



2. Remove the screw from the rear of the structure, and detach the sensor.



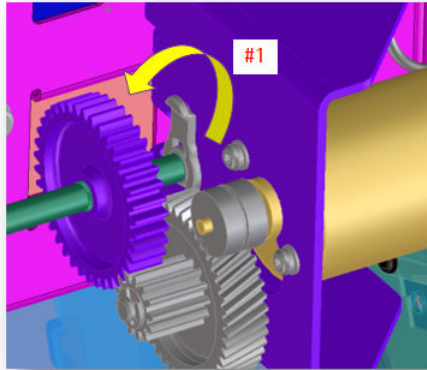
3. Unplug the connector.
4. Remove the sensor.



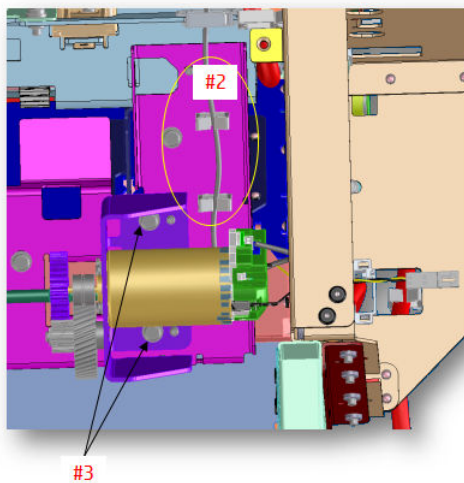
Remove the kickers motor with transmission (CZ309-60104)

After removing the paper path assembly:

1. Rotate the shaft bushing through about 90 degrees until it unsnaps.

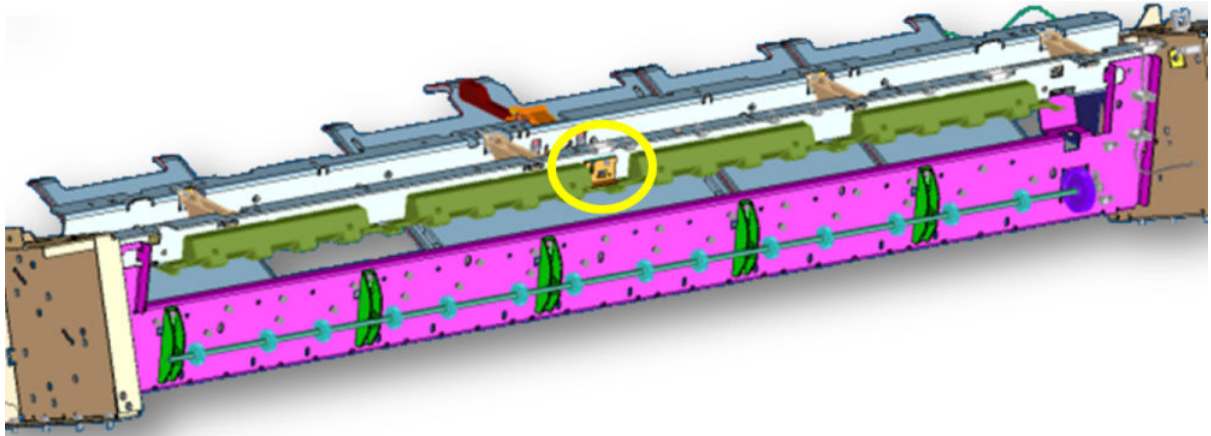


2. Detach the motor and encoder harness from the clamps.

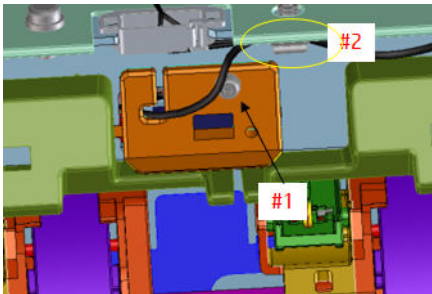


3. Remove two screws and the transmission.

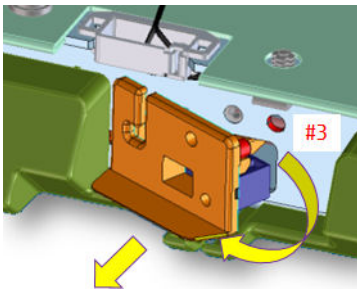
Remove the paper sensor (CZ309-80096)



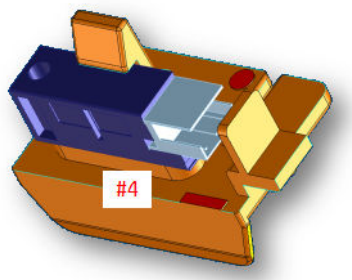
1. Unscrew the sensor bracket.



2. Detach the sensor cable.
3. Swivel the bracket and remove it from the beam.

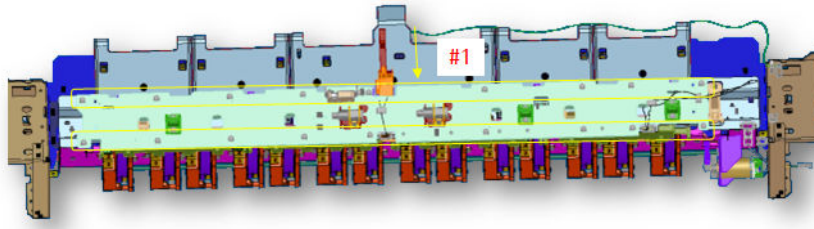


4. Unsnap the sensor from its bracket, and unplug the connector.

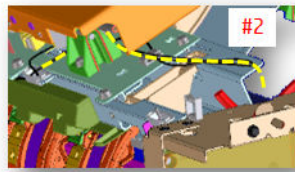


Remove the handoff roller shaft assembly (CZ309-60088)

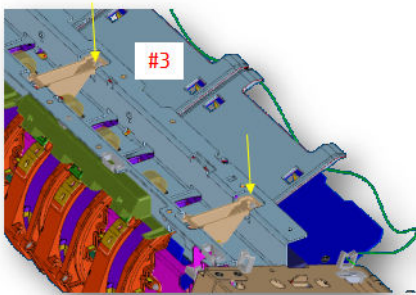
1. Remove eighteen screws to disassemble the cover structure.



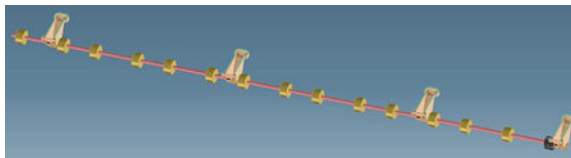
2. Unplug the sensors connector and remove the cable from the clamps (yellow routing).



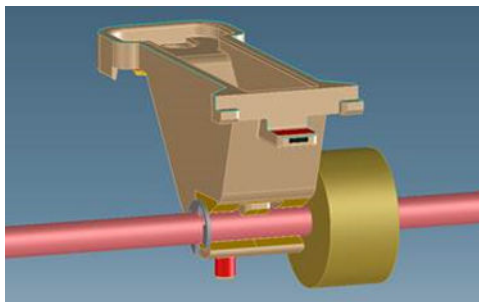
3. Remove four screws to release the shaft bushings (CZ309-40562).



4. Pull up the whole shaft assembly with bushings.



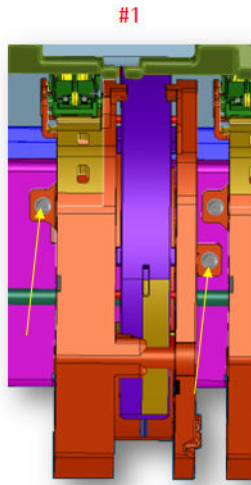
5. Detach the bushings.



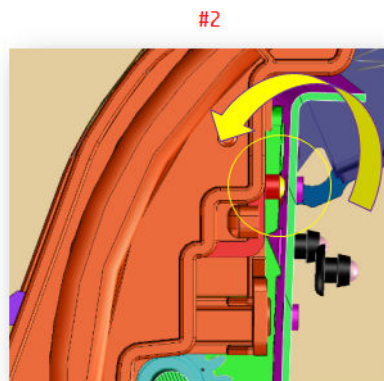
Remove the kickers (CZ309-60090)

After removing the paper path assembly:

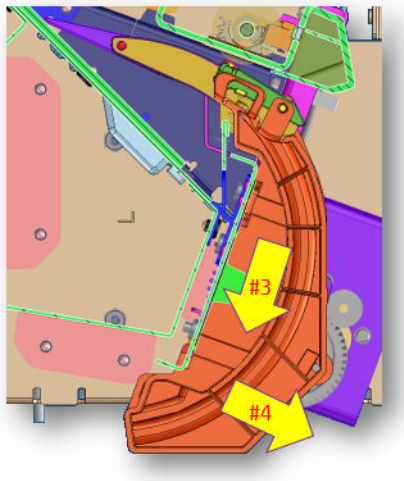
1. Remove two screws for each kicker assembly to be changed.



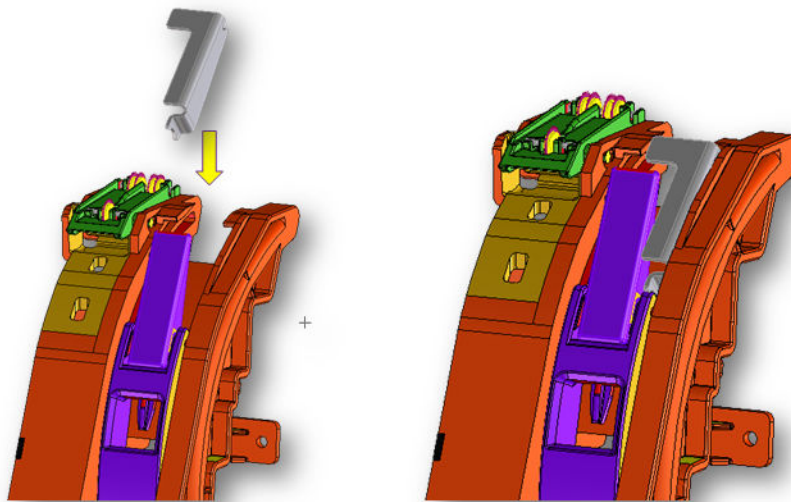
2. Slightly pull out the kicker to remove the kicker centering pin from the beam hole.



3. Pull down the whole kicker assembly.



4. Pull it away from the kicker beam.
5. Before assembling the new kicker, in order to synchronize all kicker positions, two tools are used to keep the kicker in the back position. Use one tool to block one of the already-assembled kickers and the other tool to block the new kicker to be assembled. The tools are provided in the service kit.

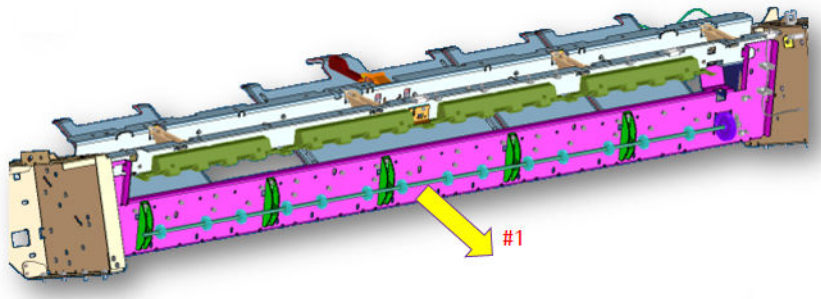


Remove the kickers shaft assembly (CZ309-60449)

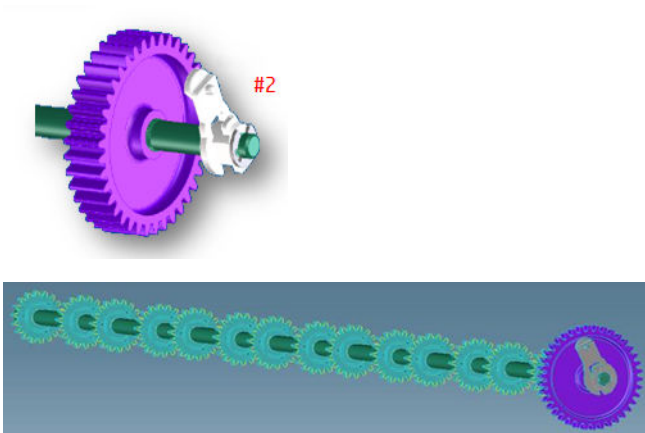
1. Remove the paper path assembly, all kickers, and the kicker motor and transmission.

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2. Pull out the shaft, unsnapping it from the bushings.

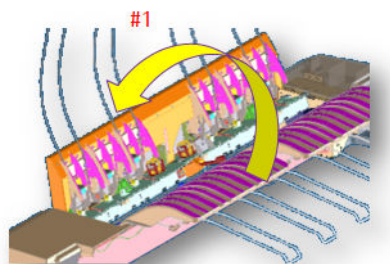


3. Add the bushing (Q5669-40061) and C-clip to the new shaft assembly.




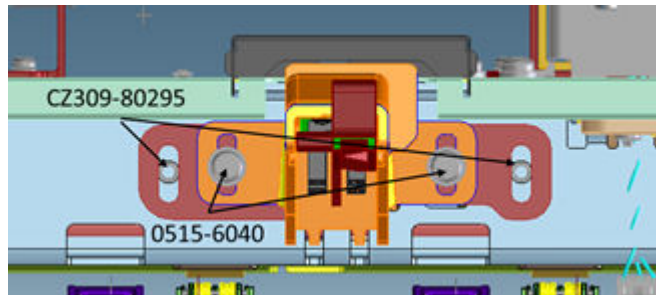
Remove the capacity sensor (CZ309-60608)

1. Swivel the arms assembly.

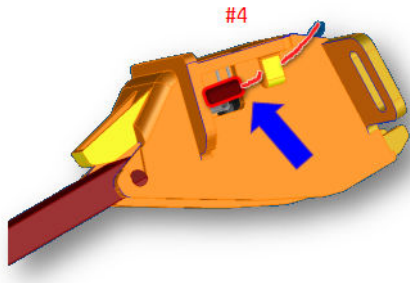


2. Remove two screws (0515-6040, black in color).

 **NOTE:** The screws CZ309-80295 should NOT be removed.

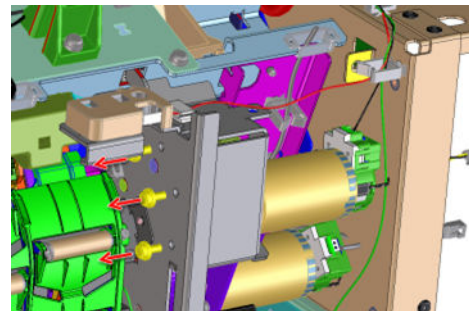
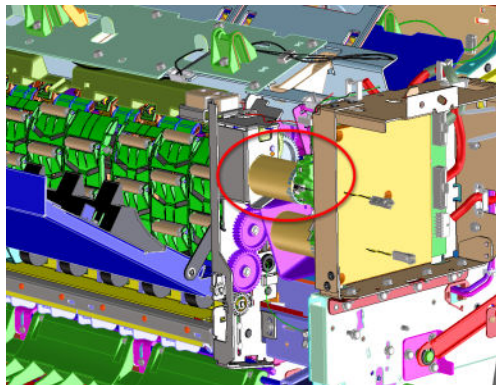


3. Detach the capacity sensor.
4. Unplug the cable and unsnap it from the hook.



Remove the paper advance motor and transmission

1. Remove three screws from the motor bracket.



2. Remove two screws attaching the motor to the bracket.

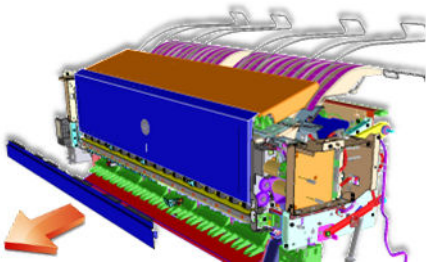


3. Remove the motor from the bracket.

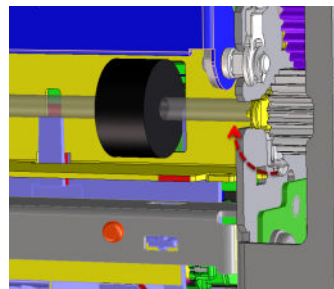
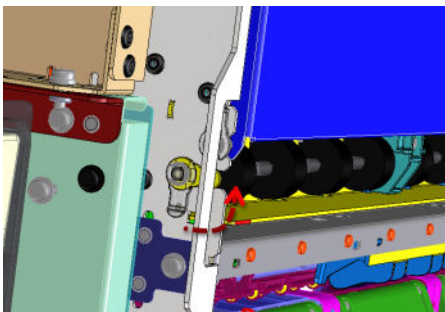
Remove the intermediate roller transmission



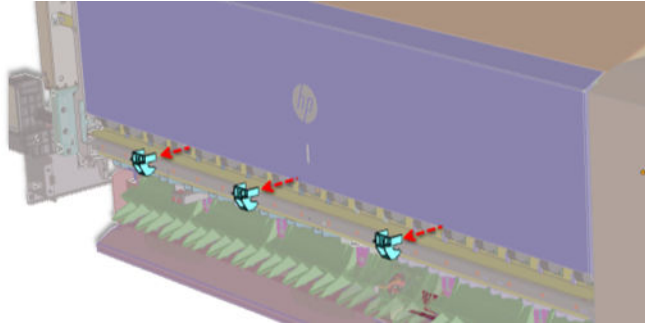
1. Remove five screws and the cover.



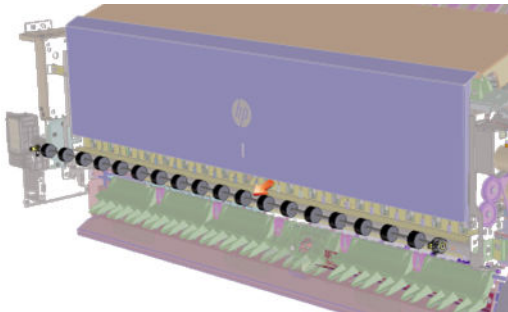
2. Release the bearing overdrive by turning it 90 degrees in two places.



3. Remove three screws.

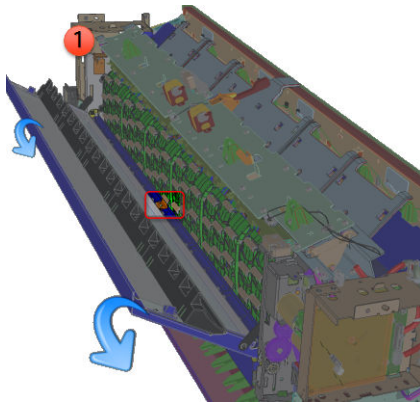


4. Remove the A3 roller intermediate support.



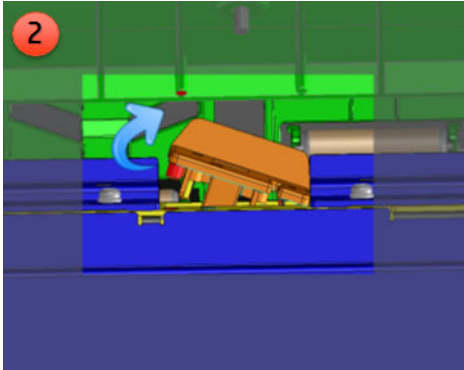
Remove the paper input sensor

1. Open the clean-out door and remove one screw.

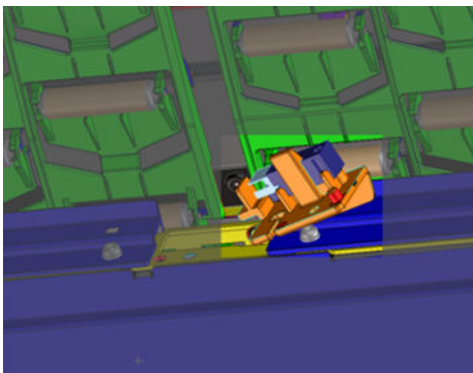


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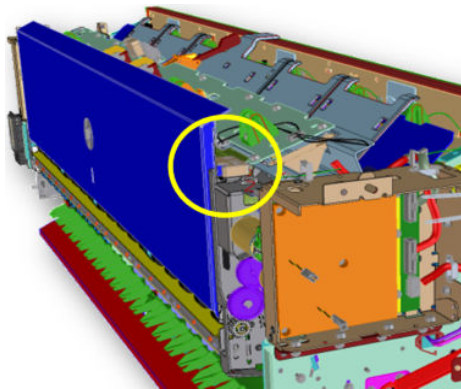
2. Disassemble the bracket that holds the paper sensor.



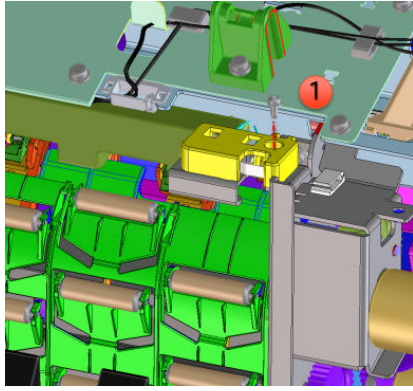
3. Turn upside-down and remove the sensor.



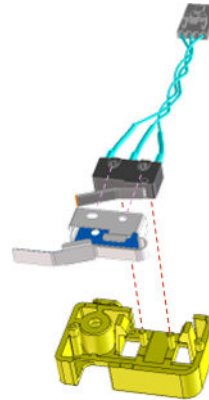
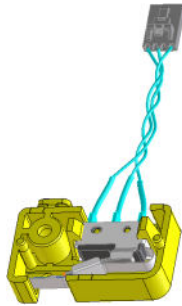
Remove the switch



1. Open the clean-out door and remove one screw.

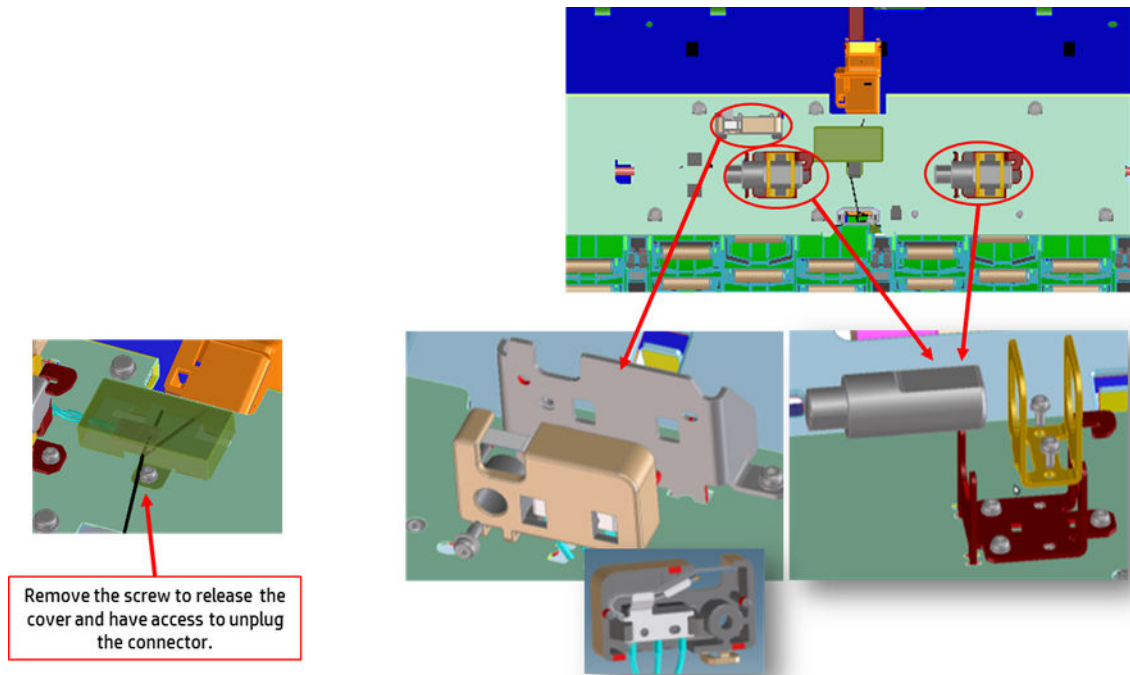


2. Unclip the microswitch from the plastic bracket.



Remove the tray and arms

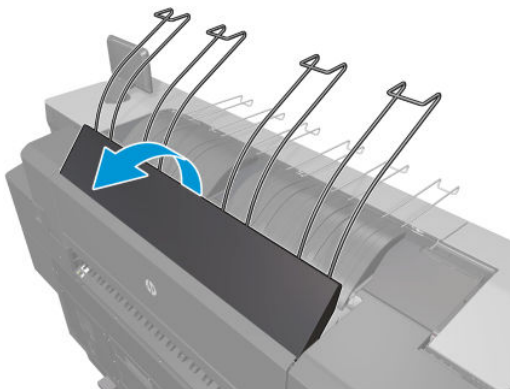
1. Remove the central short ground plate screw from the structure.
2. Remove the paper output arms stopper.
3. Slide out the paper output arms static assembly.



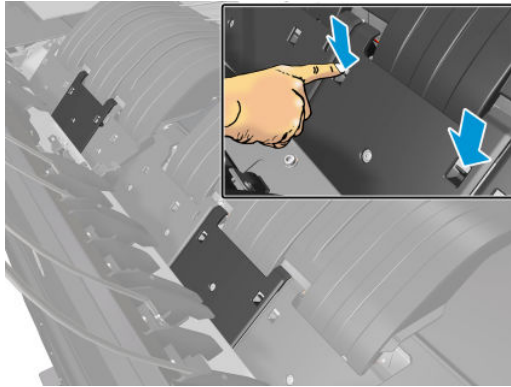
Paper-output fixed-tray cover central (CZ309-67195)

Removal

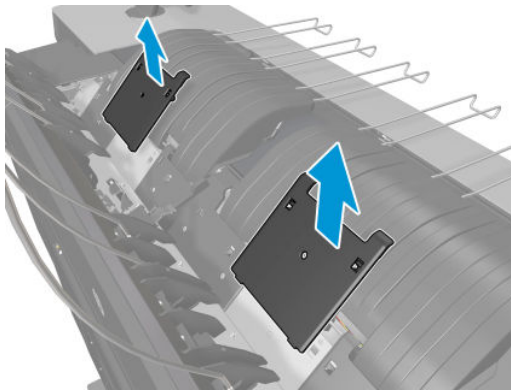
1. Open the paper-output arms assembly.



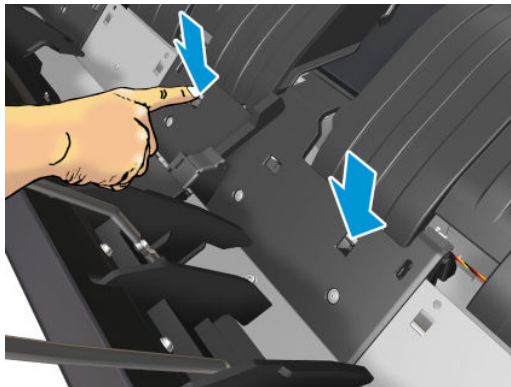
2. Unclip the two paper-output fixed-tray common covers.



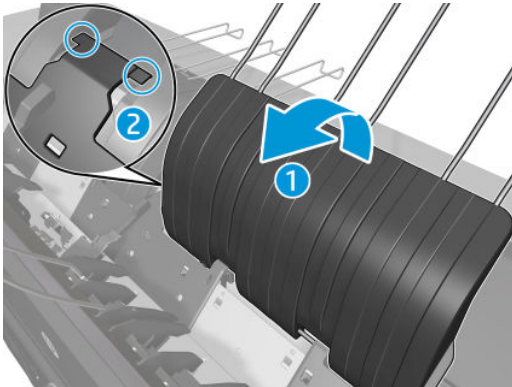
3. Remove the paper-output fixed-tray common covers.



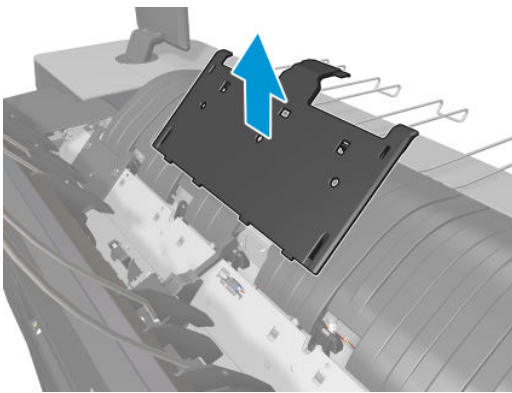
4. Unclip the paper-output fixed-tray central cover.



5. Open the paper-output tray module to release both tabs.



6. Remove the paper-output fixed-tray central cover.



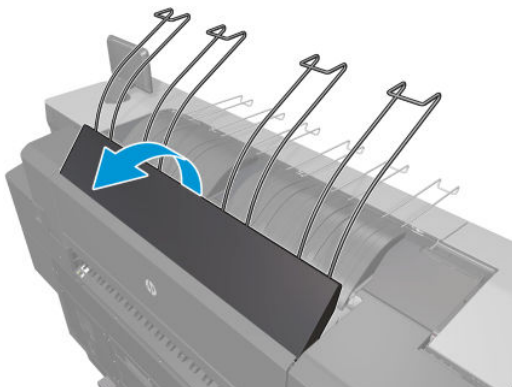
Installation

- ▲ To install, perform the removal operation in reverse.

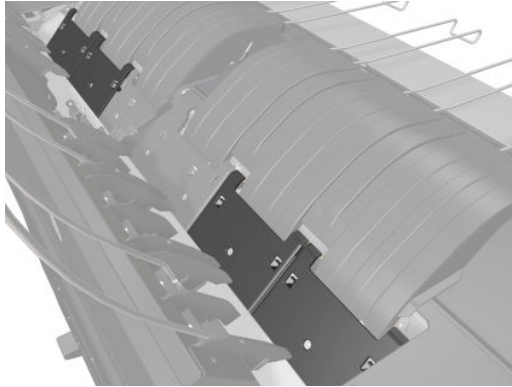
Paper-output fixed-tray cover common (CZ309-67196)

Removal

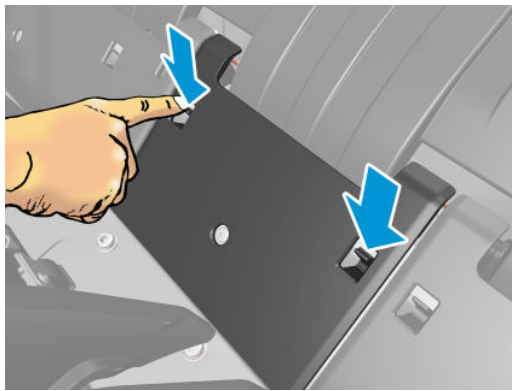
1. Open the paper-output arms assembly.



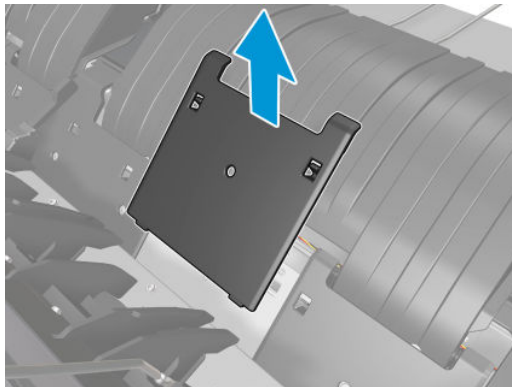
2. Locate the four paper-output fixed-tray common covers.



3. Unclip one of the paper-output fixed-tray common covers.



4. Remove the paper-output fixed-tray common cover.



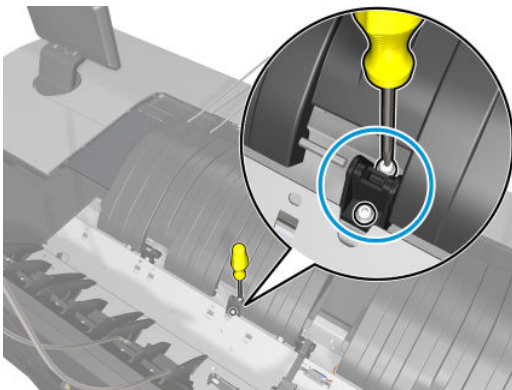
Installation

- ▲ To install, perform the removal operation in reverse.

Paper-output tray module (CZ309-67194)

Removal

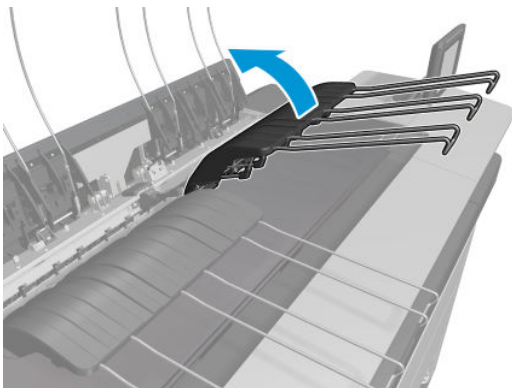
1. Remove the four paper-output fixed-tray common covers; see [Paper-output fixed-tray cover common \(CZ309-67196\) on page 1236](#).
2. Remove the [Paper-output fixed-tray cover central \(CZ309-67195\) on page 1234](#).
3. Remove two screws from the wireframe shaft support of the right paper-output tray module.



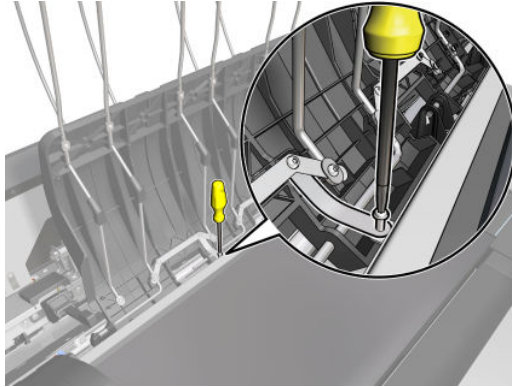
4. Remove the wireframe shaft support.



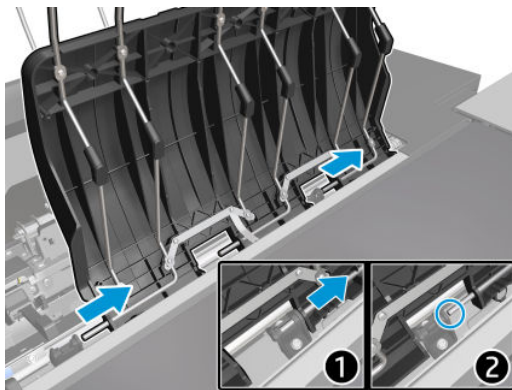
5. Open the right paper-output tray module.



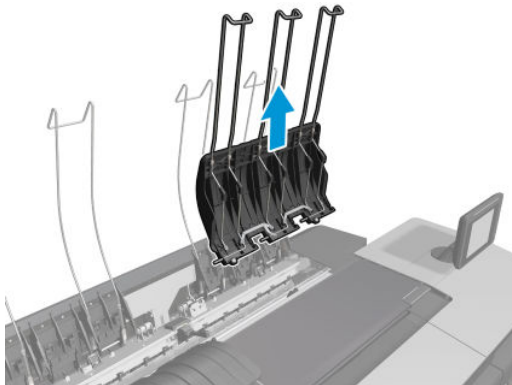
6. Remove a screw from the ground plate.



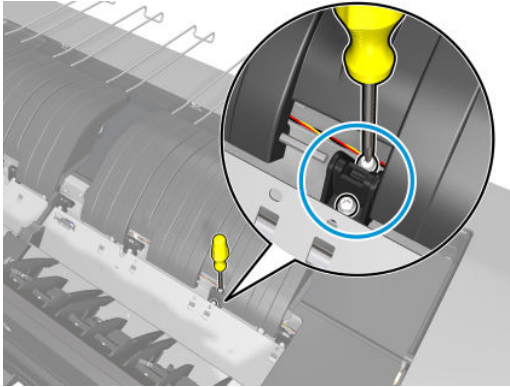
7. Slide the right paper-output tray module to the right to release it from the two wireframe shaft supports.



8. Remove the right paper-output tray module.



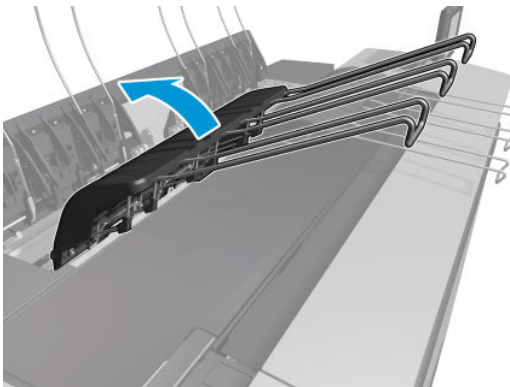
9. Remove two screws from the wireframe shaft support of the left paper-output tray module.



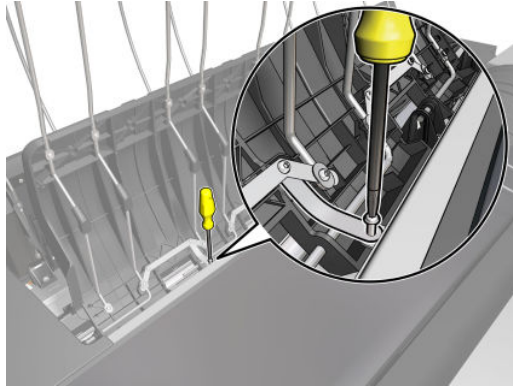
10. Remove the wireframe shaft support.



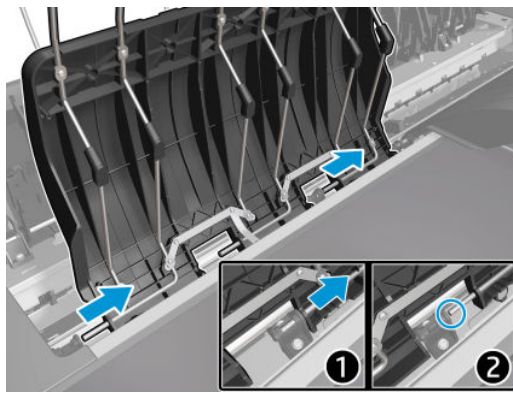
11. Open the left paper-output tray module.



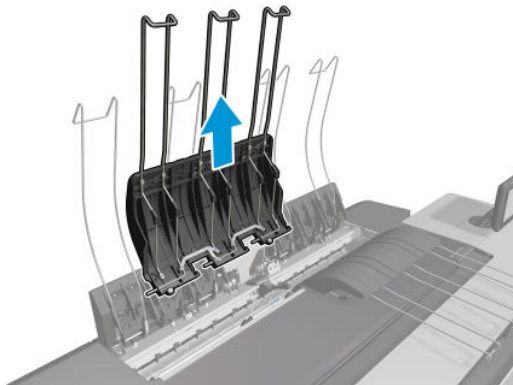
12. Remove a screw from the ground plate.



13. Slide the left paper-output tray module to the right to release it from the two wireframe shaft supports.



14. Remove the left paper-output tray module.



Installation

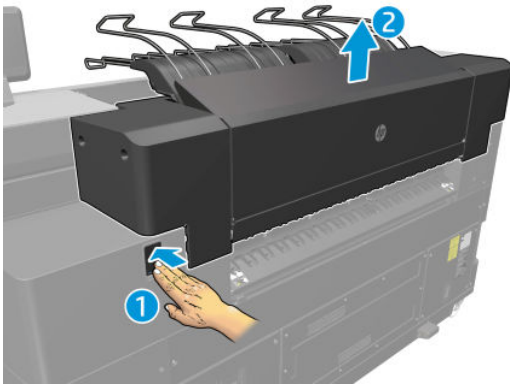
- ▲ To install, perform the removal operation in reverse.


Paper-output stacker cover left (CZ309-67202)

Removal

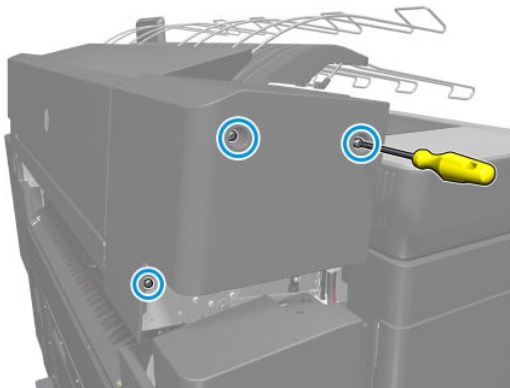
1. Open the output module door.

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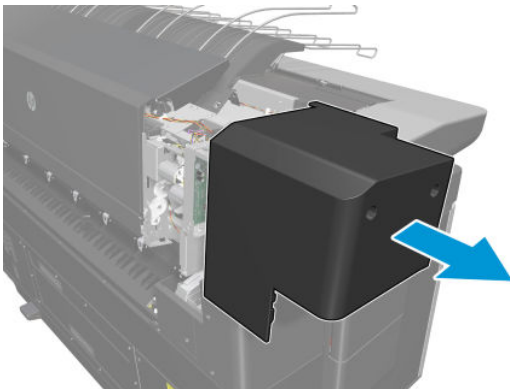


 **NOTE:** Skip this step for PWXL 4x00/3900s with SNs \geq MY7688Q008.

2. Remove three screws.



3. Remove the left paper-output stacker cover.



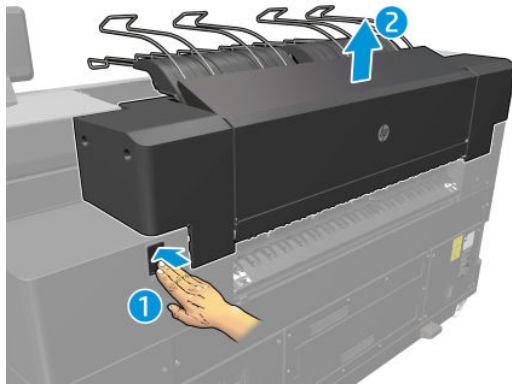
Installation


- ▲ To install, perform the removal operation in reverse.

Paper-output stacker cover right (CZ309-67203)

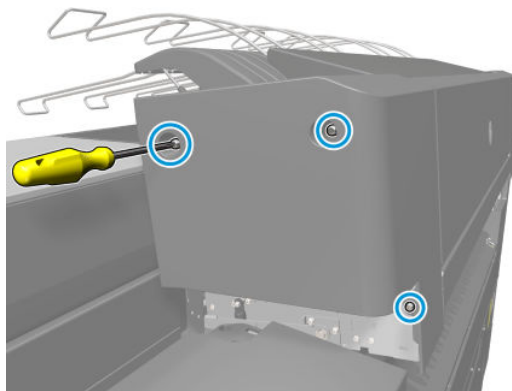
Removal

1. Open the output module door.

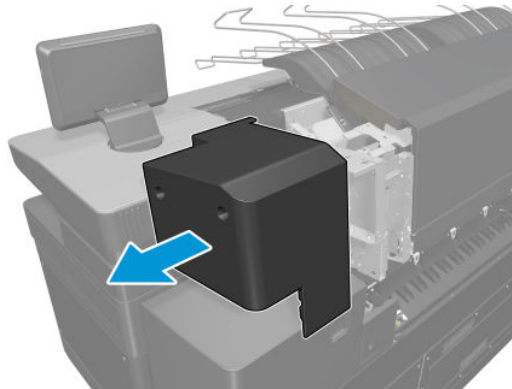


 **NOTE:** Skip this step for PWXL 4x00/3900s with SNs \geq MY7688Q008.

2. Remove three screws.



3. Remove the right paper-output stacker cover.



Installation

- ▲ To install, perform the removal operation in reverse.

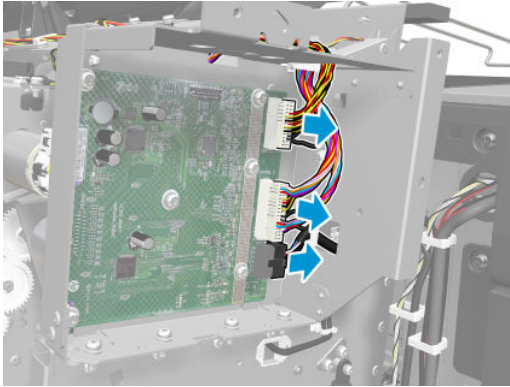
Top Stacker PCA (CZ309-67018)

Removal

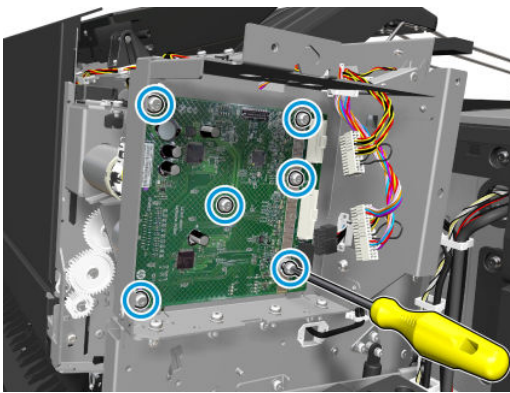
1. Remove the [Paper-output stacker cover left \(CZ309-67202\)](#) on page 1241.

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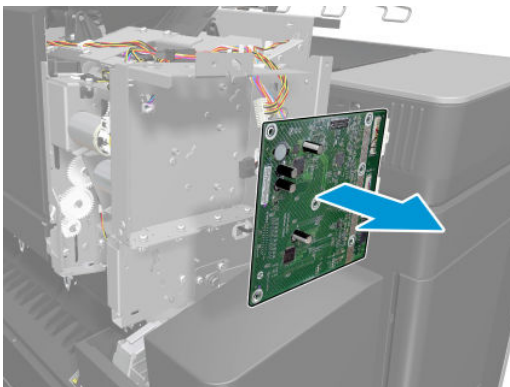
2. Unplug two cables.



3. Remove six screws.



4. Remove the Top Stacker PCA.



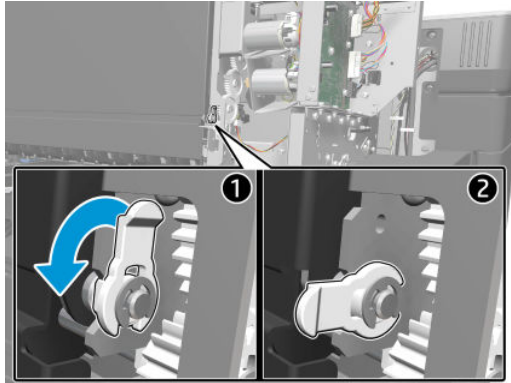
Installation

- ▲ To install, perform the removal operation in reverse.

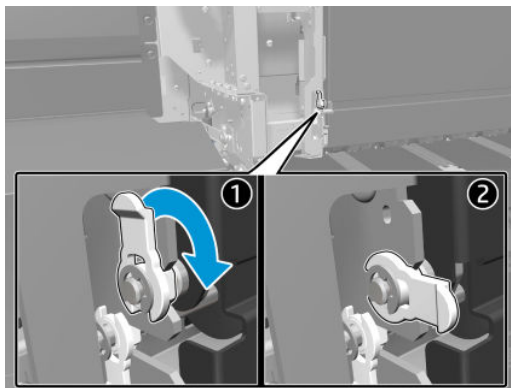
Paper-output path door (CZ309-67197)

Removal

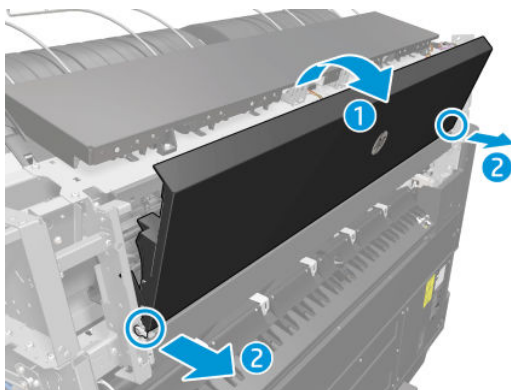
1. Remove the [Paper-output stacker cover left \(CZ309-67202\)](#) on page 1241.
2. Remove the [Paper-output stacker cover right \(CZ309-67203\)](#) on page 1242.
3. Rotate the left bearing 90°.



4. Rotate the right bearing 90°.

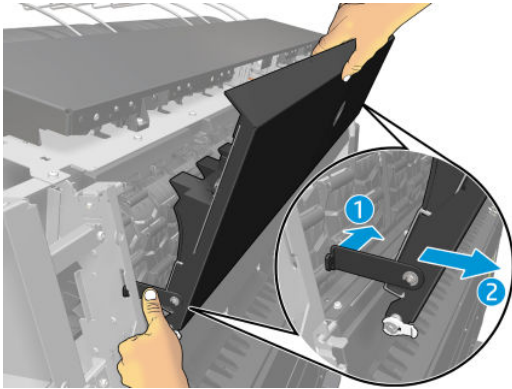


5. Open the paper-output path door about 25° and release both bearings from the brackets.

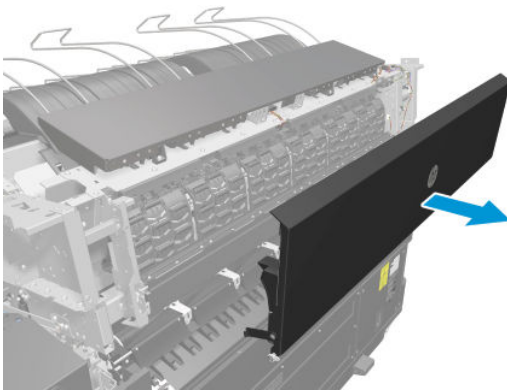


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6. Release the lever at each side.



7. Remove the paper-output path door.



Installation

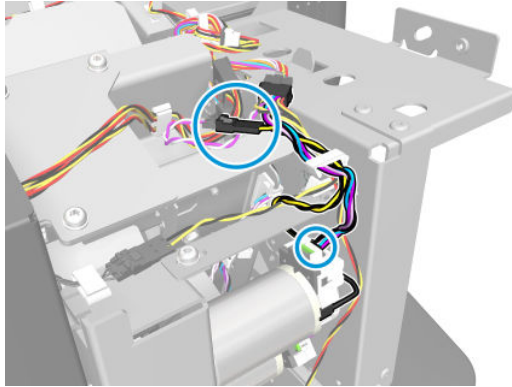
- ▲ To install, perform the removal operation in reverse.

Paper-output transmission (CZ309-67198)

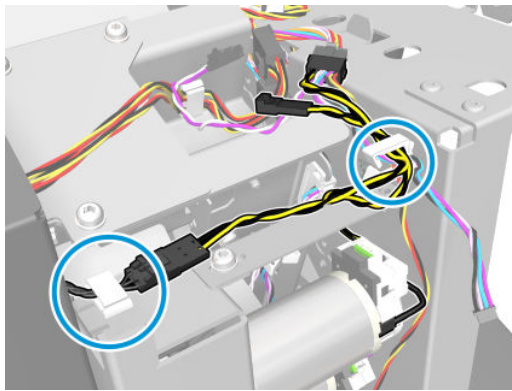
Removal

1. Remove the [Paper-output stacker cover left \(CZ309-67202\) on page 1241](#).
2. Remove the [Paper-output stacker cover right \(CZ309-67203\) on page 1242](#).

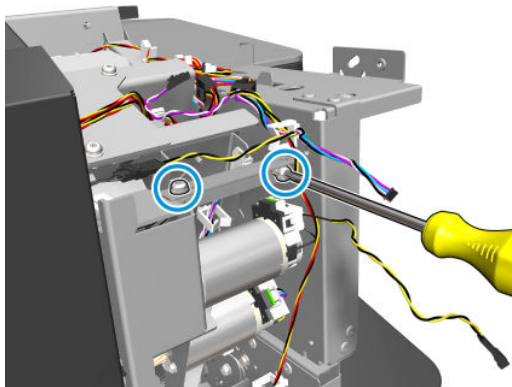
3. Unplug two cables.



4. Release the cables from the two hooks.

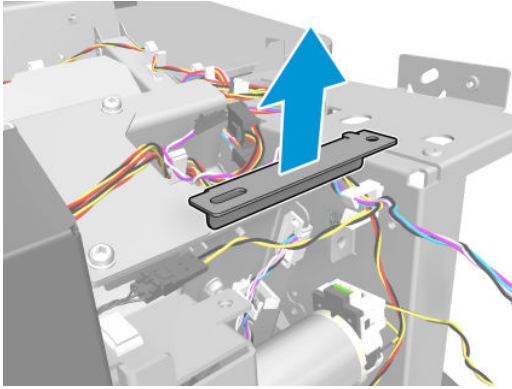


5. Remove two screws.

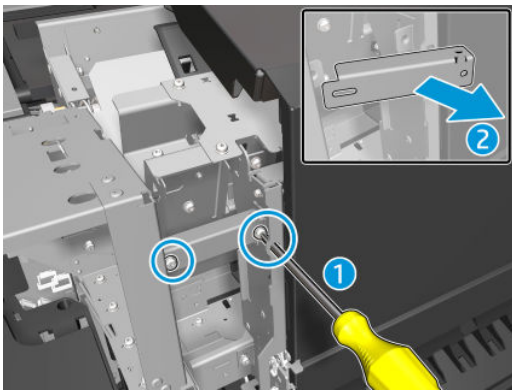


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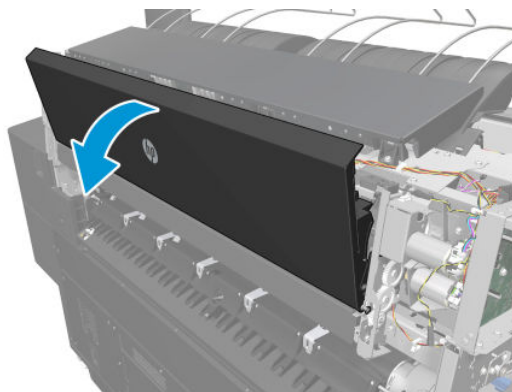
6. Remove the strut.



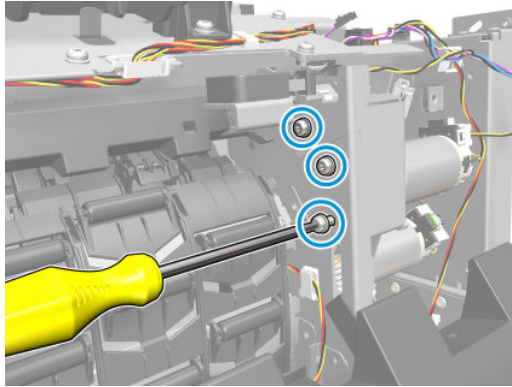
7. Remove two screws and the strut.



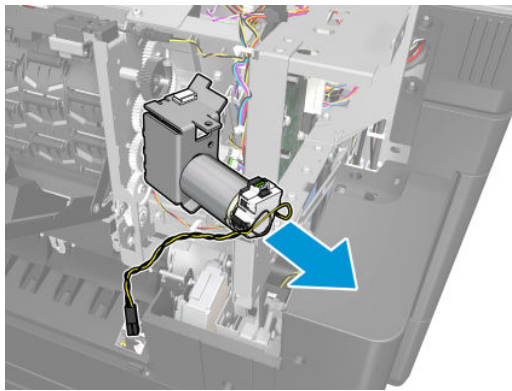
8. Open the paper-output path door.



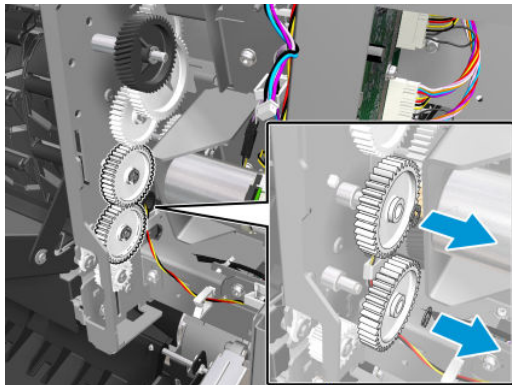
9. Remove three screws.



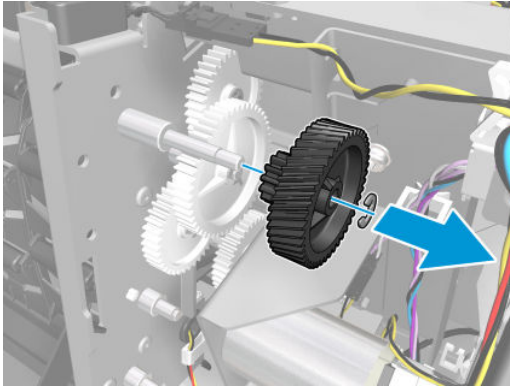
10. Remove the motor assembly.



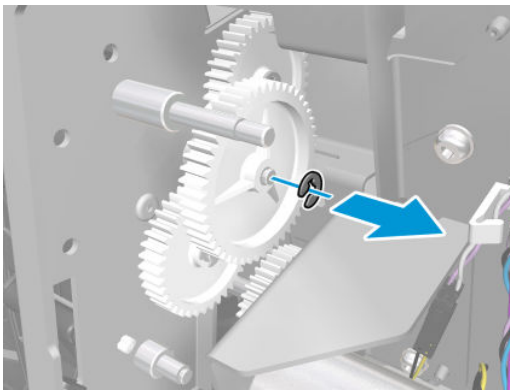
11. Remove two circlips and two gearwheels.



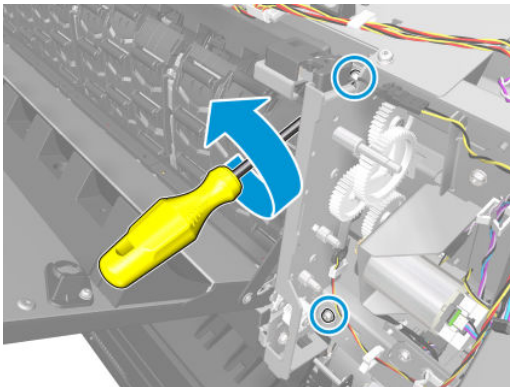
12. Remove one circlip and the cluster gearwheel.



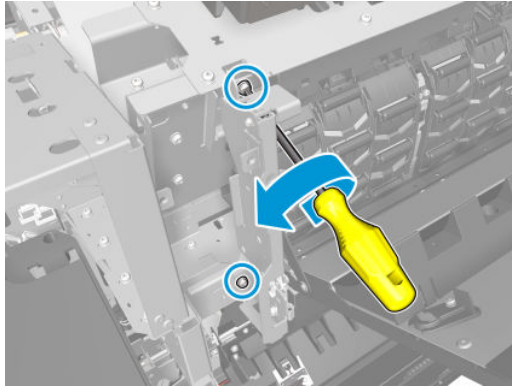
13. Remove a circlip.



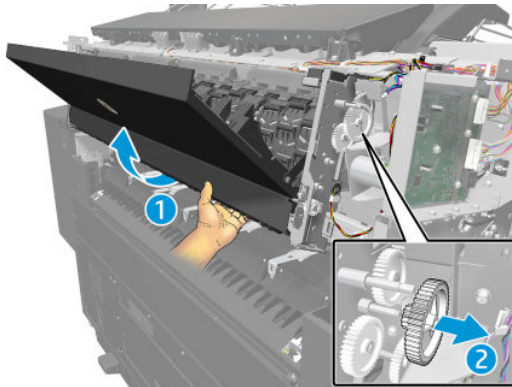
14. Remove two screws.



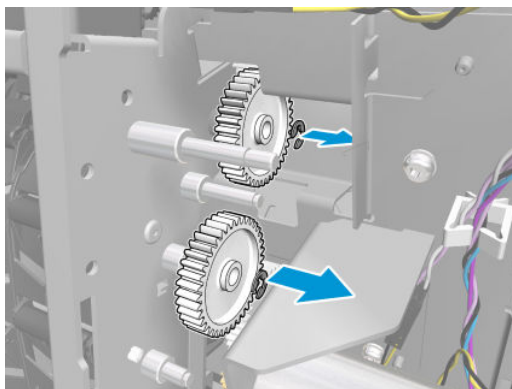
15. Remove two screws.



16. Rotate the paper-output path module sufficiently to remove the gearwheel. Be careful that the paper-output path module does not fall off.



17. Remove two circlips and two gearwheels.



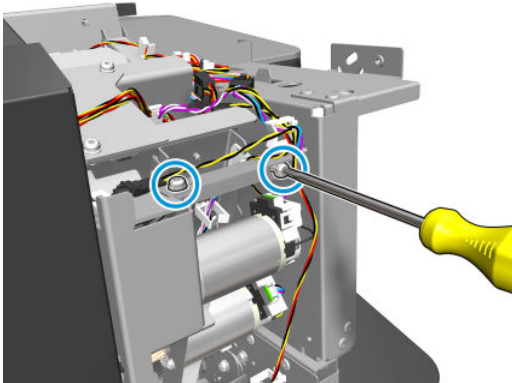
Installation

- ▲ To install, perform the removal operation in reverse.

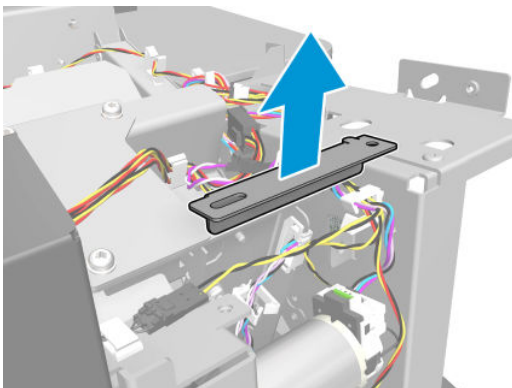
Paper-output vertical SW (CZ309-67199)

Removal

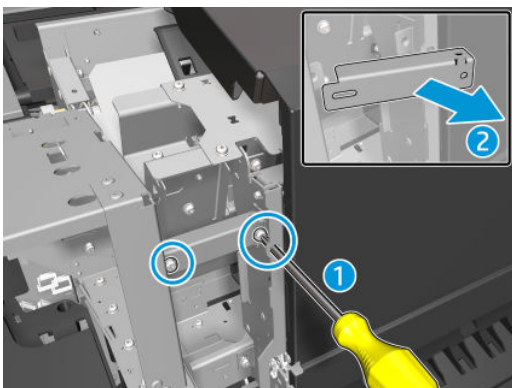
1. Remove the [Paper-output stacker cover left \(CZ309-67202\)](#) on page 1241.
2. Remove the [Paper-output stacker cover right \(CZ309-67203\)](#) on page 1242.
3. Remove two screws.



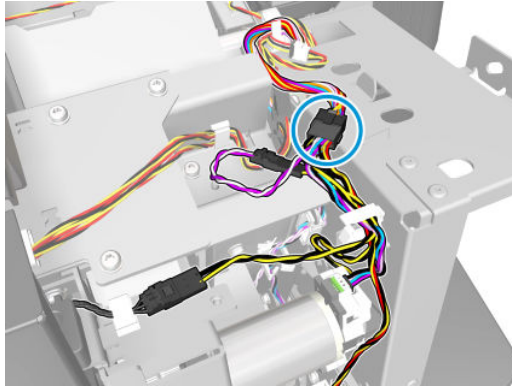
4. Remove the strut.



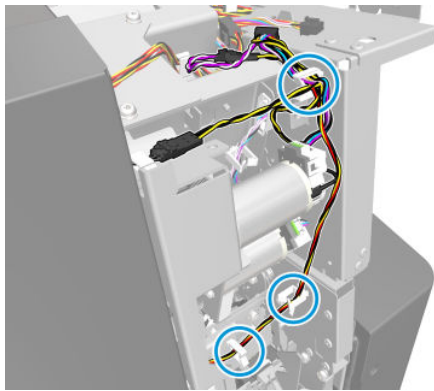
5. Remove two screws and the strut.



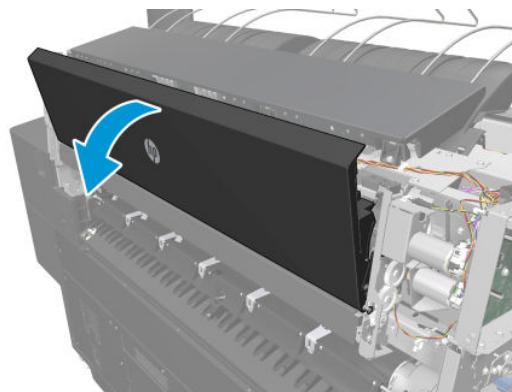
6. Unplug a cable.



7. Release the cables from the three hooks.

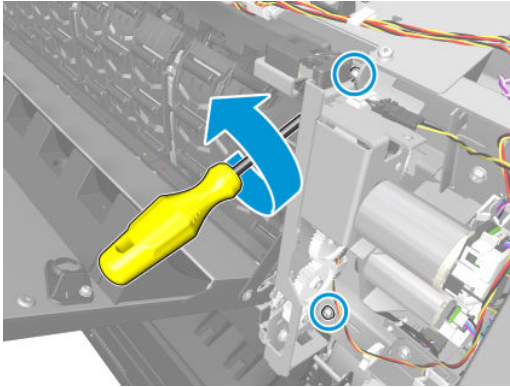


8. Open the paper-output path door.

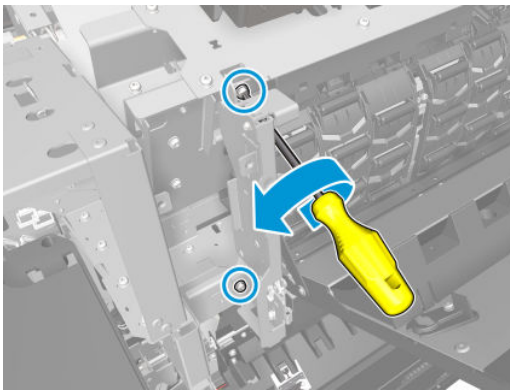


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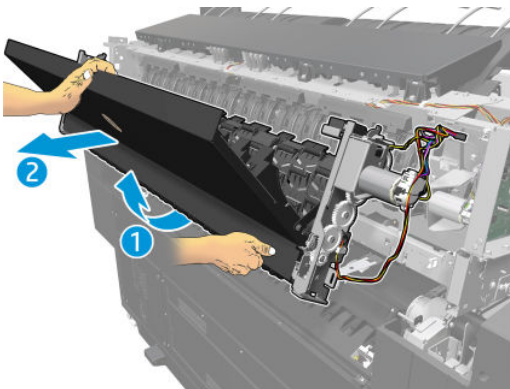
9. Remove two screws.



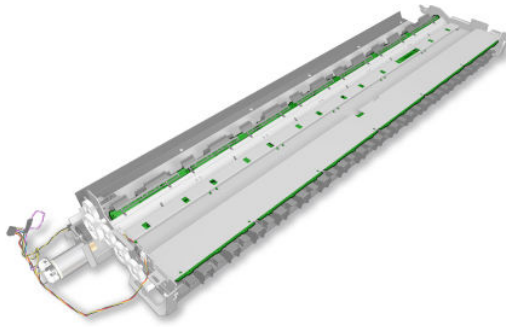
10. Remove two screws.



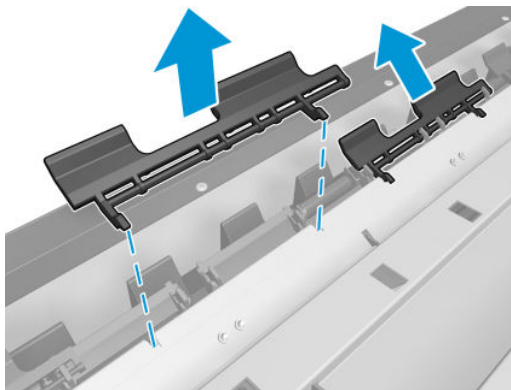
11. Rotate the paper-output path module until you can disengage the two hooks and remove it. Be careful not to damage the cables.



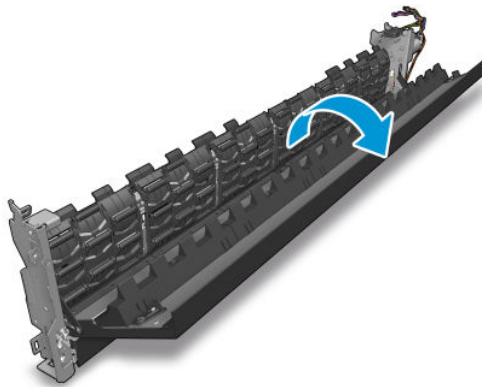
12. Leave the paper-output path module in a safe place and locate all the paper-output vertical SW (indicated in green).



13. Unclip and remove the two paper bridges in the paper-output vertical SW.

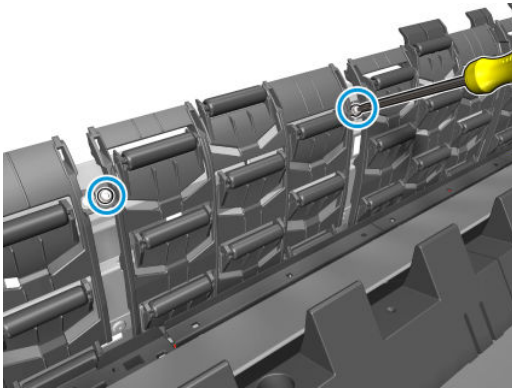


14. Rotate the paper-output path module and open the paper-output path door.

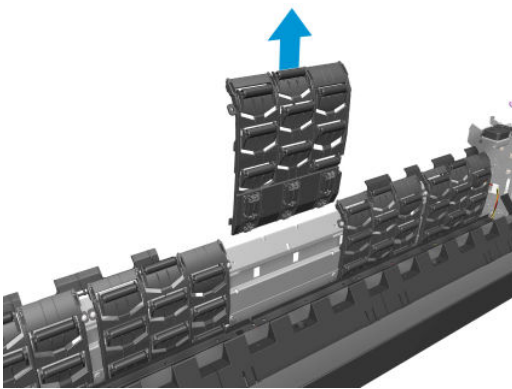


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15. Remove two screws.

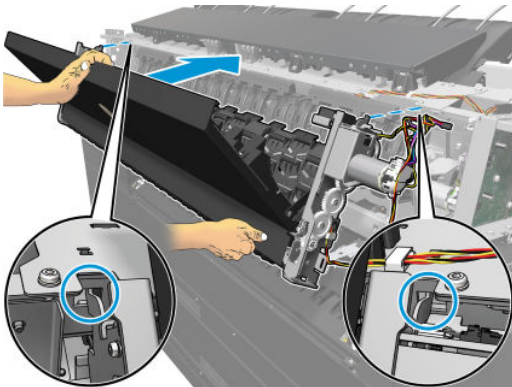


16. Remove the paper-output vertical SW.



Installation

- ▲ To install, perform the removal operation in reverse. Replace the paper-output path module with the paper-output path door open, and take care to insert both hooks correctly.

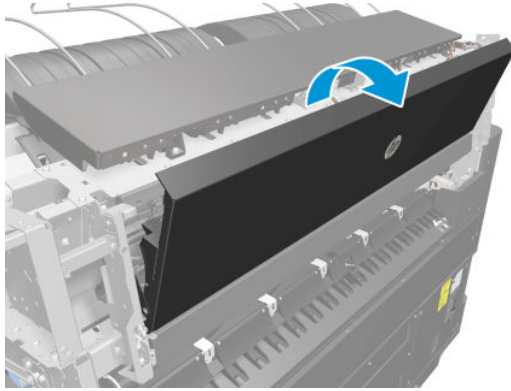


Paper-output intermediate roller (CZ309-67200)

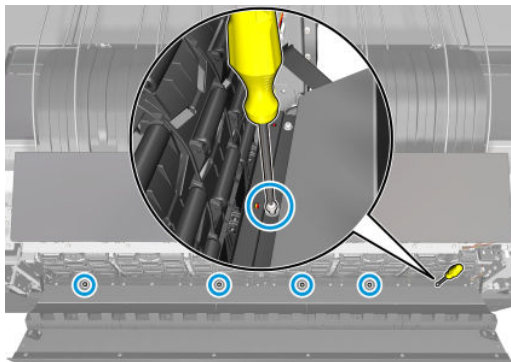
Removal

1. Remove the [Paper-output stacker cover left \(CZ309-67202\) on page 1241](#).
2. Remove the [Paper-output stacker cover right \(CZ309-67203\) on page 1242](#).

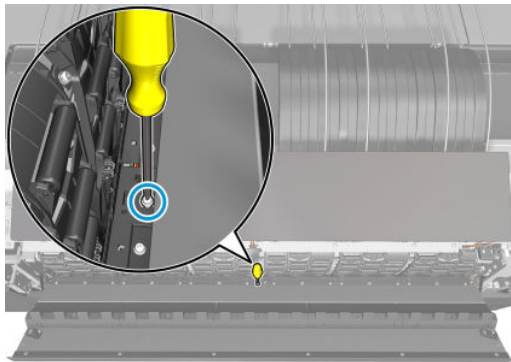
3. Open the paper-output path door.



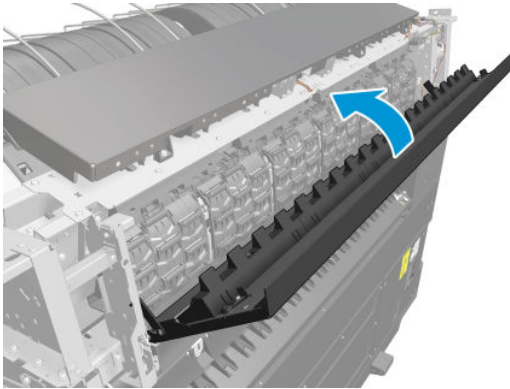
4. Remove five screws.



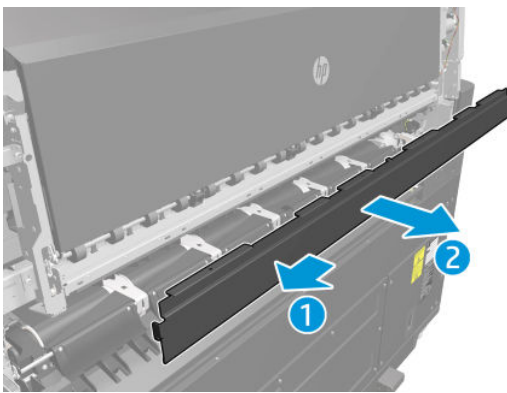
5. Remove a screw to avoid damaging the optical paper sensor.



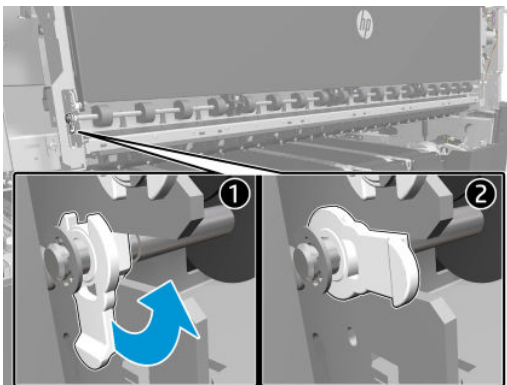
6. Close the paper-output path door.



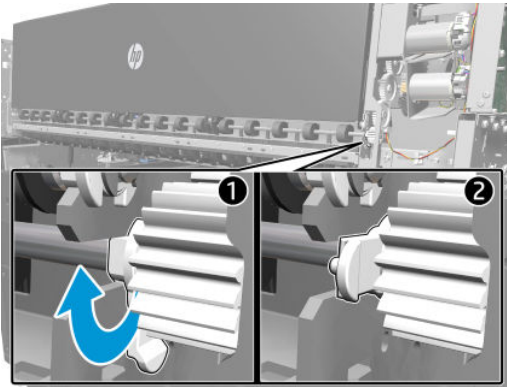
7. Slide the paper-output sheet-metal cover to the left and remove it.



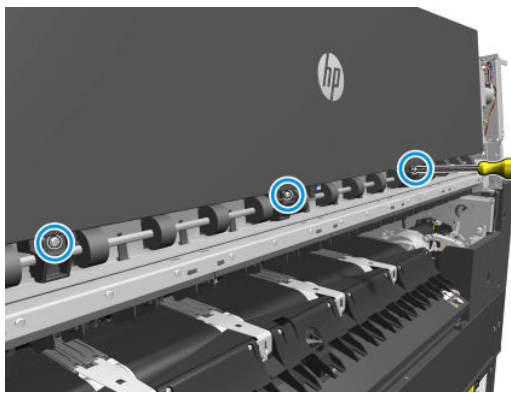
8. Rotate the bearing 90°.



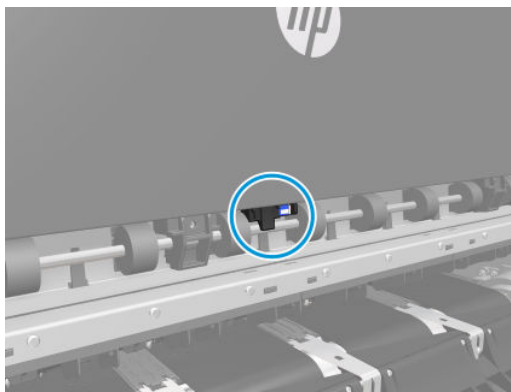
9. Rotate the bearing 90°.



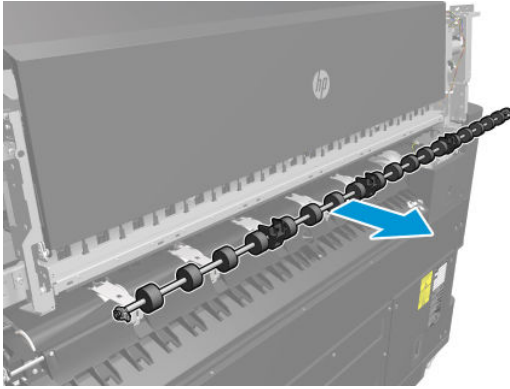
10. Remove three screws.



11. Take care not to damage the optical paper sensor when removing the paper-output intermediate roller in the next step.

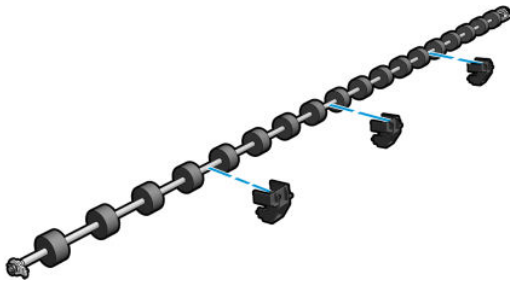


12. Remove the paper-output intermediate roller with the three intermediate supports.

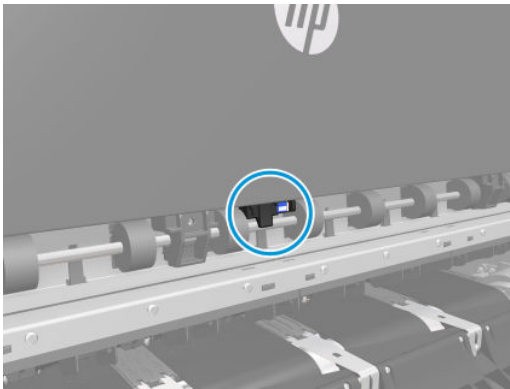


Installation

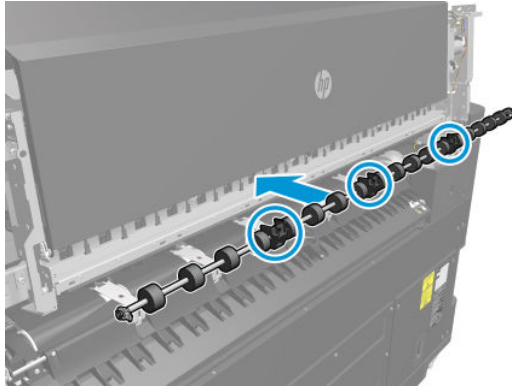
1. Clip the three intermediate supports to the new paper-output intermediate roller.



2. Take care not to damage the optical paper sensor when inserting the paper-output intermediate roller in the next step.



3. Insert the paper-output intermediate roller with the three intermediate supports attached to it.

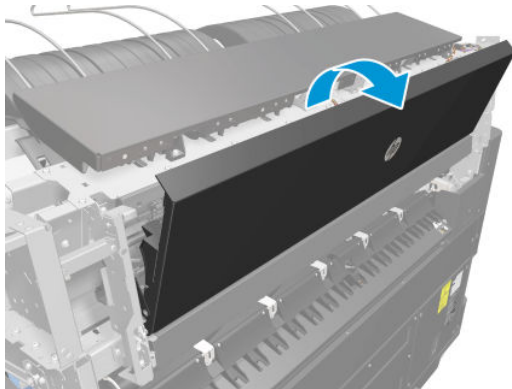


4. Continue performing the removal operation in reverse.

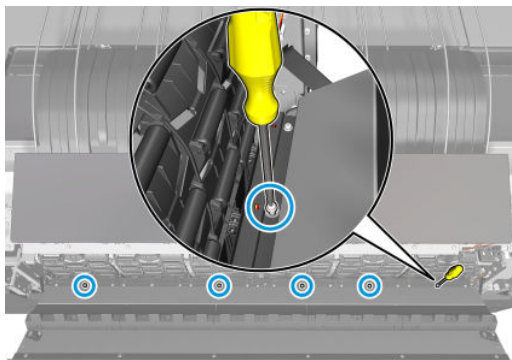
Paper-output path adjustable beam (CZ309-67201)

Removal

1. Remove the [Paper-output stacker cover left \(CZ309-67202\)](#) on page 1241.
2. Remove the [Paper-output stacker cover right \(CZ309-67203\)](#) on page 1242.
3. Open the paper-output path door.

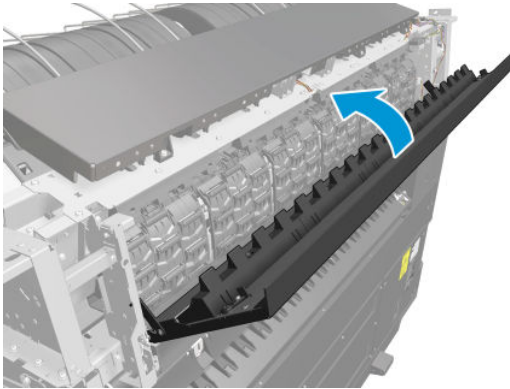


4. Remove five screws.

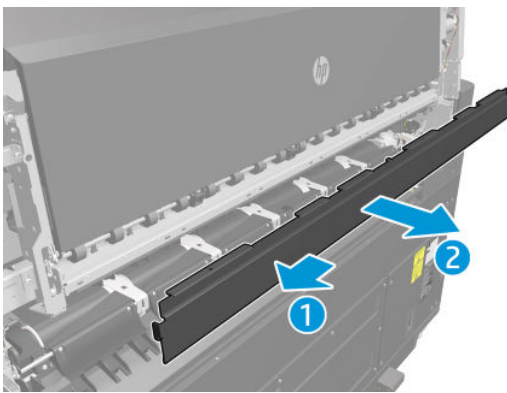


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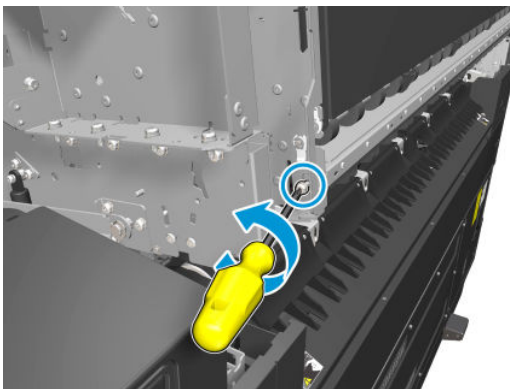
5. Close paper-output path door.



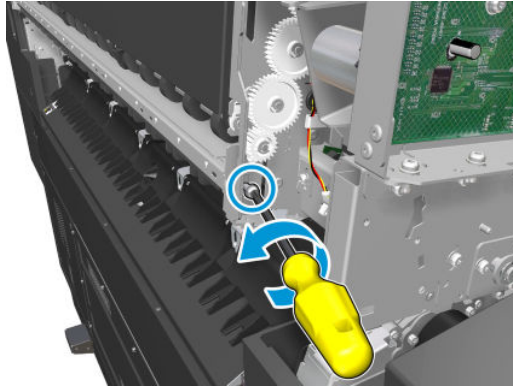
6. Slide the paper-output sheet-metal cover to the left and remove it.



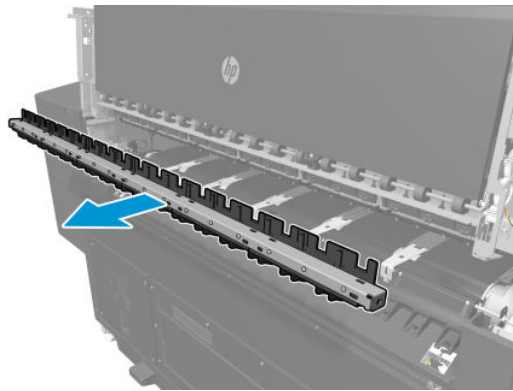
7. Remove a screw.



8. Remove a screw.

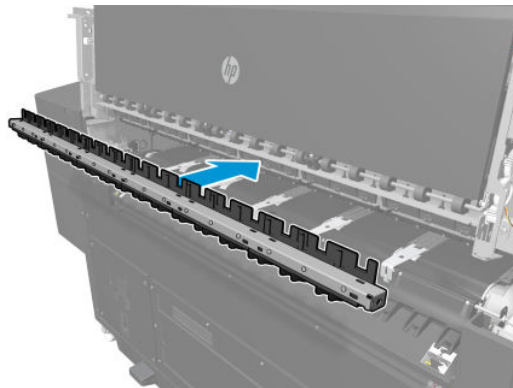


9. Remove the paper-output path adjustable beam.



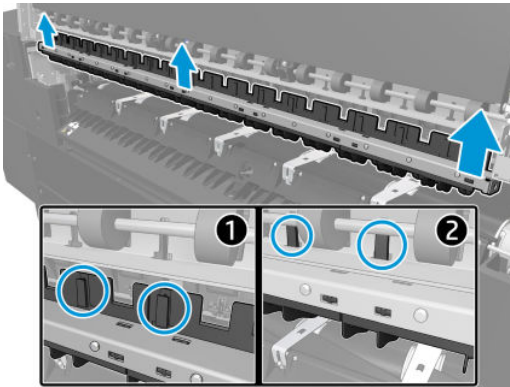
Installation

1. Insert the new paper-output path adjustable beam.



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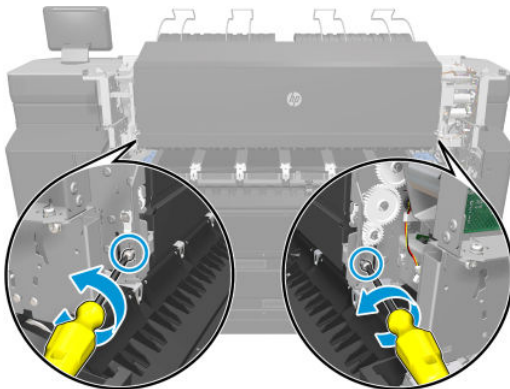
2. Slide up the paper-output path adjustable beam, taking care to insert it through the holes.



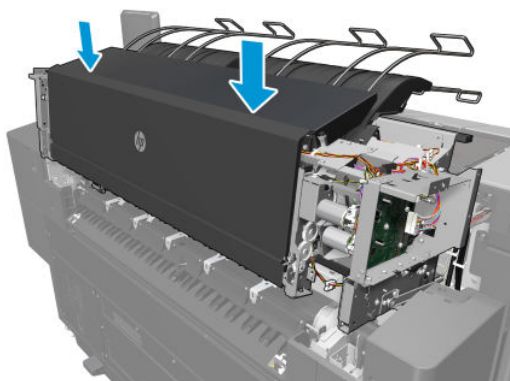
3. Continue performing the removal operation in reverse.

Adjustment

1. Loosen two screws without removing them.



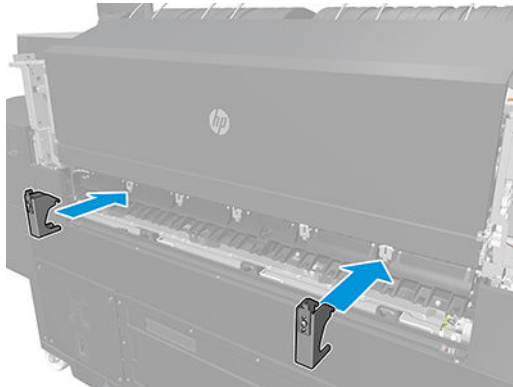
2. Close the paper-output path door.



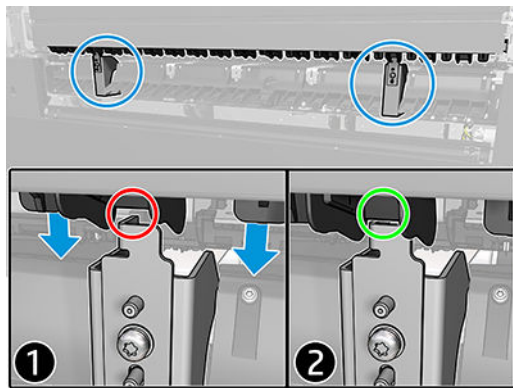
3. Remove the [Diverter cover \(CZ309-67147\)](#) on page 698.

4. Place the two adjustment tools under the plastic interface.

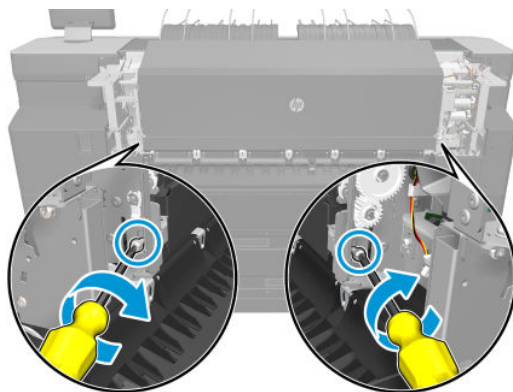
 **NOTE:** Keep the paper-output path door closed.



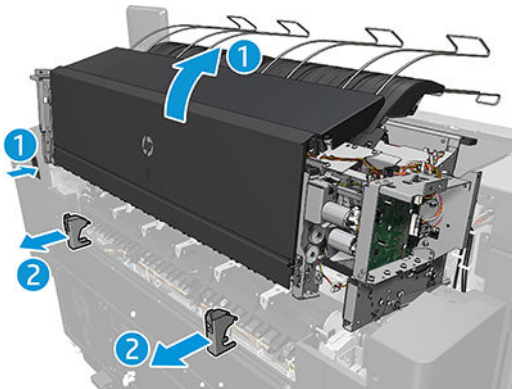
5. Pull down the plastic interface until it touches the adjustment tools.



6. Tighten the two screws.



7. Open the output module by pressing the button, then remove the adjustment tools.



Paper-output gas spring (CZ309-67204)

TIP: Before following the removal procedure, in case you do not have the adjustment tools, here is an alternative way of performing the calibration:

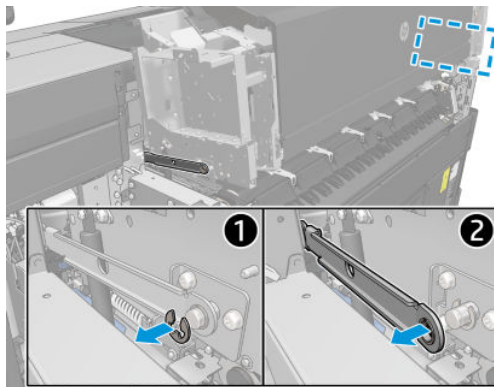
1. At step 3, in the places where the adjustment tool should be fitted on the print platen, place a business card or access badge so that a part of it rests on the print platen and a part of it doesn't.
2. Close the Rear cover.
3. Measure the height between the card / badge and the part of the "Paper-output path adjustable beam" that is in contact with the standard adjustment tools. This space should be 1 inch / 2.5cm. Here is an example:



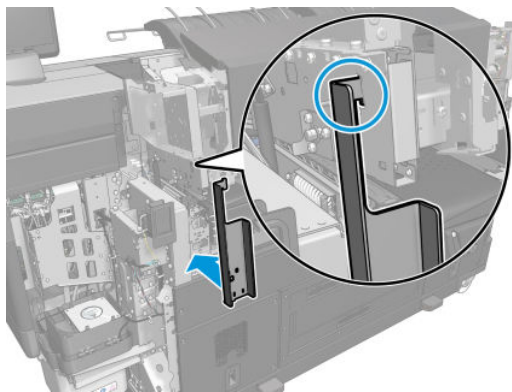
4. Then follow the standard steps from step 4, by tightening up the 2 screws, and remove the card / badge.

Removal

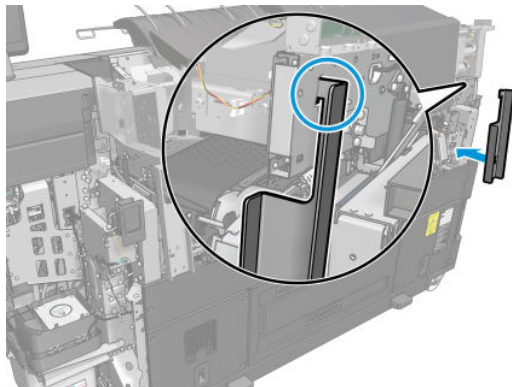
1. Remove the [Paper-output stacker cover left \(CZ309-67202\) on page 1241](#).
2. Remove the [Paper-output stacker cover right \(CZ309-67203\) on page 1242](#).
3. Remove the [Rear-left cover \(CZ309-67042\) on page 644](#).
4. Remove the [Rear-right cover \(CZ309-67050\) on page 653](#).
5. Remove the circlip from both sides and release the crank.



6. Hang one holding tool.

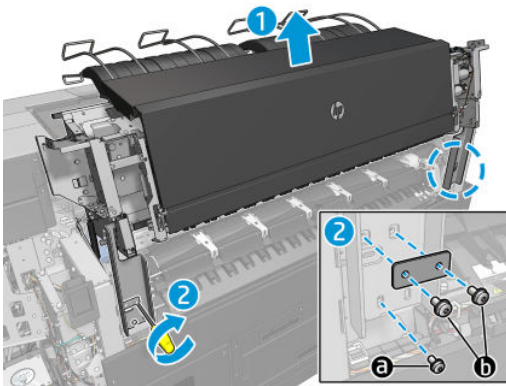


7. Hang the other holding tool.

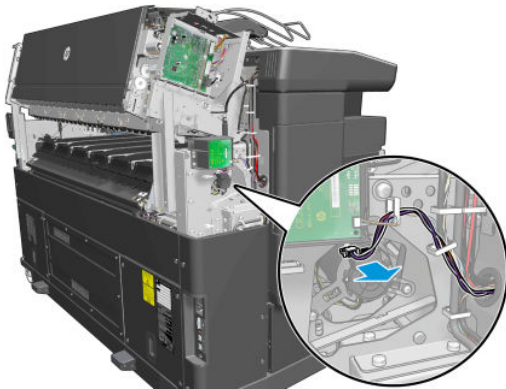


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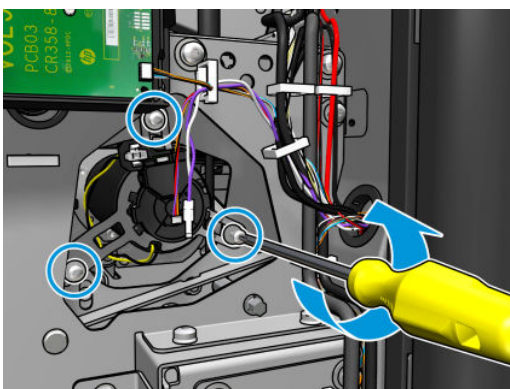
8. Move the output module up until the holes align, then attach each holding tool with one screw at the bottom and the metal strip and two screws above.



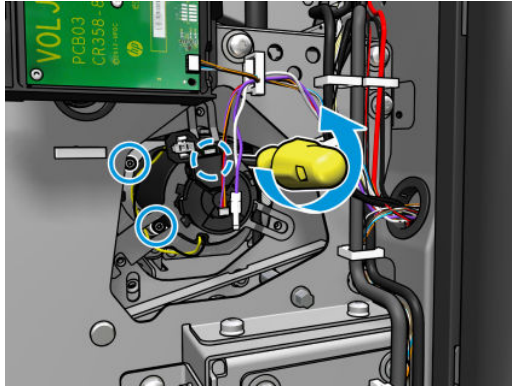
9. Unplug the cables from the belt motor.



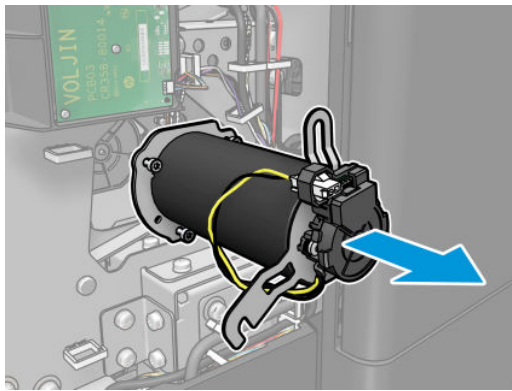
10. Remove three screws from the outer area.



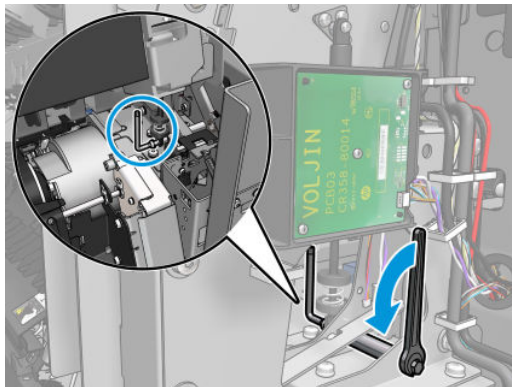
11. Loosen three screws in the inner area.



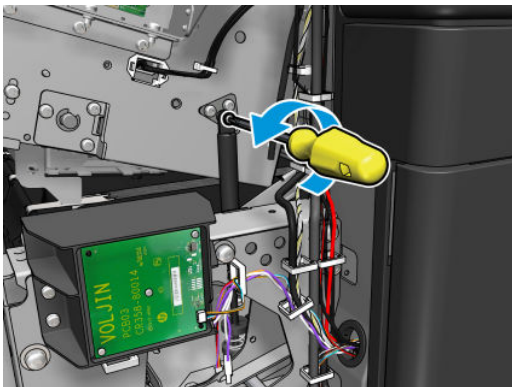
12. Remove the belt motor.



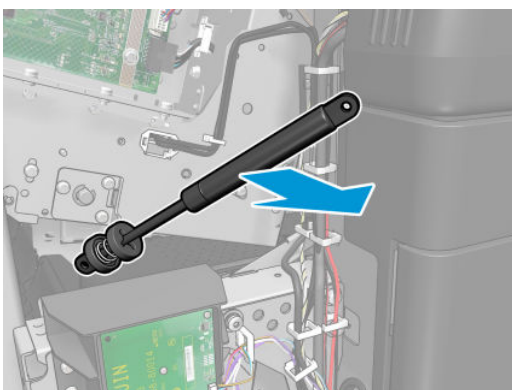
13. Remove the bottom screw from the gas spring.



14. Remove the top screw from the gas spring.

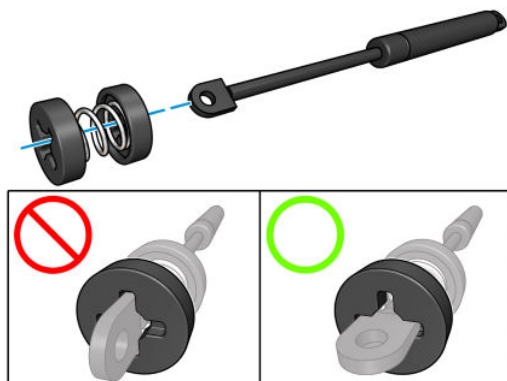


15. Remove the gas spring.



Installation

1. Remove the assistance spring assembly from the gas spring. Take care to mount the new gas spring correctly.



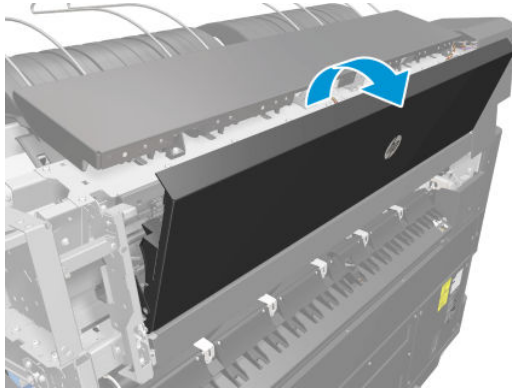
2. Continue performing the removal operation in reverse.

Paper-output arms assembly (CZ309-67205)

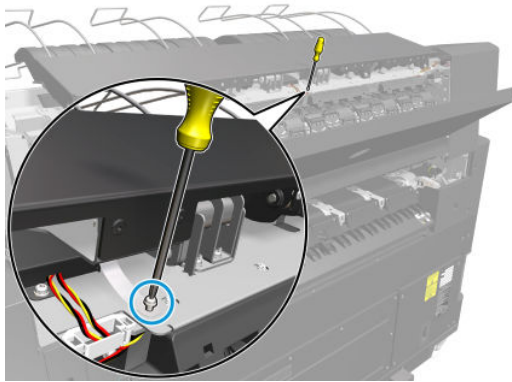
Removal

1. Remove the [Paper-output stacker cover right \(CZ309-67203\)](#) on page 1242.

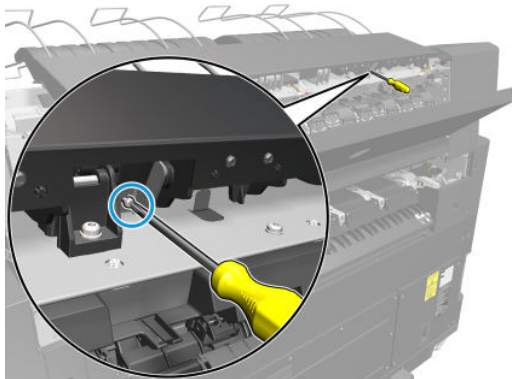
2. Open the paper-output path door.



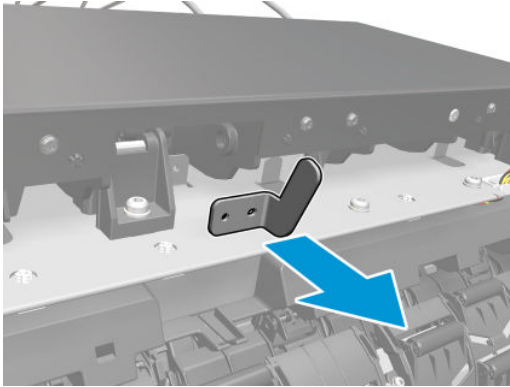
3. Remove a screw from the grounding plate.



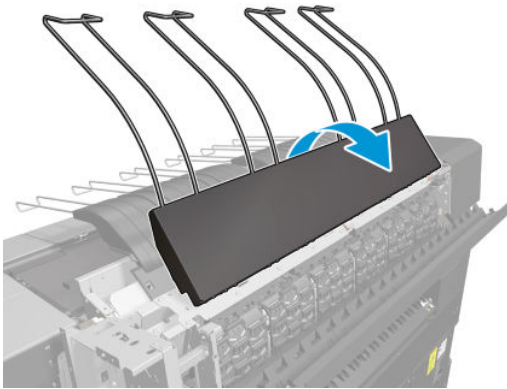
4. Remove another screw.



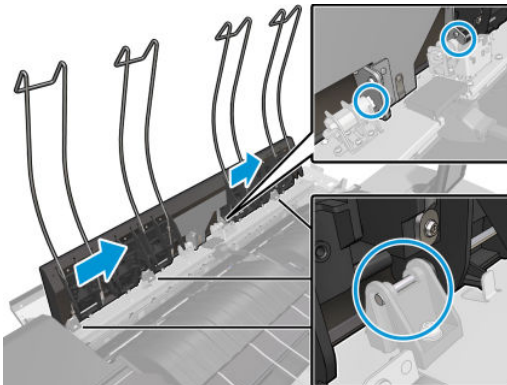
5. Remove the metal retainer.



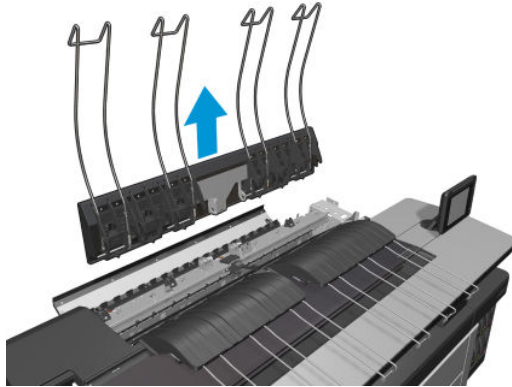
6. Open the paper-output arms.



7. Slide the paper-output arms to the right.



8. Remove the paper-output arms.



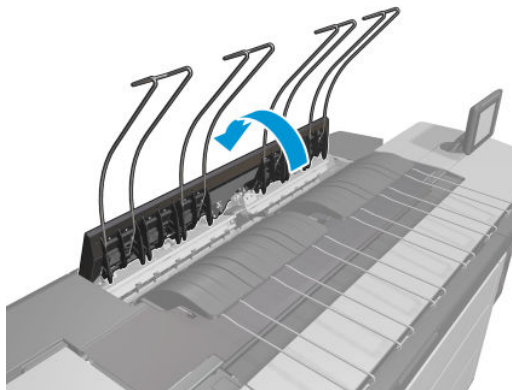
Installation

- ▲ To install, perform the removal operation in reverse.

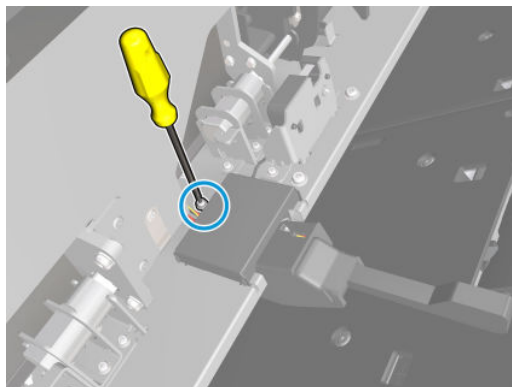
Paper-output continuous stack sensor (CZ309-67206)

Removal

1. Open the paper-output arms assembly.

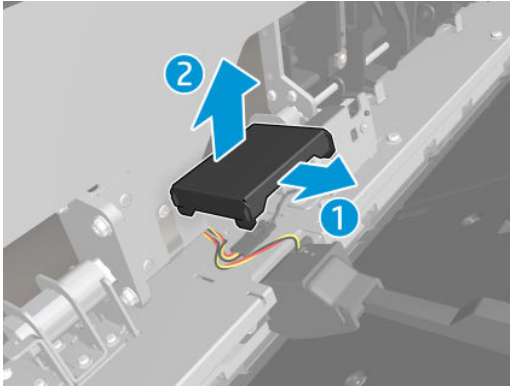


2. Remove a screw.

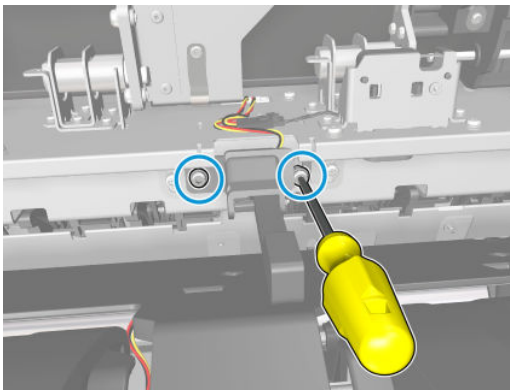


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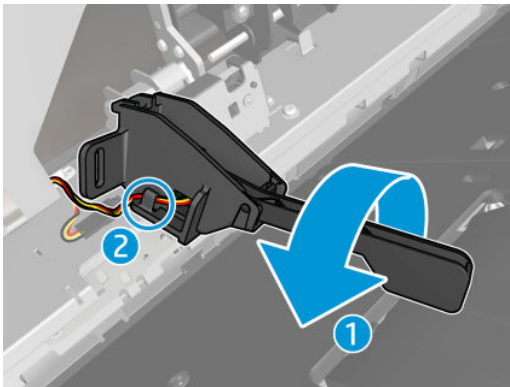
3. Remove the paper-output arms connector cover.



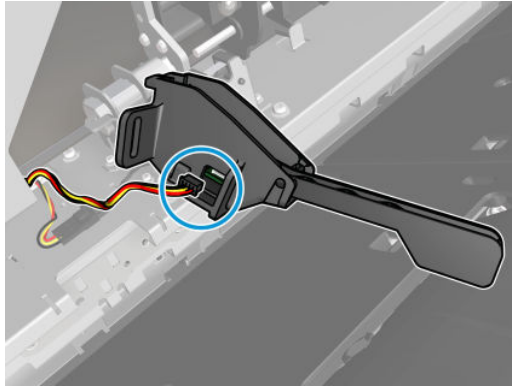
4. Remove two screws.



5. Rotate the paper-output continuous stack sensor so that you can release the cable from the hook.



6. Disconnect the cable.



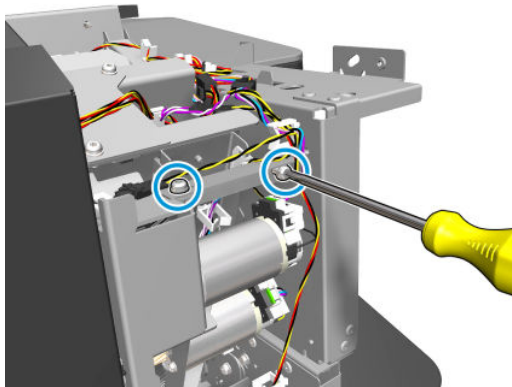
Installation

- ▲ To install, perform the removal operation in reverse.

Paper-output kicker motor (CZ309-67207)

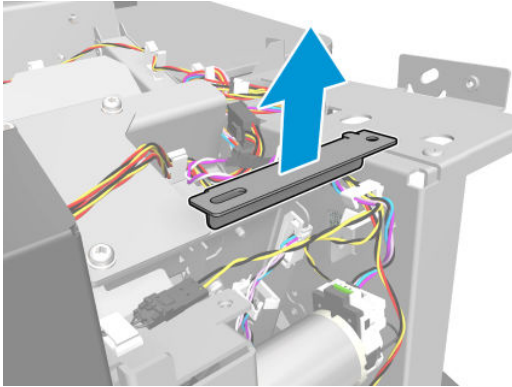
Removal

1. Remove the [Paper-output stacker cover left \(CZ309-67202\)](#) on page 1241.
2. Remove the [Paper-output stacker cover right \(CZ309-67203\)](#) on page 1242.
3. Remove two screws.

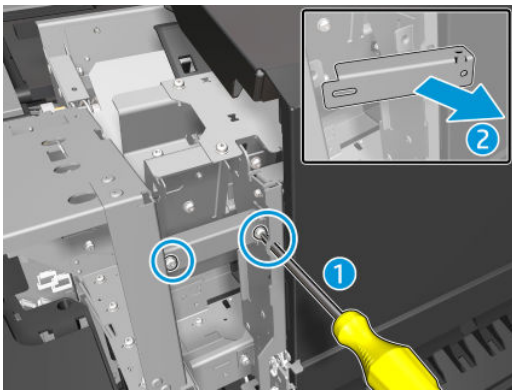


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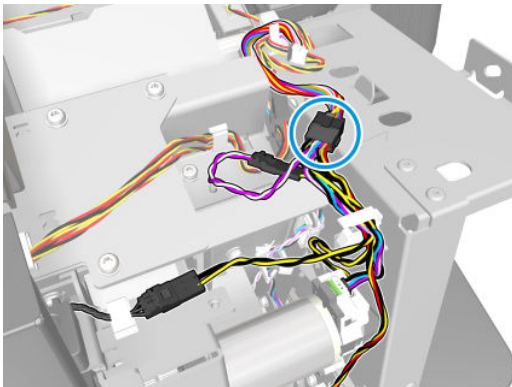
4. Remove the strut.



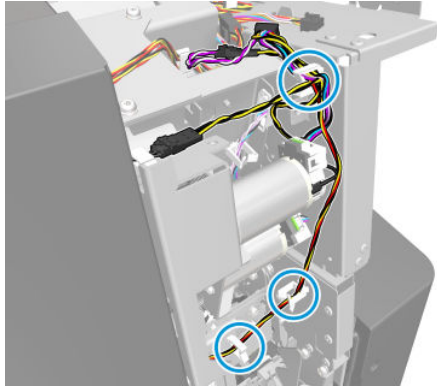
5. Remove two screws and the strut.



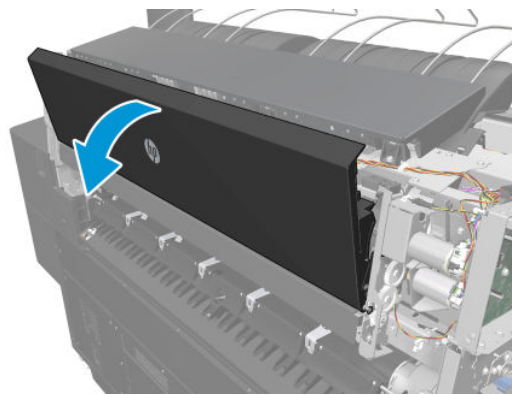
6. Unplug a cable.



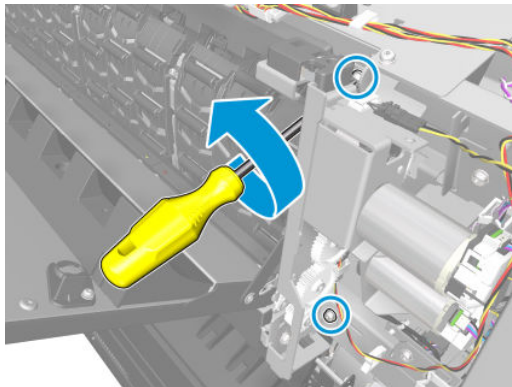
7. Release the cables from the three hooks.



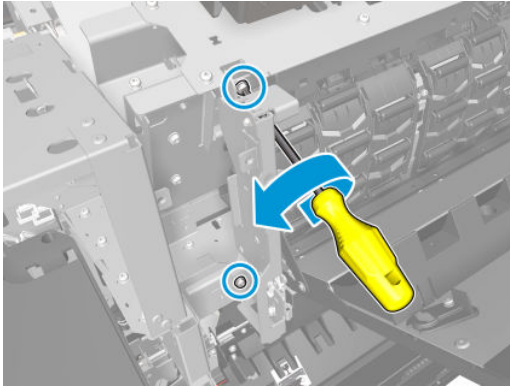
8. Open the paper-output path door.



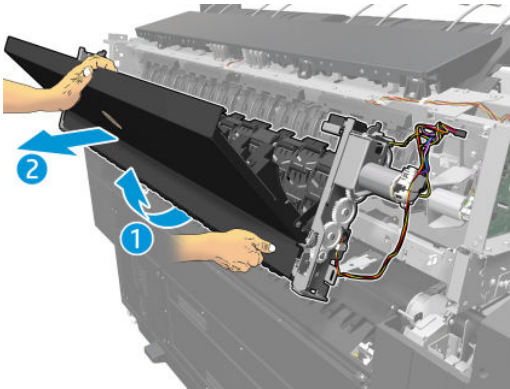
9. Remove two screws.



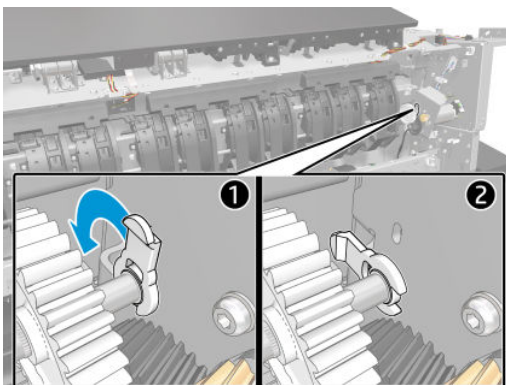
10. Remove two screws.



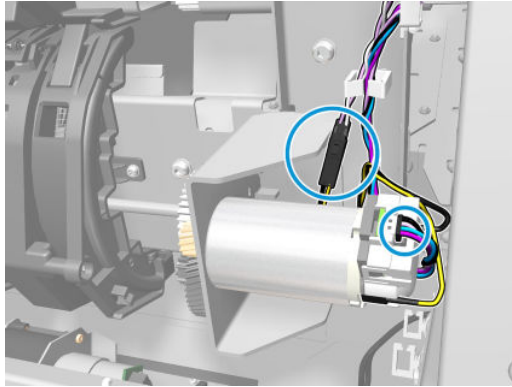
11. Rotate the paper-output path module until you can disengage the two hooks and remove it. Be careful not to damage the cables.



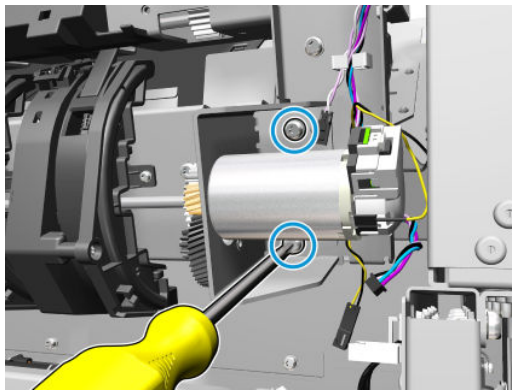
12. Rotate the bearing 90°.



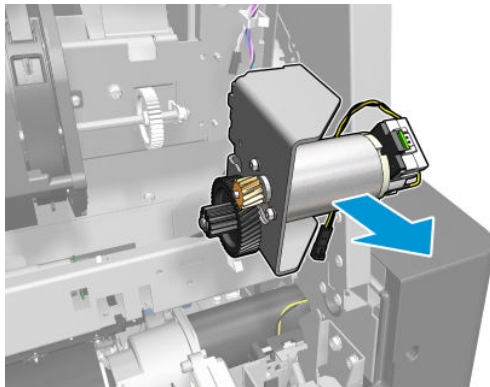
13. Unplug the two cables.



14. Remove two screws.



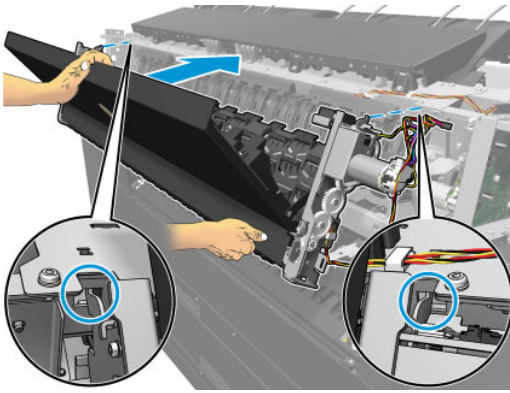
15. Remove the paper-output kicker motor.



Installation

- ▲ To install, perform the removal operation in reverse. Replace the paper-output path module with the paper-output path door open, and take care to insert both hooks correctly.

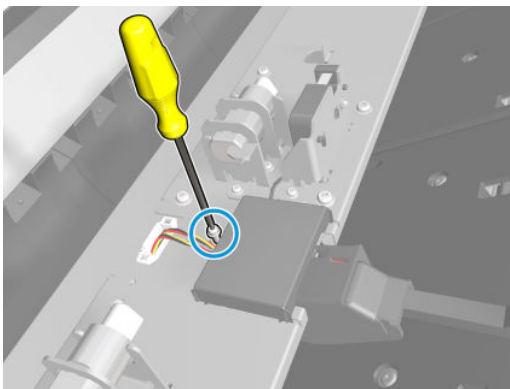
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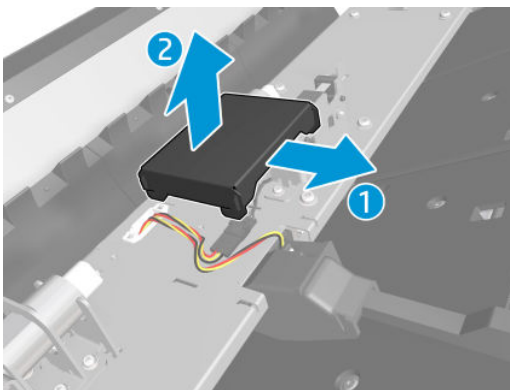
Paper-output handoff roller (CZ309-67291)

Removal

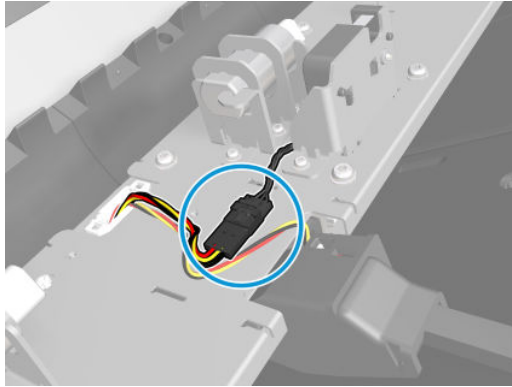
1. Remove the [Paper-output stacker cover left \(CZ309-67202\)](#) on page 1241.
2. Remove the [Paper-output stacker cover right \(CZ309-67203\)](#) on page 1242.
3. Remove the [Paper-output arms assembly \(CZ309-67205\)](#) on page 1270.
4. Remove a screw.



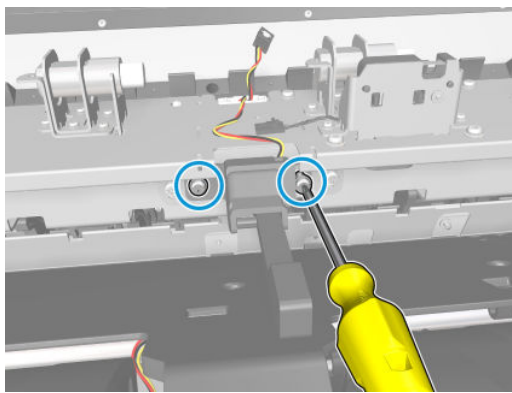
5. Remove the paper-output arms connector cover.



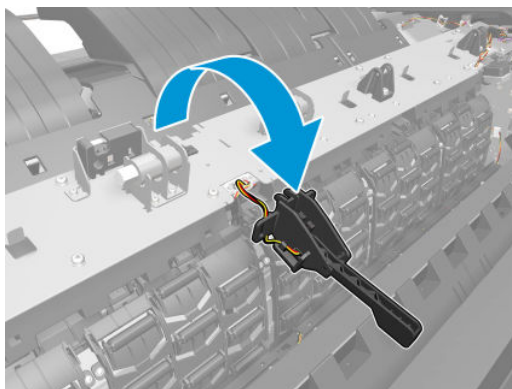
6. Unplug a cable.



7. Remove two screws.

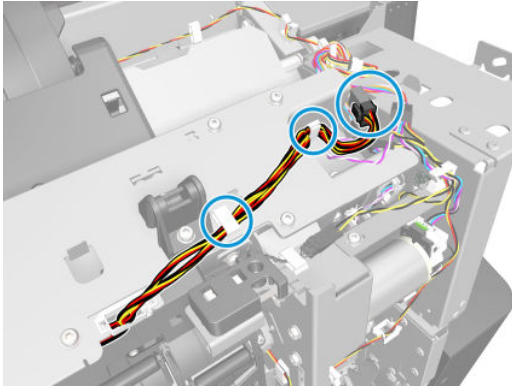


8. Remove the paper-output continuous stack sensor from the paper-output top cover, and leave it in a safe place.

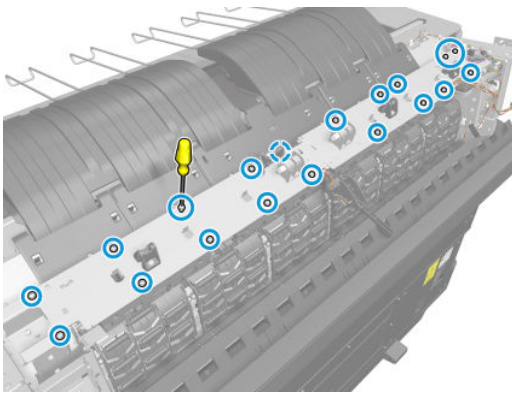


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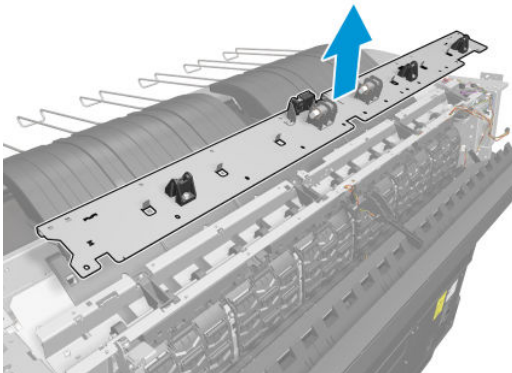
9. Unplug a cable, and release it from the two hooks.



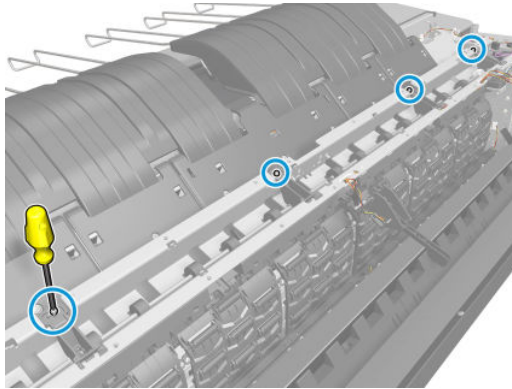
10. Remove eighteen screws.



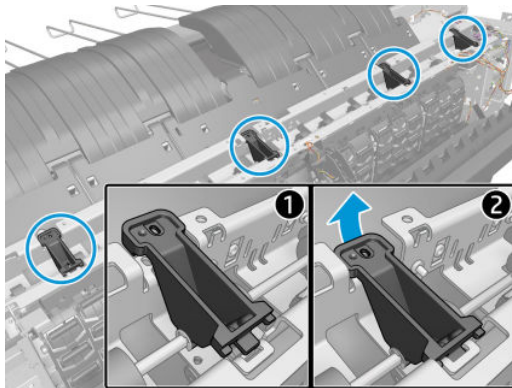
11. Remove the paper-output top cover (sheet metal).



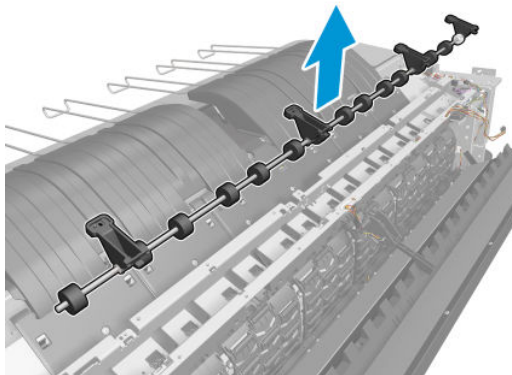
12. Remove four screws.



13. Unclip the four top shaft bushings.



14. Remove the paper-output handoff roller with the four top shaft bushings (to be reused).



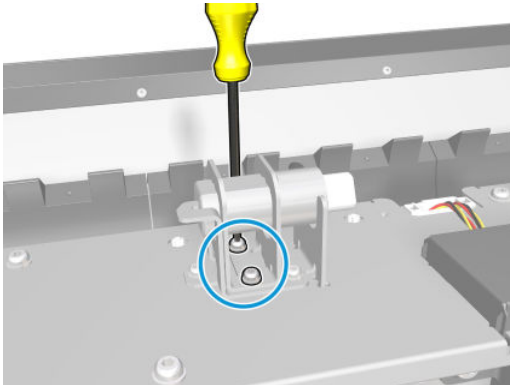
Installation

- ▲ To install, perform the removal operation in reverse.

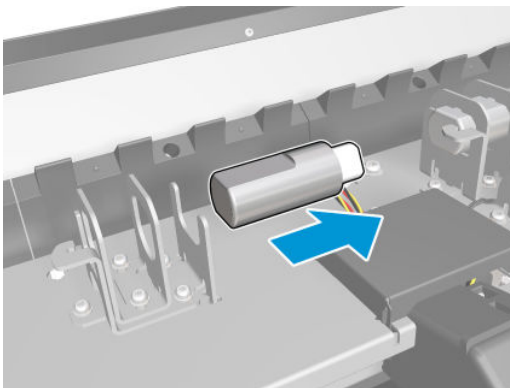
Paper-output dampers (CZ309-67292)

Removal

1. Remove the [Paper-output stacker cover right \(CZ309-67203\) on page 1242](#).
2. Remove the [Paper-output arms assembly \(CZ309-67205\) on page 1270](#).
3. Loosen two screws.



4. Remove the paper-output damper.



Installation

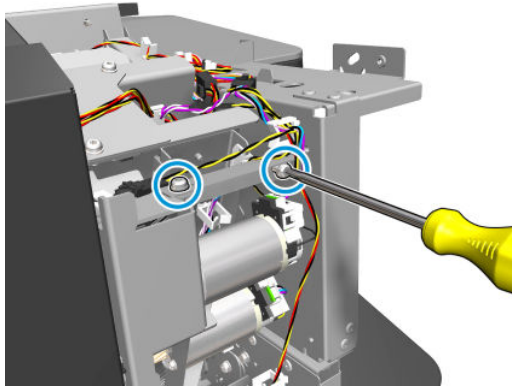
- ▲ To install, perform the removal operation in reverse.

Paper-output kicker bracket (CZ309-67208)

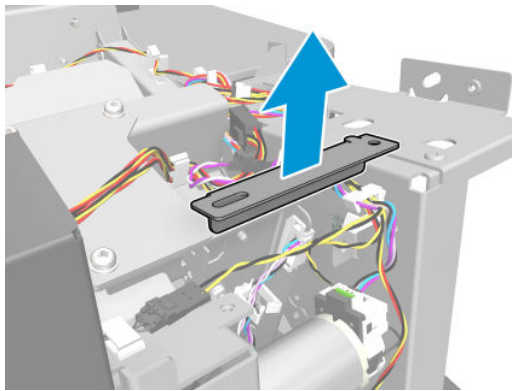
Removal

1. Remove the [Paper-output stacker cover left \(CZ309-67202\) on page 1241](#).
2. Remove the [Paper-output stacker cover right \(CZ309-67203\) on page 1242](#).

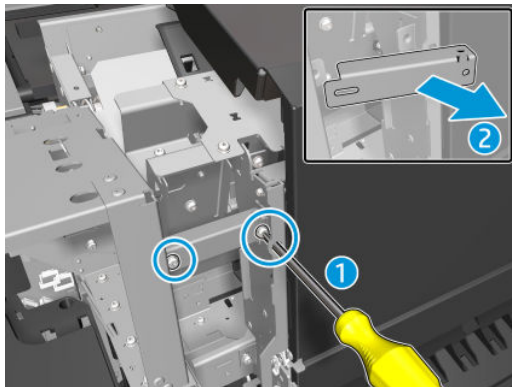
3. Remove two screws.



4. Remove the strut.

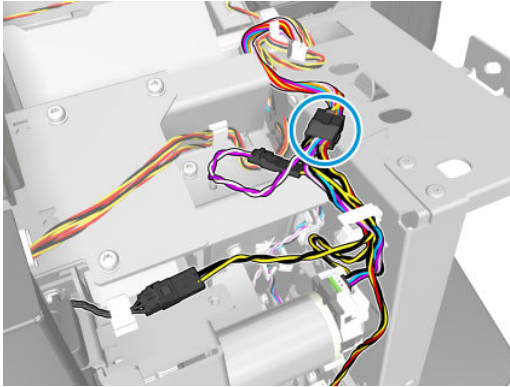


5. Remove two screws and the strut.

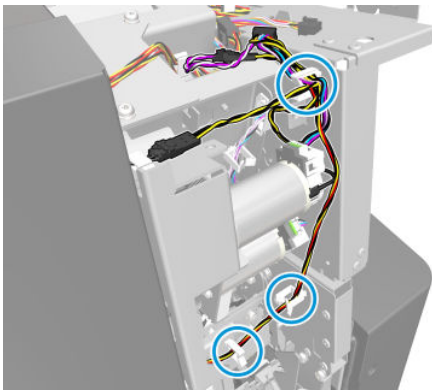


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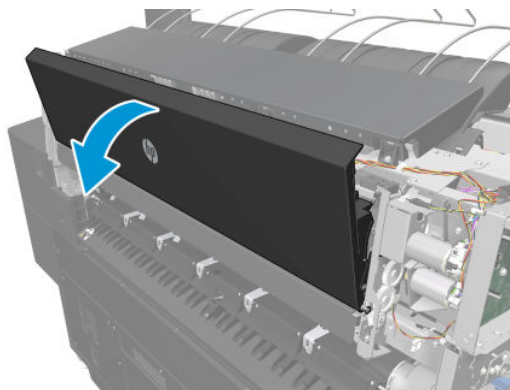
6. Unplug a cable.



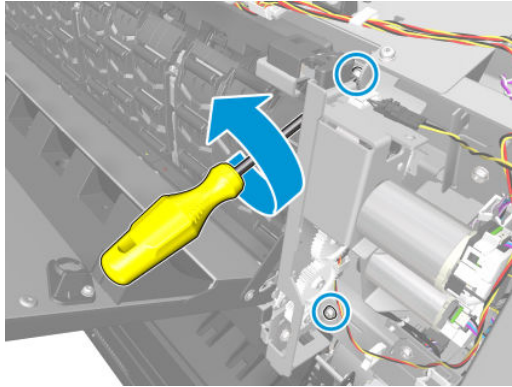
7. Release the cables from the three hooks.



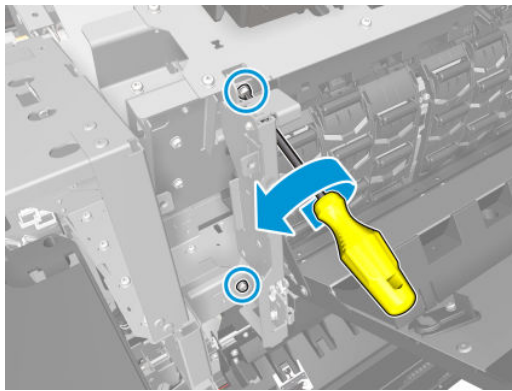
8. Open the paper-output path door.



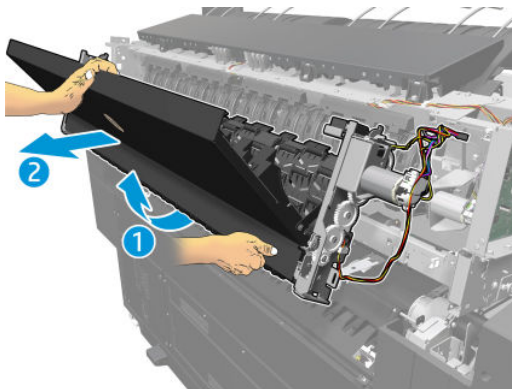
9. Remove two screws.



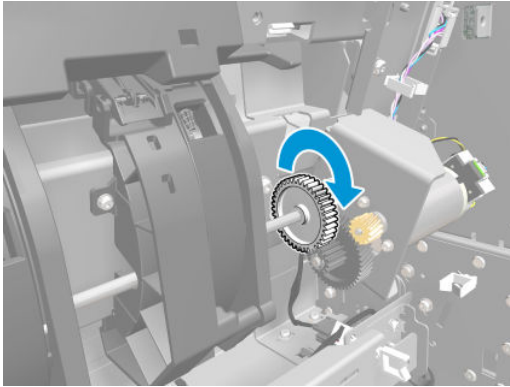
10. Remove two screws.



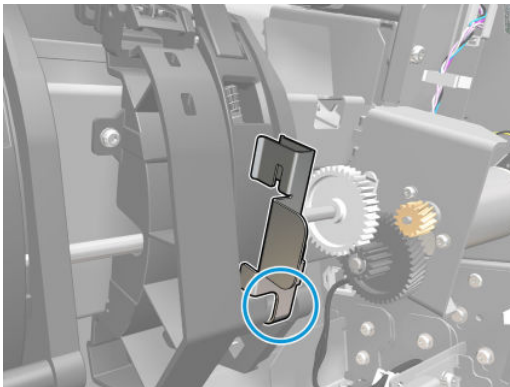
11. Rotate the paper-output path module until you can disengage the two hooks and remove it. Be careful not to damage the cables.



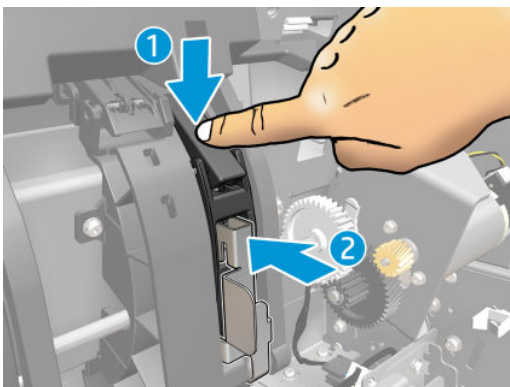
12. Rotate the gear to move the kickers, until it stops.



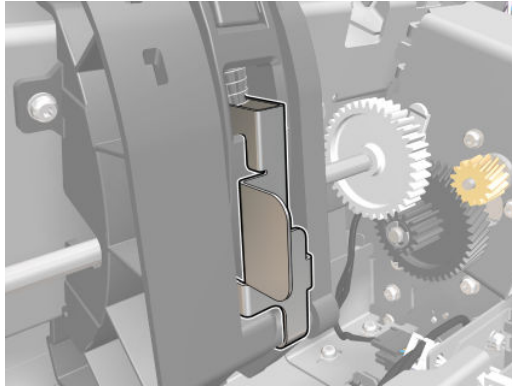
13. Attach the kicker locator in the lower part of any paper-output kicker bracket that is *not* damaged. The objective is to lock the kickers shaft.



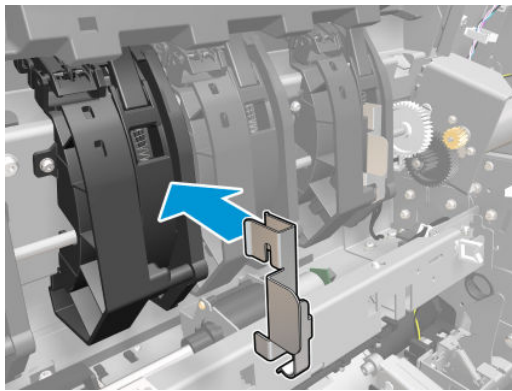
14. Push the kicker until the kicker locator is inserted.



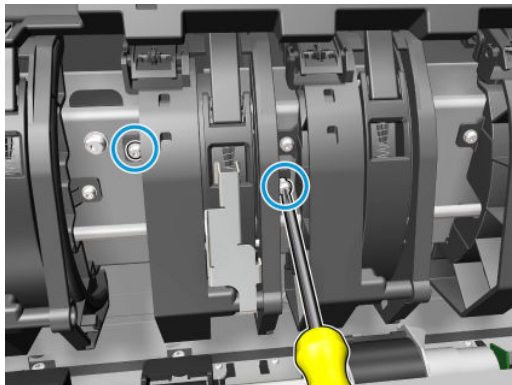
15. Check that the kicker locator is installed as shown.



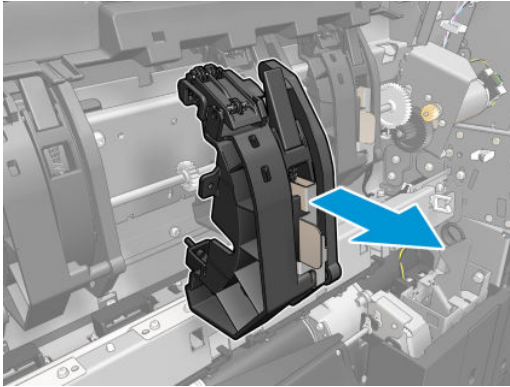
16. Install the kicker locator in the damaged kicker bracket, following the same procedure as above.



17. Remove two screws.

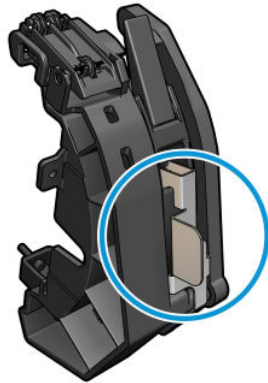


18. Remove the paper-output kicker bracket.

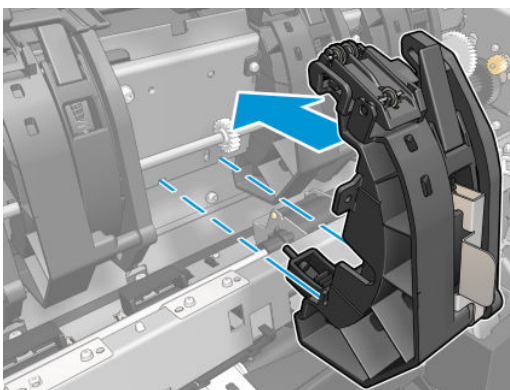


Installation

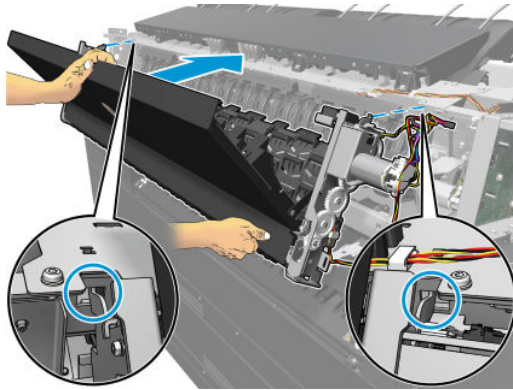
1. To install, perform the removal operation in reverse.
2. Before replacing the paper-output kicker bracket, ensure that the kicker locator is mounted.



3. Be aware of the two positioning aids.



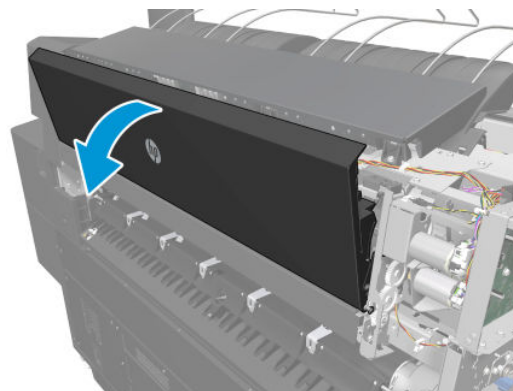
4. Replace the paper-output path module with the paper-output path door open, and take care to insert both hooks correctly.



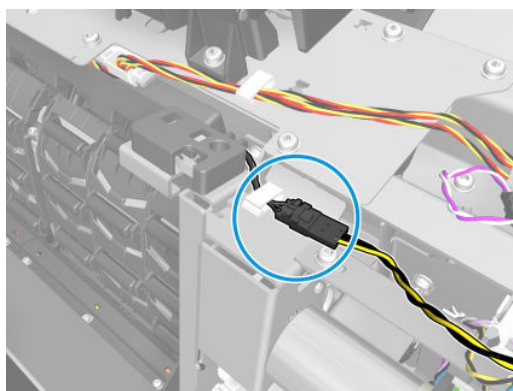
Sensor safety assembly (CZ309-67034)

Removal (rear)

1. Remove the [Paper-output stacker cover left \(CZ309-67202\)](#) on page 1241.
2. Open the paper-output path door.

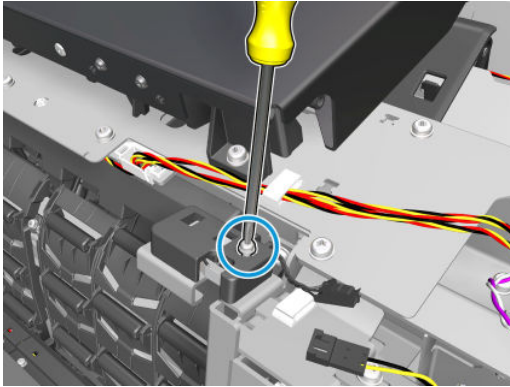


3. Unplug the sensor cable and release it from the hook.

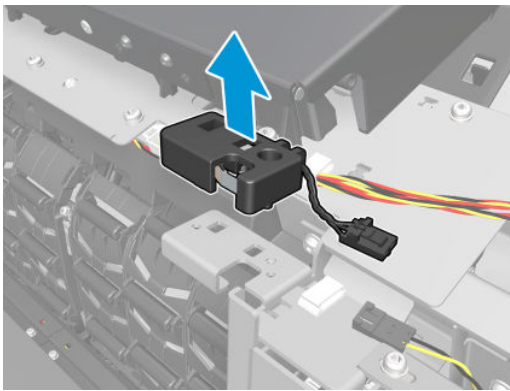


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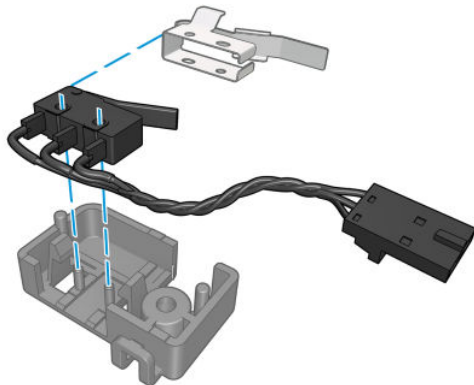
4. Remove one screw.



5. Remove the sensor safety assembly.

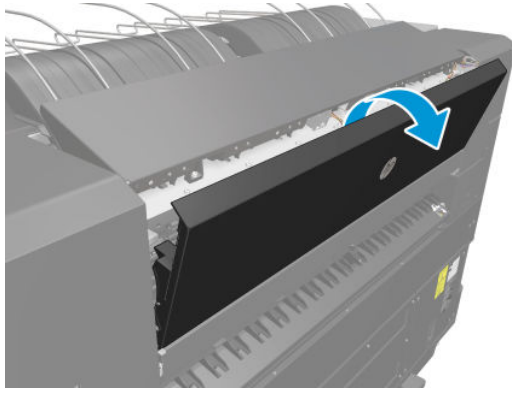


6. Remove the sensor from the assembly (the service kit includes only the sensor).

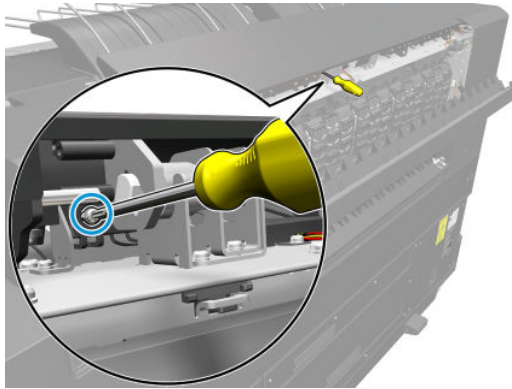


Removal (front)

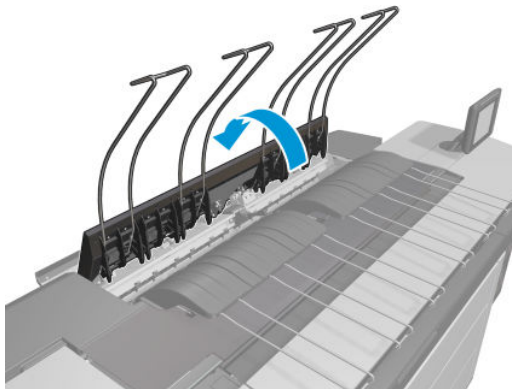
1. Open the paper-output path door.



2. Remove a screw.

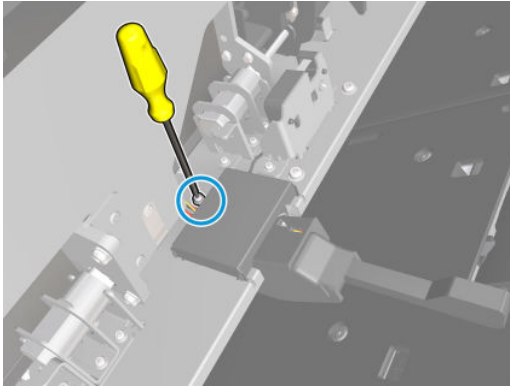


3. Open the paper-output arms assembly.

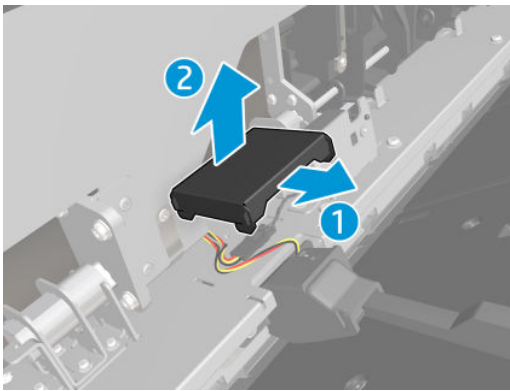


For HP-authorized personnel only

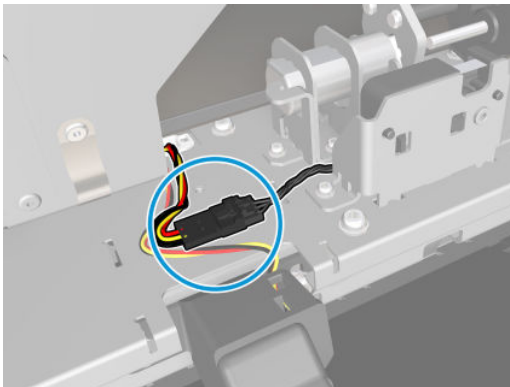
4. Remove a screw.



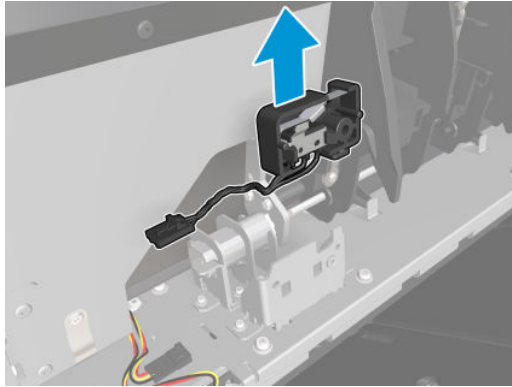
5. Remove the paper-output arms connector cover.



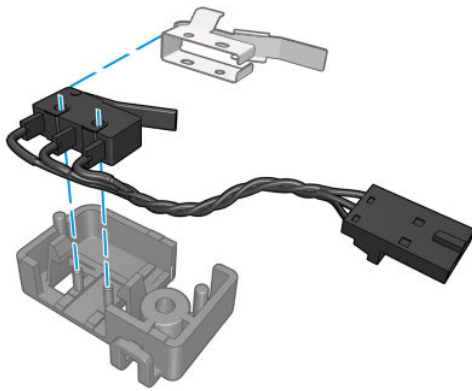
6. Unplug a cable.



7. Remove the sensor safety assembly.



8. Remove the sensor from the assembly (the service kit includes only the sensor).



Installation

- ▲ To install, perform the removal operation in reverse. Replace the sensor as shown below.



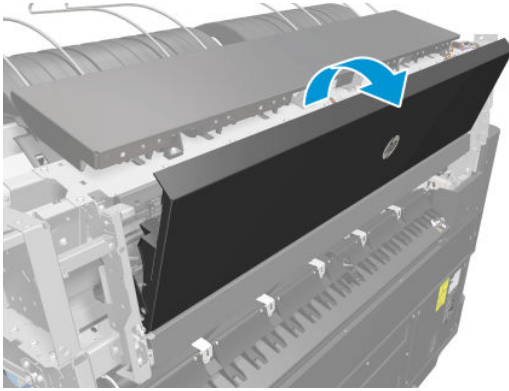
Paper presence sensor (CZ309-67145)

Removal

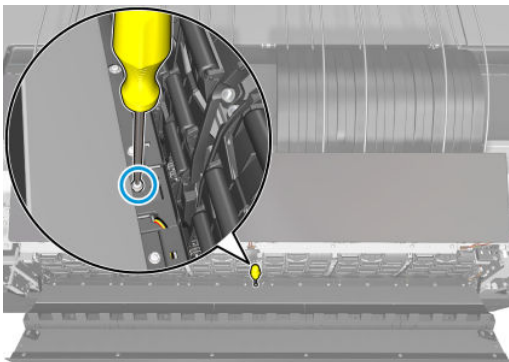
1. Remove the [Paper-output stacker cover left \(CZ309-67202\)](#) on page 1241.
2. Remove the [Paper-output stacker cover right \(CZ309-67203\)](#) on page 1242.

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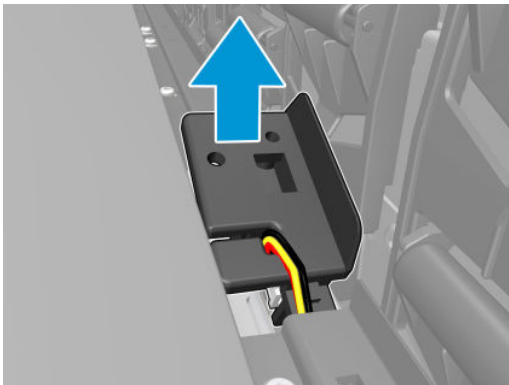
3. Open the paper-output path door.



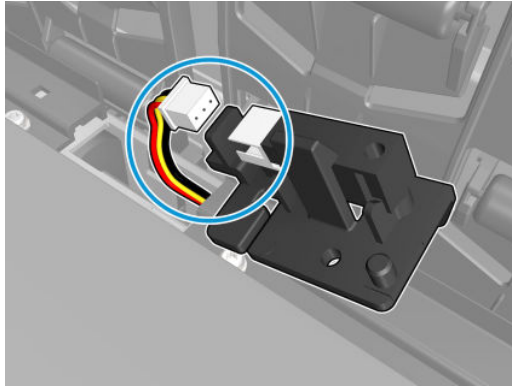
4. Remove a screw.



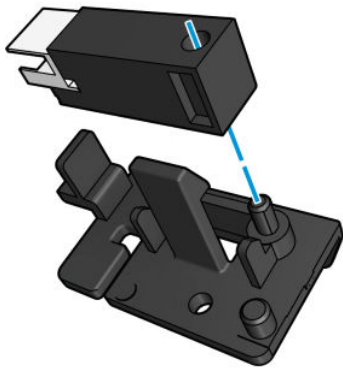
5. Remove the optical paper sensor bracket in order to access the connector.



6. Unplug the cable.



7. Unclip the paper presence sensor from the optical paper sensor bracket, and remove it.



Installation

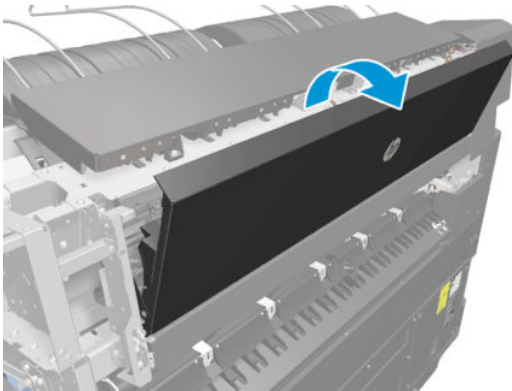
- ▲ To install, perform the removal operation in reverse.

Media guide bracket (CZ309-67318)

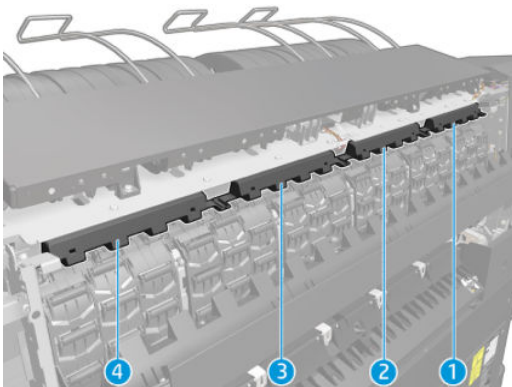
Removal

1. Remove the [Paper-output stacker cover left \(CZ309-67202\) on page 1241](#).
2. Remove the [Paper-output stacker cover right \(CZ309-67203\) on page 1242](#).

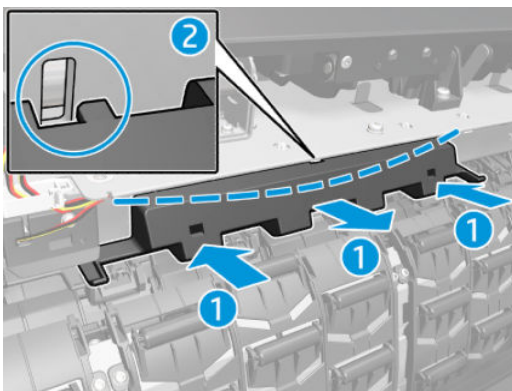
3. Open the Paper output path door.



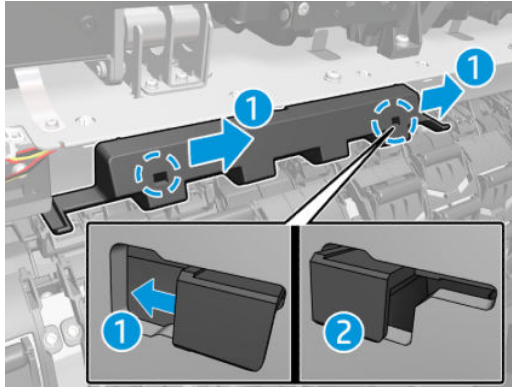
4. Locate the broken Media guide bracket:
 - Case 1: It is only is necessary to remove #1
 - Case 2: You have to remove #1 and 2
 - Case 3: You have to remove #1, 2 and 3
 - Case 4: You have to remove #1, 2, 3 and 4



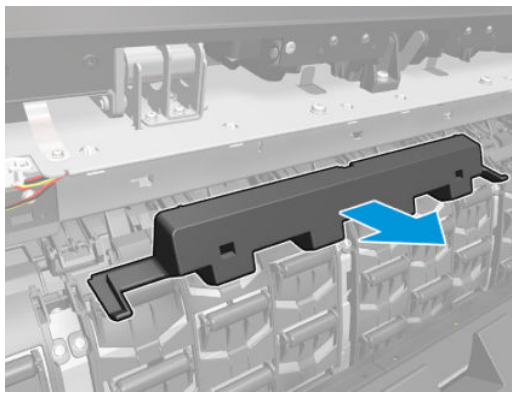
5. Pull carefully from the center of the part, to force a soft bend, in order to unlock the centering pin.



6. Slide the part from left to right in order to unclip both clips.



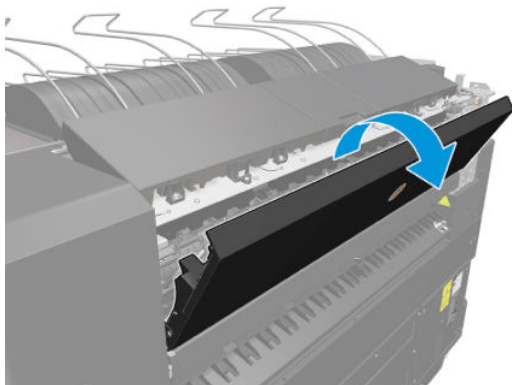
7. Remove the Media guide bracket.



Left & right arm modules (CZ309-67368)

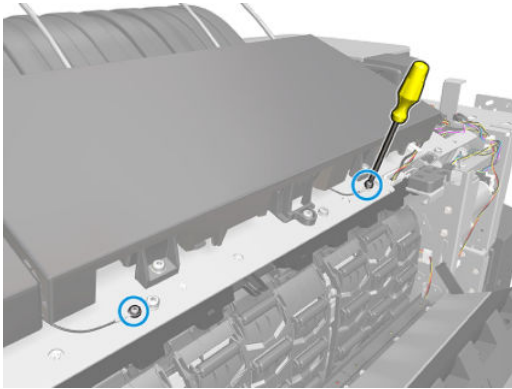
Removal

1. Remove the [Paper-output stacker cover left \(CZ309-67202\)](#) on page 1241.
2. Open the MO path door.

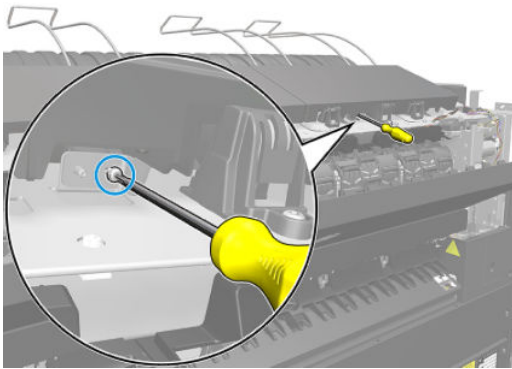


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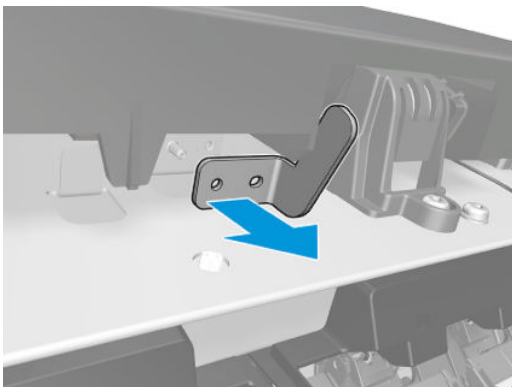
3. Remove 2 screws from the grounding cable.



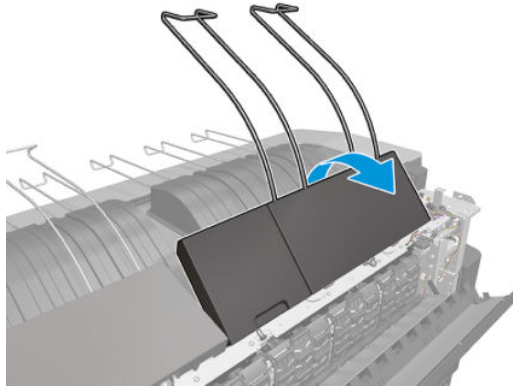
4. Remove 1 screw.



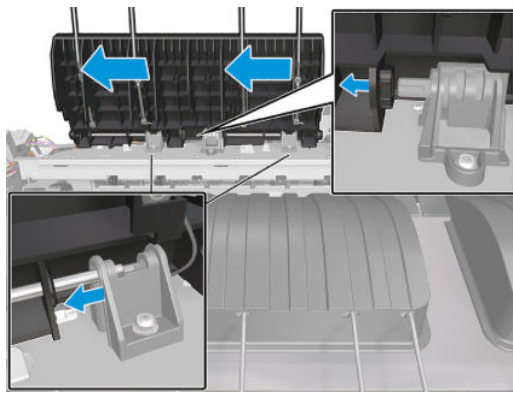
5. Remove the metal retainer.



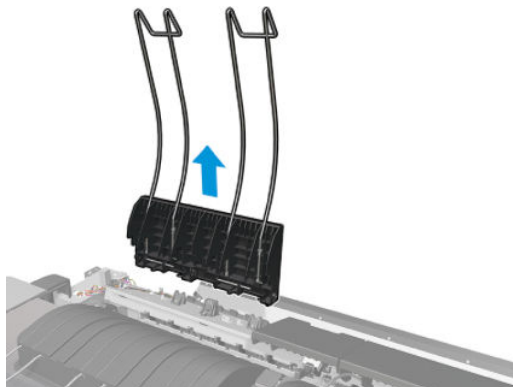
6. Open the Left arm module.



7. Slide the Left Arm Module to the left.

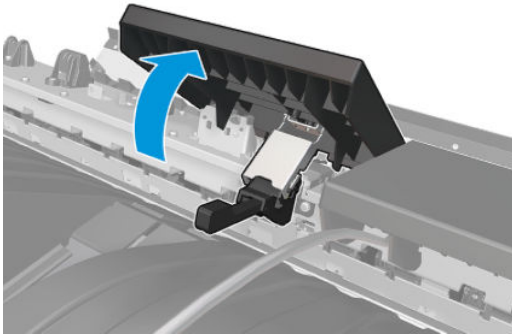


8. Remove the Left arm module.

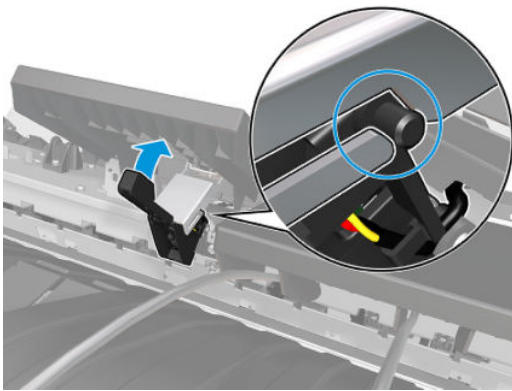


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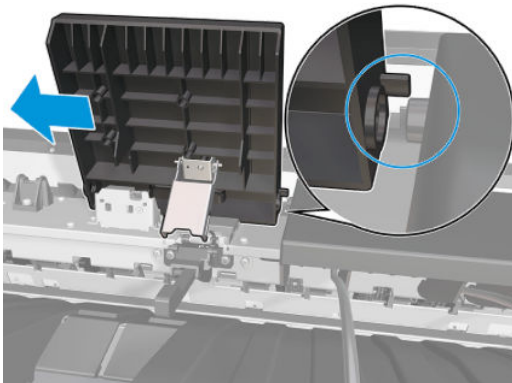
9. Open the Middle arm module to get access in order to disengage the sensor.



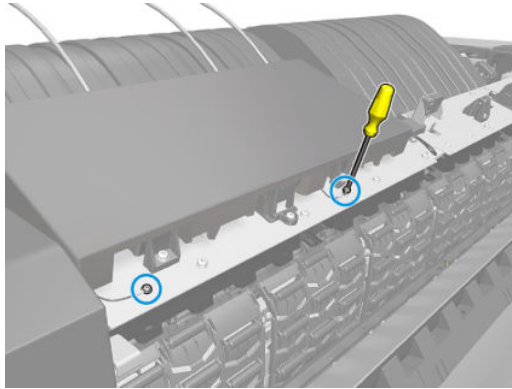
10. Disengage the sensor from the Middle arm module.



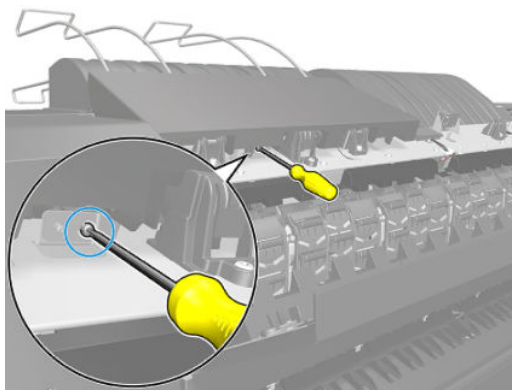
11. Slide the Middle arm module to the left.



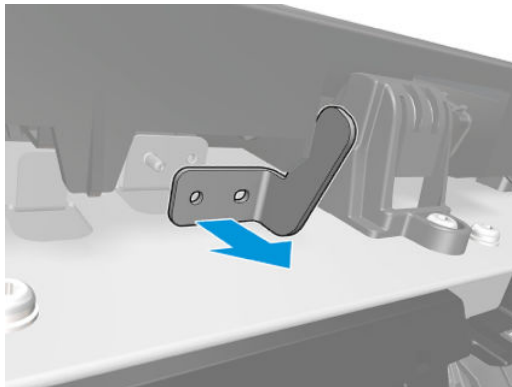
12. Remove 2 screws from the grounding cable.



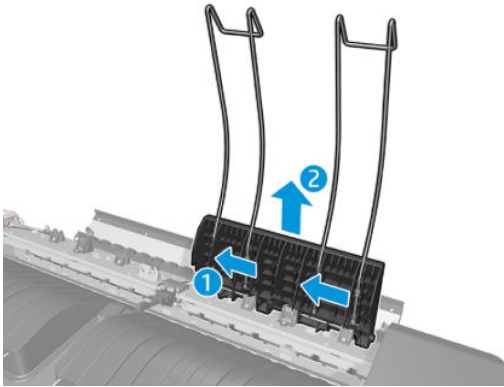
13. Remove 1 screw.



14. Remove the metal retainer.



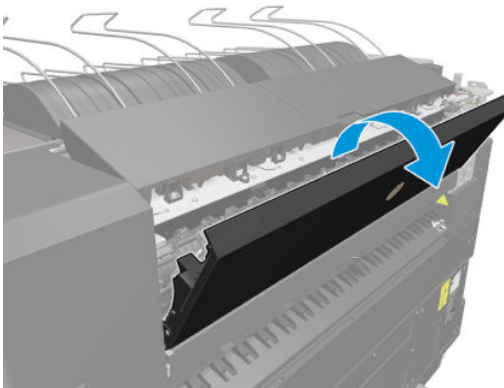
15. Remove the Right arm module.



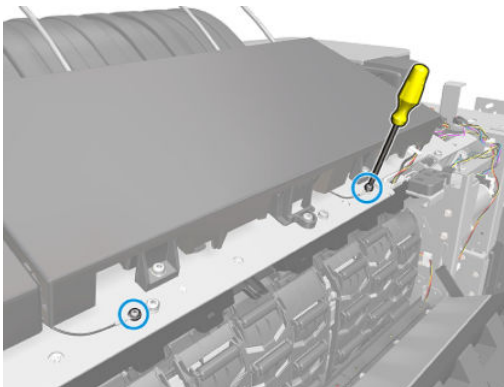
Central arm module (CZ309-67369)

Removal

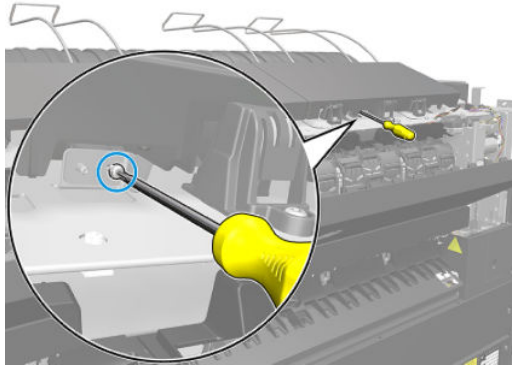
1. Remove the [Paper-output stacker cover left \(CZ309-67202\)](#) on page 1241.
2. Open the MO path door.



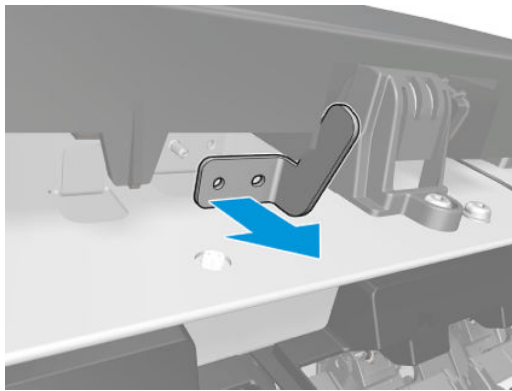
3. Remove 2 screws from the grounding cable.



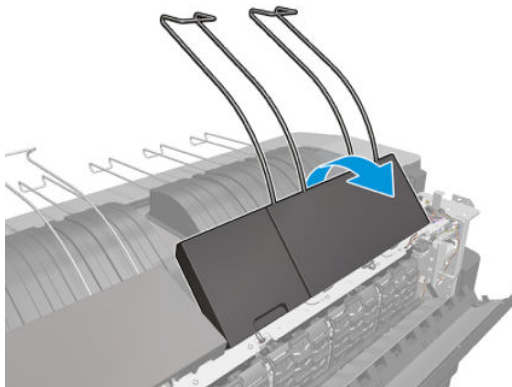
4. Remove 1 screw.



5. Remove the metal retainer.

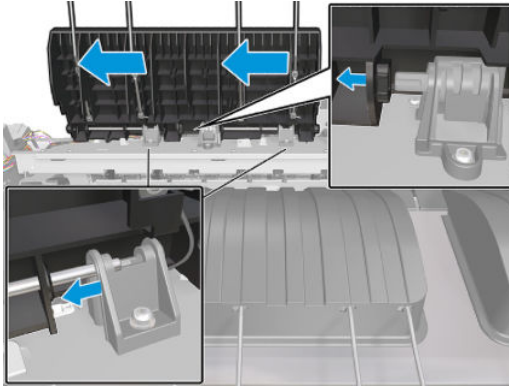


6. Open the MO arms.

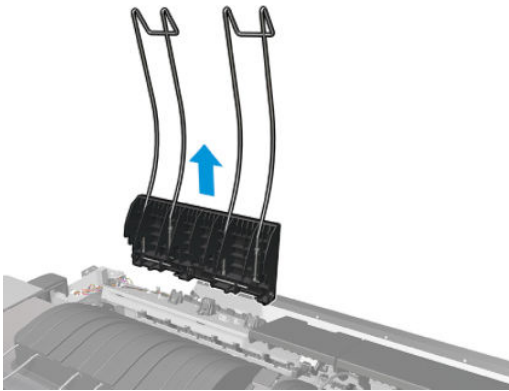


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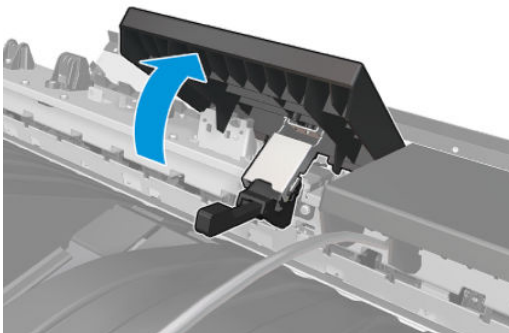
7. Slide the MO arms to the left.



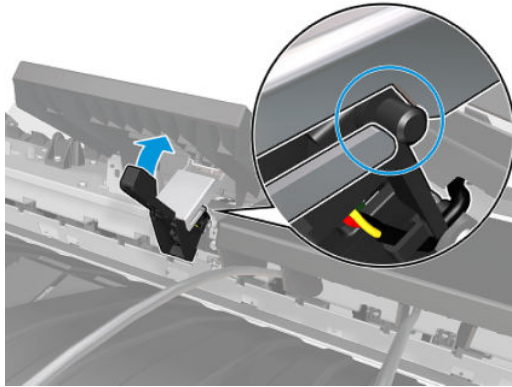
8. Remove the MO arms.



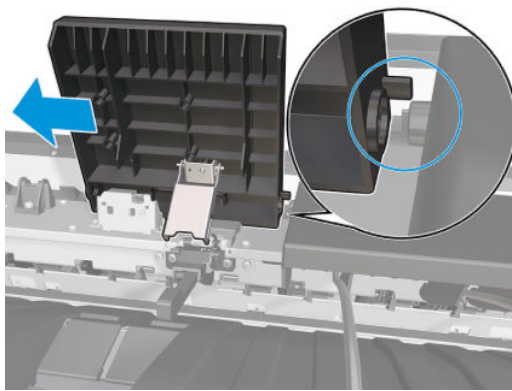
9. Open the Middle arm module to get access in order to disengage the sensor.



10. Disengage the sensor from the Middle arm module.

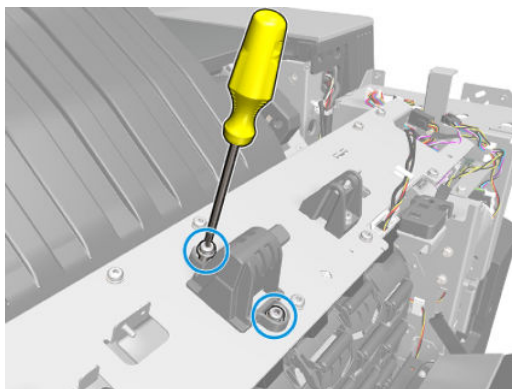


11. Slide the Middle arm module to the left.



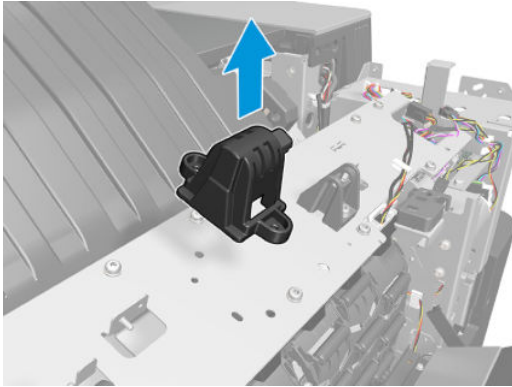
Paper-output dampers (CZ309-67375)


1. Remove the [Left & right arm modules \(CZ309-67368\)](#) on page 1299.
2. Remove 2 screws.



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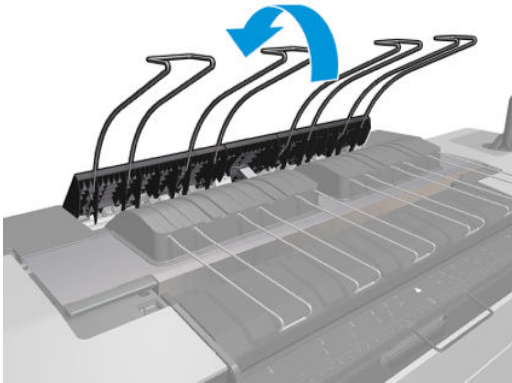
3. Remove the Paper-output dampers.



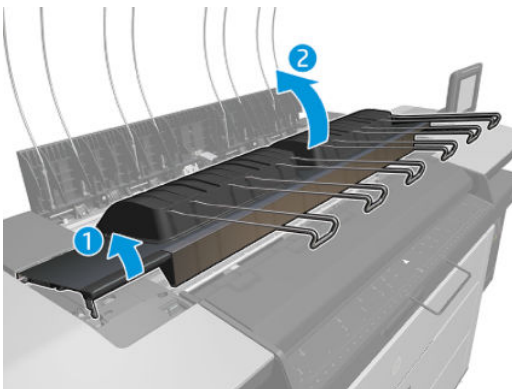
 **NOTE:** For the Right paper-output damper repeat steps 2 to 3.

Left & right tray modules (CZ309-67370)

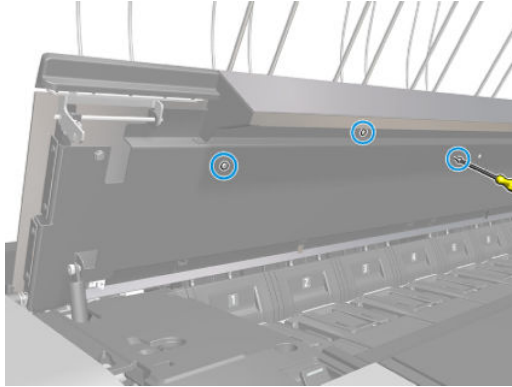
1. Open the MO arms.



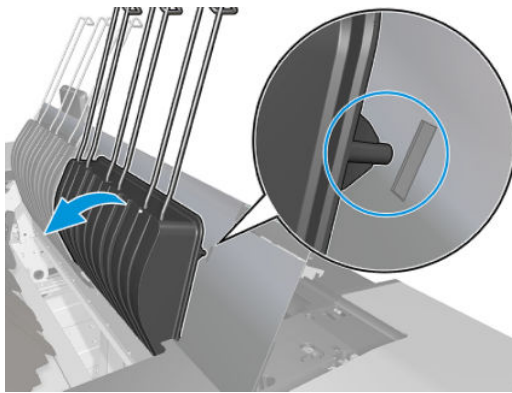
2. Open the Top cover.



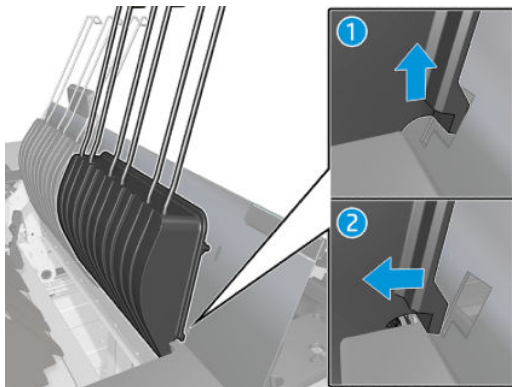
3. Remove 3 screws.



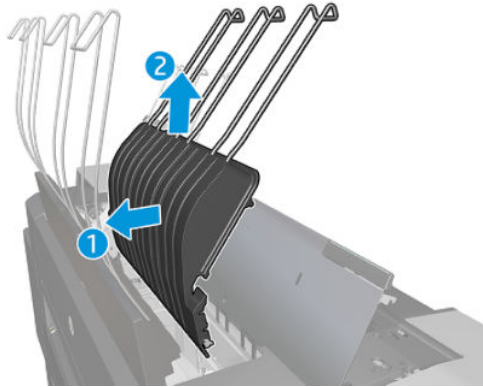
4. Rotate the Tray module to disengage the top (both sides).




5. Disengage the bottom (both sides).



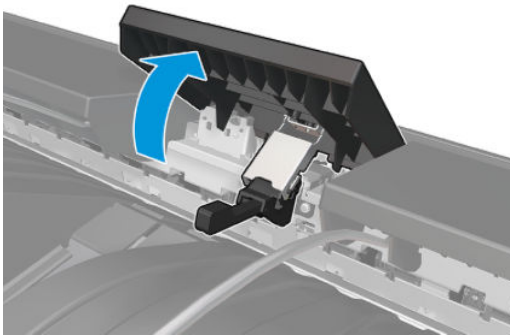
6. Remove the Left tray module.



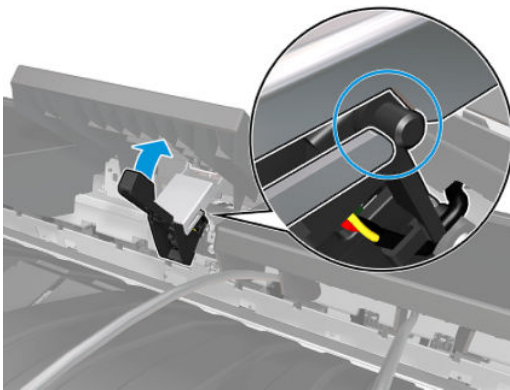
 **NOTE:** For the Right tray module repeat steps 3 to 5.

Stacker arm sensor (CZ309-67409)

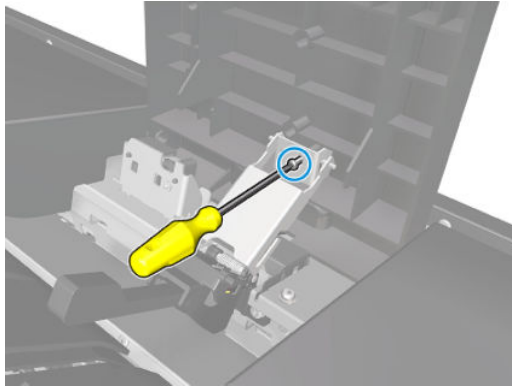
1. Open the Middle arm module in order to get access so you can disengage the sensor.



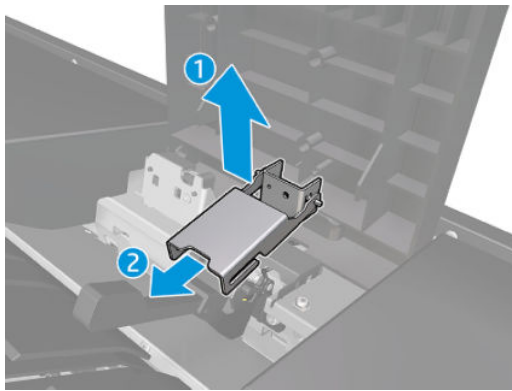
2. Disengage the sensor from the Middle arm module.



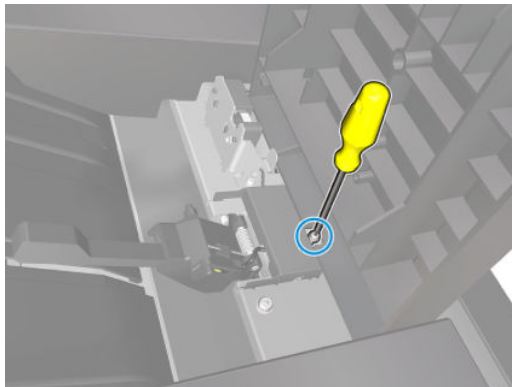
3. Remove 1 screw.



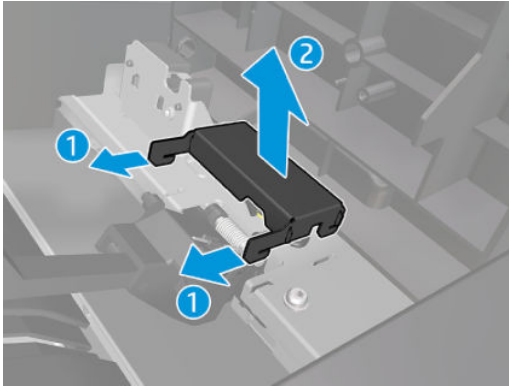
4. Remove the metallic part.



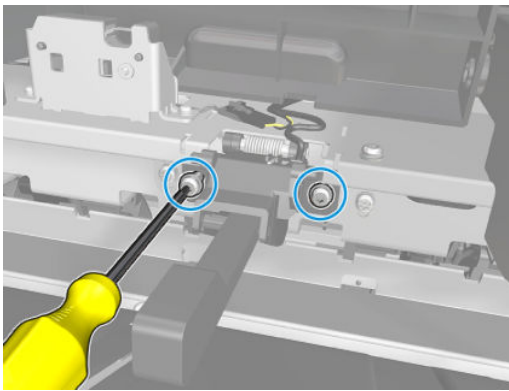
5. Remove 1 screw.



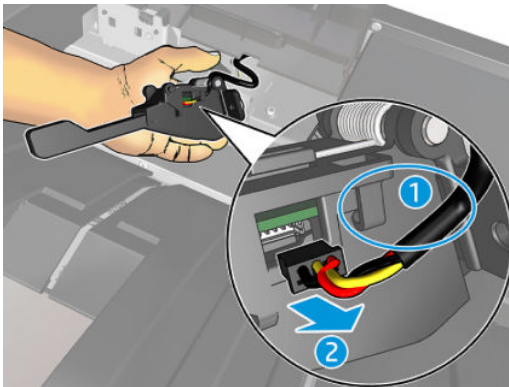
6. Remove the sensor cover.



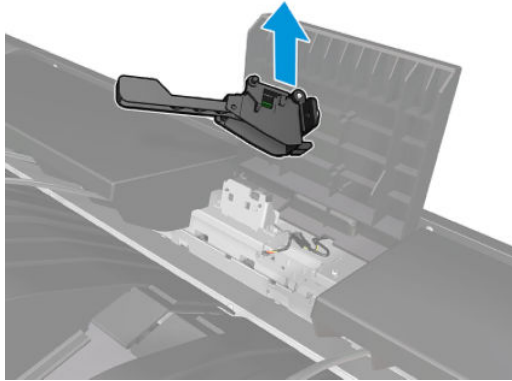
7. Remove 2 screws.



8. Unroute and disconnect the cable.

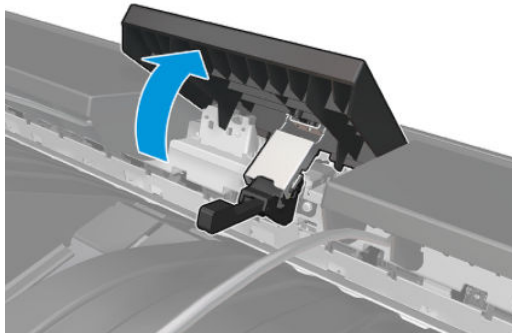


9. Remove the sensor cover.

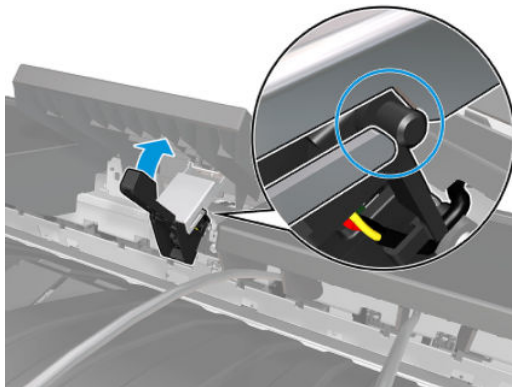


Arm closure sensor (CZ309-67374)

1. Open the Middle arm module in order to get access so you can disengage the sensor.

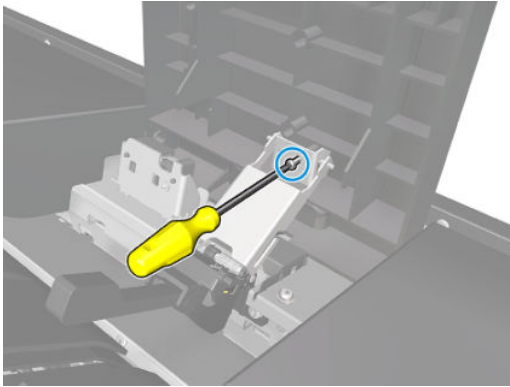


2. Disengage the sensor from the Middle arm module.

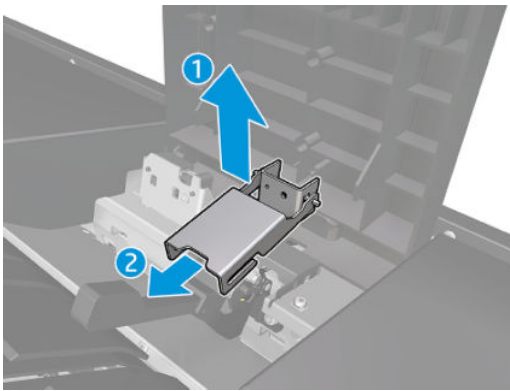


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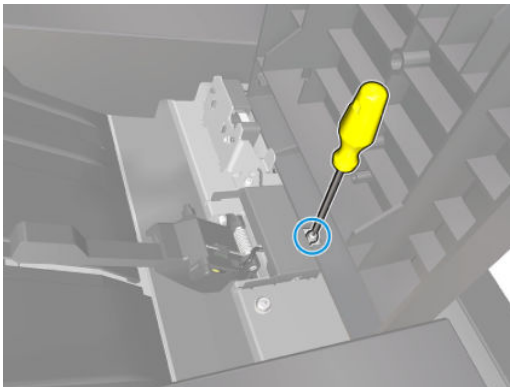
3. Remove 1 screw.



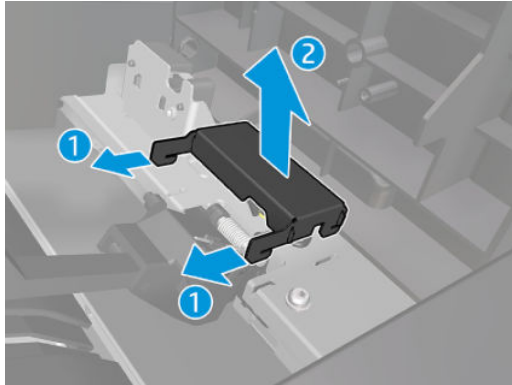
4. Remove the metallic part.



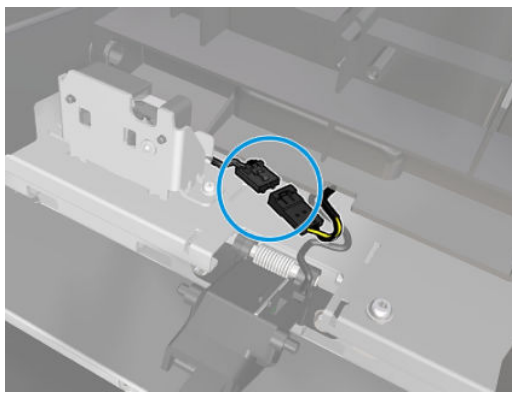
5. Remove 1 screw.



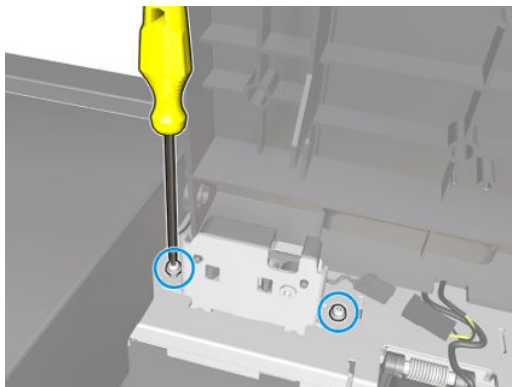
6. Remove the sensor cover.



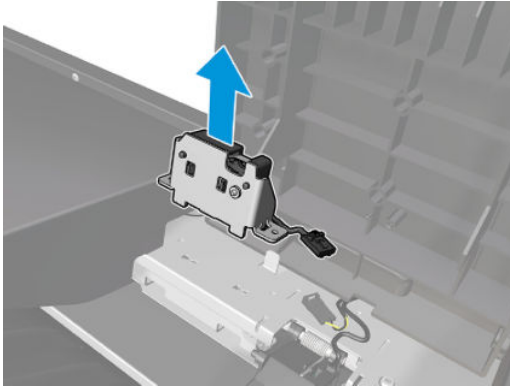
7. Disconnect the cable.



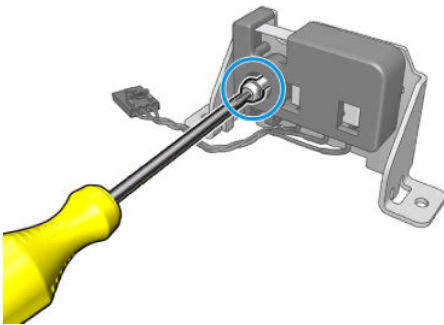
8. Remove 2 screws.



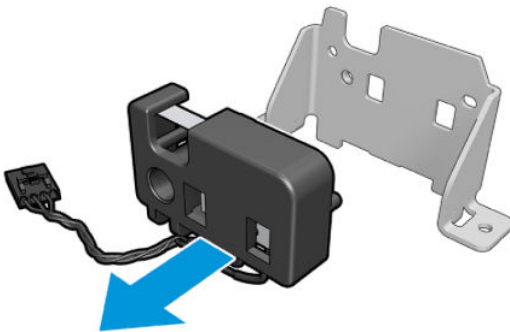
9. Remove the Arm sensor with the holder.



10. Remove 1 screw.



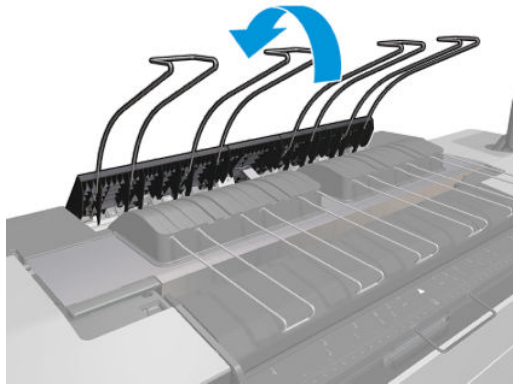
11. Remove the Arm sensor.



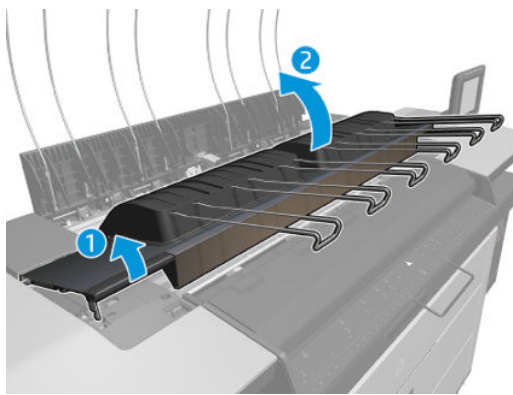
Tray safety switch (CZ309-67373)

1. Remove the [Paper-output stacker cover left \(CZ309-67202\)](#) on page 1241.

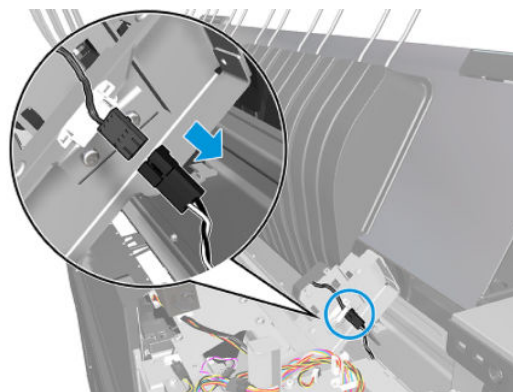
2. Open the M0 arms.



3. Open the Top cover.

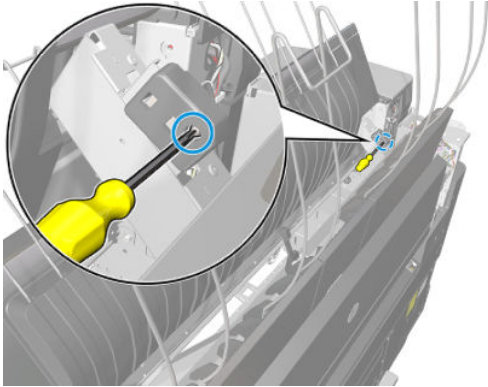


4. Disconnect the cable.

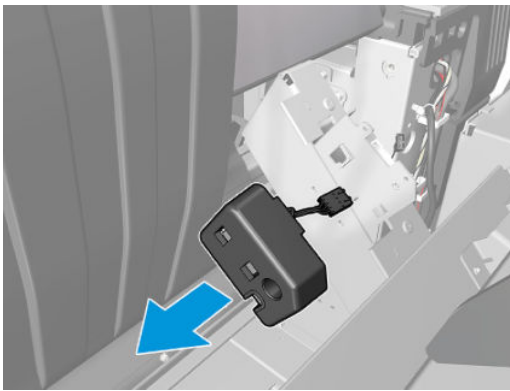


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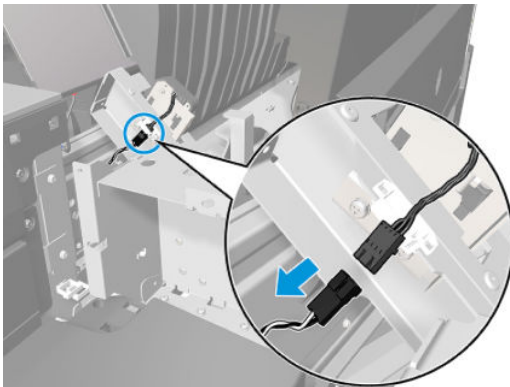
5. Remove 1 screw.



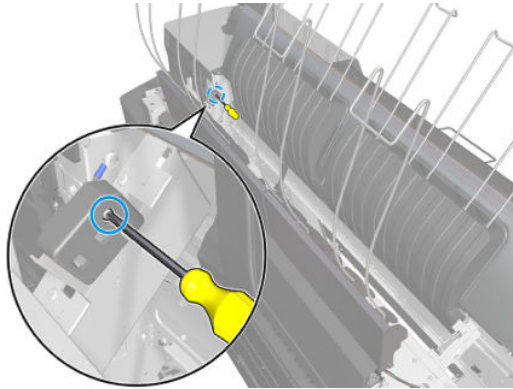
6. Remove the sensor.



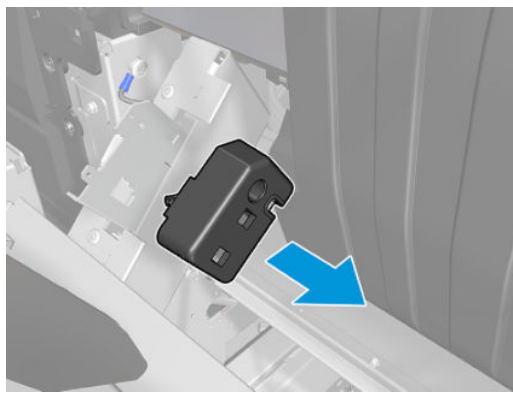
7. Disconnect the cable.



8. Remove 1 screw.

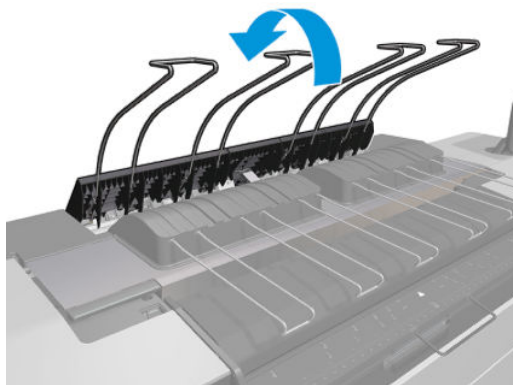


9. Remove the sensor.



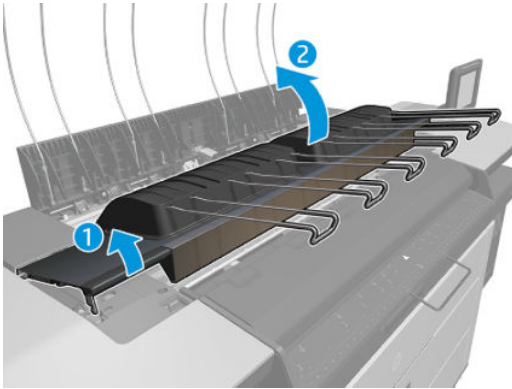
Tray brackets (CZ309-67376)

1. Open the M0 arms.

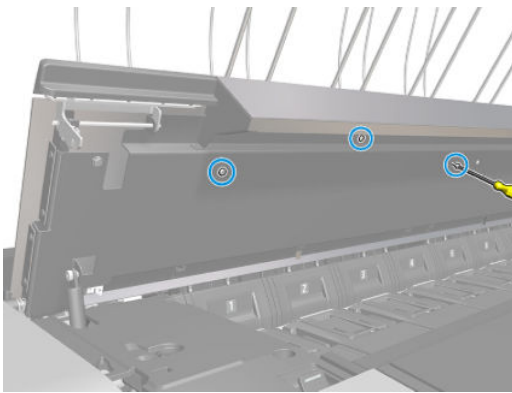


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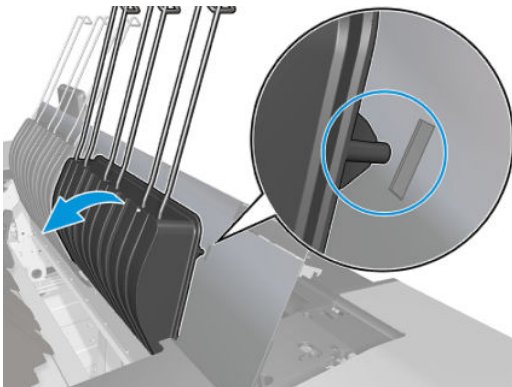
2. Open the Top cover.



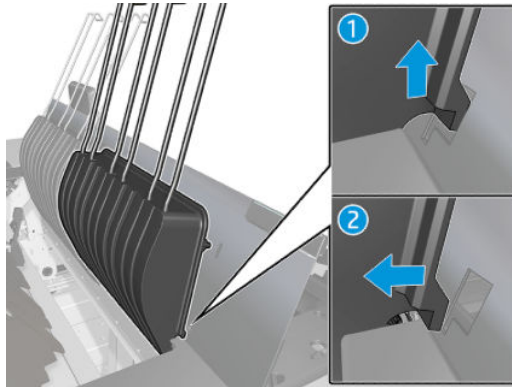
3. Remove 3 screws.



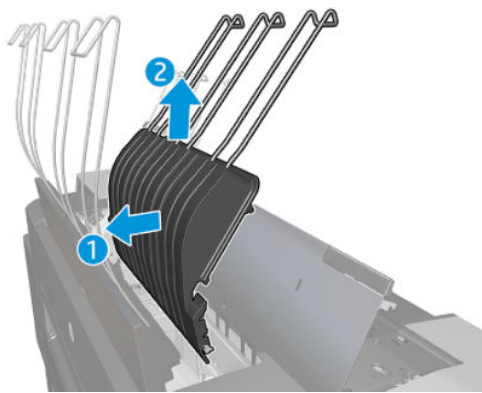
4. Rotate the Tray module in order to disengage the top (both sides).




5. Disengage the bottom (both sides).

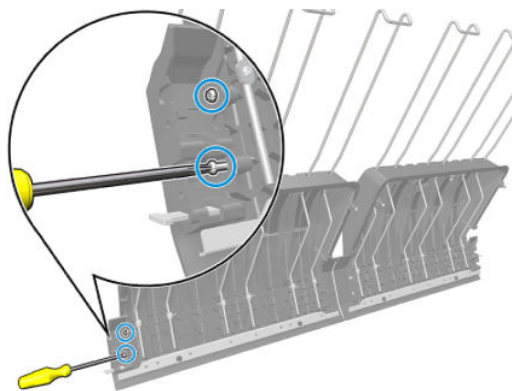


6. Remove the Left tray module.

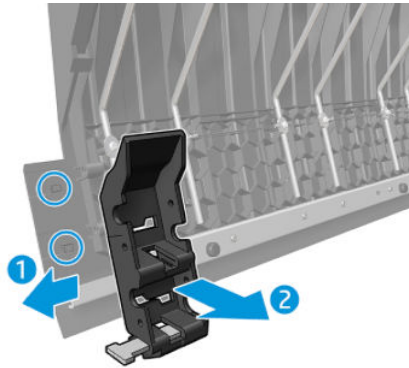


 **NOTE:** For the Right tray module repeat steps 3 to 5.

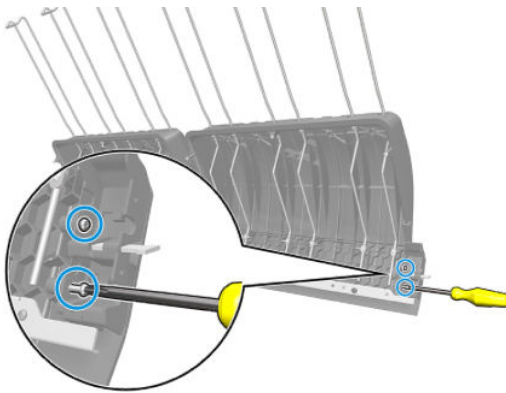
7. If left side: Remove 2 screws.



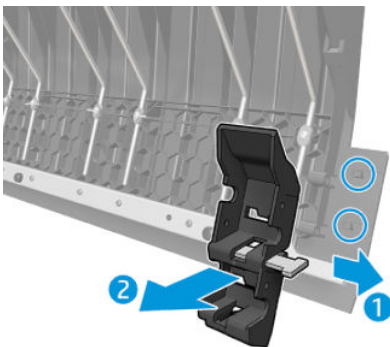
8. Disengage the bracket.



9. If right side: Remove the Left Tray Module.



10. Remove the Left Tray Module.

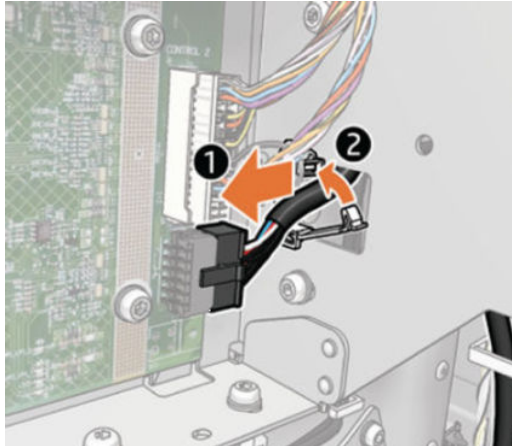


Top stacker assembly (PWXL 4x00/3900s with SNs \geq MY7688Q008)

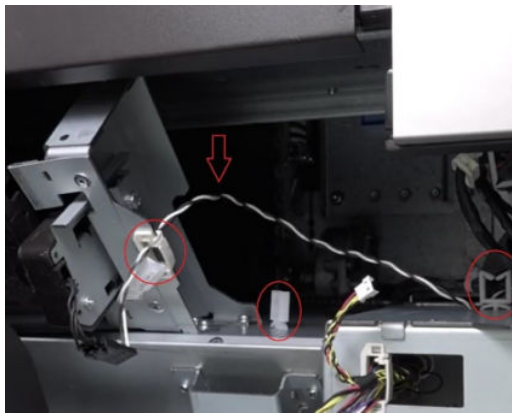
Removal

1. Remove the [Paper-output path module on page 1218](#).

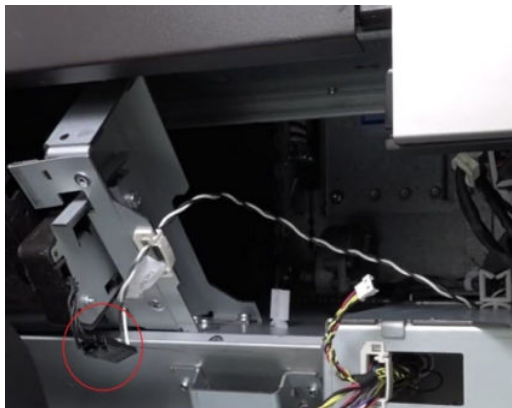
2. Unplug the cable connected to the Top stacker PCA (1) and remove it by opening the clamp (2).



3. Release the cables that are routed through the clamps around the right side of the stacker's structure.



4. Unplug the cable of the Tray safety switch (CZ309-67373) on the right side.



For HP-authorized personnel only

5. Release the cables that are routed through the clamps around the left side of the stacker's structure.



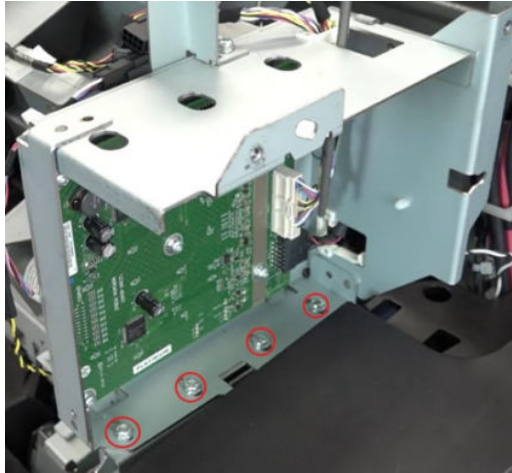
6. Unplug the cable of the Tray safety switch (CZ309-67373) on the left side.



7. Remove 4 screws from the left side.

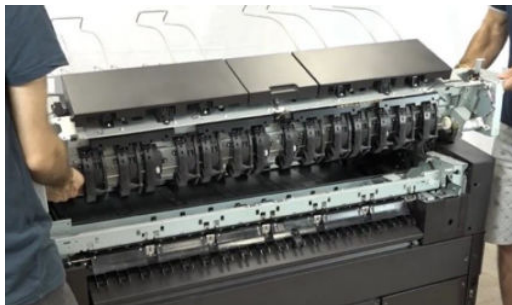
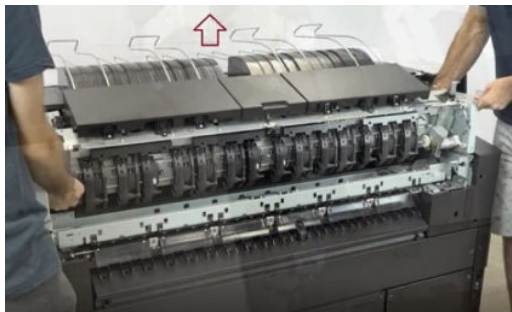


8. Remove 4 screws from the right side.



9. Carefully lift the Top stacker assembly up, away from the printer structure.

⚠ WARNING! Two people are needed to perform this operation.



10. Remove the Top stacker assembly. Be careful not to damage it.

⚠ WARNING! Two people are needed to perform this operation.



For HP-authorized personnel only

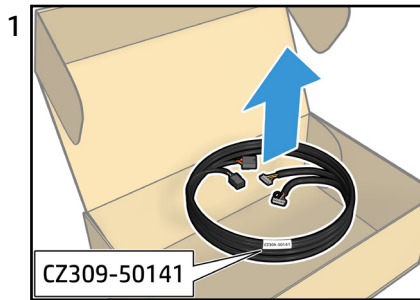
Installation

- ▲ To install, perform the removal operation in reverse.

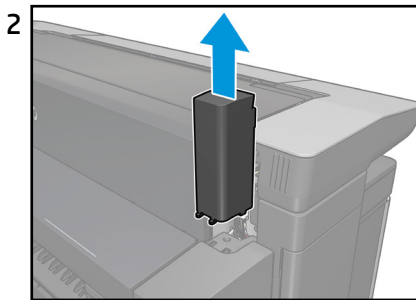
Pinch motor cable (CZ309-50141) rework

PageWide XL Printer Series Pinches Motor Cable Rework

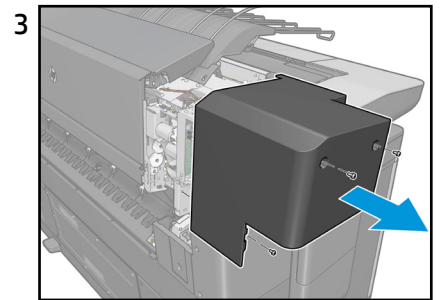
Only applies until s/n:
MY61R6Q00N



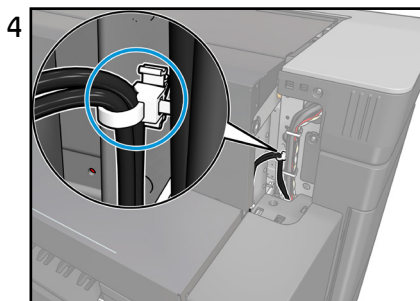
Take the new cable with the p/n:
CZ309-50141



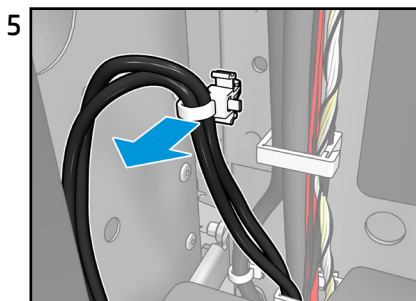
Remove the rear corner cover left
(only for HP PageWide XL 5000/5100
/6000 Printer Series)



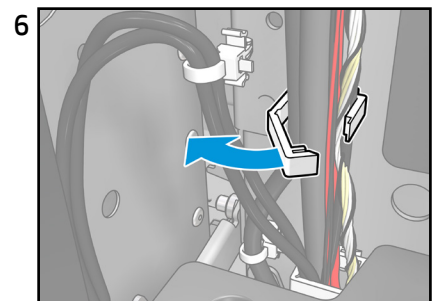
Remove the 3 screws and the left
paper-output stacker cover (only for
HP PageWide XL 4000/4500 Printer
Series)



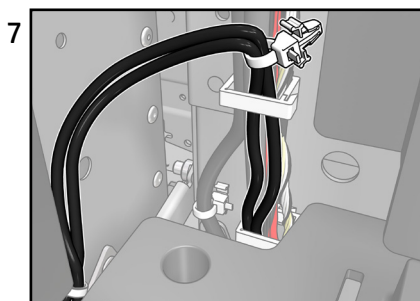
Locate the cable



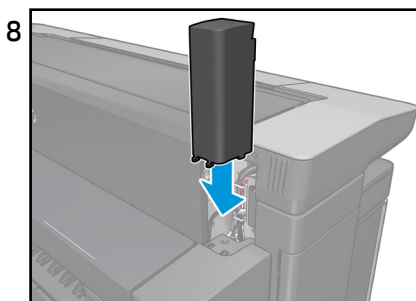
Detach the cable with the clamp



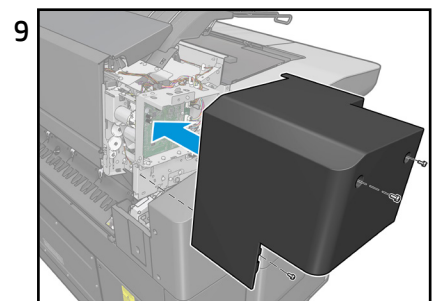
Open the saddle part to route the
cable



Route the cable as show the graphic
and close the saddle part



Replace the rear corner cover left
(only for HP PageWide XL 5000/5100
/6000 Printer Series)



Replace the 3 screws and the left
paper-output stacker cover (HP
PageWide XL 4000/4500 Printer
Series)

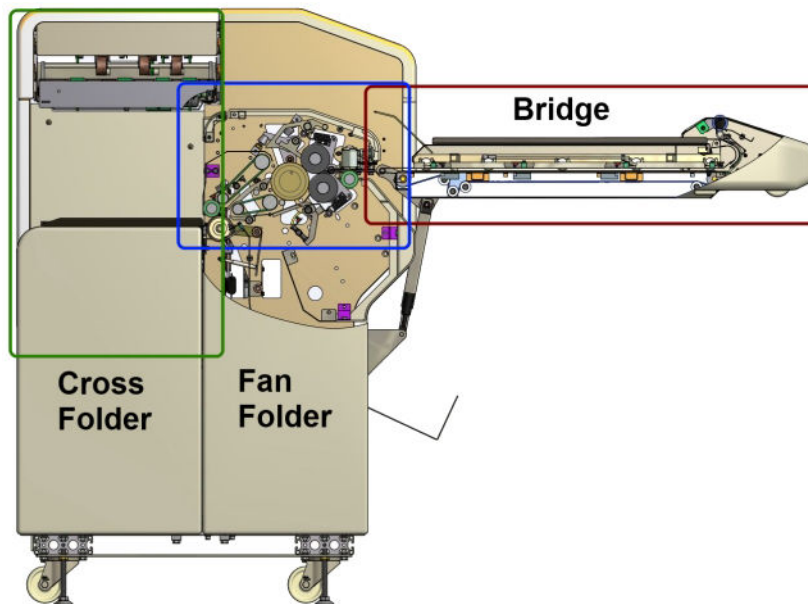
13 Folder F70/F60

 **IMPORTANT:** The information in this chapter is preliminary.

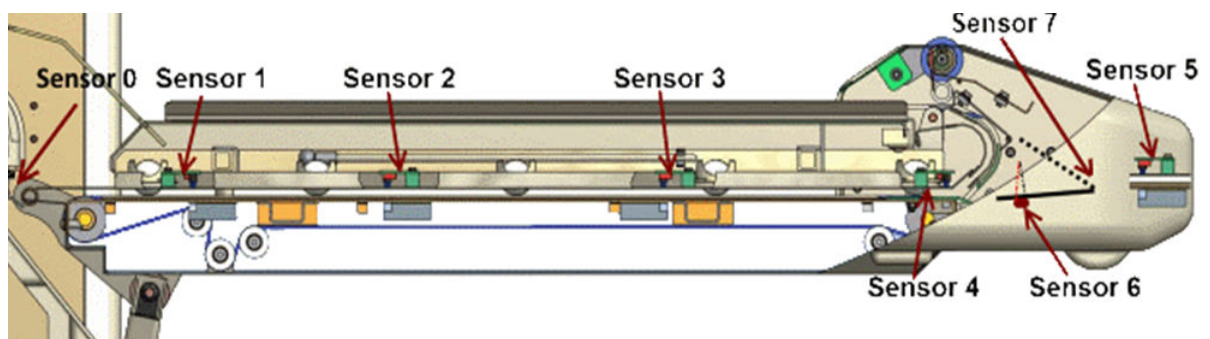
- [Folder overview](#)
- [Folder versions](#)
- [Folder fundamentals](#)
- [Folder specifications](#)
- [Functional description](#)
- [Connecting to the printer](#)
- [Folder assembly instructions](#)
- [TAB Unit assembly/disassembly instructions](#)
- [System error codes](#)
- [Troubleshooting](#)
- [Reset to factory defaults \(from service menu\)](#)
- [Firmware update](#)
- [Service](#)
- [Adjust folding quality](#)
- [Folding quality specifications](#)
- [Service menu – Parameter configuration: Fan-fold settings](#)
- [Service Menu – Parameter configuration: Cross-fold settings](#)
- [Service Menu – Parameter configuration: Set part number](#)
- [Service Menu – Configuration file](#)
- [Folder electrical devices](#)
- [Folder parts and diagrams](#)
- [Maintenance activity](#)
- [Folder reshipment](#)

- [Purchase of tabs](#)

Folder overview

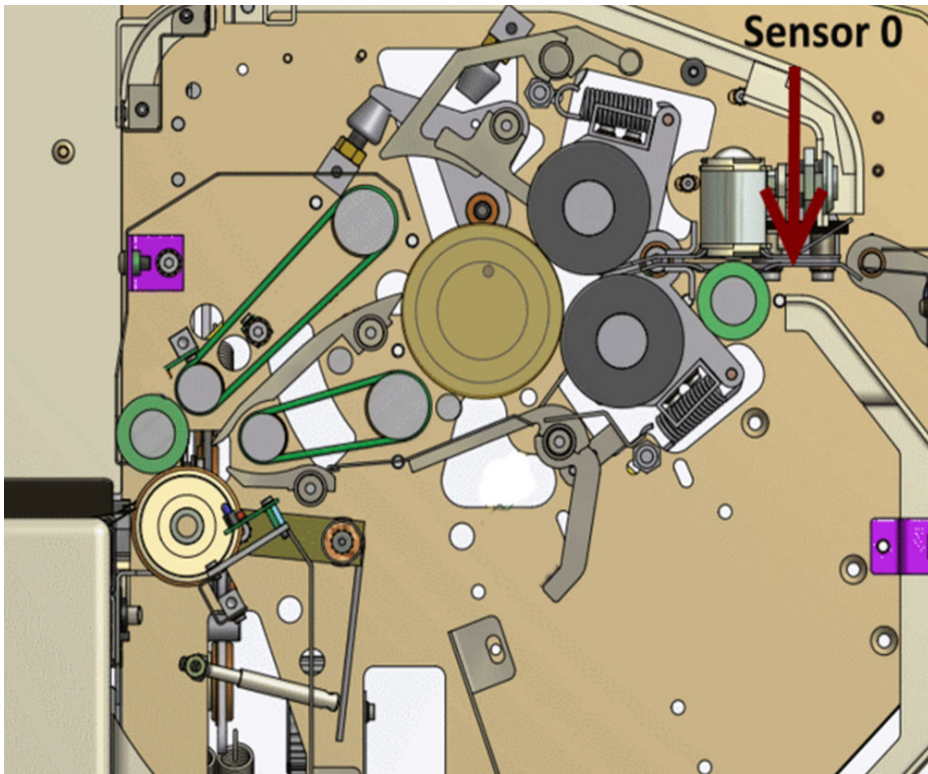


Bridge

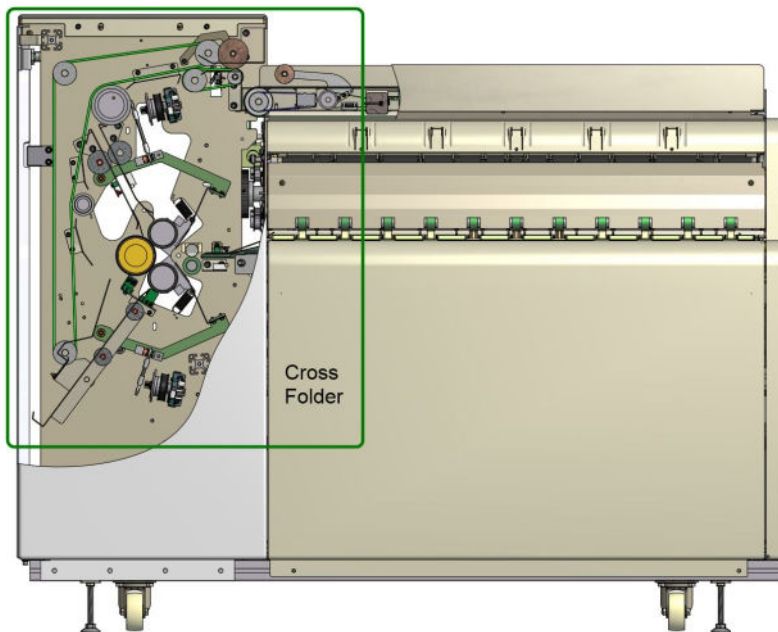


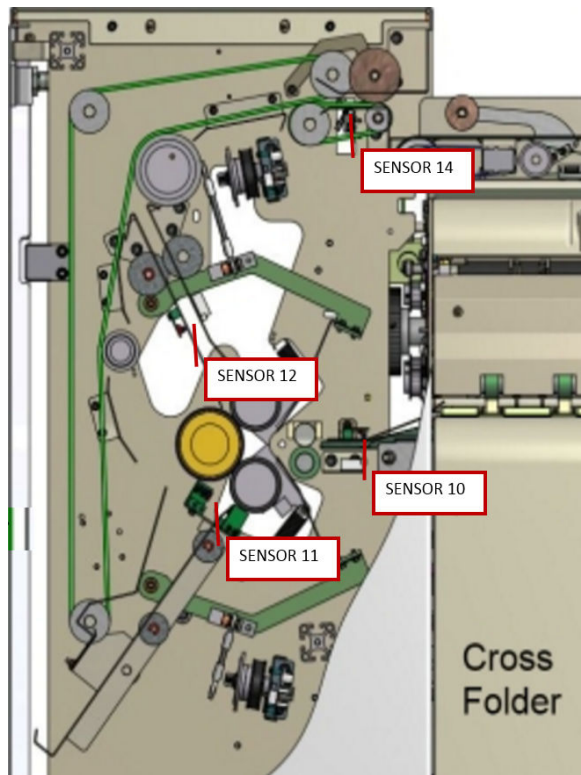
- Sensor 0: First sheet
- Sensor 1: Last sheet for copies 420–530 mm
- Sensor 2: Last sheet for copies 540–710 mm
- Sensor 3: Last sheet for copies >720 mm
- Sensor 4: Bridge entry sensor
- Sensor 5: Entry interface
- Sensor 6: Flap position

Fan-folder



Cross-folder





- Sensor 10: Cross-folder entry sensor
- Sensor 11: First sheet (lower start)
- Sensor 12: First sheet (upper start)
- Sensor 14: Cross-folder exit sensor

Folder versions

There are nine versions of the HP PageWide XL folder:

- HP F70 folder (K5H75A)
- HP PageWide XL series folder with tab applicator (L3M58A)
- HP F70 folder with tab applicator (L3M58B)
- HP PageWide XL series folder with tab applicator for Nordic countries (W9C05A)
- HP F70 folder with north tab applicator (W9C05B)
- HP F60 Folder (1EW99A)
- HP F60 folder with tab applicator (1EX00A)
- HP F60 folder with tab applicator (1EX00B)
- HP F40 folder (3JJ54A)

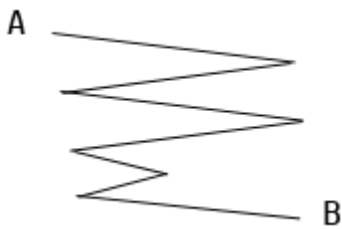
The standard tab applicator supports a binder strip of 111 mm width. The Nordic tab applicator supports a wider binder strip.

Folder fundamentals

Folding styles review

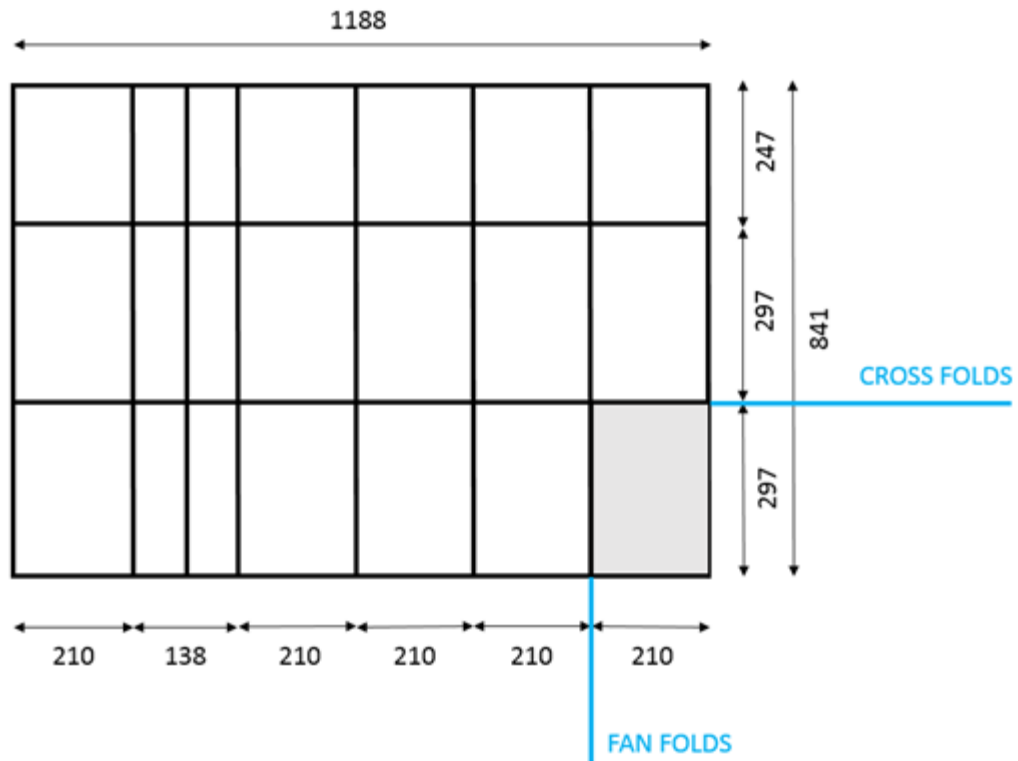
DIN B folding

Folds a packet with no margin (the dimensions depend on the folding style chosen). This folding style is useful if a Tab is needed or if you want to keep the folded documents into A4 size folder. This type of folding is also called **compensated folding**. If you want to place a Tab on the last fold, this requires a last fold of size 210 mm. In order to do so, the previous panel must be slightly smaller to compensate for the length of the media. Edge A and edge B are all the time on opposite sides:



Folding styles supported:

- DIN B 210x297



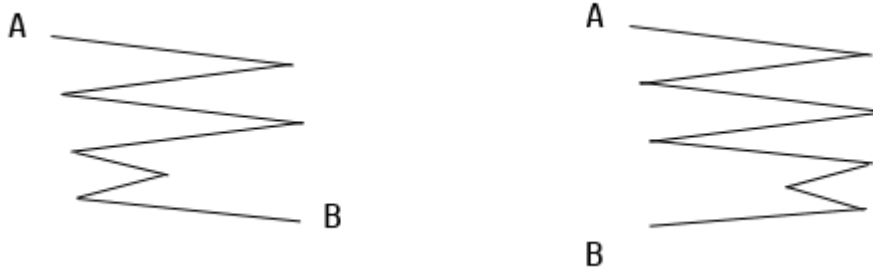
- DIN B 210x305
- DIN B 210 TAB

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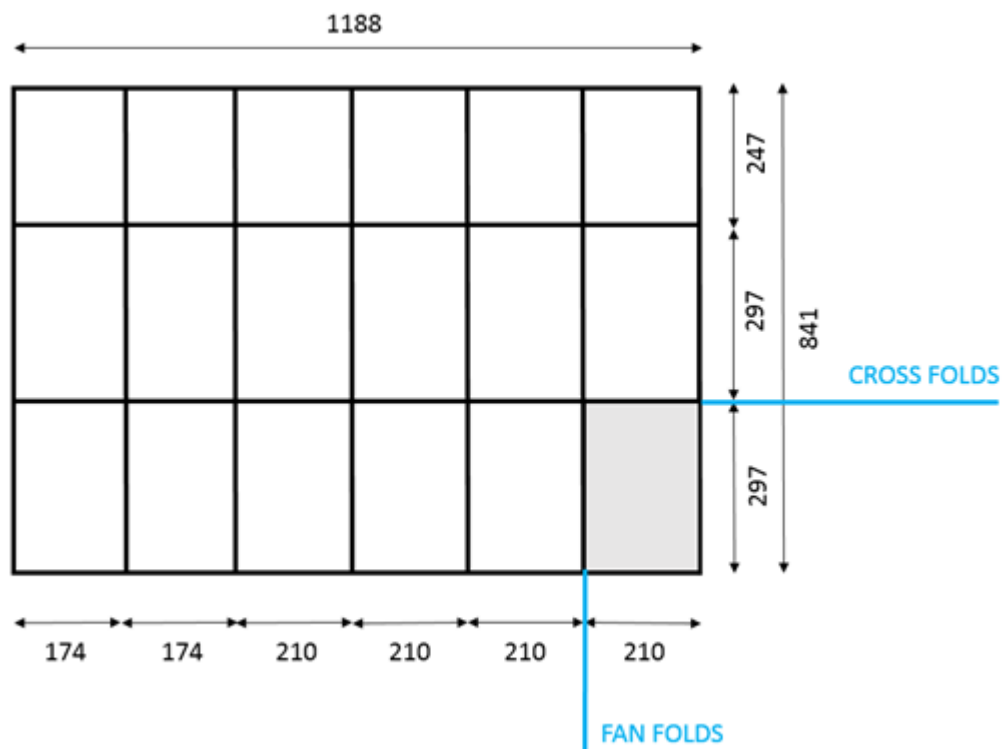
- DIN B 198 TAB
- DIN B 210x310

DIN C folding

Folds a packet with no margin (the dimensions depend on the folding style chosen). This type of folding is also called **uncompensated folding**. Edge A and edge B can be on the same side or on opposite sides.



- DIN C 210x297



DIN A folding

Folds a packet with margin. This folding style is useful if you need a margin for binder holes or labels.

Folding styles supported:

- DIN A 190/20x297: 20mm margin
- DIN A 170/40x297: 40mm margin

Fan-fold only

No cross-fold folding. Commonly used with long plots.

- Fan-fold only 210
- Fan-fold only 8.5*

Inverse DIN

Very useful if the title box is set with the Title Block in the upper left corner.

- Inverse DIN 210x297

AFNOR

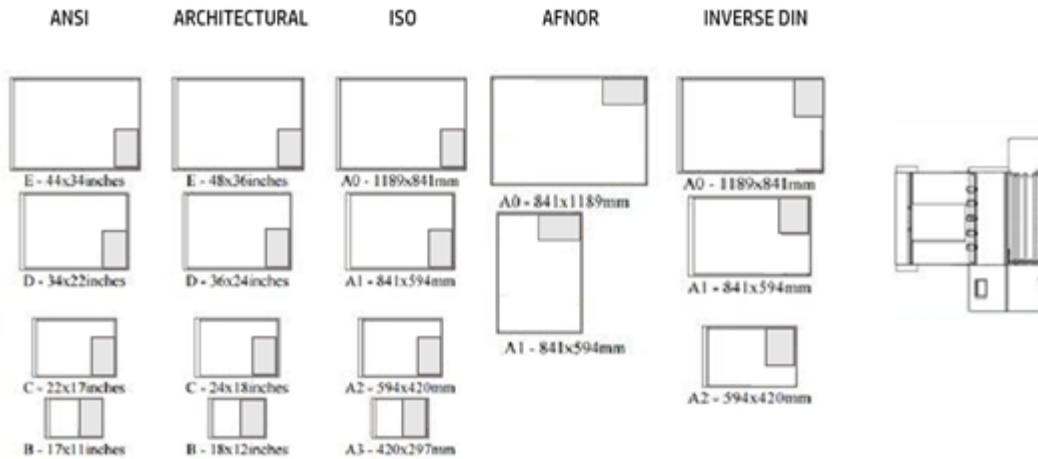
This folding style, commonly found in France, folds into A4 size packets (210 mm x 297 mm) with the Title Block in the upper right corner. The longer dimension will be folded at the fan-fold (297 mm) and the short dimension will be folded at the cross-fold (210 mm).

- AFNOR 297x210

Other

- Not Folded: use the bridge as a Stacker.
- DIN 185/25x297
- ANSI 8.5x11*
- ANSI 7.5+1x11*
- ARCH 9x12*
- Mailer 7.5x10*

Title box position



Folder specifications

Specifications for the KH575/L3M58A/L3M58B Folders

Sheet folding	Face-up
Folding options	Fan-fold, cross-fold, no-fold
Folding standards supported	DIN 824, ANSI, AFNOR, fan-fold
Cross-folding style	“Z” type and “M” type
Maximum speed	23 m/min
Minimum speed	Minimum speed of the printer
Compatible with printer basket	Yes
Maximum paper width	914 mm (36 in)
Maximum paper path width	950 mm ± 2 mm
Minimum paper size	A4 landscape
Fan-folded panel size range	170–305 mm
Cross-folded panel size range	210–310 mm
Maximum length of cross-folded job	2.5 m
Maximum length of fan-folded job	6 m (or longer if customers purchase additional license)
Justification	Center
Margin size range	0–40 mm
Paper weight range	75–90 g/m ²
Stacking on folder bridge	Yes
Folder bridge stacking capacity	10 A0 sheets
Folder bridge stacking maximum width	914 mm (36 in)

Specifications for the KH575/L3M58A/L3M58B Folders (continued)

Support for manual folding	Yes
Number of conveyor trays for cross-folding	1
Conveyor tray capacity	150 A0 sheets
Folder capacity sensors	Conveyor full, out of tab labels, paper on bridge
Folding accuracy	DIN (± 2 mm)
Folder life	900,000 A0 sheets or equivalent length
Front panel	No
LED indicators	Yes
Maximum start-up time	30 s
Power cords	Four different sets
Voltage range	100–240 V
Power save modes	Sleep, Ready
Maximum power consumption	400 W
Operating temperature	15–35°C
Operating humidity	20–80%
Dimensions	1.85 × 1.4 × 1.05 m
Dimensions with tab applicator	2.18 × 1.4 × 1.07 m
Weight	310 kg
Weight with packaging	365 kg
Weight with tab applicator	360 kg
Weight with tab applicator and packaging	408 kg
HP printers supported	HP PageWide XL series, except 3900/4000/4100/4500/4600 MFP



NOTE: High density ink plots may cause a higher number of jam interventions. See [Paper jam in roll tray when plot has high ink density areas on page 1477](#) to troubleshoot.

Specifications for the 1EW99A/1EX00A/1EX00B Folders

Sheet folding	Face-up. Printer delivers the job face up.
Folding types supported	Fan-fold, cross-fold. Printer will bypass jobs. Folder to allow bypass operation to the BIN.
Folding standards supported	DIN 824, ANSI, AFNOR, fan-fold only
Custom package dimensions	Supported within the allowed range
Cross-folding style	“Z” type and “M” type
Max linear speed supported	10m/min

Specifications for the 1EW99A/1EX00A/1EX00B Folders (continued)

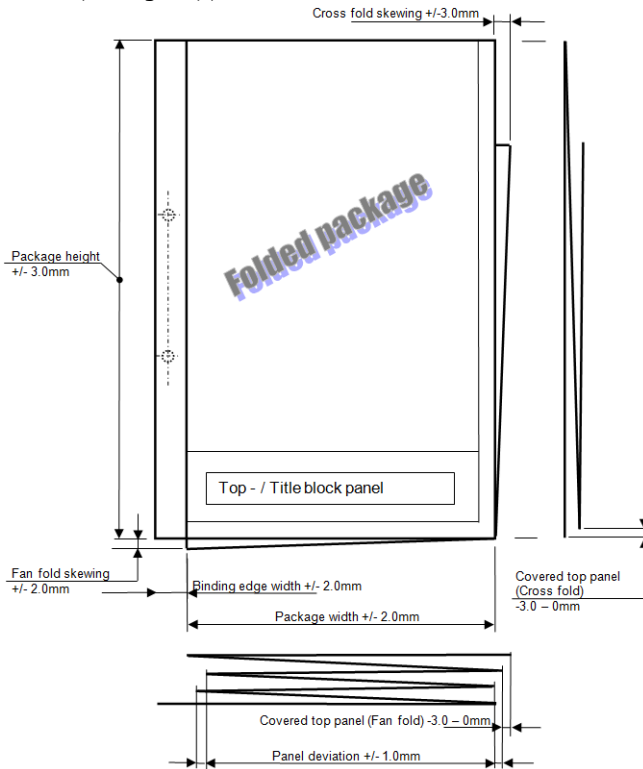
Minimum folding speed	Min speed supported by the printer
Interface support for printer sheet exit mode, sheet exit mode support including the BIN exit	Same as the current HP PageWide Folder
Sheet exit mode support inside the device, excluding the BIN exit	Same as the current HP PageWide Folder
Maximum paper width supported	914 mm
Maximum paper path width	950 mm +/- 2 mm. To allow for skew and side loading.
Maximum sheet size supported for fan- and cross-folds	914 x 2500 mm long. Default: 13 layers (13 x 210 = 2730 mm).
Minimum sheet size supported	A4 landscape
Minimum folded length supported	410 mm
Min / max fan panel folded length	170 / 305 mm Supports AFNOR
Min / max cross panel folded length	210 / 310 mm
Maximum length of cross-fold jobs	13 layers Media = 75-80 gsm
Maximum foldable fan-fold length (not cross-fold)	28 layers Media = 75-80 gsm
Media justification	Center
Media-set to be supported	Best quality 75-90 gsm
Stacking on folder bridge	No
Basket for non-supported media	Same as the current HP PageWide Folder
Number of trays in the folder for cross-folding	Same as the current HP PageWide Folder
Maximum package capacity for conveyor tray	100 A0
Folder capacity sensors	Out-of-TAB labels warning
Folding accuracy	Same as the current HP PageWide Folder
Folder jam rate	Same as the current HP PageWide Folder
Folder life	900K A0 or equivalent length. Total life of the folder.
Front panel	All folder related tasks managed from the printer
LED indicators	Yes
Printer-to-folder- sheet handover specs	Same as the current HP PageWide Folder
Maximum start-up time to Ready	Same as the current HP PageWide Folder

Specifications for the 1EW99A/1EX00A/1EX00B Folders (continued)

LE Folder options	Long plot license (plots longer than 6 m) Same as the current HP PageWide Folder
Maximum plot length folded without interruption	4620 mm Default: 22 layers (22 x 210 = 4620 mm) Max: 28 layers (28 x 210 = 5880 mm)
Power cords	Same as the current HP PageWide Folder
Voltage range	100v-120v 200v-240v

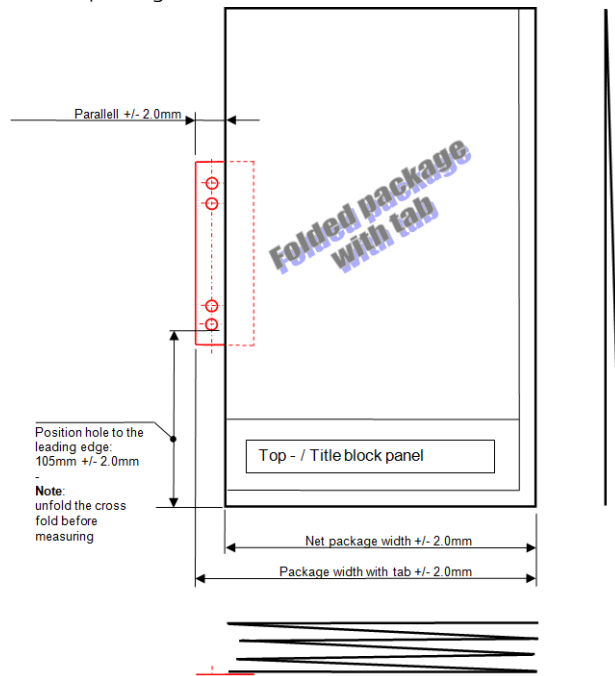
* All specs have been defined with 80 gsm media.

Folded package (applicable to all folder SKUs)



For HP-authorized personnel only

Folded package with tab



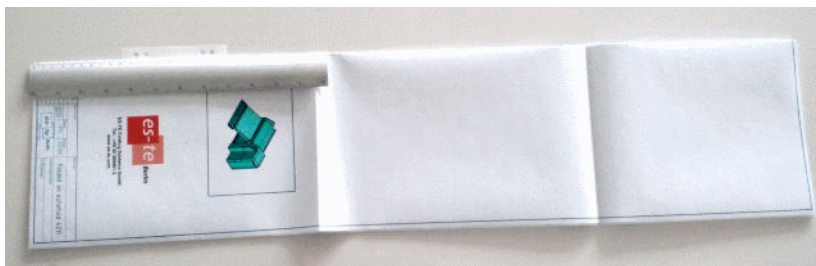
 **NOTE:** All the folding specifications are referenced with a one meter plot length.

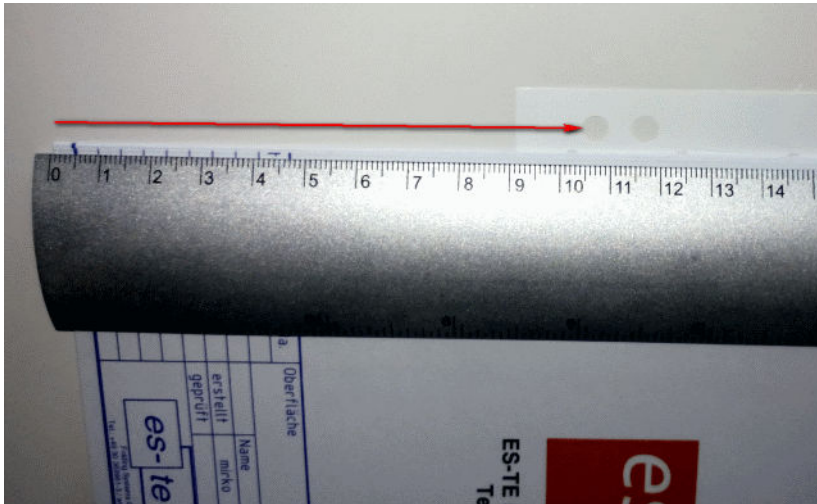
Tab accounting

- The tab count will be reported after every 25 tabs consumed.
- After the tab count reaches 300, the tab count is reported after every 5 tabs consumed.
- The Tab will be refreshed/saved whenever the printer is rebooted.

Tab position

 **IMPORTANT:** Larger pages must be unfolded in order to measure the tab position.





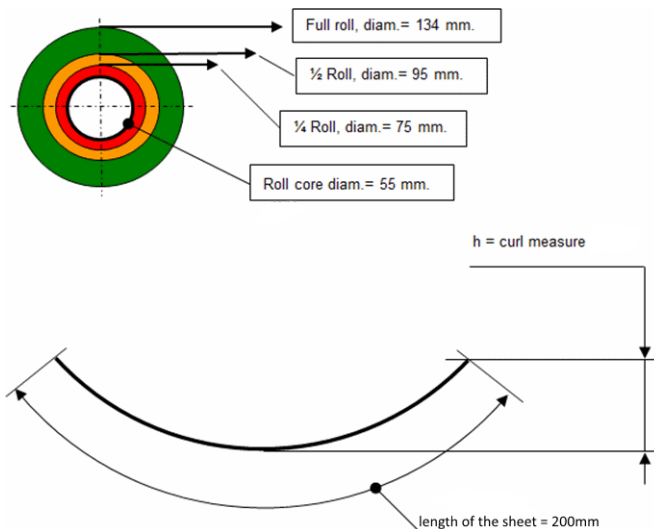
Paper curl

Severe paper curl has an effect on the quality and reliability of the system. Print-quality issues and paper jams could result from a curl greater than 30 mm.

To measure the paper curl, cut a piece 200 mm long from the copy and lay it face down on a table. Measure the distance between the table's surface and the highest point of the paper.

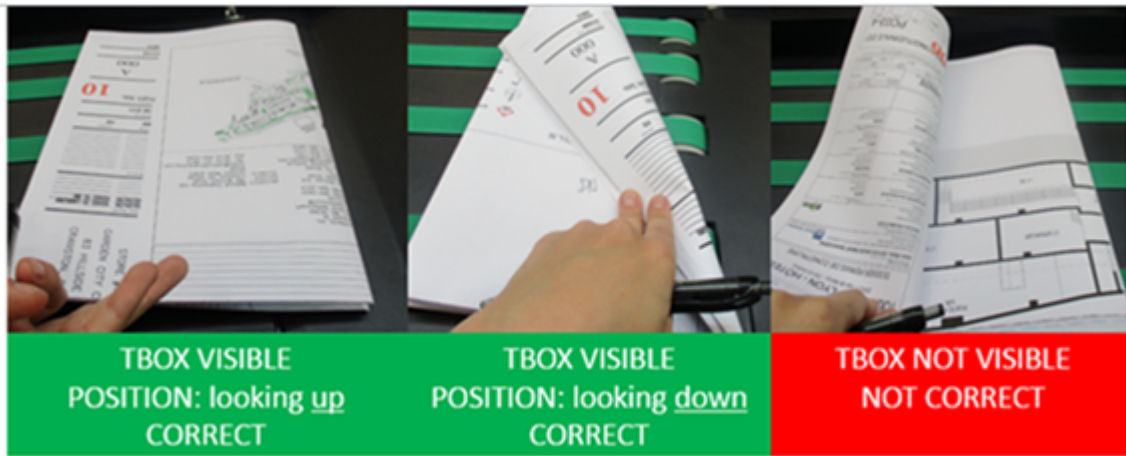
Effects of curl

- Curl < 30 mm: Should not be a problem.
- Curl 30–50 mm: Possible paper jams and unstable tab position
- Curl > 50 mm: Out of specification



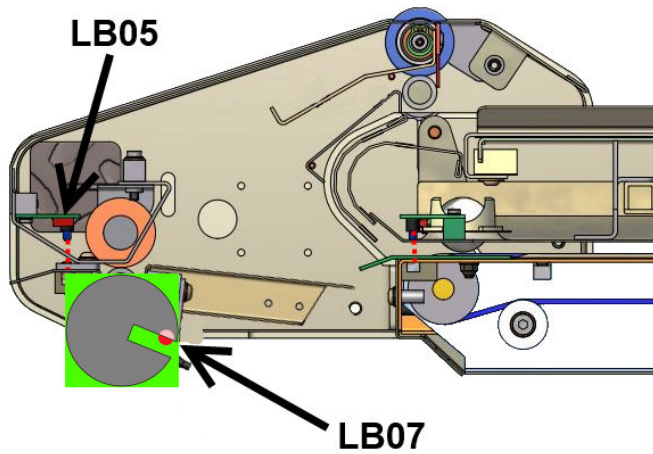
Title block visible

A correct folded package is one as shown in the first and second images (title block visible either facing up or down).

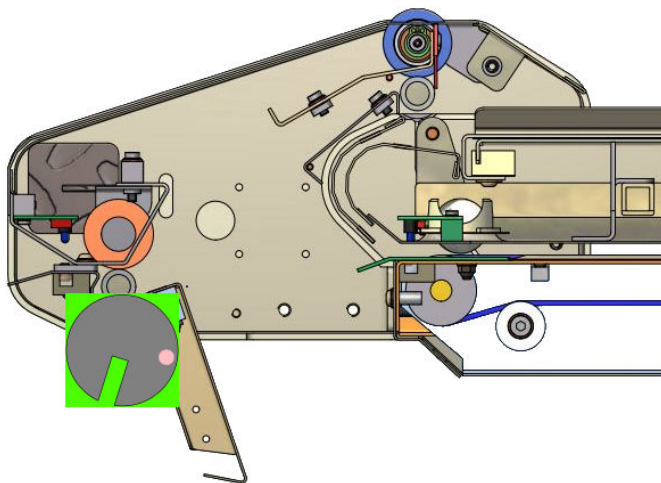


Functional description

Interface operation



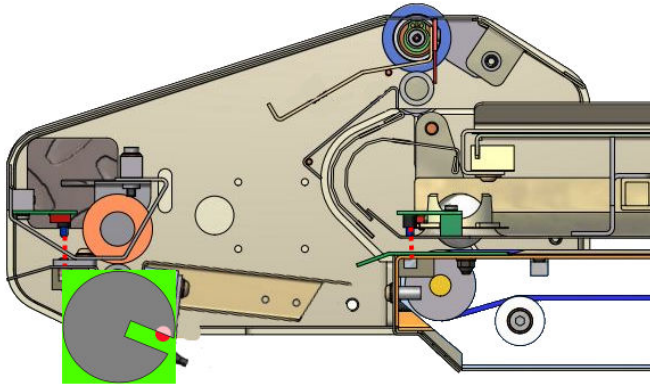
- The paper arrives at LB05; the flap moves to the position defined by the job ticket.
- LB07 defines the INIT position, FOLD and STACK are defined by the motor steps after INIT.



OFF position

Sensor LB07 is fully covered by the disc.

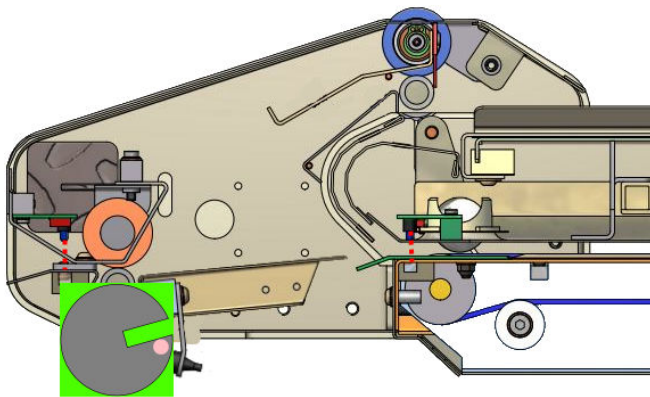
- Power off
- Error
- Sleep



INIT position

LB07 becomes free at this position. From here, steps (value: Flap Fold Steps) are counted to the FOLD position.

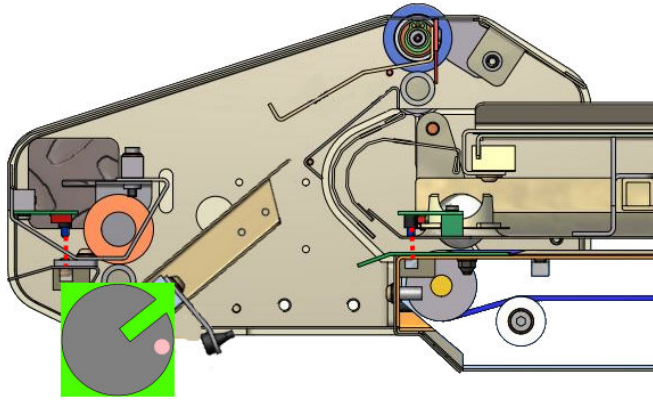
- The flap never stops here.



FOLD position

Counted steps (value: Flap Fold Steps) after INIT. See [Flap fold steps on page 1569](#).

- Default position after power on



STACK position

Counted steps (value: Flap Stack Steps) after FOLD position. See [Flap stack steps on page 1571](#).

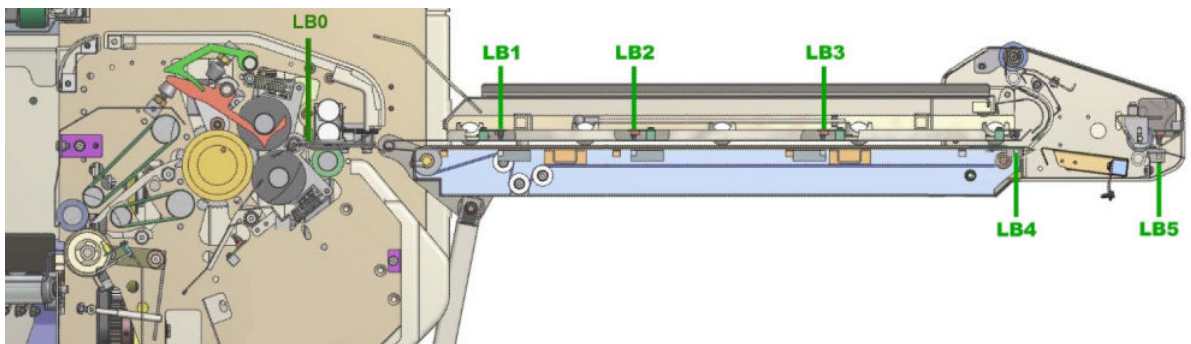
- For flat-sheet stacking

Fan-folder operation

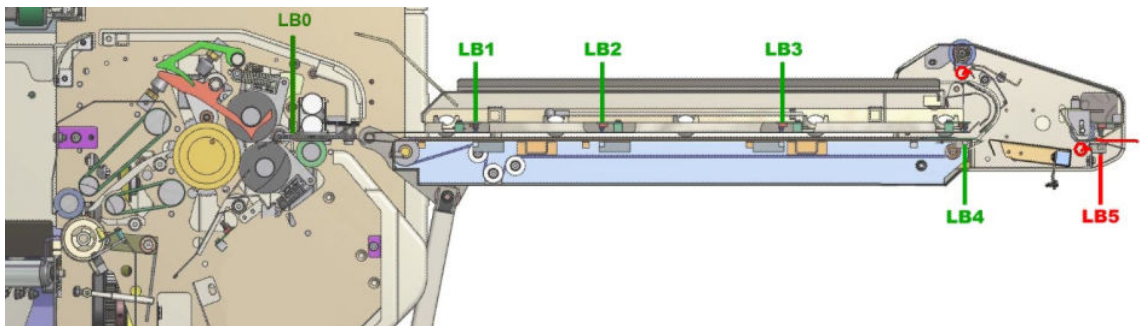
This section describes the fan-folding process. In outline, it describes:

1. What happens when the leading edge passes the different light sensors.
2. What happens when the trailing edge leaves the light sensors.
3. The final folds and the output of the folded sheet.

Initially the folder is awaiting paper input:

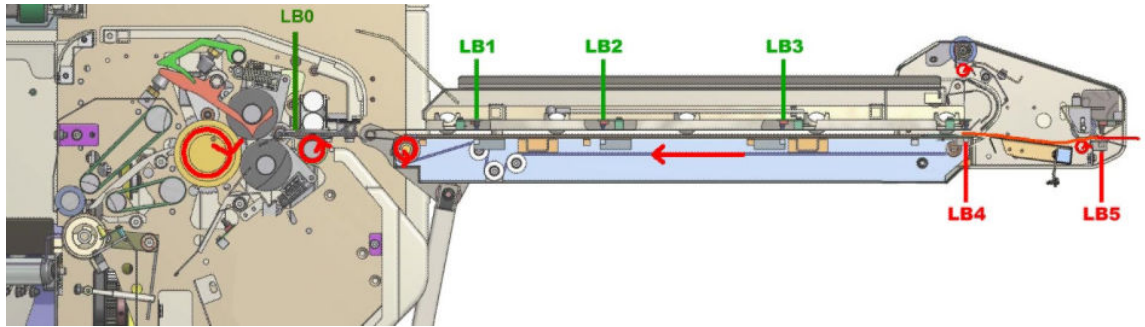


1. The leading edge passes the light sensor LB5.



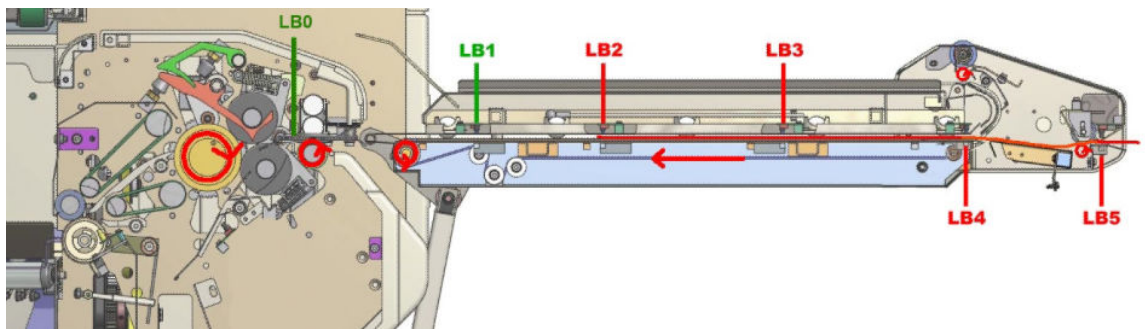
- The interface motor FF-X46 starts rotating.
- The interface transport pulls the paper sheet through with a speed of 18 m/min, regardless of the printer's speed.
- There is always a slip between the paper and the interface transport.

2. The leading edge passes the light sensor LB4.

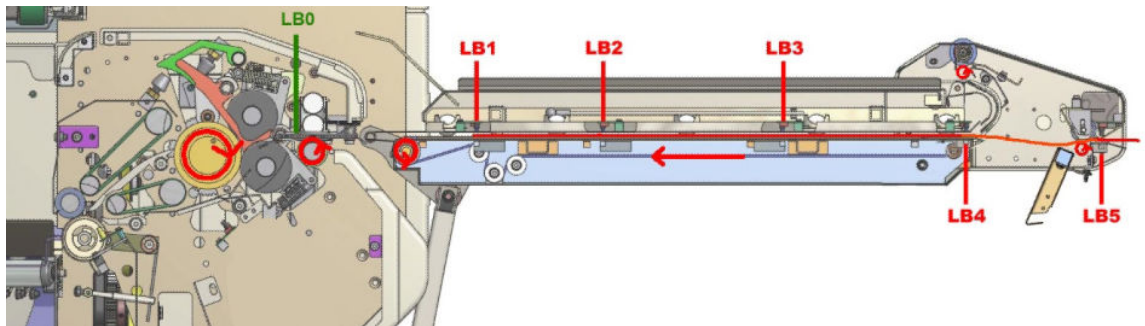


- The main motor FF-X47 starts rotating.
- It runs at high speed, as set in the Service.
- There is a slip between the transport belts and the paper.
- This motor actuates the bridge transport, the fan-folder entry transport, and the folding rollers.

3. The leading edge passes the light sensor LB2.



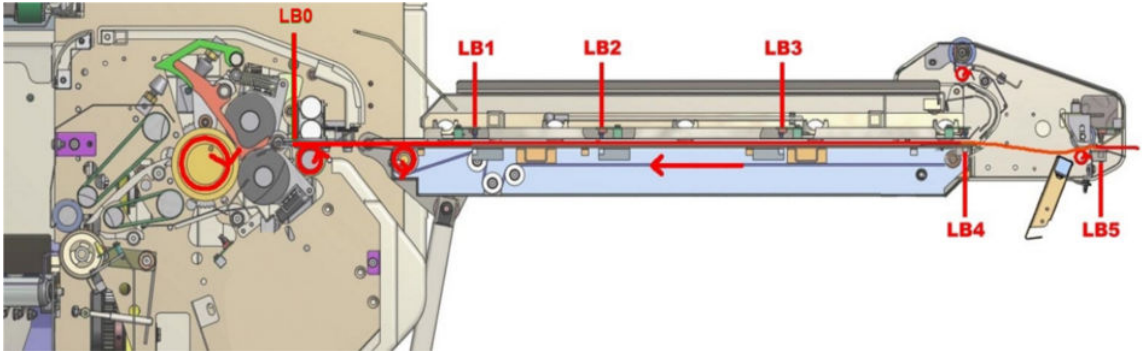
4. The leading edge passes the light sensor LB1.



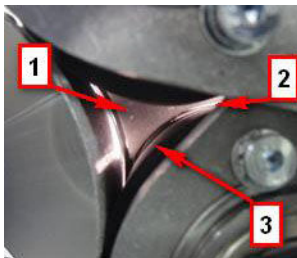
- The paper guide FF-X49 operates.
- The FF-only exit guide FF-X45 operates in case a very short sheet arrives, which will be passed directly to the transport roller tray.

- The interface flap FF-X41 moves down to provide space for a small compensation buckle which could develop.
- The main motor FF-X47 switches to online speed, which is synchronized with the printer's speed.

5. The leading edge passes the folding triangle.

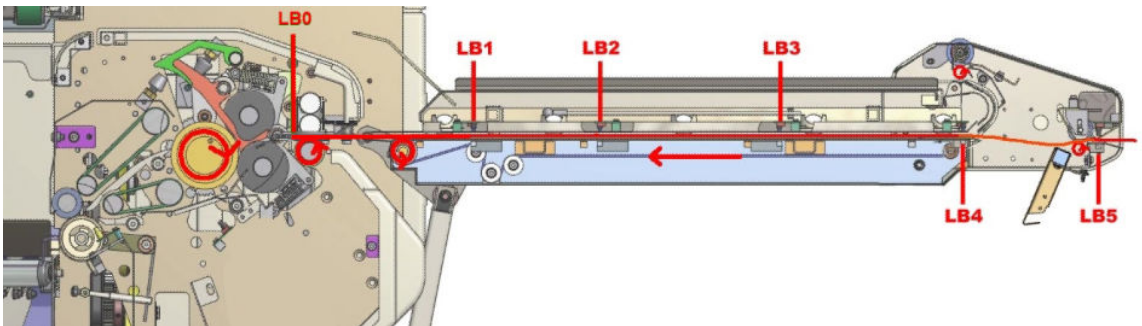


- The paper guide FF-X49 defines the path for the leading edge of the paper.
- It prevents the paper from contacting the reverse-turning upper folding roller and pushes it between the turning metal roller and the lower folding roller.
- The illustration below shows a well adjusted paper guide. For further information please check [Adjustment of the Fan-fold paper guides on page 1522](#).



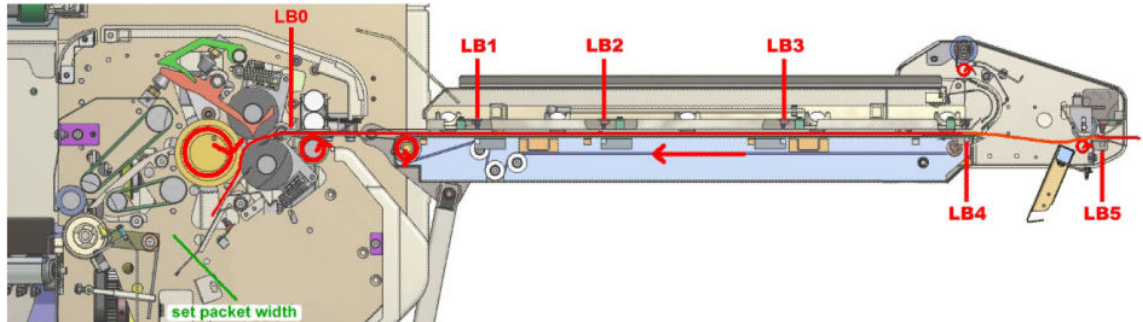
- 1: Actuated paper guide
- 2: Paper path
- 3: Even distance between the guide and the folding roller

6. The leading edge passes the light sensor LBO.



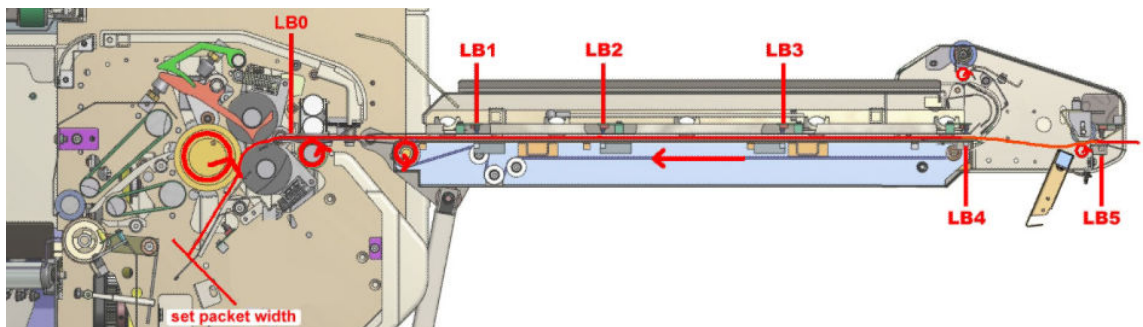
- The paper guide FF-X49 moves back to the home position.
- The FF-only exit guide FF-X45 moves back to the home position.
- The counting of motor steps begins.

7. The counting of motor steps.



- LB0 is cut.
- The length between the folding triangle and the LB0 is known exactly.
- The controller counts the steps of the motor until the set packet length is reached (such as 210 mm, 198 mm, 8.5 in, or 12 in).
- One motor step represents a specific length.

8. The set packet length is reached.

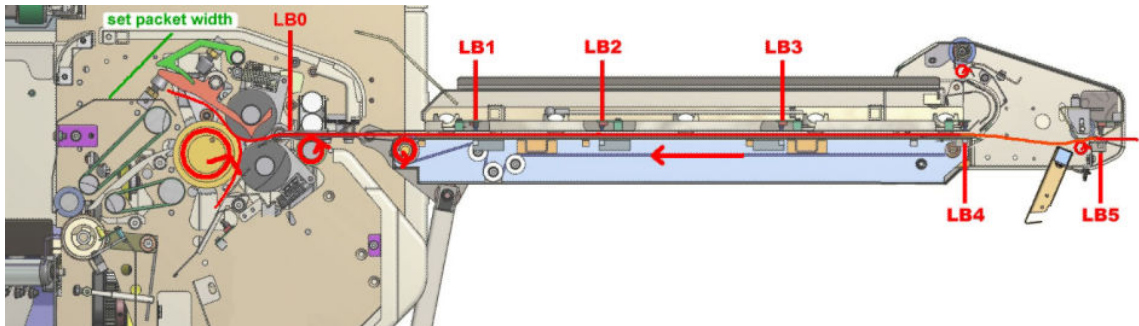


- As soon as the packet length is reached, the motor reverses direction.
- The first fold is made.

 **IMPORTANT:**

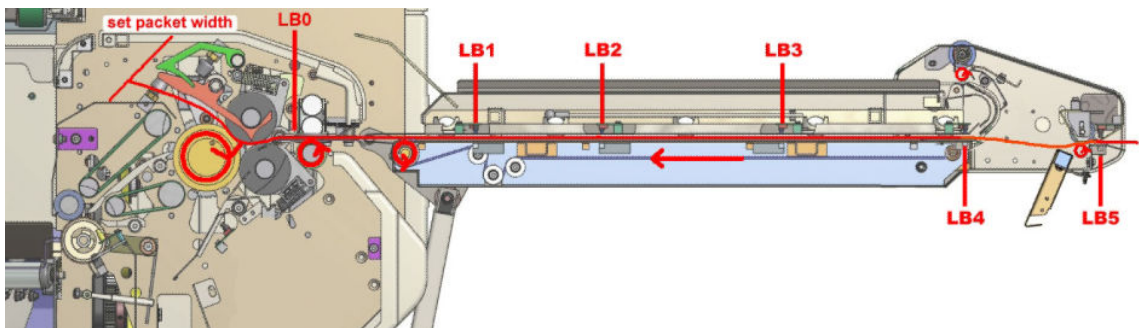
- The most important factor in successful folding is the paper transport up to the folding triangle.
- It is produced by the axis and the steel bowls in front of the folding triangle.
- If there is a slip, the paper is not pushed correctly inside the folding triangle.
- This causes an incorrect packet width and different widths of every fold.
- If you see a bad fan-fold, check the axis, the bowls, and the clutches.

9. The packet is moved up.



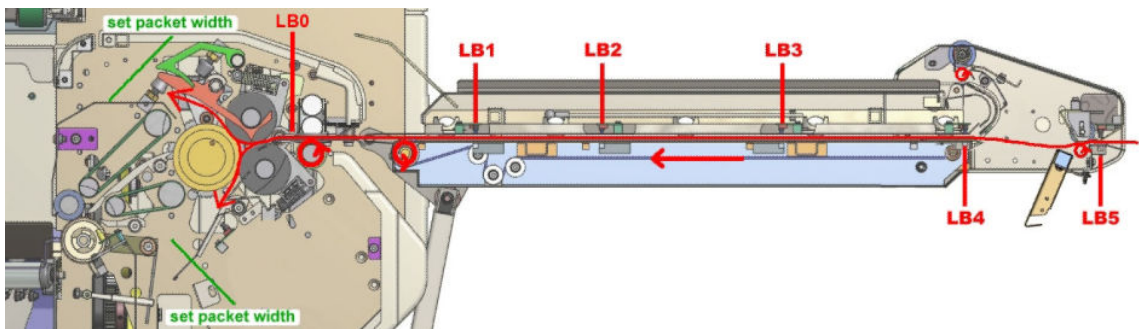
- The rollers move the packet upwards.
- Now no light sensor is involved; steps are counted to reach the upper position.
- This position corresponds to the packet width.
- Again, the accuracy of the transport axis and bowls in front of the folding triangle are most important.

10. The packet is moved down.



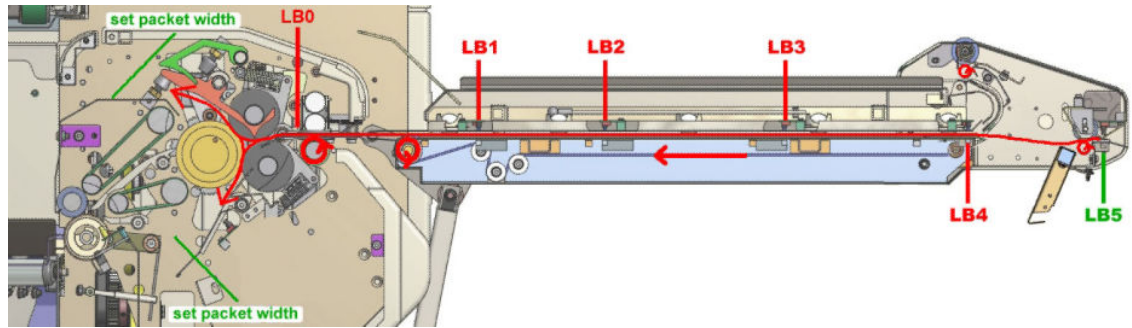
- The packet length is reached again.
- The motor reverses again.
- Another fold is made.

11. The folding process.

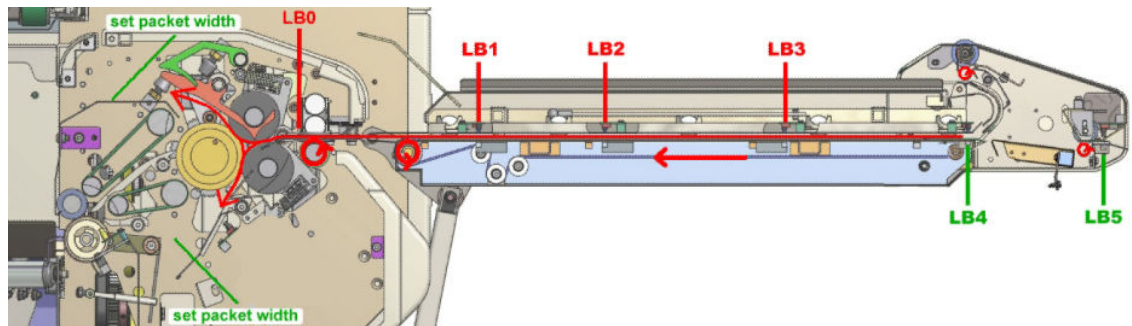


- The packet is moved up and down to create folds as long as paper is on the bridge.

12. The trailing edge leaves light sensor LB5.

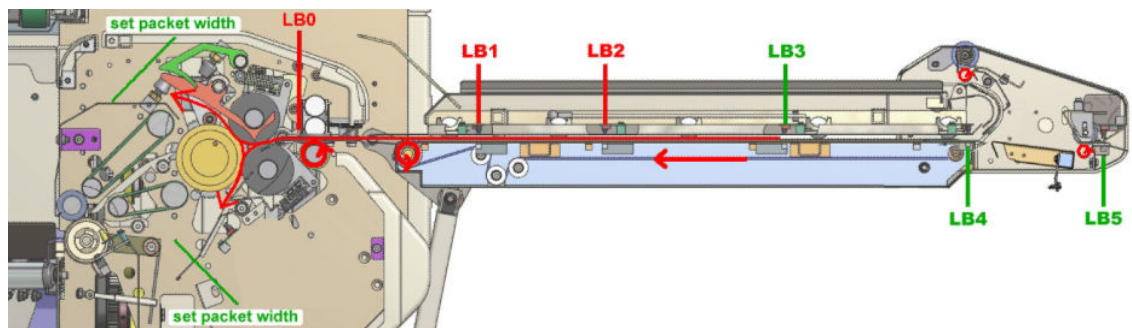


13. The trailing edge leaves light sensor LB4.

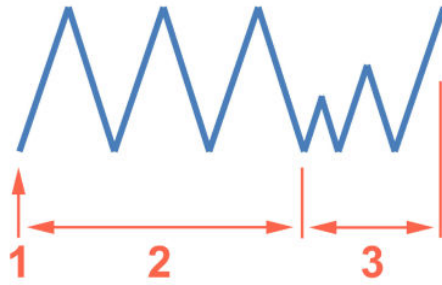


- The interface flap moves up.
- A new sheet can enter the folder.

14. The trailing edge leaves light sensor LB3.

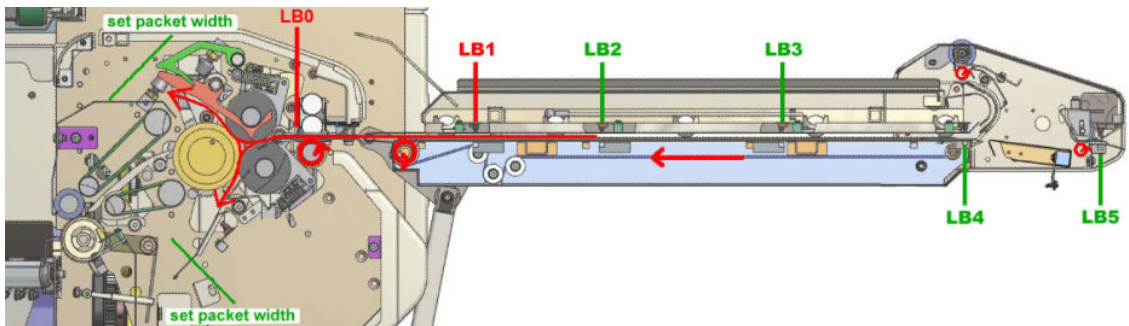


- This light sensor is responsible only for paper lengths greater than 740 mm.
- Now the folder knows the length of the rest of the sheet exactly.
- Depending on the chosen folding style, the folder calculates how the rest should be folded.



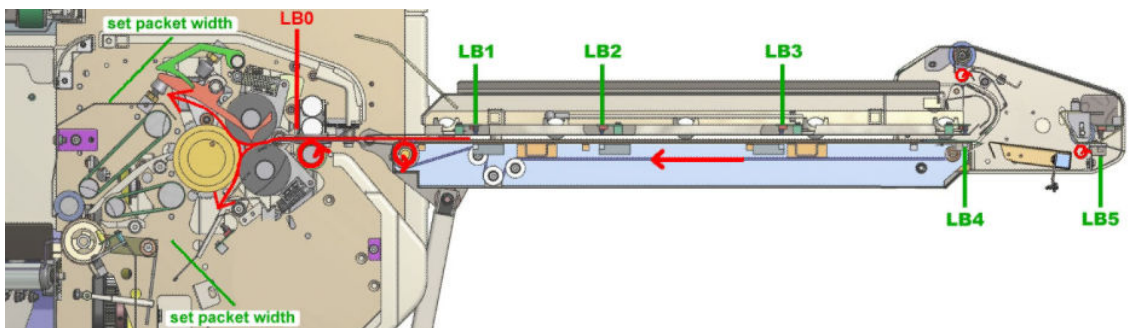
- 1: Leading edge recognized by sensor LB0
- 2: Area within which steps are counted
- 3: Last folds are calculated (with one or two intermediate folds depending on the length) to create a full last sheet

15. The trailing edge leaves light sensor LB2.



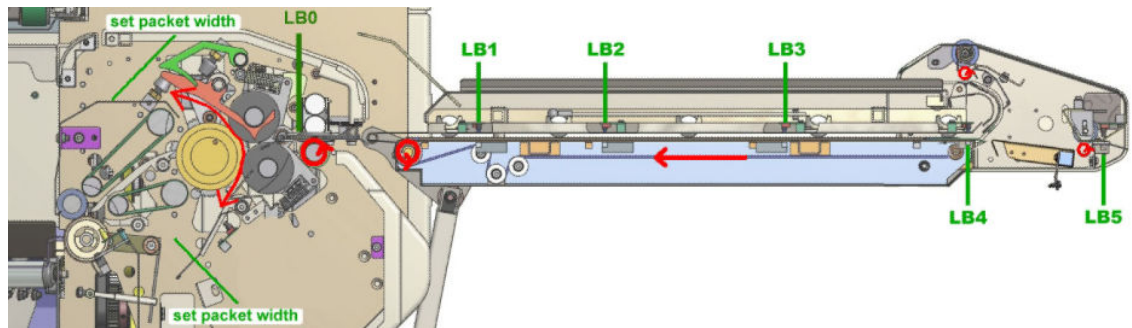
- This light sensor is responsible for paper lengths between 540 and 720 mm.
- At these lengths, it works in the same way as LB3.

16. The trailing edge leaves light sensor LB1.



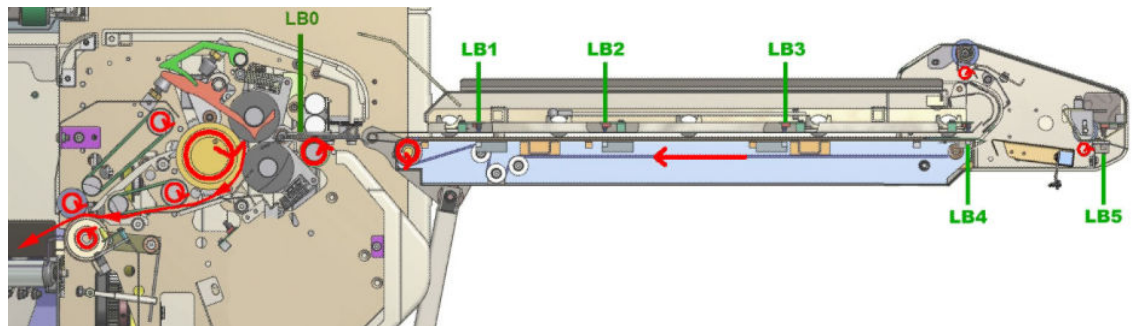
- This light sensor is responsible for paper lengths between 420 and 530 mm.
- At these lengths, it works in the same way as LB3.

17. Finish folding.



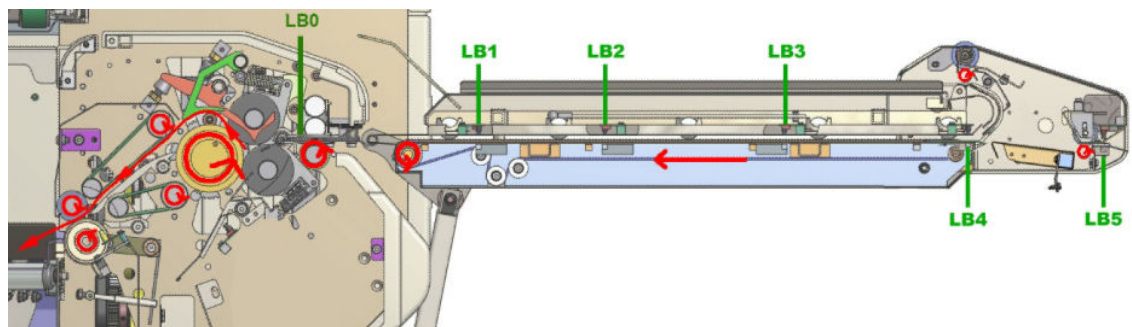
- The folding is done.
- The exit path is chosen depending on the last direction of the folding rollers.

18. Lower exit path.



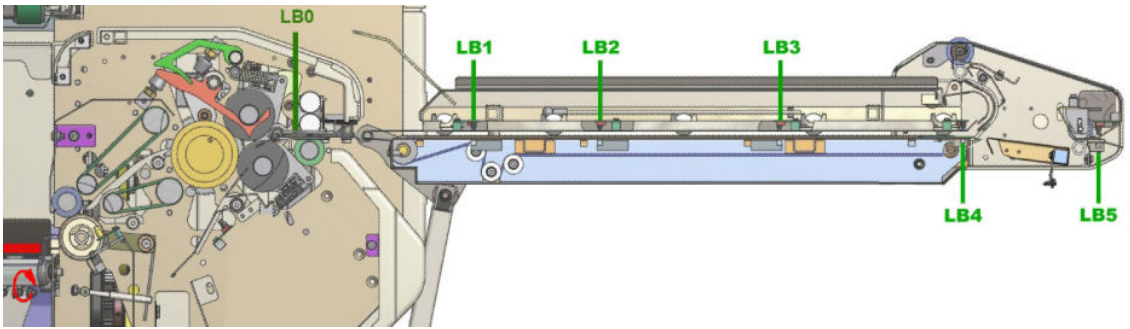
- The FF-only exit guide FF-X45 operates.
- The exit motor FF-X45 starts rotating.
- If the last direction was down, the packet is sent to the lower exit path. For example:
 - When an intermediate fold has been made
 - With some uncalculated folds, depending on the length

19. Upper exit path.



- The upper exit guide FF-X52 operates.
- The exit motor FF-X45 starts rotating.
- If the last direction was up, the packet is sent to the upper exit path. For example:
 - With some uncalculated folds

20. Fan-fold done.

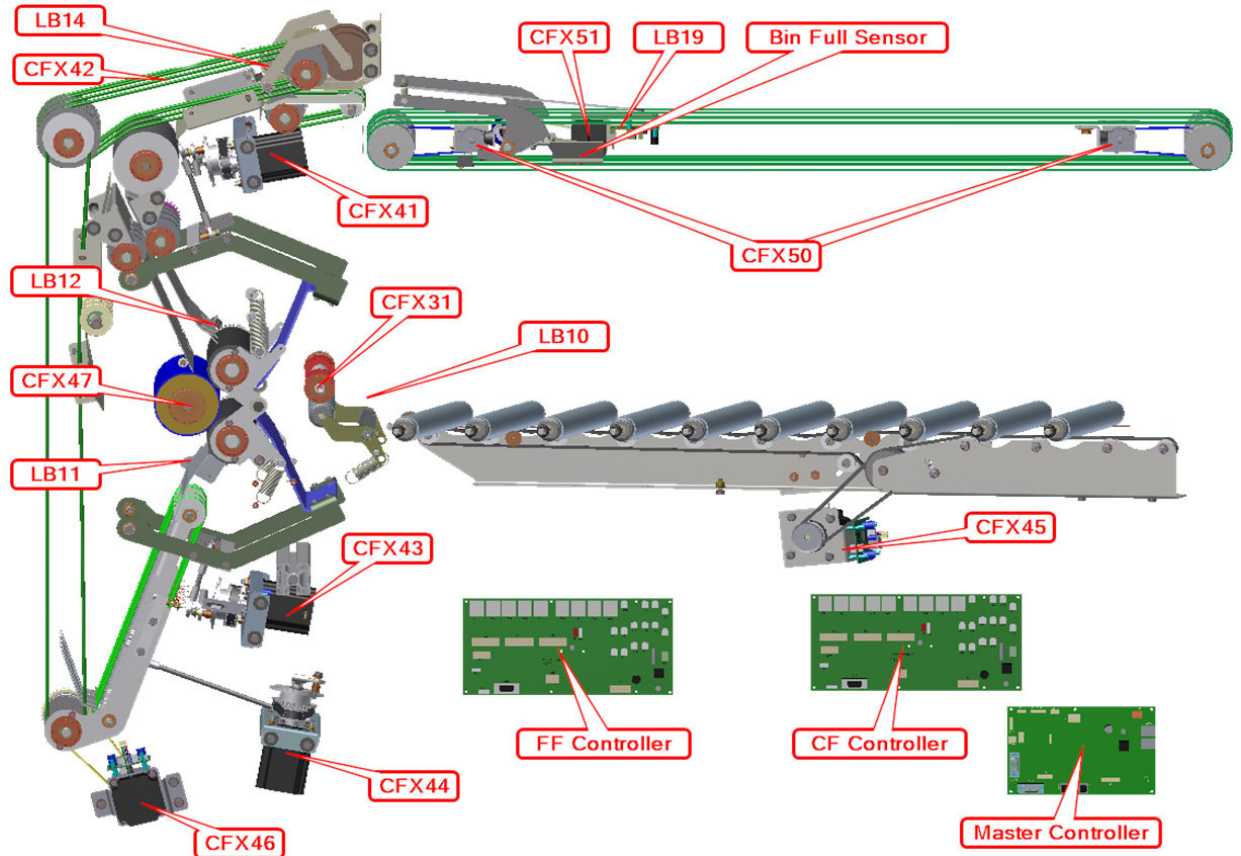


- The packet has been completely transported to the roller tray.
- The cross-folder starts operating.

Cross-folder operation

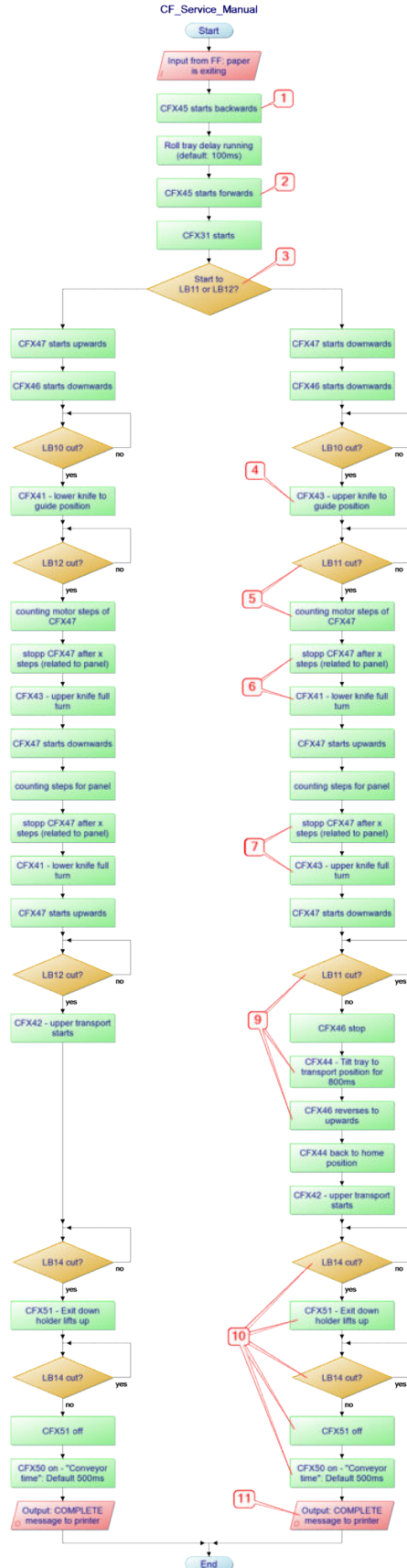
Description

Cross-folder components



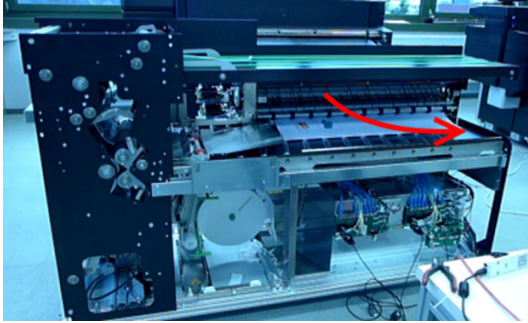
The following flowchart gives a simplified description of the operation of the cross-folder.

Cross-folder flowchart

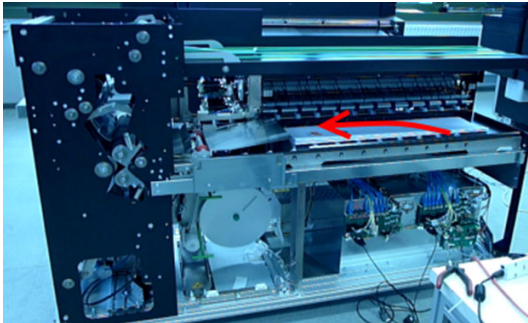


Flowchart notes and illustrations

1. CFX45: The roller tray starts in reverse, pulling the paper out from the fan-folder.



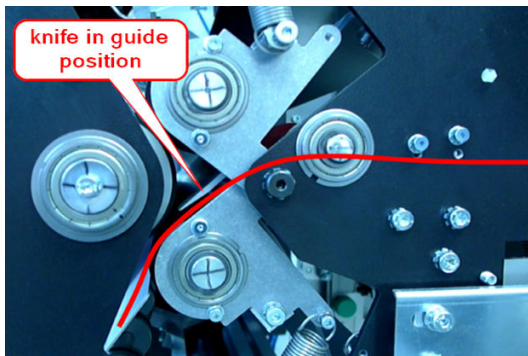
2. CFX45: The roller tray starts feeding the paper into the cross-folder. The angle of the rollers aligns the paper to the alignment path.



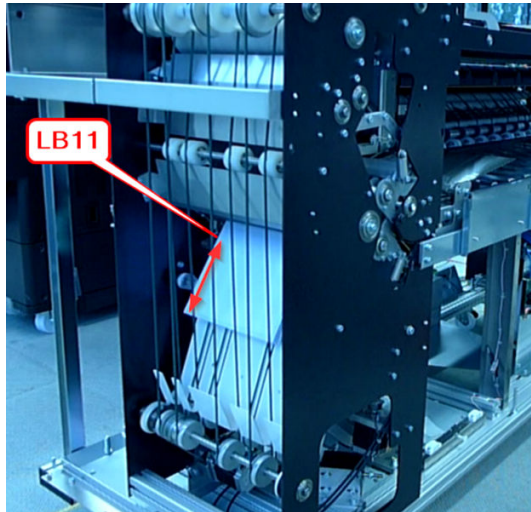
3. According to the position of the title block, the paper may start upwards or downwards in the cross-folder. Examples:

- Downwards to LB11: A0 – DIN B 210×297
- Upwards to LB12: A0 – DIN C 210×297


4. The upper knife goes into the guide position. It guides the leading edge down to LB11.



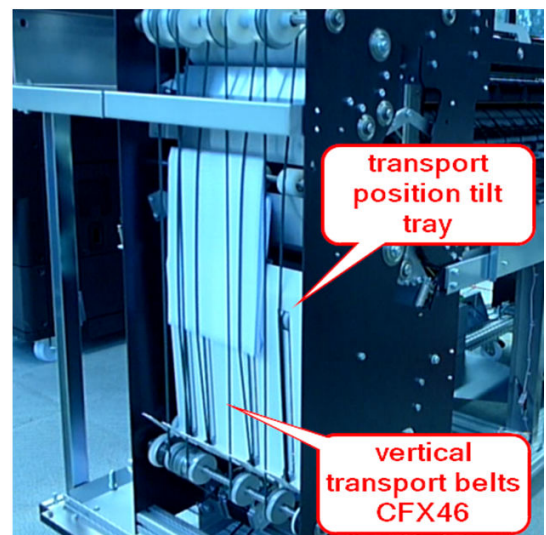
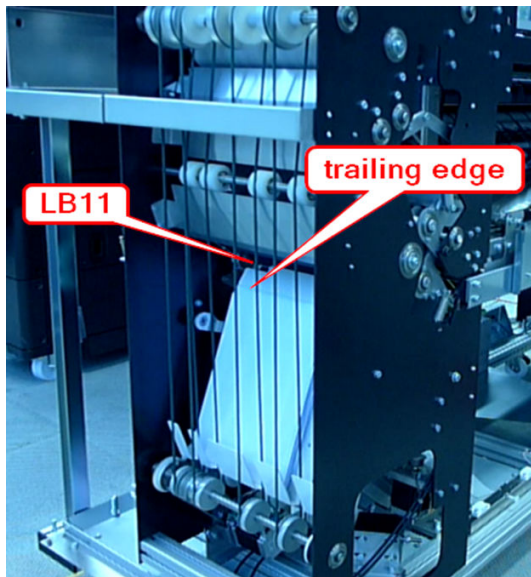
5. When the leading edge arrives at LB11, a count starts of the motor steps of CFX47.



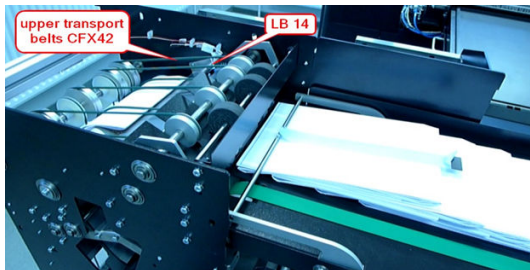
6. Depending on the panel size, the motor stops and the lower knife is activated, creating the fold at the right place.

 **NOTE:** If a tab strip is to be applied to the paper, CFX31 stops with an adjustable delay after LB10 to apply the strip. The stop position can be adjusted in the diagnostics, under **Tab position**.

7. Until the next fold, the folder just counts steps: no sensor is involved. After the correct number of steps, the next fold is performed.
8. LB11 must be free before the tilt tray can direct the paper to the vertical transport.



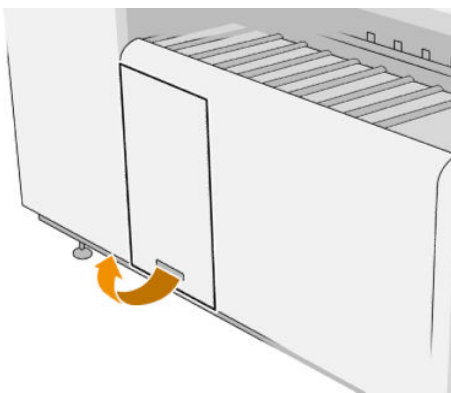
9. When the leading edge arrives at LB14, the exit down holder lifts up for the time this sensor is covered.



10. When the trailing edge leaves LB14, the folder sends the message "Page successfully folded" to the printer.

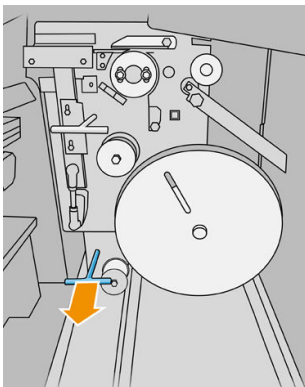
Tab replacement

1. Remove the rear tab cover.

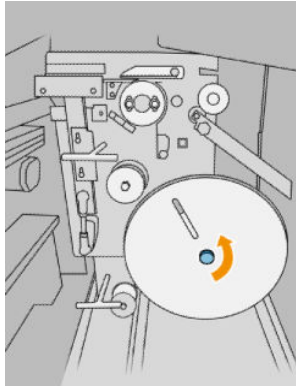


2. Pull the lower handle.

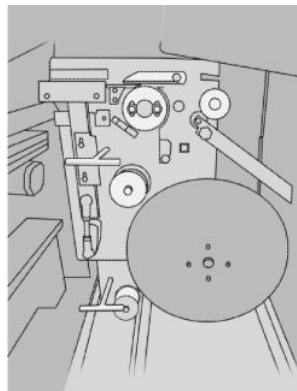
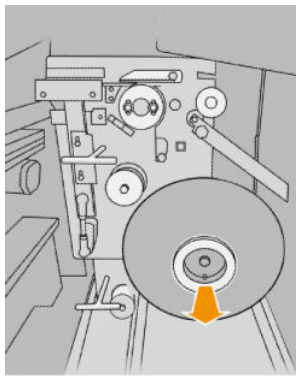
⚠ CAUTION: Be careful not to trap your fingers while moving the tab unit.



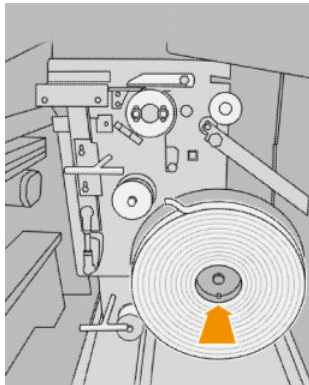
3. Remove the plastic cap.



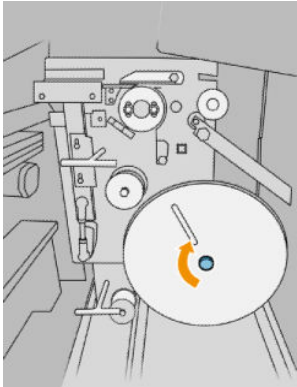
4. Remove the cardboard core.



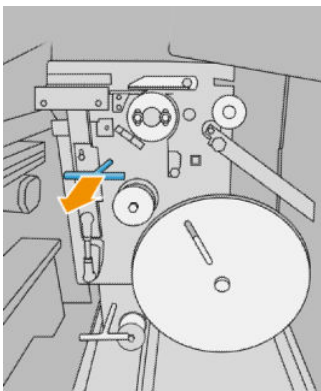
5. Replace the tab roll.



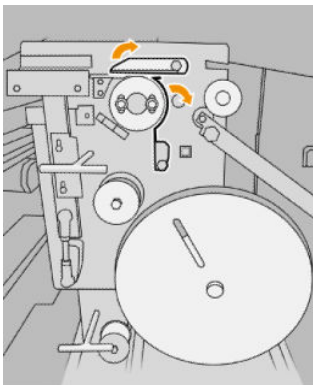
6. Reinstall the assembly.



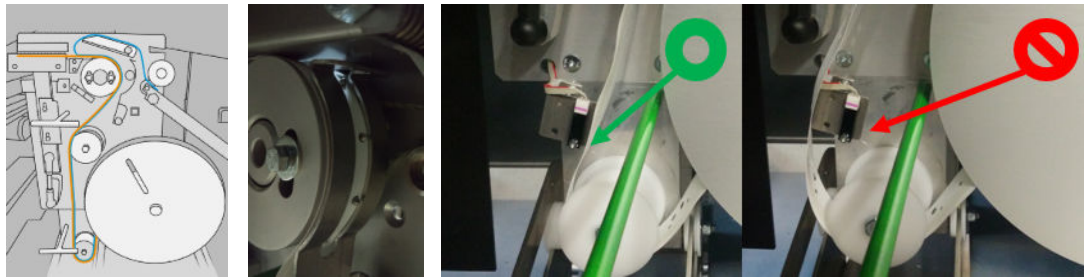
7. Pull the upper handle to bring the tab applicator closer.



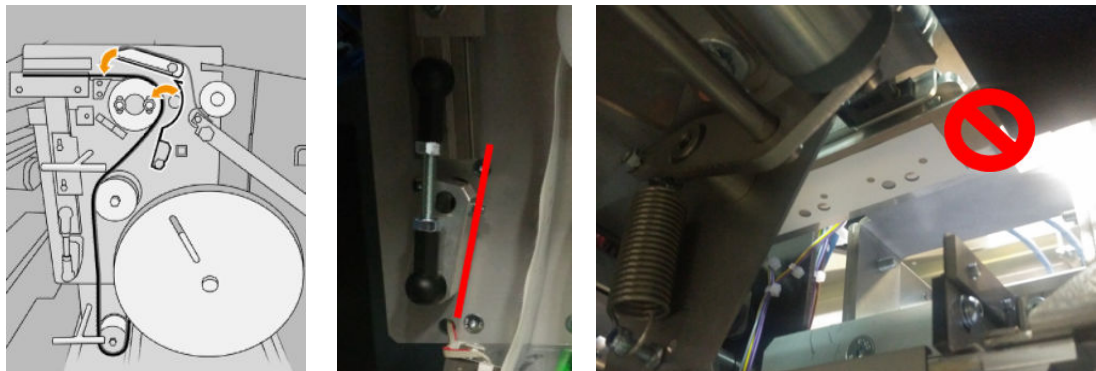
8. Clear the tab path.



9. Ensure a proper tab and waste routing, and check that the tab strip is correctly routed next to the sensor. Besides, check if the first tab is properly dimensioned as per the below picture.



10. Reassemble the unit.

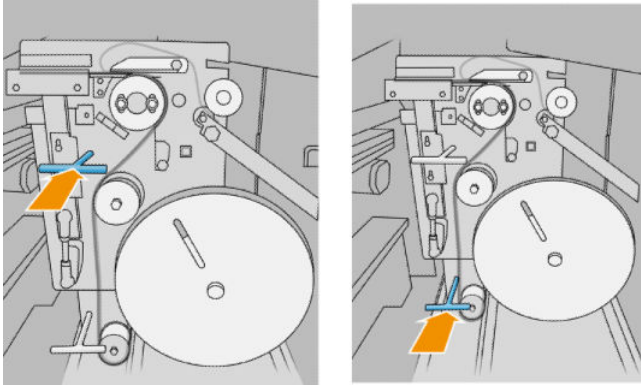


11. Press the test button. The excenter for the vertical movement rotates counter-clockwise; it should stop before the lowest point. Remove the tab sample tested on the sheet-metal surface.

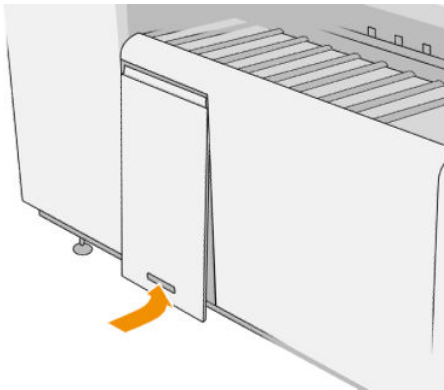
12. Push in the upper handle, then the lower handle.

⚠ CAUTION: Be careful not to trap your fingers while moving the tab unit.

📝 NOTE: Ensure correct tab placement. If the tab is applied slightly out of place, you will receive no feedback.



13. Close the rear tab cover.



Connecting to the printer

The folder can be used in the following ways:

- Online, with serial communication to a printer controller. The cable is a DB15 cable on each side, pin to pin.
- Online, with serial communication to a computer and its application software
- Offline, without connection to a printer

Starting the folder without a connection

If you start the folder without a CAN bus connection, it automatically starts in manual mode. Insert the paper at the folder input.

Folder LED information

Status LED

Status	Use cases	LED color	Behavior
Ready	All systems OK and ready to print	White	On
Sleep	After 20 minutes with no activity, the printer goes to sleep, and the folder should do the same	–	Off
Working	Receiving job, no problem detected	White	Blinking: 0.5 s on, 0.5 s off
Error	Paper jam Open covers that need to be closed for folding Other errors in the folder	Red	On
Power up with error and no communication	N times on-off according to the error category	Red	2 s off, then 0.5 s on, 0.5 s off
Power up with error and communication	Error: communicate error to the printer	Red	On
Power up with no error and no communication	N times on-off according to the error category (CAN controller error 3 times on-off)	Red	2 s off, then 0.5 s on, 0.5 s off
Folder offline (manual mode)	Folder offline (manual mode) During initialization, the folder goes through this status until it achieves communication with the printer. Also, the user can put the folder into offline mode from the printer's front panel.	Blue	Blue on for 5 s, then two 0.2 s blinks
Output full	Any tray detected as full	Red	On
Working, and tabs run off	Working, but cannot complete the next page because the tabs are empty	Red	On

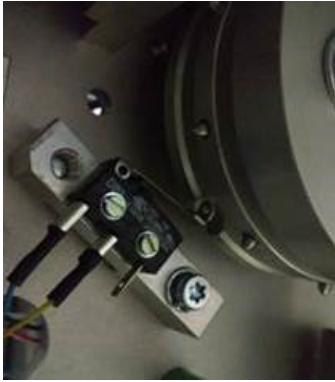
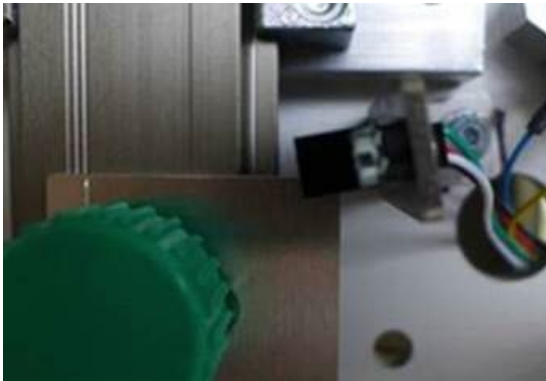
Tab LEDs

Error	Green LED	Red LED	Folder error code
Normal operation	On		

Tab LEDs (continued)

Error	Green LED	Red LED	Folder error code
<p>Stamp motor is not running or stamp cannot move</p> 		<p>Blinks once</p>	
<p>Tab transport motor is not running or micro switch is not working</p> 	<p>Blinks once</p>	<p>Blinks once</p>	
<p>Tab guide open (could be caused by a jam)</p> 		<p>Blinks fast</p>	<p>4:41:04</p>
<p>Tab empty</p>		<p>On</p>	

Tab LEDs (continued)

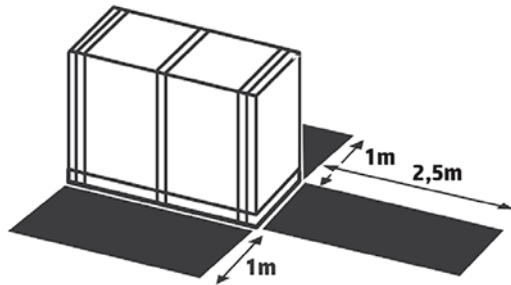
Error	Green LED	Red LED	Folder error code
<p>Tab transport doesn't find home position (micro switch permanently pressed)</p> 	Blinks twice	Blinks twice	
<p>Stamp light sensor broken or permanently cut</p> 		Blinks twice	
Broken fuse	Off	Off	

LED master controller

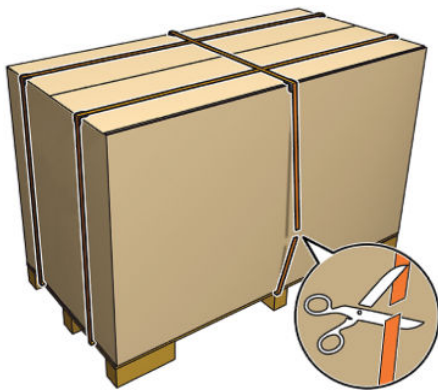
LED color	Behavior	Description
Green	Blinking 0.5 Hz	Power on
Orange	On	Switched off when contact is lost between master controller and internal CAN controller
Red	Blinking	Showing the traffic on the CAN bus, status change on every message

Folder assembly instructions

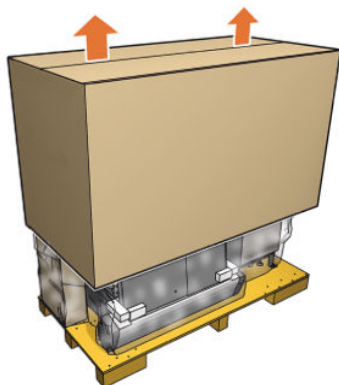
- The space required for assembly is 2,5m (8,2 feet) at the front and 1m (3,3 feet) on each side



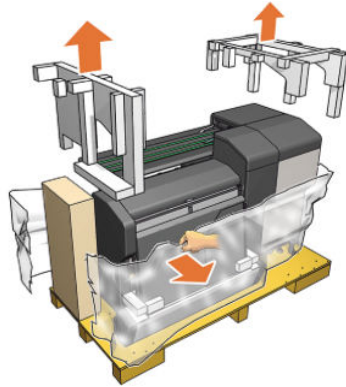
- 2 people are required to perform certain tasks
 - Time required for assembly is approximately 150 minutes .
 - Tools needed: Allen, torx, and Phillips screwdrivers.
1. Cut the straps.



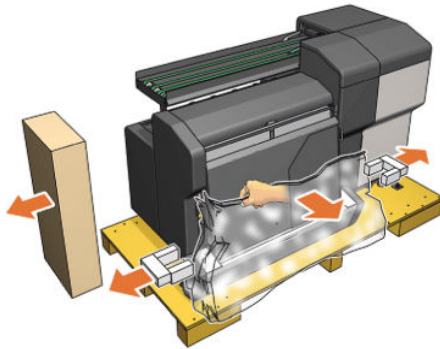
2. Using two people, lift the cardboard box up and off the folder.



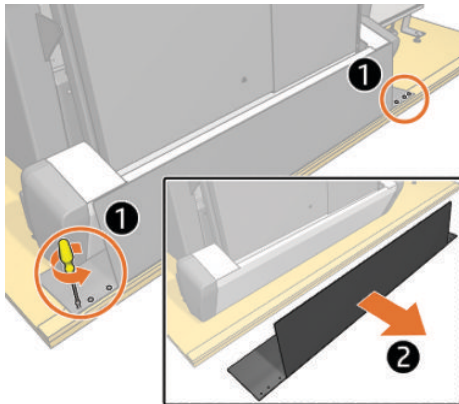
3. Cut the plastic bag and remove the foams.




4. Remove the small boxes (with the pieces to be assembled during setup), and all external packaging.

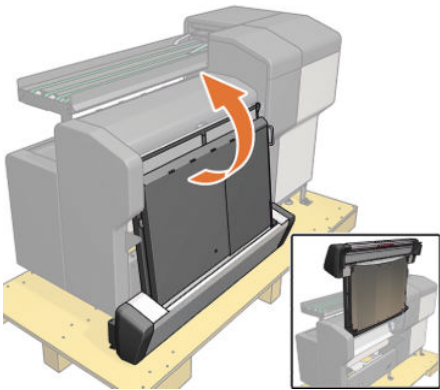


5. Remove the 6 Torx 30 screws and the bridge protector.

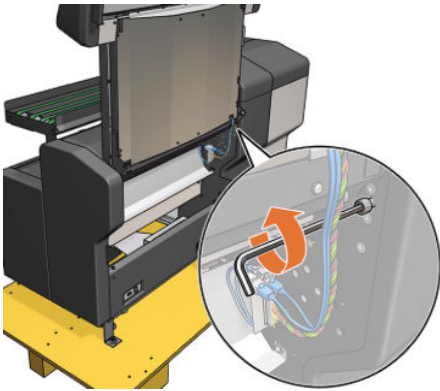


6. Raise the tray.

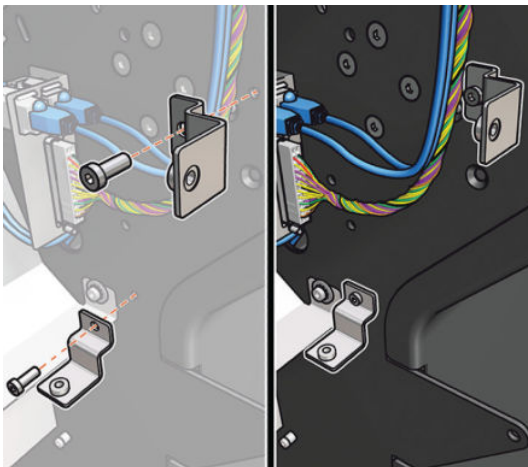
 **IMPORTANT:** Two people are required: one to hold the folder tray up and the other to complete the following step.



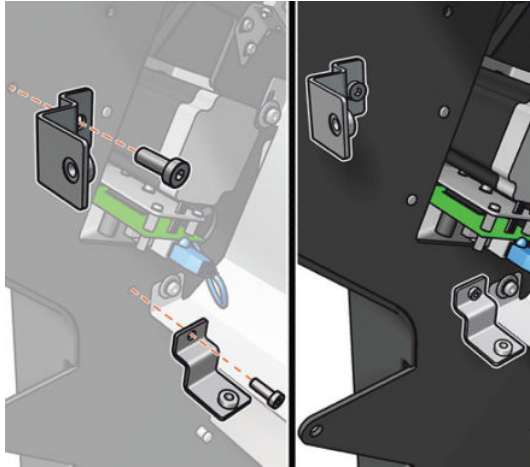
7. Unscrew the security screw.



8. Place two brackets on the right, with one screw on each.

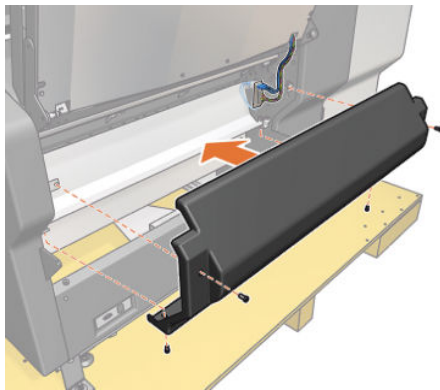


9. Place two brackets on the left, with one screw on each.

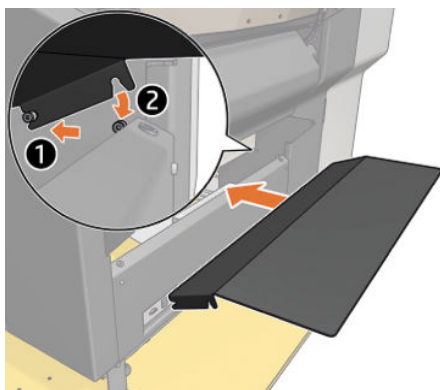


10. Place the bottom cover, and fix it to the brackets with four screws.

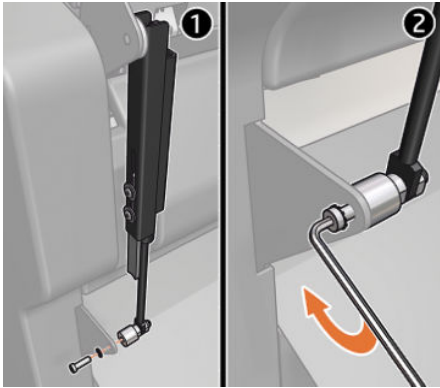
⚠ CAUTION: Take care with the cable.



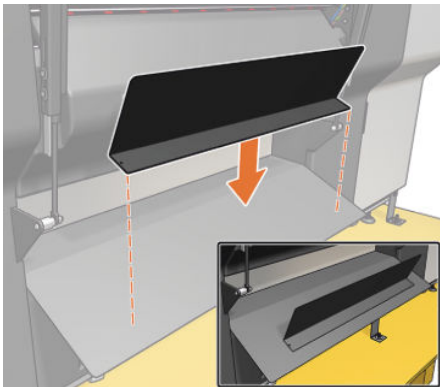
11. Place the fan-fold tray.



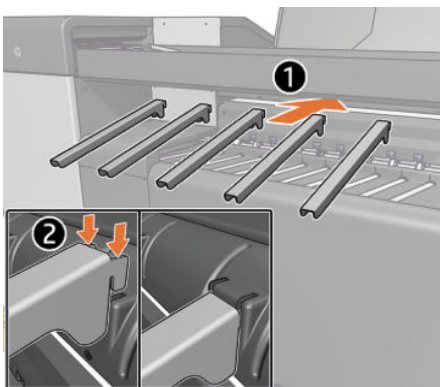
12. Attach the bottom of the gas spring with one screw, making sure it is fully tightened. Do the same on the other side.



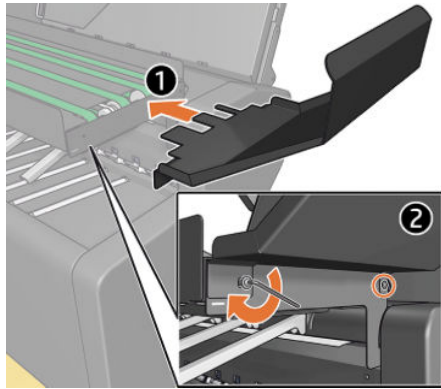
13. Place the magnetic fan-fold stopper.



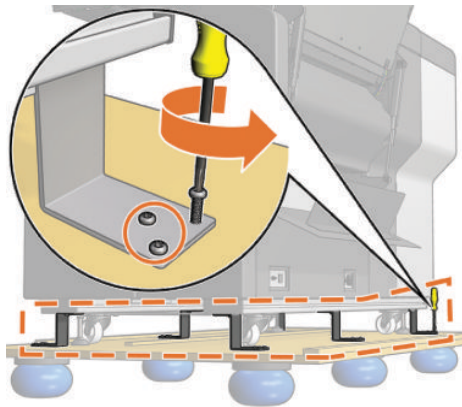
14. Place five stacker-exit sliders under the cross-fold tray.



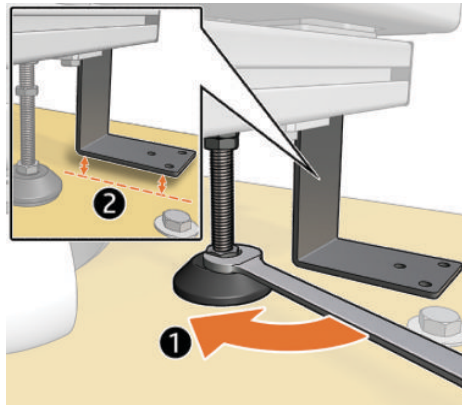
15. Install the conveyor plate end and attach it with two screws.



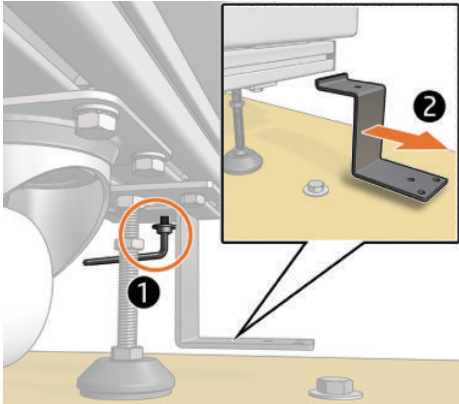
16. Unscrew the three screws from the six skid shipping brackets.



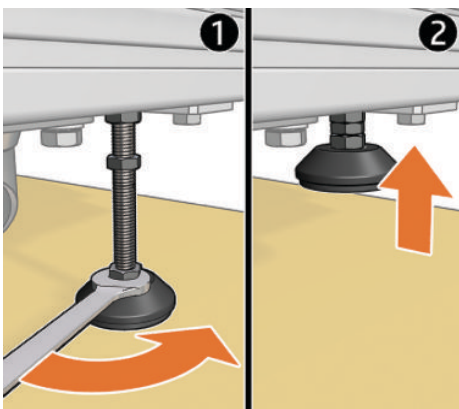
17. Screw all four levelling pads down until the shipping brackets are 10 mm above.



18. Remove the screw from the top of each bracket and remove the brackets.



19. Adjust the levelling pads until the four wheels sit correctly.



20. Using two people, shift the folder on the pallet to the right side.


⚠ CAUTION: Be careful not to roll the folder off the end of the pallet.

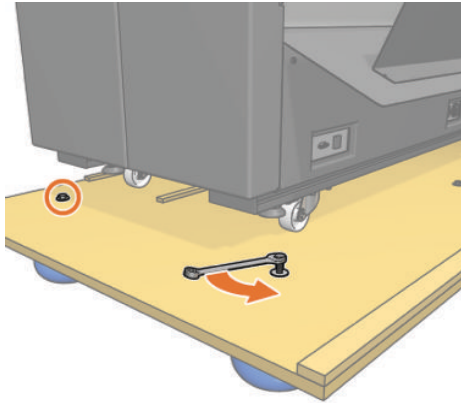
💡 TIP: If you have the ramps that came with the printer, they can be used.



21. Unscrew the two air cushions.


 **TIP:** A mechanical screwdriver is recommended to remove the screw from each air cushion.

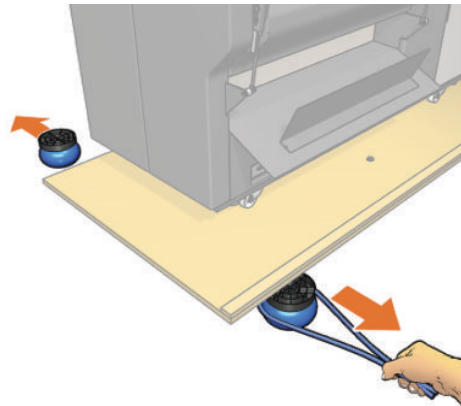
 **IMPORTANT:** Two people are required, as one person must hold the folder on the other side.



22. Remove the two air cushions.

 **TIP:** Use a cord or rope to remove them easily.

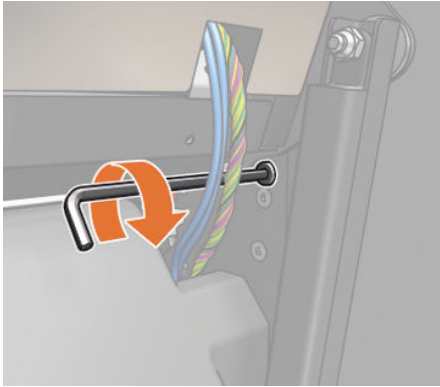
 **IMPORTANT:** Two people are required, as one person must hold the folder on the other side.



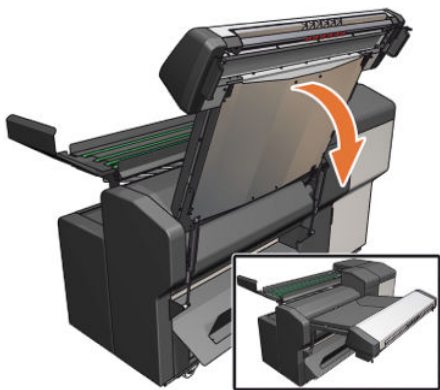
23. Using two people, roll the folder off the pallet, using it as a ramp.



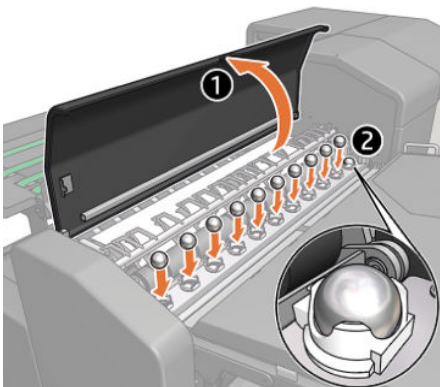
24. Screw in the security screw.



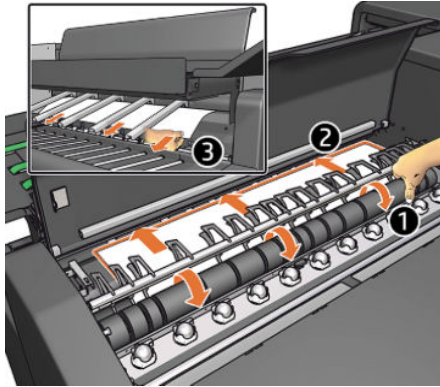
25. Place the tray in the down position.



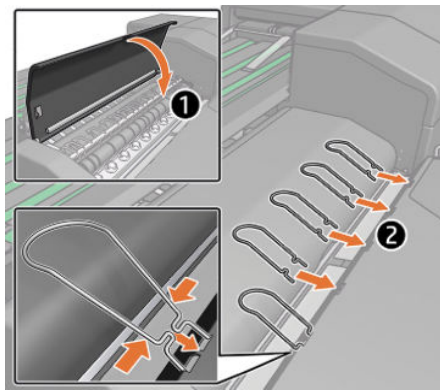
26. Open the top cover and ensure that the metal balls on the fan-fold unit are in place.



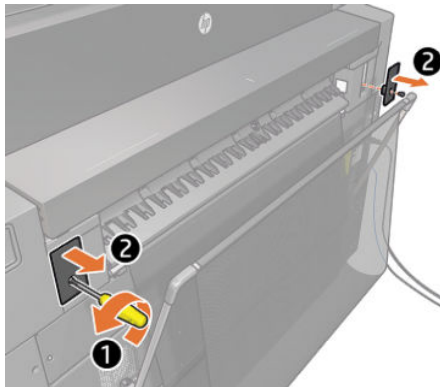
27. Remove the paper. You may need to roll the rollers, and pull the paper from the rear.



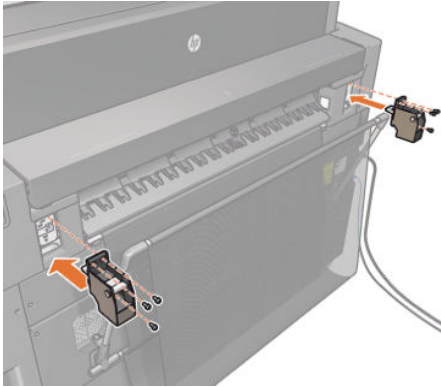
28. Close the top cover and place the stacking guides.



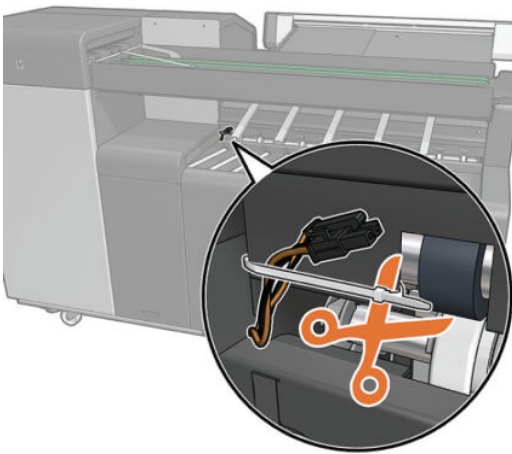
29. If not done already, remove the covers for the rear accessories.



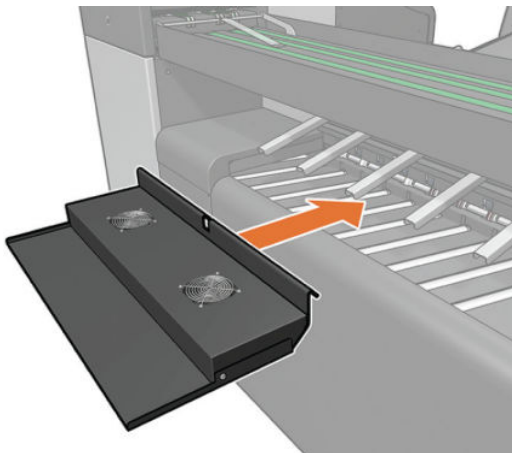
30. Attach the two accessory hooks to the printer with three screws on each side.



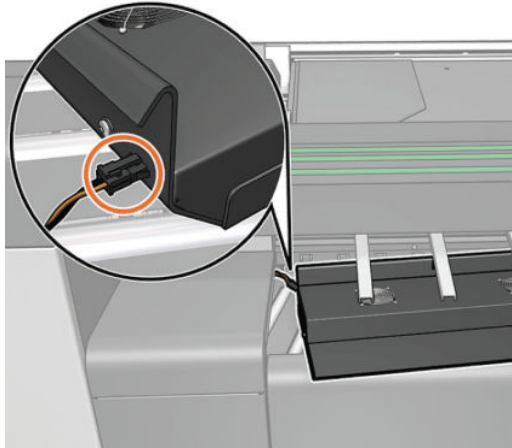
31. On the left side of the roller tray, remove the cable tie from the power cable.



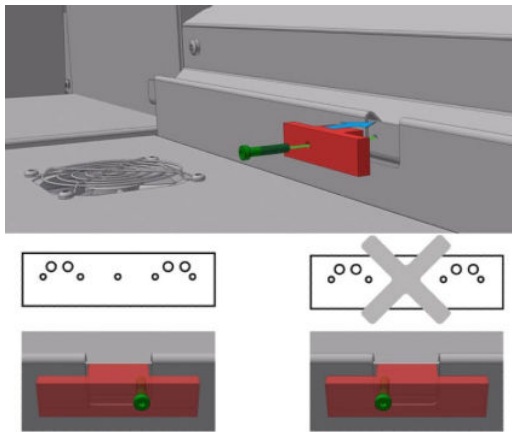
32. Place the fan unit on the top of the transport tray.



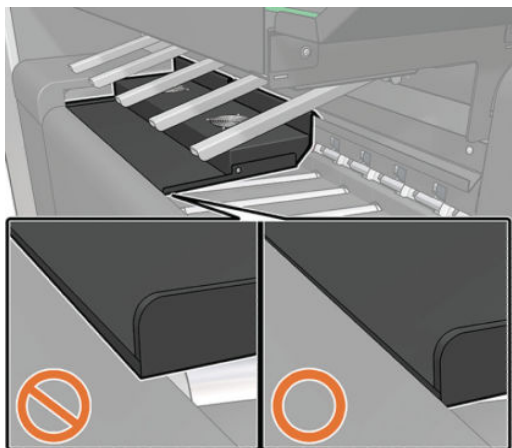
33. Connect the cable.



34. Assemble the fan unit into the upper and lower support rails. The screw has to be in the fan unit gap.



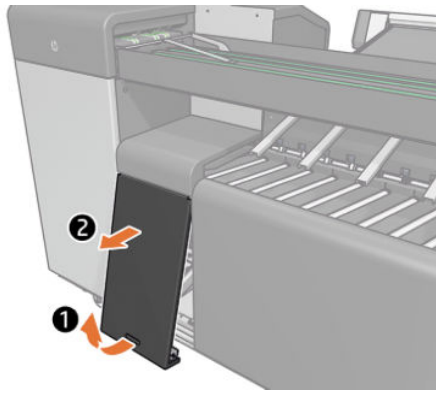
35. Please ensure that the fan unit is assembled correctly.



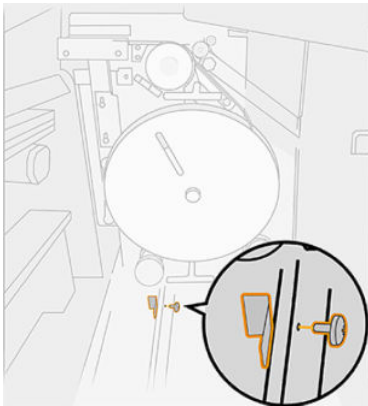
Folders with tab applicators only

1. Open the tab cover.

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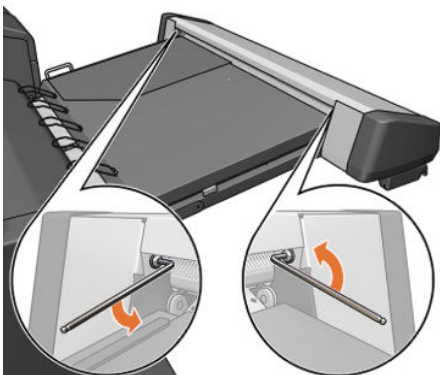


2. Remove the piece shown below by removing the screw on the lateral.

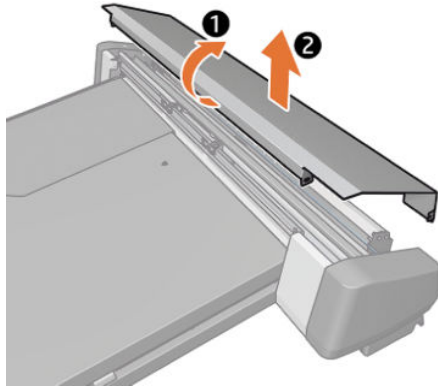


5000/5100/6000 printer series adjustment only

1. Push the tray down and remove one screw from each side.



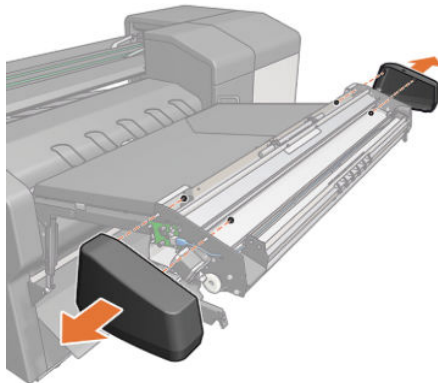
2. Remove the tray cover.



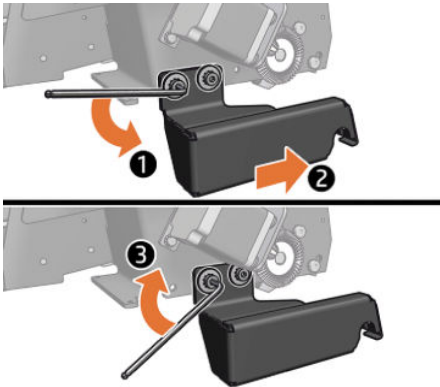
3. Remove one screw from each side, then remove the piece shown below.



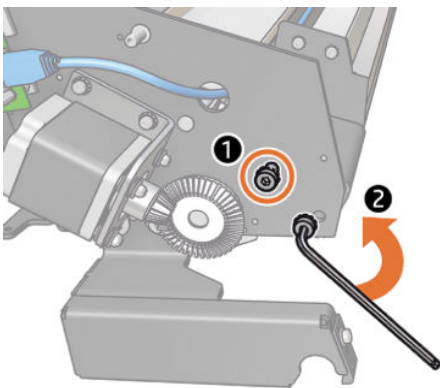
4. Remove two screws from each side of the folder tray to remove the lateral covers.



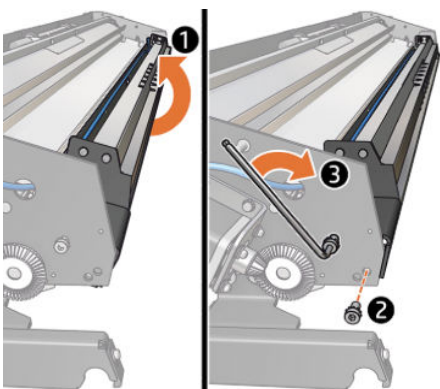
5. Remove two screws, move the hook upwards, and fix it in the two front holes.



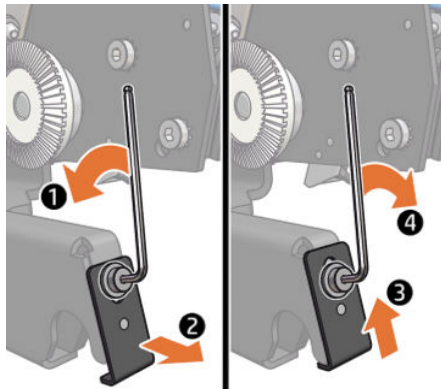
6. Loosen the upper screw and remove the lower screw on both sides.



7. Move the front module so that the lower screw on each side can be placed in the neighboring hole. Tighten the lower and upper screws on both sides.



8. Unscrew the metallic piece from the extreme of the folder tray on both sides, and position the pin using the bottom hole.

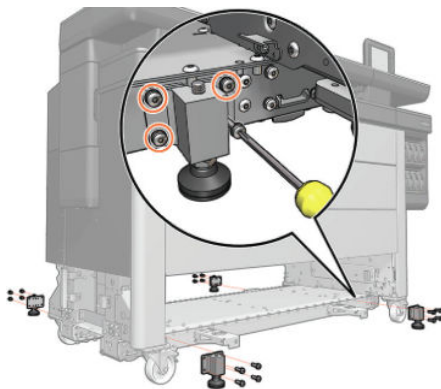


Levelling feet assembly (printers with folders only)

1. Remove the three front and three rear foot covers.

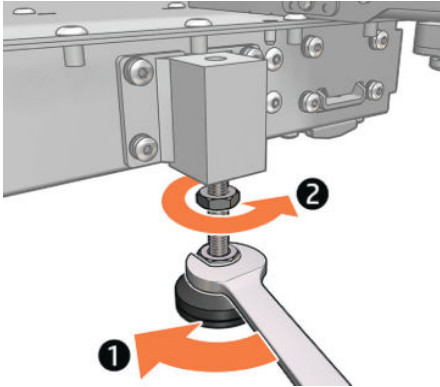


2. Attach the four levelling feet to the structure base with four M6x25 screws each.



For HP-authorized personnel only

3. Level the printer by adjusting the height of each foot.

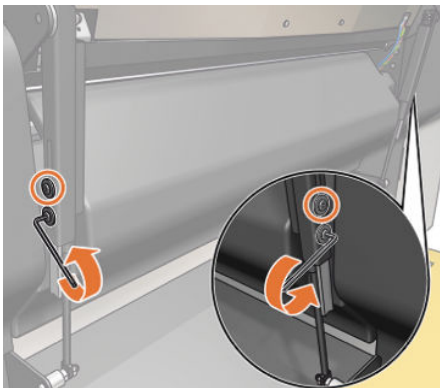


4. Replace all six foot covers.

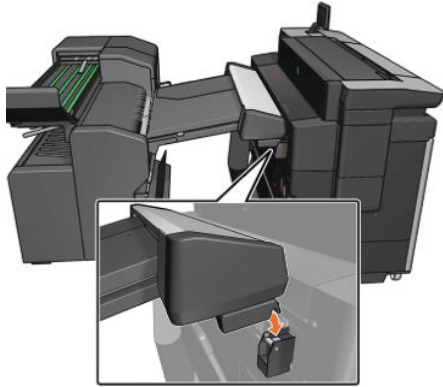


Final adjustments

1. Pull the folder tray up and loosen the stoppers of the gas springs.

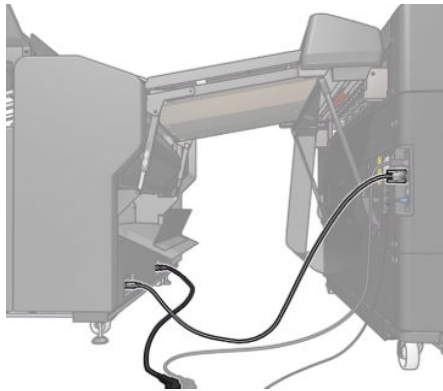


2. Connect the folder tray over the printer's hooks.

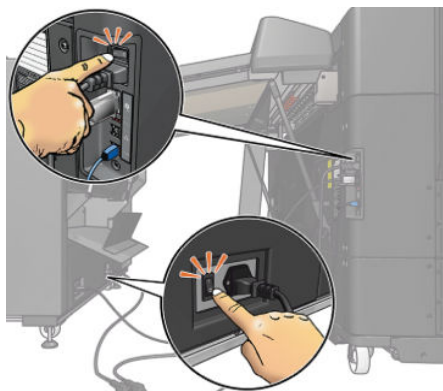


3. Switch off the printer with the rear button. Connect a cable from the folder to the printer and another from the folder to the electrical power supply.

 **NOTE:** The printer's and folder's power cables should be connected to the same power outlet.

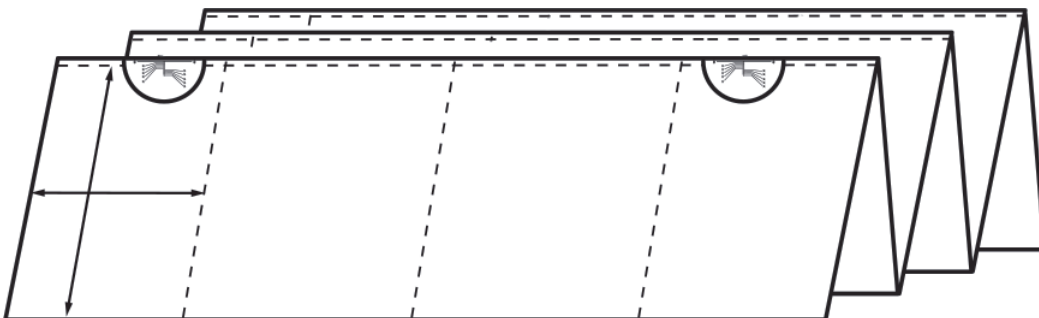


4. Switch on the folder with the rear button, and switch on the printer. The printer should recognize and install the folder.

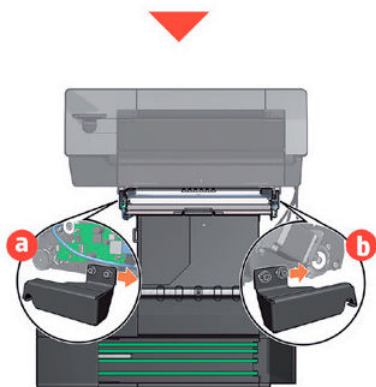
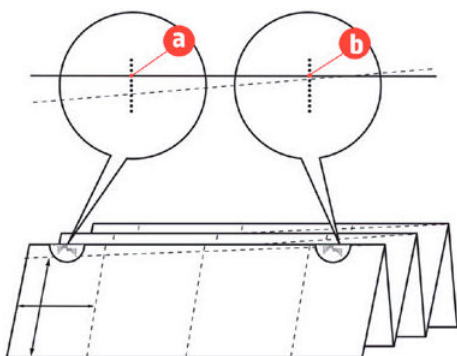


- From the front panel (**Internal prints > Output destination prints > Print test on folder to check alignment**), print the test plot to check that it is correctly folded. Unfold the test plot and check that it is folded where indicated. If the plot is not correctly folded, proceed with the following steps.

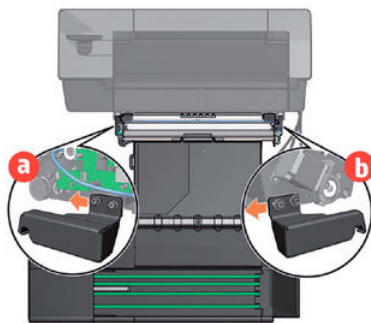
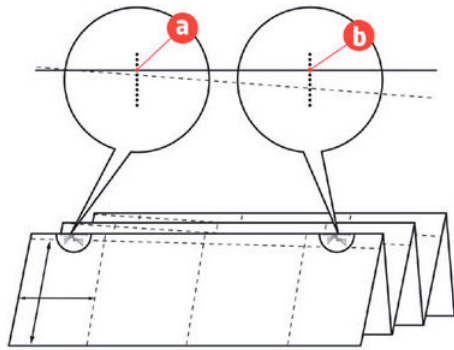
 **NOTE:** The folder tray covers should be removed.



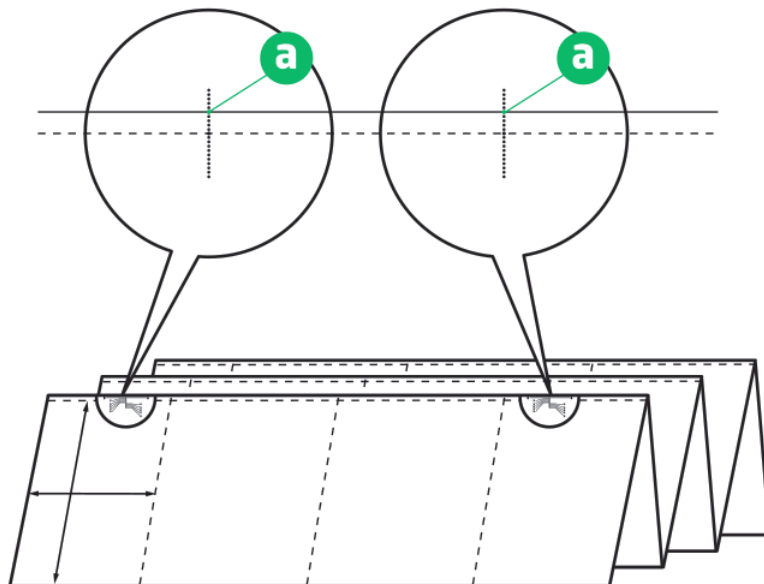
- If misalignment appears on the left, the folder needs to be closer to the right. Loosen the screws of the two hooks, move each hook, then retighten the screws.



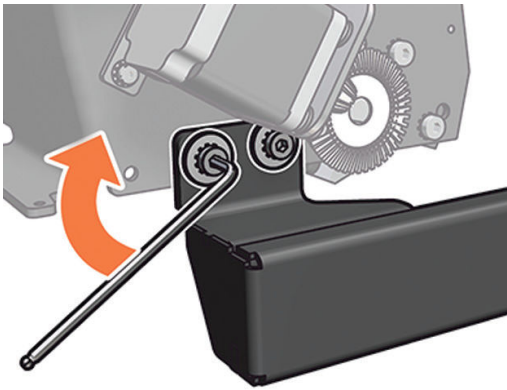
7. If misalignment appears on the right, the folder needs to be closer to the left. Loosen the screws of the two hooks, move each hook, then retighten the screws.



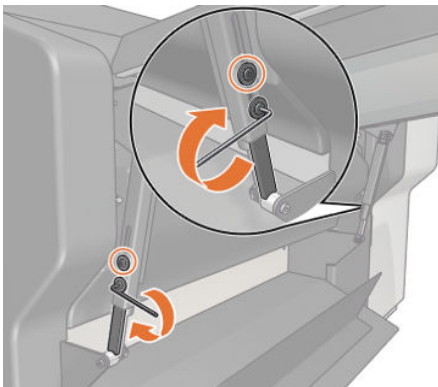
8. Print the folder test plot again, and check whether it is now aligned. If not, repeat the previous steps until it is.



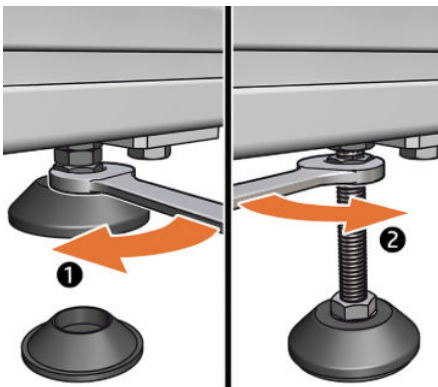
9. Loosen the screws from the hook, but do not remove them. Push the tray down and retighten the screws. Then replace all covers.



10. Tighten the stoppers of the gas springs.



11. Adjust the levelling pads to the lowest position. Place the plastic taps under them. Make sure that the folder is level and parallel to the printer, adjusting for any unevenness in the floor.





Serial No.

Product No.


HP, HP-IT, 71021 Heidelberg, Germany






WSP-REM-HPG-BCLAA-1505




001









CAN ICES-3 (A) / NMB-3 (A)
 This device complies with part 15 of the FCC Rules.
 Operation is subject to the following two conditions:
 (1) This device may not cause harmful interference, and
 (2) This device must accept any interference received,
 including interference that may cause undesired operation

设备仅应连接到有接地的电源上。
 Equipment to be connected to earthed mains outlet only.
 Conectar el producto a la red de alimentación con toma tierra.
 Laitla on liitettävä suojakoskettimella varustettuun pistoresiaan.
 Apparatet må tilkoples jordet stikkontakt.
 Apparatets skall anslutas till jordat uttag.
 Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord.

**非维修人员请勿打开机盖。
 需要维修时请找专业人员服务。**

No operator serviceable parts inside.
 Refer servicing to qualified service personnel.
 No hay piezas reparables por el usuario en el interior.
 Reparaciones: contactar con personal de servicio autorizado.

~AC VOLTAGE / TEGANGAN	~100-120 V	~200-240 V	交流电压
CURRENT MAX	10 A	5 A	最大电流
FREQUENCY / FREKUENSI	50 / 60 Hz		频率范围

MADE IN GERMANY
 DEUTSCH HERGESTELLT
 德国制造

Regulatory Model: BCLAA-1505
 规定型号: BCLAA-1505

Image of the serial number / product number / certifications.

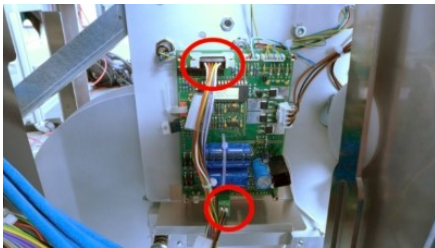
TAB Unit assembly/disassembly instructions

Completely remove the TAB Unit

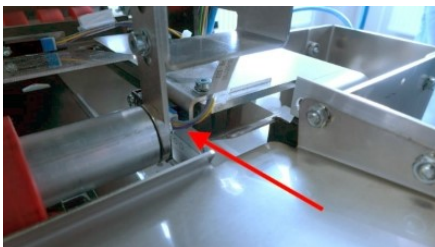
1. Remove the covers marked in red.



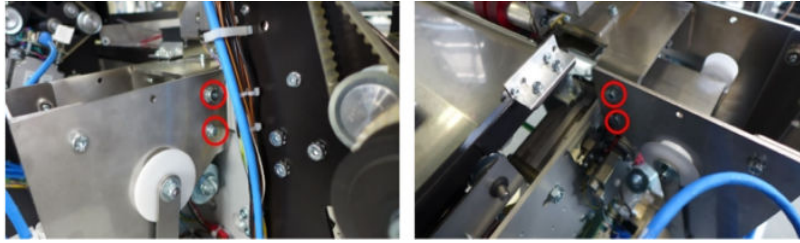
2. Disconnect the two plugs on the TAB Unit controller and the ground cable as well.



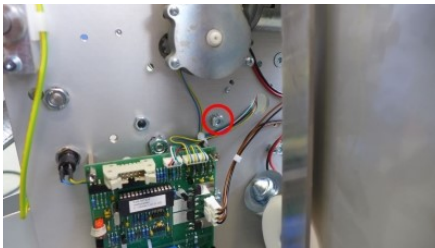
3. Disconnect LB22.



4. Remove 4 screws on the top of the TAB Unit.

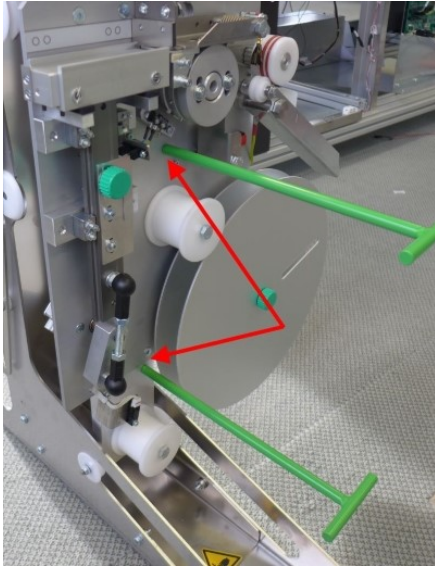


5. Remove 4 screws on the Upper pressure plate.
6. Unscrew 2 bolts.



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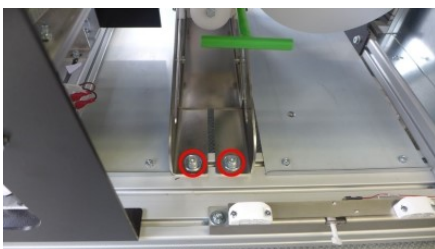
7. Remove the two green handles.



8. On the backside, unhook the cables from the clamps.



9. Remove 4 screws on the bottom of the TAB Unit.



10. Remove the whole TAB assy through the door of the TAB, first with a rotation of 30 degrees (the bottom out first).



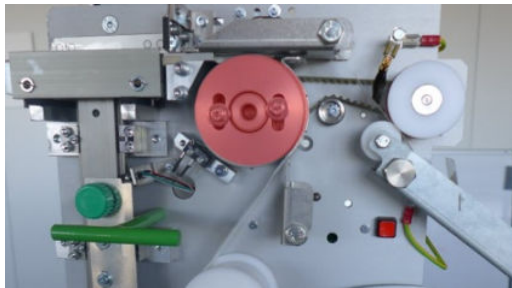
Installation

- ▲ To install the whole Tab unit, assemble all the parts in reverse order.

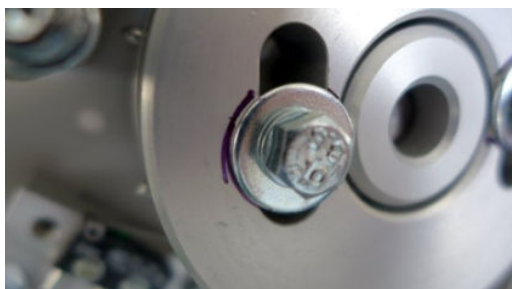
TAB spike roller

Removal

1. The position of the spike roller is marked in red:

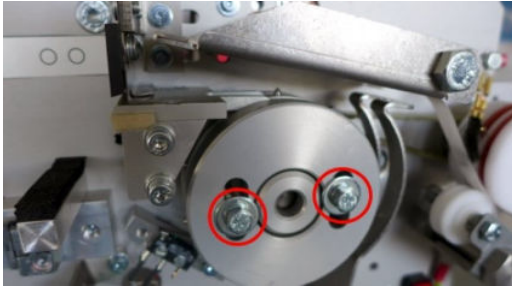


2. Before you begin, mark the correct position of the screws as we do here:



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3. Remove the two screws in order to remove the roller.



4. Remove the spike roller.

Installation

- ▲ To install the whole Tab unit, assemble all the parts in reverse order.

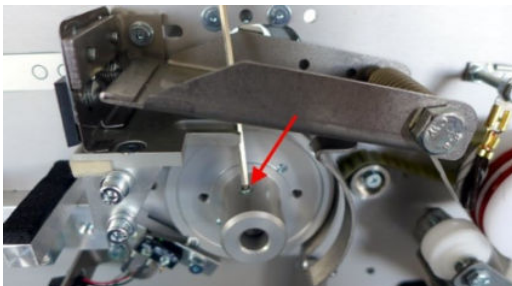
TAB transport motor

Removal

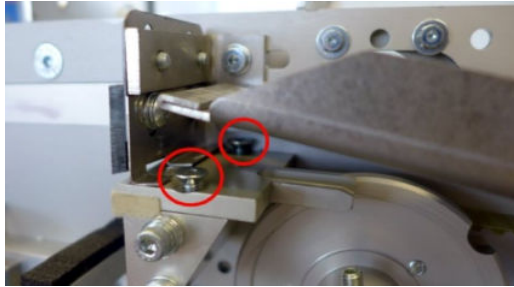
1. The position of the transport motor is marked in red:



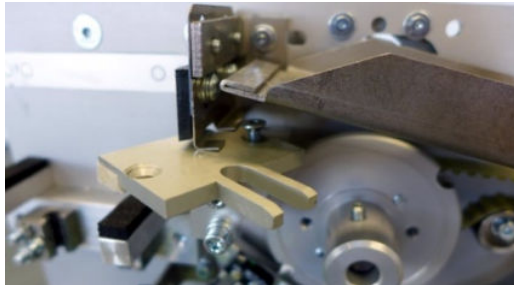
2. Loosen the locking screw.



3. Remove 2 screws in order to remove the guide plate.



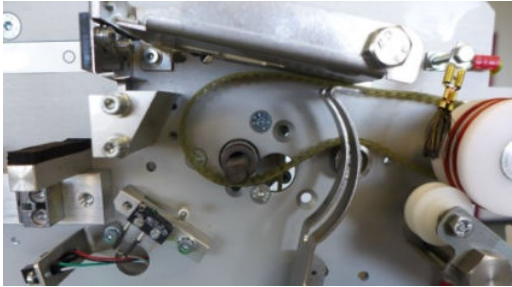
4. Remove the plate.



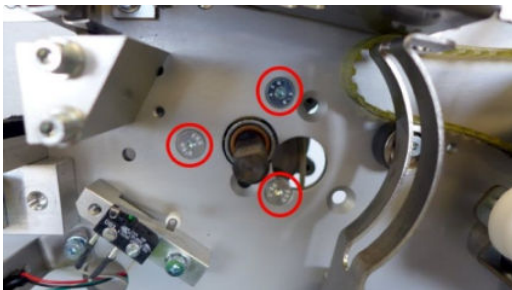
5. Loosen the belt tensioner and remove the disk.



6. Remove the bushing and the washer and store them in a safe place.



7. To remove the motor, disconnect the cable on the back side and remove the screws.



Installation

- ▲ To install the motor, assemble all the parts in reverse order.

System error codes

1010-0000-0089 Folder generic – Folder sent to printer wrong page ID

Printer is receiving an unknown page ID from Folder.

Call agent:

1. This error may not cause any problem in the printing process, but in most cases it will cause a jam in the Folder. Just follow the media jam process.
2. Re-initialize the Folder, it will be set properly again, and check that you have the latest firmware installed.

Service engineer:

1. This is a Folder software error, it could be cleaned just rebooting the Folder.
2. Ensure printer and Folder firmware is updated to the latest version available.
3. If the issue persists, it could be caused by the Master controller PCA, replace it.

1010-0000-0090 Generic – Accessory not supported by SKU**Call agent:**

1. Check if the printer SKU (part number) supports the Folder accessory.
2. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
3. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that your printer model supports this accessory.
2. Try to reconnect and check the folder communication cable.
3. Check that the product number corresponds to the printer SKU.

1010-0000-0091 Generic – Unable to upgrade firmware, old firmware installed**Call agent:**

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Unplug Folder power cord. Reboot and retry.
2. Check that the Folder cabling is undamaged and properly connected. Replace if necessary.
3. Replace, one by one, the Master Controller board, Cross-folder board, or Folder Fan boards.

1010-0000-0092 Generic – Unable to upgrade firmware, unknown firmware installed

Printer is unable to retrieve which firmware version the Master controller, Folder Fan or Cross-folder boards have, maybe because the Folder is unable to initialize or it is not ready.

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the Folder is up and running with all of its covers closed and retry.
2. Check the cabling of the Master Controller, FF Controller and/or CF Controller PCA.

3. Check the troubleshooting in [Intermittent power supply failures in Folder on page 1489](#).
4. Replace all the boards, one by one.

1010-0001-0083 Master controller – License error: Map fold

The panel width is less than 160 mm (6.3 in).

Call agent:

1. Check that the plot size is compatible with the folding style.
2. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
3. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the plot size is compatible with the folding style. Try to fold another plot size.
2. Upgrade printer and Folder firmware to the latest version.
3. Replace Master controller board, if necessary.

1010-0001-0102 Master controller – No contact with FF during initialization

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check Fan-folder board fuse; replace if necessary.
2. Check that the cable from master controller X112 to fan-folder controller X60 is undamaged and unbroken; replace it if necessary.
3. Check that the power cable K5H75-67018 from Power distribution to the Fan-fold controller is undamaged and unbroken. Replace it if necessary.
4. Check that the cable from Fan-folder X40 (930-590178) to Distributor 1 is undamaged and unbroken; replace it if necessary. Use a multimeter to check the electrical conductivity in said cable and check that the cable provides +24V (continuous).
5. Check the troubleshooting in [Intermittent power supply failures in Folder on page 1489](#).

1010-0001-0105 Master controller – FF result code is TIMEOUT

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the cable from master controller X112 to fan-folder controller X60 is undamaged and unbroken; replace it if necessary.
2. Check that the cable from Fan-folder X40 (930-590178) to Distributor 1 is undamaged and unbroken; replace it if necessary. Use a multimeter to check the electrical conductivity in said cable and check that the cable provides +24V (continuous).
3. Check the troubleshooting [Intermittent power supply failures in Folder on page 1489](#).
4. Replace the Fan-Folder Controller PCA.

1010-0001-0105 Master controller – Timeout while resetting FF

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the cable from master controller X112 to fan-folder controller X60 is undamaged and unbroken; replace it if necessary.
2. Check that the cable from Fan-folder X40 (930-590178) to Distributor 1 is undamaged and unbroken; replace it if necessary. Use a multimeter to check the electrical conductivity in said cable and check that the cable provides +24V (continuous).
3. Check the troubleshooting [Intermittent power supply failures in Folder on page 1489](#).
4. Replace the Fan-Folder Controller PCA.

1010-0001-0148 Master controller – No response from FF

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the cable from master controller X112 to fan-folder controller X60 is undamaged and unbroken; replace it if necessary.
2. Check that the cable from Fan-folder X40 (930-590178) to Distributor 1 is undamaged and unbroken; replace it if necessary. Use a multimeter to check the electrical conductivity in said cable and check that the cable provides +24V (continuous).
3. Check the troubleshooting [Intermittent power supply failures in Folder on page 1489](#).
4. Replace the Fan-Folder Controller PCA.

1010-0001-0202 Master controller – No contact with CF during initialization

Call agent:

1. Ensure there is no paper jam in the folder.
2. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
3. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check, for both the CF board and FF board, if 24V is present.
2. Check Cross-folder board fuse; replace if necessary.
3. Check that the cable from master controller X111 to cross-folder controller X60 is undamaged and unbroken; replace it if necessary.
4. Check that the cable from Cross-folder X40 (930-590179) to Distributor 2 is undamaged and unbroken; replace it if necessary. Use a multimeter to check the electrical conductivity in said cable and check that the cable provides +24V (continuous).
5. Check the troubleshooting in [Intermittent power supply failures in Folder on page 1489](#).

1010-0001-0205 Master controller – CF result is TIMEOUT

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the cable from master controller X111 to cross-folder controller X60 is undamaged and unbroken; replace it if necessary.
2. Check that the cable from Cross-folder X40 (930-590179) to Distributor 2 is undamaged and unbroken; replace it if necessary. Use a multimeter to check the electrical conductivity in said cable and check that it provides +24V (continuous).
3. Check the troubleshooting in [Intermittent power supply failures in Folder on page 1489](#).
4. Replace the Cross-Folder Controller PCA.

1010-0001-0205 Master controller – Timeout while resetting CF

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the cable from master controller X111 to cross-folder controller X60 is undamaged and unbroken; replace it if necessary.
2. Check that the cable from Cross-folder X40 (930-590179) to Distributor 2 is undamaged and unbroken; replace it if necessary. Use a multimeter to check the electrical conductivity in said cable and check that it provides +24V (continuous).
3. Check the troubleshooting in [Intermittent power supply failures in Folder on page 1489](#).
4. Replace the Cross-Folder Controller PCA.

1010-0001-0248 Master controller – No response from CF

Call agent:

1. Ensure there is no paper jam in the folder.
2. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
3. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the cable from master controller X111 to cross-folder controller X60 is undamaged and unbroken; replace it if necessary.
2. Check that the cable from Cross-folder X40 (930-590179) to Distributor 2 is undamaged and unbroken; replace it if necessary. Use a multimeter to check the electrical conductivity in said cable and check that it provides +24V (continuous).
3. Check the troubleshooting in [Intermittent power supply failures in Folder on page 1489](#).
4. Replace the Cross-Folder Controller PCA.

1010-0002-0080 Fan folder – Board in wrong spot

The fan-folder board has got the firmware of the cross-folder board.

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

- ▲ Replace the PCA in the Fan-folder spot for a correct one.

1010-0002-0101 Fan folder – Sensor LB1 cut

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LB1 sensor is properly placed and there is no paper or anything else on it.
2. Run diagnostic test [1010-11 Check fan-fold sensors on page 528](#). Check that cable and connectors are undamaged and unbroken; replace them if necessary.
3. Replace the LB1 sensor if necessary.
4. Check that the FF motors are working properly. Run the FF motor diagnostic tests. Replace motor or driver if necessary.



NOTE: After checking the cables and connectors through diagnostics, and before replacing the sensor (in case it is needed), please make sure that the error is not being caused by the printer.

1010-0002-0187 Fan folder – No paper at sensor LB1

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LB1 sensor is properly placed and there is no paper or anything else in the paper path.
2. Run diagnostic test [1010-11 Check fan-fold sensors on page 528](#). Check that cable and connectors are undamaged and unbroken; replace them if necessary.
3. Replace the LB1 sensor if necessary.
4. Check that the FF motors are working properly. Run the FF motor diagnostic tests. Replace motor or driver if necessary.

1010-0002-0201 Fan folder – Sensor LB2 cut

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LB2 sensor is properly placed and there is no paper or anything else on it.
2. Run diagnostic test [1010-11 Check fan-fold sensors on page 528](#). Check that cable and connectors are undamaged and unbroken; replace them if necessary.
3. Replace the LB2 sensor if necessary.
4. Check that the FF motors are working properly. Run the FF motor diagnostic tests. Replace motor or driver if necessary.



NOTE: After checking the cables and connectors through diagnostics, and before replacing the sensor (in case it is needed), please make sure that the error is not being caused by the printer.

1010-0002-0301 Fan folder – Sensor LB3 cut

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LB3 sensor is properly placed and there is no paper or anything else on it.
2. Run diagnostic test [1010-11 Check fan-fold sensors on page 528](#). Check that cable and connectors are undamaged and unbroken; replace them if necessary.
3. Replace the LB3 sensor if necessary.
4. Check that the FF motors are working properly. Run the FF motor diagnostic tests. Replace motor or driver if necessary.



NOTE: After checking the cables and connectors through diagnostics, and before replacing the sensor (in case it is needed), please make sure that the error is not being caused by the printer.

1010-0002-0401 Fan folder – Sensor LB4 cut

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LB4 sensor is properly placed and there is no paper or anything else on it.
2. Run diagnostic test [1010-11 Check fan-fold sensors on page 528](#). Check that cable and connectors are undamaged and unbroken; replace them if necessary.
3. Replace the LB4 sensor if necessary.
4. Check that the FF motors are working properly. Run the FF motor diagnostic tests. Replace motor or driver if necessary.



NOTE: After checking the cables and connectors through diagnostics, and before replacing the sensor (in case it is needed), please make sure that the error is not being caused by the printer.

1010-0002-0487 Fan folder – No paper at sensor LB4

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check the interface gap (See [Interface gap check. LB05 distance to media while being folded on page 1560](#)).
2. Check that the LB4 sensor is properly placed and there is no paper or anything else in the paper path.
3. Run diagnostic test [1010-11 Check fan-fold sensors on page 528](#). Check that cable and connectors are undamaged and unbroken; replace them if necessary.
4. Replace the LB4 sensor if necessary.
5. Check that the FF motors are working properly. Run the FF motor diagnostic tests. Replace motor or driver if necessary.

1010-0002-0501 Fan folder – Sensor LB5 cut

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LB5 sensor is properly placed and there is no paper or anything else on it. See [Fan-folder operation on page 1344](#).
2. Run diagnostic test [1010-11 Check fan-fold sensors on page 528](#). Check that cable and connectors are undamaged and unbroken; replace them if necessary.
3. Replace the LB5 sensor if necessary.
4. Check that the FF motors are working properly. Run the FF motor diagnostic tests. Replace motor or driver if necessary.



NOTE: After checking the cables and connectors through diagnostics, and before replacing the sensor (in case it is needed), please make sure that the error is not being caused by the printer.


1010-0002-1601 Fan folder – Sensor LB0 cut

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LB0 sensor is properly placed and there is no paper or anything else on it.
2. Run diagnostic test [1010-11 Check fan-fold sensors on page 528](#). Check that cable and connectors are undamaged and unbroken; replace them if necessary.
3. Replace the LB0 sensor if necessary.
4. Check that the FF motors are working properly. Run the FF motor diagnostic tests. Replace motor or driver if necessary.

 **NOTE:** After checking the cables and connectors through diagnostics, and before replacing the sensor (in case it is needed), please make sure that the error is not being caused by the printer.

1010-0002-1687 Fan folder – No paper at sensor LBO

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LBO sensor is properly placed and there is no paper or anything else in the paper path.
2. Run diagnostic test [1010-11 Check fan-fold sensors on page 528](#). Check that cable and connectors are undamaged and unbroken; replace them if necessary.
3. Replace the LBO sensor if necessary.
4. Check that the FF motors are working properly. Run the FF motor diagnostic tests. Replace motor or driver if necessary.

1010-0003-0080 Cross folder – Board in wrong spot

The cross-folder board has got the firmware of the fan-folder board.

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

- ▲ Replace the PCA in the Cross-folder spot for a correct one.

1010-0003-0088 Cross folder – Erroneous CSV file

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
3. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Upgrade printer and Folder firmware to the latest version.
2. Through the folder diagnostics (accessible through the service menu or the diagnostic menu), run the diagnostic test for each CF motor.
3. Run the sensor diagnostic tests.
4. Ensure that there is no paper/TAB preventing the paper from passing through the CF.



NOTE: This error indicates that the CF is not able to perform the required folds. A failure of the upper knife or lower knife could produce such a symptom / System error.

1010-0003-1001 Cross folder – Sensor LB10 cut

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LB10 sensor is properly placed and there is no paper or anything else on it.
2. Run diagnostic test [1010-25 Check cross-fold sensors on page 536](#). Check that cable and connectors are undamaged and unbroken; replace them if necessary.
3. Replace the LB10 sensor if necessary.
4. Check that the CF motors are working properly. Run the CF motor diagnostic tests. Replace motor or driver if necessary.



NOTE: After checking the cables and connectors through diagnostics, and before replacing the sensor (in case it is needed), please make sure that the error is not being caused by the printer.

1010-0003-1087 Cross folder – No paper at sensor LB10

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LB10 sensor is properly placed and there is no paper or anything else in the paper path.
2. Run diagnostic test [1010-25 Check cross-fold sensors on page 536](#). Check that cable and connectors are undamaged and unbroken; replace them if necessary.
3. Replace the LB10 sensor if necessary.
4. Check that the CF motors are working properly. Run the CF motor diagnostic tests. Replace motor or driver if necessary.

5. Mainly in case the jam is happening when sending long plots of 2 – 2.5 meters, and if you see that the plots start to come out of the FF on their way to the roll tray but they start to get stuck, lift up on the rear side of the FANs situated at the top of the roller tray, rotating it by 10-20 degrees. Here are different pictures of how to rotate it:



1010-0003-1101 Cross folder – Sensor LB11 cut

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LB11 sensor is properly placed and there is no paper or anything else on it.
2. Run diagnostic test [1010-25 Check cross-fold sensors on page 536](#). Check that cable and connectors are undamaged and unbroken; replace them if necessary.
3. Replace the LB11 sensor if necessary.
4. Check that the CF motors are working properly. Run the CF motor diagnostic tests. Replace motor or driver if necessary.



NOTE: After checking the cables and connectors through diagnostics, and before replacing the sensor (in case it is needed), please make sure that the error is not being caused by the printer.

1010-0003-1108 Jam at sensor LB11 or LB12

Call agent:

1. Ensure there is no paper jam in the folder.
2. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
3. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LB11 and LB12 sensors are properly placed and there is no paper or anything else on them.
2. Run diagnostic test [1010-25 Check cross-fold sensors on page 536](#). Check that cable and connectors are undamaged and unbroken; replace them if necessary.
3. Replace the sensors if necessary.
4. Check that the CF motors are working properly. Run the CF motor diagnostic tests. Replace motor or driver if necessary.

1010-0003-1108 Jam between sensors LB11 or LB12 and CF exit sensor LB14

Call agent:

- 1.
2. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
3. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LB11, LB12, and LB14 sensors are properly placed and there is no paper or anything else on them.
2. Run diagnostic test [1010-25 Check cross-fold sensors on page 536](#). Check that cable and connectors are undamaged and unbroken; replace them if necessary.
3. Replace the sensors if necessary.
4. Check that the CF motors are working properly. Run the CF motor diagnostic tests. Replace motor or driver if necessary.

1010-0003-1187 Cross folder – No paper at sensor LB11 or LB12

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LB11 and LB12 sensors are properly placed and there is no paper or anything else in the paper path.
2. Run diagnostic test [1010-25 Check cross-fold sensors on page 536](#). Check that cable and connectors are undamaged and unbroken; replace them if necessary.
3. Replace the LB11 or LB12 sensor if necessary.
4. Check that the CF motors are working properly. Run the CF motor diagnostic tests. Replace motor or driver if necessary.

1010-0003-1201 Cross folder – Sensor LB12 cut

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LB12 sensor is properly placed and there is no paper or anything else on it.
2. Run diagnostic test [1010-25 Check cross-fold sensors on page 536](#). Check that cable and connectors are undamaged and unbroken; replace them if necessary.
3. Replace the LB12 sensor if necessary.
4. Check that the CF motors are working properly. Run the CF motor diagnostic tests. Replace motor or driver if necessary.



NOTE: After checking the cables and connectors through diagnostics, and before replacing the sensor (in case it is needed), please make sure that the error is not being caused by the printer.

1010-0003-1401 Cross folder – Sensor LB14 cut

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LB14 sensor is properly placed and there is no paper or anything else on it.
2. Run diagnostic test [1010-25 Check cross-fold sensors on page 536](#). Check that cable and connectors are undamaged and unbroken; replace them if necessary.
3. Replace the LB14 sensor if necessary.
4. Check that the CF motors are working properly. Run the CF motor diagnostic tests. Replace motor or driver if necessary.



NOTE: After checking the cables and connectors through diagnostics, and before replacing the sensor (in case it is needed), please make sure that the error is not being caused by the printer.

1010-0003-1408 Jam at CF exit sensor LB14

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LB14 sensor is properly placed and there is no paper or anything else on it.
2. Run diagnostic test [1010-25 Check cross-fold sensors on page 536](#). Check that cable and connectors are undamaged and unbroken; replace them if necessary.
3. Replace the LB14 sensor if necessary.
4. Check that the CF motors are working properly. Run the CF motor diagnostic tests. Replace motor or driver if necessary.

1010-0003-1847 Cross folder – Tilt tray sensor issue

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LB18 sensor is properly placed and there is no paper or anything else on it.
2. Run diagnostic test [1010-18 Check tilt-tray flap X44 on page 532](#). Check that cable and connectors are undamaged and unbroken; replace them if necessary.
3. Replace the LB18 sensor, motor, or driver if necessary.

1010-0004-0001 Tab applicator – Tab unit is not ready

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the Tab applicator is ready, has got tabs, and placed properly.
2. Check that the fuse, cables, connectors and sensors are properly connected and undamaged; replace if necessary.
3. Troubleshoot using the TAB LEDs, refer to Folder > troubleshooting > Tab > “TAB LED Information”, the LED sequence should point to the defect (sensor, motor, etc.). See [Tab LED information on page 1455](#).
4. Replace Tab PCB, if necessary.

1010-0004-0001 Tab applicator – Error at motor end stage

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that fuse, cables, connectors and sensors are properly connected and undamaged; replace, if necessary.
2. Troubleshoot using the TAB LEDs, refer to Folder > troubleshooting > Tab > “TAB LED Information”, the LED sequence should point to the defect (sensor, motor, etc.). See [Tab LED information on page 1455](#).
3. Replace Tab PCB, if necessary.
4. Replace motor.

1010-0004-0008 Tab applicator – Tab applicator jam or tab applicator bracket not closed

Call agent:

1. Check that there is no paper jammed in the Tab applicator, and that the bracket that holds the strip of tabs is properly closed.
2. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
3. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that there is no paper jammed in the Tab applicator, and that the bracket that holds the strip of tabs is properly closed.
2. Check that sensor S22 is properly placed.
3. Check that switches are not damaged.
4. Check that cables, connectors are undamaged.
5. Replace sensor S22 or switch, if necessary.
6. Replace the Cross-folder PCB or Tab PCB, if necessary.

Troubleshooting

Previous checks:

- For any issue related to motors, please check the driver pin configuration in [Folder electrical devices on page 1581](#).
- For any issue related with the Tab, please check the two LEDs (red and green) installed at the Tab PCA, which is installed behind the Tab mechanism. See [Tab LEDs on page 1361](#).
- Check that each sensor does not have any media left over from any other jams. Clear the paper path for all the processes.

The following information is divided into these categories:

- [Interface/Bridge](#)
- [Fan-folder](#)
- [Tab](#)
- [Cross-folder](#)
- [Install the folder bridge](#)
- [Printer messages](#)

Interface/Bridge

How to look at the space between the printer and the folder

In order to understand the cause of a paper jam at the interface, it is critical to check what is happening between the printer and the folder, and unfortunately, this is not so easy. Here are two recommended viewing positions:

- Focus on the diverter of the printer. Here is how to place your head:



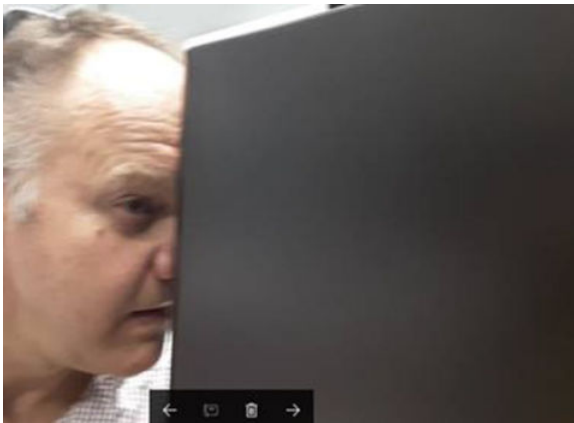
What you will see: a clear view of the diverter when the edge of the paper is arriving and how the paper moves while advancing to the folder.



This can be recorded in video, even with slow motion, to see, afterwards, really what happened.

For HP-authorized personnel only

- Focus at the entrance of the folder:



What you will see: A clear view of the paper edge when it enters the folder “mouse” as well as how the paper moves while advancing to the folder.



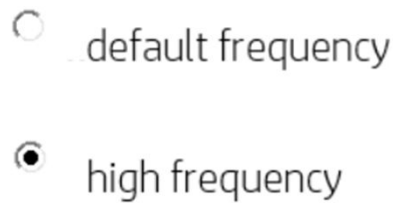
This can be recorded in video, even with slow motion, to see, afterwards, really what happened.

Loud high frequency noise from the Interface

This noise is caused by the input frequency of the Interface transport motor FF-X46, which a feedback frequency of the motor.

It is possible to reduce this noise by increasing the frequency of the Interface transport. Therefore, two things are necessary to reduce this noise:

1. Change the setting of the FF-X46 in diagnostics to “high frequency.”




2. Change the dip switch settings:

1. On > On
2. Off > Off
3. On > On
4. Off > Off
5. Off > **On**
6. On > **Off**
7. On > **Off**
8. Off > Off

Paper does not reach the Folder

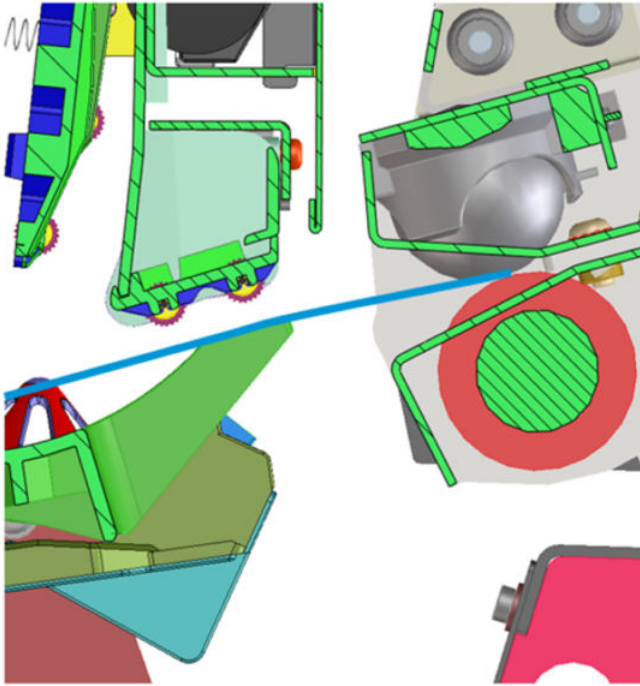
Issue: Paper does not reach the Folder.

Cause: Three things can happen before Folding (**before** input rollers):

 **NOTE:** In case the printer has a Top stacker installed, please first adjust the paper-output path adjustable beam. See “Adjustment” in [Paper-output path adjustable beam \(CZ309-67201\) on page 1261](#).

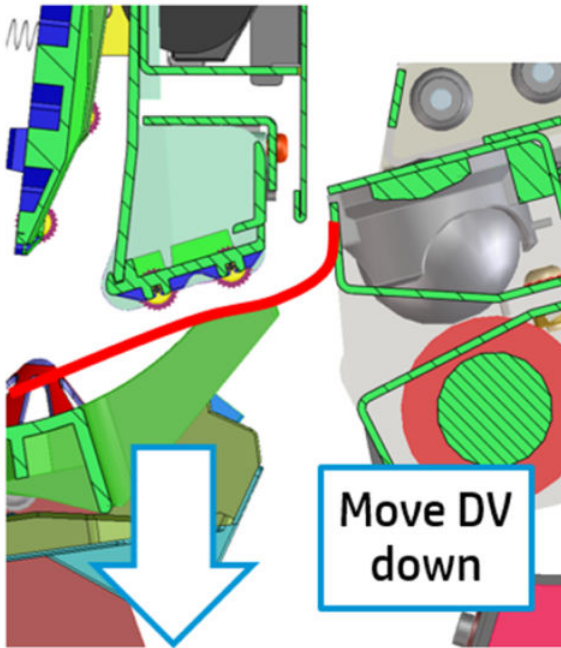
1. Optimal transition: smooth transition. No need to move the Diverter valve.
2. Folder entrance too low: paper hits upper metal beam and gets blocked, causing a jam at printer exit.
3. Folder entrance too high: paper hits lower metal beam and goes down. Usually it doesn't get blocked at printer exit.

Optimal transition



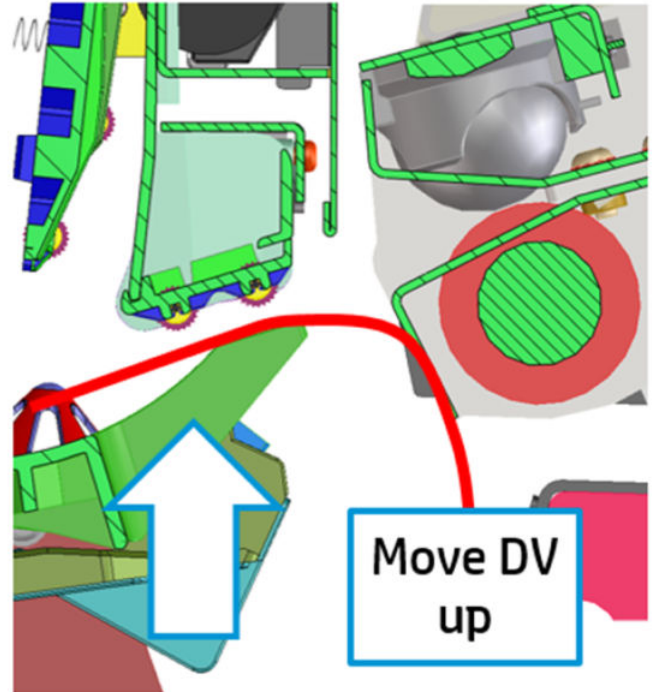
Smooth transition
No need to move DV

Folder entrance **too low**




Move DV
down

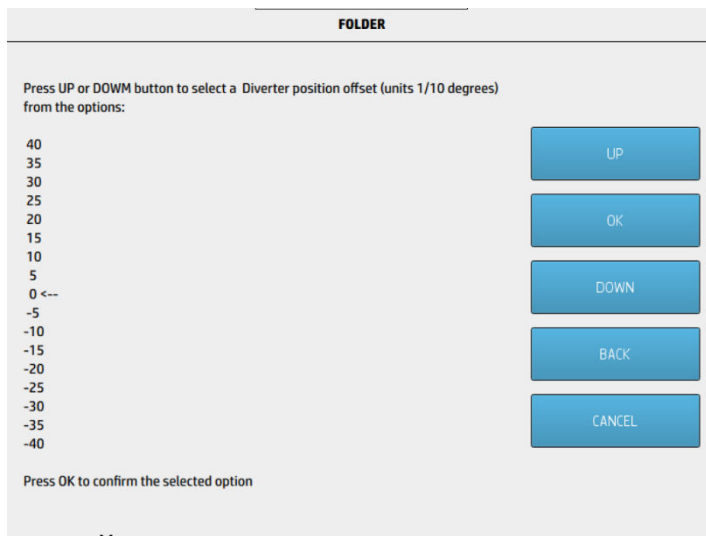
Folder entrance **too high**



Move DV
up

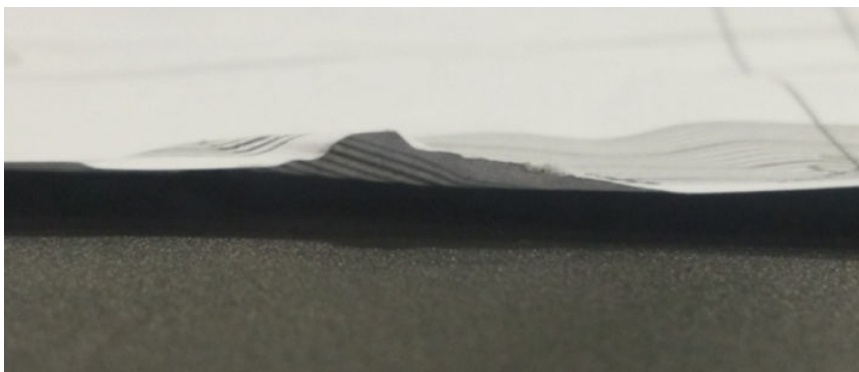
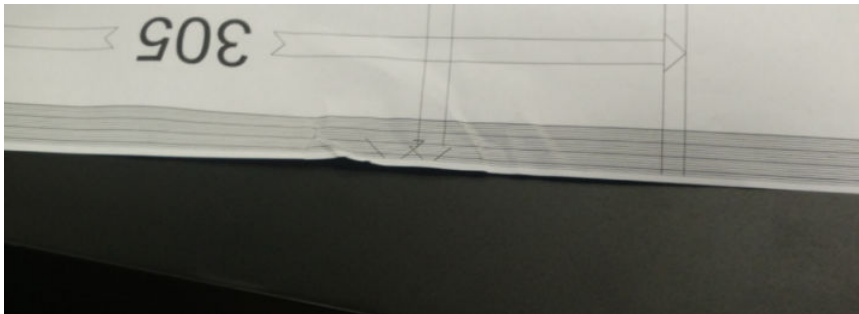
Procedure: Go to **Settings** ► **Service menu** ► **Accessory Utilities** ► **Folder Utilities** ► **Calibrate Diverter Position**.

 **IMPORTANT:** Any positive amount (ex: +10) will move the Diverter up and any negative amount (ex:-10) will move the Diverter down.



Interface crash

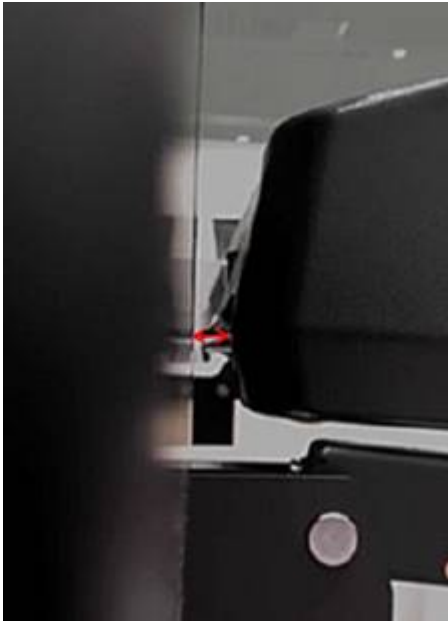
The following is a list of recommendations to follow if an interface crash occurs:



1. Check the printer to ensure that nothing could slightly deform the trailing edge before reaching the entry of the folder. Example checks include:

- Ensure there are no traces of glue at the output of the printer, or on the diverter (do not hesitate to clean the diverter if any doubt).
 - Ensure that the fingers of the diverter are well placed in the platen (fingers are inserted within the print platen, no risk of the trailing edge touching the "head" of the metal fingers).
 - Ensure the presence of no other factors that could damage the trailing edge. Touch-check the entire output media path, seeking any unevenness, roughness, etc.
2. Check the space between printer and folder.

Try to reduce the space between the printer and the folder as much as possible.



Try to reduce the space between the printer and the folder as much as possible.

Criteria:

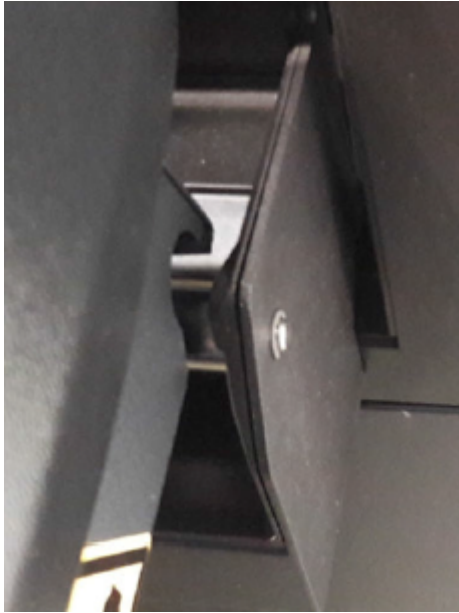
- It should be possible to lift up the bridge without touching the printer.
- It should be possible to open the rear cover of the printer without touching the folder.

The recommendation is to leave a distance of only 1-2 mm between the folder and the printer when lifting up the bridge or opening the rear cover.

3. Check the hook position on the printer.

- When lifting up the bridge on either side by 1 cm and placing it back on the support of the printer, there should be NO lateral force or pressure. If there is any force, the interface/bridge will be under tension, which could create intermittent paper jams / intermittent lateral FF SKEW.

- The following picture shows the bridge lifted up by 1 cm:

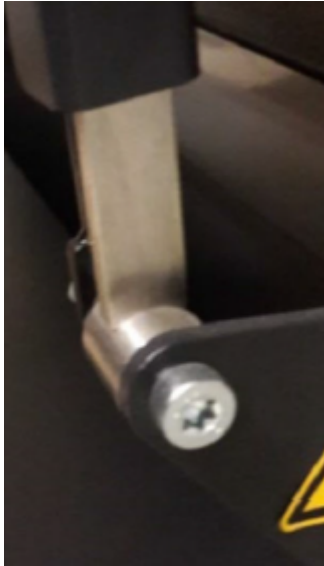


- The following picture shows the bridge when it is released and it goes down to its standard position:



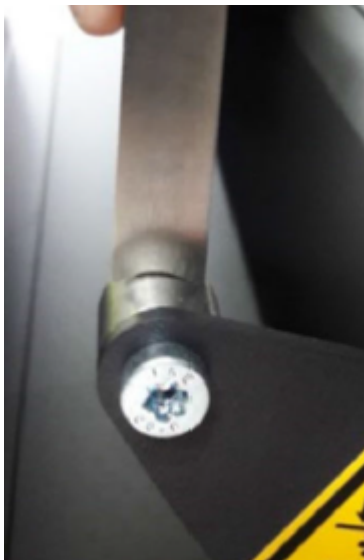
- You should not feel any forwards, backwards, or lateral tension when putting the hook back in contact with the support of the printer.
- If any of these horizontal forces exist, you should move the printer or folder accordingly to ensure that there is no more force when closing the bridge.
- This check must be carried out on each side, one after the other (not at the same time).
- On both sides, there should be a similar weight to lift up. If one side can be lifted up with almost no force and the other requires a much higher force, something needs to be improved.

- How: by adjusting the feet under the folder:
 - Decrease the height of the folder on the side which has little force, if possible, or increase the height of the folder on the opposite side. When doing this, you may notice that the bridge is also moving laterally in relation to the printer by 0.5–1 cm. It is then possible that you will need to recalibrate the position of the folder in relation to the printer.
4. Check the gas spring position.
- When the bridge/folder is “hooked” to the printer in its normal position:
 - Check that the Gas spring stopper is not under any pressure under the bridge (on both sides). The following picture shows the stopper potentially under pressure:



- In this case, when you try to move the Gas spring stopper, you CANNOT do it.

The following picture shows the Gas spring stopper under NO pressure (there is a space of at least 1 mm at the bottom of the stopper):

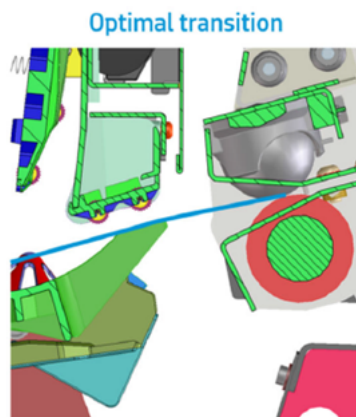


- Look at the space shown with the lines below:



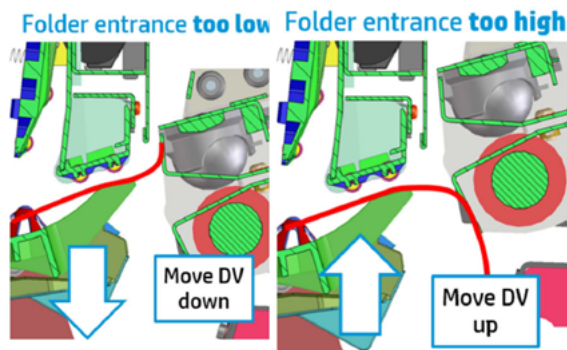
In this case, when you try to move the Gas spring stopper, you CAN do it.

5. Check if the diverter is properly positioned.



Smooth transition
No need to move DV

-



Settings > Service menu > Accessory Utilities > Folder Utilities > Calibrate Diverter Position.

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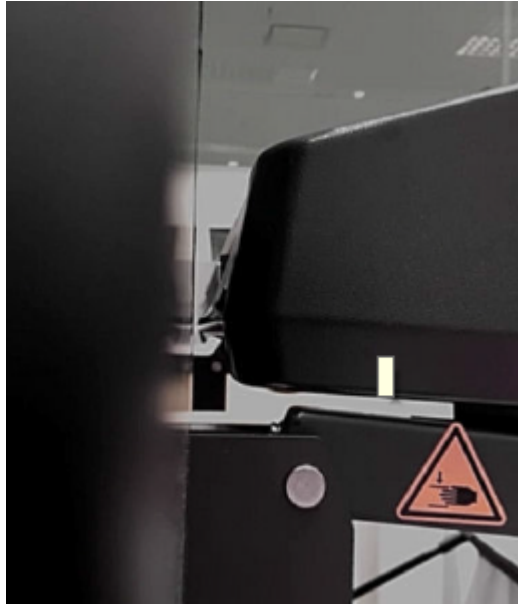
- Here is the recommended position to look at the paper in the interface, to be able to best check the position of the diverter: the correct position of the head is at the level of the paper.



- What you will see: a clear view of the diverter when the edge of the paper is arriving and how the paper moves while advancing to the folder. Focus on the diverter:



- Placing the head closer to the printer, enables a greater view of the entry of the folder:



This can be recorded on video, even using slow motion, to enable subsequent viewing of what really happened.

6. Check if there is any burr on the sheet metal.



7. When the jam is happening, check whether the motor FFX46 was turning well / not stopped.

How: remove the plastic cover on the right (the one covering the white/blue LED), and while printing and folding, place a finger on the belt or axis of the motor, in this way, while looking at the interface you can tell if the motor is rotating or not. If you feel that the motor is ceasing to rotate when the edge of the paper is arriving, then you should suspect an intermittent failure of this motor/PCA or of the cable connecting the PCA to the FF PCA.

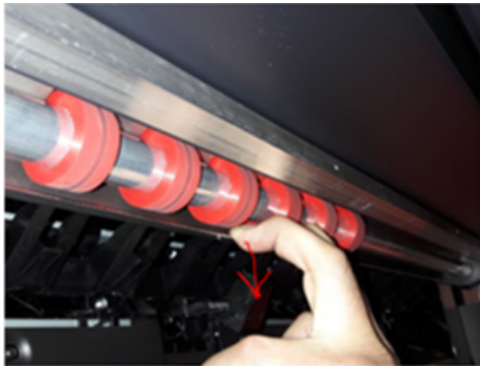


IMPORTANT: This motor will stop in any case just after the physical jam, so it is important to know the movement of this motor just before the jam.

8. Check the paper path at the Folder interface

Check the interface gap to prevent sensor LB5 from flickering and cause intermittent jams. Please refer to [Interface gap check. LB05 distance to media while being folded on page 1560.](#)

In the case of intermittent paper jam, check if the level of paper jam is reduced by pulling down the metal part guiding the axis with the red rubbers.



If it is reduced, you need to check the space and cleanness where the paper passes through in the interface.

Check the interface by unmounting it, and clean each part that is in contact with the paper. Any small defect, (stickiness, or abrasion could generate intermittent paper jam).

a. Remove the top of the flap:

- Remove the upper stopper of the upper flap.
- On the left side, remove a plastic pin maintained by 2 screws.

How to access these 2 screws: make sure the bridge and upper flap are up, and they are then accessible from the lower part.

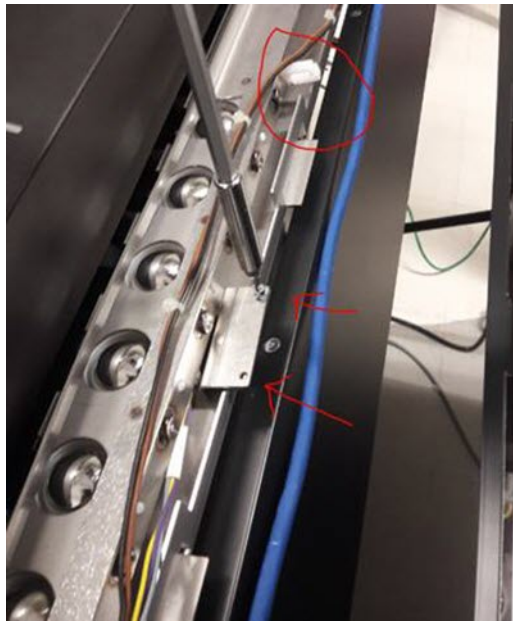


Then remove the upper flap.



- b. When possible: remove the LB5 sensor or at least unplug the cable connected to the LB5 and take out the cable from the plastic guides.

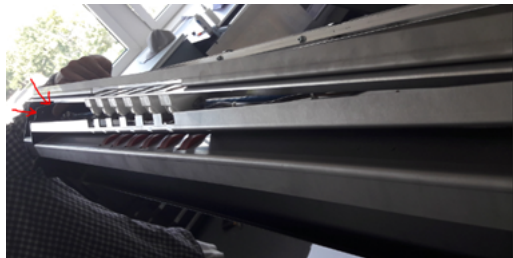
If the LB5 is on a removable metal plate maintained by 2 screws, remove the plate supporting this sensor.



If, as in the case of the initial version, the LB5 cannot be unmounted from the interface, the cable must be removed. How:

Remove the 2 screws on the left side maintaining the upper part of the interface, the one which is holding the balls, and then rotate it until you can reach the end of the cable plugged in to the LB5 cable > pull out the cable connector from the LB5 sensor.

The red arrows in the following picture indicate the placement of the 2 screws to be removed. In this picture, you can see the upper part rotated to enable access to the LB5.



- c. Release the tension on the belt on the right side.



- d. Remove a gear on the right side (you will need a good quality Allen key 2.5).

The gear is situated on this axis.

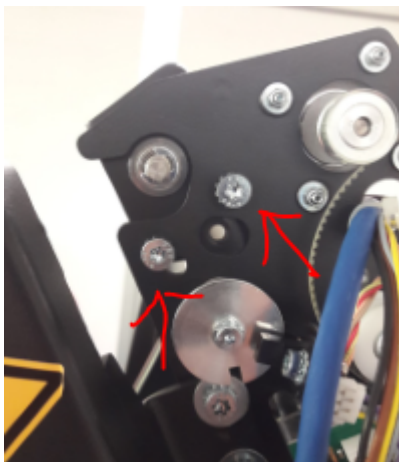


- e. Remove the interface maintained by 4 screws.

⚠ CAUTION: The help of another person will be required when carrying out this operation! Otherwise there is a: HIGH RISK OF THE INTERFACE FALLING DOWN.

To remove the screws:

Start from one side.



Ask the other person to support the interface on the side where you just removed the 2 screws.

Then remove the 2 screws from the other side, while supporting the interface with one hand.



Then remove the interface (some force will need to be applied).

To split the interface into 3 pieces:

- First remove the upper part (the one with the metal balls). There are a total of 4 horizontal screws. (If the LB5 is still with the interface, only the 2 screws on the right should be removed, the 2 screws on the left have already been removed).



- Then separate the middle from the lower parts by removing 2 vertical screws.



Then you can check/clean the different parts that come into contact with the media.

- f. To mount it back in position: follow the same process in reverse order.

If the LB5 is part of the interface (not on a separate plate maintained by 2 screws), two specific points need to be followed:

In this step, only the 2 screws on the right, marked as A in the following picture, should be put in place.



Once the interface is mounted back in the folder, rotate the upper metal part supporting the metal balls to be able to plug the cable back into the LB5 and then put in place the 2 screws on the left.



To be able to open a case with HP support:

1. First the traces of the folder must be turned on (**Settings > Service Menu / Accessory Utilities > Folder utilities > Retrieve Folder Full Logging**). Details are provided in the service manual, in the chapter [Obtaining the printer log and the diagnostics package on page 2058](#).

2. While duplicating the paper jam, you need to take video and pictures, extract the diagnostic package, and give detailed explanations describing exactly what you have seen and done on the printer and folder.

For example: a video at the moment of the jam, of the 2 following areas, taken in slow motion, is of critical importance.

Video of the first area:



And video of the second area, from the bottom side:



Paper edge crashes

Issue: Paper edge crashes (after input rollers).

Cause: Flap misadjustment.

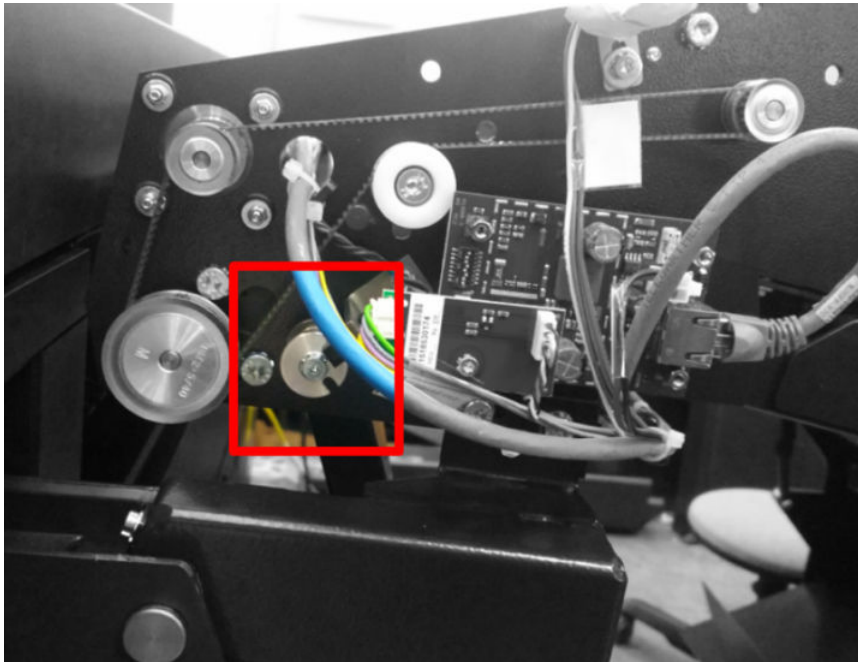
Procedure: Go to **Settings/Service menu/ Accessory Utilities/ Folder Utilities/ Parameter Configuration/Fan Fold-Flap Fold steps (LB07)** and add/remove the needed mm. See [Flap fold steps on page 1569](#).

If we cannot reach the optimal position with the Service menu calibration, a **manual** flap calibration must be implemented:

1. Keep the Folder connected to the printer in order to maintain the flap's "up" position.
2. Unscrew the Flap screw a little.

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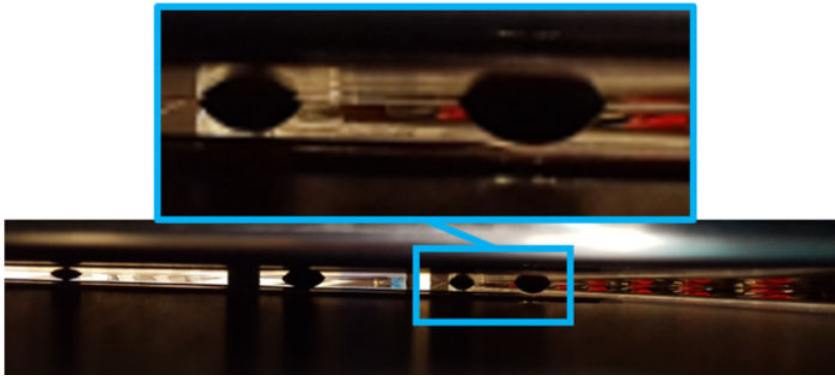
3. Hold the Flap with your fingers at the proper position (4 mm higher than Bridge entry). To improve visibility take a side-look of the Folder.
4. Screw it back in.



Jam at bridge with small-sized paper

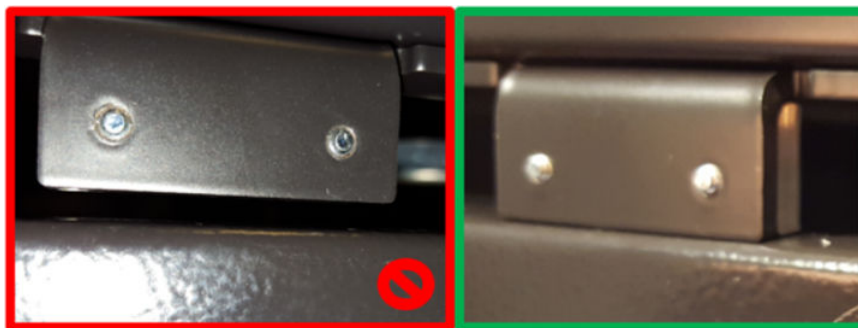
Issue: Jam at bridge with small-sized paper.

Cause: Bridge balls are not pulling the paper properly (no contact for some of them).



Procedure: Hook position must be recalibrated.

1. Remove the upper part of the Bridge.
2. Remove the handle.
3. Check the spacer (central part of the rubber) and remove one of the parts. When the spacer is shorter, the hook is in an upper position. As a consequence, the upper part of the bridge is staying closer to the lower part of the bridge.



Jam at bridge interface

Issue: Leading edge corner is bent causing a jam at the interface.



Cause: Hooks are not properly aligned with the printer.

Procedure: Loosen the screws from the hook, but do not remove them. Push the tray down and then tighten the screws again. Then, replace all the covers.



Low-end interface jams (before input rollers)

Issue: Jams at the folder interface (before the input rollers) in low-end configuration.

Cause: The folder is not correctly adjusted to the low-end configuration.

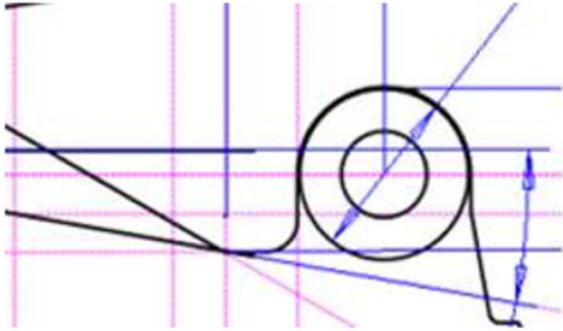
Procedure: Follow the [5000/5100/6000 printer series adjustment only on page 1376](#), under the Folder assembly instructions section.

Bent corners

Issue: The corner of the leading edge is bent at the interface/entrance of the bridge.

Cause: The hooks are not properly aligned with the printer.

Procedure: Ensure that both hooks are perfectly aligned at the reference point of the printer pictured below. Adjust the Diverter Valve up +5. If 5 is not enough, adjust the Diverter Valve up +10.

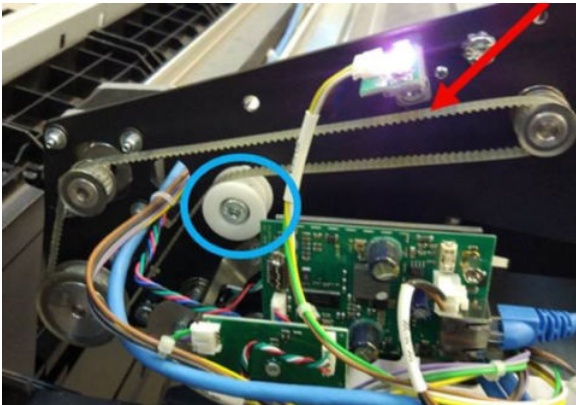


Intermittent interface noise with plots longer than 1 m

Issue: Intermittent interface noise (very sensitive with plots longer than 1m).

Cause: The belt moved by the FFX46 Interface transport roller is loosen. As a consequence the belt slides and does not properly fit the engine.

Procedure: Adjust the belt with the tensor highlighted in blue:



Small sized plots (A4, A3, etc.) are twisted inside the bridge

Issue: Small sized plots (A4, A3...) get twisted inside the bridge. The outcome might be:

- Jams at the Transport tray (for A4 sheets)
- OOS fan fold skew (only a problem for small roll-width sizes)

Cause: Some metal balls are not properly guiding the plot inside the bridge. Check if all metal balls are touching the belt while transporting the plot inside the bridge.

We have barely encountered the following situation: One of the first couple of metal balls inside the bridge is not properly placed (the other one was okay). The bridge belt, from underneath, does not properly fit the engine below. There is a screw underneath that keeps misplacing the belt.

Procedure:

1. Remove the metal ball and check if the belt properly fits the engine (the Top cover will need to be removed).



2. If not, check the position of the following screw from underneath (several covers will need to be removed):

Wrong position

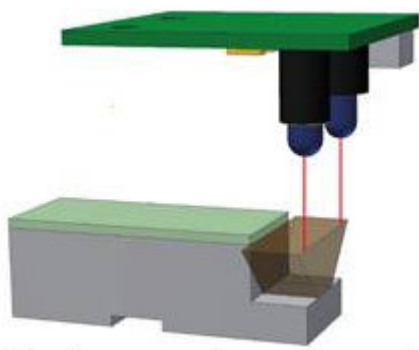


Good position



Alignment of the bridge sensors with corresponding prisms

The following is a list of recommendations to follow if the bridge sensor (LB1-LB2-LB3-LB4) is not properly aligned with the prism.



NOTICE: Alignment check of the LB1 sensor PCA – prism **must be done with the GAS SPRING in place.**

Issue:

- Intermittent paper jam. No physical jam, paper stops moving suddenly in the folder followed by a paper jam removal. Check alignment position in all sensors.
- Folder door open if all covers are properly closed. Check alignment in LB1 sensor.

Procedure:


 **NOTE:** The prism and the block which holds the sensor are in fixed positions.

1. Remove the LB1 PCA, shine a light in the hole from one side and check that the light coming out the other side is well-centered. Do this check for both holes.
2. Put a flashlight over one of the holes.



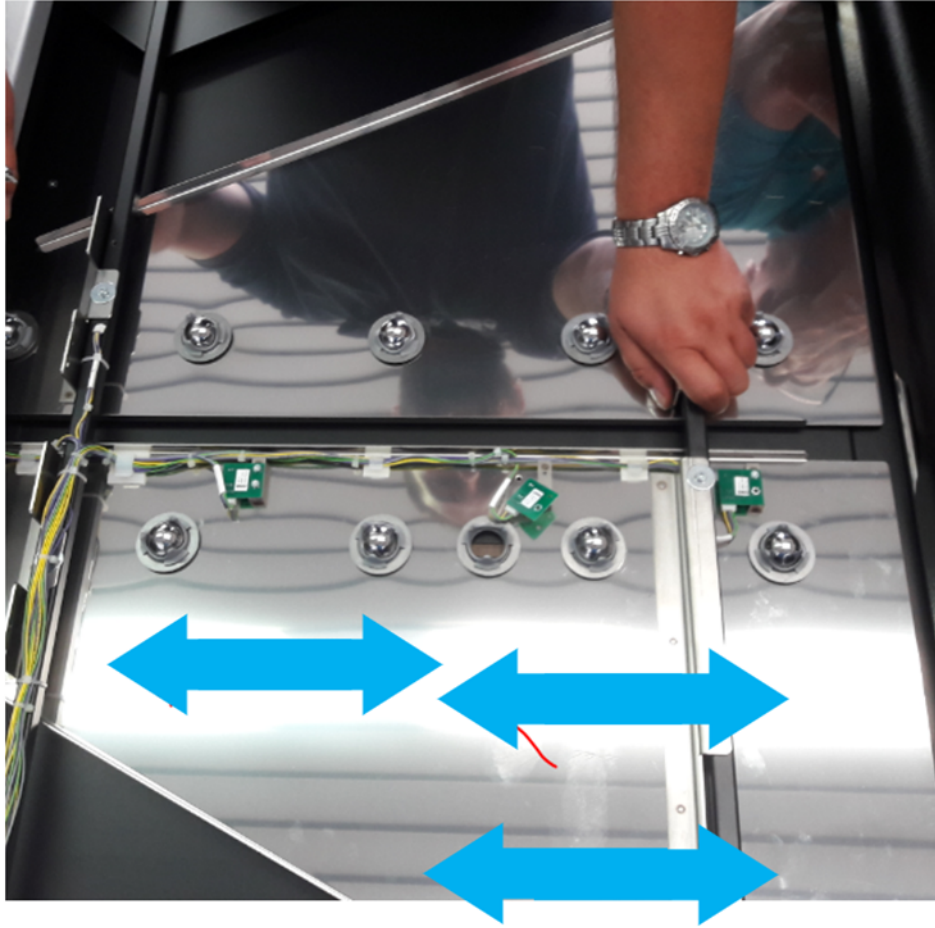
3. Check through the other hole. From this view If you can see the complete prism, the position is OK.



 **NOTE:** Please ensure the gas spring is in place. You need to keep pushing down the top cover as shown in this picture:



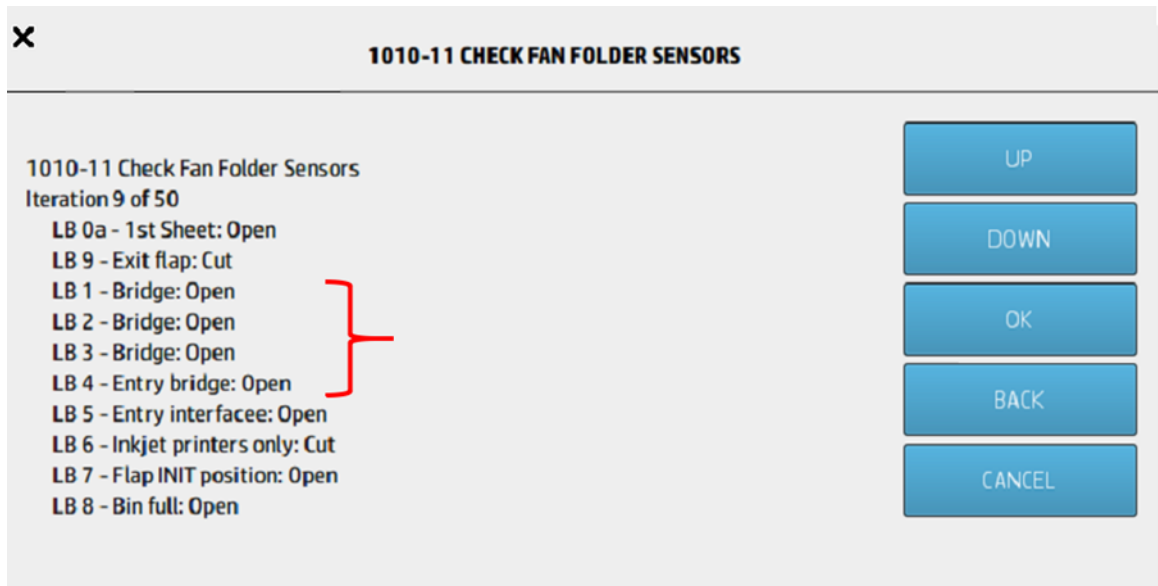
4. To adjust the plate which supports the LB1, LB2, LB3, and LB4 PCA, you need to loosen the 3 screws to move it.



5. After the alignment, the hole and prism should be aligned in relation to each other.

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6. A functional check must be carried out when booting the printer in diagnostic mode, FF sensor tests: if the signal is not cut > **OPEN**, if it is cut > **CUT**.

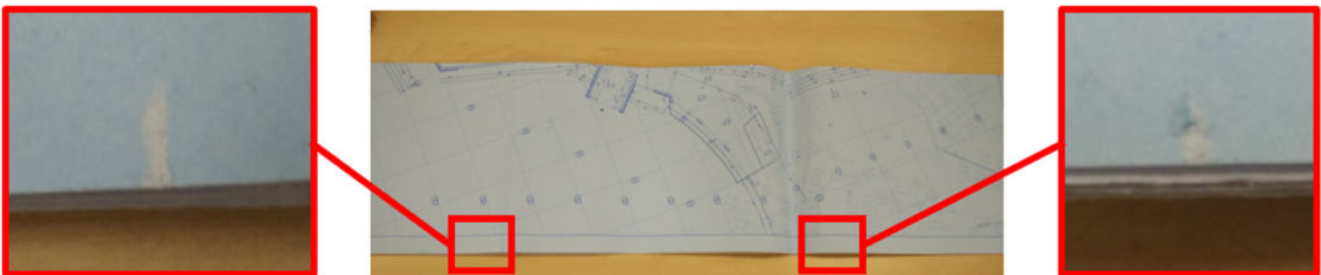


If any misalignment is detected on the LB4 please contact HP support.

Fan-folder

Scratches at Fan-fold exit

Issue: Scratches at Fan-fold exit.

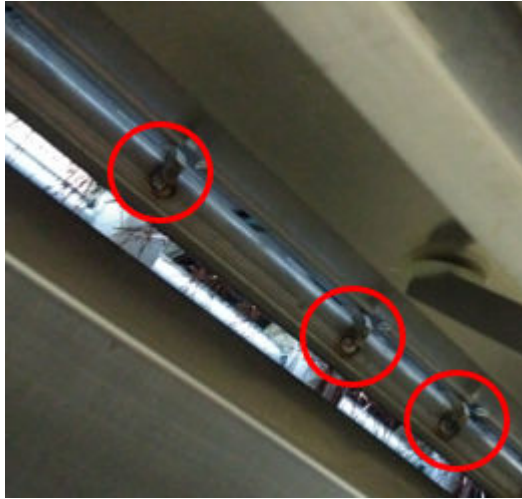


Procedure:

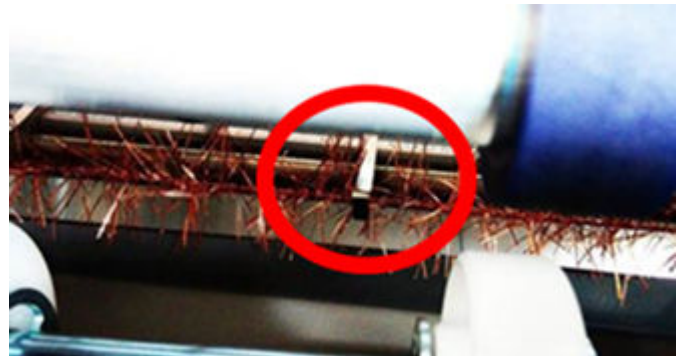
1. Remove the fan-fold cover (central) and the fan-fold exit cover.



2. Rotate the lower exit flap until the lower fixed guides are visible.



3. Smooth the lower fixed guides with a file (sharp edges). Also, smooth the upper fixed guides (from the roller tray point of view).



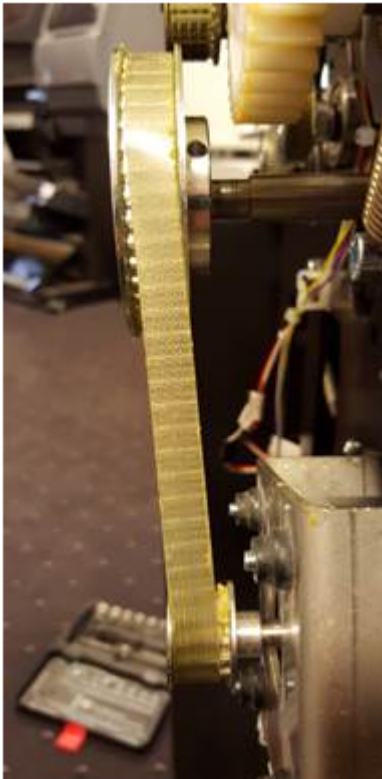
If not solved, please check [Lower exit flap adjustment on page 1535](#).

Jam at Fan-fold exit

Issue: Jam at Fan-fold exit (LB04 jam).

Cause: Loosen screw. The Fan-fold exit guide motor is not rotating (FFX31). Visible gear misalignment. The screw maintaining the wheel on its axis is loose.

Procedure: Tighten the screw again.



Jam at Fan-fold exit with long pages (2-2.5 m) (2nd possibility)

Issue: Jam at Fan Fold exit, part of the paper getting out from the FF on its way to the roll tray.

Cause: A long plot will generate a thick folded plot going from the FF to the roller tray and could hit the FAN assembly situated at the top of the roll tray.

Procedure: Rotate the rear part of the FAN at the top of the roller tray up 10-20 degrees. Here are different pictures of how to rotate it:





Jam at Fan-fold exit with a 36 inch roll size

Issue: Jam at fan-fold exit with a 36 inch roll size.



Cause: Roller tray not in the proper position (too far from Cross-fold output).

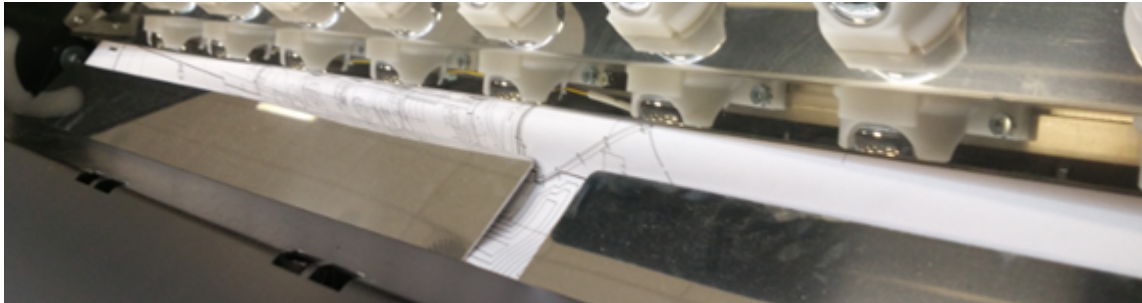


Procedure: Move the Roller tray closer to the Fan-fold and tighten the 3 screws maintaining the Roller tray with the rest of the folder. On both sides, create 6 mm distance between the white Fan-fold wheel and the Roller tray.

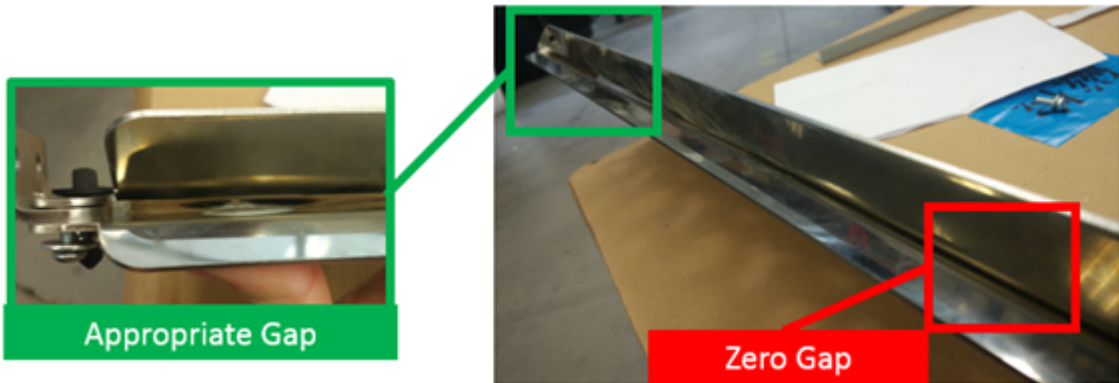


Plot crashes at Fan-fold entrance

Issue: Plot crashes at Fan-fold entrance against the Fan-fold sheet metal.



Cause: The Fan-fold sheet metal is bent (no gap in the middle), so the plot is not able to get to the input rollers. If the Bridge is lifted when Top Cover Fan-fold is also opened, the Bridge grids bend the Fan-fold sheet metal.



Procedure: Replace the Fan-fold sheet metal if it is bent. Never lift the Bridge if the Top Cover Fan Fold is opened.



Fan-fold exit speed too low

Issue: Fan-fold exit speed too low.

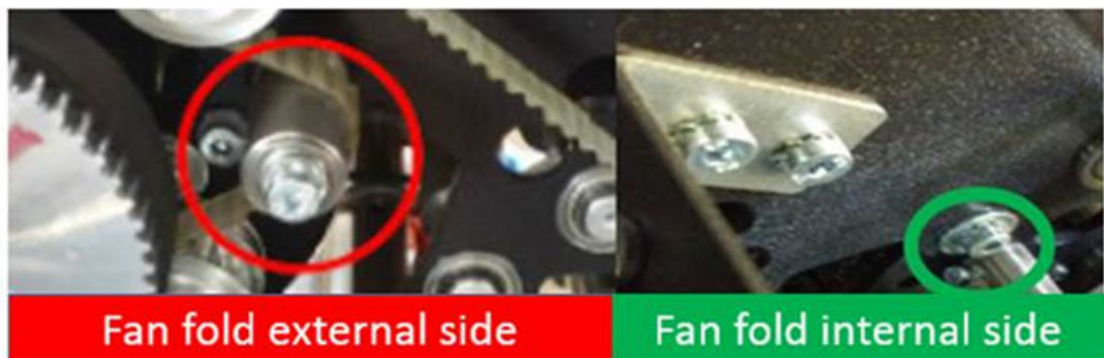
Cause: Loosen belt (FFX45).

Procedure:

1. Remove the fan-fold exit cover.



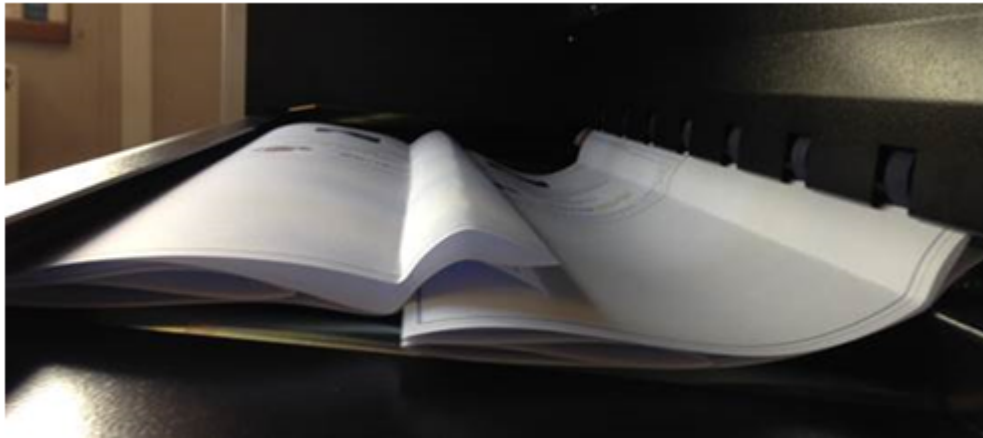
2. Adjust the tensor from the fan-fold internal side (not external side).




Marks at Fan-fold exit

Issue: Marks at fan-fold exit.

Scenario 1: AFNOR/FF size 297 mm.



1. Too much pressure of the FF lower exit roller.
Run the calibration **Folder ▶ Adjust folding quality ▶ Further adjustments ▶ Torsion spring at the Fan-fold exit**. See [Torsion spring at the Fan-fold exit on page 1514](#).
2. Fan-fold exit flap sensor (LB09) not properly positioned, as a consequence the flap does not properly guide the plot to the Cross-fold.
Run the calibration **Folder ▶ Adjust folding quality ▶ Further adjustments ▶ Lower exit flap adjustment**. See [Lower exit flap adjustment on page 1535](#).

 **IMPORTANT:** For page lengths of 700 mm and 800 mm (non AFNOR standard sizes), some marks could remain (but no mark with 841 mm or 594 mm page length). Removing these marks by decreasing the FF lower exit belt will create paper jams near this area.

Scenario 2: Page length from 2 m to 2.49 m with FF width of 210 mm.



1. Fan-fold exit flap sensor (LB09) not properly positioned, as a consequence the flap does not properly guide the plot to the Cross-fold.

- Run the calibration **Folder ▶ Adjust folding quality ▶ Further adjustments ▶ Lower exit flap adjustment**. See [Lower exit flap adjustment on page 1535](#).
2. Too much pressure of the FF lower exit roller.
Run the calibration **Folder ▶ Adjust folding quality ▶ Further adjustments ▶ Torsion spring at the Fan-fold exit**. See [Torsion spring at the Fan-fold exit on page 1514](#).
 3. Upper exit metal guide not well adjustment, applies too much pressure on the paper when exiting through the lower channel from the FF to the roller tray.
Run the fix mentioned in the chapter **Folder ▶ Troubleshooting ▶ Jams in fan-folder with long plots on 914 mm width media**. See [Jams in fan-folder with long plots on 914 mm width media on page 1445](#).

Jam at Fan-fold exit with small-sized paper

Issue: Jam at Fan-fold exit with small-sized paper.

Cause: The Fan-fold flap has some deformed edges and plot crashes there.



Procedure: Get the deformed edges back into the original position.



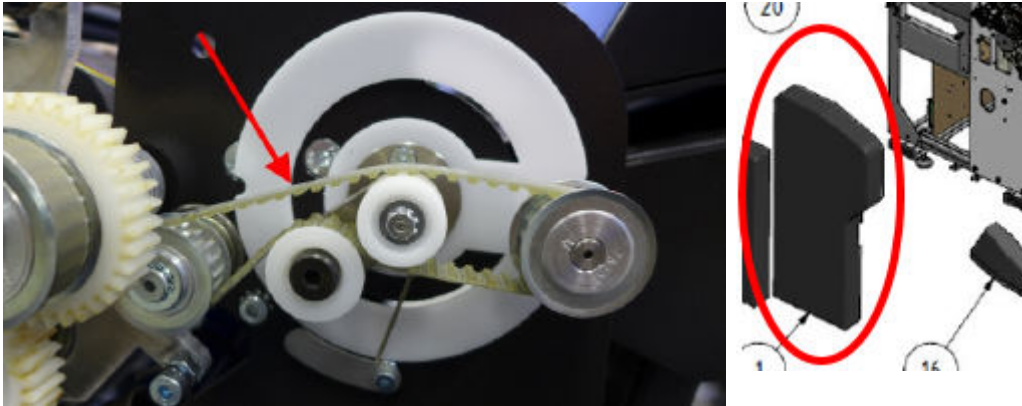
Intermittent FFX30 stall

Issue: Intermittent FFX30 stall.

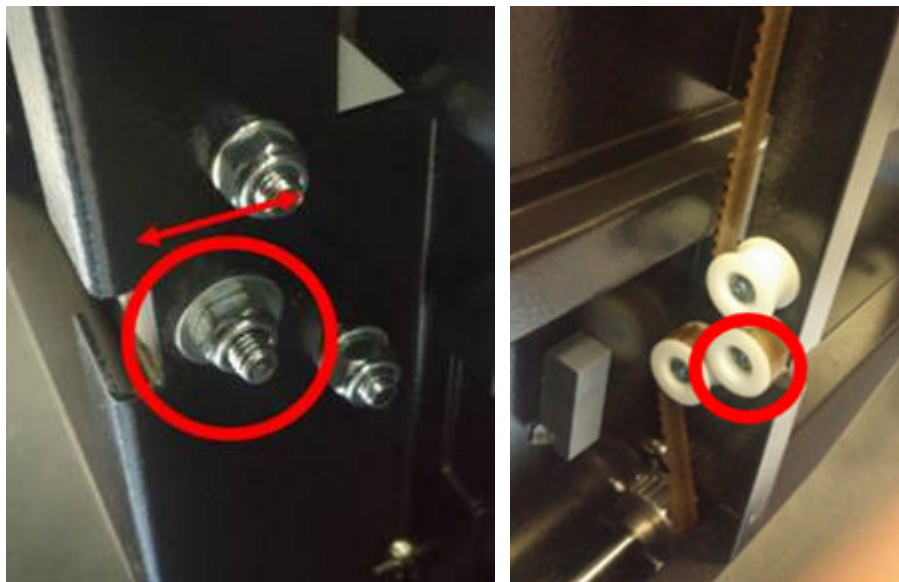
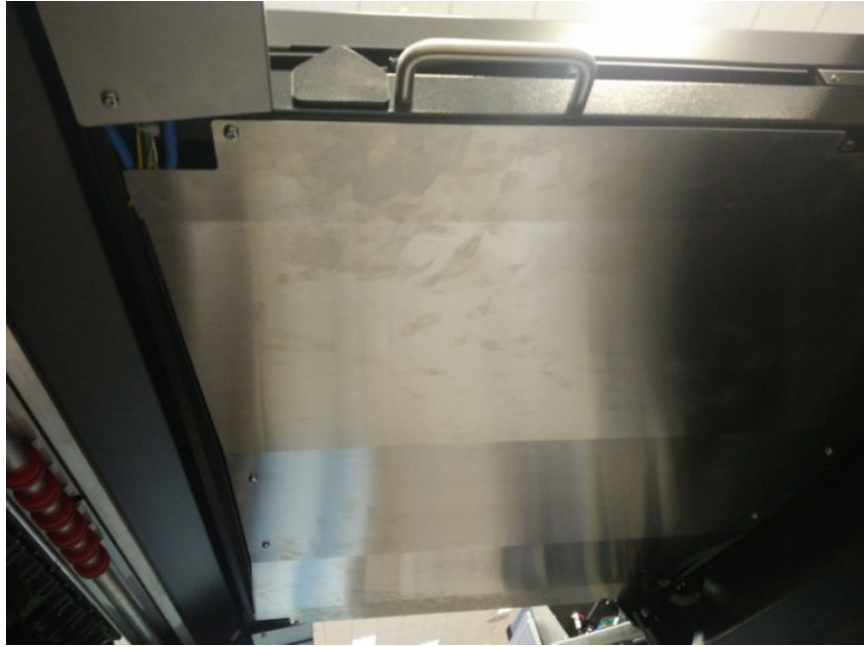
Procedure:

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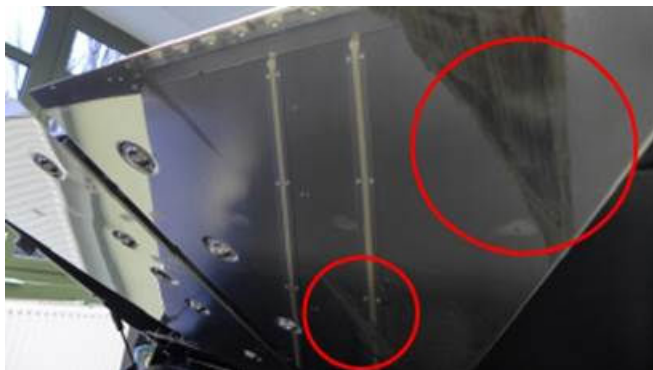
1. Clean the fan-fold red rubbers with alcohol.
2. Lightly grease the belt. Remove the left Fan-fold Cover.



3. Check the bridge belts tension below the bridge (remove the sheet metal cover) by adjusting the tensor (red circle).

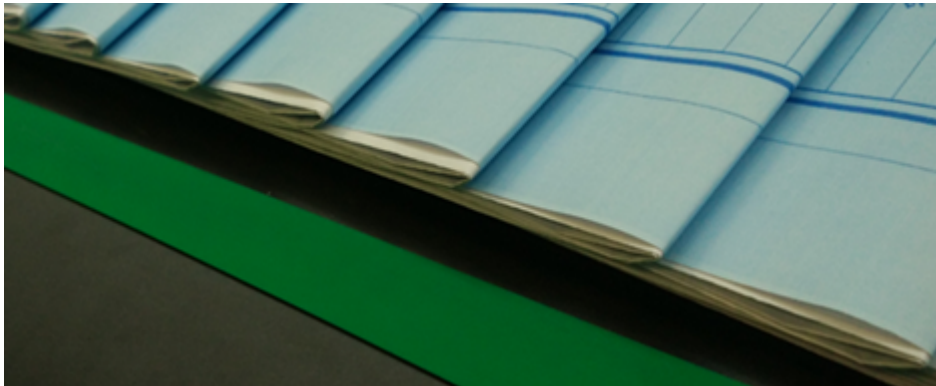


4. Open the bridge and clean the paper path with alcohol.

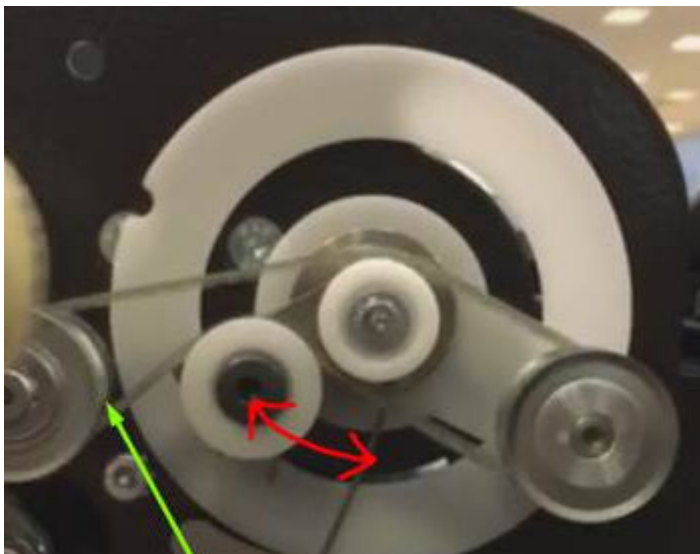


Fan-fold first sheet instability

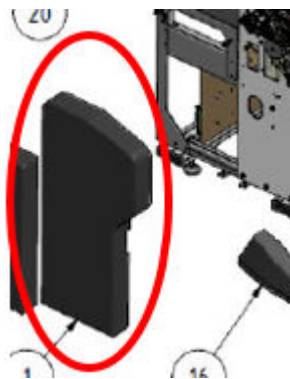
Issue: Fan-fold first sheet instability.



Cause: The tensor is oscillating.



Procedure: Lightly grease the belt. Remove the left Fan-fold Cover.



Jam at roll tray with long plots, after fan-fold exit

Issue: FFX47 stalls while trying to extract a long plot from the fan-fold. Jam at the transport tray.

Cause: The FFX47 belt tension is too high.

Procedure: Adjust the belt tension by changing the motor metal structure on the Folder structure. Unscrew the 4 screws and tight them once the position is found.

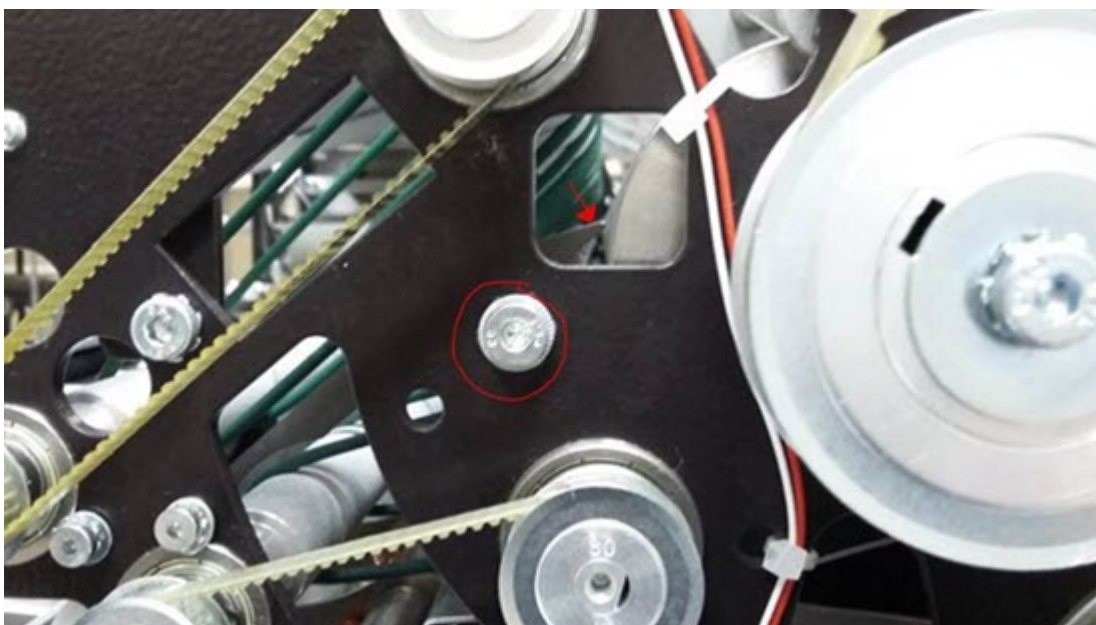
Jams in fan-folder with long plots on 914 mm width media

Issue: Jams in fan-folder when printing long plots on 914 mm width media.

Cause: Top metal diverter (as shown in the picture) is too low, causing jams in the fan-folder when printing long plots on a 914 mm roll. If the diverter is not in the right position, the plot can get jammed after the fan-fold operation, between the fan-fold exit and the roller tray.



Procedure: This metal diverter can be adjusted by the screw detailed on the picture below (you will also need to adjust the same screw on the opposite side):



This picture may be used as a reference for the position of the metal diverter on the rear (marked with an arrow) in relation to the grit roller.

A4 leading edge mark at Fan-fold exit

Issue: A4 leading edge mark at Fan-fold Exit.

Cause: Not appropriate Fan-fold exit force.

Procedure: Adjust the torsion spring. Check [Torsion spring at the Fan-fold exit on page 1514](#).

Jams and intermediate wrinkles after Fan fold

Issue: Folds get jammed in the Fan-fold exit area, or they are delivered to the CF area with intermediate wrinkles/folds.

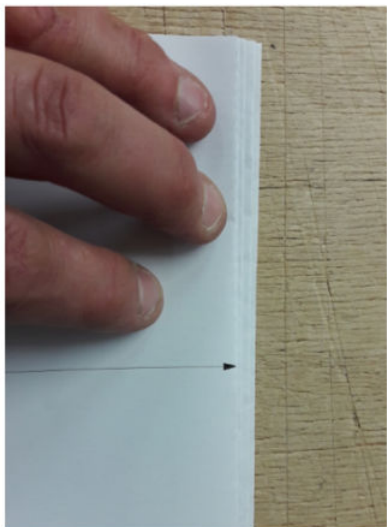


Cause: The exit flap, which has a range of motion which is larger than normal, is hitting both the green rubber belts (top position) and the metal output bin (bottom position), making a clanging-metal sound during normal operation.

Procedure: Change the configuration of the FF-X31 motor to (5: OFF, 6: ON, 7: ON).

Bad quality in FF: steps through media advance

The example below corresponds to a long plot of 2.5 m from a roll 594 mm wide.



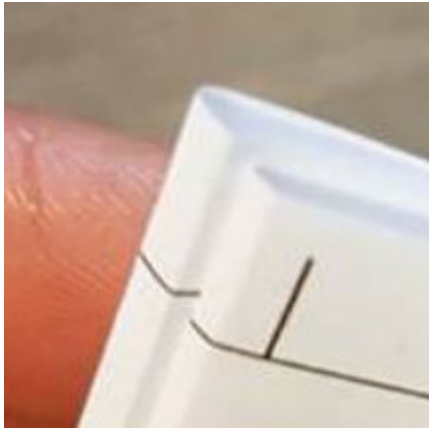
Issue: Quality of the FF is not perfect—there are steps in FF folds through the media advance.

Cause: Not enough force is being applied by the FF roller.

Procedure: Increase the force applied by the FF roller, reducing the length of the springs by 1-2 mm.

Bad quality of the FF: last folds have a round shape

Issue: The last folds have a round shape instead of a sharp shape.



Cause: Non-perfect adjustment of LBO (Fan Fold First Sheet).

Procedure: Increase or decrease the folder parameter "Fan Fold First Sheet". See [Printer-Folder FF skew adjustment on page 1496](#).

Additional information: These symptoms have mainly been seen when the FF page number is an odd number and no compensation fold, for example page length of 840, with FF width of 210 > 4 pages of 210, 3 folds and folding style DIN C or FF 210 without compensation.

Intermittent vertical wrinkles on long plot (longer than 3 meters) with folding style "FF only"

Issue: Vertical wrinkles through media advance, appearing mainly at the end of the FF package (before letting two pages not folded), seen more with narrow roll (for example, 297 mm roll width).



Cause: Paper gets deformed when the package starts to be thicker, more pressure is applied on the paper.

Fix/workaround: Decrease the folding setting **Max fan fold** from 22 to 15 or until the value when the marks do not appear. The thickness of each package will be smaller, but quality will be improved.

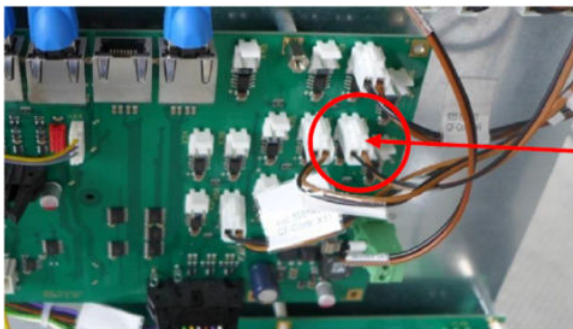
Roll tray

Checking the ventilation fan at the top of the Roll tray

These FANS only turn when there is paper on the roll tray moving towards the CF (they do not turn when the paper exits the FF and moves towards the roll tray).

The check should be performed when the Folder is on standby. Here's how to check:

1. Open the cover to access the EE board.
2. Switch off the Folder.
3. On the CF board, disconnect the cable on X52 and connect it to an available connector on the CF power distribution board.



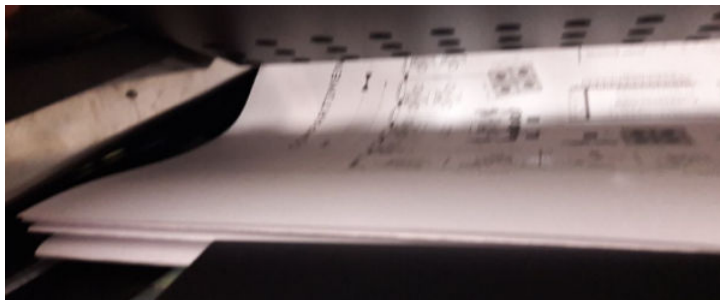
-Connect the power cable with Port X52 on the cross fold-Controller

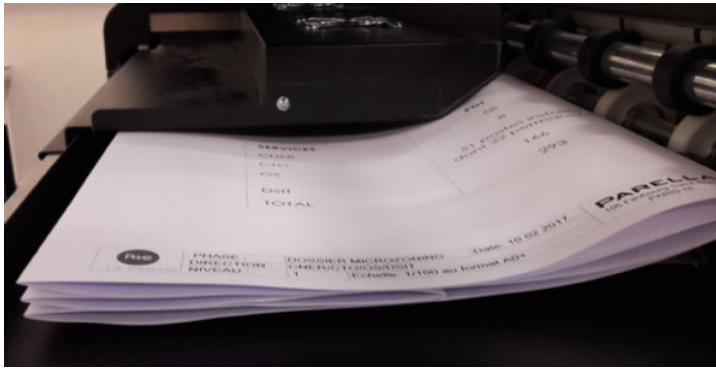
Power on the Folder. If there are LEDs on the CF board, the FANS over the CF should turn on.

Jam in the roll tray when printing plots with AFNOR folding style longer than 1.5 m

Issue: Jam in the roll tray when printing with AFNOR folding style plots longer than 1.5 m.

Cause: When the plot exits the FF area the paper is too wide and crashes with the fan support creating a Jam in the CF entrance..





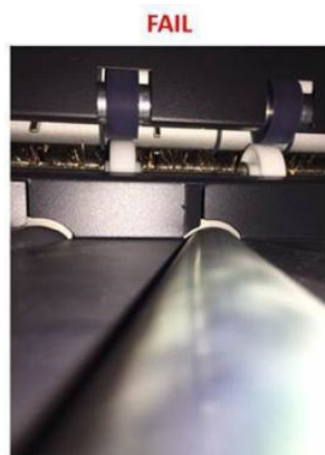
Procedure: Add washer to the L shape supporting the Fan at the top of roll tray, that will increase distance mechanically in order to situate it further versus the roll tray, more towards the back.

Curled plots stuck at the TT openings (small sizes very likely to get stuck at the openings)

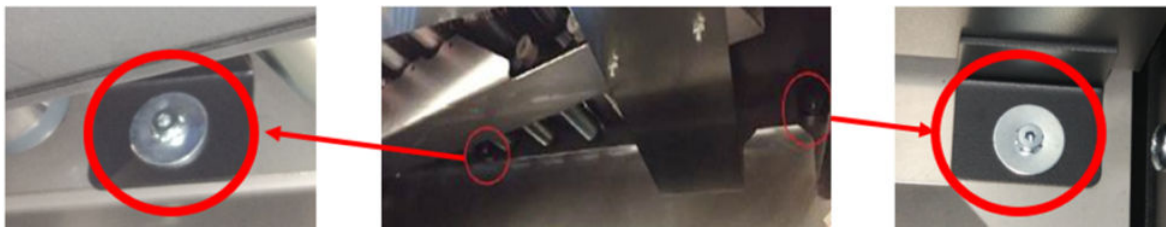
Issue: Curled plots stuck at the TT openings (small sizes a very likely to get stuck at the openings)



Cause: The gap between the sheet metal and the roller is too high.



Procedure: Readjust the Transport tray's vertical position with the two screws under the Transport tray (three for TAB units).

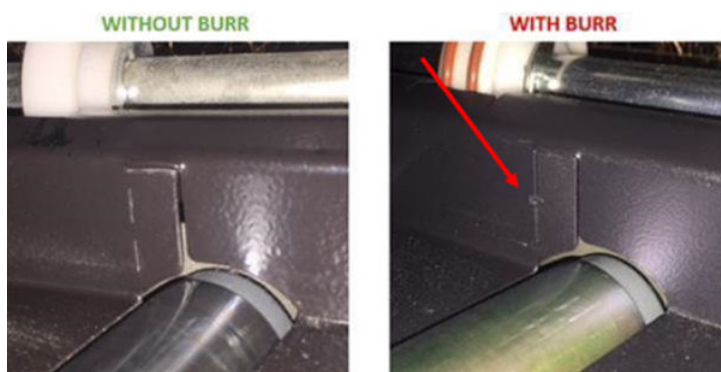


⚠ CAUTION: If the sheet metal/roller are too close, a metal on metal noise will happen and it will be very loud when the Transport tray motor is activated.

Plot found at the Transport tray (not done by the flush)

Issue: Plot found at the Transport tray (not done by the flush).

Cause: Sheet metal burr. Curled plots stuck at the burr.



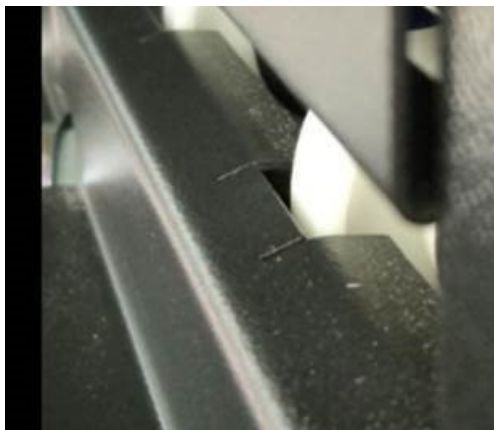
Procedure: Remove the burr.

Plot found at the Transport tray (not done by the flush) (II)

Issue: Plot found at the Transport tray (not done by the flush).

Cause: Transport tray/Fan-fold gap is too high. A small sized plot not does entirely exit the Fan Fold, causing a jam at the Roller tray.

Procedure: Adjust the Transport tray to the proper distance.



Curled plots blocked at CF entrance

Issue: Curled plots blocked at CF entrance.

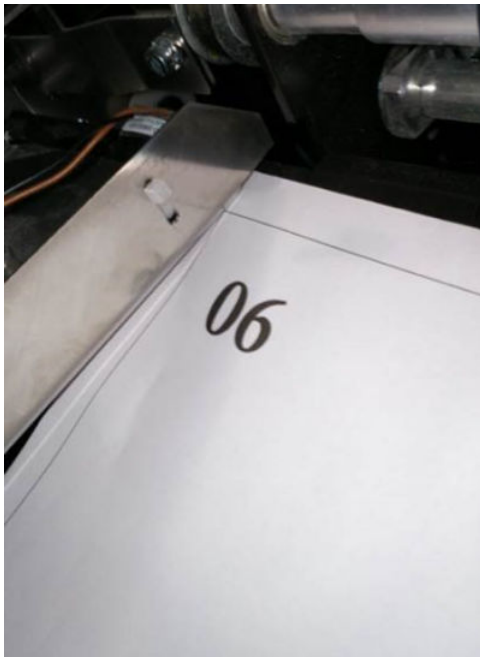
Cause: The antistatic strip is blocking the paper entrance at the CF.

Procedure: Cut the extra length.



Plots with big FF sizes (297mm) (e.g. A1 landscape AFNOR)

Issue: Plots with big FF sizes (297mm) (e.g. A1 landscape AFNOR).



Cause: The TAB blower holder is not correctly referenced to the Transport tray.

Procedure: The TAB blower holder must be placed below the metal cut.

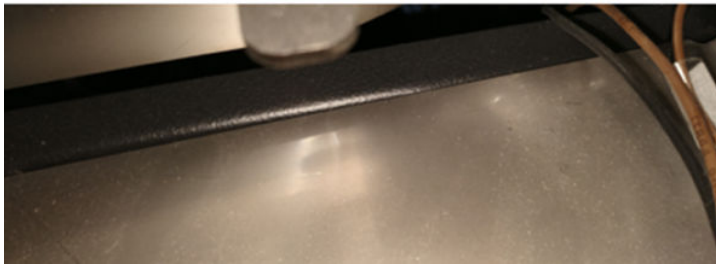
Adjust the part below the metal cut.

Metal cut



Adjust the part below the metal cut.

Fail



Good



A2 Landscape AFNOR

Issue: When printing A2 plots in landscape with the AFNOR folding style, there is a high probability that this configuration will cause a jam in the roll tray when the sheet is being transported to the cross-fold entry.



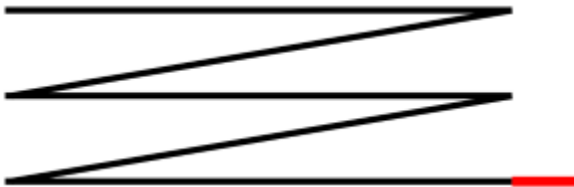
Cause: The folded plot created in the fan-fold could not enter the CF, as one of the corners would get jammed when exiting the fan-fold due to the fact of having the first fold at 297mm on a 420mm long plot, which leads to excessive curling.

Procedure: Rotate the plot 90 degrees for 420mm roll widths.

No effect after changing LB02 or LB03 offsets

In some cases the last sheet of a fan-folded package is a few millimeters longer and the adjustment of Light sensors LB02 or LB03 doesn't make any difference.

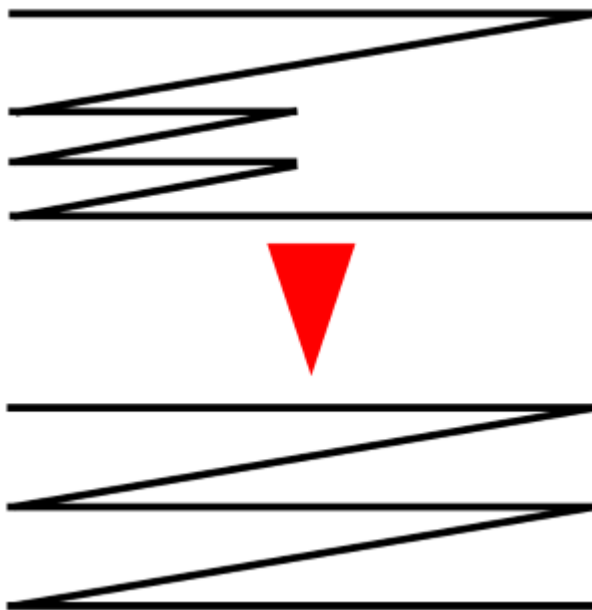
Verify that the actual paper length is exactly as given in the document file.



The upper folding style is a standard compensated folding. The last sheet can be easily adjusted with Light sensors LB02 or LB03.

In case of a specific condition, a set of rules applies and the plot will be folded like the lower folding style below, which is more suitable for customers.

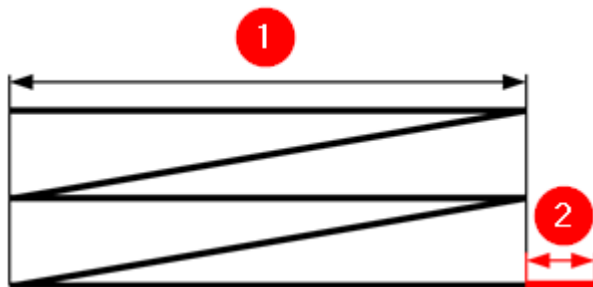
Changing LB02 or LB03 settings does not affect the length of the last sheet.



Issue

1. Length is supposed to be 210mm, but it is 209mm. A difference of 1mm x 5 sheets is 5mm in total.
2. The result at the last sheet is 5mm.

The solution is to increase the panel width by 1 mm (go to **Settings** > **Panel width**).



Tab

Tab not properly cut

Issue: Tab not properly cut. Jam caused. Some plots face Tab skew (intermittent).



Cause: Misalignment between the knives. When trying to cut with scissors only with the top, the blade can bend away and clamp the material rather than cutting it. See [Tab knife skew adjustment \(Serial Number previous to DE92B21001\) on page 1536](#).

Tab skew in every plot

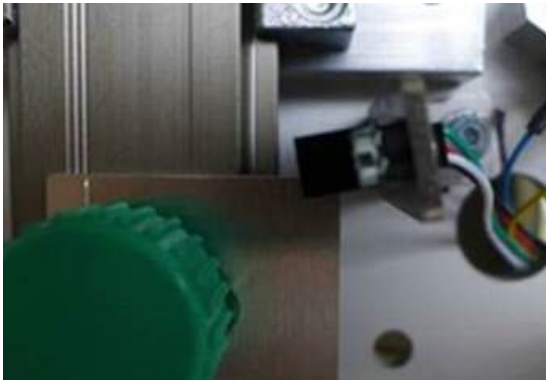
Issue: Tab skew in every plot.

Cause: Tab mechanism not properly placed.


Procedure: Check [Tab adjustment on page 1510](#).

Tab LED information

See the table below to diagnose the issues described:

Issue	Green LED	Red LED
Normal operation	On	
Stamp motor is not running or stamp cannot move 		Blinks once

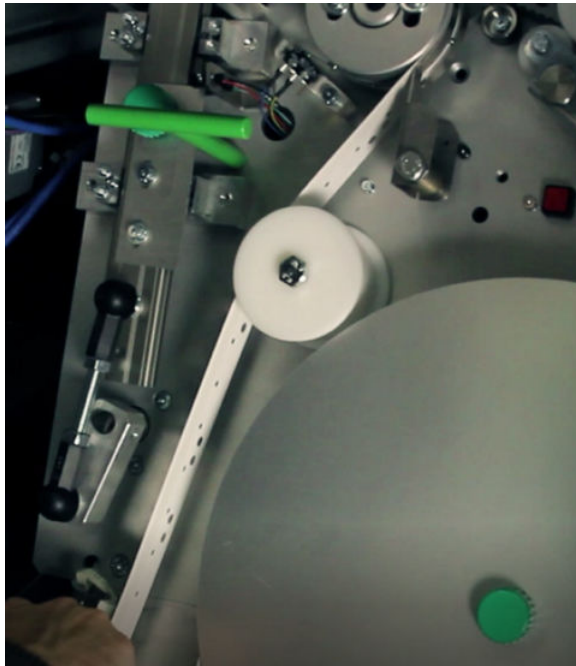
Issue	Green LED	Red LED
<p>Stamp light sensor broken or permanently cut</p> 		<p>Blinks twice</p>
<p>Tab transport motor is not running or micro switch is not working</p> 	<p>Blinks once</p>	<p>Blinks once</p>
<p>Tab transport doesn't find home position (micro switch permanently pressed)</p> 	<p>Blinks twice</p>	<p>Blinks twice</p>

Issue	Green LED	Red LED
Tab guide open (could be caused by a jam) 		Blinks fast
Tab empty		On
Broken fuse	Off	Off

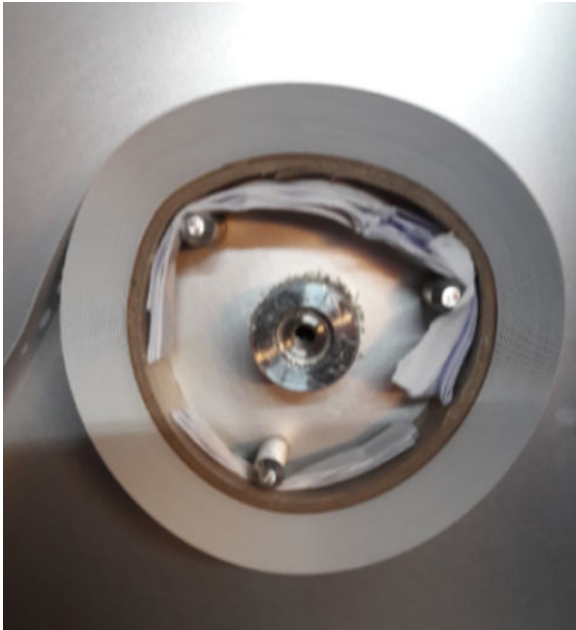
Can't use the whole TAB roll until it is finished: Folder/printer reporting End of TAB

In this case, perform these two checks:

- **Check the path of the tape:** It should pass over the top of the white plastic guide (and not under), as shown in the following picture:



- **Ensure that there is no more slippage at the level of the core of the TAB roll:** In case of slippage, add tape between the 3 pins and the core of the TAB applicator, as shown in the following picture



Then place the round plate back on the machine. The whole roll of tape could be used.

Very high variation in the placement of TABs (X, Y and SKEW), mainly at the end of the TAB roll

If TABs are being placed randomly, especially towards the end of the TAB roll, do the following:

- Perform the same two checks as in [Can't use the whole TAB roll until it is finished: Folder/printer reporting End of TAB on page 1457](#).
- Increase the backwards tension of the axis connected to the core of the TAB roll. Here's how:
 - ▲ Using a 17mm wrench socket, place the TAB roll in the vertical position towards the back (the same position as when replacing the TAB roll).

Here is the overall position:



1. Hold the TAB roll with one hand:

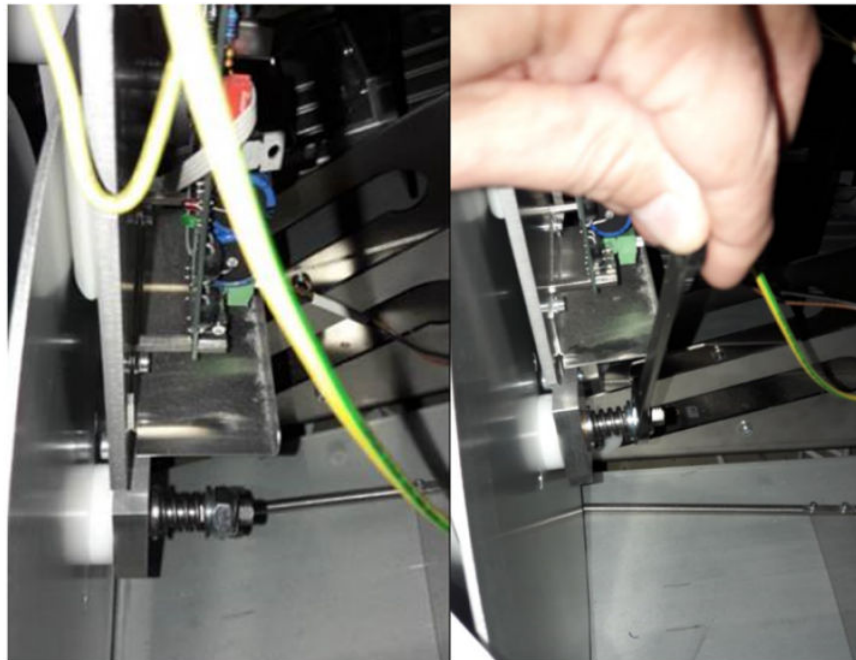


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2. Hold the socket wrench with the other hand:



3. Get ready to turn this nut with the socket wrench (it is not easy to see / pictured below):



4. Turn the nut this way, so as to add backwards tension:



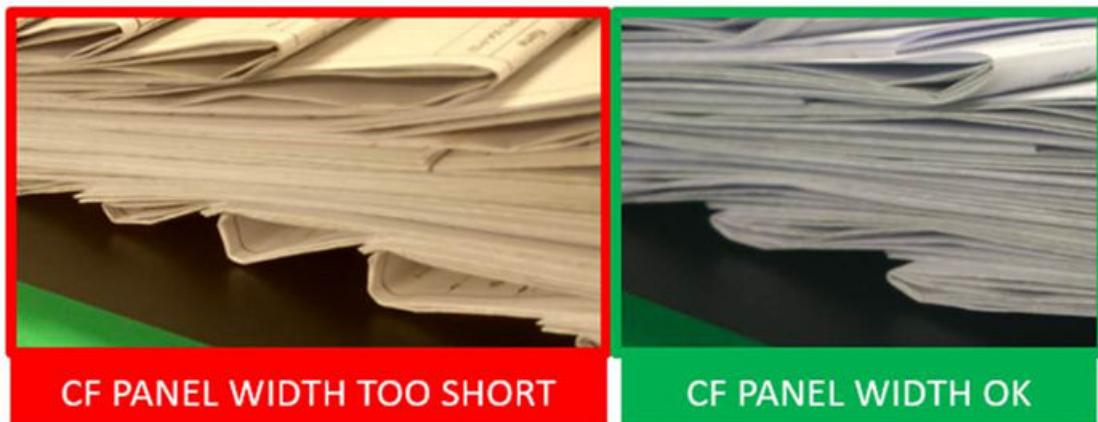
Cross-folder

Folding quality misadjustment

Issue: Folding quality misadjustment.

Cause: Cross-fold panel width too short.

Procedure: Check [CF dimensions adjustment LB12 on page 1504](#).

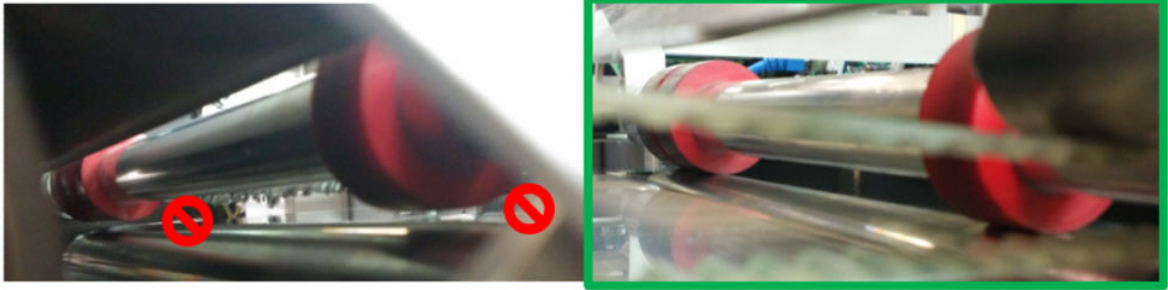


Plot does not reach the Cross-fold

Issue: Plot does not reach the Cross-fold.

Cause: No Cross-fold entry roller pressure.

Procedure: Ensure contact between entry rollers & lower fit roller by readjusting the entry CF spring (both sides). Make sure the belt is properly routed with the tensor. Check [CF input rollers adjustment on page 1550](#).



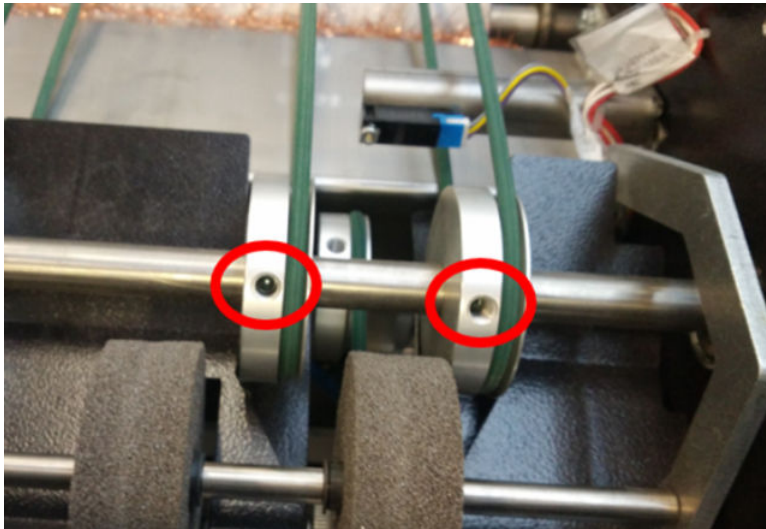
Transport Belt CF top belts out of place

Issue: Transport Belt Cross-fold top belts out of place.



Cause: Due to pulley position the belts are forced to a non-natural position.

Procedure: Loosen the pulley screw and find the most suitable belt position.



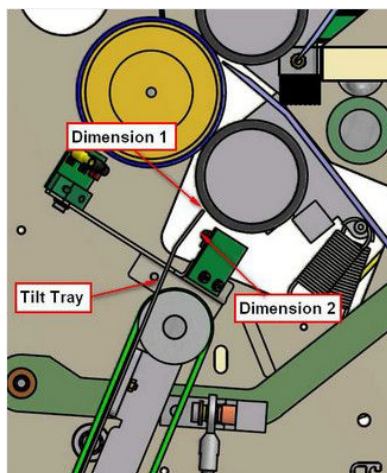
Paper jam at tilt tray

Issue: Paper jam at tilt tray.

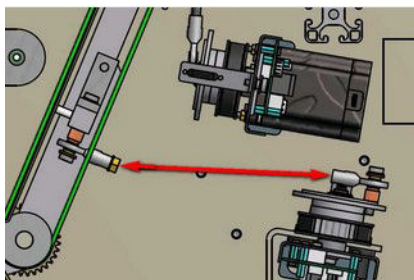
Cause: An incorrectly adjusted tilt tray could cause a paper jam between the tray and the fold rollers.

Procedure:

1. Adjust the tilt tray as described in [Tilt tray adjustment on page 1506](#).



2. You can also adjust the tilt tray by moving the connection rod.



Folder full with few plots

Issue: Folder is full with few plots.

Procedure: One wire is unwelded from the green belts tray motor driver. Check the entire system for any other issue/disconnection.



Jams at Cross-fold exit

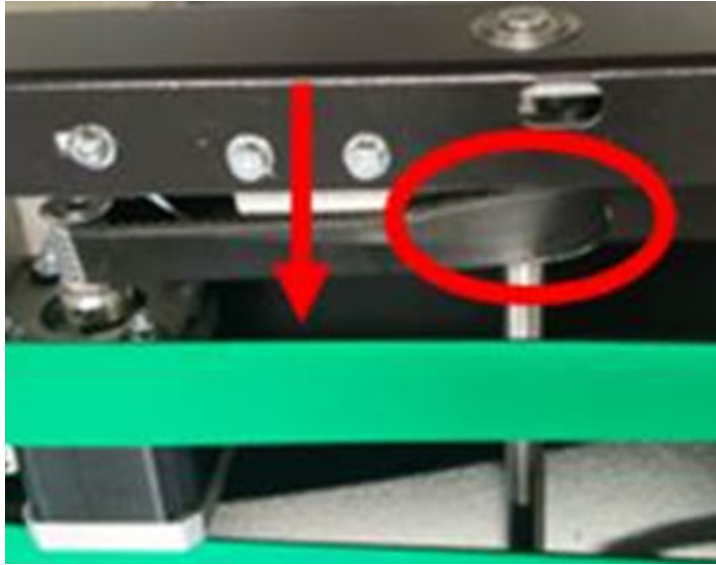
Issue: Jams at Cross-fold exit. Exit bar movement not accurate (strange noise when the exit bar is lifted).

Cause: Exit bar movement not accurate.


Procedure:

1. Remove the conveyor.

2. Check if the belt is assembled on top of the bracket. If so, please move the gear to the proper position.



3. Adjust the belt tension by moving sideways the exit down holder.
4. Check the [Cross-folder – Exit down holder CFX51 on page 1604](#) pin configuration and adjust the potentiometer (R18).

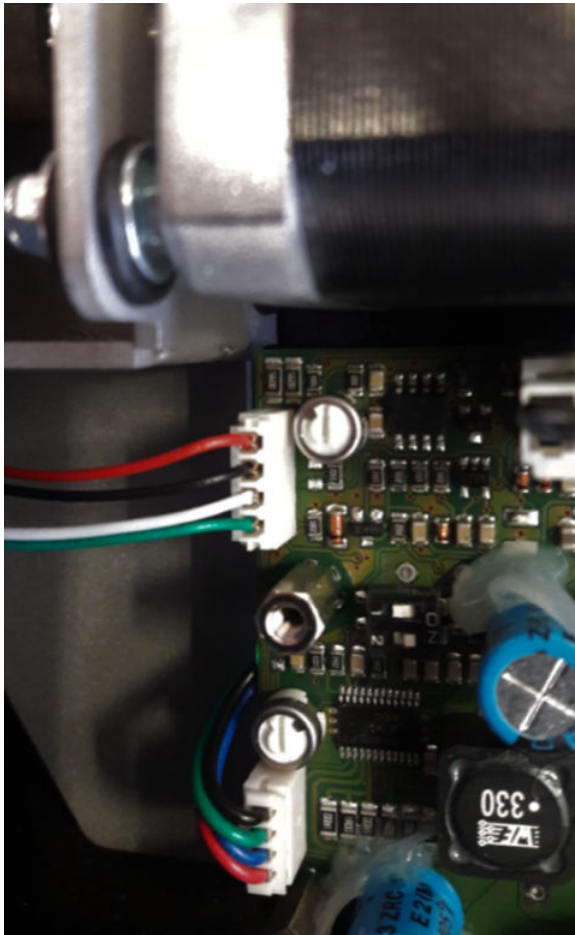
 **NOTE:** If you set the speed too high, the exit bar won't lift up; if you set the speed too low, the exit bar will be too slow.

5. Try different settings on the “Cross-folder – Exit down holder CFX51:”
 - a. **R18:** to be set to 0% instead of 70%

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- b. **S1:** Set S1-1 to OFF and S1-2 to ON (instead of the contrary):

Here is a picture showing both settings.



6. Follow [Intermittent bad movement of the exit down bar at the exit of the CF on page 1474](#) from step 3.

A4 corner jam at the roll tray

Issue: A4 corner jam at the roll tray.



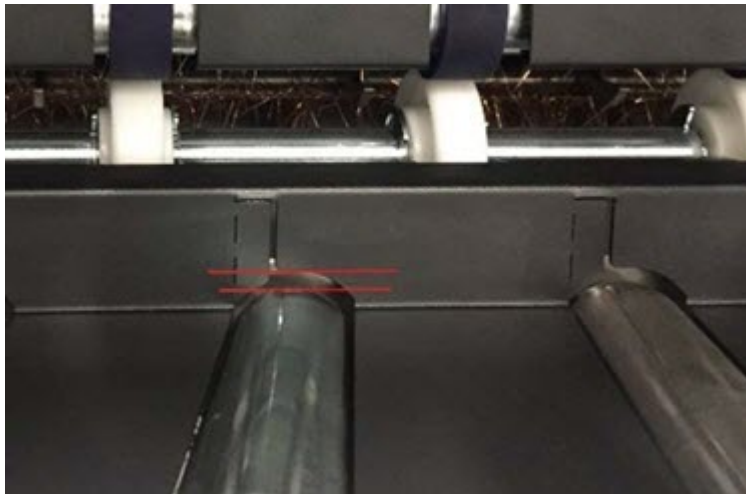
Procedure:

1. Modify the “Torsion spring at the Fan-fold exit (See [Torsion spring at the Fan-fold exit on page 1514](#)), so that the paper comes out from the FF to the roll tray as shown in the following image.



2. **Distance between transport tray and rollers is too high.** Readjust it with the three screws under the transport tray.

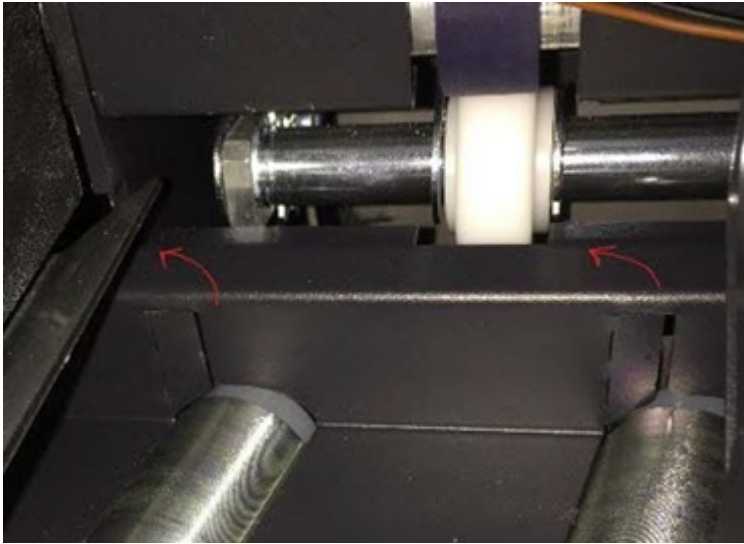
The critical distance to control is marked in red. Ensure it is as close as possible to the rollers **without** touching them.



In red, two of the three screws used to control the transport tray position (bottom view).



- 3. Bend angle of the metal sheet opening not inside specs.** It should be 20° and it is much less. Bend it more with a screw driver.



A4 with high curl blocked at CF entrance

Issue: A4 with high curl blocked at CF entrance.

Cause: The antistatic strip is blocking the paper entrance at the CF. This is more likely to happen with curled media.



Procedure: Fixed cutting the extra length.



Ink transfer with 90 gsm media (in any plot length)

Issue: Ink transfer with 90 gsm media, regardless of the plot length.

Cause: High density ink areas.

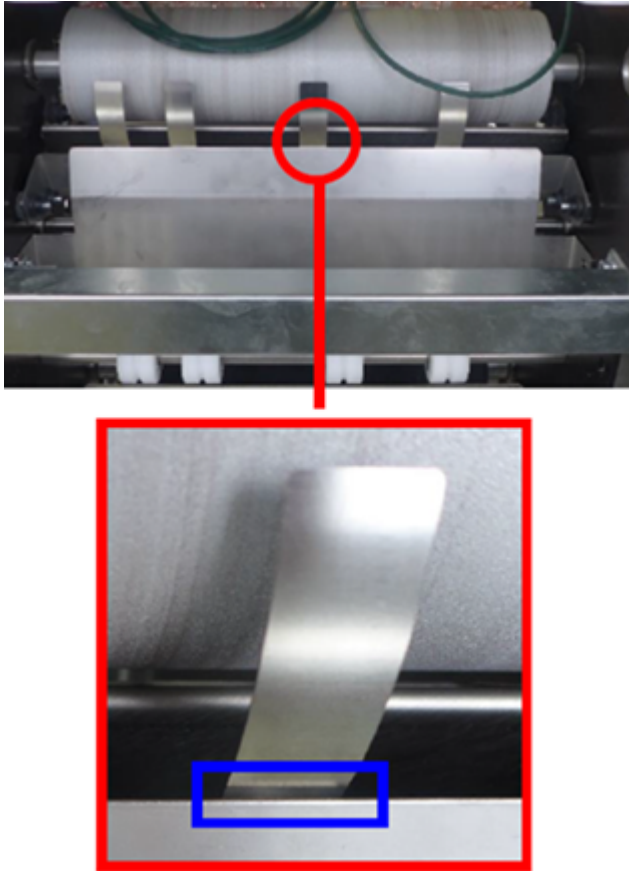
Procedure: In order to reduce the ink transfer marks, as a workaround you might load the paper as 70 gsm.

Intermittent jams in the cross-folder exit guide, especially with long plots (between 2 and 2.5 m)

Issue: Intermittent jams in the cross-folder exit guide.

Cause: Cross-fold exit guide not well adjusted.

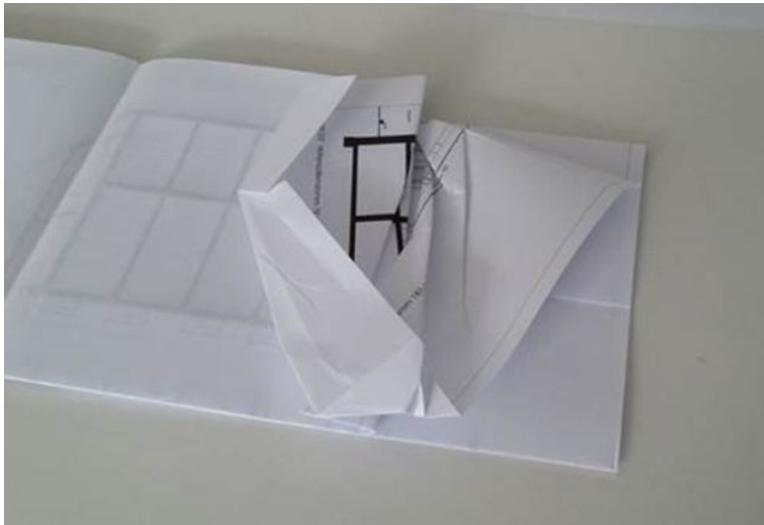
Procedure: After installing the LB12 sensor, when installing the cross-fold exit guide, make sure that it is not touching the thin metal guides of the slot sheet. The distance marked in the blue rectangle should be one or two millimeters.



Job with area fills not correctly folded when using AFNOR folding style.

Issue: Bent corners and wrinkles happening only when doing DIN A folds.

Cause: The last sheet of DIN A jobs bends and creates wrinkles and even torn pieces of paper during the cross folding.



Procedure: The Tilt tray is misaligned, please adjust it as appropriate. Due to an incorrect positioning, the bind/margin part of the DIN A job is located on the bottom part of the folded package. After passing the first CF rollers and going downwards to the tilt tray (before the first CF knife moves), the corner where the bind/margin is located bends and clashes with the cut area where sensor LB11 is located.

Intermittent imperfect A1 landscape CF folds

Here is an example on some intermittent plots after the CF, with some defects on the corners:



This phenomenon mainly happens when the FF is performed with a width of 297mm and the CF with a width of 210mm, on landscape pages, with a small number of FF folds on 841mm roll widths.

This is mainly visible when the page size is A1 in landscape, with no rotation, with a custom folding style like: FF width – 210mm; CF width – 297mm; margin – 0mm, with the compensation checked (equivalent to a DINB 210 * 297).

But, when submitting an A1 landscape with a DINB210 * 297, the Folder will perform a folding style of: FF – 297mm; CF – 210mm, invoking a kind of rotation, the same way that a 4x11 Folder with a rotation table would perform.

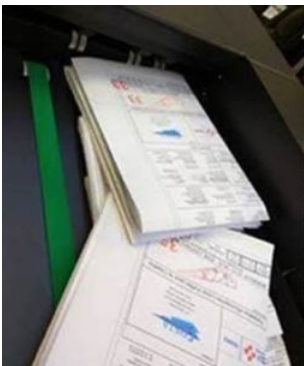
Reason: it could be possible to mechanically adjust the Folder in order to not get the defect in this case, but then other defects would be visible in other standard cases (such as A1 portrait sheets with DINB 210*297, for example).

Jam in Conveyor tray with accumulated jobs

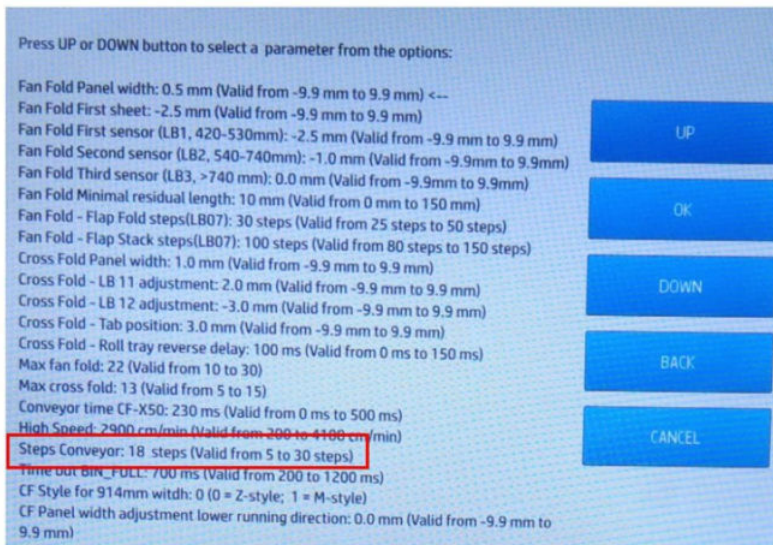
Issue: Jam in Conveyor tray with accumulated jobs.

Cause: The belts do not move the folded package enough. As a consequence, the last folded plot pushes the ones on the Conveyor creating a very messy fold job.

Procedure: Increase the STEPS CONVEYOR parameter from the Service Menu (it is also available for the HE Folder). This parameter defines the number of step widths between copies. If the motor is switched on for longer (more steps), the distance will increase. The default value is 18. See [Conveyor steps on page 1574](#) for more information.



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When printing continuous A4 pages, mainly at the end of the roll, there is a higher risk of a jam occurring.

This is a product limitation.

What is happening?

When an A4 page is printed, the plastic at the output of the conveyer is ensuring that all the paper is in contact with the green belts > the page is advancing.



But when there are multiple A4 pages, one after the other, and it is at the end of the roll of 297 mm roll width, the curved shape appears.



And here, the risk of paper jam in the conveyer increases: paper may get stuck under a green belt, as shown in the following two images.

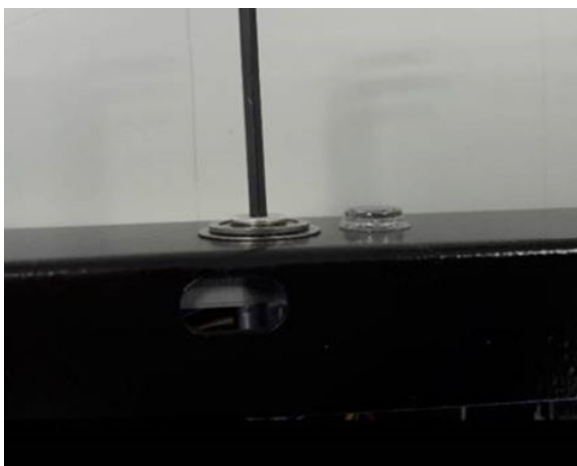


Intermittent bad movement of the exit down bar at the exit of the CF

1. Check that the settings of the Exit down holder CFX51 PCA are correct. See [Cross-folder – Exit down holder CFX51 on page 1604](#).
2. Check that the belt has enough tension between the “Exit down holder CFX51 motor assy” and the “Exit down holder” axis.
3. Check that the movement of the Exit down bar is smooth. In some cases, the two following actions have to be done:
 - Secure the Exit down bar versus the main axis of rotation (ensure that the bar is not in contact with the metal and that there is no friction as it could move laterally...mainly if the screw is loose).

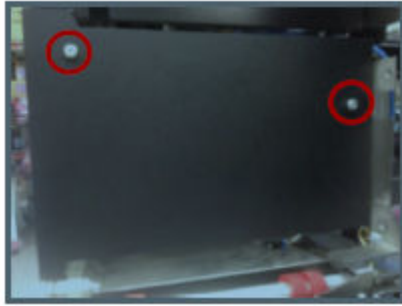


- In case of too much friction: loosen the extremity (loosen the screw maintaining the main axis of rotation of the conveyer).

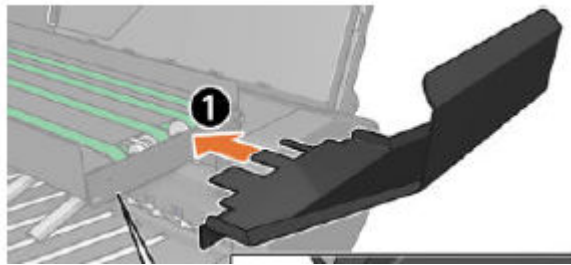


4. To perform these checks, it is recommended to remove the conveyer and place it on a table:

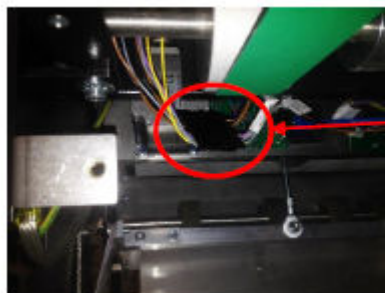
- a. Remove the cover located at the CF entrance in order to get access to the connector and the locking screws.



- b. Remove the conveyor plate (the opposite movement shown by the arrow; 2 screws need to be removed in order to remove it).

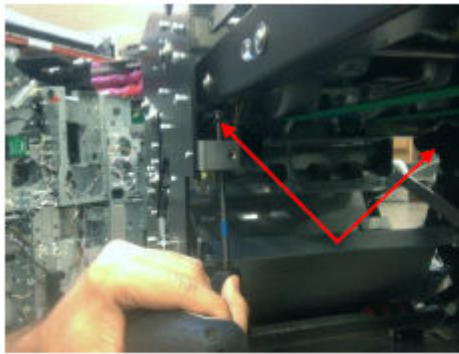


- c. Remove the rear cover under the conveyer (for the screws, use a Torx T20 screwdriver: loosen the 4 screws on the row at the back and the 4 screws in the middle).
- d. Now unplug the connector from the conveyer tray (the Folder has to be powered off).



Unplug this connector before moving on with the rework

- e. Now proceed to unscrew the 2 screws located to the left of the conveyer tray (when looking at it from the back).



REMOVE THE 2 SCREWS LOCATED AT EACH SIDE OF THE CONVEYER TRAY

- f. Remove the 2 similar screws on the other side (1 will need to be accessed at an angle; you could use a Torx T27 instead of a Torx T30).
- g. Now you can remove the whole conveyer and place it on a table.



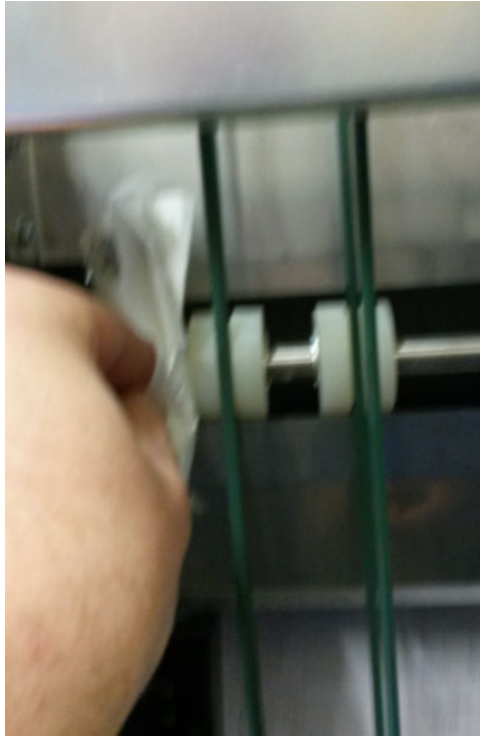
High frequency and annoying noise coming from Cross fold

Check if the noise is coming from one of the white gears guiding the vertical green belt lifting the plot from the tilt tray to the upper part of the CF.

These white gears can be rotated manually; the noise could then be duplicated (open the right vertical cover). If confirmed that the noise is coming from these white gears, here's how to fix it:

- Use a silicon-based liquid oil/lubricant.

- Apply it on the axis that guides the green vertical belt of the CF. Use a piece of cloth to apply it.

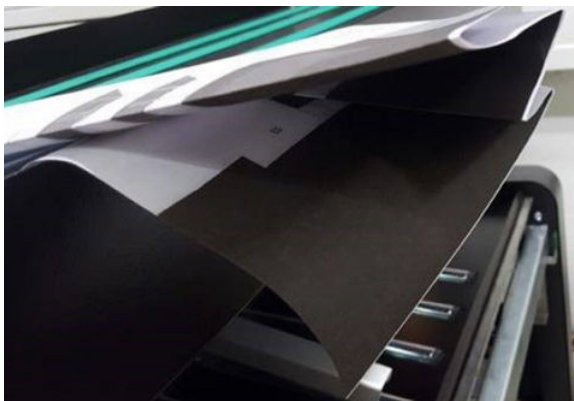


Paper jam in roll tray when plot has high ink density areas

Issue: A corner of the paper is sliding between the rollers and the transportation guide.

Cause: Area of paper is so wet that the corners bend much more easily.

Procedure: Place less ink on the paper (load paper as “plain 70g” or “poster plain.”)



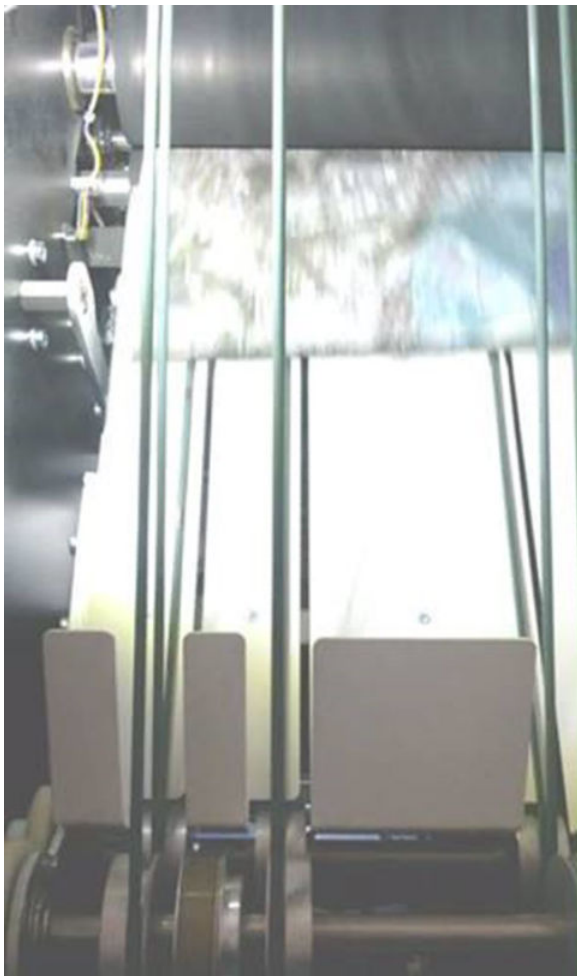


Paper jam or bent plot in the CF with A2 plot portrait with high ink density and AFNOR folding style

Issue: Paper jams or bent plots in the CF with A2 portrait plots with high ink densities folded in the AFNOR style.

Cause: Due to the ink on the plot, it stays “stuck” on the upper roll of the CF, preventing the plot from going down to the tilt tray when the fold is done, and when the tilt tray is moving to the vertical position, the plot is bent.

Procedure: Place less ink on the paper (load paper as “plain 70g” or “poster plain.”)





A2 portrait not folded in the CF (intermittent) when doing DINA, DINB or TAB folding style

Issue: Page is not folded in the cross fold while still reaching the conveyer.

Cause: A too-wide first page in the cross fold could create such an intermittent issue.

Procedure: Reduce the cross fold first page by adjusting the LB11 parameter in the list of folder parameters.

Install the folder bridge

To remove the bridge, follow these instructions in reverse.

Equipment needed

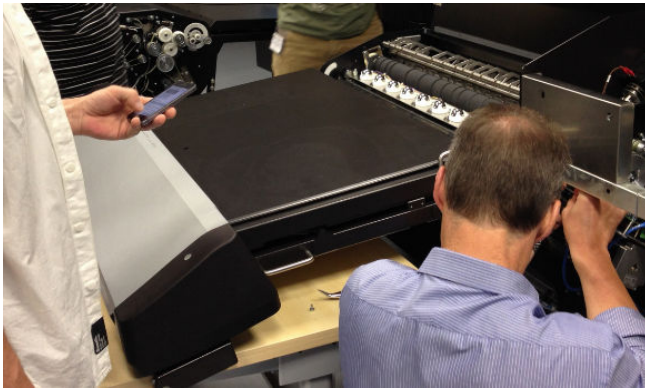
- Table about 70–85 cm high; a table with wheels is best, but not mandatory
- 2.5 mm Allen key (good quality, otherwise you could damage the screw)

Installation instructions

1. Place the bridge on a table. Here are two examples: first a table about 90 cm high, and second a table about 75 cm high.

In order not to damage the bridge, ensure that contact with the table is made by the flat sheet-metal part below the bridge. Use a table narrow enough that the hooks are not damaged (avoid any contact on those parts).

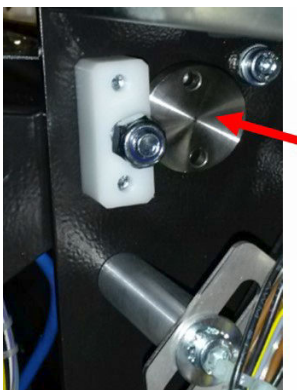




2. Prepare the two pins holding the bridge to the fan-fold area and the round white plastic guide on the left. Here is a picture of the left pin with the round white plastic guide (no error possible when placing it):



And a picture of the pin on the right, indicated by the red arrow, part already in place:



3. Position the bridge at the front of the folder, slightly towards the right. Set the bridge at about a 5-degree angle, and put it in place sliding the bridge towards the folder, translating it towards the left, in order to slide the axis of the paper advance of the bridge within the specific round guide (1/2 round). Here is a picture of this “axis of the paper advance of the bridge” on the left, indicated by the red arrow:



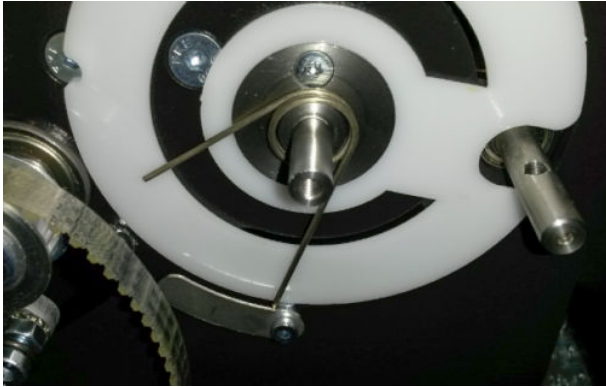
4. Place the left and right pins holding the bridge. On the left, as shown already, you should place the round white plastic part first before the pin holding the bridge. As the majority of the weight is on the table, you do not need to apply a lot of force to guide the bridge into the correct position.



5. Screw in the two left and two right pins holding the bridge (left shown in picture).



6. Place the spring on the left.



7. Add the guide on the left.

View from the side:



View from the top, showing that this part is seated at the top of one arm of the spring:



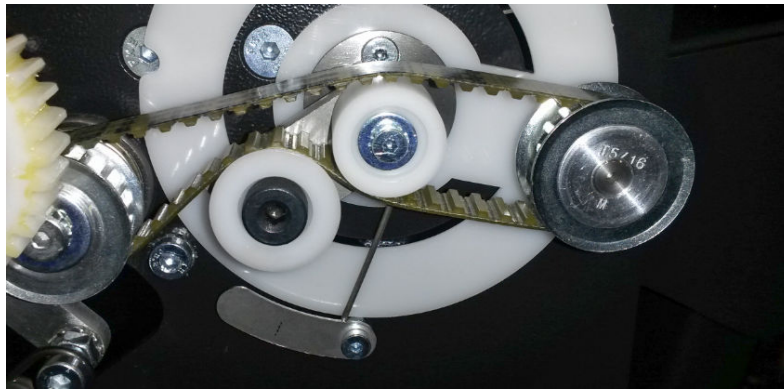
8. Add a guide and a screw to hold it.



9. Add the following gear on the axis of the paper advance of the bridge. First remove the pin holding this gear on the axis, then insert it; you need to align the hole of the gear with the hole on the axis, and then, once alignment is done, screw back the holding pin.



10. Put back the belt.



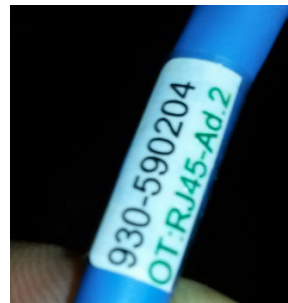
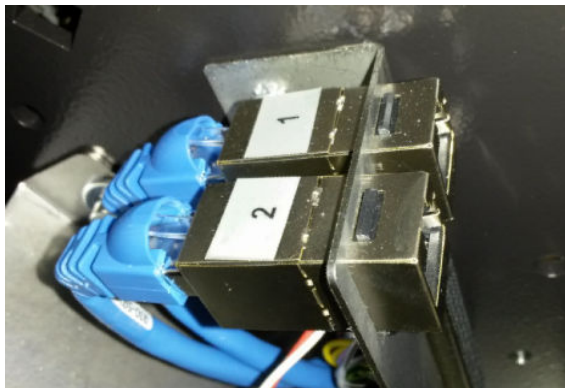
⚠ CAUTION: Do not place it as shown below! Because, when rotating the bridge, you will damage the bridge irreparably, and break the belt!



11. Add a screw with washer to the inner part of the left pin holding the bridge.



12. Connect the blue cables under the bridge. The cable marked AD1 should be connected to the connector marked 1, and the cable marked AD2 to the connector marked 2.



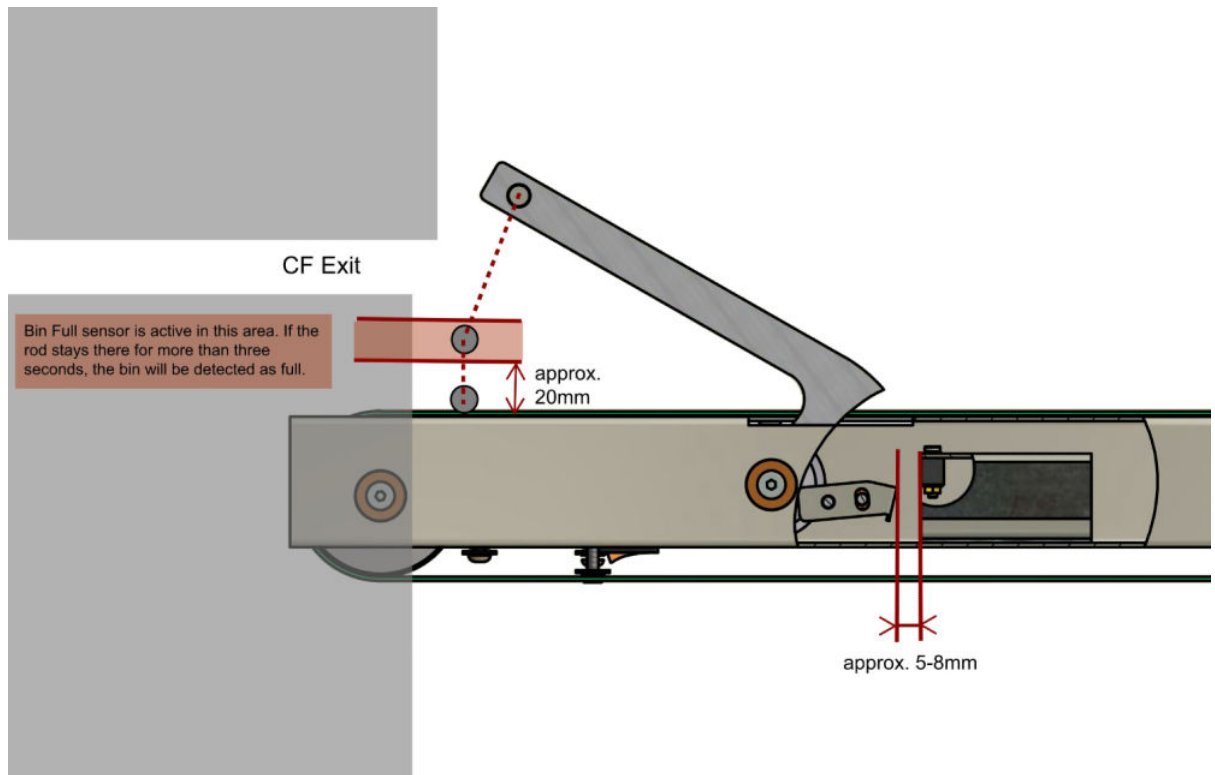
13. Connect the large cable with the long thin screws.



14. Follow the standard process to install the folder, starting by attached the gas spring.

Printer messages

Folder bin full

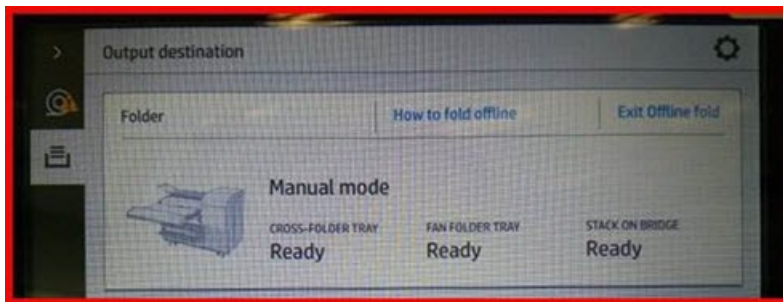
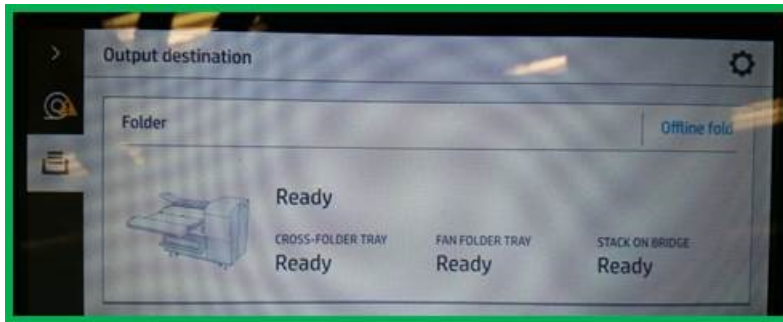


Communication error (blue LED on)

1. Do a reset of the folder parameters (Service menu > Accessories > Folder > Reset to factory defaults, first take pictures of the different current settings under Parameter Configuration). This is important mainly in cases where this issue is happening after a replacement of the MC PCA.

For HP-authorized personnel only

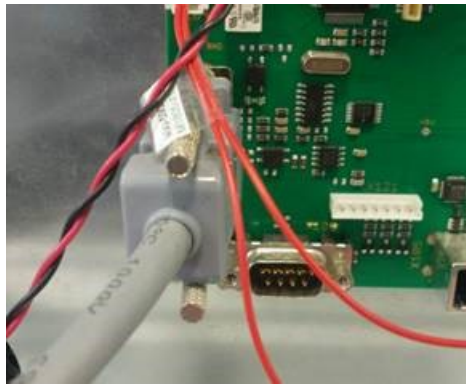
2. Check if the Folder is in MANUAL MODE or READY. Go to **Paper ► Output destination** and press **Exit offline fold** if the Manual mode is activated.



3. Check if the Folder data cable pins are properly positioned.



4. Disconnect and connect the Folder data cable again on both sides.
5. Make sure the set up poster procedure was followed (slide 49). The Folder has to be turned on before the Printer.
6. Connect the Folder data cable directly to the Master controller PCA. If the issue is solved, replace the cable connecting the Master controller to the internal connector.



7. If the problem persists, change the cable connecting the Folder to the Printer. Check if any LAN cable is damaged (FF x41 LAN cable is likely to be damaged during Folder installation).

How to troubleshoot “Close cover” messages

In case there is the message on the FP “close cover”: one switch of the “safety line” is open. How to fully confirm it: look at the LEDs of the FF and CF: none of them should be turned on (while the one of the MC PCA should be turned on).

How to troubleshoot if issue is from PSU or from safety line (one switch open):



The red and white cable from the PSU is the one that goes to the “safety line.”

Place an ohmmeter where this cable connector goes to the safety switch (not on the connector on the PSU),

At the connector on the PSU, with the safety line cable connector unconnected:

1. Check, with a voltmeter, for +24V (continuous).

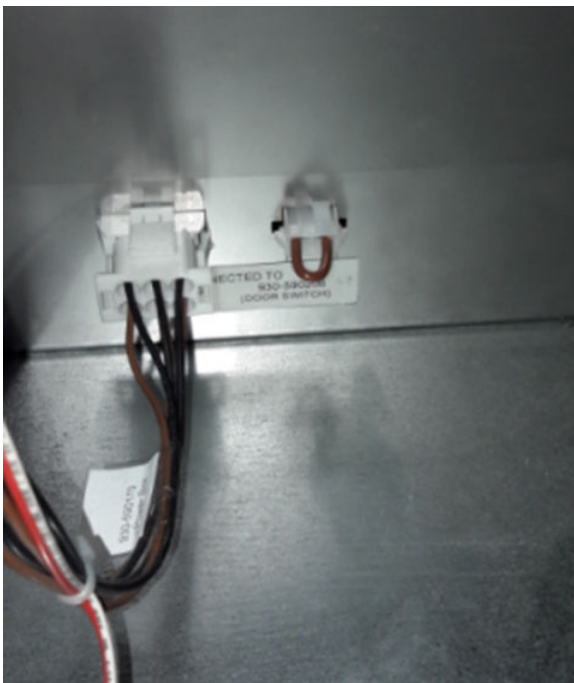
For HP-authorized personnel only

2. Bypass: connect 2 points together and then check that the Folder is turning on (the LED should turn blue after the self test).

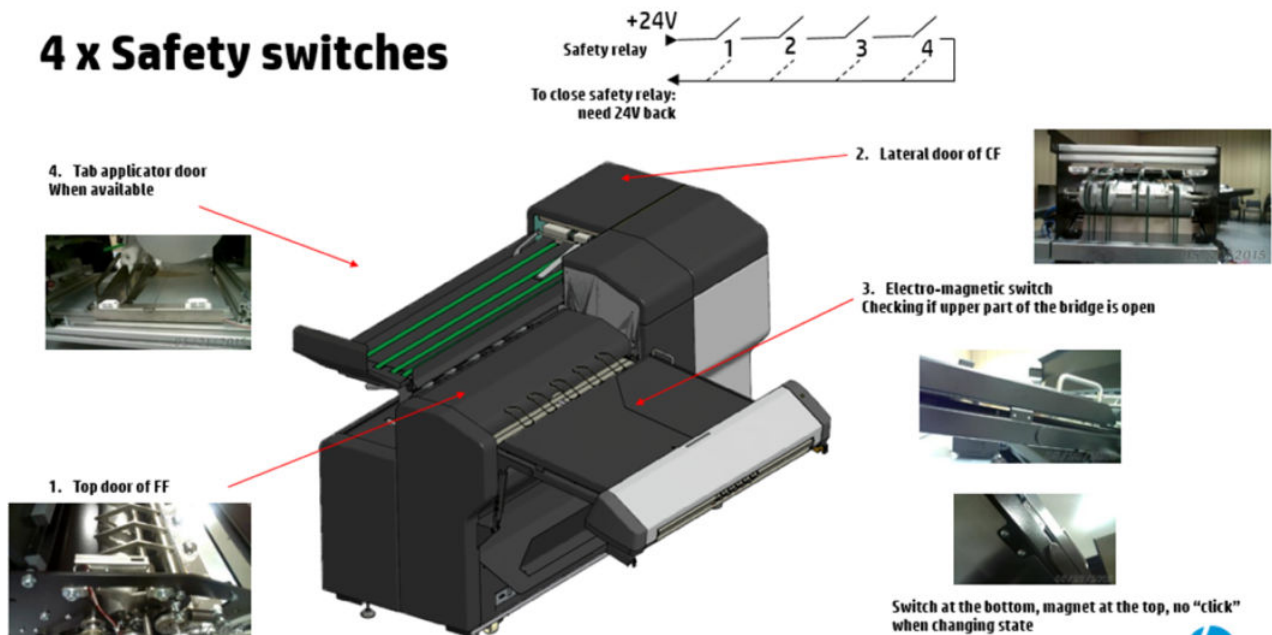
Here is an example of the bypass:



Here is what the bypass should look like when it is connected:



3. If the Folder starts with the bypass then you need to find which of the safety switches is not closing (with all the covers closed). The four safety switches are placed as shown:



4. If any safety line switches are open (Cover Open), the symptoms could be: The FF and CF power distribution PCA will not be powered on. If the FF is OFF, check the safety switches of the FF; replace the switches if necessary. If the CF is OFF, check the safety switches of the CF; replace them if necessary.
5. Follow the troubleshooting of the following chapter: [Alignment of the bridge sensors with corresponding prisms on page 1430](#).

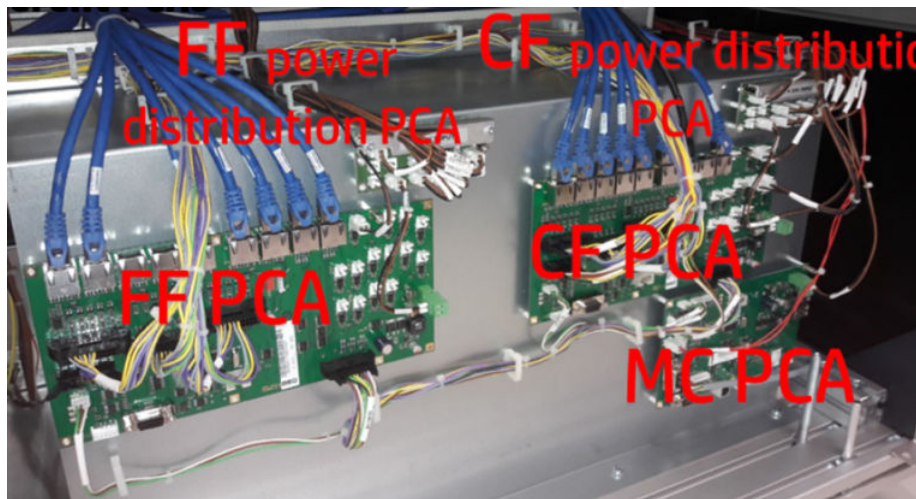
In case the LB1, 2, 3 or 4 are not well aligned between the PCA and the prism, or in case of intermittent failure of the PCA or of the prism, it can report on the front panel "cover open" message of the folder.

Intermittent power supply failures in Folder

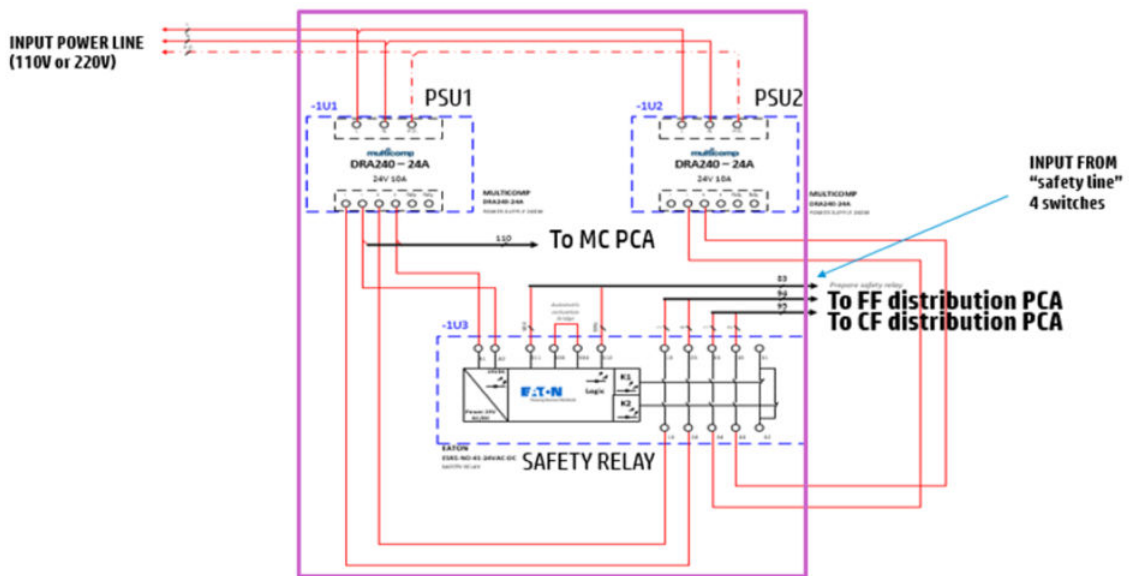
Some failures due to some power lines (+24 V) could cause intermittent Power OFF failures and/or lost communication between the Master controller PCA and the Fan-fold controller, or between the Master controller PCA and the Cross-fold controller.

Symptoms:

- Power OFF failures with the Master controller or Fan-fold controller and Cross-fold controller PCAs.
- No communication between the MC PCA and the FF PCA; system errors 1010-0001-0102, 1010-0001-0105, 1010-0001-0105, 1010-0001-0148 could appear.
- No communication between the MC PCA and the CF PCA; system errors (1010-0001-0202, 1010-0001-0205, 1010-0001-0205, 1010-0001-0248 could appear.



Output line voltage at 24V:



Fan-fold

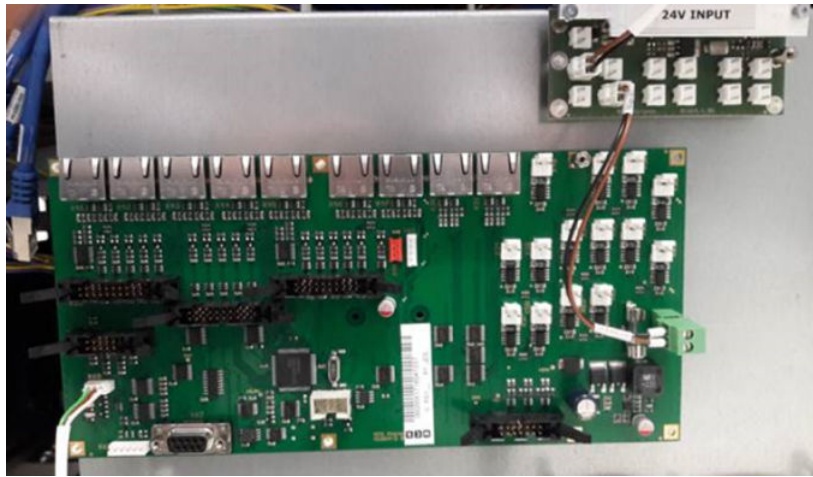
Issue: Intermittent power supply failures in Folder (Fan-fold controller). System errors 1010-0001-0102, 1010-0000-0092, 1010-0001-0105, and/or 1010-0001-0148 appearing.

Causes: Fan-fold drive motor short-circuit, damaged motor, damaged Sensor cable, damaged Fan-fold controller.

Procedure:

1. Unplug all the cables from the Fan-fold controller PCA and the Distribution 1 PCA. Keep only the following cables in place:

- The power cables from the Power box to the Distributor 1 PCA.
- The power cables from the Distributor 1 PCA to the Fan-fold controller PCA.
- The cable between the Fan-fold controller PCA and the Master controller PCA.



2. Check that the cable from the Power box (930-590170) to Distributor 1 is undamaged and unbroken. Check that this cable provides Distributor 1 with a +24V (continuous) signal. If not, change the position of the cable from the Power box (930-590170) on Distributor 1, as the following picture indicates:



Replace the cable if it is necessary. If the issue persists, replace Distributor 1 PCA.

3. Check the fuse in the Fan-fold controller.
4. Check that the cable from Fan-folder X40 (930-590178) to Distributor 1 is undamaged and unbroken; replace it if necessary. Use a multimeter to check the electrical conductivity in this cable and check that the cable provides +24V (continuous) on the green connector. Replace the cable if it is necessary.
5. If the issue persists: With the minimum number of cables plugged in, power off the Folder, and plug the rest of the Fan-fold connectors in one at a time, powering on the folder and checking the improvement. Do this step for each cable/connector until you find which cable is causing the error. During each iteration, you can boot the printer up in Diagnostic mode and run one specific test/diagnostic. There is no need to restart the printer and re-enter in Diagnostic Mode; you just need to switch off the Folder, re-connect the next cable and power the folder back on. For more details, check [Electronic parts and wiring on page 1630](#) or [Folder electrical devices on page 1581](#).
6. Replace the Fan-fold controller.
7. Replace the Master controller if it is necessary.

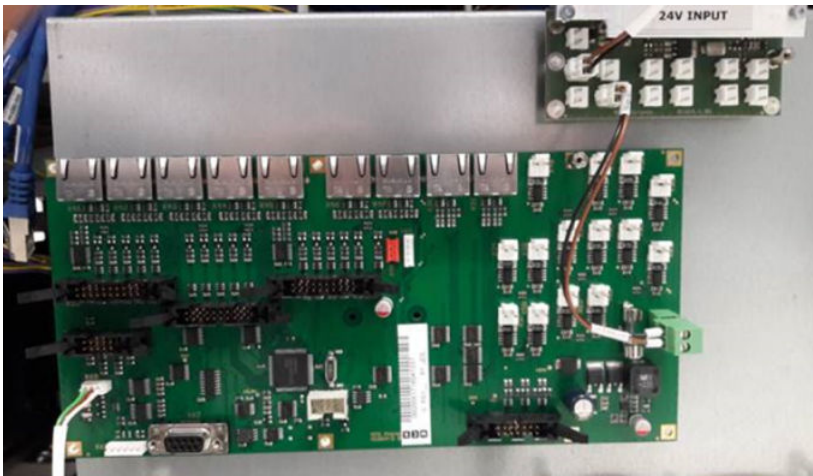
Cross-fold

Issue: Intermittent power supply failures in Folder (Cross-fold controller). System errors 1010-0001-0202, 1010-0000-0092, 1010-0001-0205, 1010-0001-0248.

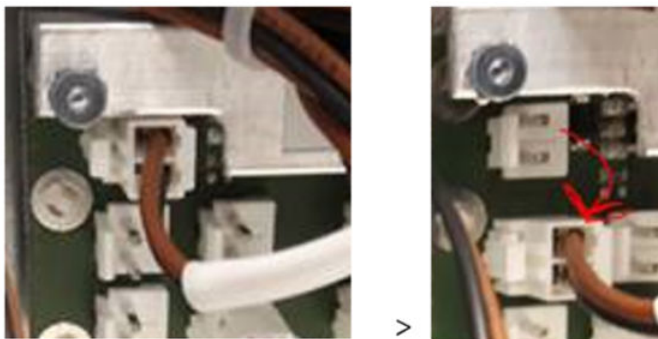
Causes: Cross-fold drive motor short-circuit, damaged motor, damaged Sensor cable, damaged Cross-fold controller.

Procedure:

1. Unplug all the cables from the Cross-fold PCA to Distribution 1 PCA. Keep only the following cables plugged in:
 - The power cables from the Power box to the Distributor 2 PCA.
 - The power cables from Distributor 2 PCA to the Cross-fold controller PCA.
 - The cable between the Cross-fold controller PCA and the Master controller PCA.



2. Check that the cable from the Power box (930-590170) to Distributor 2 is undamaged and unbroken. Check that this cable provides Distributor 2 with a +24V (continuous) signal. If not, change the position of the cable from the Power box (930-590170) on Distributor 2, as the following picture indicates:




Replace the cable if it is necessary. If the issue persists, replace Distributor 2 PCA.

3. Check the fuse in the Cross-fold controller.
4. Check that the cable from Cross-folder X40 (930-590179) to Distributor 2 is undamaged and unbroken; replace it if necessary. Use a multimeter to check the electrical conductivity in this cable and check that the cable provides +24V (continuous) on the green connector. Replace the cable if it is necessary.

5. If the issue persists: With the minimum number of cables plugged in, power off the Folder, and plug the rest of the Cross-fold connectors in one at a time, powering on the Folder and checking the improvement. Do this step for each cable/connector until you find which cable is causing the error. During each iteration, you can boot the printer up in Diagnostic Mode and run one specific test/diagnostic. There is no need to restart the printer and re-enter in Diagnostic Mode. You just need to switch off the Folder, re-connect the next cable and power the Folder back on. For more details, check [Electronic parts and wiring on page 1630](#) or [Folder electrical devices on page 1581](#).
6. Replace the Cross-fold controller.
7. Replace the Master controller if it is necessary.

Reset to factory defaults (from service menu)

You can press the **Reset** button to restore factory default settings if the folder misbehaves in some way that could be related to the firmware.

 **IMPORTANT:** The **Reset** button takes effect immediately, with no prompt for confirmation: all parameter values are lost and set to the “by default” value. You may find it useful to save your parameters before pressing the button.

After reset:

- [Folding quality specifications on page 1560](#).

Firmware update

The folder’s firmware is updated automatically whenever you update the printer’s firmware, and whenever a controller board on the folder is replaced and a firmware update is needed.

Service

Sidebar items	After changing a value, press Save to save the settings.
<ul style="list-style-type: none"> • START: Toggles main motor running • STOP: Toggles main motor stop • ALTERNATE: Lets the main motor alternate its direction after a varying number of steps 	
Interface settings	<ul style="list-style-type: none"> • Fan-fold steps • Flap stack steps

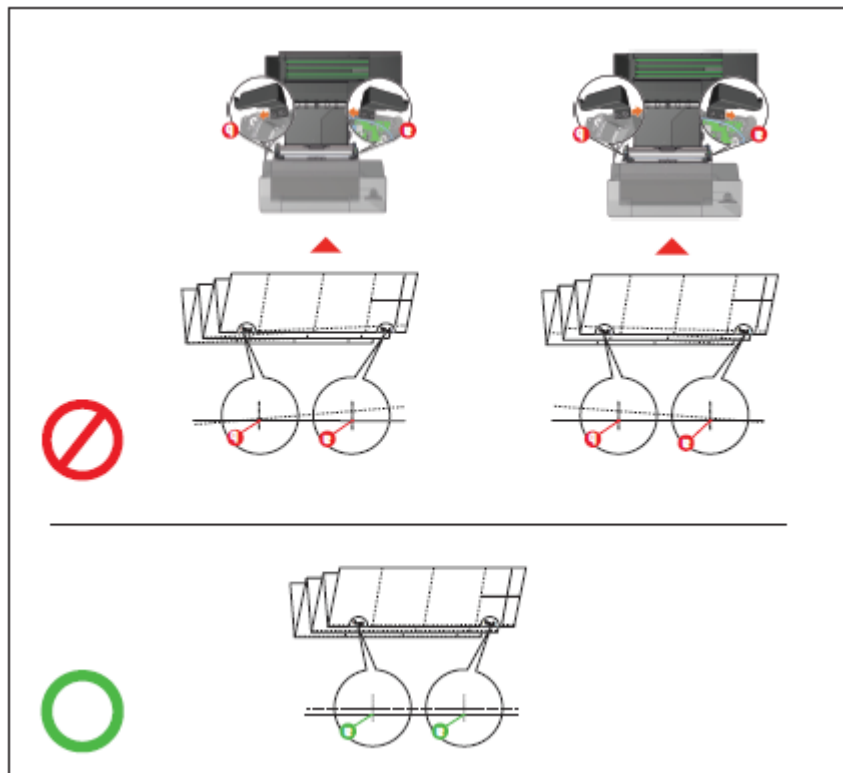
<p>Fan-fold settings</p>	<ul style="list-style-type: none"> • Panel • 1st sheet • First sensor • Second sensor • Third sensor • Minimal residual length • High speed • Adjustment FF paper guide (FFX42)
<p>Cross-fold settings</p>	<ul style="list-style-type: none"> • Panel width adjustment • Light barrier 11 adjustment • Light barrier 12 adjustment • Upper running direction • Lower running direction • Roll tray reverse delay • Max. cross-fold • Conveyor steps • Time out BIN_FULL • Tab position • CF style for 914 mm width
<p>Test interface</p>	<ul style="list-style-type: none"> • Run interface flap motor (FFX41) • Run interface transport motor (FFX46)
<p>Test fan-fold</p>	<ul style="list-style-type: none"> • Run main motor (FFX47) • Run feeding motor (FFX30) • Run paper guide (FFX49) • Run fan-fold exit guide (FFX31) • Run fan-fold exit motor (FFX45) • Run fan-fold upper exit guide (FFX52) • Tab unit test functions (FFX43/FFX44) • Tab centering (FFX44) • Test sensors

Test cross-fold	<ul style="list-style-type: none">• Run main motor (CFX47)• Run entry motor (CFX31)• Run knife 1 motor (CFX41)• Run knife 2 motor (CFX43)• Run tilt tray flap (CFX44)• Run tilt tray transport (CFX46)• Run roller tray (CFX45)• Run upper transport motor (CFX42)• Run bin motor (CFX50)• Run exit down holder (CFX51)• Solenoid lower entry roller (CFX49)• Test sensors
Master controller	<ul style="list-style-type: none">• Reset to factory defaults (from service menu)

Adjust folding quality

Printer-Folder FF skew adjustment

1. Print the Folder calibration plot on an A0 roll.
 - Go to **Settings ► Service Menu ► Accessory Utilities ► Folder Utilities ► Calibration Plot**.
 - Folding Style: DIN B 210x297 (print to a 841 mm roll size).
 - Print 3 or 4 copies and take the last one as a reference.
2. If no A0 roll is available you may use a 36" roll but the cross folding lines won't be aligned with the calibration plot lines.
 - Folding Style: DIN B 210x305.
3. Check the parallelism of the fan folding lines to the dotted lines on the calibration plot using the scales provided at both sides ^(*) and check skew at the package side.



4. If the lines are not parallel, adjust the printer to folder FF skew by adapting the position of the Folder hooks according to the Set-Up Poster instructions. The fan-fold skew tolerance is 2 mm.



5. After finding the ideal hook position:
 1. Close the bridge.
 2. Loosen the hook screws in order to eliminate the play on the holes.
 3. Fix the screws again.

* If the printer cutting or printing skew has not been fully adjusted, you have to decide if the folding lines have to be parallel to the media edge or to the printed lines.

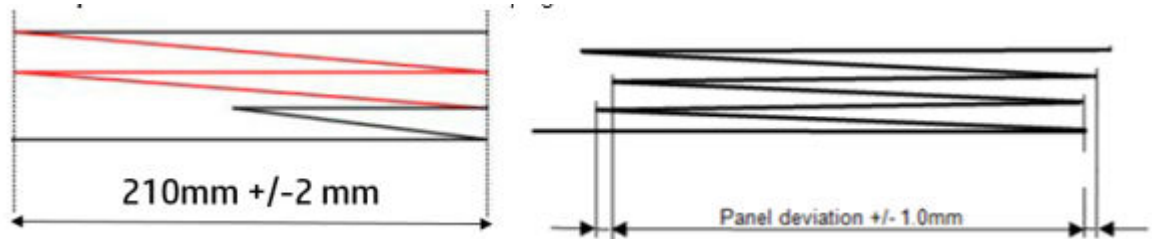
Fix folder feet

1. Ensure the ground below the feet is free of objects/holes/etc.
2. Unscrew the feet manually until they slightly touch the ground.
3. With a 14 mm wrench key start fixing one foot until the wheel is lifted from the ground.
4. Fix the diagonally-opposite foot.
5. Fix the two remaining feet.

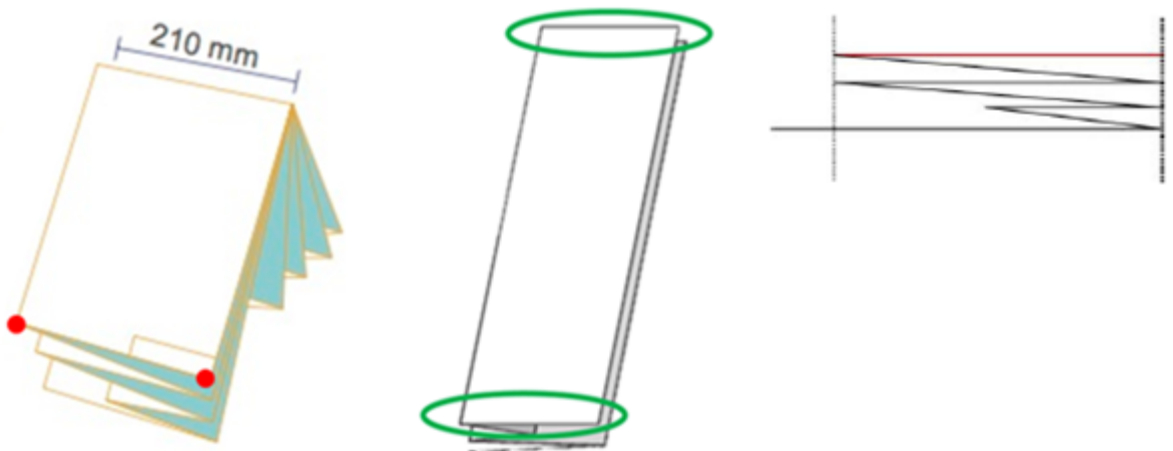
FF dimensions adjustment

1. Print the Folder calibration plot on an A0 roll.
 - Go to **Settings ► Service Menu ► Accessory Utilities ► Folder Utilities ► Calibration Plot**.
 - Folding Style: DIN B 210x297 (print to a 841 mm roll size).
 - Print 3 or 4 copies and take the last one as a reference.
2. If no A0 roll available you may use a 36" roll but the cross folding lines won't be aligned with the calibration plot lines.
 - Folding Style: DIN B 210x305.

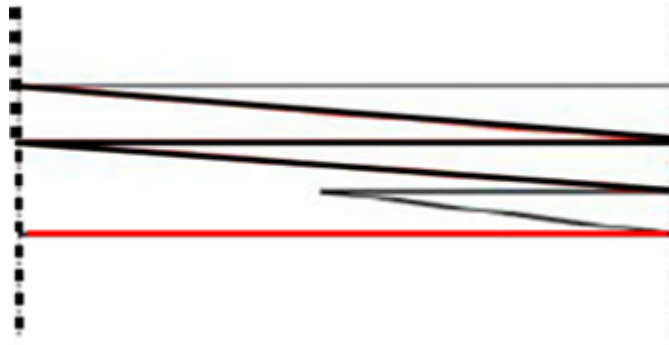
3. Check if the fan-fold panel width is 210 mm. If not, modify the “Fan Fold Panel Width” folder parameter on the Service menu and print the calibration plot again. Package width tolerance ± 2 mm with a ± 1 mm panel deviation. See [Panel width on page 1565](#).



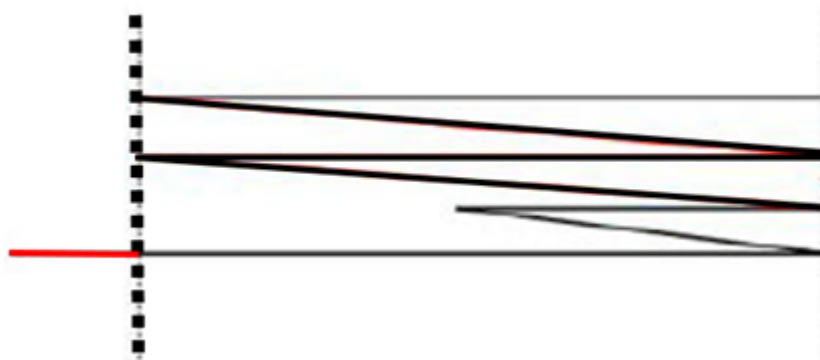
4. Check if the fan-fold width of the first sheet is 210 mm between the two points highlighted below (red). Please, measure on both sides on the plot. If the length is not the same, please check if the fan-fold skew is in specs. If so, adjust the longest length in order to match a 210 mm distance (modify the “Fan Fold First Sheet” folder parameter on the Service menu and print the calibration plot again). The first sheet should be in line with the following folds, to a tolerance of -3 to 0 mm. See [First sheet on page 1565](#).



5. Check if the fan-fold last sheet is properly calibrated. In order to do so, 3 sensors must be calibrated: LB03, LB02, LB01.
 - a. LB03 (paper length > 740 mm): print an A0 DIN B and check that the last fold does not surpass the panel width (the last fold will also measure 210 mm). If it does, modify the “Fan Fold Third Sensor (LB03)” folder parameter on the Service menu. See [Third sensor \(> 740 mm\) on page 1567](#). **The last sheet should have the same size with a ± 2 mm tolerance.**

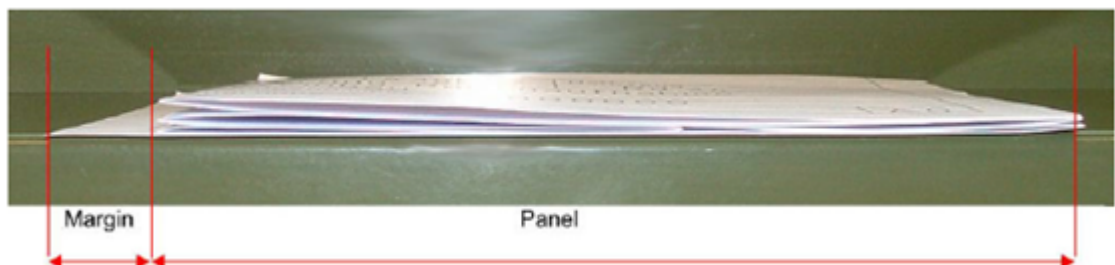


- b. LB02 (540–740 mm): print an A1 DIN B and check that the last fold does not surpass the panel width. If it does, modify the “Fan Fold Second Sensor (LB02)” folder parameter on the Service menu. See [Second sensor \(540–720 mm\) on page 1566](#). The last sheet should have the same size with a +/-2 mm tolerance.
- c. LB01 (420–530 mm): print an A3 DIN A and check if the margin is 20 mm long. If not, modify the “Fan Fold First Sensor (LB01)” folder parameter on the Service menu. See [First sensor \(420–530 mm\) on page 1566](#). The last sheet should have the same size with a +/-2 mm tolerance.

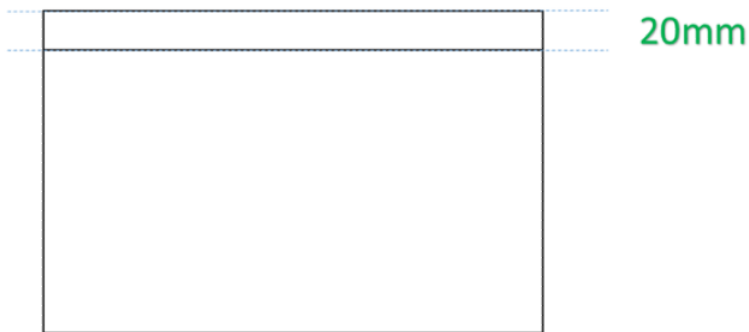


FF margin adjustment

1. Print an A3 DIN A and check if the margin is 20 mm long. If not, modify the “Fan Fold Third Sensor (LB03)” folder parameter on the Service menu.



2. Check if the fan-fold margin is 20 mm. If not, modify the “Fan Fold First/Second/Third sensor” ^(*) parameter and print the plot again

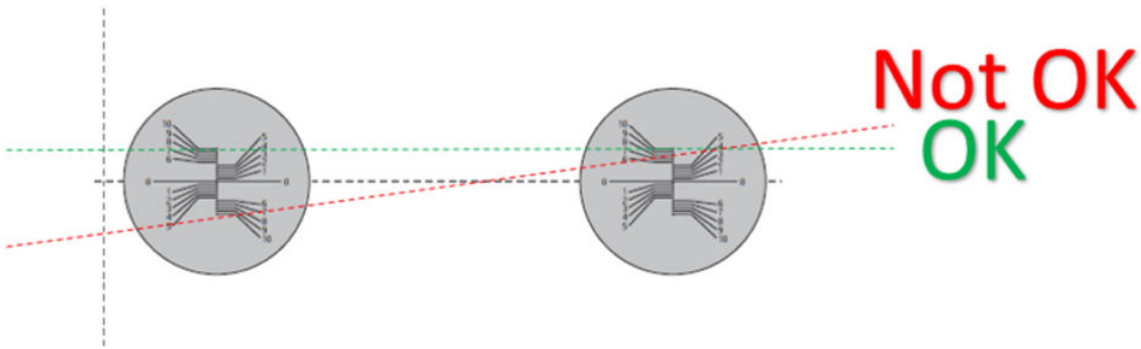


* Depends on the length of the plot.

Folder CF skew adjustment

1. Print the Folder calibration plot on an A0 roll.
 - Go to **Settings ▶ Service Menu ▶ Accessory Utilities ▶ Folder Utilities ▶ Calibration Plot**.
 - Folding Style: DIN B 210x297 (print to a 841 mm roll size).
 - Print 3 or 4 copies and take the last one as a reference.
2. If no A0 roll is available you may use a 36" roll but the cross folding lines won't be aligned with the calibration plot lines.
 - Folding Style: DIN B 210x305.

3. Check the parallelism of the cross folding lines to the dotted lines on the calibration plot using the scales provided at both sides (*) and check the skew at the package side.



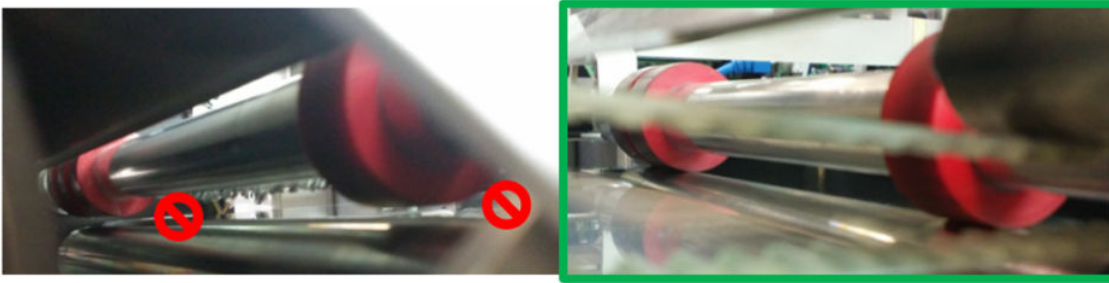
Check with DIN A0 or ARCH E, tolerance ± 3 mm.



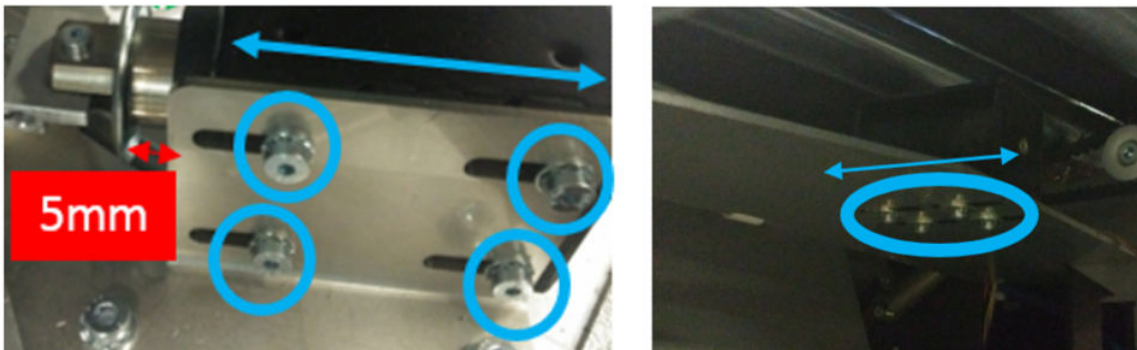
4. If the lines are not parallel, adjust the CF by:
 - a. Checking if the pressure on the feed roller(s) is enough and equal on both sides:
 - Adjust it by increasing/decreasing the spring pre-load with the different screw positions. If the pressure is too high the Solenoid Decoupling feeding roller will not be able to move the roller.



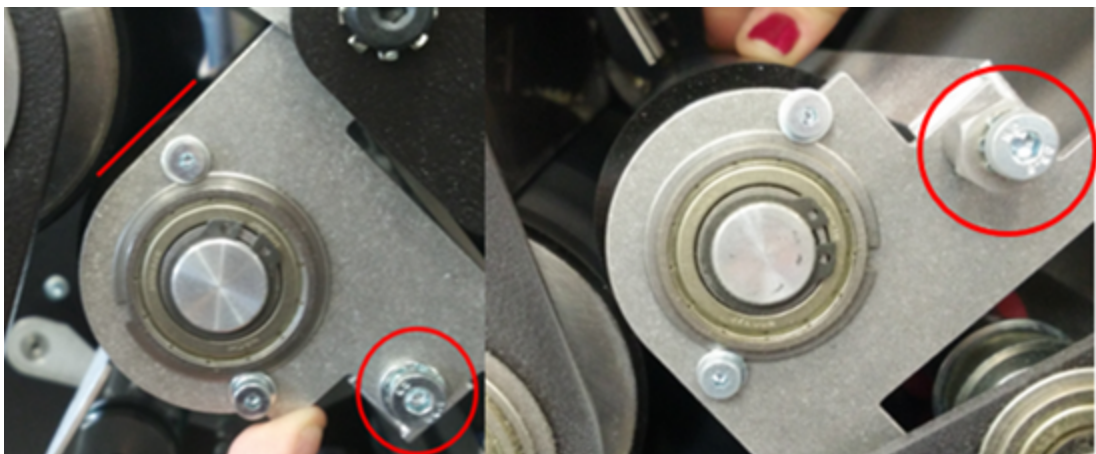
→ Adjust it by ensuring the solenoid allows the lower feed roller to touch the upper feed roller.



- b. Checking if the solenoid is removing the pressure when the plot enters the CF:
→ Adjust it by sliding the solenoid (CF-X49) on its fixture (5mm approximately).



- c. Checking that the CF auxiliary rolls touch the CF main roll equally on both sides:
→ Loosen the screws on both sides.
→ Push the auxiliary roller against the Main roller to ensure full contact along the entire roller.
→ Tighten the screws back in.
→ Repeat the same process with the other auxiliary roller.



- d. Checking that the CF knives are approximately 1 mm away of each of the rolls on both sides:
- Adjust it by loosening the screws at the end of the knives and twist the knives in both directions till they are at the same distance on both sides.
 - Adjust it by moving the knife manually to the end of stroke and adjust this position with the screw lever.



- e. Adjusting the roll tray angle by loosening the screws at the end and the screw in the middle and rotating the tray

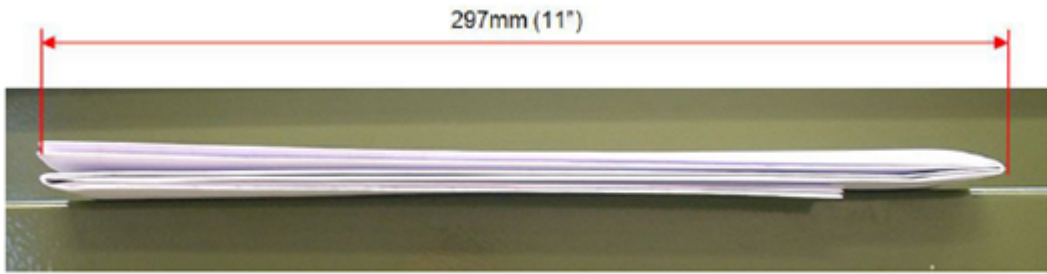


* If the printer cutting or printing skew has not been fully adjusted, you have to decide if the folding lines have to be parallel to the media edge or to the printed lines.

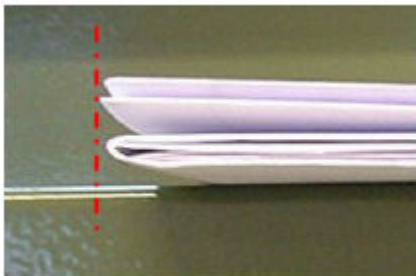
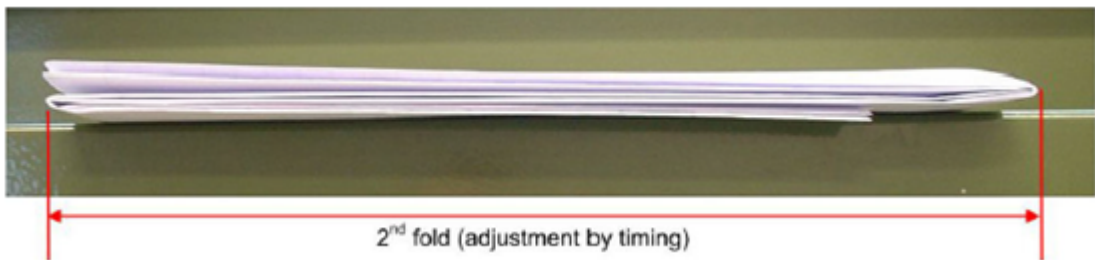
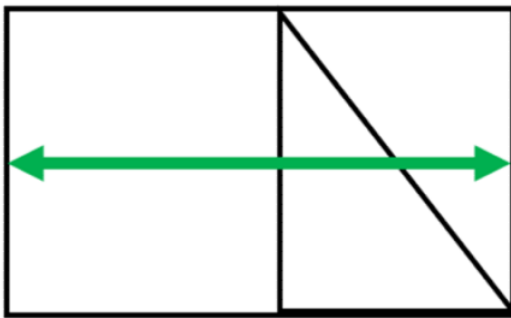
CF dimensions adjustment LB11

1. Print the Folder calibration plot on an A0 roll using the DIN B 210x297 style:
 - Go to **Settings ► Service Menu ► Accessory Utilities ► Folder Utilities ► Calibration Plot**.
 - Folding Style: DIN B 210x297 (print to a 841 mm roll size).
 - Print 3 or 4 copies and take the last one as a reference.
2. If no A0 roll is available you may use a 36" roll but the cross folding lines won't be aligned with the calibration plot lines.
 - Folding Style: DIN B 210x305.

3. Check if the cross-fold length of the first sheet is 297 mm. If not, modify the “CF LB11 adjustment” parameter and print the calibration plot again. See [Sensor 11 adjustment on page 1573](#). **First fold tolerance +/-3 mm.**



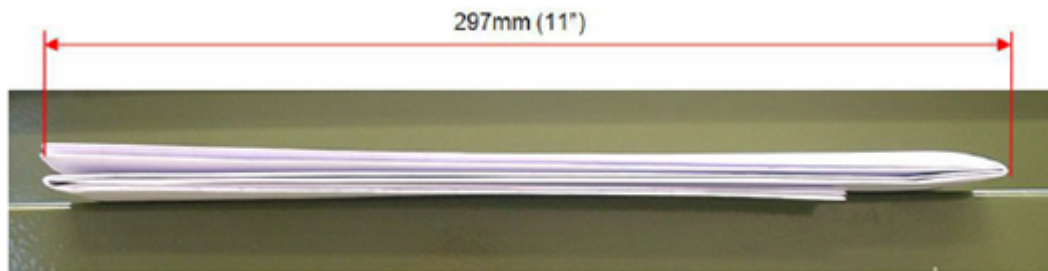
4. Check if the cross-fold length of the panel is 297 mm. If not, modify the “CF Panel width” parameter and print the calibration plot again. See [Panel width adjustment upper running direction on page 1575](#). The second fold should not be shorter than the first fold. Otherwise, the lower part of the front page could receive a mark or fold from the second knife. **Panel Stability range +0, -3.0 mm.**



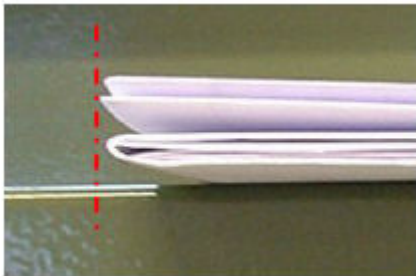
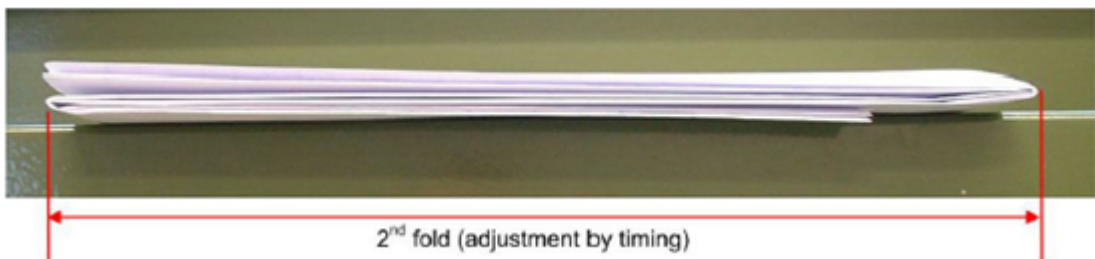
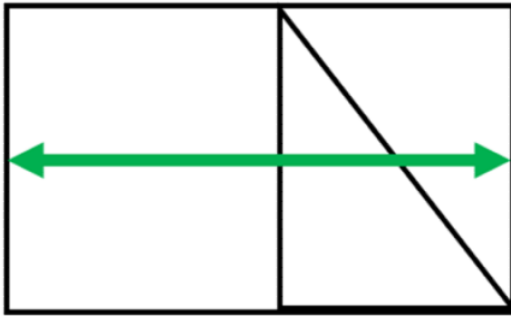
CF dimensions adjustment LB12

1. Print the Folder calibration plot on an A0 roll using the DIN C 210x297 style:

- Go to **Settings** ► **Service Menu** ► **Accessory Utilities** ► **Folder Utilities** ► **Calibration Plot**.
 - Folding Style: DIN C 210x297 (print to a 841 mm roll size).
 - Print 3 or 4 copies and take the last one as a reference.
2. If no A0 roll is available you may use a 36" roll but the cross folding lines won't be aligned with the calibration plot lines.
- Folding Style: DIN C 210x305.
3. Check if the cross-fold length of the first sheet is 297 mm. If not, modify the "CF LB12 adjustment" parameter and print the calibration plot again. See [Sensor 12 adjustment on page 1573](#). **First fold tolerance +/-3 mm.**

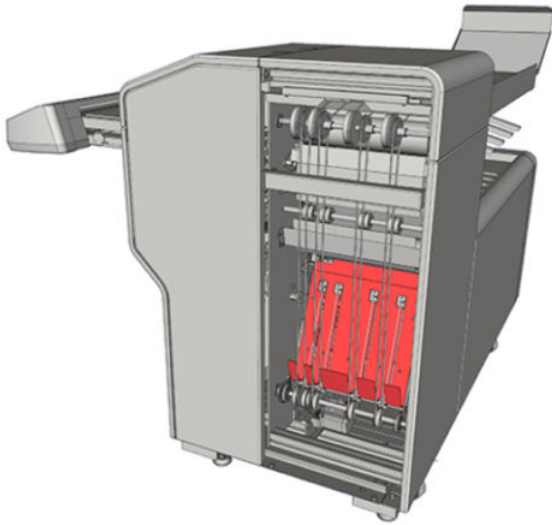


4. Check if the cross-fold length of the panel is 297 mm. If not, modify the “CF Panel width” parameter and print the calibration plot again. See [Panel width adjustment lower running direction on page 1574](#). The second fold should not be shorter than the first fold. Otherwise, the lower part of the front page could receive a mark or fold from the second knife. **Panel Stability range +0, -3.0 mm.**



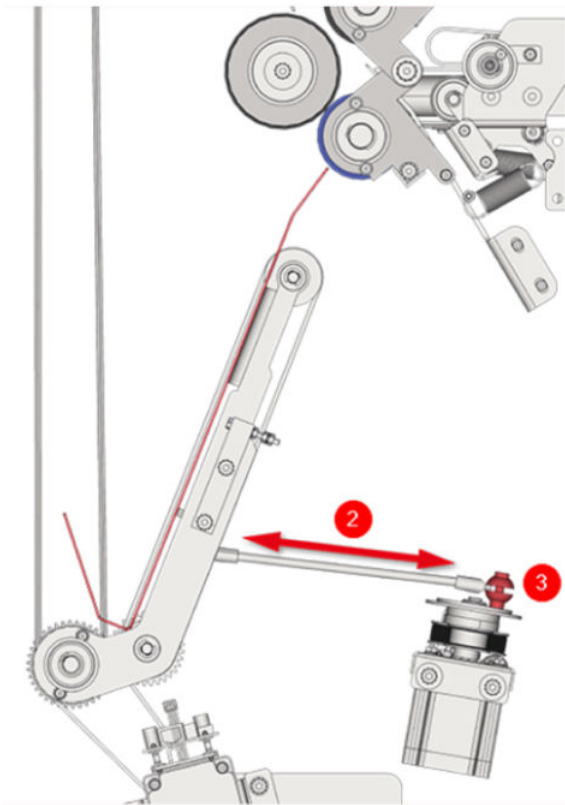
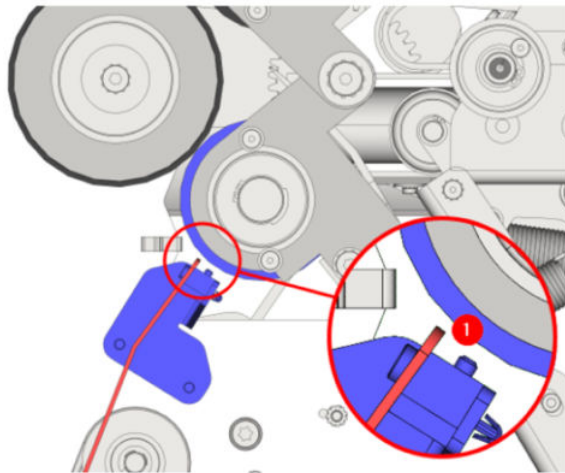
Tilt tray adjustment

Location



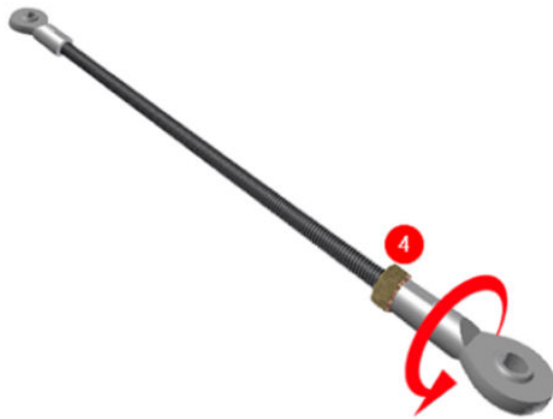
1. Locate the top edge of the tilt tray.
2. The tilt tray must not touch the lower folding roller nor the sensor or its bracket.

3. The recommended distance [1] between the Tilt tray and the folding is 2mm.

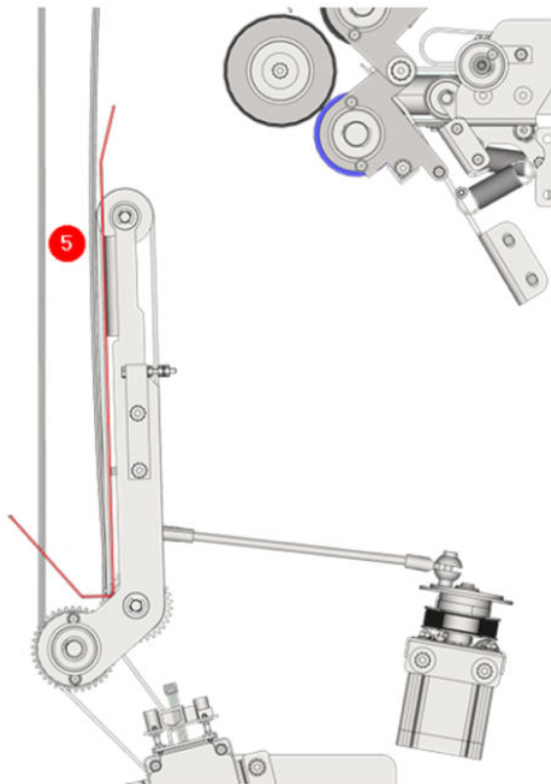


4. The actual adjustment of the Tilt tray is made by altering the distance [2 above] to its motor.

5. To adjust the Tilt tray remove this swivel joint [3 above].



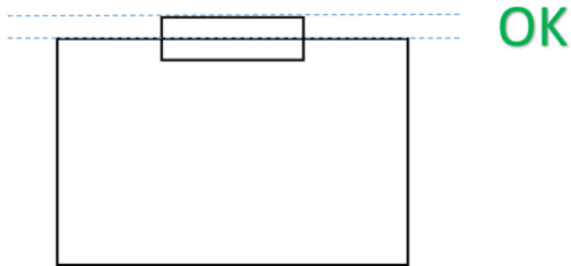
6. Loosen the locknut [4 above].
7. Turn the swivel counterclockwise to increase the distance from the Tilt tray to the folding roller.
8. Turn the swivel clockwise to decrease the distance from the Tilt tray to the folding roller.
9. Fasten the locknut.



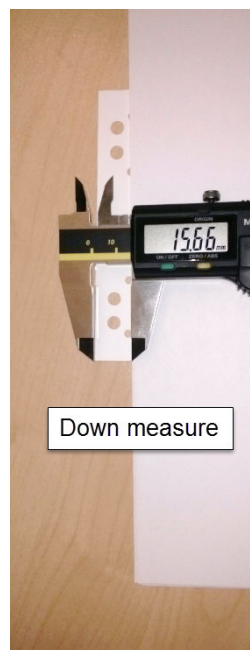
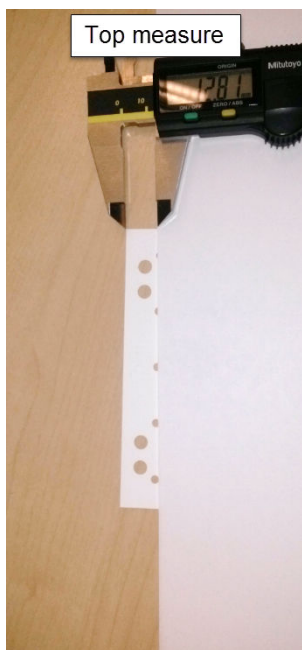
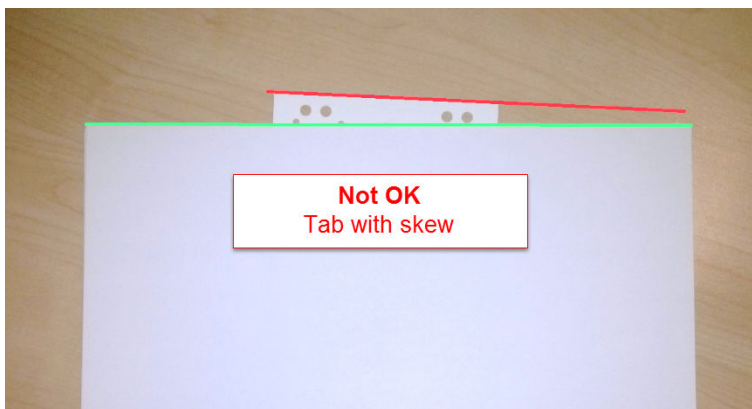
While adjusting the position, also check, in 'active mode,' that the green belts of the Tilt tray touch and slightly bend the transport belts to provide proper transportation [5 above] to the CF exit for very thin folding packages or one layer sheets.

Tab adjustment

1. Print an A0 / Arch E plot with a DIN B 210 TAB folding style.
2. Check if the tab is parallel to the edge of the media.



3. If the tab is skewed, print 5 more plots to measure the skew.



4. Measure the 6 plots to know the average skew (the skew is the difference between the top and down tab skew measures).

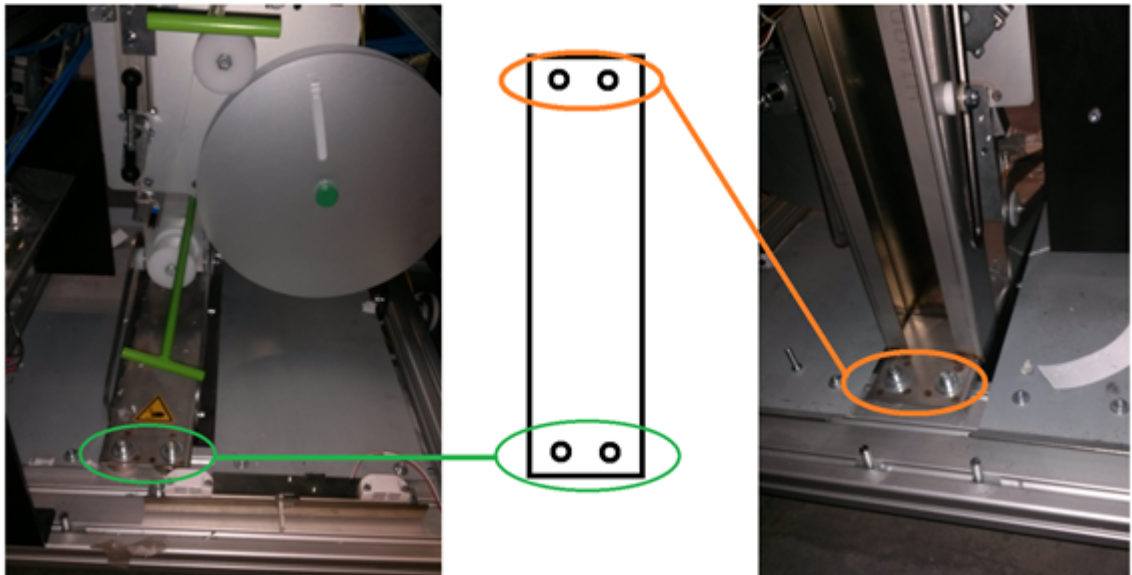
	Top	Down	Skew
Plot 1	12,81	15,66	2,85
Plot 2	12,92	15,43	2,51
Plot 3	12,87	15,87	3,00
Plot 4	12,88	15,08	2,20
Plot 5	12,17	15,54	3,37
Plot 6	12,29	15,78	3,49
Average (mm)	12,66	15,56	2,90

5. Once the average skew is known, you need to turn the tab system 5 times the average skew.

In the previous example, the average skew was 2,9 mm so the tab system should be turned $2,9 \text{ mm} \times 5 = 14,5 \text{ mm}$.

6. To turn the tab system, you need to loose only 3 of the 4 screws that fasten the tab system, as showed in the following steps.

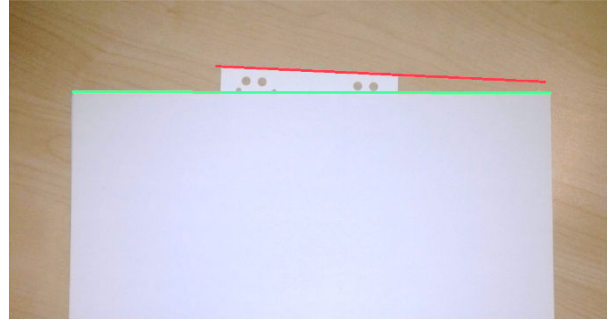
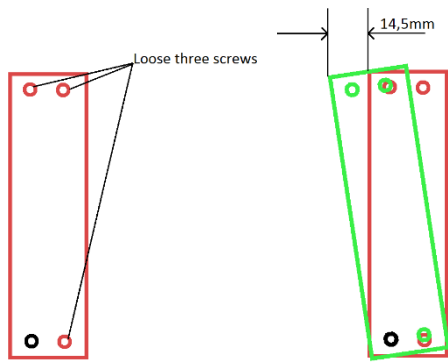
7. Locate the 4 screws.



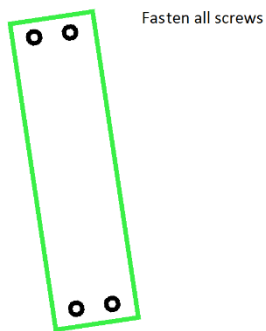
8. Loose 3 of the screws.

9. Turn the tab system 5 times the average screw measured, in our example $2,9 \text{ mm} \times 5 = 14,5 \text{ mm}$.

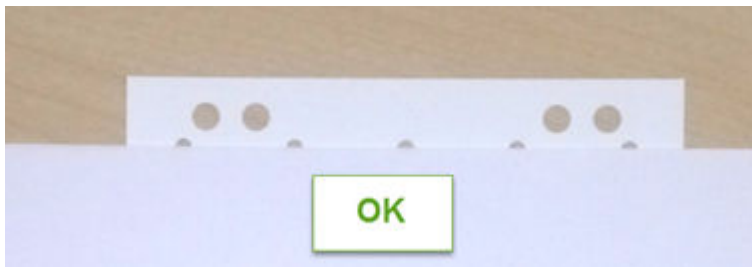
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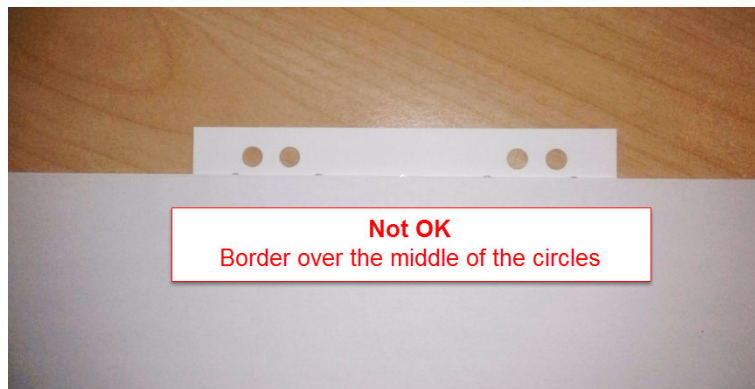
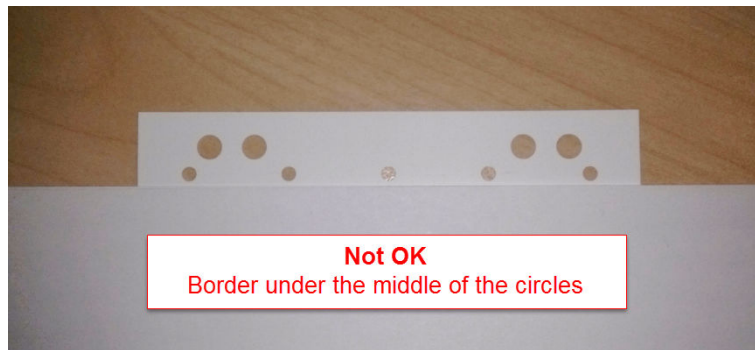
10. Fasten all the screws and print again to check the result.



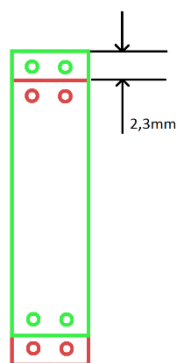
11. The border of the paper should be in the middle of the small circles as in the following image.



12. If the border of the paper is over or under the middle of the small circles, as seen in the next images, it has to be adjusted.



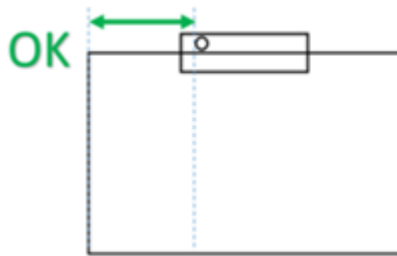
13. To adjust the border position, unscrew the 4 screws and move the tab system straight, the same distance that we need to move the border of the paper.
14. Measure 6 plots and calculate the average; take, for example, that the average distance we need to move the border is 2,3 mm.
15. Unscrew the 4 screws.
16. Move the tab system (be careful to not turn it) 2,3 mm.



17. Fasten all the screws.

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18. Check if the edge of the tab hole is placed at the right height (105 +/- 2 mm). The Tab has a **tolerance of +/- 2 mm**. Package must be unfolded in order to check tab position.

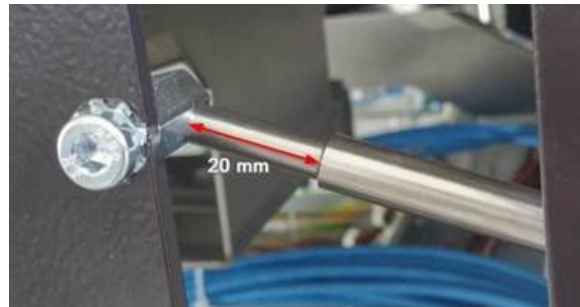
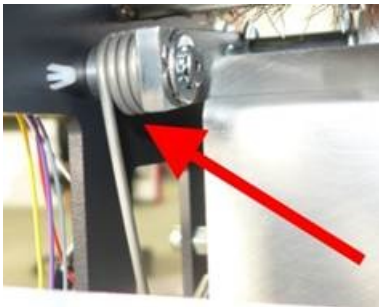


19. If not, modify the "CF Tab position" parameter (**Settings ▶ Service Menu ▶ Accessory Utilities ▶ Folder Utilities ▶ Parameter Configuration**) and print the plot again.

Further adjustments

Torsion spring at the Fan-fold exit

Check the torsion spring at the fan-fold exit. See image below.



How to access the 2 nuts that need to be adjusted

1. Remove the EEs PCA cover and lay it down on the floor facing the EE boards like in the image below.



2. If 20 mm is still not enough (if you are still experiencing jams in the FF exit, especially for long plots between 2 m and 2.5 m or short pages less than 500 mm long, then make 4-10 more turns on the nuts), screw the nuts.
3. To screw the nuts use a 10 mm flat key (the best option is to use a 10 mm ratchet flat key).



There are two ways of accessing the nuts:

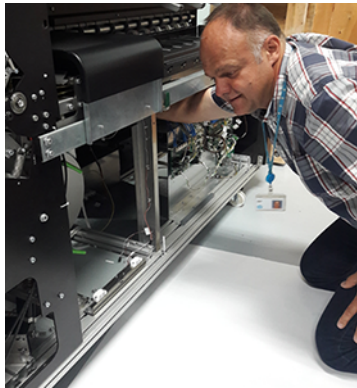
- A. From the rear: the access is more difficult, but you need to remove only one cover.
- B. From the front/under the bridge: three covers to remove, but then really easy access.

A. Access from the rear

- a. To access the one on the left (looking from the rear of the folder), remove the cover covering the different folder's PCAs by unscrewing the screw on the bottom right (short, vertical, T30 screwdriver).

Check the images below for visual indications on how to access the screw and place the key:

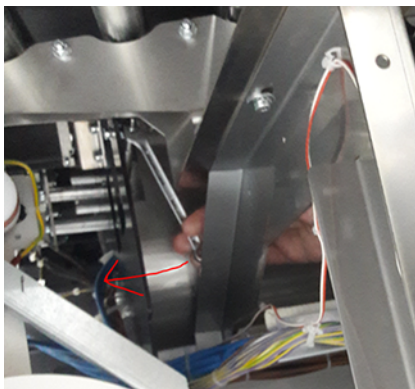
- Position required to access it.



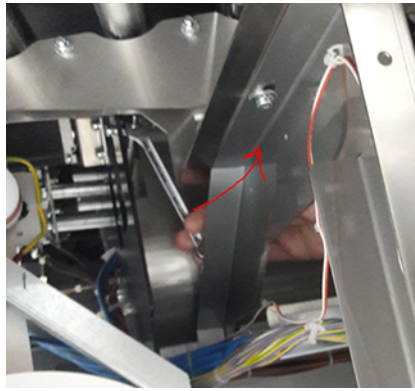
- Position for the key (the circle marks the key; the tip of the arrow, the nut).



To increase tension, turn the key clockwise.



To reduce tension, turn the key counterclockwise.



- b. To access the one on the right (looking from the rear of the folder), check the images below for visual indications on how to access the screw and place the key:
- Position required to access it (place a piece of paper on the ground).



- Position for the key (the circle marks the key; the tip of the arrow, the nut).



NOTE: The new folder version does not have any hole on the side metal, making the access to the nut more difficult.



To increase tension, turn the key clockwise.

To reduce tension, turn the key counterclockwise.

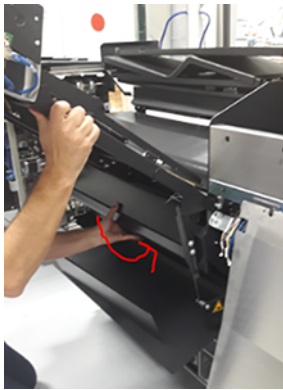
B. Access from the front, under the bridge

Four covers need to be removed, three fixed by four screws each, and one with no screws.

- a. For the first cover, remove the four screws shown below.



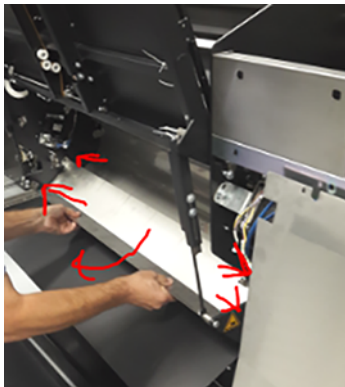
- b. Then, move down the bridge, until you are able to rotate the cover.



- c. Lift up again the bridge and remove the cover.



- d. Remove the four screws holding the second cover and remove it doing a rotation as shown in the picture below.

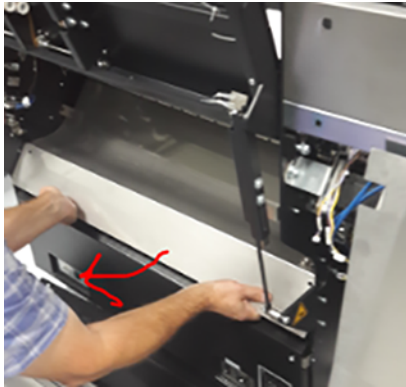
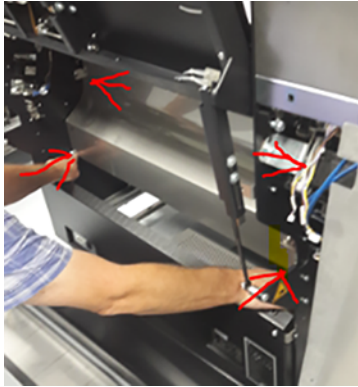


- e. Remove the cover placed on top of the Power supply (no screws).

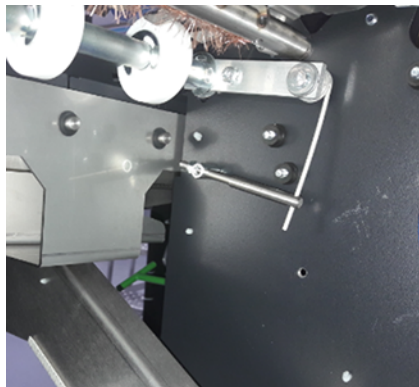
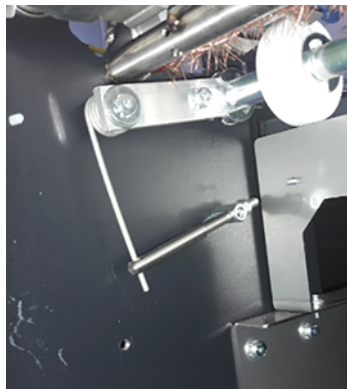


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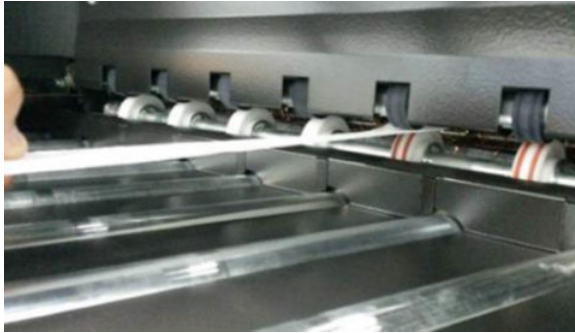
- f. Remove the four screws (two T30 and two Allen) holding the last cover and remove it.



- g.** Now you can easily access the nuts.



- 4.** After having adjusted the torsion spring, here is how to check the adjustment:
- a.** Use a piece of paper as shown in the following picture and, on three different positions of the white gears surrounded by two red rubbers, for each position:
 - i.** Insert the piece of paper by pulling down the lower axis.
 - ii.** Once the paper is inserted by at least 5 cm, lift the lower axis.
 - iii.** Pull out on the paper.
 - iv.** Perform the same operation on the left, center and right positions (on the image below, only the left and center ones are visible; the image shows the left one being tested, the step where the paper is pulled out).
 - v.** Compare the force required to pull out the paper.



- b. The recommendation is to have the one on the left applying more pressure than the one on the right (when looking from the back of the folder, the same view as in the following picture).

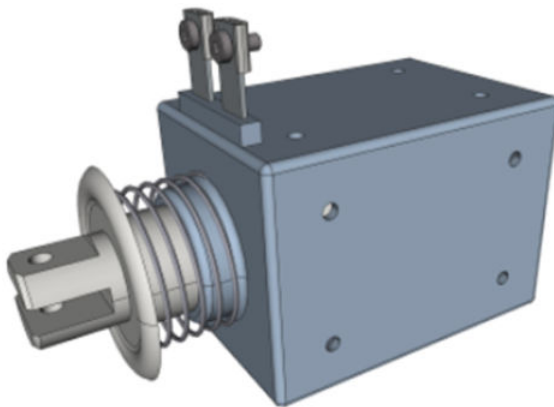
The reason is that the A4 / small paper will come out of the FF and go to the roll tray as in the following picture:



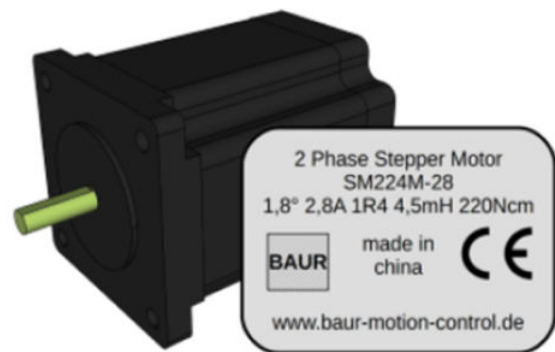
Adjustment of the Fan-fold paper guides

Depending of the type of gear installed, the adjustment of the Paper guides is different:

Solenoid:



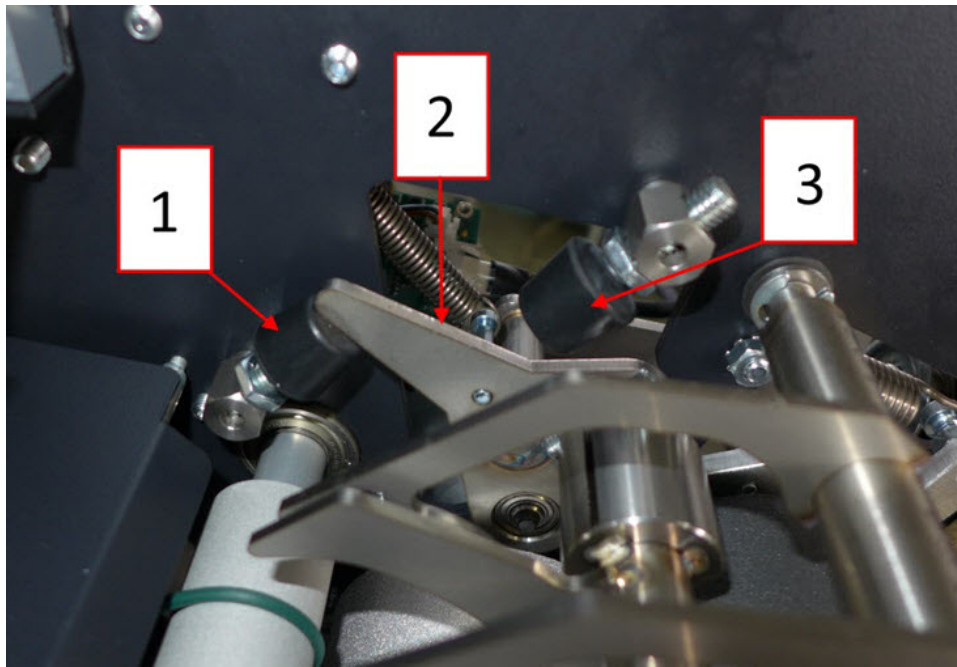
Stepper motor:



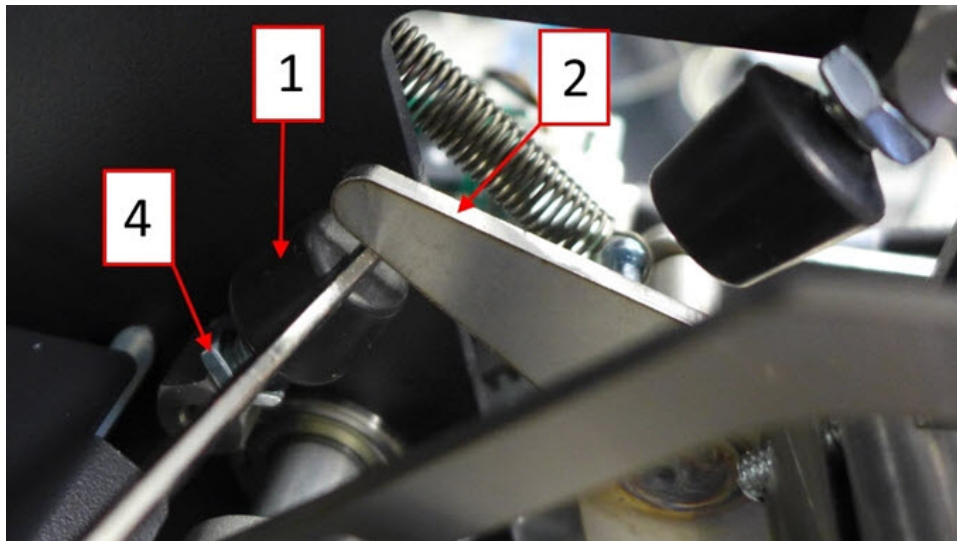
Adjustment of the Fan-fold paper guides with a solenoid

Home position of the main Paper guide

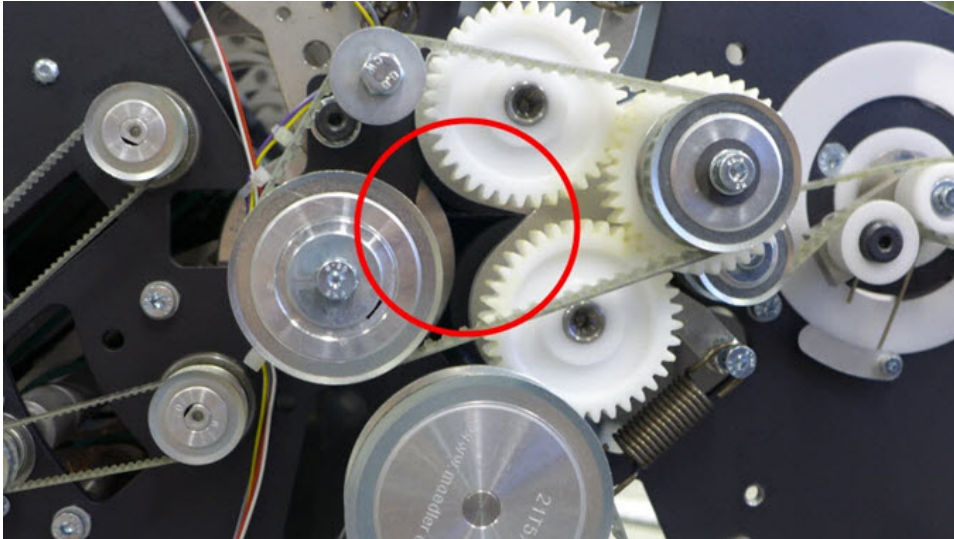
1. To adjust the home position of the main paper guide (2), adjust the lower stop (1).



2. Loosen the locknut (4) and place a 3 mm Allen key between the stop (1) and the main paper guide (2).



3. Look in the Folding triangle.



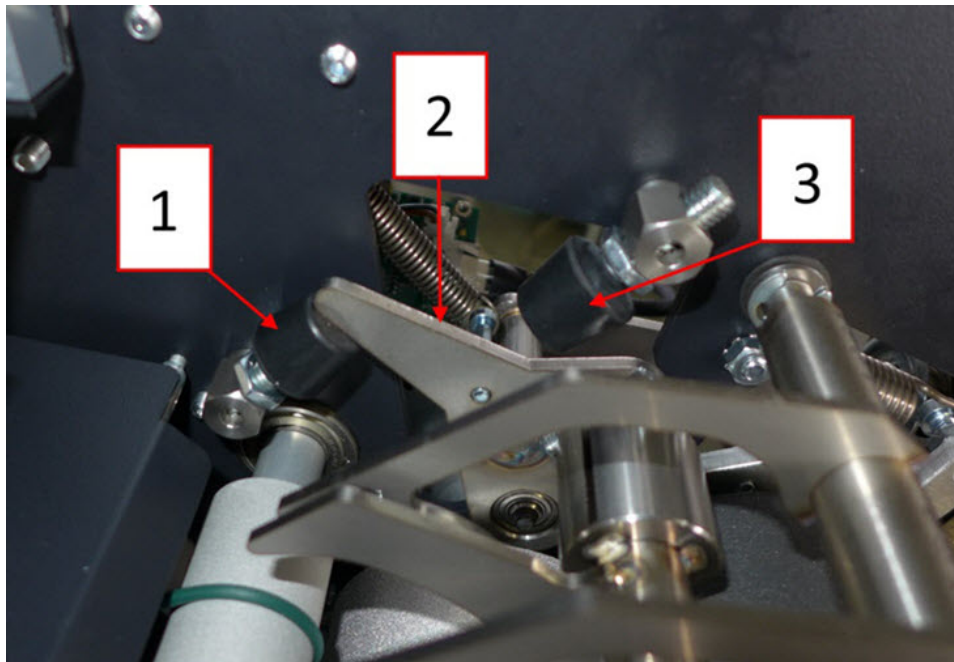
4. Adjust the stopper (1) until the spikes of the guide (indicated by the red arrow) slightly appear.



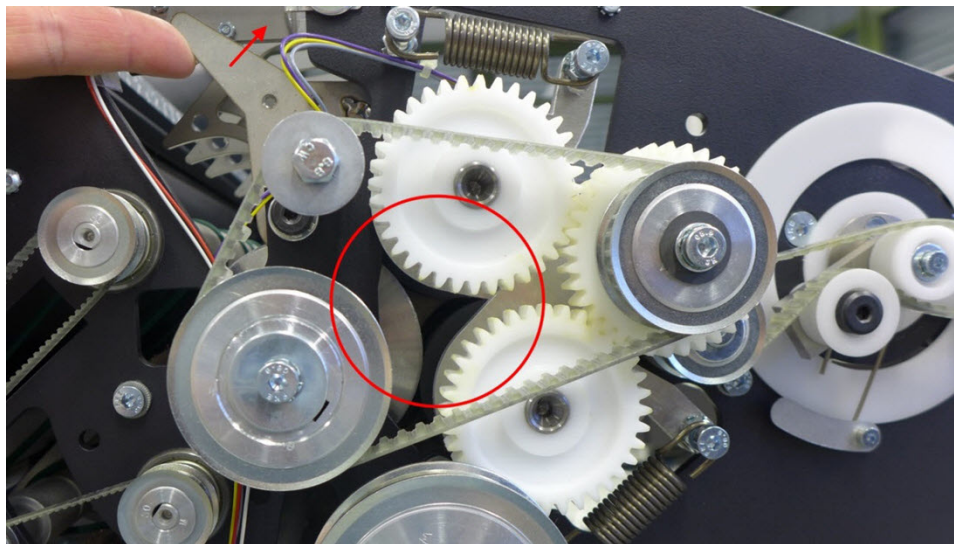
5. Fasten the locknut (4) and remove the Allen key; control the adjustment again.

End position of the main Paper guide

1. Loosen the locknut of the upper stop (3).

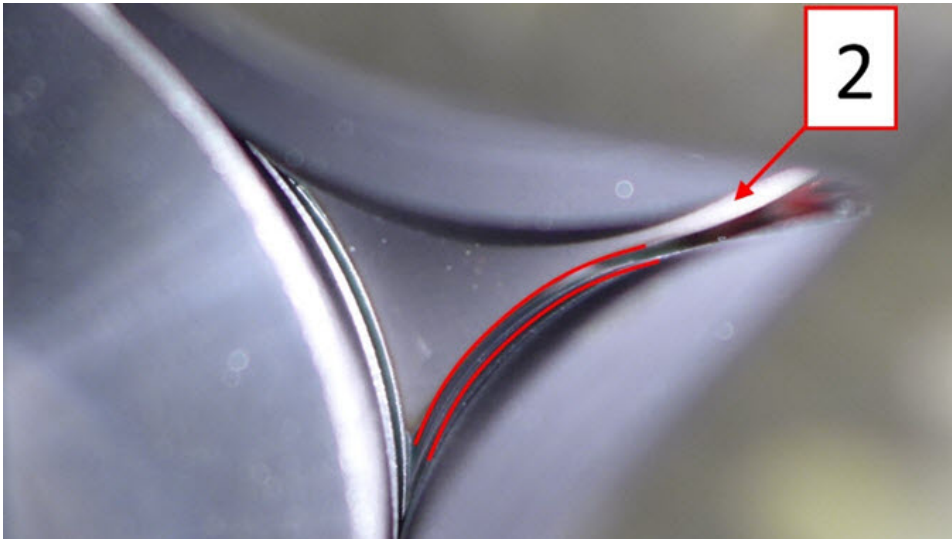


2. Push the main Paper guide against the upper stop (3), hold it in this position and look into the folding triangle.



3. Adjust the upper stop (3) until the distance between the lower Fold roller and the main Paper guide (2) is approximately 2 mm and the Paper guide slightly stands out of the upper Fold roller (see picture below).

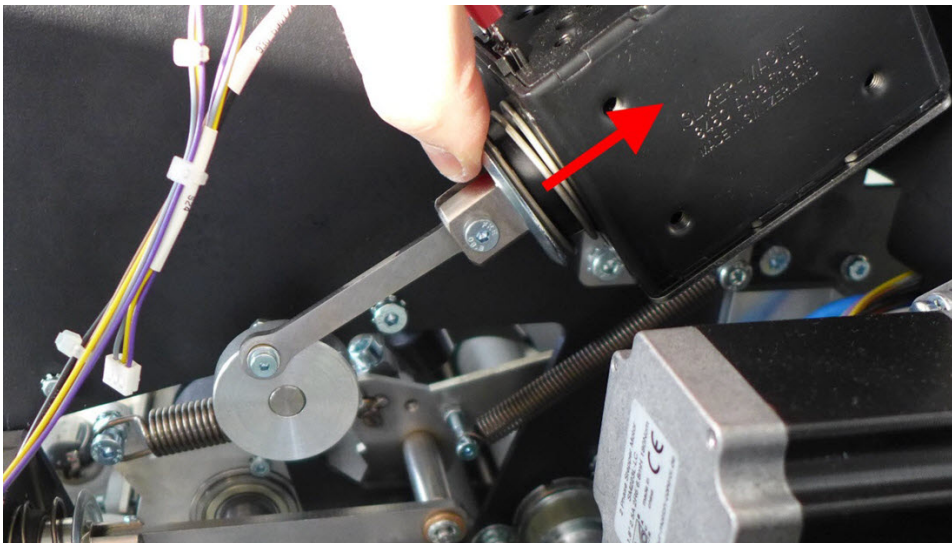
Be sure that the main paper guide has no contact to all three Folding rollers.

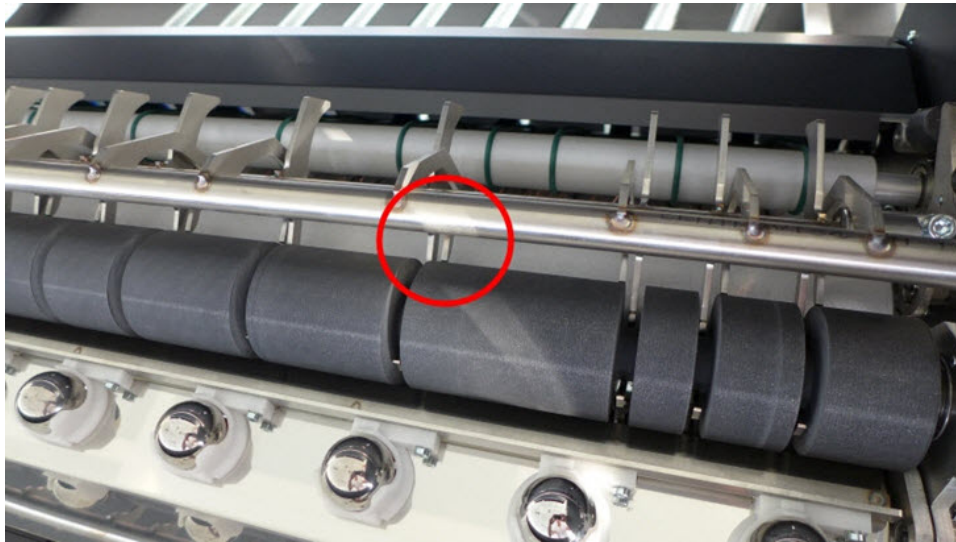


4. If this is OK, fasten the locknut and control the adjustment again.

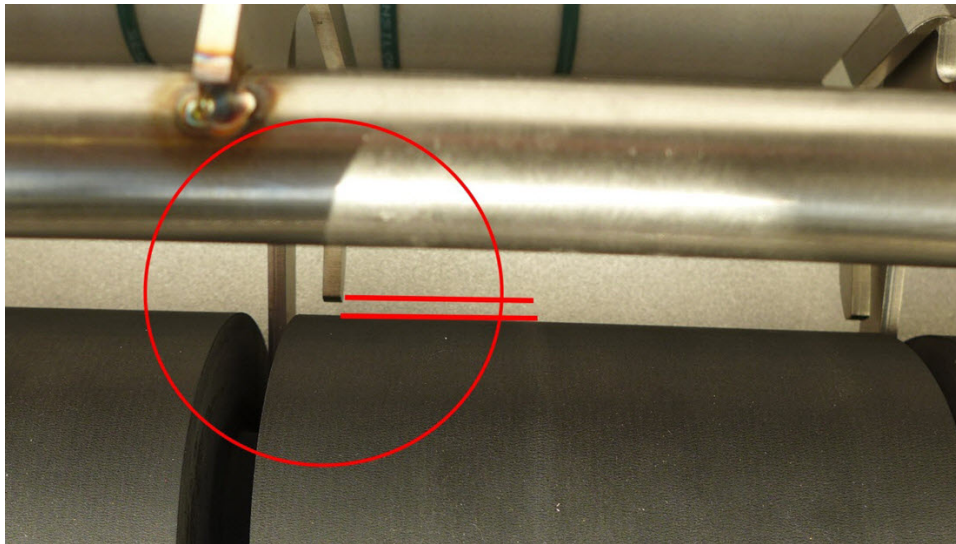
End position of the upper Paper guide

1. Activate the magnet by hand and control the distance between the upper Fold roller and the upper Paper guide.

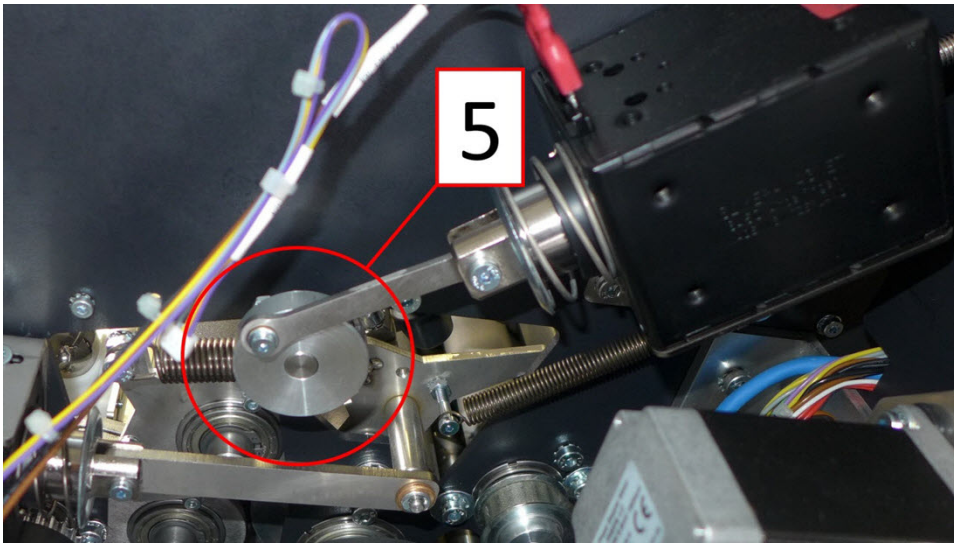




2. Measure the distance on that guide finger, which is the nearest to the Fold roller. The distance must be approximately 4mm.



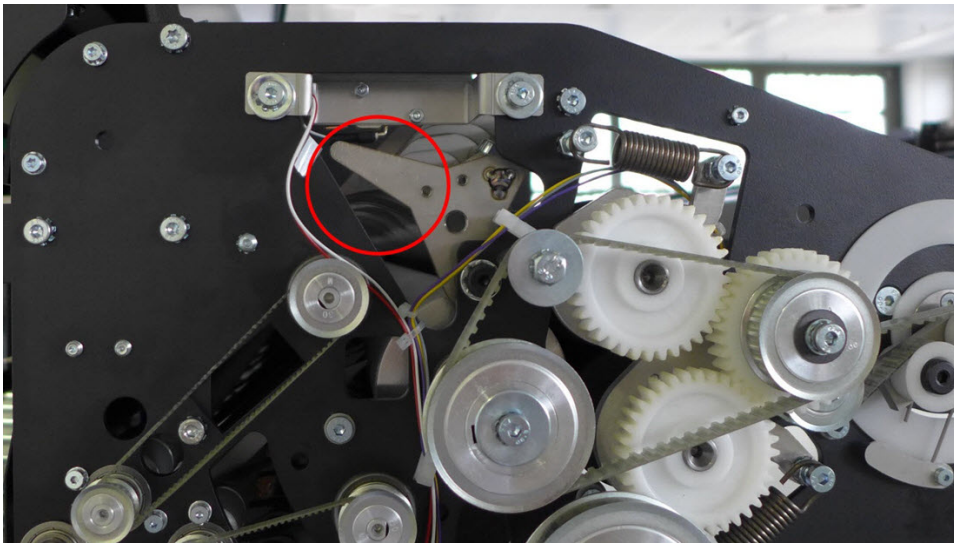
3. To adjust the distance, loosen the locking screw of the wheel (5) and hold the magnet in the activated position. While holding the magnet, adjust the distance between the Fold roller and the guide.



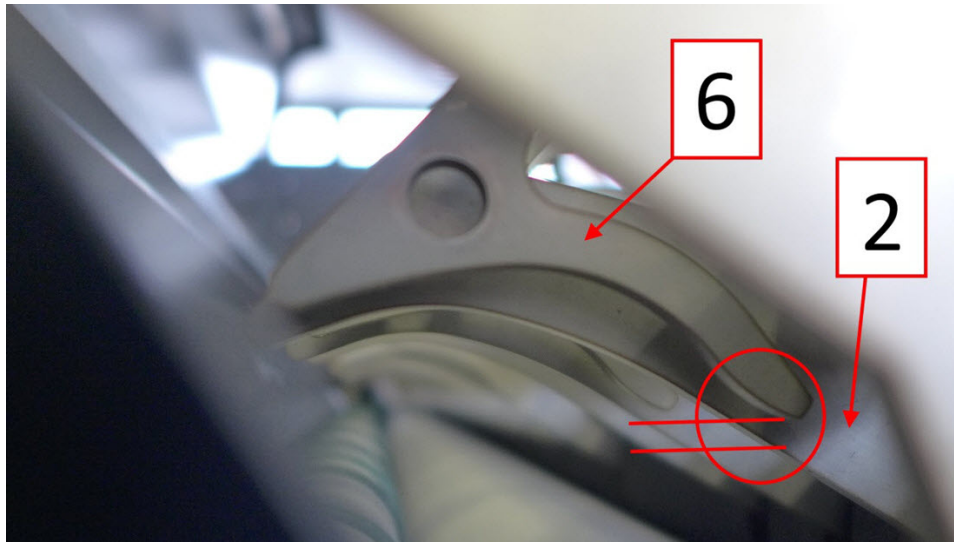
4. If the distance is OK, fasten the locking screw and control it again.

Home position of the upper Paper guide

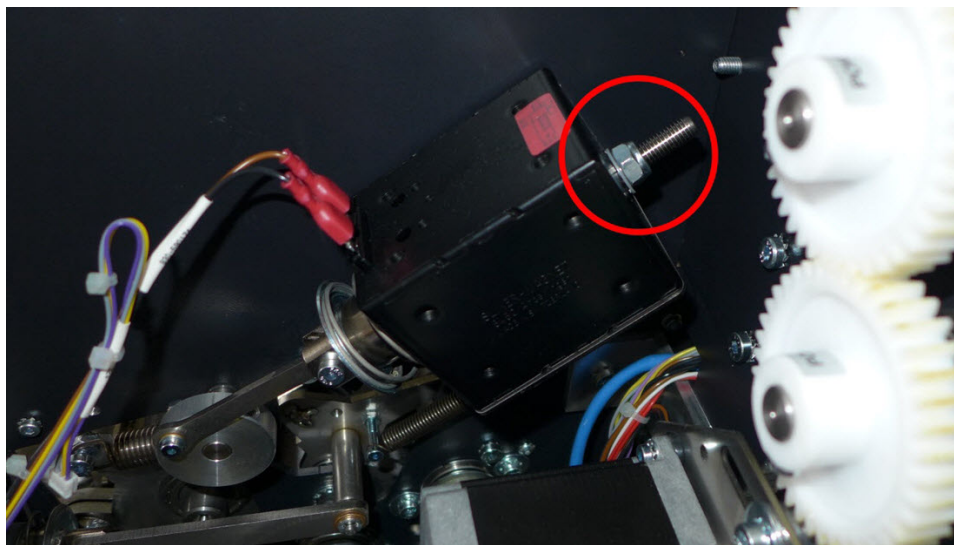
1. Look at this point:



2. In the home position, the upper paper guide (6) must be higher than the main paper guide (2) (see picture below).



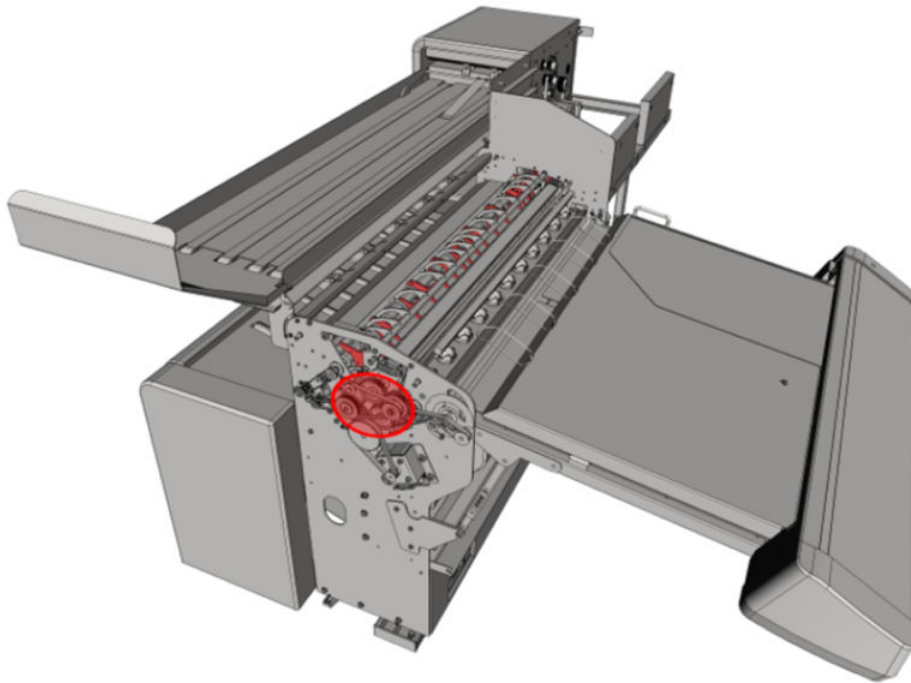
3. To adjust the home position, adjust the nut of the magnet.



Adjustment of the Paper guides with a stepper motor

Location of the Paper guide and a view of the Folding triangle

- ▲ The paper guide is drawn in red and the red circle shows the folding triangle:

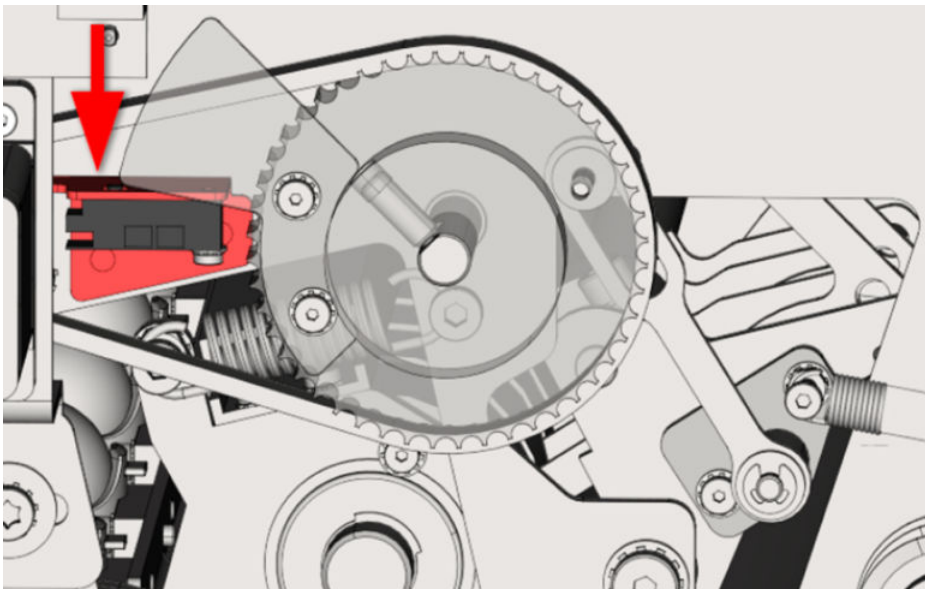


Active position of the main Paper guide

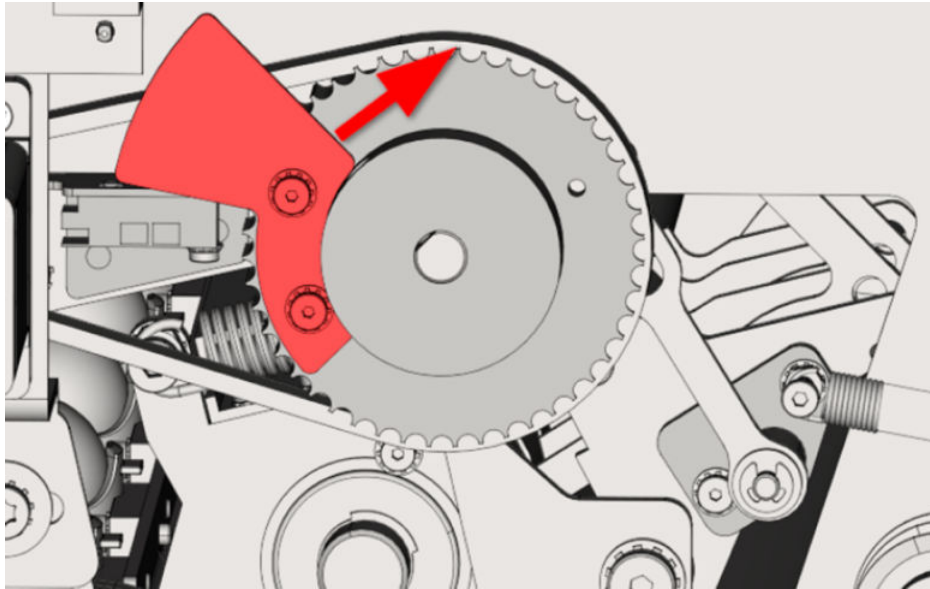
1. Loosen both Light sensor bracket screws.

Push the sensor to its lowest position.

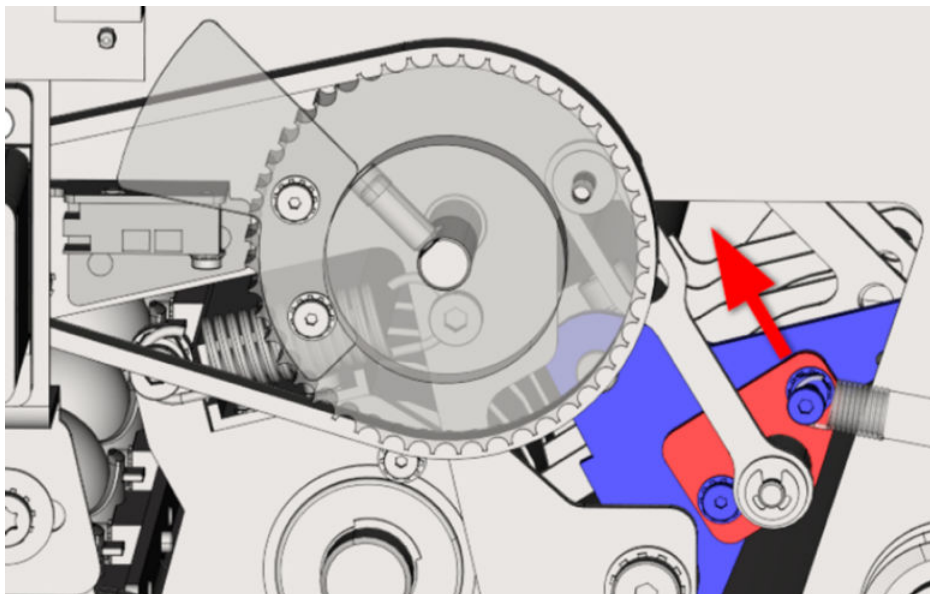
Tighten the screws.



2. Loosen both screws of the Encoder flag that is mounted at the toothed wheel.
Push the flag to its highest position.
Tighten the screws.



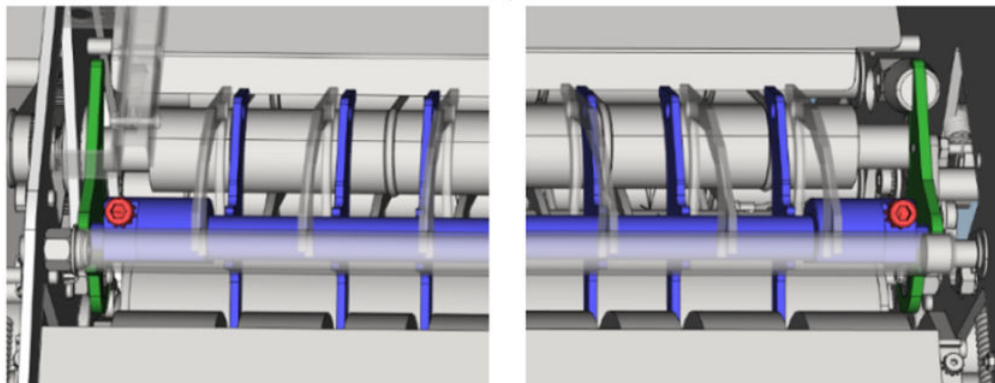
3. Loosen both Adjustment plate screws.
Push the plate to its highest position in the slot hole.
Tighten the screws.



4. SWITCH the Folder ON.
Activate the Paper guide FF-X49 via the Diagnostic Menu.

5. Loosen the screws indicated in red below.

The inner part of the Paper guide (indicated in blue) is now movable with respect to the outer brackets (indicated in green).

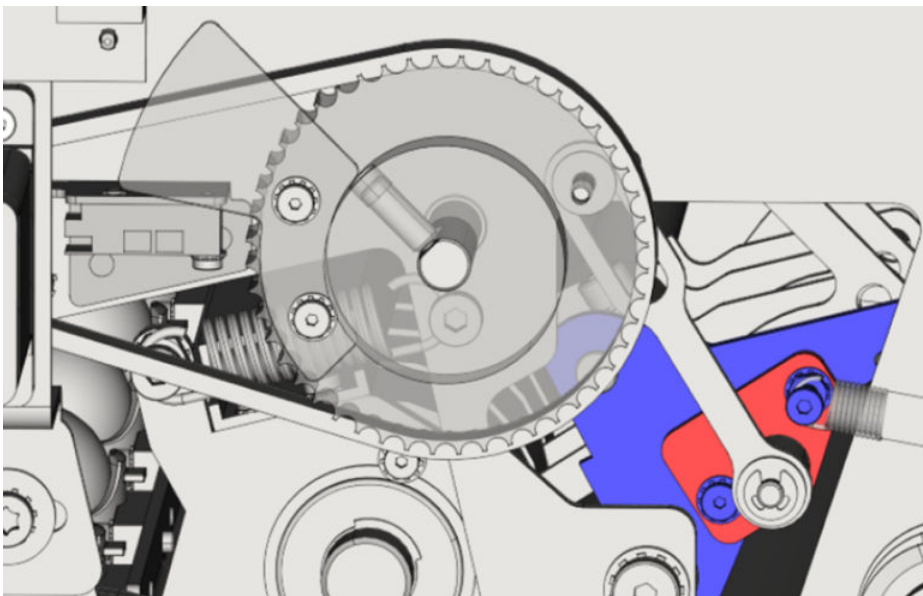



6. Move the inner part of the guide (indicated in red) so that its appearance in the Folding triangle is as shown in the picture below.

The guide (1) must not touch the main Folding roller.

The guide fingers (2) must appear slightly below the upper Folding roller in order to prevent the paper that enters from touching this roller.

The position of the outer brackets (indicated in green) is adjustable by the adjustment plate at the drive side of the guide.



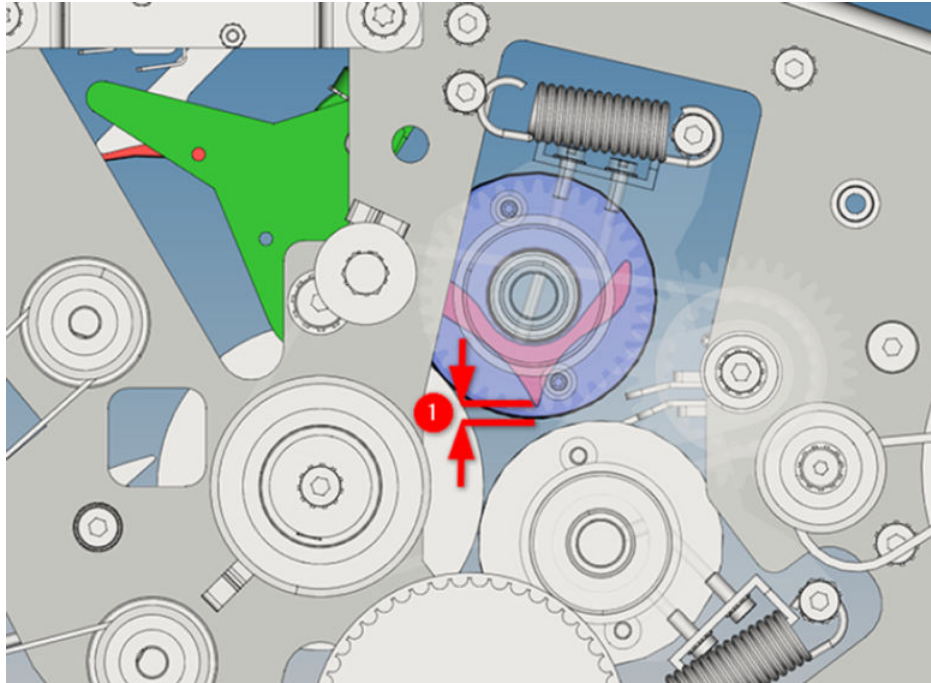
 **NOTE:** Just in case the position of the Paper guide is not adjustable by moving the inner part of the guide, the outer bracket can also be adjusted. In this case, loosen the screws and move the adjustment plate in its slot hole.

Home position of the main Paper guide

1. In the home position, the Paper guide must not be visible in the paper path.

The guide fingers should be hidden inside the upper Folding roller and should have a distance of 3mm to its lower edge (1).

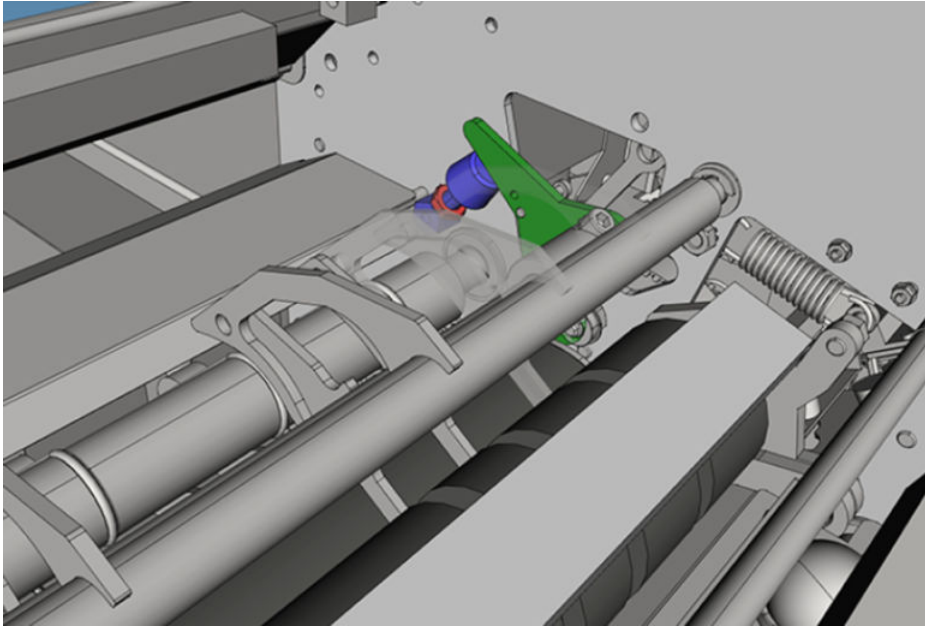
Please make sure that the Paper guide does not touch the inner core of the Folding roller.



2. To adjust the home position there is a stopper located at the drive side of the paper guide.

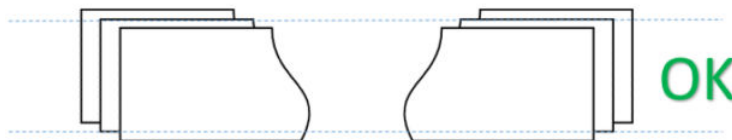
Loosen the stopper locknut (indicated in red / stopper indicated in blue).

Turn the stopper to adjust the home position. Turning it clockwise will increase the distance between the Paper guide and the lower edge of the Folding roller. Turning it counter-clockwise will decrease the distance between the Paper guide fingers and the lower edge of the Folding roller.



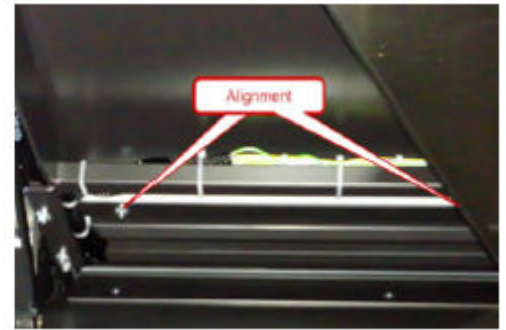
Folder FF skew adjustment

1. Set the Folder to Manual Mode.
2. Select a Default folding style.
3. Insert an A0 / Arch E manually.
4. Measure the distance between the fan-folds at each side of the plot.



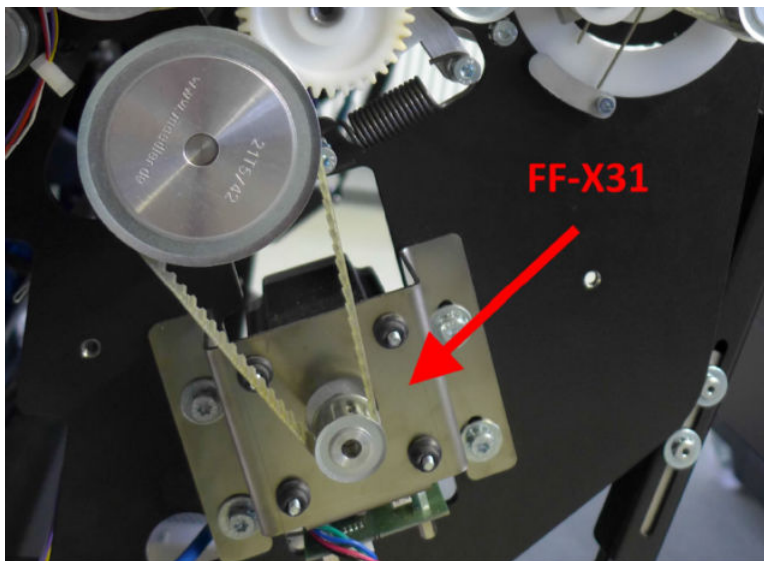
5. If the distance on both sides is the same (+/-2 mm), do nothing.
6. If the distance on both sides is out of specs, improve it by:
 - adjusting the manual feed guide below the bridge cover.

If the paper is skewed after manual folding, open the bridge and correct the angle of the paper guide. Loosen the screw.

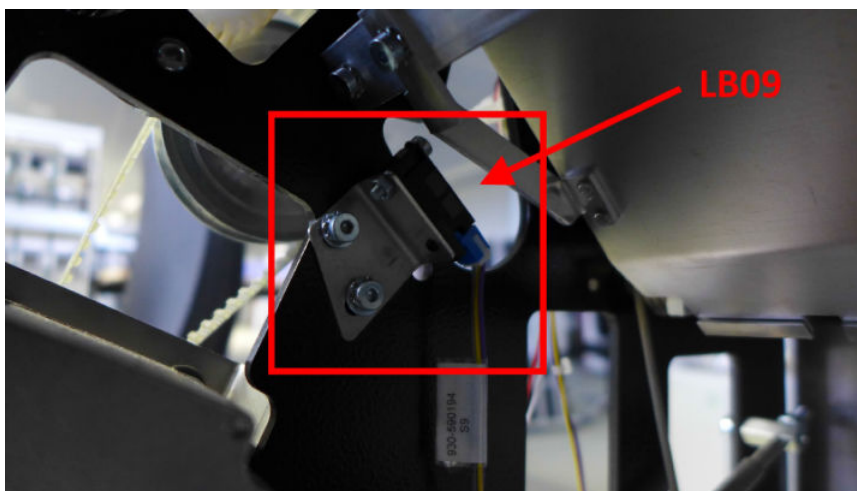


Lower exit flap adjustment

The lower exit flap is moving by stepper motor FFX31.

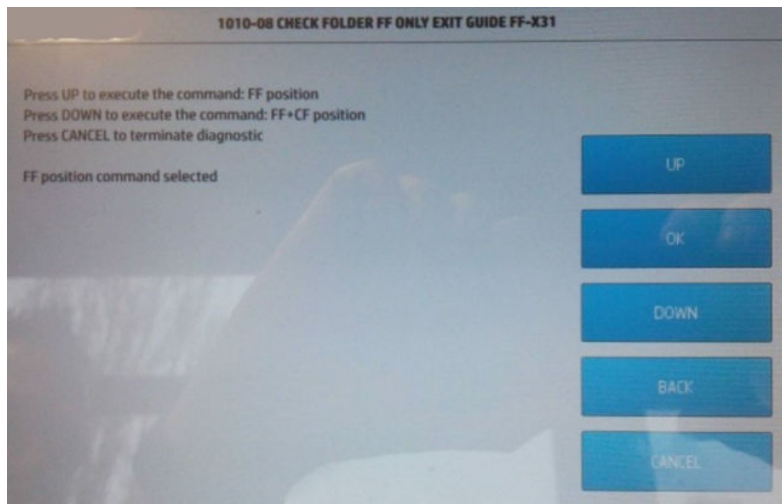


The correct position of the lower exit flap will be determined by the position of LB09.

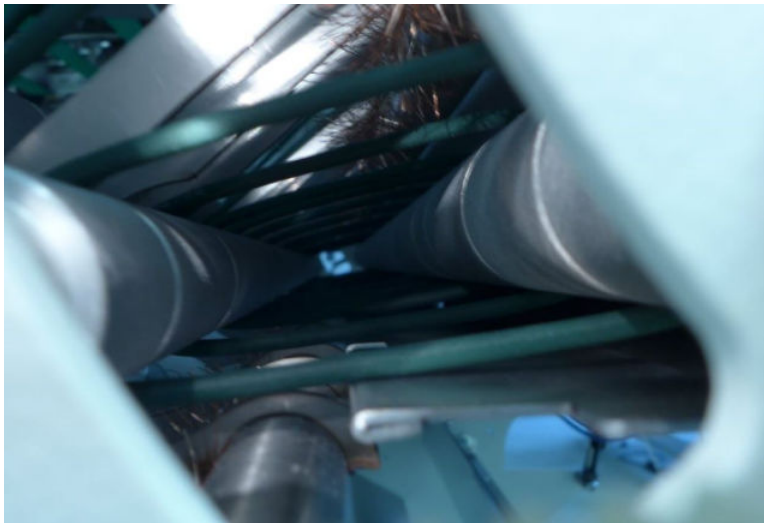


To check the correct position of the flap open the diagnostic menu of the printer and run the test 1010-08 CHECK FOLDER FF ONLY EXIT GUIDE FF-X31.

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In the position “DOWN” the flap must touch the belts without any pressure, like in the picture below.



If this is not so, adjust the position of LB09 and test again until the flap is touching the belts.

Tab knife skew adjustment (Serial Number previous to DE92B21001)

⚠ WARNING! In order to guarantee hazard-free operations it is strongly recommended that any maintenance or repair work is only carried out by trained personnel.

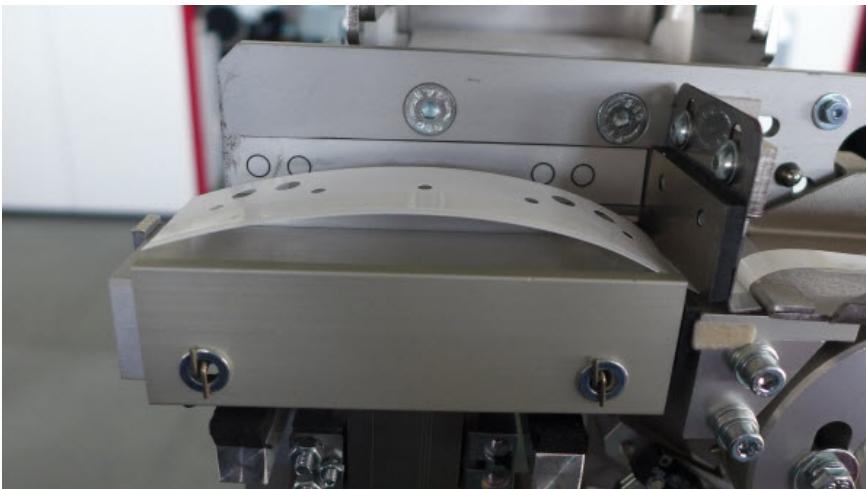
To avoid any injuries, be sure that the Folder is switched off before you begin.


This a possible failure of a misaligned tab knife:



The main reason why the Tab is misaligned is that the position of the knife is not correct.

This picture shows a misaligned knife. When it is cutting, it lifts the tab causing a non-defined position of the tab on the stamp. While cutting, the tab should move as little as possible.




 **IMPORTANT:** To check if a hardware adjustment is necessary, activate the Tab unit 10 times by pushing the red button and check the alignment of the Tabs.

If the Tabs are well adjusted, there is no reason to adjust the hardware.

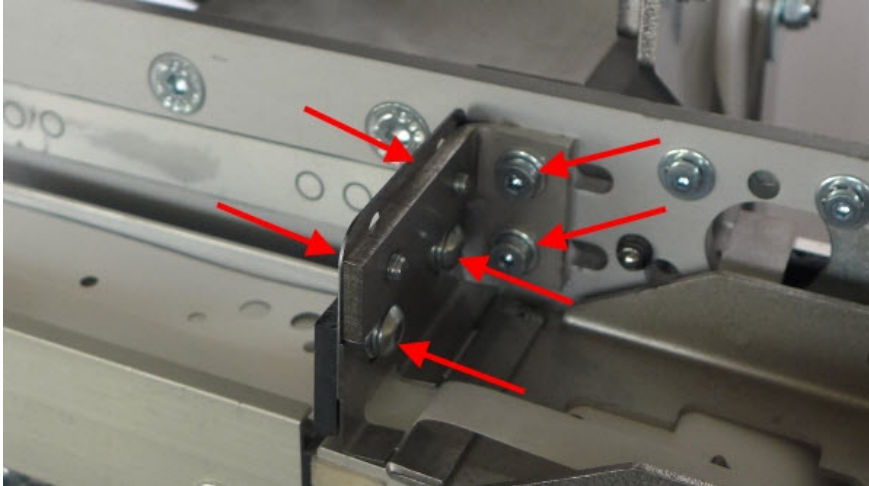
Check if the metal stopper is in the right position.



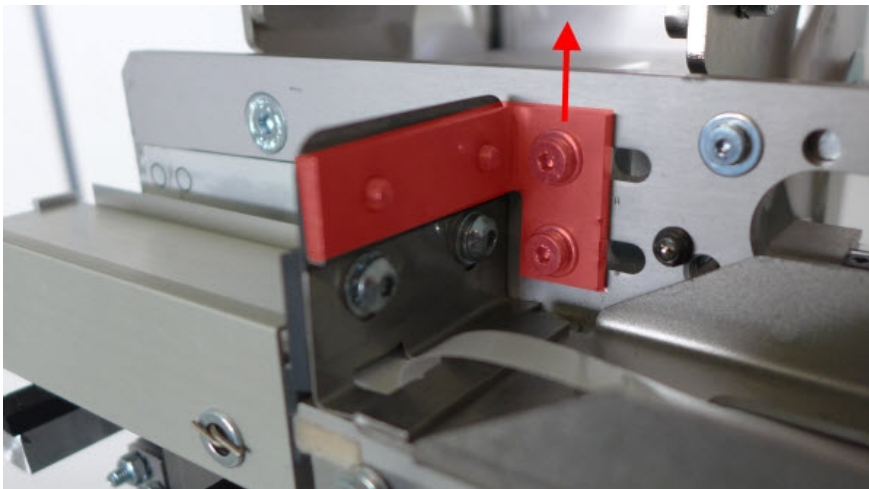
Knife adjustment

 **TIP:** For better access and handling we recommend to remove the complete Tab unit before beginning the adjustments. See [Tab replacement on page 1356](#).

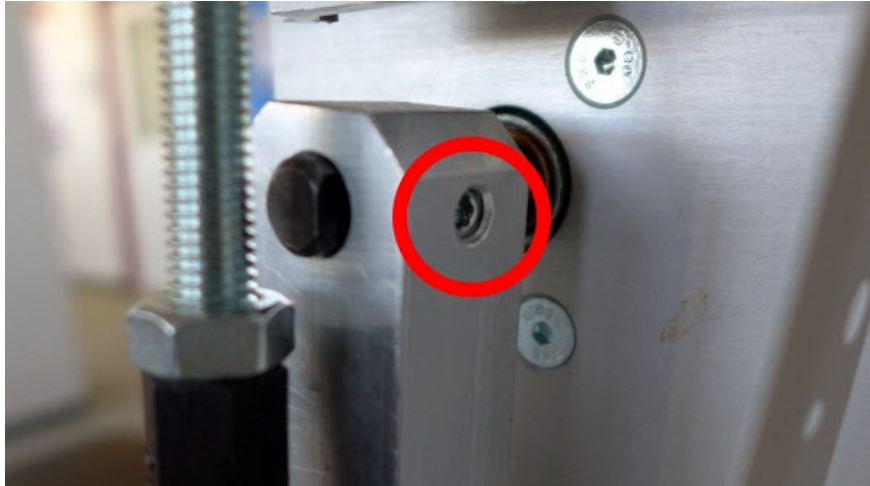
1. Slightly loosen the screws marked by the arrows to begin the adjustment.



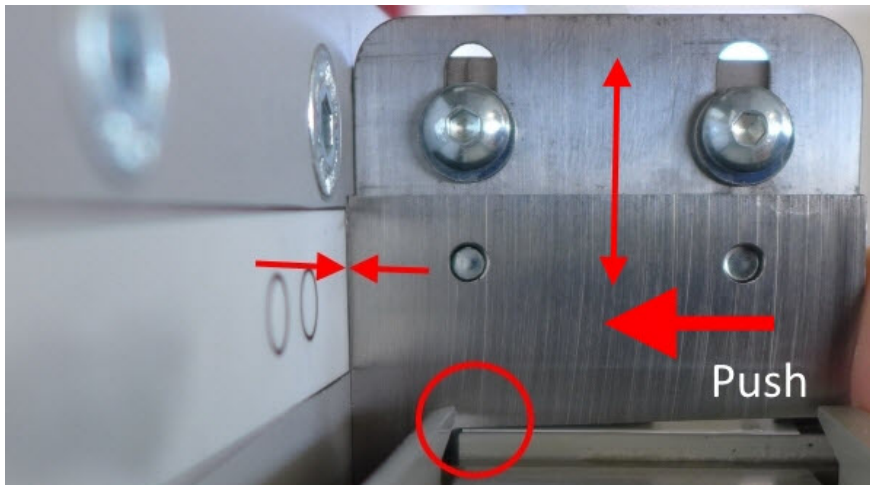
2. Push the red marked bracket to the top and fasten it in this position.



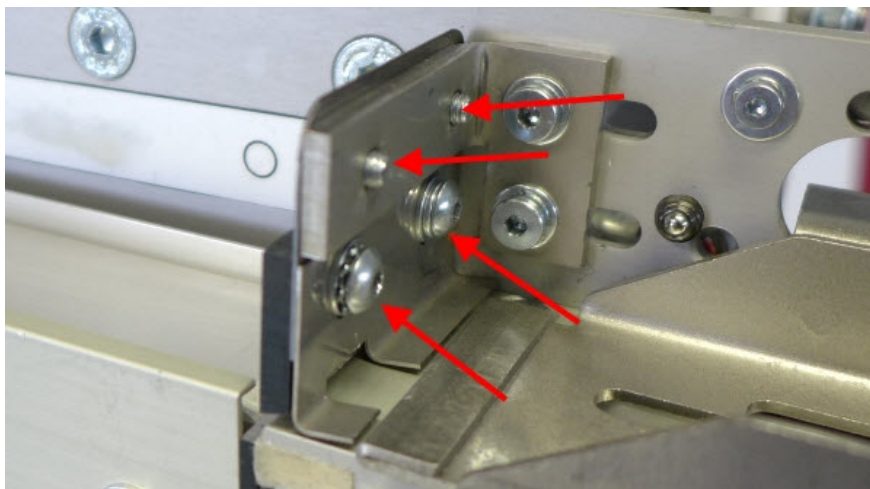
3. Loosen the screw circled in red in order to move the stamp.



4. Adjust the height of the knife so that the tab fits underneath the knife with a distance to it as little as possible. Push the knife against the main frame.



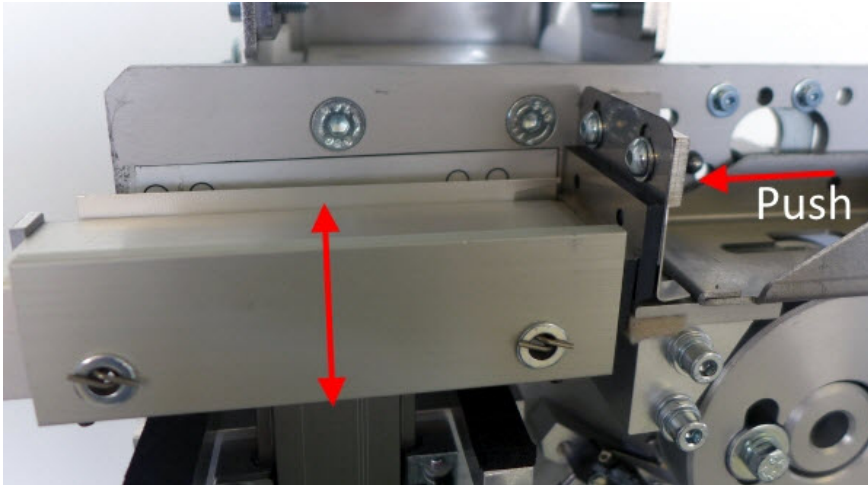
5. While pushing the knife fasten the four screws marked by the arrows.



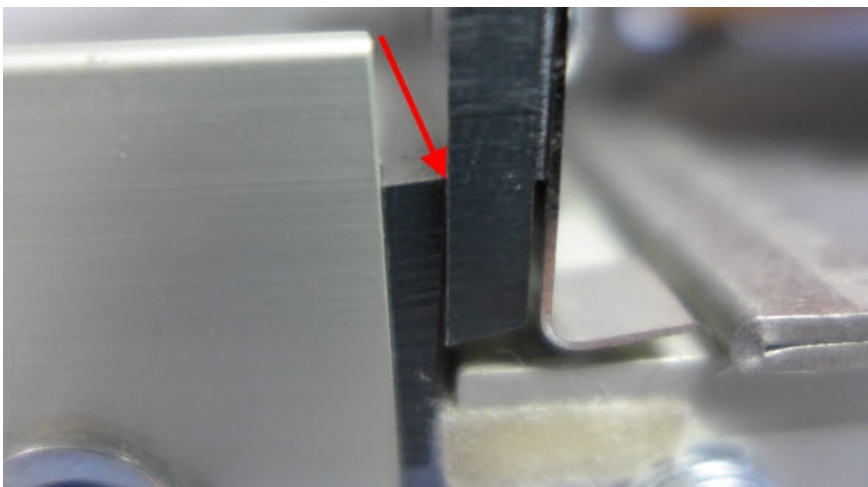
- Slightly loosen these other two screws again.



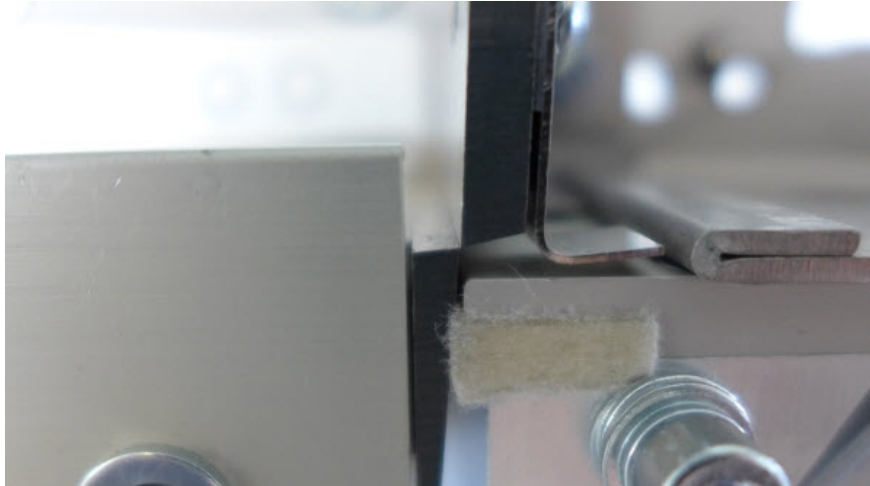
- Move the stamp to the centre of the knife and push the knife against the stamp.



- This is the correct position of the knife in the centre of the stamp.



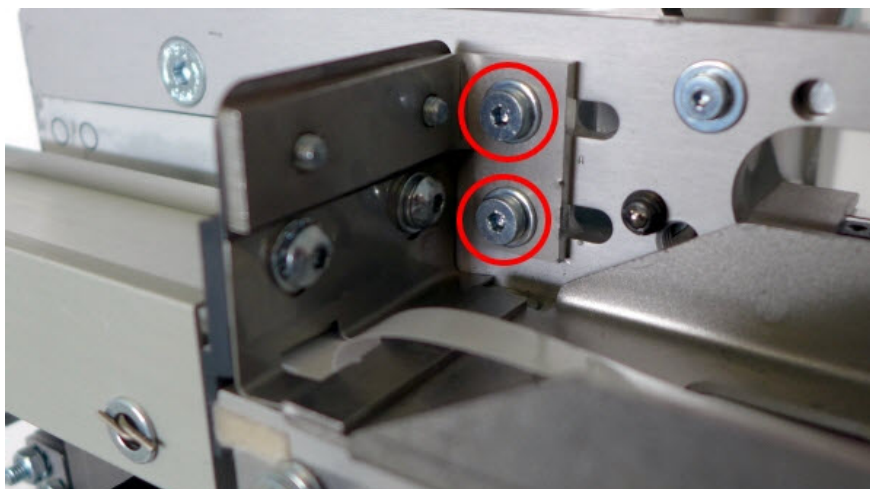
9. Verify that the lower and upper knives are touching each other in this position.



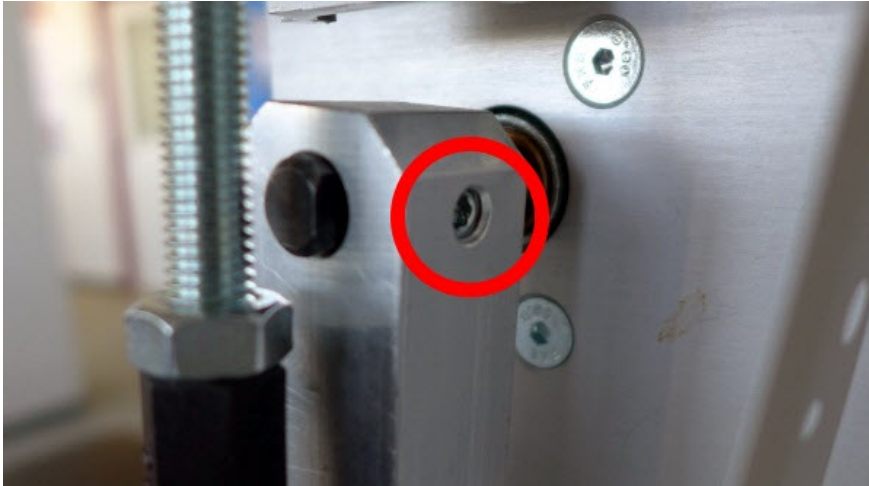
10. The image below shows a correct adjusted knife. Both knives have full contact over the complete movement.



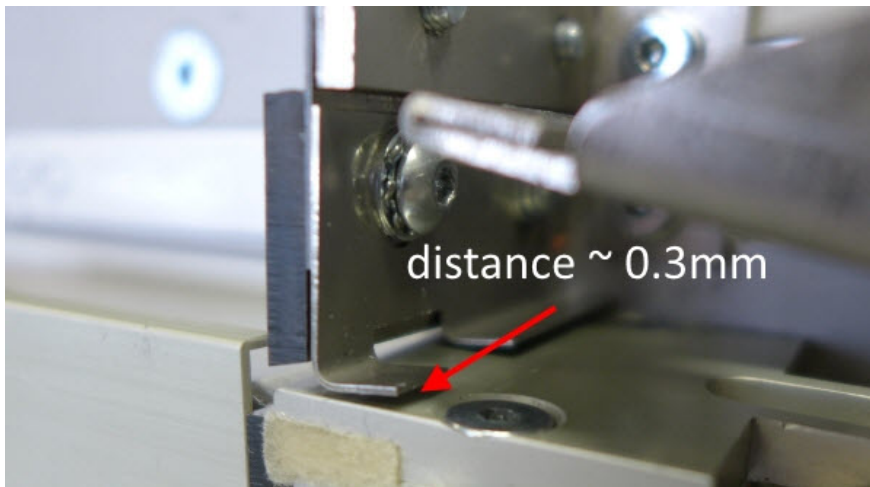
11. Once you are sure that the stamp knife has full contact over the complete range, fasten these two screws.



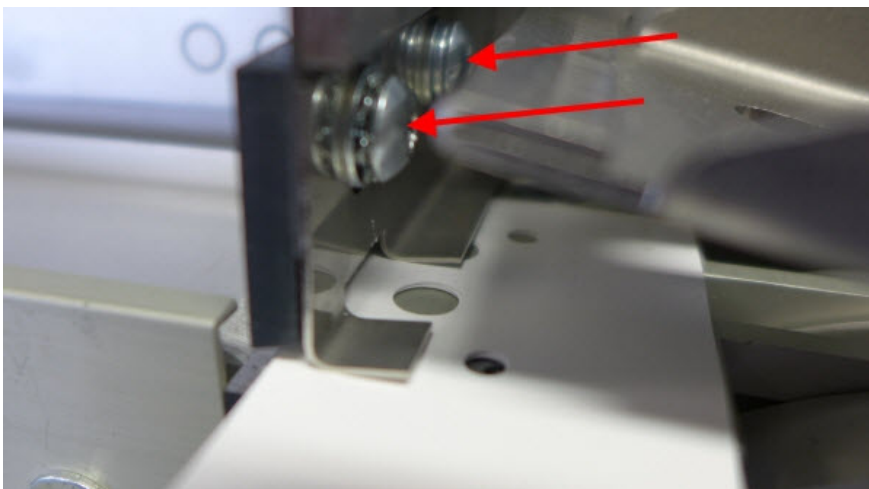
12. Control the position. If the position is correct, bring the stamp to its home position and fasten the screw.



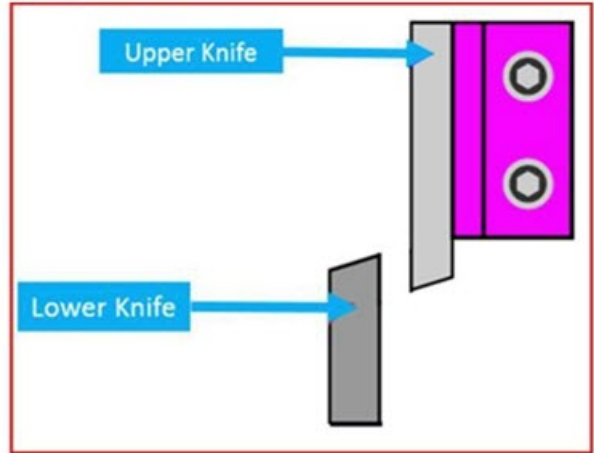
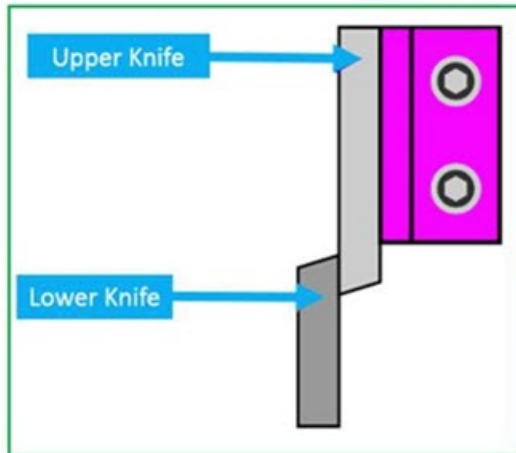
13. Adjust the tab guide, making sure that it provides enough space for the tab.



14. To adjust the correct distance, place three tabs between the plate and the guide. Fasten the two screws marked by the arrows.

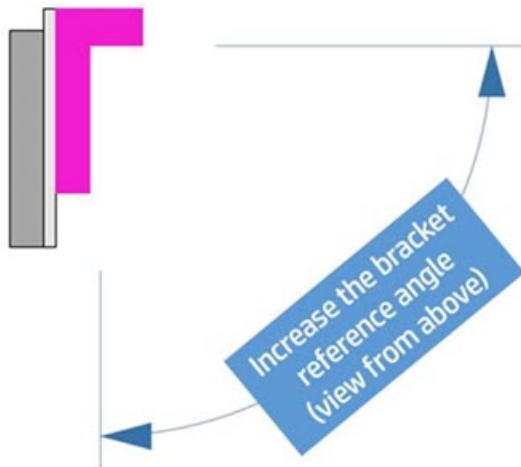


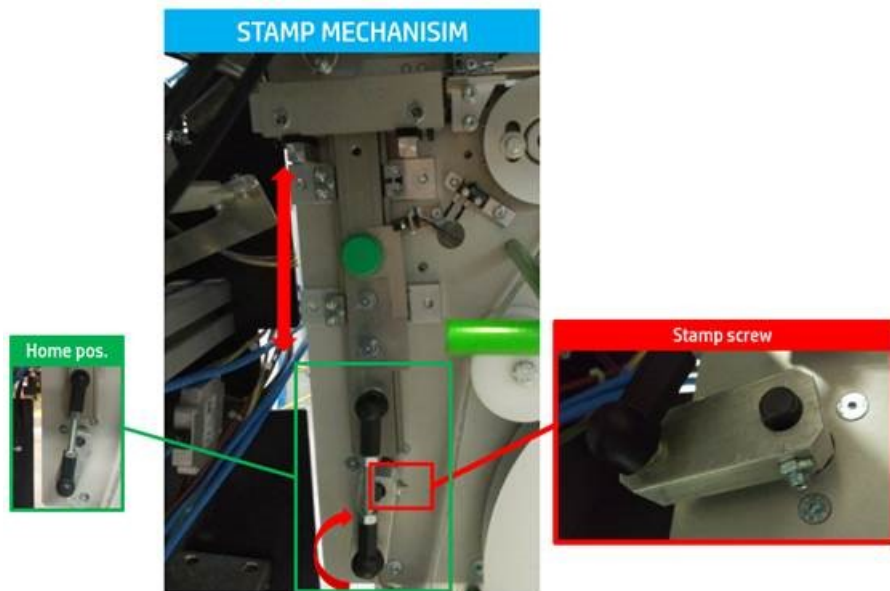
15. Reinsert the tab roll in the Tab unit and reinstall the Tab unit.



Procedure: Increase the tension between the blades right away. Bend the bracket of the upper knife a bit.

⚠ CAUTION: Manually move the stamp mechanism in order not to damage the knife if going too far. To do so, please loosen the stamp screw. Once the adjustment has been completed, tighten the screw and ensure the stamp mechanism is at the correct home position.





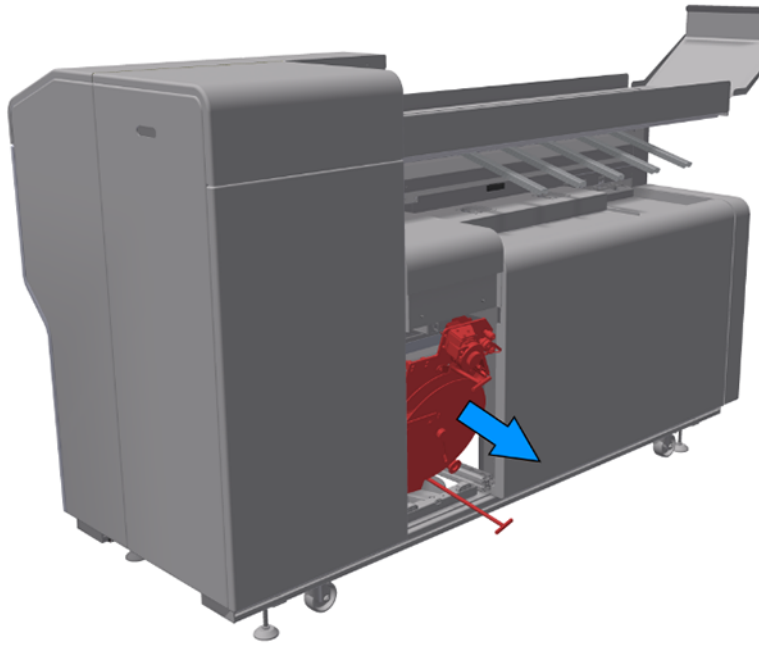
Tab knife skew adjustment (Serial Number after DE92B21001)

A possible failure of a misaligned tab knife is seen in the image below.



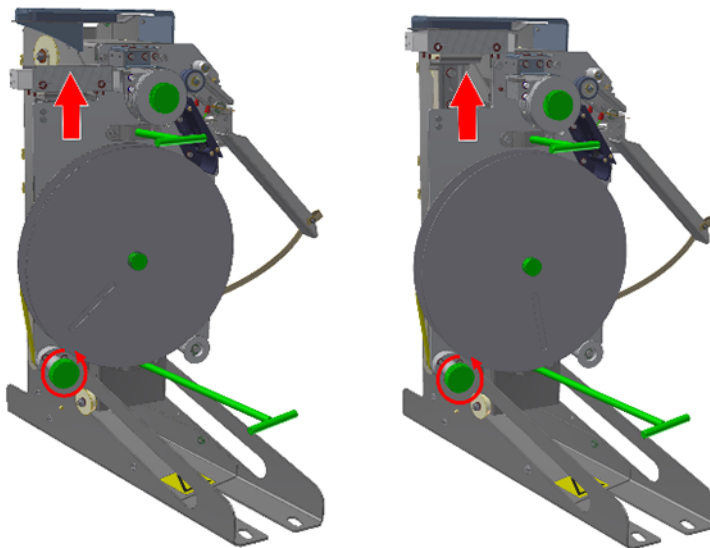
The main reason why the Tab is misaligned is that the position of the knife is not correct.

1. Open the TAB cover and pull out the TAB unit.

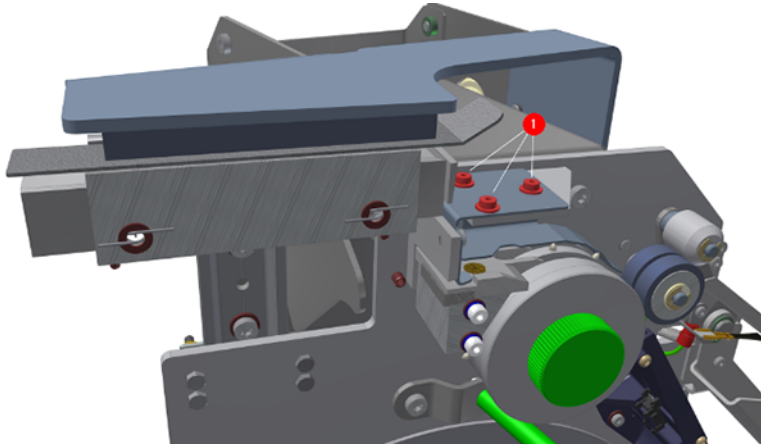


2. Turn the green stamp knob to lift the stamp.

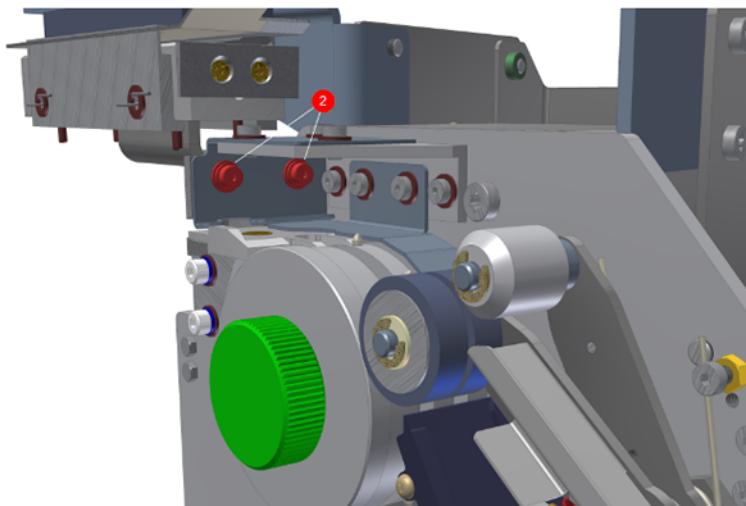
 **IMPORTANT:** Before you begin with the adjustment procedure, please clean the upper and the lower knives with alcohol and ensure that the sponge is soaked with silicone oil.



3. Slightly loosen the three screws marked with number 1 .

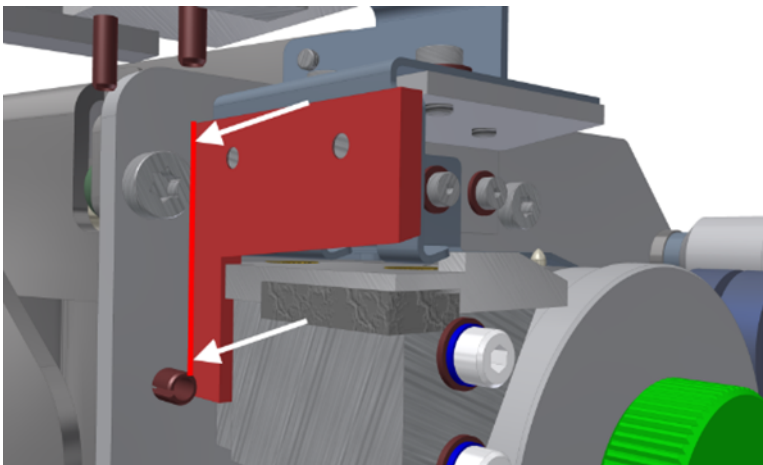


4. Slightly loosen the two screws marked with number 2.



5. **Vertical knife adjustment**

Adjust the knife until there is no gap between the knife and the frame. The knife must be in contact with the frame over all its length.

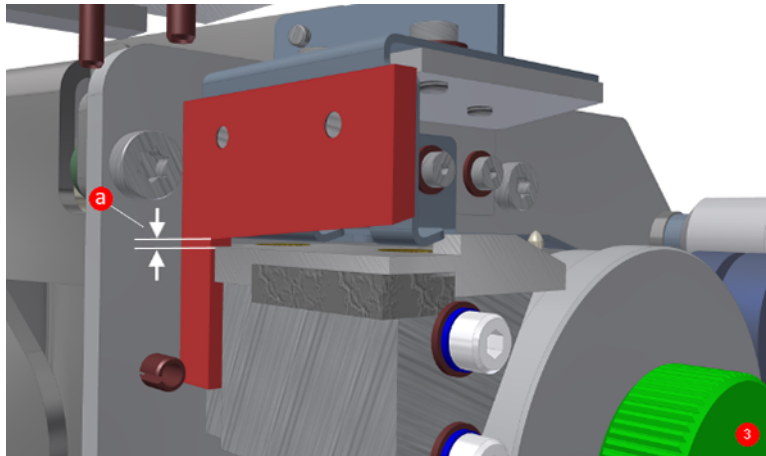


6. Horizontal knife adjustment

Adjust the height of the knife until the recommended value is reached: a ~ 0.25 mm.

Use a TAB strip to adjust the correct height: forward the strip by turning the green knob (3) counterclockwise. Adjust the height as low as possible. The TAB strip must be able to pass the gap without touching the knife.

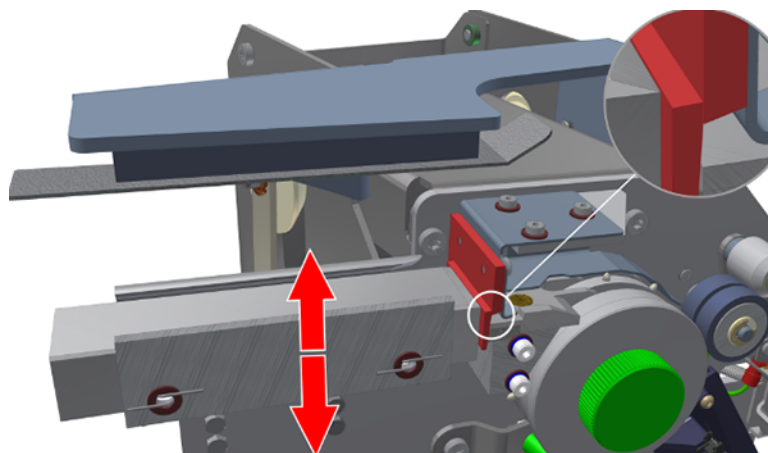
- If the knife is too high, you will get a "jumping " TAB strip.
- If the knife is too low, you will get a TAB strip jam.



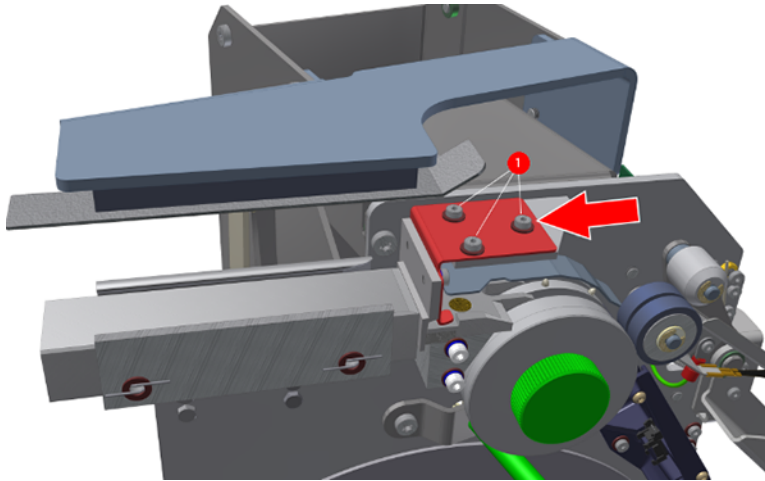
If both adjustments (vertical and horizontal) are correct, fasten the screws (number 2 in step 4 above) again.

7. Upper/lower knife adjustment

- Bring the stamp to the position shown in the image above. To move the stamp, use the green stamp knob at the lower left of the TAB unit.

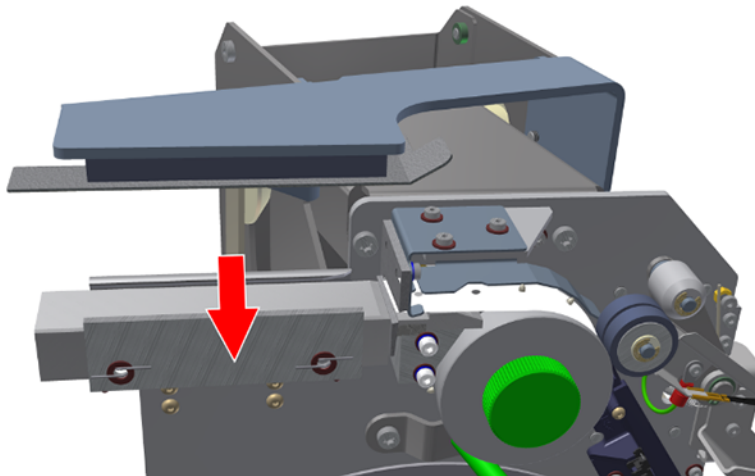


- b. Push the red marked plate with a little bit of pressure in the direction shown until the upper and the lower knives are in contact with each other over the whole face. Fasten the screws (1).

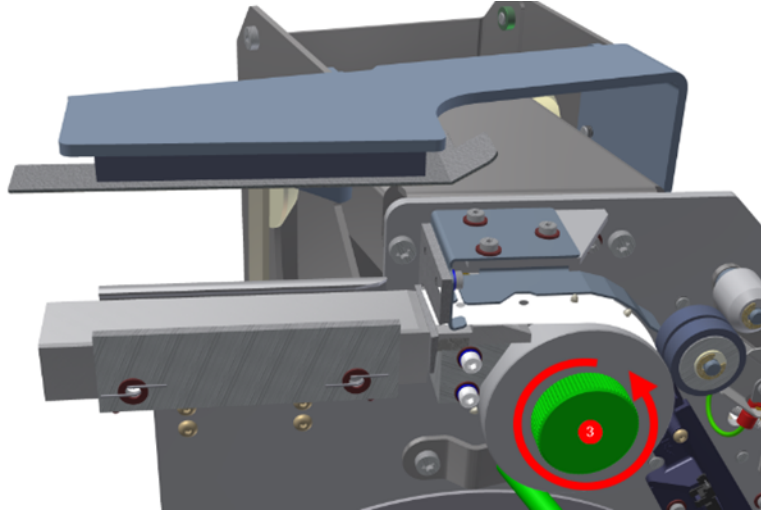


8. Check the adjustment manually

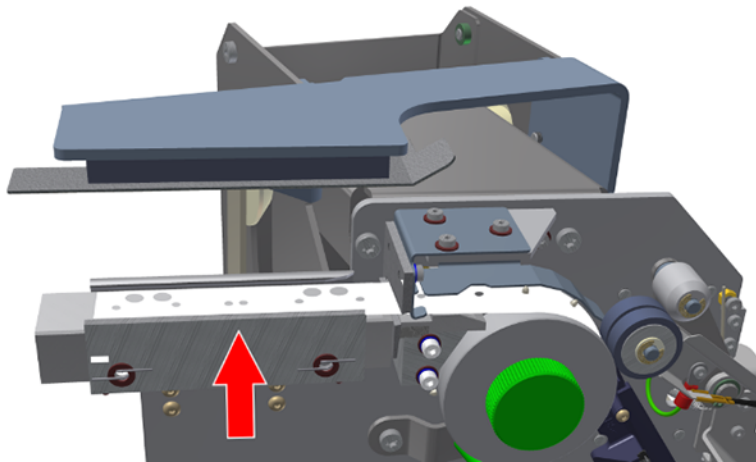
- a. Bring the stamp to the lowest position while turning the green stamp knob at the lower left of the TAB unit.



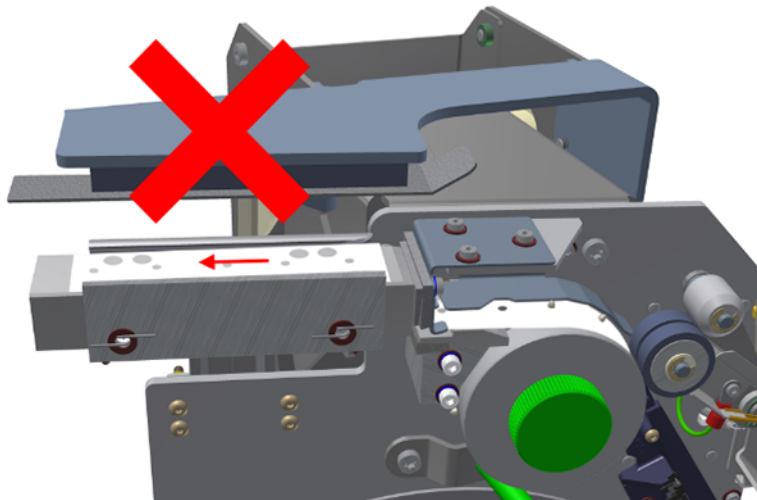
- b. Turn the green knob (3) and move the TAB strip to the table.



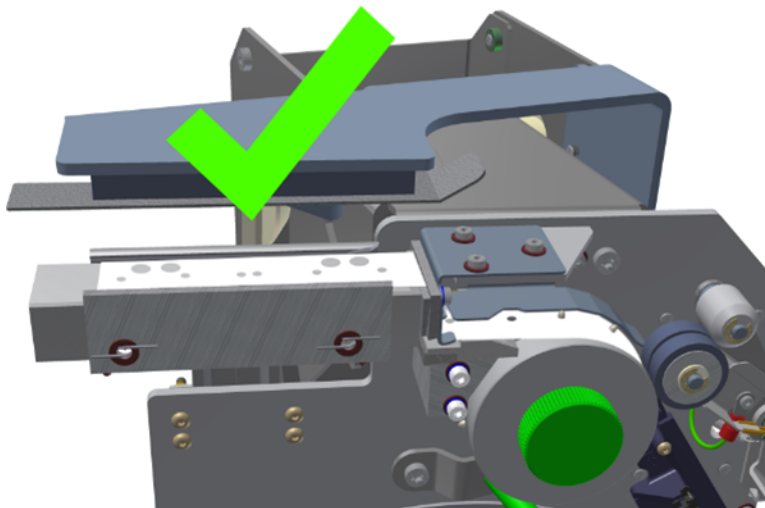
- c. Move the stamp to the upper position to cut the TAB strip. To move the stamp, use the green stamp knob at the lower left of the TAB unit.



- d. If the strip jumps away during the cut, the adjustment is not correct. Repeat the upper/lower knife adjustment.



- e. If the strip keeps its position during the cut, the adjustment is fine.



- 9. Push the TAB unit back into the machine and close the TAB cover.

CF input rollers adjustment

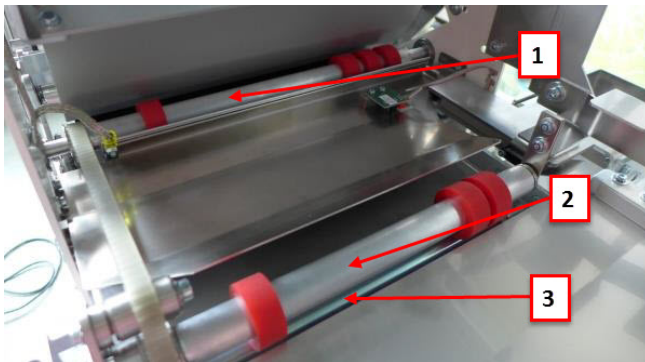
This section describes how to adjust the complete CF entry.

An adjustment is necessary if your cross-fold package is skewed (like in the picture below).



⚠ WARNING! In order to guarantee hazard-free operations it is strongly recommended that any maintenance or repair work is only carried out by trained personnel.


To avoid any injuries, be sure that the Folder is switched off before you begin.



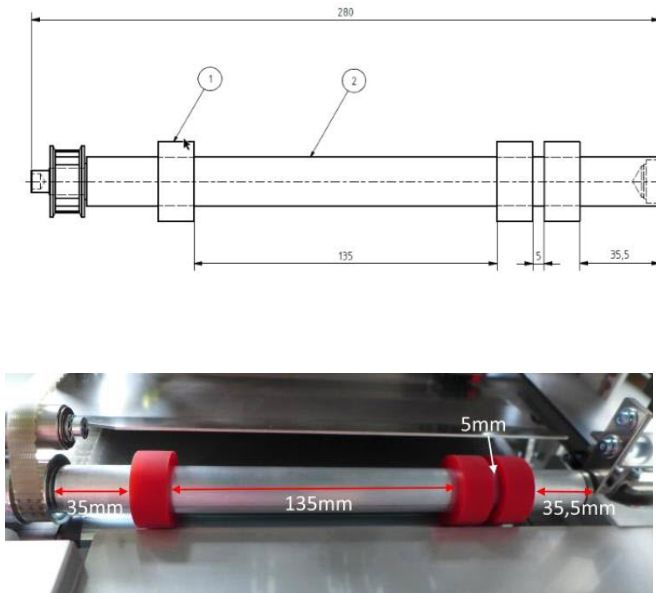
1. Rear CF entry roller with rear pressure roller
2. Front CF entry roller
3. Front pressure roller

Position of the red rubber wheels

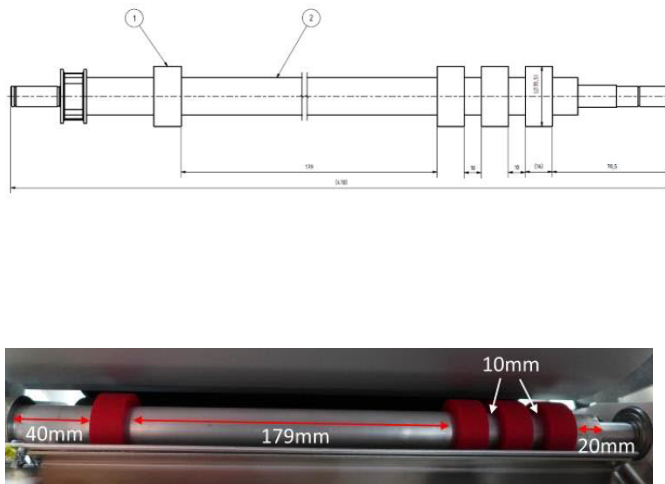
Below you can see the correct position of the red rubber wheels for the front and rear CF entry rollers.

 **IMPORTANT:** The rubber wheels are adjusted by the manufacturer. Never change the position of the red rubber wheels.

- Front CF entry roller

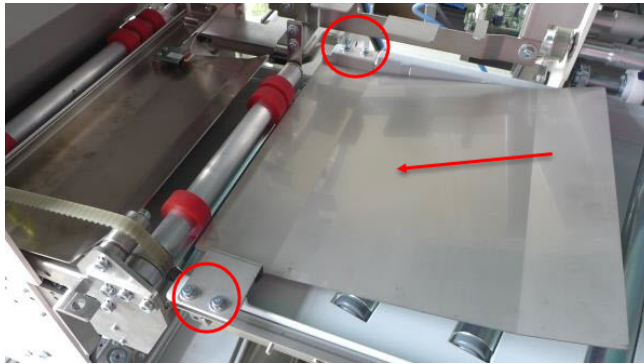


- Rear CF entry roller

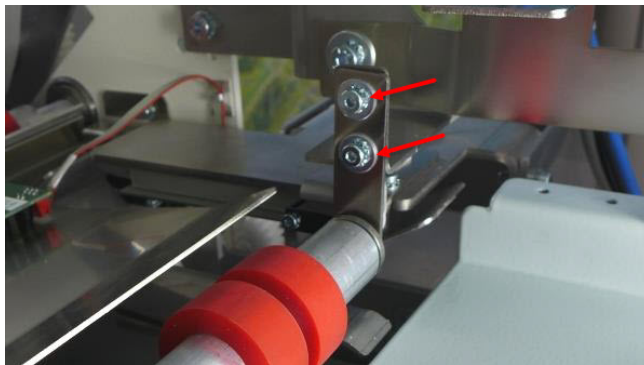


Adjust the parallelism of the front CF entry rollers

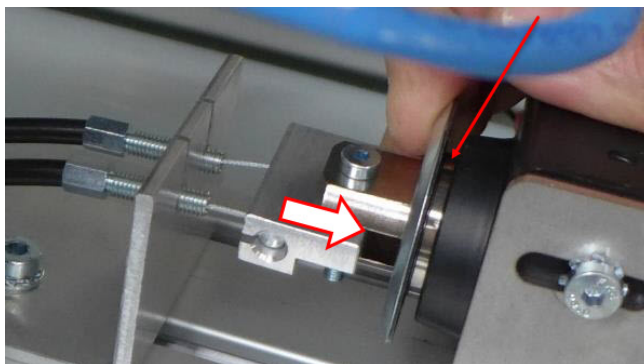
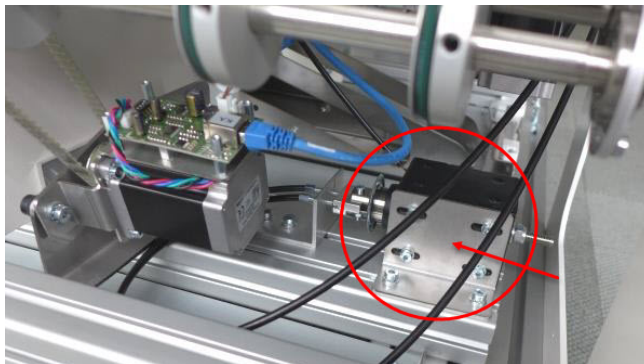
1. For a better access, remove this guide plate by removing the two screws on both sides.



2. Loosen these two screws.

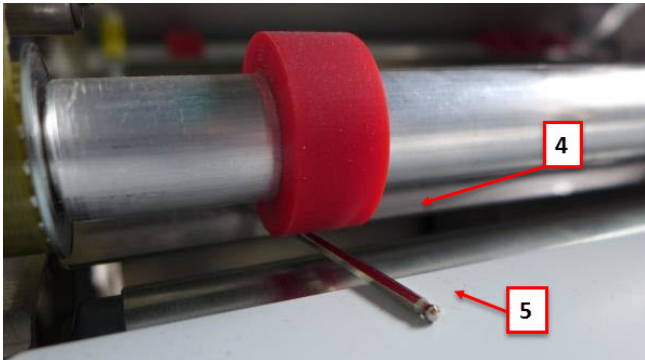


3. During the next adjustment, you have to pull down the lower pressure rollers. To do it, activate this solenoid by hand and hold it in this position.

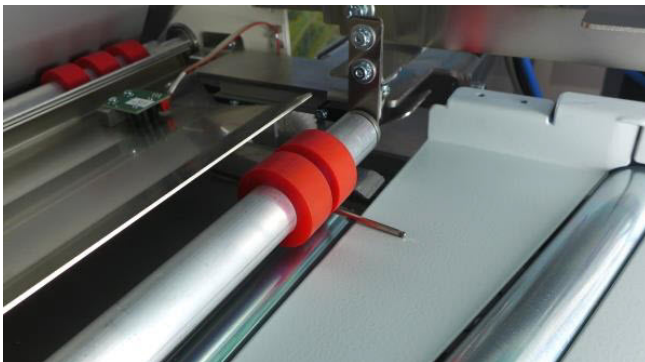


4. At the position of the front red rubber wheel, put an Allen key between the roller tray (5) and the lower CF entry plate (4).

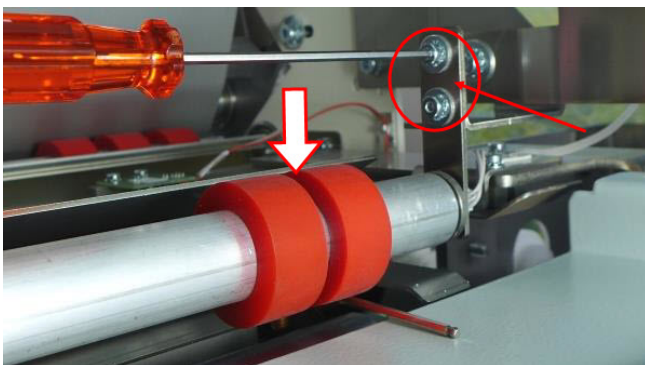
Choose the size of the Allen key so that there is no space between the plate and the red rubber wheel.



5. Put the same Allen key under the rearmost red rubber wheel (see picture below).



6. Push down the roller until the red rubber wheel is touching the Allen key. Fasten these two screws.

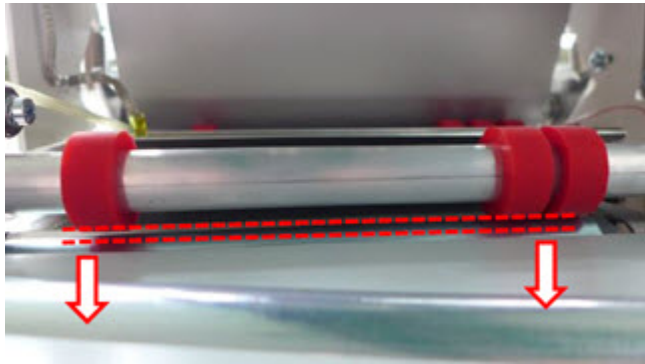


This adjustment ensures that the red entry rollers are parallel to the roller tray and the CF entry plate.


Adjustment of the lower pressure rollers

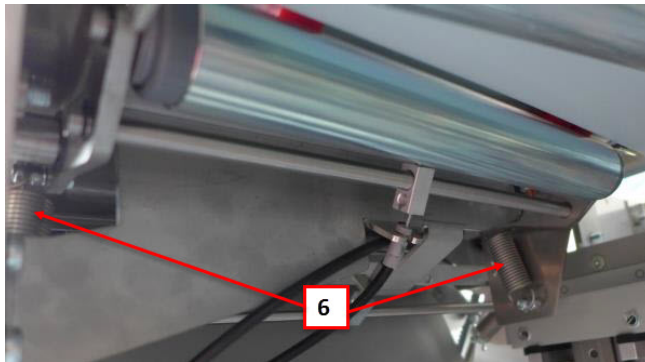
1. Now you have to check if the lower pressure roller is moving uniformly at the left and the right side. To check this, activate the solenoid by hand and have a look at the red rubber wheels and the lower pressure roller.

If one side of the pressure roller is moving away earlier from the red rubber wheels you have to adjust the lower pressure roller.

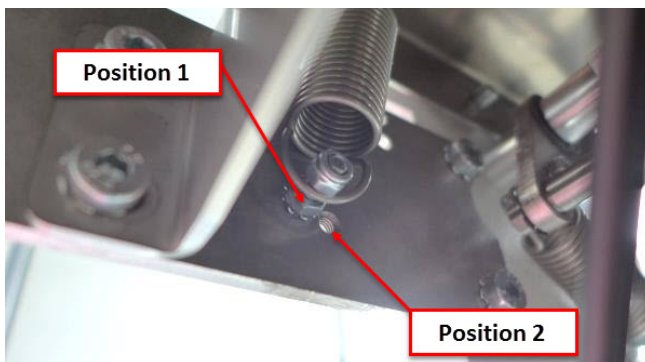


2. The pressure of the lower pressure roller will adjust by two springs (6) (one of each side). If one side of the roller is moving earlier than the other one, you have to increase the tension of the spring on this side.

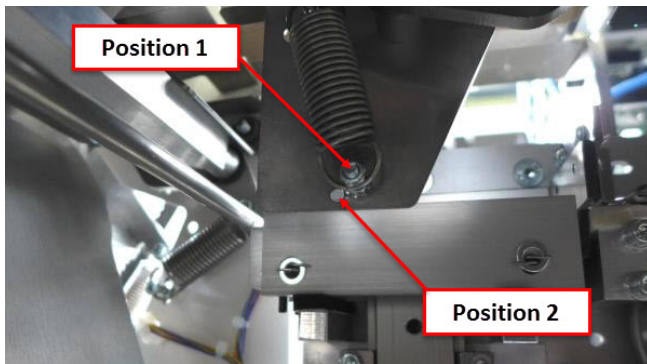
 **TIP:** For instance, if the roller is moving first at the right side you have to increase the tension of the right spring.



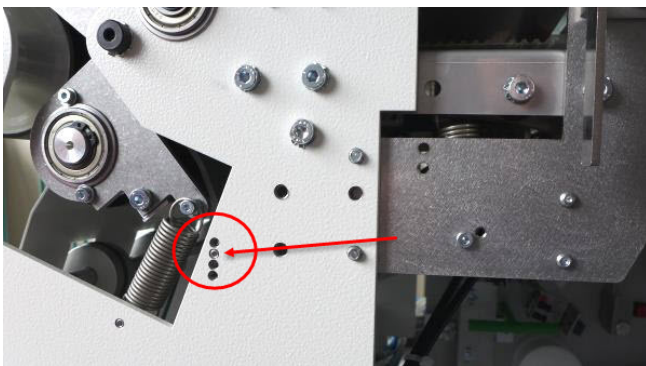
3. To increase the tension of the left spring of the front pressure roller, change the position of the screw from position 1 to position 2.



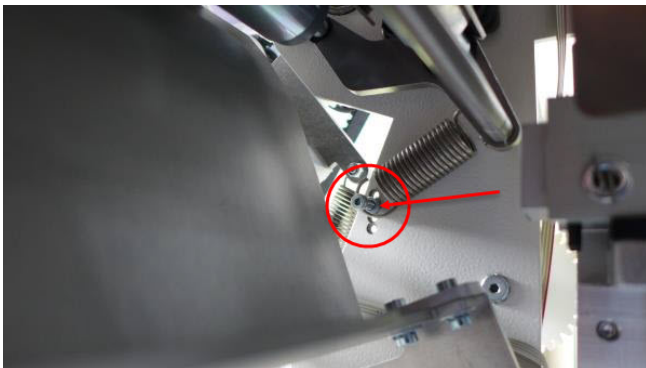
4. To increase the tension of the right spring of the front pressure roller, change the position of the screw from position 1 to position 2.



5. To adjust the tension of the left spring of the rear pressure roller, change the position of the screw.

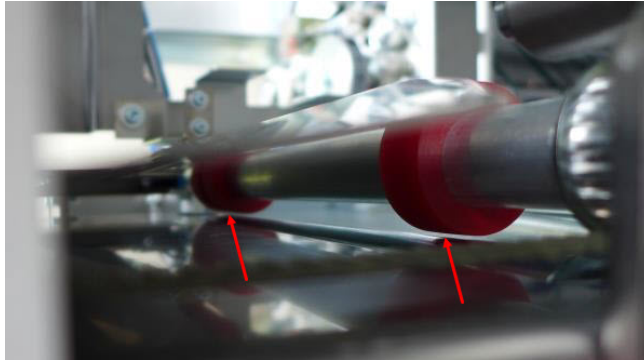


6. To adjust the tension of the right spring of the rear pressure roller, change the position of the screw.



7. The picture below shows a well-adjusted pressure roller.

The distance during the movement between the right and the left side of the lower pressure roller is the same.

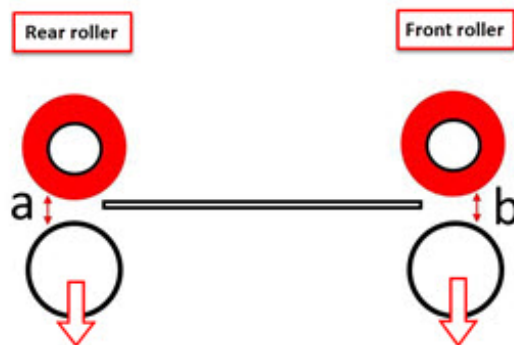


Adjust the parallelism of the front and the rear pressure roller

For a good folding quality, it is necessary that the front and rear pressure rollers are moving equally.

1. Activate the solenoid by hand and check if the front and the rear pressure roller are moving uniformly.

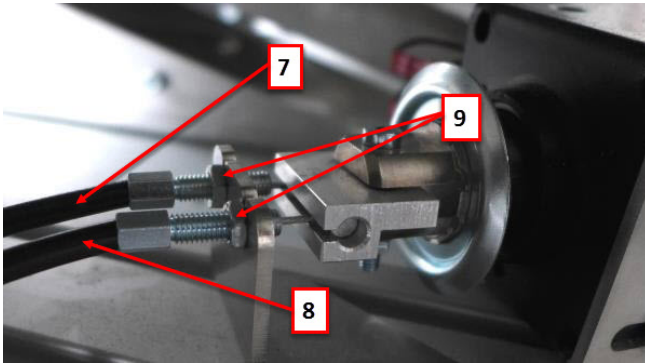
The gaps between the pressure roller and the entry roller must equal: $a = b$.



2. Adjust the gap using the Bowden cables:
- (7) to adjust the gap at the front pressure roller (**gap b**).
 - (8) to adjust the gap at the rear pressure roller (**gap a**).

Loosen the locking nut (9) and adjust the corresponding Bowden cable until the **gap a** and the **gap b** are equal.

For HP-authorized personnel only

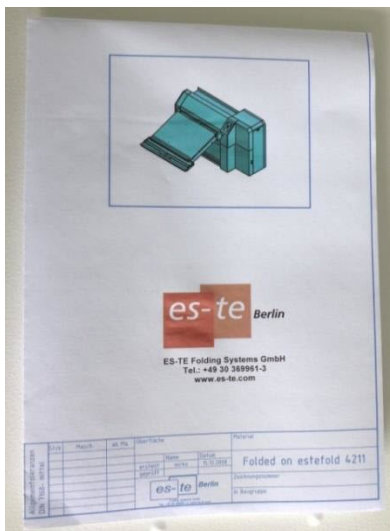


If the **gap a** and the **gap b** are equal, fasten the locking nut.

Final check

To check if the CF entry rollers are well adjusted print some A0 and fold it with folding program DIN C.

If the folding quality is OK and you don't have any skewing, the adjustment is done.

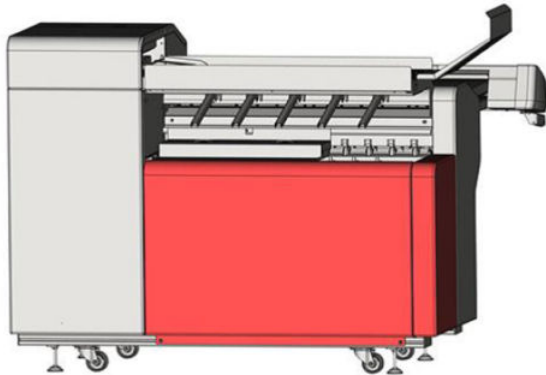


Improving the stability of the guide from the Fan fold to the Roller tray

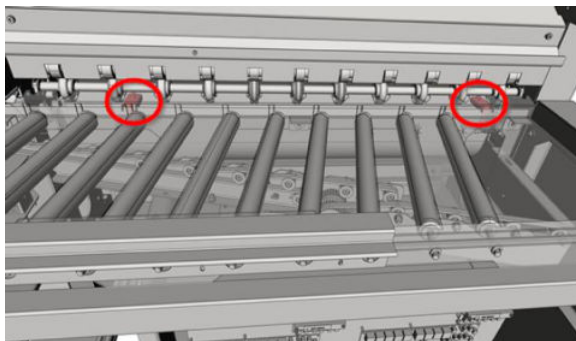
In case the part (K5H75-67133) is missing, please install it as described below in order to improve the stability of the guide from the Fan fold to the Roller tray.



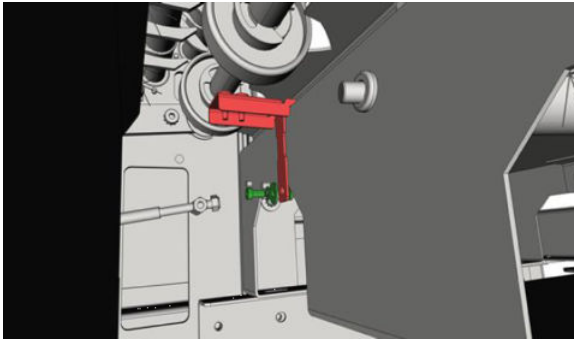
1. Remove the covers marked in red:



2. Suspend the stopper on the base frame of the roller tray. It is under the paper-path plate. Set the stoppers between two rolls like in the picture:



3. Remount the screw, toothed washer, and washer from one side, and the nut from the other on the base frame. The stoppers have to be solid.



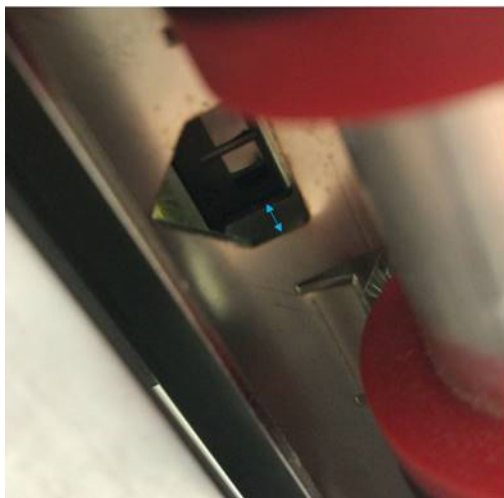
Interface gap check. LB05 distance to media while being folded

The recommended distance along the entire interface is 4.95 mm.


If the distance is shorter it will cause sensor LB05 to flicker.

This will result in the fan folder detecting paper at the interface when no paper is present. LB4, however, will not detect any paper. The fan folder will then stop with error code 1010-0002-0487 “No paper at sensor LB4”.

A washer must be added on one side of the interface.



Folding quality specifications

 **NOTE:** All the folding specifications are referenced with a one meter plot length.

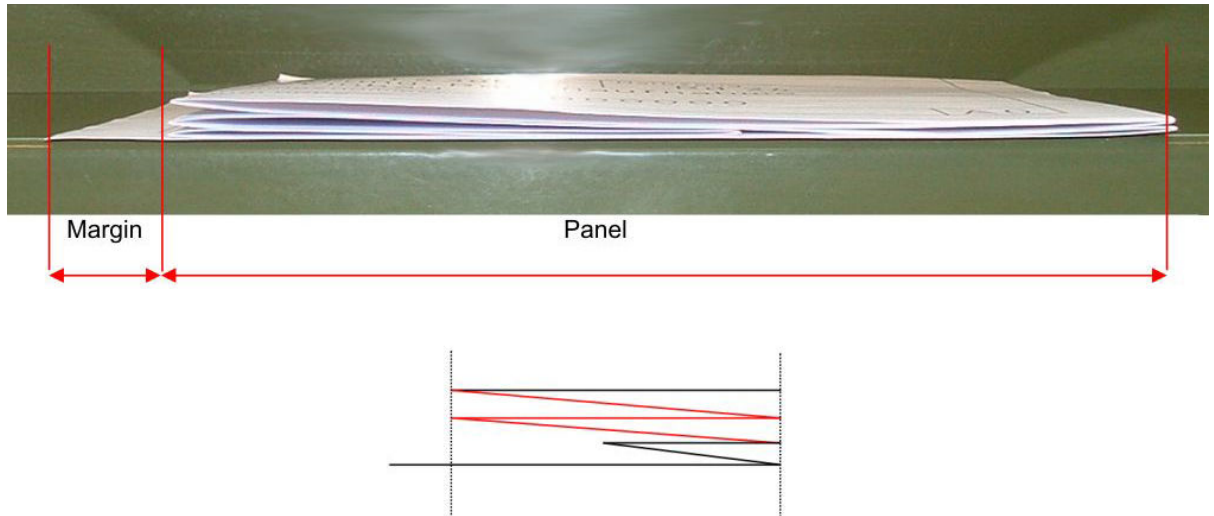
 **IMPORTANT:** Please check [Folded package \(applicable to all folder SKUs\) on page 1339](#).

Check every one of the following points to ensure the best quality:

1. Check the straightness. See [Folder FF skew adjustment on page 1534](#).
2. [Check the accuracy of the Fan-fold on page 1561](#).
3. [Check cross-fold size on page 1561](#).

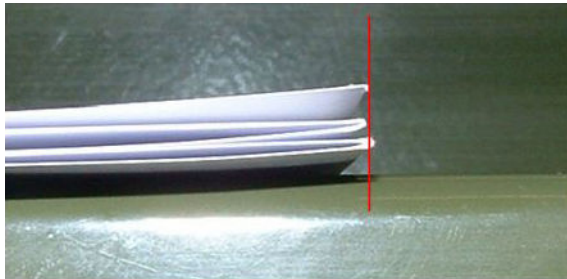
4. [Check that the cross-fold is straight on page 1562.](#)
5. [Check manual input on page 1563.](#)
6. [Check the position of the reinforcement strip on page 1563.](#)

Check the accuracy of the Fan-fold

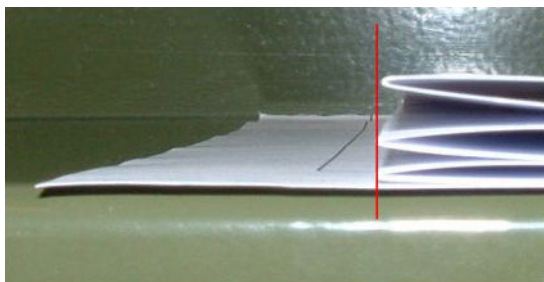
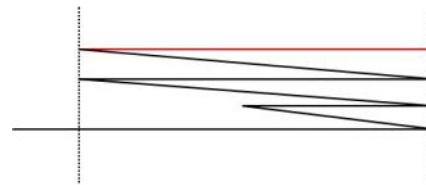


All folds should have the same size, to within ± 2 mm.

Check with size DIN A0 or ARCH E and adjust the panel width if necessary. See [Panel width on page 1565.](#)

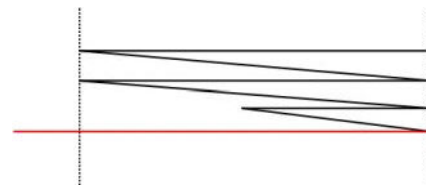


The **first sheet** should be in line with the following folds, to a tolerance of -3 to 0 mm. See [First sheet on page 1565.](#)



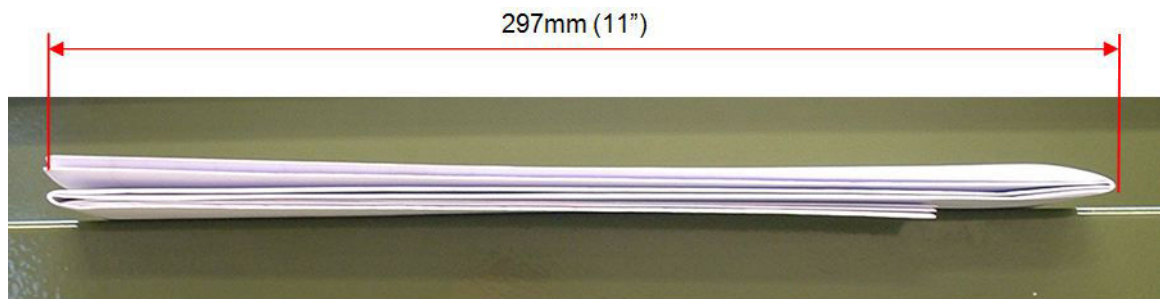
Margin (last sheet) (tolerance of ± 2 mm)

See [First sensor \(420–530 mm\) on page 1566](#), [Second sensor \(540–720 mm\) on page 1566](#), or [Third sensor \(> 740 mm\) on page 1567.](#)



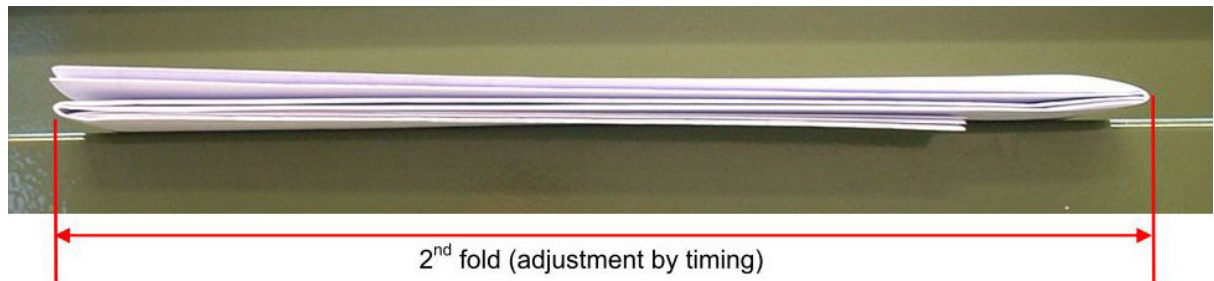
Check cross-fold size

First fold: Tolerance ± 3 mm



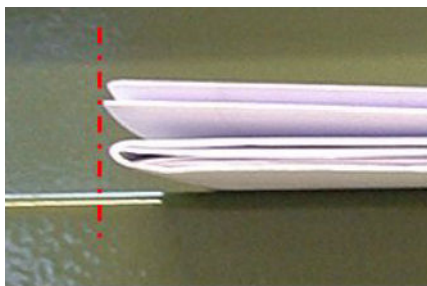
See [Sensor 11 adjustment on page 1573](#) and [Sensor 12 adjustment on page 1573](#).

Panel: Stability range +0, -3.0 mm



See [Panel width adjustment lower running direction on page 1574](#) and [Panel width adjustment upper running direction on page 1575](#).

The second fold should not be shorter than the first fold. Otherwise, the lower part of the front page could receive a mark or fold from the second knife.



Check that the cross-fold is straight

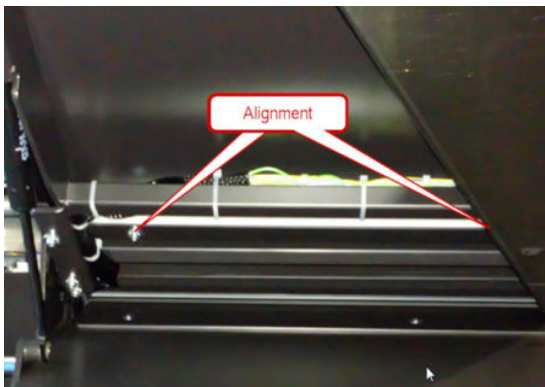
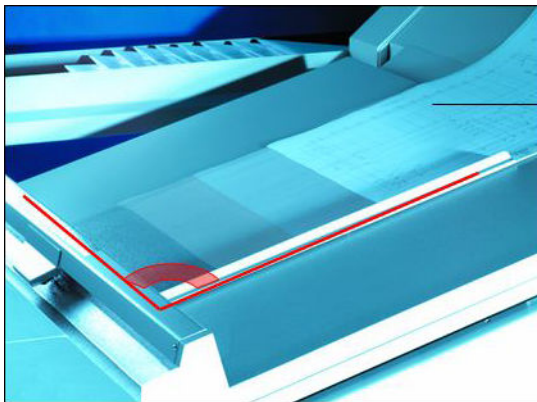
Check with DIN A0 or ARCH E, tolerance ± 3 mm.



If you need to adjust the Cross-fold entry rollers, follow the steps in [CF input rollers adjustment on page 1550](#).

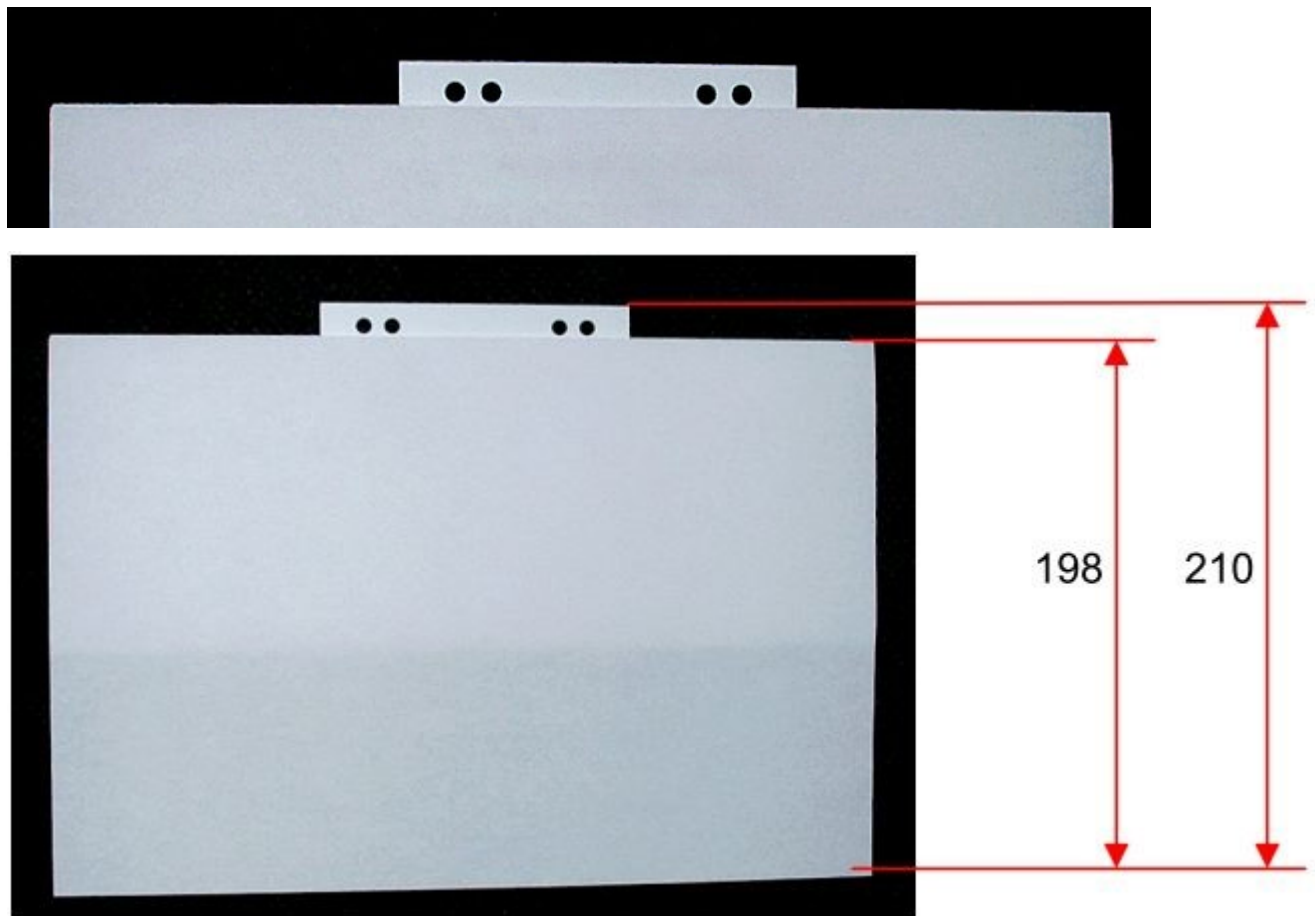
Check manual input

If the paper is skewed after manual folding, open the bridge and correct the angle of the paper guide. Loosen the screw with a 7 mm spanner.

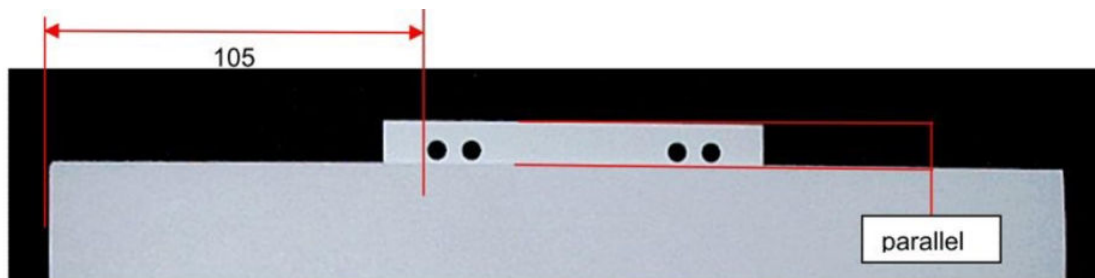


Check the position of the reinforcement strip


Tolerance ± 2 mm



To adjust the distance from the paper edge, use the “Tab position” parameter in the Cross Fold settings.



Service menu – Parameter configuration: Fan-fold settings

 **NOTE:** Changed settings take effect only after the power has been turned off and on again.

Speed

100% speed correction

1. Send a paper of at least 2.2 m.
2. Check the situation at the printer output.
3. If the folder starts to pull on the paper, reduce the speed.

4. If the buckle between printer and folder becomes too big, increase the speed.
5. Check again.

29 m/min – high speed

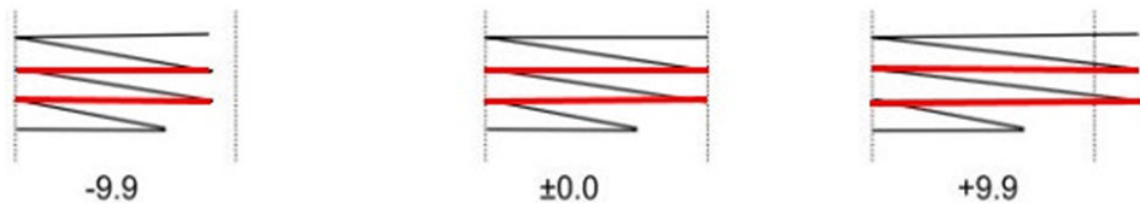
12 m/min – manual speed

- As a consequence of a very innovative new feature, there is no need for speed settings. The folder measures the speed of the printer for every page and automatically synchronizes with the printer from 2 m/min up to 16 m/min. This works also for printers with various speeds. If the folder speed is too high or too low, it can be adjusted by the speed correction parameter (%).
- High speed is normally set to 18 m/min, it can be reduced, but it needs to be at least 10% higher than the printer speed. If an A2 Rotation Unit is used, the speed has to be high enough to turn five A2 pages in sequence.
- The manual speed is normally set to 12 m/min and is used to feed the paper in manual mode from the bridge. It can be higher for very experienced users and lower for beginners.

Panel width

- Min: -9.9 mm
- Max: +9.9 mm
- Default: 0.0 mm

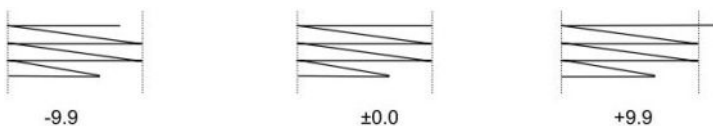
This value is for the correction of the panel size (check it with an A0 or E-size sheet).



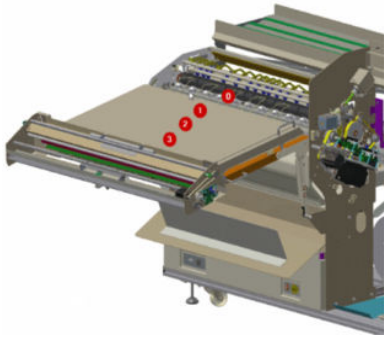
First sheet

- Min: -9.9 mm
- Max: +9.9 mm
- Default: 0.0 mm

This value is for the correction of the first sheet size (check it with an A0 or E-size sheet).




LB0

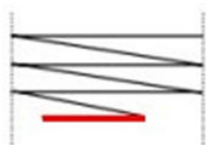


First sensor (420–530 mm)

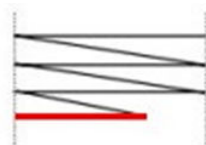
- Min: -9.9 mm
- Max: +9.9 mm
- Default: 0.0 mm

This value is for the correction of the last sheet size (check it with a sheet of 420–530 mm).

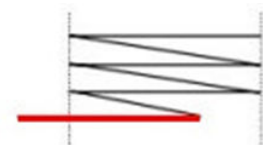
 **NOTE:** For this calibration, you need to select the DINB folding style.



-9.9

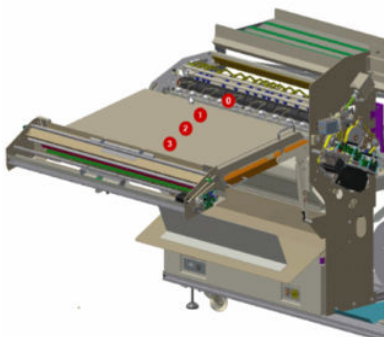


±0.0



+9.9


LB01

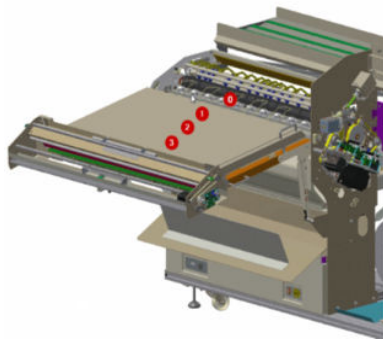
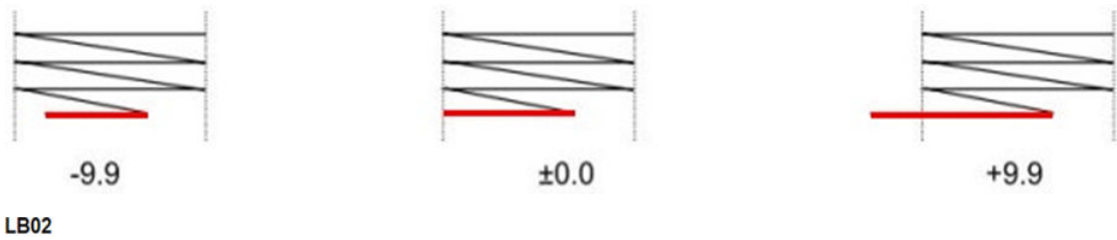


Second sensor (540–720 mm)

- Min: -9.9 mm
- Max: +9.9 mm
- Default: 0.0 mm

This value is for the correction of the last sheet size (check it with a sheet of 540–720 mm).


 **NOTE:** For this calibration, you need to select the DINB folding style.

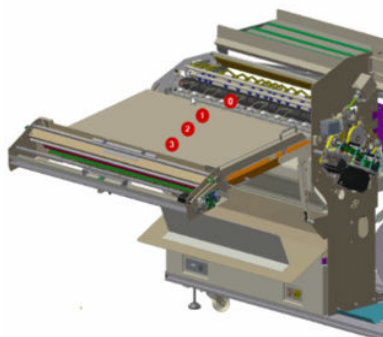
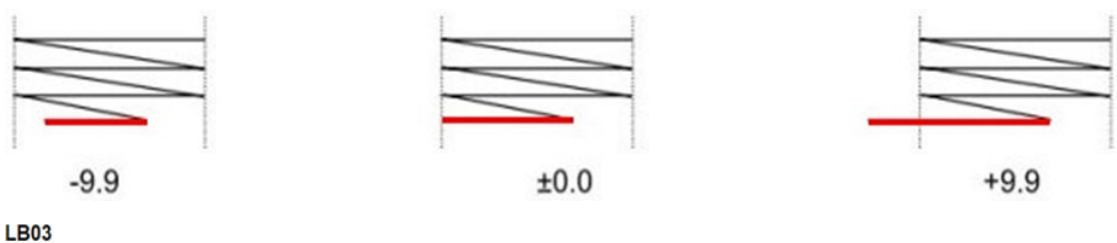


Third sensor (> 740 mm)

- Min: -9.9 mm
- Max: +9.9 mm
- Default: 0.0 mm

This value is for the correction of the last sheet size (check it with an A0 or E-size sheet).

 **NOTE:** For this calibration, you need to select the DINB folding style.

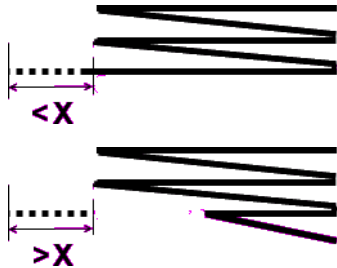


Minimal residual length

- Min: 0 mm
- Max: 150 mm
- Default: 10 mm

Define for foldings without an intermediate fold, how long is the rest of the unfolded paper X?

If the remaining paper would be longer than that value, there would be another fold; if it would be shorter, it remains unfolded.



If the Minimal residual length is below 10, you may encounter some TAB misplacements (TABs placed on the wrong side of the plots).

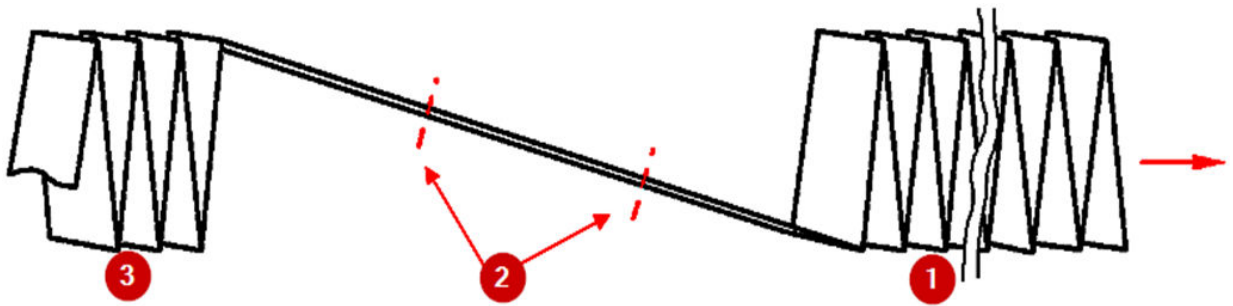


If the last fold of the Fan fold exceeds the maximum specs (3mm). please follow the steps in [0065-0008-0091 TOF sensor – Incorrect page size measured on page 410](#).


Max fan-fold

- Min: 10
- Max: 30
- Default: 22

This value determines the maximum number of folds in the fan-folder. Longer copies will be folded in packages of X layers as far as endless folding is licensed for this folder.



1. First segment, determined by the max fan-fold value: 22 by default
2. Three segments unfolded (to be finished manually)
3. Next segment, and so on up to the end of the paper

 **NOTE:** For some specific page lengths, the 2nd package (shown as "3" in the previous picture) cannot be started as the total page length is too short to create the 2nd package. In the case of FF only 210, if page length is < 5.85 m (and page length > 4.6 m), only one package (section "1") and a section "2" is created of a length up to 1.2 m (in the case that page length is 5.85 m).


Max cross-fold

- Min: 5
- Max: 15
- Default: 13

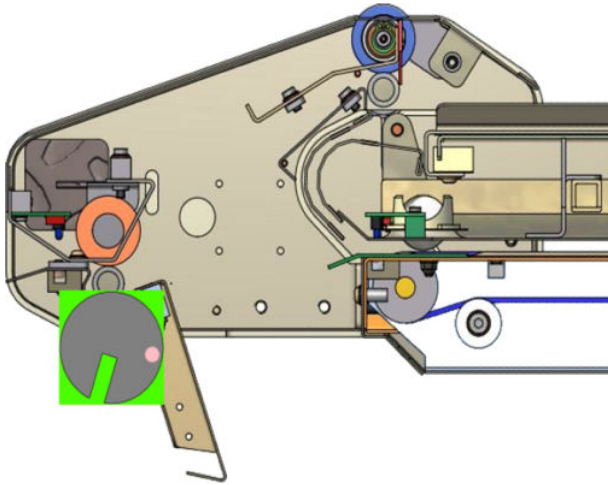
Sheets with more folds than defined with this value will not be cross-folded, but ejected to the basket under the bridge.

Flap fold steps

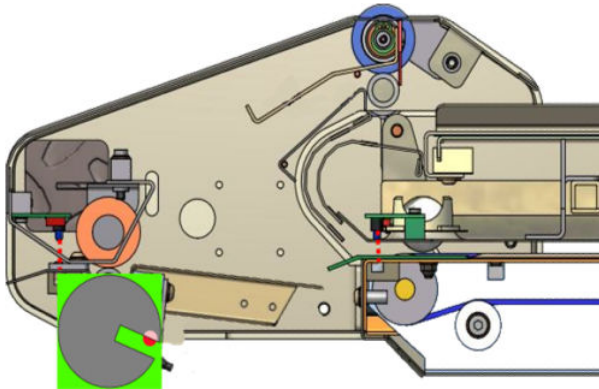
- Min: 25
- Max: 50
- Default: 30

 **NOTE:** The changed values will take effect only after the power has been turned off and on.

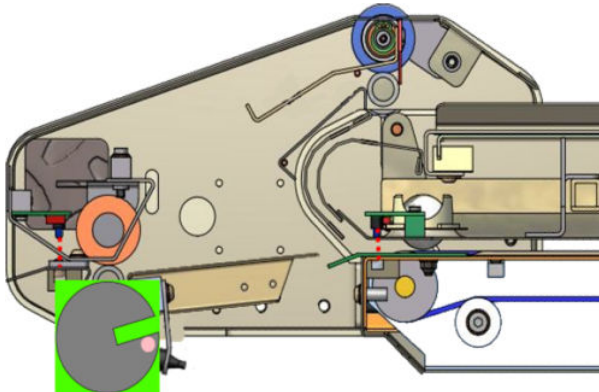
1. **OFF position:** Sensor LB07 is fully covered by the disc.



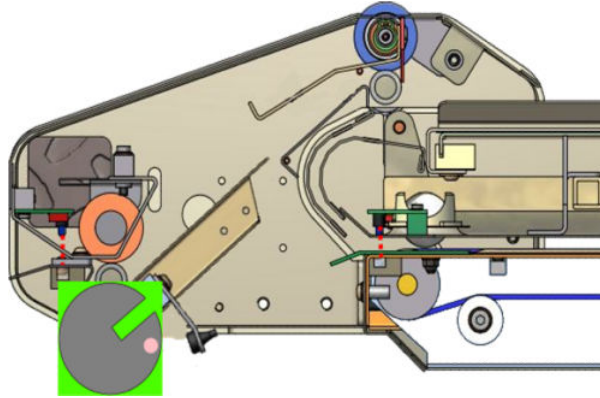
2. **INIT position:** LB07 becomes free at this position; from here, steps (value: flap fold steps) are counted to the FOLD position.



3. **FOLD position:** This is reached some counted steps (value: flap fold steps) after the INIT position.



4. **STACK position:** This is reached some counted steps (value: flap stack steps) after the FOLD position.

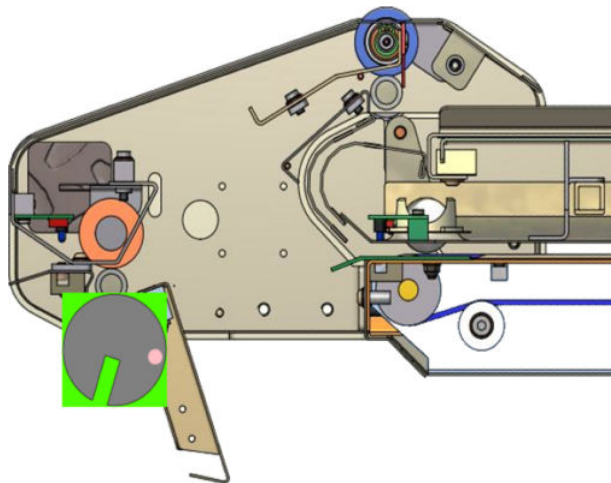


Flap stack steps

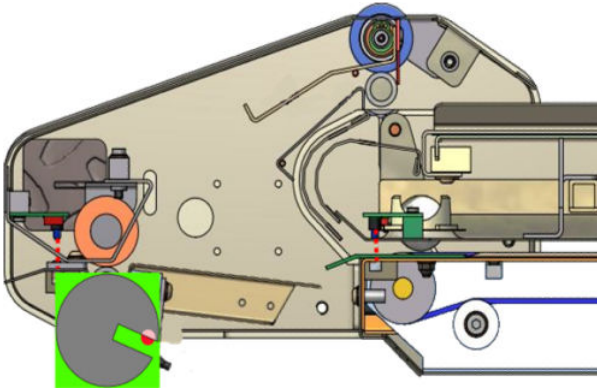
- Min: 80
- Max: 150
- Default: 120

 **NOTE:** The changed values will take effect only after the power has been turned off and on.

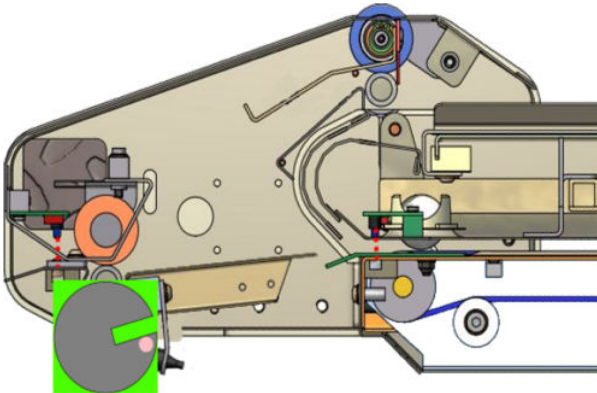
1. **OFF position:** Sensor LB07 is fully covered by the disc.



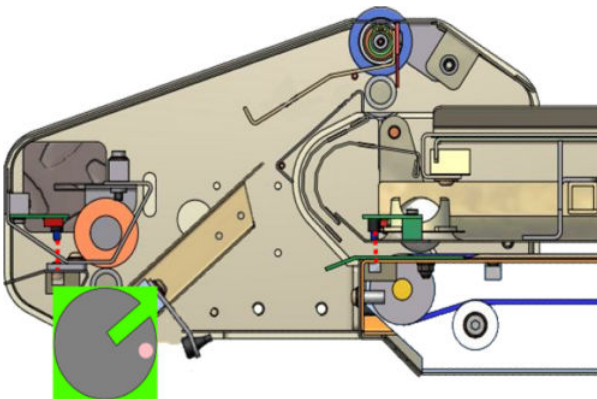
2. **INIT position:** LB07 becomes free at this position; from here, steps (value: flap fold steps) are counted to the FOLD position.



3. **FOLD position:** This is reached some counted steps (value: flap fold steps) after the INIT position.



4. **STACK position:** This is reached some counted steps (value: flap stack steps) after the FOLD position.

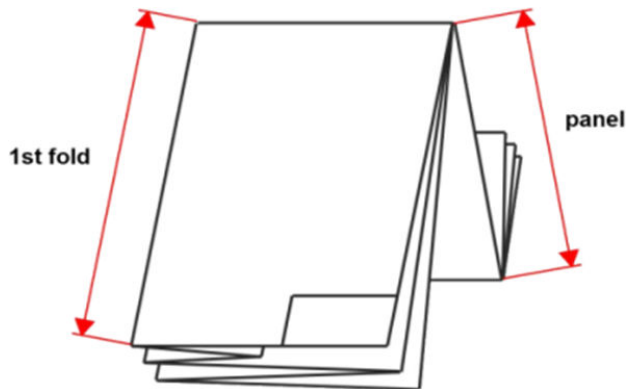


Service Menu – Parameter configuration: Cross-fold settings

Sensor 11 adjustment

- Min: -9.9 mm
- Max: +9.9 mm
- Default: 0

This value corrects the size of the first fold, if the cross-folder starts downwards (for example, A0 to DIN B).

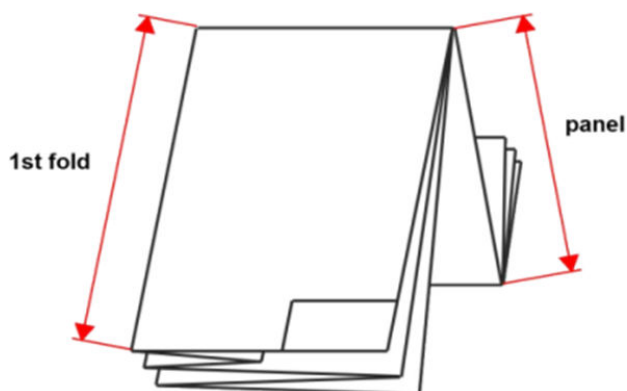


Fold an A0 sheet to DIN B, and measure the first sheet.

Sensor 12 adjustment

- Min: -9.9 mm
- Max: +9.9 mm
- Default: 0

This value corrects the size of the first fold, if the cross-folder starts upwards (for example, A0 to DIN C).



Fold an A0 sheet to DIN C, and measure the first sheet.

Conveyor time

- Min: 50 ms
- Max: 2000 ms
- Default: 230 ms

The conveyor makes steps of x ms. In some cases you may need to change this time in order to lay out the copies properly.

Conveyor steps

- Default: 18 steps

The number of Conveyor steps defines the width of the steps between copies. If the motor is switched on for longer (more steps), the distance will increase. Setting 30 steps does not make too much sense, but could be needed in special conditions. If the number of steps is increased that much however, you will need to give the process more time in the “Time out BIN_FULL” setting.

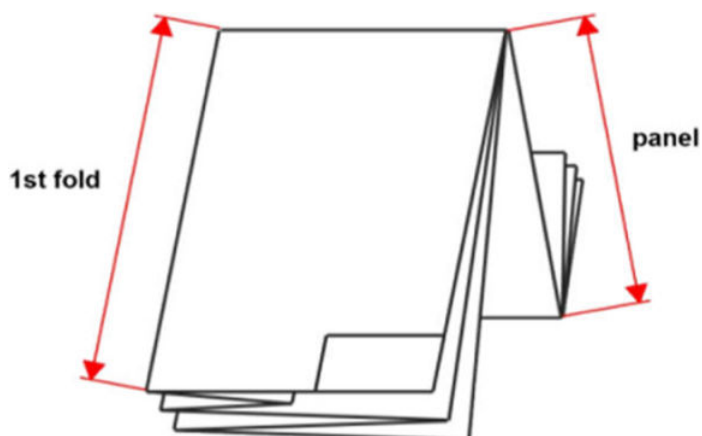
BIN_FULL timeout

This timeout defines how many copies are needed to trigger a BIN_FULL. The longer the time, the more copies that will be needed to trigger the BIN_FULL condition. The default value is related to Folder type, as the conveyors are of different sizes. With TAB: 700ms, without TAB: 500ms.

Panel width adjustment lower running direction

- Min: -9.9 mm
- Max: +9.9 mm
- Default: 0 mm

The panel is the distance between two folds. This adjusts the lower running direction of CF X47. The 1st fold is defined by sensor LB12.

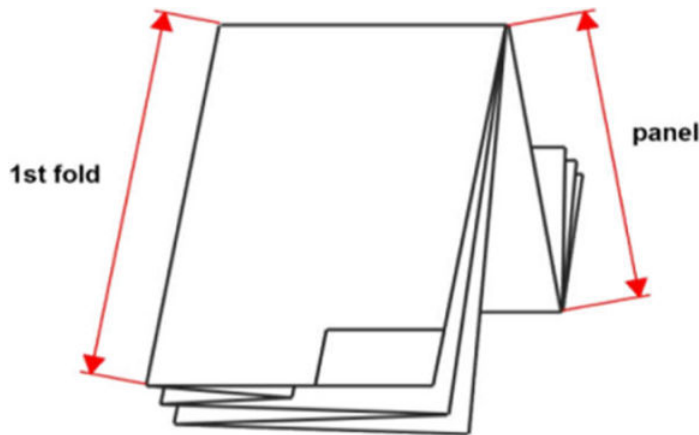


Fold an A0 sheet to DIN C, and measure the first sheet.

Panel width adjustment upper running direction

- Min: -9.9 mm
- Max: +9.9 mm
- Default: 0 mm

The panel is the distance between two folds. This adjusts the lower running direction of CF X47. The 1st fold is defined by sensor LB11.





Fold an A0 sheet to DIN B, and measure the first sheet.

CF style for 914 mm widths

- For the Z-style, set this parameter to “0” (the default).
- For the M-style, set this parameter to “1.”

This parameter allows you to change the shape of the folded package from M-style to Z-style.

 **NOTE:** In case you want to fold 36” width sheets manually to 8.5”x11” and in the M-style, you need to select the “_OFFLINE_36M 8.5x11” folding style as the default before putting the Folder in offline mode.

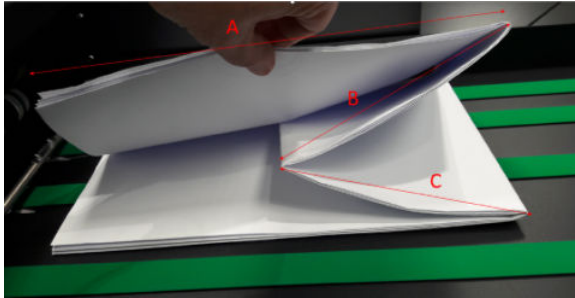
 **NOTE:** This parameter does not affect custom folding styles.

Extra intersheet distance

- Min: 0 mm
- Max: 2,000 mm (200 cm)
- Default: 0 mm

This parameter will set an extra distance between the trailing edge of a sheet and the leading edge of the following sheet.

Example – CF parameters affecting the measurements of a folded package



How to adjust each measurement:

- “A” is controlled by the “Cross Fold – LB11 adjustment” parameter
- “B” is controlled by the “CF panel width adjustment upper running direction” parameter
- “C” is controlled by the “CF panel width adjustment lower running direction” parameter

This parameter will set an extra distance between the trailing edge of a sheet and the leading edge of the following sheet.

Tips for knowing which CF panel width settings to change when looking at a folded plot

When looking from the back, look at the upper first fold:

- If situated on the right, this means that it went down first in the CF (from the roller tray)



- If situated on the left, this means that it went up first in the CF (from the roller tray)



At the top, in both cases, you always have the first panel which went in the CF from the roll tray; the first page is calibrated by LB11 (if going down) or LB12 (if going up).

Panel width is defined by:

- the CF panel width parameter, and
- depending on if panel width is going down or up, the following settings could be applied at the top:
 - If corresponding panel going up, then “Panel width adjustment upper running direction” should be added at the top of the “CF panel width”
 - If corresponding panel going down, then “Panel width adjustment lower running direction” should be added at the top of the “CF panel width”

For HP-authorized personnel only

Service Menu – Parameter configuration: Set part number

The following procedure applies whenever a Master controller is replaced in a folder with a TAB applicator:

Service menu > Accessory utilities > Folder utilities > Set serial number.

Service Menu – Configuration file

The purpose of this utility is to backup and recover the settings of a folders from/to the MC PCA and the printer HDD.

Important-summary

- The folder S/N and folder product number can NOT be transferred through the configuration file.
- The transfer is done with the folder SN. The backup and the recovery must be done with the same folder S/N.

Complete process: Assuming that the folder S/N is DE62411001

- Create a backup. The filename created on the printer should have this structure: “FOLDER_DIAGNSOTIC_ DE62411001_x.txt” (where “x” is the number of the backup, increasing by one for each backup created). This is done through **Service menu > Accessory utilities > Folder utilities > Configuration file**.
- Replace the MC PCA in the folder.
- Start the folder and the printer with the new MC PCA, at 95% of the printer boot, if needed a FW upgrade will be done.
- Once you have reached ready: set the right folder S/N DE62411001 (through **Service menu > Accessory utilities > Folder utilities > Set serial number**).
- You then recover the file from the printer to the folder, selecting the one previously created: FOLDER_DIAGNSOTIC_ DE62411001_x.txt (through **Service menu > Accessory utilities > Folder utilities > Configuration file**).

Details

Before replacing the MC PCA:

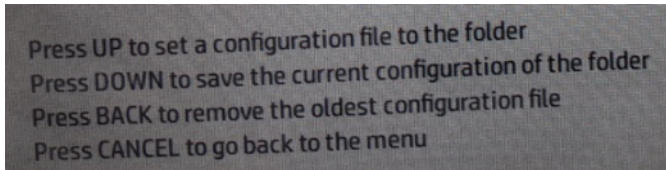
1. Ensure that the folder has the right S/N, matching that which is marked at the back of the folder.

The folder S/N is visible in the service plot or through **Service menu > Accessory utilities > Folder utilities > Set serial number**, the current S/N is then displayed and can be modified if needed.

2. Create a backup file through:

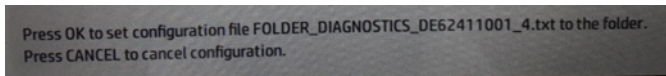
Service menu > Accessory utilities > Folder utilities > Configuration file.

At the bottom you have the following selection.



Click on **UP** to set a configuration.

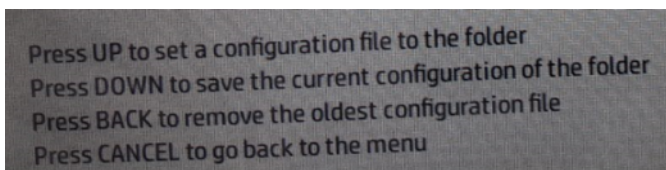
All the current parameters will then appear.



Press **OK** and the backup file is created: FOLDER_DIAGNOSTICS_DE62411001_4.txt (x=4, up to date version created).

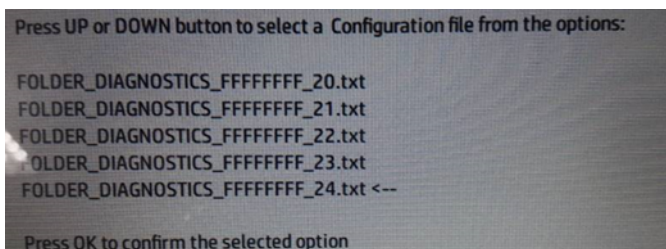
3. Replace the MC PCA.
4. Start the folder and the printer with the new MC PCA, at 95% of the printer boot, if needed a FW upgrade will be done.
5. Once ready: set the correct folder S/N DE62411001 (through **Service menu > Accessory utilities > Folder utilities > Set serial number**).
6. Then recover the file from the printer to the folder, selecting the one previously created: FOLDER_DIAGNOSTICS_DE62411001_x.txt, through **Service menu > Accessory utilities > Folder utilities > Configuration file**.

At the bottom you have the following selection:



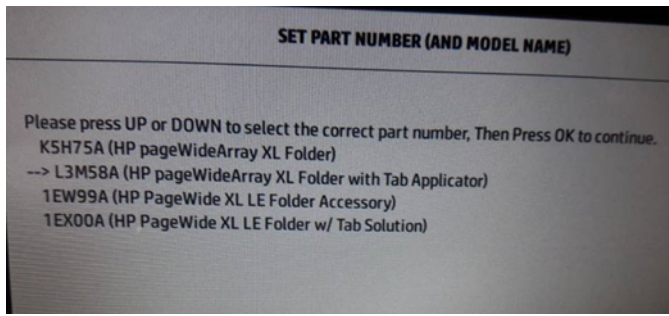
Click on **DOWN** to set a configuration.

Then select the previously created file and press **OK**.



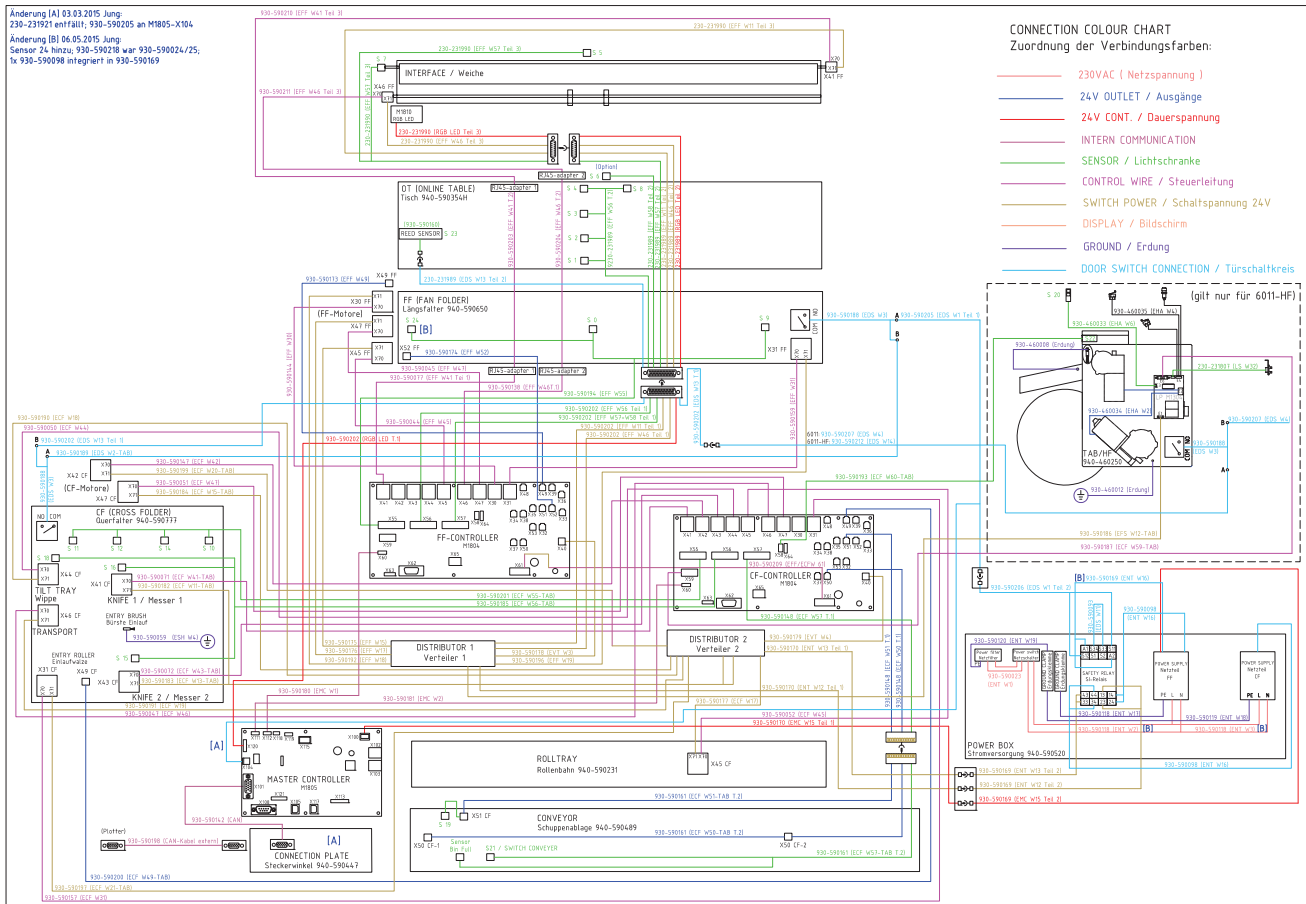
Press **OK** and the backup file is created, FOLDER_DIAGNOSTICS_DE62411001_4.txt (x=4, up to date version created).

- Check the product number. This is accessed through: **Service menu > Accessory utilities > Folder utilities > Set part number.**



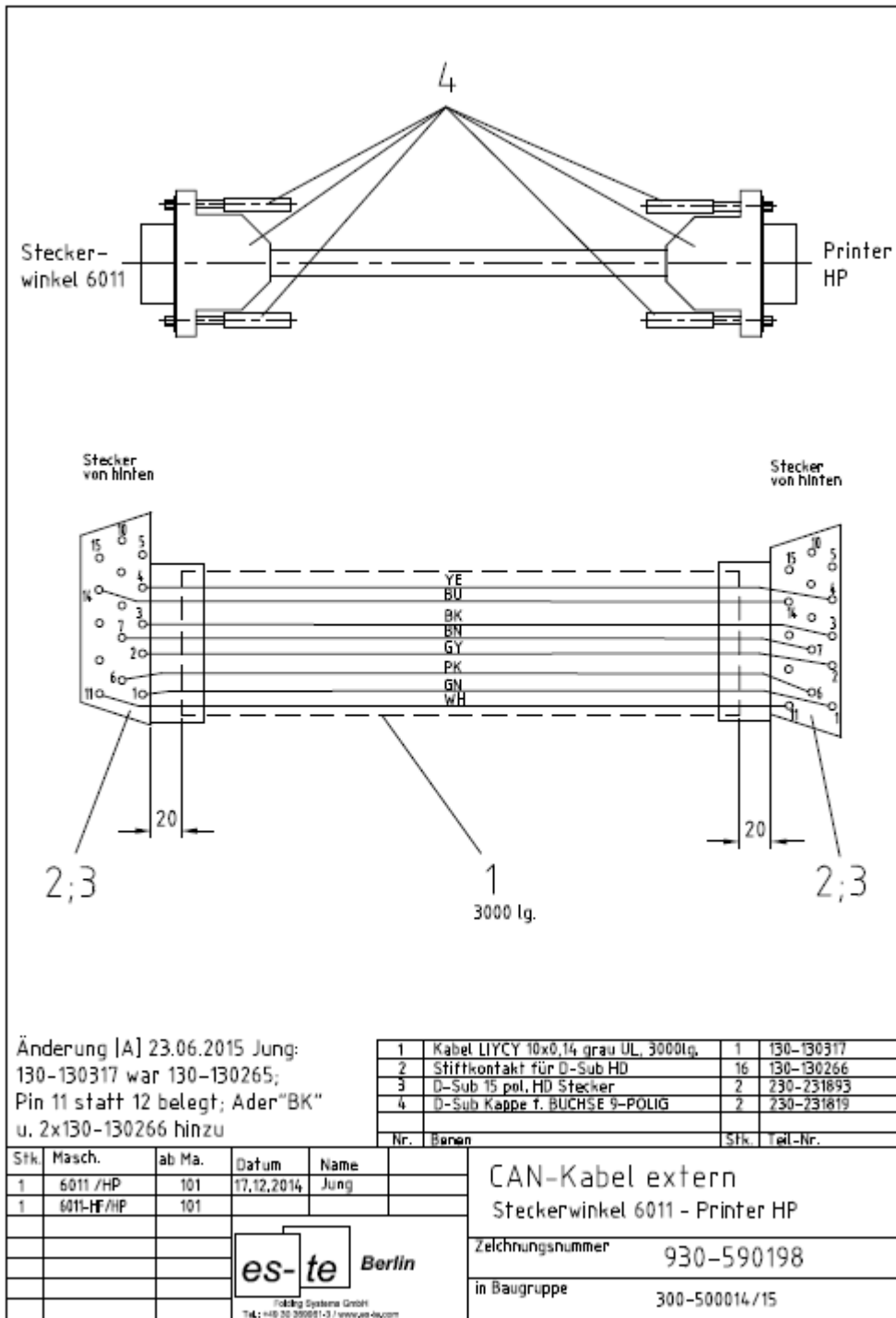
Folder electrical devices

Wiring diagram



Internal cable pin configuration

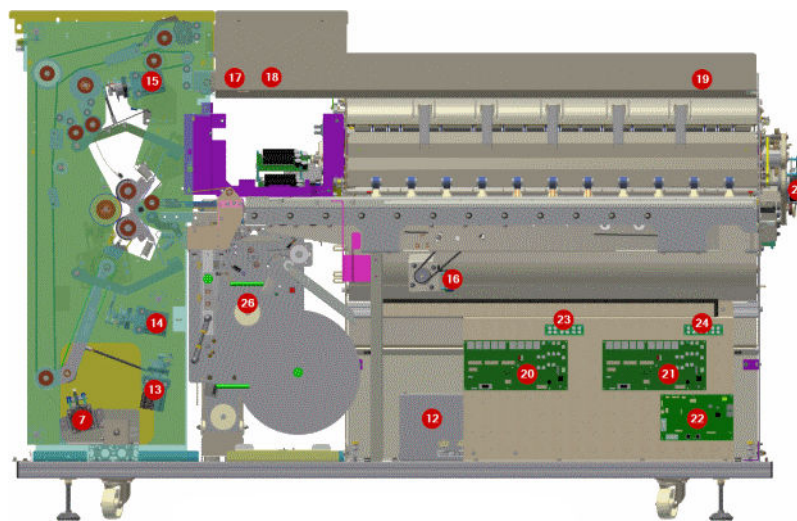
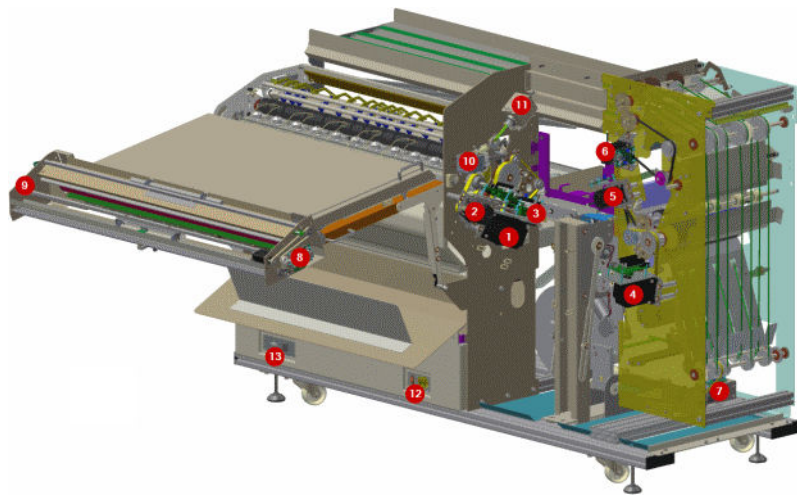
The following scheme corresponds to the internal CAN bus cable configuration (part number K5H75-67009):



The following image shows the three controller boards and motor controller boards where settings can be made. In case of a malfunction it may be necessary to check those settings or the wiring.

FF stands for Fan-Folder and CF for Cross-Folder. In the wiring diagram, they refer to the fan- and cross-folder controller boards. The X plus a number (such as X41) describes both the terminal on the board and the motor.

A good way to identify devices is by looking at the connected cable. There you can find the device name, such as CFX41 (for example).



1. [Fan-folder – Main fold motor FFX47 on page 1585](#)
2. [Fan-folder – Feeding roller FFX30 on page 1587](#)
3. [Fan-folder – Exit motor FFX45 on page 1589](#)
4. [Cross-folder – Main fold motor CFX47 on page 1590](#)
5. [Cross-folder – Entrance motor CFX31 on page 1591](#)
6. [Cross-folder – Upper transport belts CFX42 on page 1592](#)
7. [Cross-folder – Vertical transport belts CFX46 on page 1594](#)
8. [Cross-folder – Solenoid-decoupling feeding roller CFX49 on page 1595](#)
9. [Fan-folder – Interface transport roller FFX46 on page 1596](#)
10. [Fan-folder – Interface flap FFX41 on page 1598](#)
11. Fan-folder – Paper guide FFX49
 - a. Fan-folder – Paper guide FFX49: 24 VDC solenoid
 - b. [Fan-folder – Paper guide FFX49: stepper motor version on page 1600](#)

12. Fan-folder – Upper exit guide FFX31: 24 VDC solenoid
13. Power box with main switch
14. Printer folder communication port: CAN bus or RS232 port
15. [Cross-folder – Lower knife CFX43 on page 1600](#)
16. [Cross-folder – Upper knife CFX41 on page 1601](#)
17. [Cross-folder – Roll tray CFX45 on page 1603](#)
18. Cross-folder – Exit down holder CFX50: 24 VDC motor (without settings)
19. [Cross-folder – Exit down holder CFX51 on page 1604](#)
20. Cross-folder – Exit down holder CFX50: 24 VDC motor (without settings)
21. [Fan-folder and cross-folder controller on page 1606](#)
22. [Master controller on page 1607](#)
23. 24 VDC permanent distributor: 24 VDC from the power box
24. 24 VDC permanent distributor: 24 VDC from the power box
25. [Fan-folder – Lower exit guide FFX31 on page 1608](#)
26. [Cross-folder – Tilt tray CFX44 on page 1609](#)

Fan-folder – Main fold motor FFX47

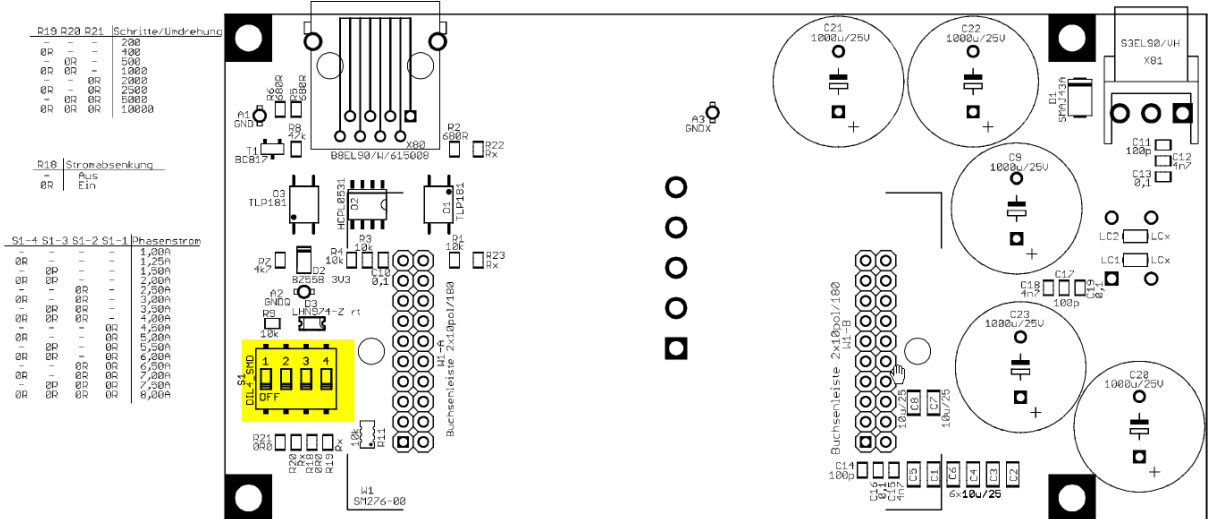
This motor drives the feeding roller. It is synchronized to the feeding motor FFX30.

Stepper-motor related test:

- On
- Off
- Alternate

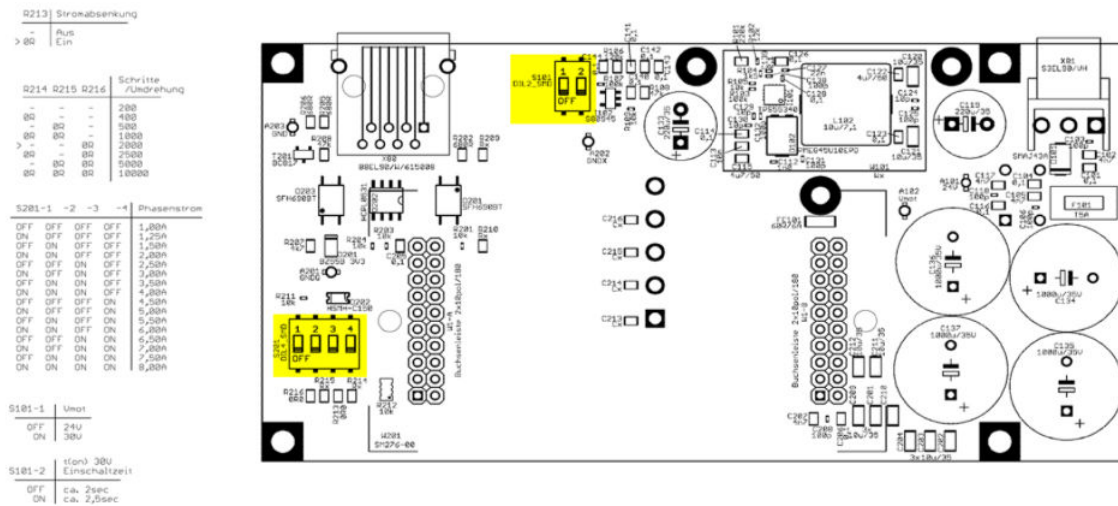
The 4 dip switch configuration:

1. On
2. On
3. On
4. On



The 6 dip switch configuration:

1. S1-1 On
2. S1-2 Off
3. S2-1 On
4. S2-2 On
5. S2-3 On
6. S2-4 On



The 10 dip switch configuration (M1900):

1. S1-1 On
2. S1-2. On
3. S1-3. On
4. S1-4. On
5. S1-5. On

6. S1-6. Off
7. S1-7. On
8. S1-8. On
9. S2-1. On
10. S2-2. Off

S1-4	-3	-2	-1	Current
OFF	OFF	OFF	OFF	2,51
OFF	OFF	OFF	ON	3,00
OFF	OFF	ON	OFF	3,54
OFF	OFF	ON	ON	3,97
OFF	ON	OFF	OFF	4,38
OFF	ON	OFF	ON	4,87
OFF	ON	ON	OFF	5,27
OFF	ON	ON	ON	5,59
ON	OFF	OFF	OFF	6,26
ON	OFF	OFF	ON	6,52
ON	OFF	ON	OFF	6,82
ON	OFF	ON	ON	7,06
ON	ON	OFF	OFF	7,36
ON	ON	OFF	ON	7,57
ON	ON	ON	OFF	7,81
ON	ON	ON	ON	8,08

S1-6	-5	Steps
OFF	OFF	1600
OFF	ON	1920
ON	OFF	2400
ON	ON	3200

S1-8	-7	Current reduction
OFF	OFF	Plus
OFF	ON	60%
ON	OFF	40%
ON	ON	30%

S2-1	Voltage
OFF	24V
ON	30V

S2-2	Start-up delay 30V
OFF	2 sec
ON	2,5 sec

Fan-folder – Feeding roller FFX30

This motor drives the feeding roller. It is synchronized to the main fold motor FFX47.

Stepper-motor related test:

- On
- Off
- Alternate

The 6 dip switch configuration:

- On (1)
- Off (2)
- On (1)
- On (2)
- On (3)
- On (4)

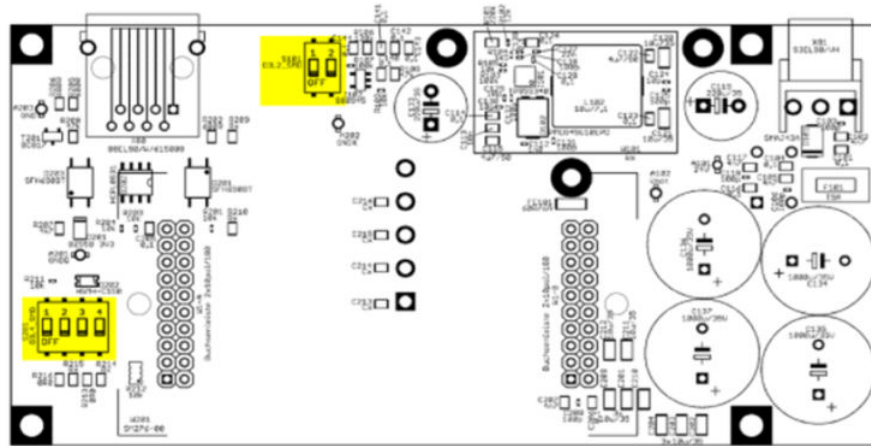
B213 Stromabsenkung	
-	Pos Ein
> 80	Ein

B214	B215	B216	Schritte /Umdrehung
-	-	-	200
-	-	-	400
-	-	-	800
80	80	-	1000
>	80	80	2000
80	80	80	2500
80	80	80	3000

S201-1	-2	-3	-4	Phasenstrom
OFF	OFF	OFF	OFF	1,00A
ON	OFF	OFF	OFF	1,25A
OFF	ON	OFF	OFF	1,50A
ON	ON	OFF	OFF	1,75A
OFF	OFF	ON	OFF	2,00A
ON	OFF	ON	OFF	2,25A
OFF	ON	ON	OFF	2,50A
ON	ON	ON	OFF	2,75A
OFF	OFF	OFF	ON	3,00A
ON	OFF	OFF	ON	3,25A
OFF	ON	OFF	ON	3,50A
ON	ON	OFF	ON	3,75A
OFF	OFF	ON	ON	4,00A
ON	OFF	ON	ON	4,25A
OFF	ON	ON	ON	4,50A
ON	ON	ON	ON	4,75A

S101-1	Unit
OFF	24V
ON	30V

S101-2	Kard 30U Einschaltzeit
OFF	ca. 2,5sec
ON	ca. 2,5sec



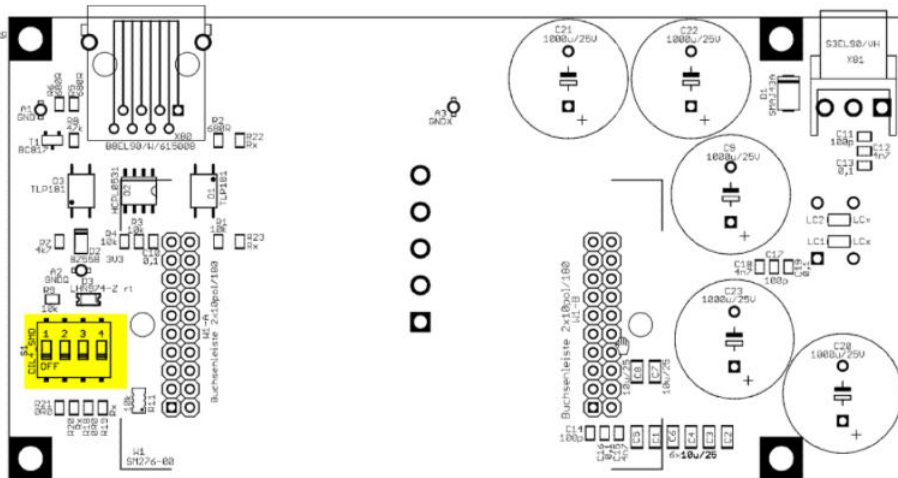
The 4 dip switch configuration (M1625):

1. On
2. On
3. On
4. On

B19	B20	B21	Schritte/Umdrehung
-	-	-	200
80	80	-	400
-	80	-	600
80	80	-	1000
-	80	80	2000
80	80	80	2500
80	80	80	3000
80	80	80	10000

B10 Stromabsenkung	
80	Pos Ein

S1-4	S1-3	S1-2	S1-1	Phasenstrom
80	-	-	-	1,00A
80	80	-	-	1,25A
80	80	80	-	1,50A
80	80	80	80	1,75A
80	80	80	80	2,00A
80	80	80	80	2,25A
80	80	80	80	2,50A
80	80	80	80	2,75A
80	80	80	80	3,00A
80	80	80	80	3,25A
80	80	80	80	3,50A
80	80	80	80	3,75A
80	80	80	80	4,00A
80	80	80	80	4,25A
80	80	80	80	4,50A
80	80	80	80	4,75A
80	80	80	80	5,00A



The 10 dip switch configuration (M1900):

1. S1-1. On
2. S1-2. On
3. S1-3. On
4. S1-4. On
5. S1-5. On
6. S1-6. Off
7. S1-7. On

8. S1-8. On
9. S2-1. On
10. S2-2. Off

S1-4 -3 -2 -1	Current
OFF OFF OFF OFF	2,51
OFF OFF OFF ON	3,00
OFF OFF ON OFF	3,54
OFF OFF ON ON	3,97
OFF ON OFF OFF	4,58
OFF ON OFF ON	4,87
OFF ON ON OFF	5,27
OFF ON ON ON	5,59
ON OFF OFF OFF	6,26
ON OFF OFF ON	6,52
ON OFF ON OFF	6,82
ON OFF ON ON	7,06
ON ON OFF OFF	7,36
ON ON OFF ON	7,57
ON ON ON OFF	7,81
ON ON ON ON	8,08

S1-6 -5	Steps
OFF OFF	1600
OFF ON	3200
ON OFF	2400
ON ON	3200

S1-8	Current reduction
OFF OFF	Plus
OFF ON	60%
ON OFF	40%
ON ON	30%

S2-1	Voltage
OFF	24V
ON	30V

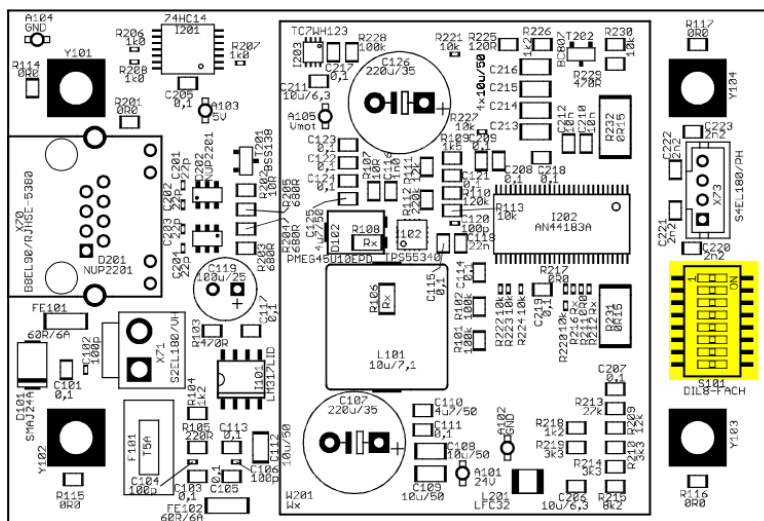
S2-2	Start-up delay 30V
OFF	2 sec
ON	2,5 sec

Fan-folder – Exit motor FFX45

This motor drives the exit belt and rollers of the fan-folder. The speed is fixed. There are no software settings for this motor.

Related test:

- On
- Off



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3. Off
4. On
5. Off
6. On
7. On
8. On

The speed has a fixed value. There are no software settings for the exit motor.

A Slow 5A SMD fuse is used:

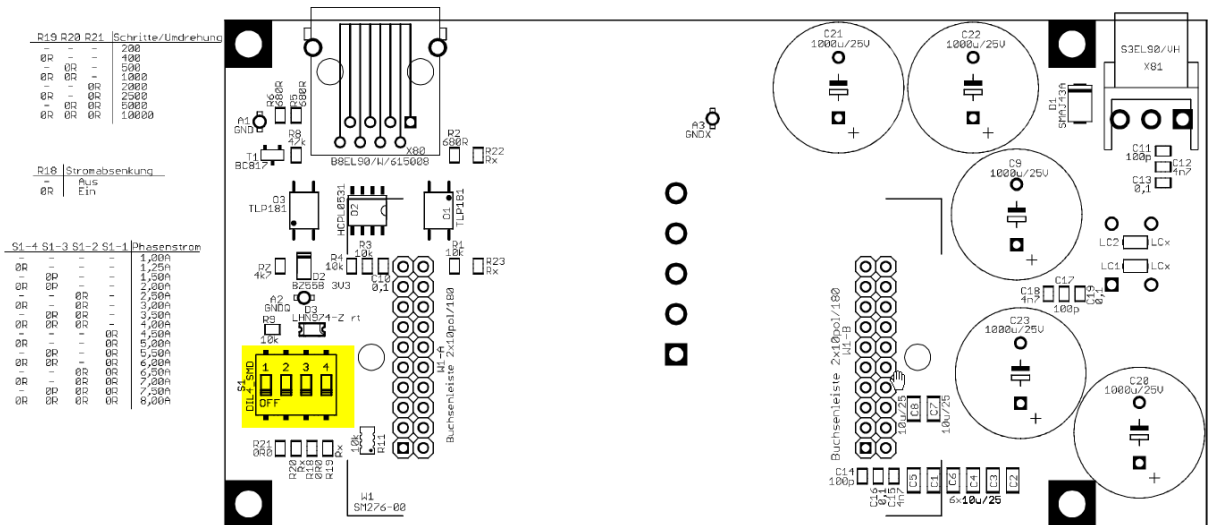


Cross-folder – Main fold motor CFX47

This motor drives the folding rollers.

Stepper-motor related test:

- On
- Off
- Alternate



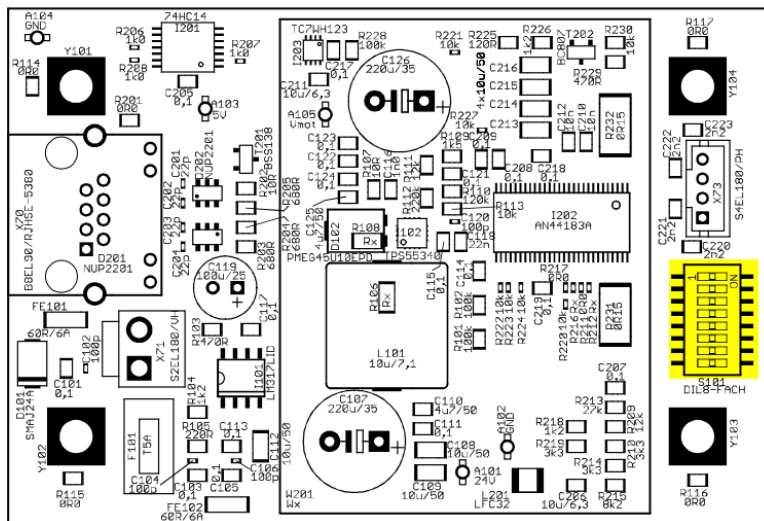
1. On
2. On
3. On
4. On

Cross-folder – Entrance motor CFX31

This motor feeds the paper into the cross-folder.

24 V DC solenoid related test:

- On
- Off



1. On
2. On
3. Off
4. On
5. On
6. On
7. On
8. On

A Slow 5A SMD fuse is used:

S1-1	S1-2	S1-3	S1-4	Imot
OFF	OFF	OFF	OFF	0,92
ON	OFF	OFF	OFF	1,16
OFF	ON	OFF	OFF	1,38
ON	ON	OFF	OFF	1,58
OFF	OFF	ON	OFF	1,77
ON	OFF	ON	OFF	1,94
OFF	ON	ON	OFF	2,10
ON	ON	ON	OFF	2,25
OFF	OFF	OFF	ON	2,40
ON	OFF	OFF	ON	2,53
OFF	ON	OFF	ON	2,55
ON	ON	OFF	ON	2,77
OFF	OFF	ON	ON	2,88
ON	OFF	ON	ON	2,98
OFF	ON	ON	ON	3,08
ON	ON	ON	ON	3,18

S1-5	S1-6	S1-7	Steps
ON	ON	ON	Full-Step
OFF	ON	ON	1/2-Step 1-2
ON	OFF	ON	1/2-Step
OFF	OFF	ON	1/4-Step W1-2
ON	-	OFF	1/8-Step 2W1-2
OFF	-	OFF	1/16-Step 4W1-2

S1-8	Umot
OFF	24U
ON	30U

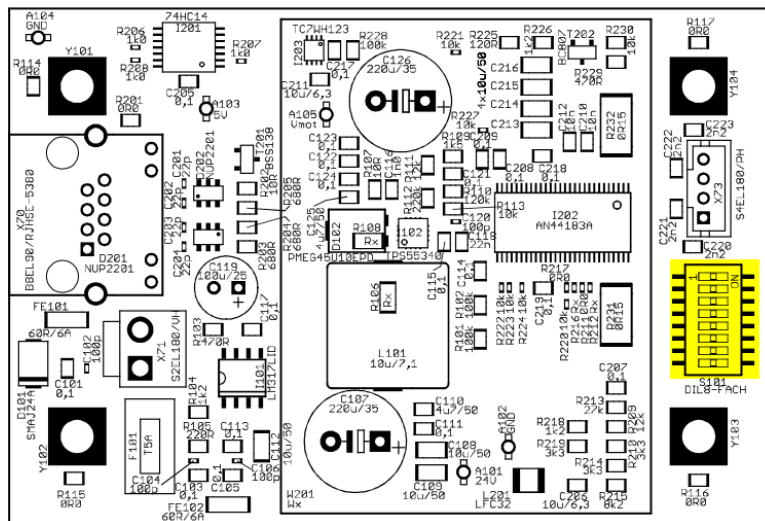


Cross-folder – Upper transport belts CFX42

This motor drives the upper exit belts.

Stepper-motor related test:

- On
- Off



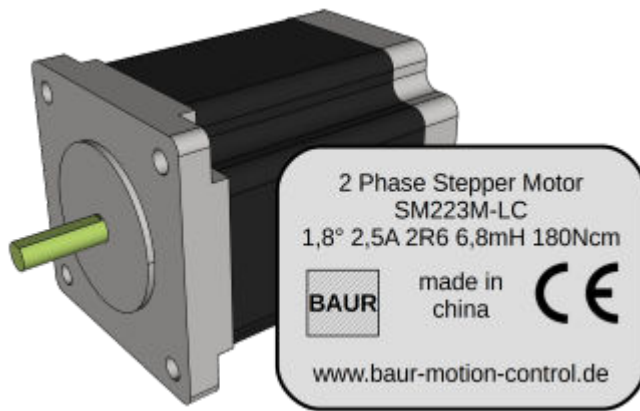
1. On
2. On
3. On
4. On
5. On
6. On
7. On
8. On

The 2 Phase Stepper Motor SM223M-LC:

S1-1	S1-2	S1-3	S1-4	Imot
OFF	OFF	OFF	OFF	0,32
ON	OFF	OFF	OFF	1,16
OFF	ON	OFF	OFF	1,38
ON	ON	OFF	OFF	1,38
OFF	OFF	ON	OFF	1,77
ON	OFF	ON	OFF	1,94
OFF	ON	ON	OFF	2,10
ON	ON	ON	OFF	2,25
OFF	OFF	OFF	ON	2,46
ON	OFF	OFF	ON	2,53
OFF	ON	OFF	ON	2,55
ON	ON	OFF	ON	2,77
OFF	OFF	ON	ON	2,88
ON	OFF	ON	ON	2,98
OFF	ON	ON	ON	3,08
ON	ON	ON	ON	3,18

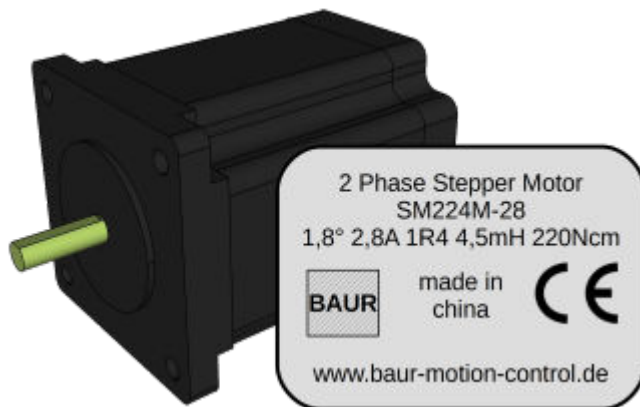
S1-5	S1-6	S1-7	Steps
ON	ON	ON	Full-Step
OFF	ON	ON	1/2-Step 1-2
ON	OFF	ON	1/2-Step
OFF	OFF	ON	1/4-Step
ON	-	OFF	1/8-Step 2x1-2
OFF	-	OFF	1/16-Step 4x1-2

S1-8	Umot
OFF	24V
ON	30V

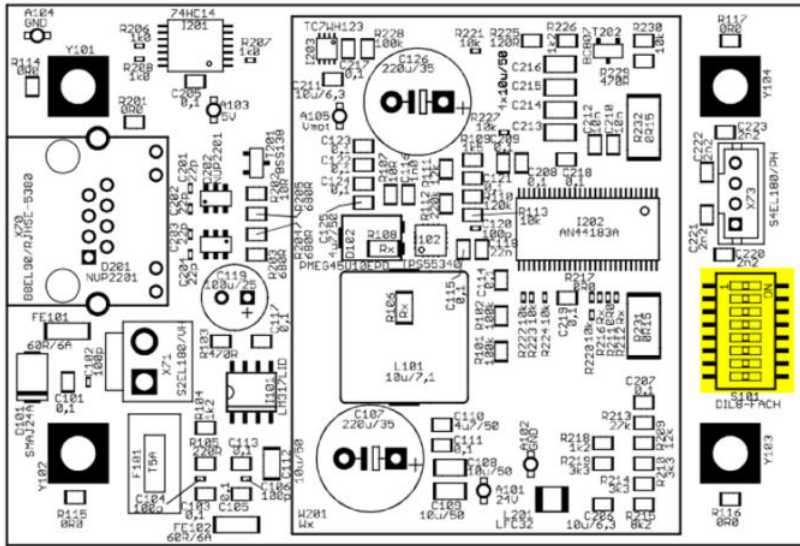


- 1. On
- 2. On
- 3. On
- 4. On
- 5. On
- 6. On
- 7. On
- 8. On

The 2 Phase Stepper Motor SM224M-28:



- 1. On
- 2. On
- 3. Off
- 4. On
- 5. On
- 6. On
- 7. On
- 8. On



S1-1	S1-2	S1-3	S1-4	Imot
OFF	OFF	OFF	OFF	0,92
ON	OFF	OFF	OFF	1,16
OFF	ON	OFF	OFF	1,38
ON	ON	OFF	OFF	1,58
OFF	OFF	ON	OFF	1,77
ON	OFF	ON	OFF	1,94
OFF	ON	ON	OFF	2,10
ON	ON	ON	OFF	2,25
OFF	OFF	OFF	ON	2,40
ON	OFF	OFF	ON	2,53
OFF	ON	OFF	ON	2,65
ON	ON	OFF	ON	2,77
OFF	OFF	ON	ON	2,98
ON	OFF	ON	ON	2,98
OFF	ON	ON	ON	3,08
ON	ON	ON	ON	3,18

S1-5	S1-6	S1-7	Steps
ON	ON	ON	Full-Step
OFF	ON	ON	1/2-Step 1-2
ON	OFF	ON	1/2-Step
OFF	OFF	ON	1/4-Step W1-2
ON	-	OFF	1/8-Step 2W1-2
OFF	-	OFF	1/16-Step 4W1-2

S1-8	Umc1
OFF	24U
ON	38U

A Slow 5A SMD fuse is used:

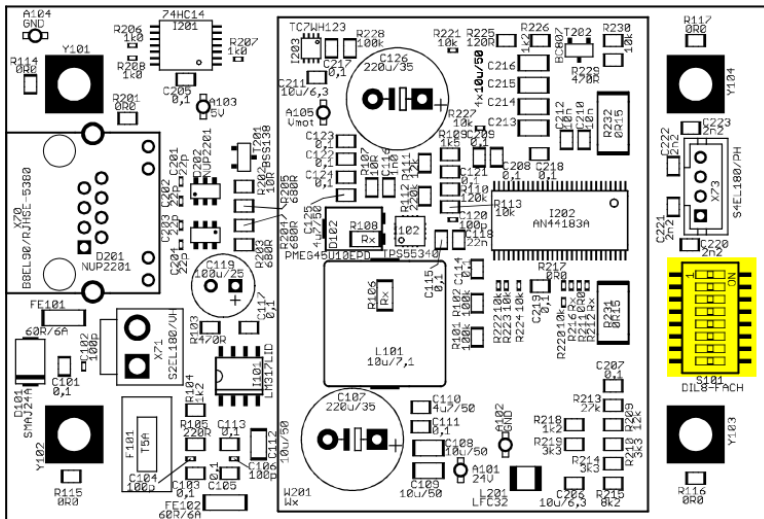


Cross-folder – Vertical transport belts CFX46

This motor moves the interface flap into different positions. These positions direct the paper into the bridge for folding or onto the bridge for stacking.

Stepper-motor related test:

- On
- Off



S1-1	S1-2	S1-3	S1-4	Imot
OFF	OFF	OFF	OFF	0,92
ON	OFF	OFF	OFF	1,16
OFF	ON	OFF	OFF	1,38
ON	ON	OFF	OFF	1,58
OFF	OFF	ON	OFF	1,77
ON	OFF	ON	OFF	1,94
OFF	ON	ON	OFF	2,10
ON	ON	ON	OFF	2,25
OFF	OFF	OFF	ON	2,40
ON	OFF	OFF	ON	2,53
ON	ON	OFF	ON	2,65
ON	ON	OFF	ON	2,77
OFF	ON	OFF	ON	2,88
ON	ON	ON	ON	2,98
ON	ON	ON	ON	3,18

S1-5	S1-6	S1-7	Steps
ON	ON	ON	Full-Step
OFF	ON	ON	1/2-Step 1-2
ON	OFF	ON	1/2-Step
OFF	OFF	ON	1/4-Step W1-2
ON	-	OFF	1/8-Step 2W1-2
OFF	-	OFF	1/16-Step 4W1-2

S1-8	Umot
OFF	24U
ON	30U

1. On
2. On
3. Off
4. On
5. Off
6. On
7. On
8. On

A Slow 5A SMD fuse is used:

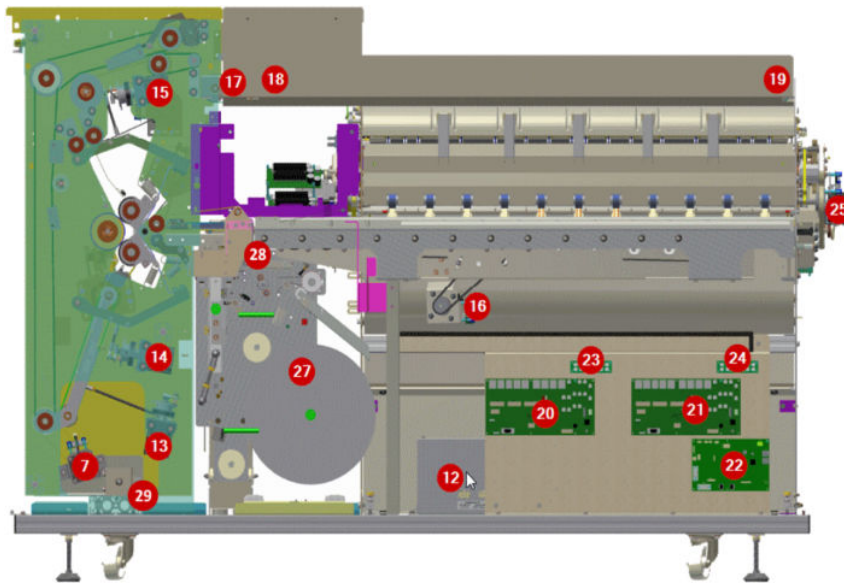


Cross-folder – Solenoid-decoupling feeding roller CFX49

To avoid skewing, the transport roller needs to be decoupled during the folding process.

24 V DC solenoid related test:

- On
- Off



Fan-folder – Interface transport roller FFX46

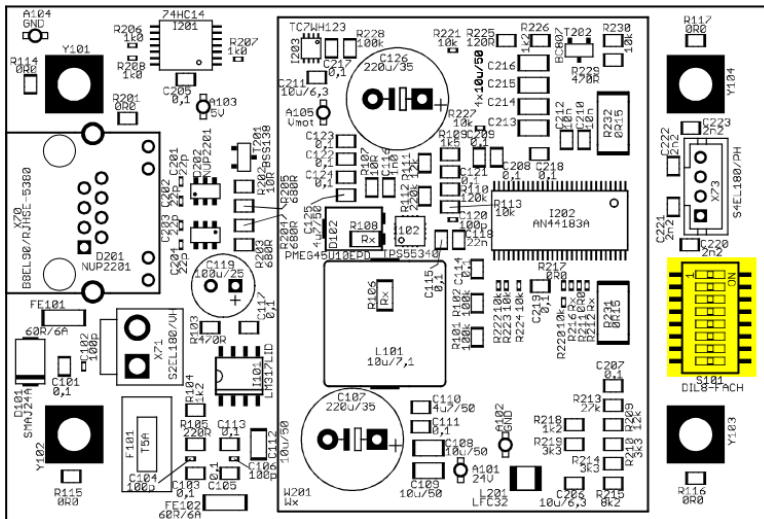
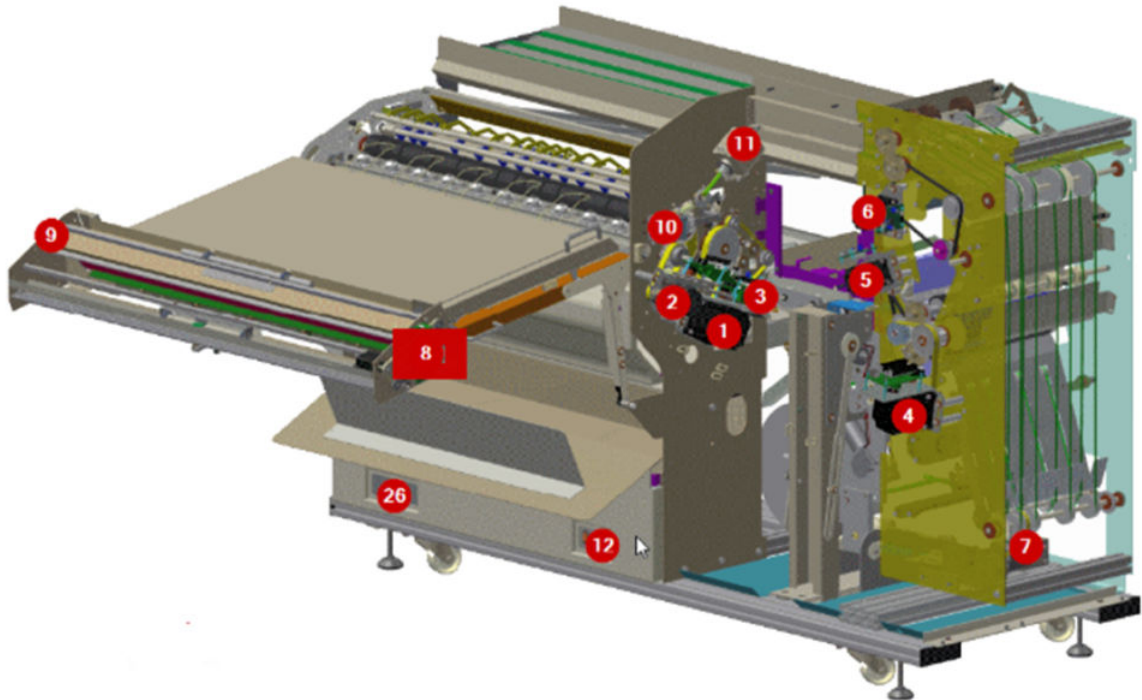
This motor drives the transport roller of the interface. The speed is given by a printer command. If it does not start, a communication issue is possible. Check the device in the Diagnostics in order to understand the root cause.

Stepper-motor related test:

- On
- Off

Related setting:

- Stacking Speed



- 1. On
- 2. Off
- 3. On
- 4. Off
- 5. Off
- 6. On
- 7. On
- 8. Off

S1-1	S1-2	S1-3	S1-4	Imot
OFF	OFF	OFF	OFF	0,92
ON	OFF	OFF	OFF	1,16
OFF	ON	OFF	OFF	1,38
ON	ON	OFF	OFF	1,58
OFF	OFF	ON	OFF	1,77
ON	OFF	ON	OFF	1,94
OFF	ON	ON	OFF	2,18
ON	ON	ON	OFF	2,25
OFF	OFF	OFF	ON	2,40
ON	OFF	OFF	ON	2,53
OFF	ON	OFF	ON	2,65
ON	ON	OFF	ON	2,77
OFF	OFF	ON	ON	2,88
ON	OFF	ON	ON	2,98
OFF	ON	ON	ON	3,08
ON	ON	ON	ON	3,18

S1-5	S1-6	S1-7	Steps
ON	ON	ON	Full-Step
OFF	ON	ON	1/2-Step
ON	OFF	ON	1/2-Step
OFF	OFF	ON	1/4-Step
ON	-	OFF	1/8-Step
OFF	-	OFF	1/16-Step

S1-8	UmCT
OFF	24u
ON	30u

A Slow 5A SMD fuse is used:



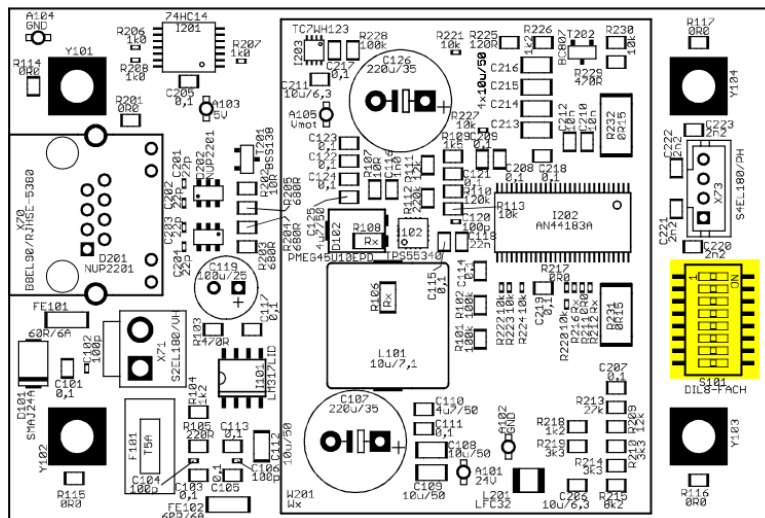
The speed is controlled by software. The motor speed can be changed for flat sheet stacking.

Fan-folder – Interface flap FFX41

This motor moves the interface flap to different positions. These positions direct the paper into the bridge for folding or onto the bridge for stacking.

Stepper-motor related test:

- Off
- Position: Fold
- Position: Stack
- Related sensor: LB07
- Related setting: Flap position (see [Flap fold steps on page 1569](#))



1. On
2. On
3. On
4. Off
5. Off

S1-1	S1-2	S1-3	S1-4	Imot
OFF	OFF	OFF	OFF	0,92
ON	OFF	OFF	OFF	1,16
OFF	ON	OFF	OFF	1,38
ON	ON	OFF	OFF	1,58
OFF	OFF	ON	OFF	1,77
ON	OFF	ON	OFF	1,94
OFF	ON	ON	OFF	2,10
ON	ON	ON	OFF	2,25
OFF	OFF	OFF	ON	2,40
ON	OFF	OFF	ON	2,53
OFF	ON	OFF	ON	2,65
ON	ON	OFF	ON	2,77
OFF	OFF	ON	ON	2,98
ON	OFF	ON	ON	3,08
OFF	ON	ON	ON	3,08
ON	ON	ON	ON	3,18

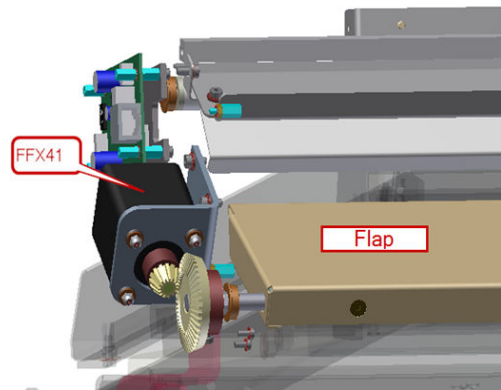
S1-5	S1-6	S1-7	Steps
ON	ON	ON	Full-Step
OFF	ON	ON	1/2-Step 1-2
ON	OFF	ON	1/2-Step
OFF	OFF	ON	1/4-Step
ON	ON	OFF	1/8-Step 2x1-2
OFF	-	OFF	1/16-Step 4x1-2

S1-8	Umot
OFF	24U
ON	30U

6. On
7. On
8. Off

The position of the flap can be corrected by changing the values of the settings **Step fold** and **Step stack**.

Two FFX41 positions are defined by steps after "LB07=0".

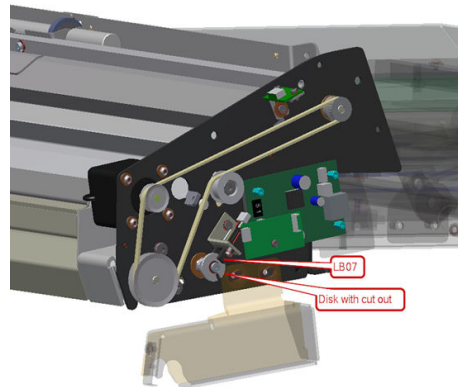


Initial position: LB07=0

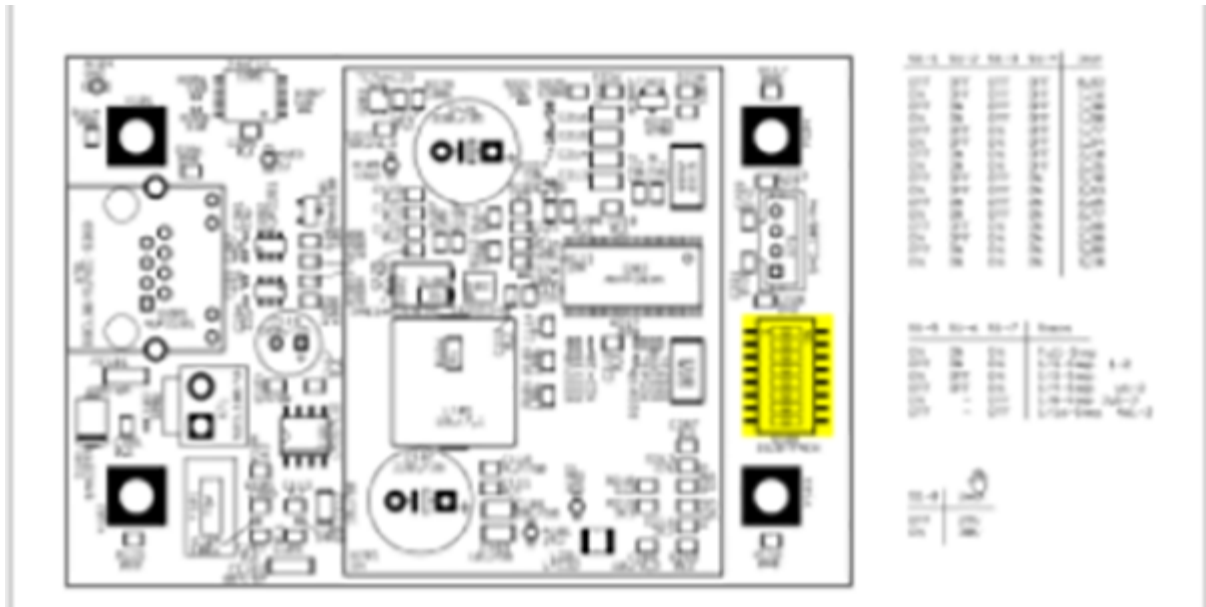
Fold position: Counted steps after LB07=0

Stack position: Counted steps after LB07=0

To be modified in Diagnostics



Fan-folder – Paper guide FFX49: stepper motor version



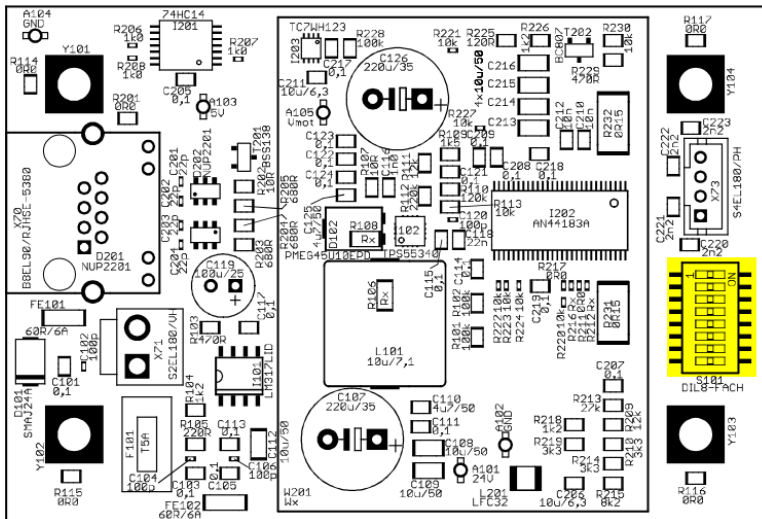
1. On
2. On
3. Off
4. On
5. Off
6. On
7. On
8. Off

Cross-folder – Lower knife CFX43

This motor drives the lower knife.

Stepper-motor related test:

- Full turn
- Sensor test
- Related sensor: LB15
- Fork-type sensor—Home position

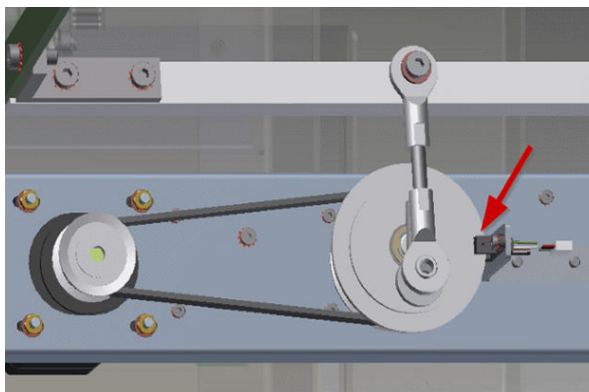


S1-1	S1-2	S1-3	S1-4	Imot
OFF	OFF	OFF	OFF	0,92
ON	OFF	OFF	OFF	1,16
OFF	ON	OFF	OFF	1,38
ON	ON	OFF	OFF	1,58
OFF	OFF	ON	OFF	1,77
ON	OFF	ON	OFF	1,94
OFF	ON	ON	OFF	2,10
ON	ON	ON	OFF	2,25
OFF	OFF	OFF	ON	2,40
ON	OFF	OFF	ON	2,53
ON	ON	OFF	ON	2,65
ON	ON	OFF	ON	2,77
OFF	ON	OFF	ON	2,88
ON	ON	ON	ON	2,98
OFF	ON	ON	ON	3,08
ON	ON	ON	ON	3,18

S1-5	S1-6	S1-7	Steps
ON	ON	ON	Full-Step
OFF	ON	ON	1/2-Step 1-2
ON	OFF	ON	1/2-Step
OFF	OFF	ON	1/4-Step 4x1-2
ON	-	OFF	1/8-Step 2x1-2
OFF	-	OFF	1/16-Step 4x1-2

S1-8	Umot
OFF	24U
ON	30U

1. On
2. On
3. Off
4. On
5. Off
6. On
7. On
8. Off



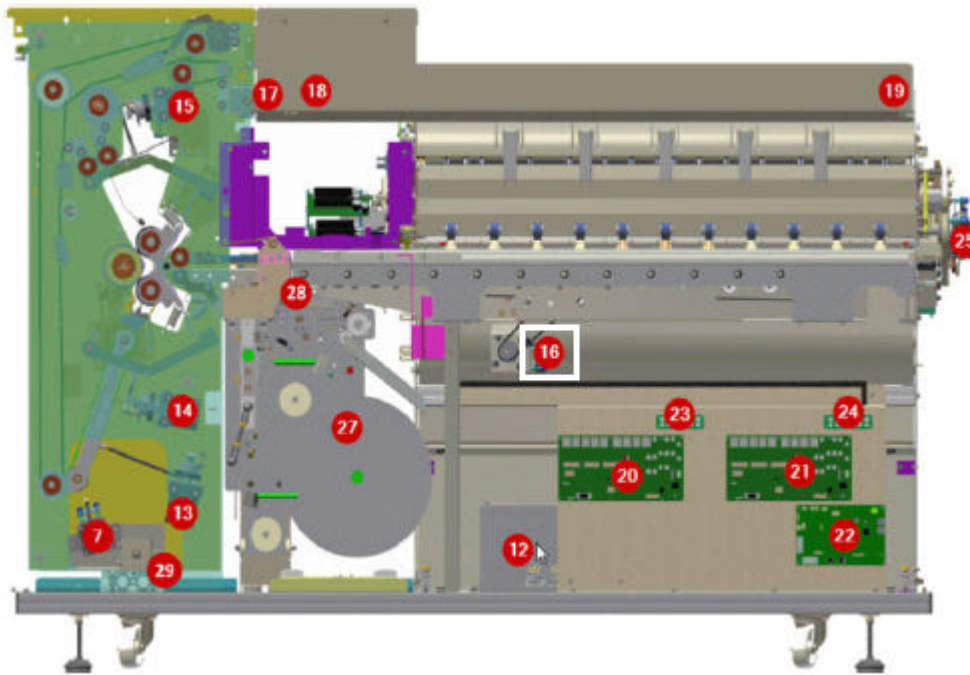
Cross-folder – Upper knife CFX41

This motor drives the upper knife.

Stepper-motor related test:

- Full turn
- Sensor test

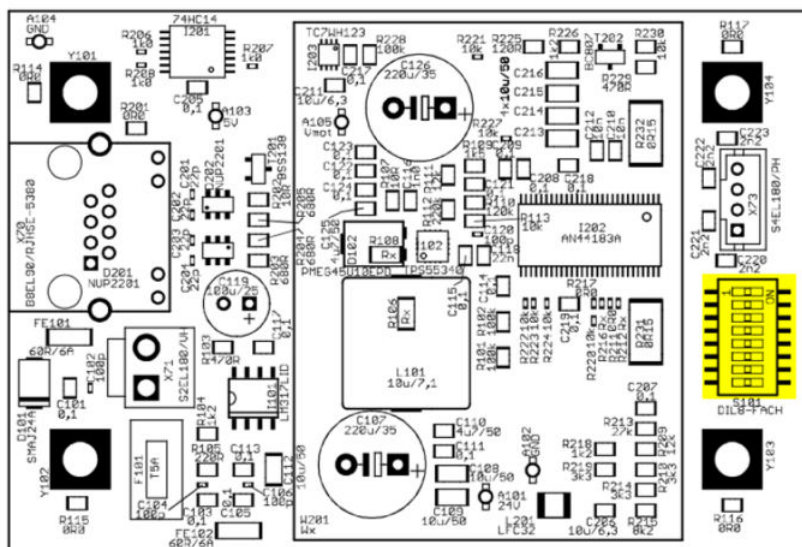
Cross-folder – Roll tray CFX45



This motor drives the roller tray.

Stepper-motor related test:

- Off
- Forwards
- Backwards



S1-1	S1-2	S1-3	S1-4	Imot
OFF	OFF	OFF	OFF	0,92
ON	OFF	OFF	OFF	1,16
OFF	ON	OFF	OFF	1,38
ON	ON	OFF	OFF	1,58
OFF	OFF	ON	OFF	1,77
ON	OFF	ON	OFF	1,94
OFF	ON	ON	OFF	2,10
ON	ON	ON	OFF	2,25
OFF	OFF	OFF	ON	2,40
ON	OFF	OFF	ON	2,53
OFF	ON	OFF	ON	2,65
ON	ON	OFF	ON	2,77
OFF	OFF	ON	ON	2,88
ON	OFF	ON	ON	2,98
OFF	ON	ON	ON	3,08
ON	ON	ON	ON	3,18

S1-5	S1-6	S1-7	Steps
ON	ON	ON	Full-Step
OFF	ON	ON	1/2-Step 1-2
ON	OFF	ON	1/2-Step 41-2
OFF	OFF	ON	1/4-Step
ON	-	OFF	1/8-Step 241-2
OFF	-	OFF	1/16-Step 441-2

S1-8	Umot
OFF	24U
ON	30U

1. On
2. On

For HP-authorized personnel only

3. Off
4. On
5. On
6. On
7. On
8. Off

A Slow 5A SMD fuse is used:

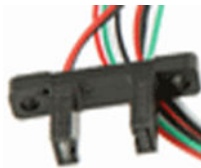


Cross-folder – Exit down holder CFX51

This motor moves the exit down holder.

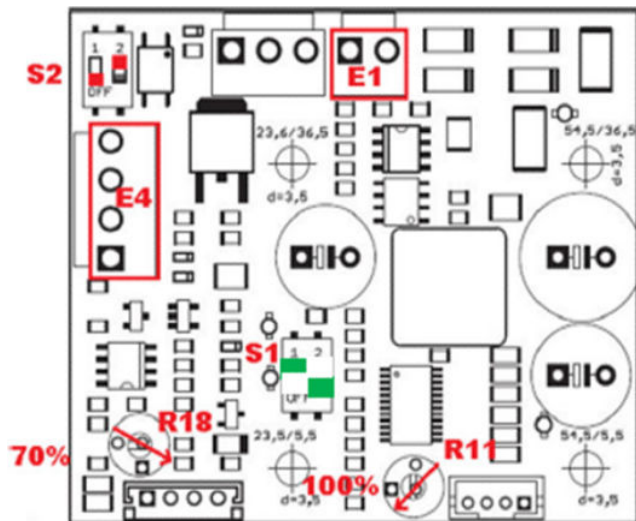
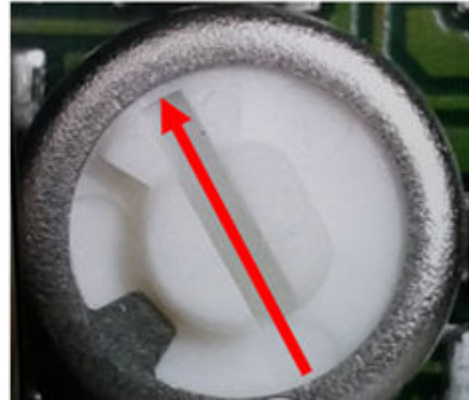
24 V DC stepper-motor related test (without data cable):

- On
- Off
- Related sensors: LB19 (CFX51 stop)
- Fork-type sensor




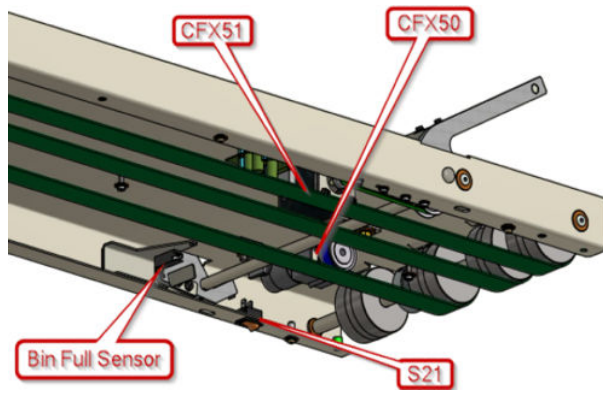
- Bin full (see [Folder bin full on page 1485](#))
- Reflection sensor—short distance (white connector)



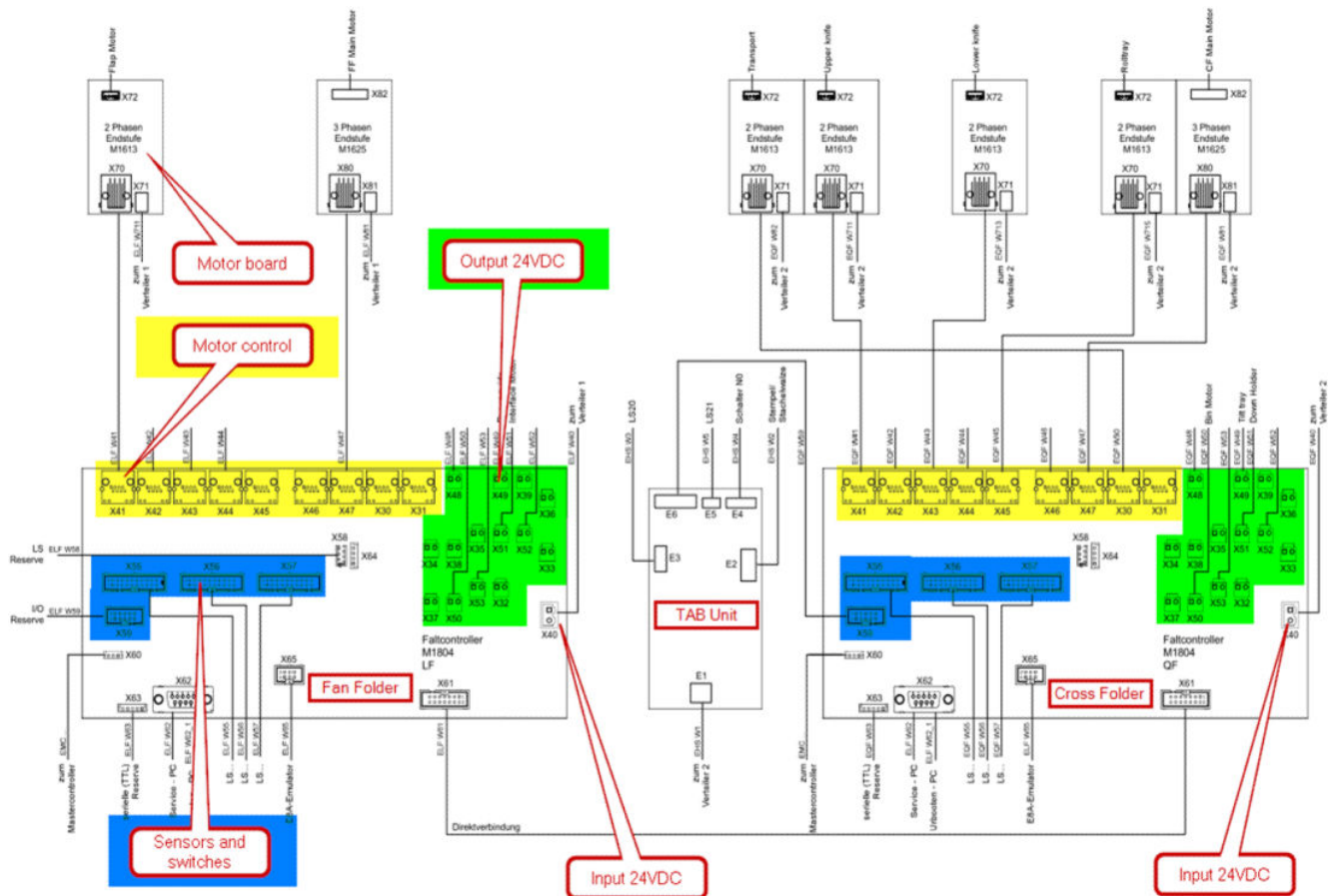


- S1-1: On
- S1-2: Off
- S2-1: Off
- S2-2: On
- R11: 100%
- R18: 60–70%

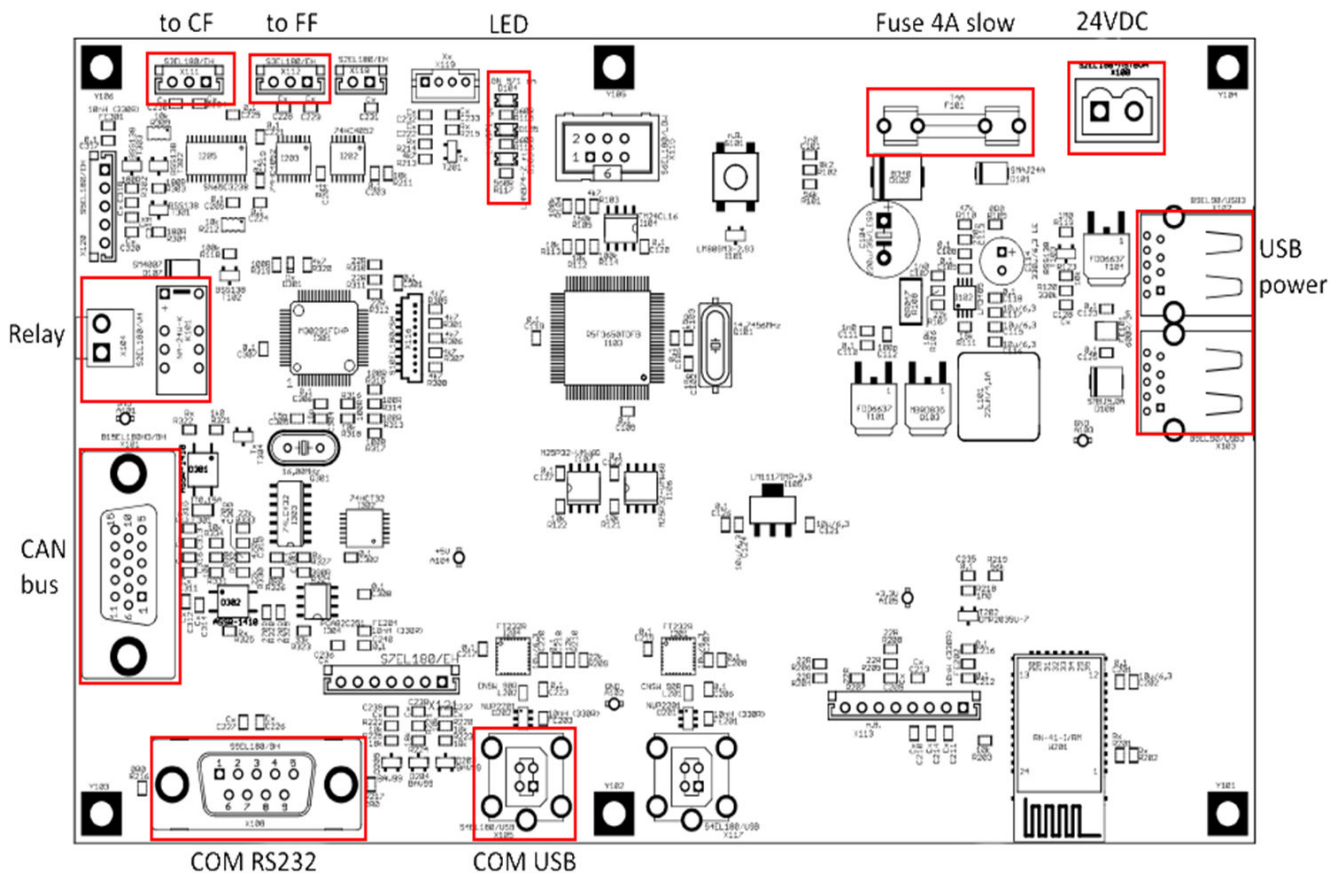
 **NOTE:** If you set the speed too high, the exit bar won't lift up; if you set the speed too low, the exit bar will be too slow.



Fan-folder and cross-folder controller



Master controller



You can check the status of the Master controller PCA by the indicators (LEDs):

LED color	Behavior	Description
Green	Blinking 0.5 Hz	Power on
Orange	Permanently on	Switched off by losing the contact between the MC and the internal CAN controller
Red	Blinking	Showing the traffic on the CAN bus. Status change on every message

Follow these instructions if you need to replace the Master Controller:

1. Save the configuration file:
Settings -> Service menu -> Accessory Utilities -> Folder Utilities -> Configuration File.
2. Replace the PCB after switching off the printer and the folder.
3. Let the printer auto-update the Master Controller firmware.
4. Reset the machine to factory defaults:
Settings -> Service menu -> Accessory Utilities -> Folder Utilities -> Reset To Factory Defaults.

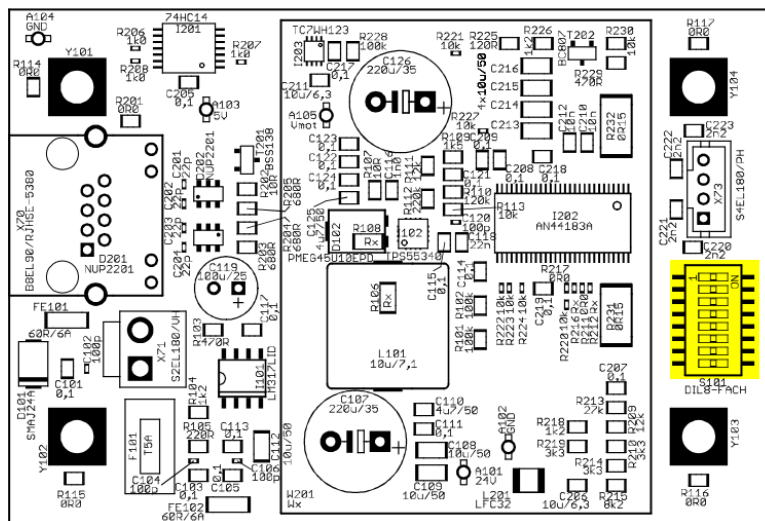
5. Set the folder's part number according to the machine type (basic machine or tab machine).
6. Restore the configuration file:
Settings -> Service menu -> Accessory Utilities -> Folder Utilities -> Configuration File.

Fan-folder – Lower exit guide FFX31

This motor moves the lower exit flap to different positions. These positions direct the paper into the cross-folder for folding or into the basket below the table for stacking.

Stepper-motor related test:

- Position: Exit to cross-folder
- Position: Exit to basket
- Related sensor: LB09



S1-1	S1-2	S1-3	S1-4	Imot
OFF	OFF	OFF	OFF	0,92
ON	OFF	OFF	OFF	1,16
OFF	ON	OFF	OFF	1,38
ON	ON	OFF	OFF	1,58
OFF	OFF	ON	OFF	1,77
ON	OFF	ON	OFF	1,94
OFF	ON	ON	OFF	2,10
ON	ON	ON	OFF	2,25
OFF	OFF	OFF	ON	2,40
ON	OFF	OFF	ON	2,53
OFF	ON	OFF	ON	2,65
ON	ON	OFF	ON	2,77
OFF	OFF	ON	ON	2,88
ON	OFF	ON	ON	2,98
OFF	ON	ON	ON	3,08
ON	ON	ON	ON	3,18

S1-5	S1-6	S1-7	Steps
ON	ON	ON	Full-Step
OFF	ON	ON	1/2-Step 1-2
ON	OFF	ON	1/2-Step
OFF	OFF	ON	1/4-Step
ON	-	OFF	1/8-Step 241-2
OFF	-	OFF	1/16-Step 441-2

S1-8	Umot
OFF	24V
ON	30V

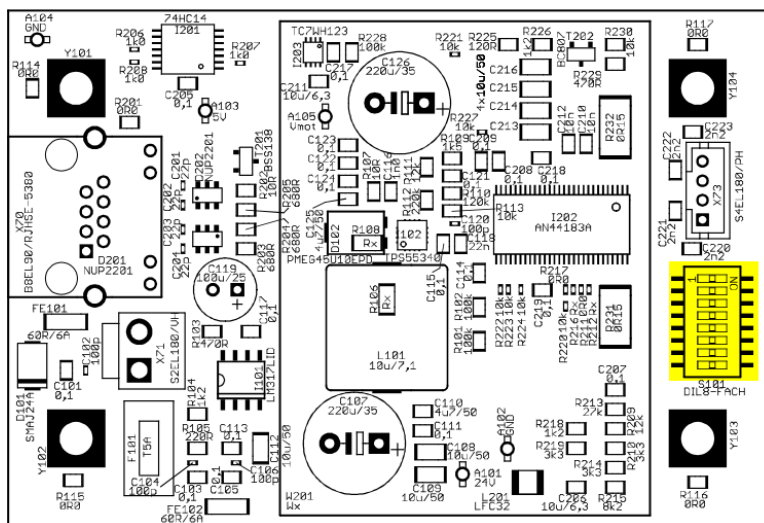
1. On
2. On
3. Off
4. On
5. Off
6. On
7. On
8. Off

A Slow 5A SMD fuse is used:



Cross-folder – Tilt tray CFX44

This motor moves the tilt tray in order to direct the paper to the vertical transport.



S1-1	S1-2	S1-3	S1-4	Imot
OFF	OFF	OFF	OFF	0,92
ON	OFF	OFF	OFF	1,16
OFF	ON	OFF	OFF	1,38
ON	ON	OFF	OFF	1,58
OFF	OFF	ON	OFF	1,77
ON	OFF	ON	OFF	1,94
OFF	ON	ON	OFF	2,18
ON	ON	ON	OFF	2,25
OFF	OFF	OFF	ON	2,40
ON	OFF	OFF	ON	2,53
OFF	ON	OFF	ON	2,65
ON	ON	OFF	ON	2,77
OFF	OFF	ON	ON	2,88
ON	OFF	ON	ON	2,98
OFF	ON	ON	ON	3,08
ON	ON	ON	ON	3,18

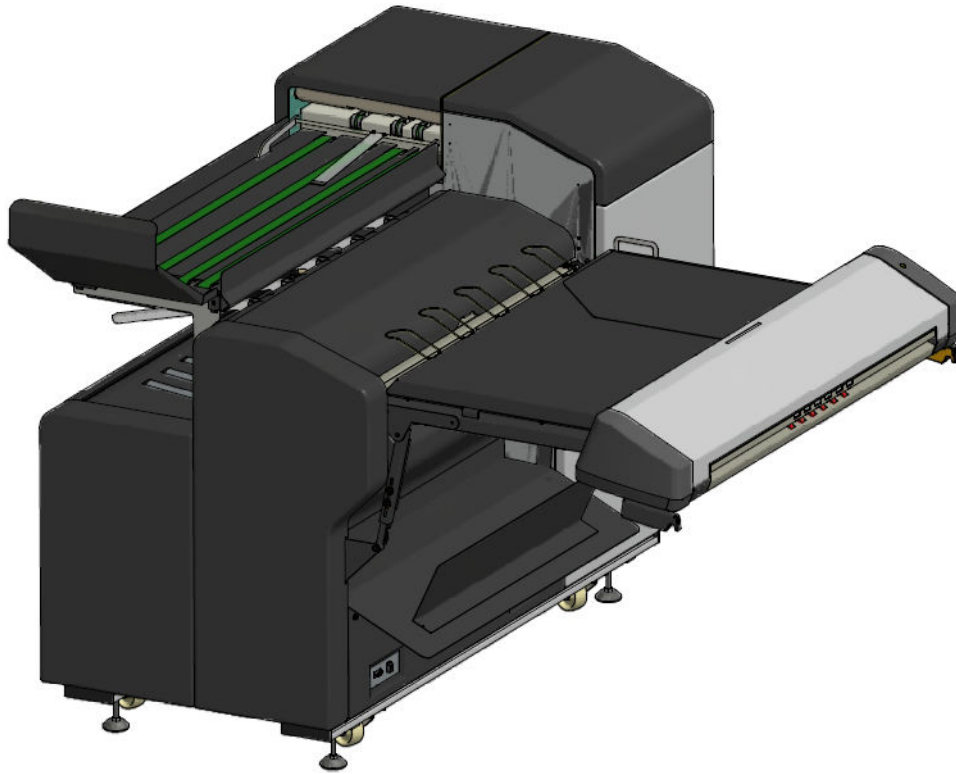
S1-5	S1-6	S1-7	Steps
ON	ON	ON	Full-Step
OFF	ON	ON	1/2-Step 1-2
ON	OFF	ON	1/2-Step
OFF	OFF	ON	1/4-Step M1-2
ON	-	OFF	1/8-Step 2M1-2
OFF	-	OFF	1/16-Step 4M1-2

S1-8	Umct
OFF	24U
ON	30U

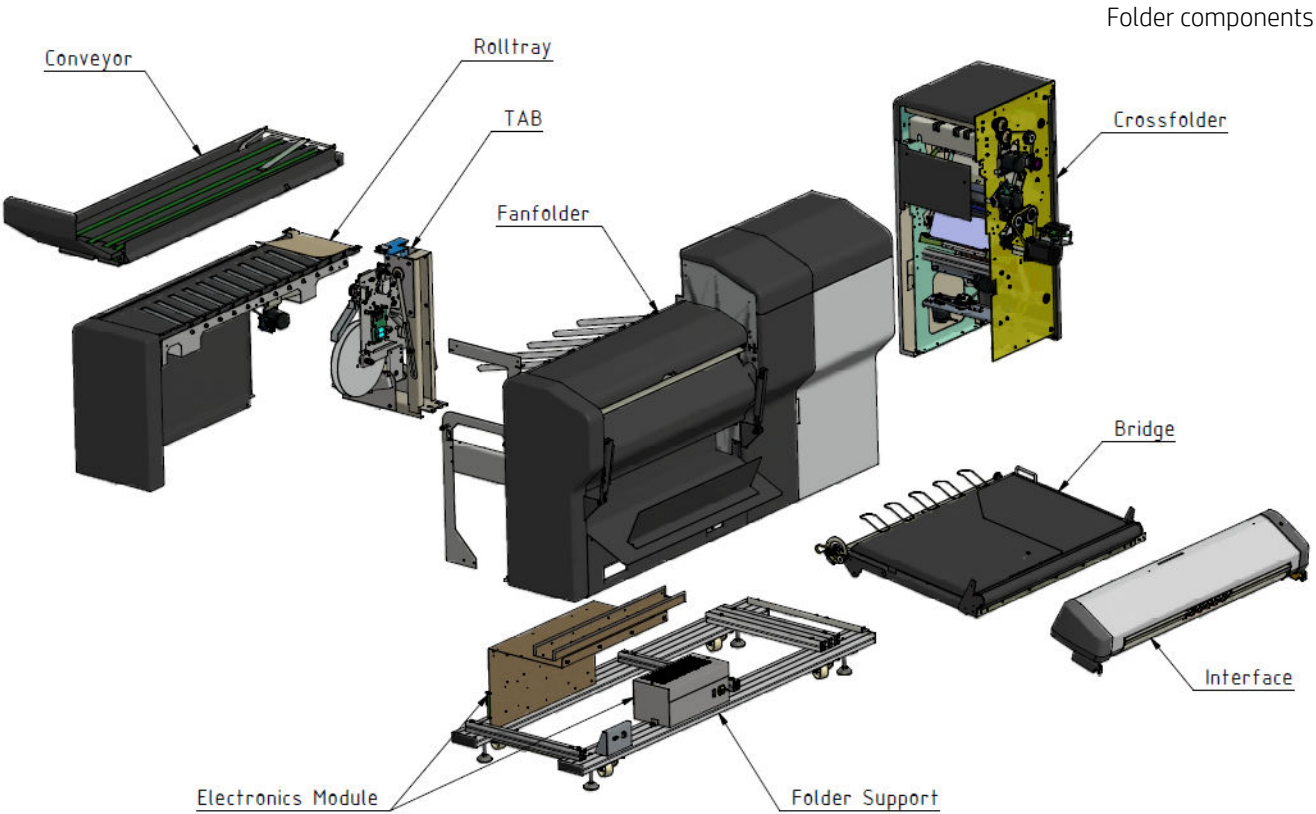
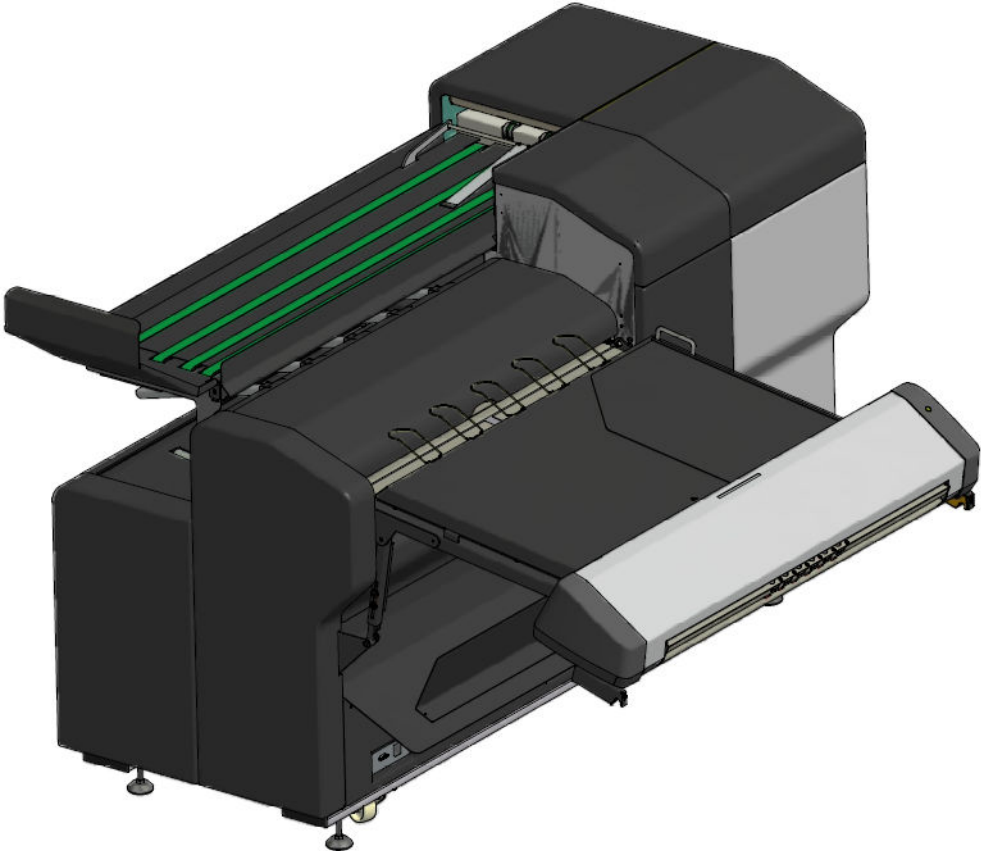
1. On
2. On
3. Off
4. On
5. Off
6. On
7. On
8. Off

Folder parts and diagrams

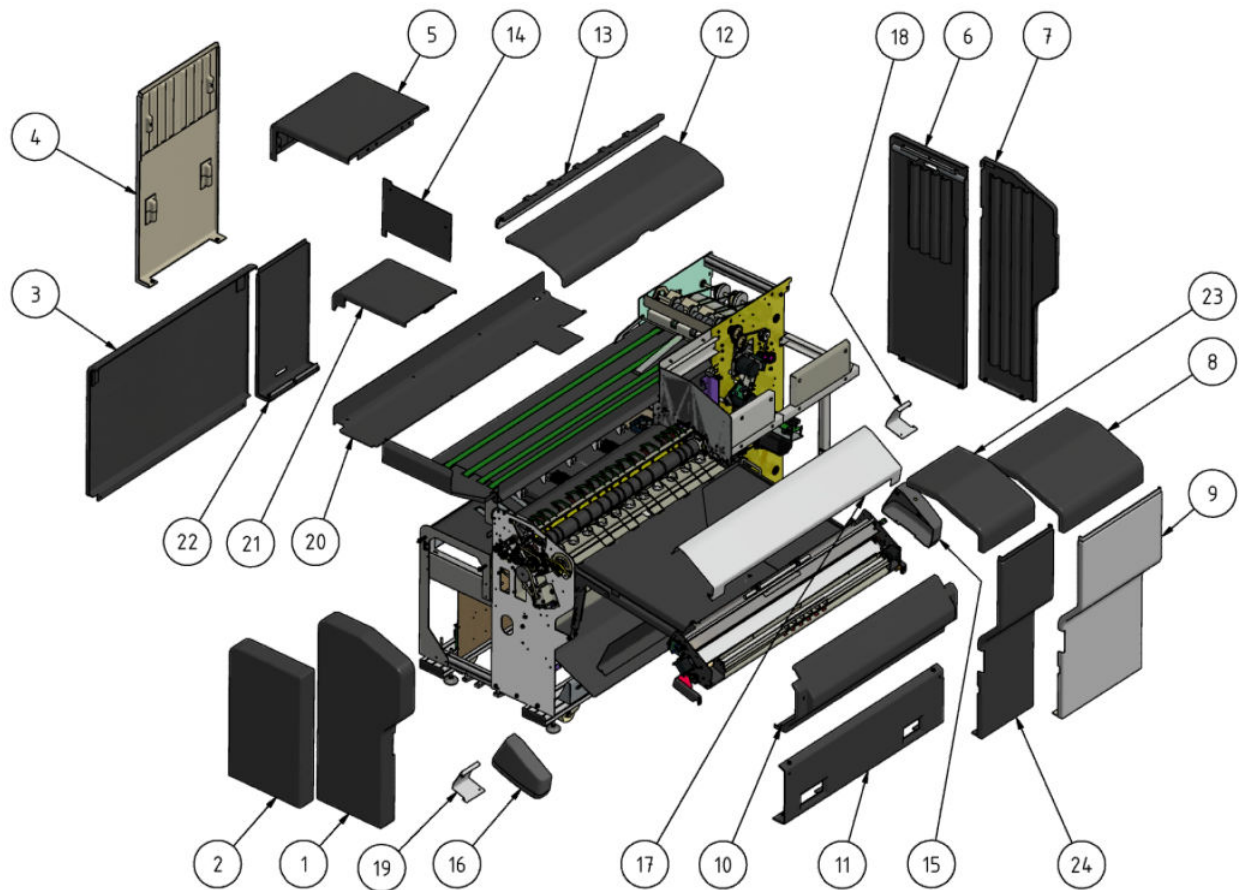
Assembled folder (1)



Assembled folder (2)



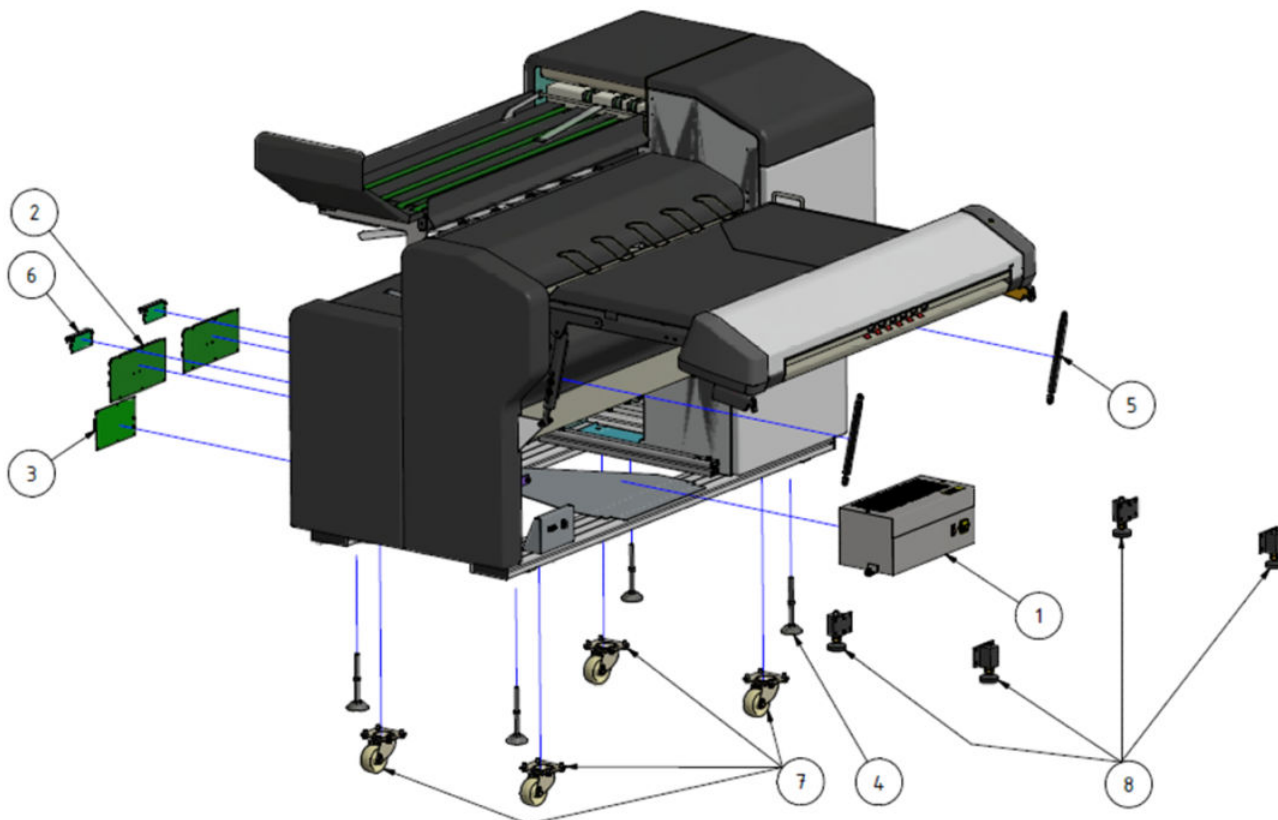
Covers



	Part number	Description
1	K5H75-67033	Cover FF, left
2	K5H75-67038	Cover rolltray, left
3	K5H75-67036	Cover rolltray
4	K5H75-67029	Cover CF, rear bottom
5	K5H75-67030	Cover CF, rear top
6	K5H75-67044	Door CF, rear
7	K5H75-67043	Door CF, front
8	K5H75-67028	Cover CF, front top
9	K5H75-67027	Cover CF, front bottom
10	K5H75-67032	Cover FF, central
11	K5H75-67031	Cover FF, bottom
12	K5H75-67080	Top cover FF
13	K5H75-67070	Rear cover FF

	Part number	Description
14	K5H75-67026	Cover CF, entry
15	K5H75-67040	Cover table, right
16	K5H75-67039	Cover table, left
17	K5H75-67081	Top cover interface (for folders with SNs previous to DE5C711005)
	K5H75-67106	Top cover interface (for folders with SNs after DE5C711005)
18	K5H75-67035	Cover interface, rear right (for folders with SNs previous to DE5C711005)
	K5H75-67105	Cover interface, rear right (for folders with SNs after DE5C711005)
19	K5H75-67034	Cover interface, rear left (with SNs previous to DE5C711005)
	K5H75-67104	Cover interface, rear left (for folders with SNs after DE5C711005)
20	K5H75-67087	Cover conveyor, bottom (for folder without tabs)
	K5H75-67086	Cover conveyor, bottom (for folder with tabs)
21	L3M58-67001	Cover TAB, rear top (for folder with tabs)
22	L3M58-67002	Cover TAB, rear (for folder with tabs)
23	L3M58-67003	Cover TAB, front top (for folder with tabs)
24	L3M58-67004	Cover TAB, front (for folder with tabs)

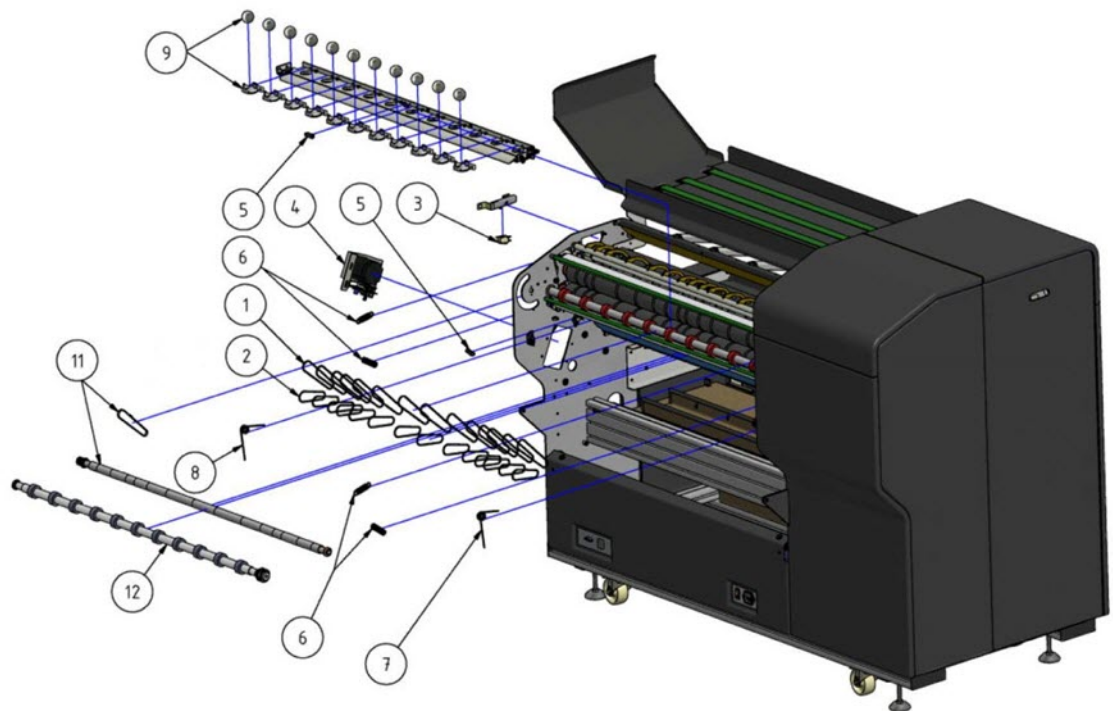
Electronics module and folder support




	Part number	Description
1	K5H75-67010	Power box assembly
2	K5H75-67059	Fold control board LP M1804 (2)
3	K5H75-67064	*Master control board LP M1805
4	K5H75-67079	Tare screw (1)
5	K5H75-67061	Gas spring 700N (2)
	K5H75-67127	...from # DE6B911001
6	K5H75-67102	Power Distribution PCA (2)
7	K5H75-67006	Folder wheels SVS KIT
8	K5H75-67134	Kit Levelling feet for printer (from SN DE5CA11001)

*Master control board LP M1805: Reset to factory defaults (from service menu) may have to be done after the replacement of this PCA in the case of no communication between the printer and the folder.

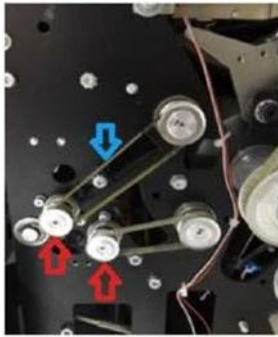
Fan-folder left-hand side and paper path



	Part number	Description
1	K5H75-67101	Outlet belt top (14) (300 mm) (see note below)
2	K5H75-67101	Outlet belt bottom (14) (215 mm) (see note below)
3	K5H75-67074	Safety switch FF
4	K5H75-67045	Drive unit bottom rake below FFX31 # DE6B911001
	K5H75-67148	Drive unit bottom rake FFX31 # DE6B911001 and above
5	K5H75-67013	Paper sensor (2)
6	K5H75-67005	Fan-fold spring (4)
7	K5H75-67089	Torsion spring right wind
8	K5H75-67090	Torsion spring left wind
9	K5H75-67091	Ball (32 mm diameter) and cage (11)
10	K5H75-67122	Toothed belt 6 T2,5 - 285 lg – from # DE62J11001
11	K5H75-67126	Output shaft and belt SVS Kit – from # DE62J11001
12	K5H75-67131	Fan-fold exit roller
13	K5H75-67183	Fan-fold metallic paper guides. SNs prior to DE6B911001

 **NOTE:** For the correct placement of belts K5H75-67122 and K5H75-67126, please check the following image:

For HP-authorized personnel only

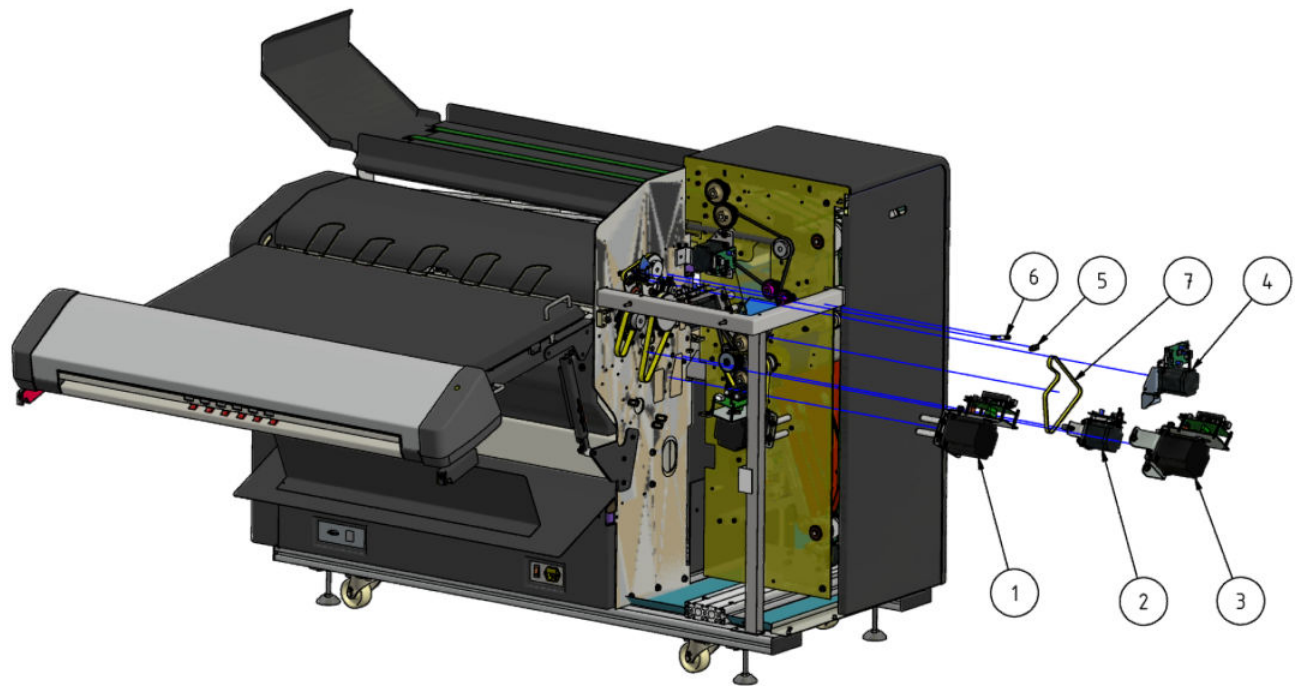


KH575-67122, in blue
KH575-67126, in red



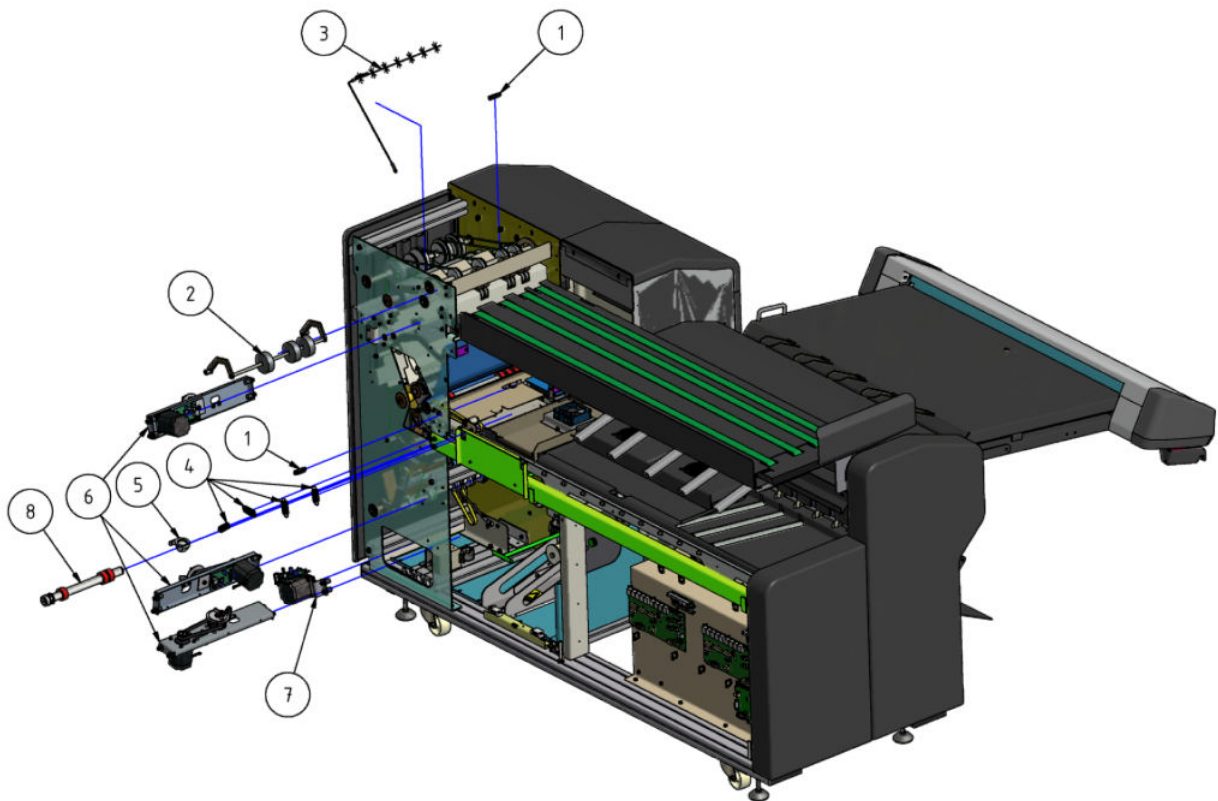
NOTE: Service kit KH575-67101 contains 3 meters of 3mm rubber belt plus 3 meters of 4mm rubber belt. In order to repair the belts, you also need to order the following parts: the Iron Solder SVS kit (KH575-67099) and the Support and joining tool (KH575-67100).

Fan-folder right-hand side



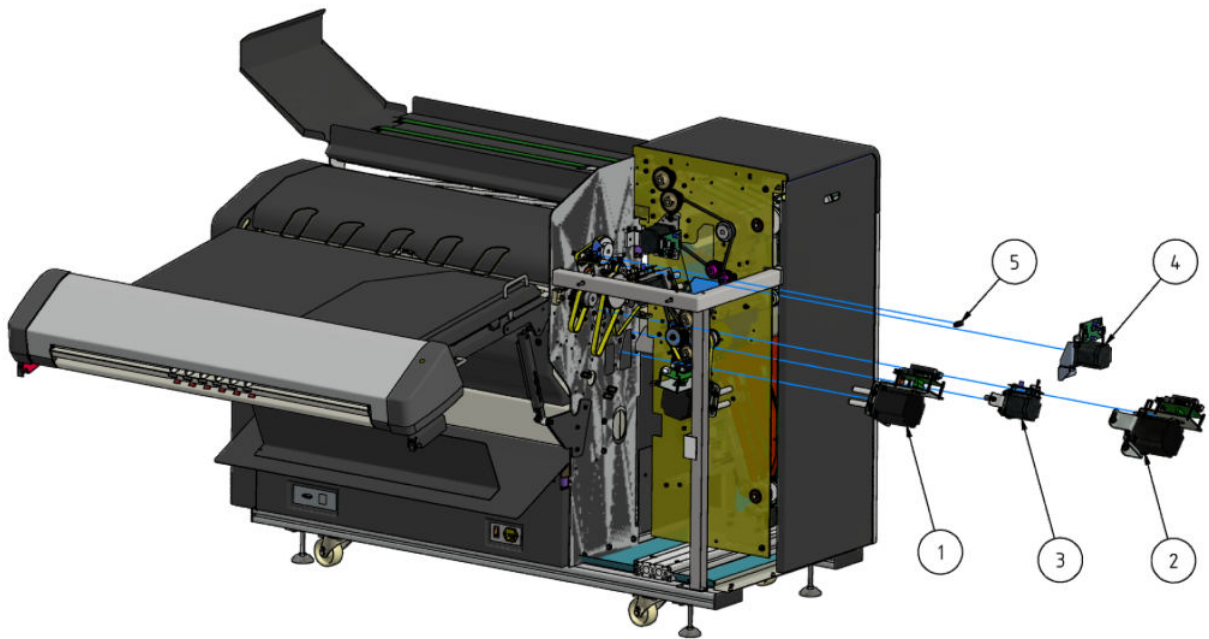
	Part number	Description
1	K5H75-67048	Drive unit fan-folder (FF X47)
	K5H75-67149	Drive unit fan-folder (FF X47 from Serial Number DE62J11001)
2	K5H75-67151	Drive unit fan-folder (FF X30)
3	K5H75-67152	Drive unit fan-folder (FF X45)
4	K5H75-67153	Stepper motor (from Serial Number DE62J11001)
5	K5H75-67092	Tension spring 10x1 - 72
6	K5H75-67092	Tension spring 10x1 - 72
7	K5H75-67132	Drive unit outlet belt
8	K5H75-67169	Single board compatible with FF X30, FF X47, CF X47

Cross-folder input and output



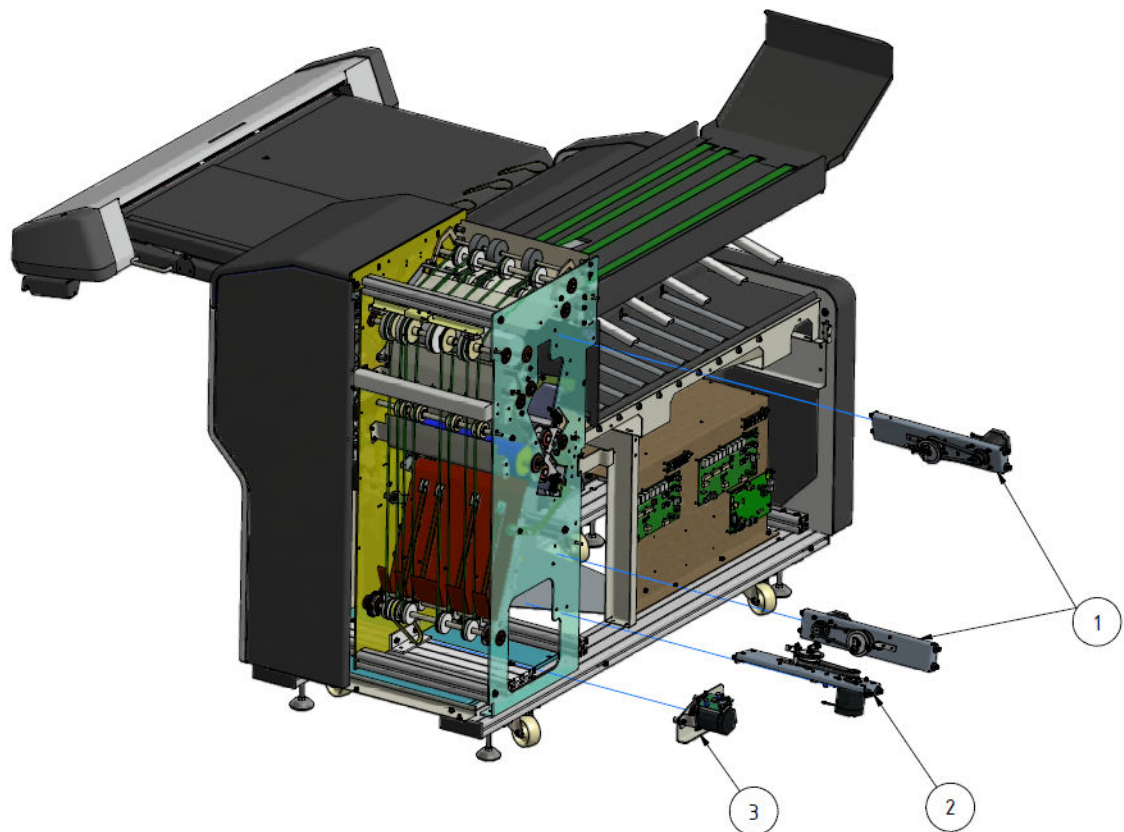
	Part number	Description
1	K5H75-67125	Paper Sensor - from # DE6B911001
2	K5H75-67084	Cross folder exit SVS kit
3	L3M58-67020	Discharge cable 660mm assembly
4	K5H75-67138	Tension spring input CF
	L3M58-67024	Tension spring input CF (for Folder with TAB)
5	L3M58-67027	Kit plastic ball dia. 32mm and cage – (for Folder with TAB and from # DE5C211001)
6	K5H75-67154	Drive unit - tilt tray and knives - from # DE6B911001
7	K5H75-67152	Drive unit - outlet belt CFX45
8	K5H75-67128	Input shaft CF-TAB (for Folder with TAB)

Fan-folder right-hand side (II) – For SNs DE6B911001 and above



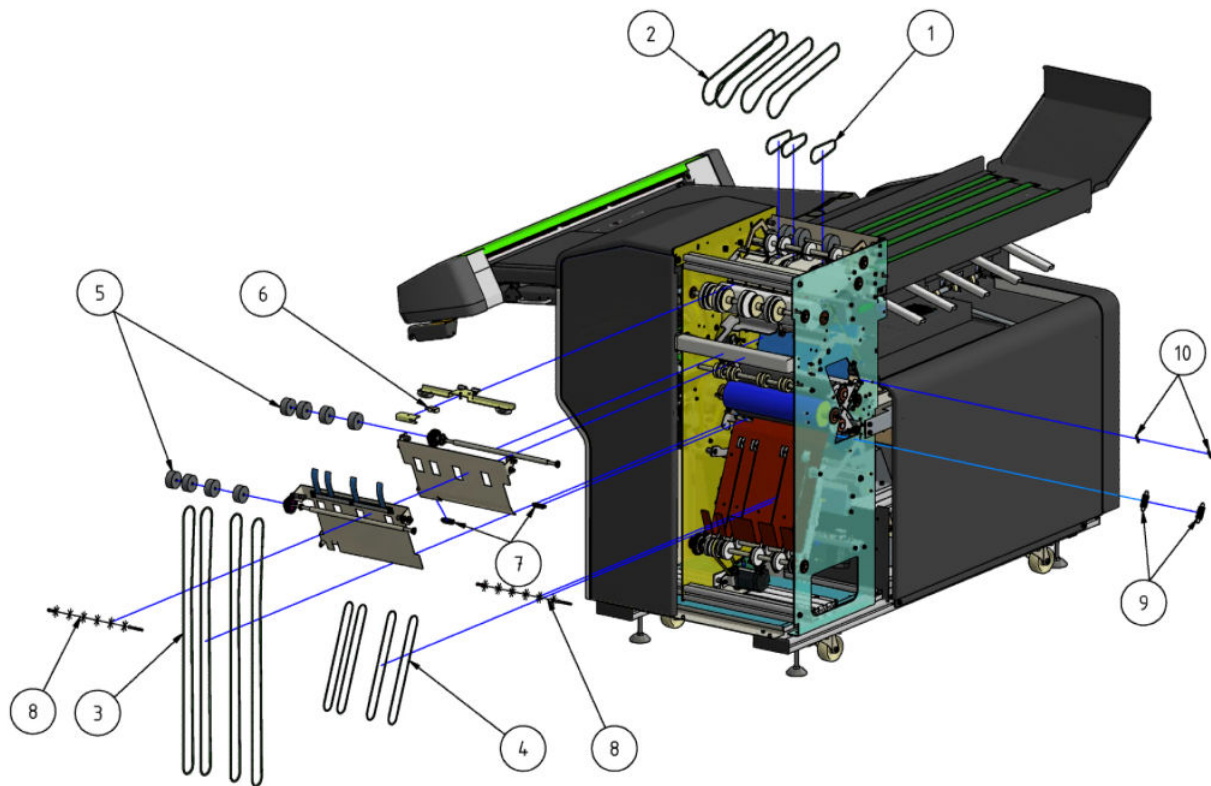
	Part number	Description
1	K5H75-67149	Drive unit fan-folder (FF X47 from Serial Number DE62J11001)
2	K5H75-67151	Drive unit fan-folder (FF X30)
3	K5H75-67152	Drive unit fan-folder (FF X45)
4	K5H75-67153	Stepper motor (from Serial Number DE62J11001)
5	K5H75-67013	Paper sensor (from Serial Number DE62J11001)
6	K5H75-67092	Tension spring 10x1 - 72
7	K5H75-67132	Drive unit outlet belt
8	K5H75-67169	Single board compatible with FF X30, FF X47, CF X47

Cross-folder knife and tilt-tray drives



	Part number	Description
1	L3M58-67006	Drive unit knife assembly (2) (for SNs below DE6B911001)
2	K5H75-67055	Drive unit tilt-tray assembly (for SNs below DE6B911001)
3	K5H75-67056	Drive unit, belt kit rear (for SNs below DE6B911001)
	K5H75-67129	Drive unit, belt kit rear (for SNs higher than DE6B911001))

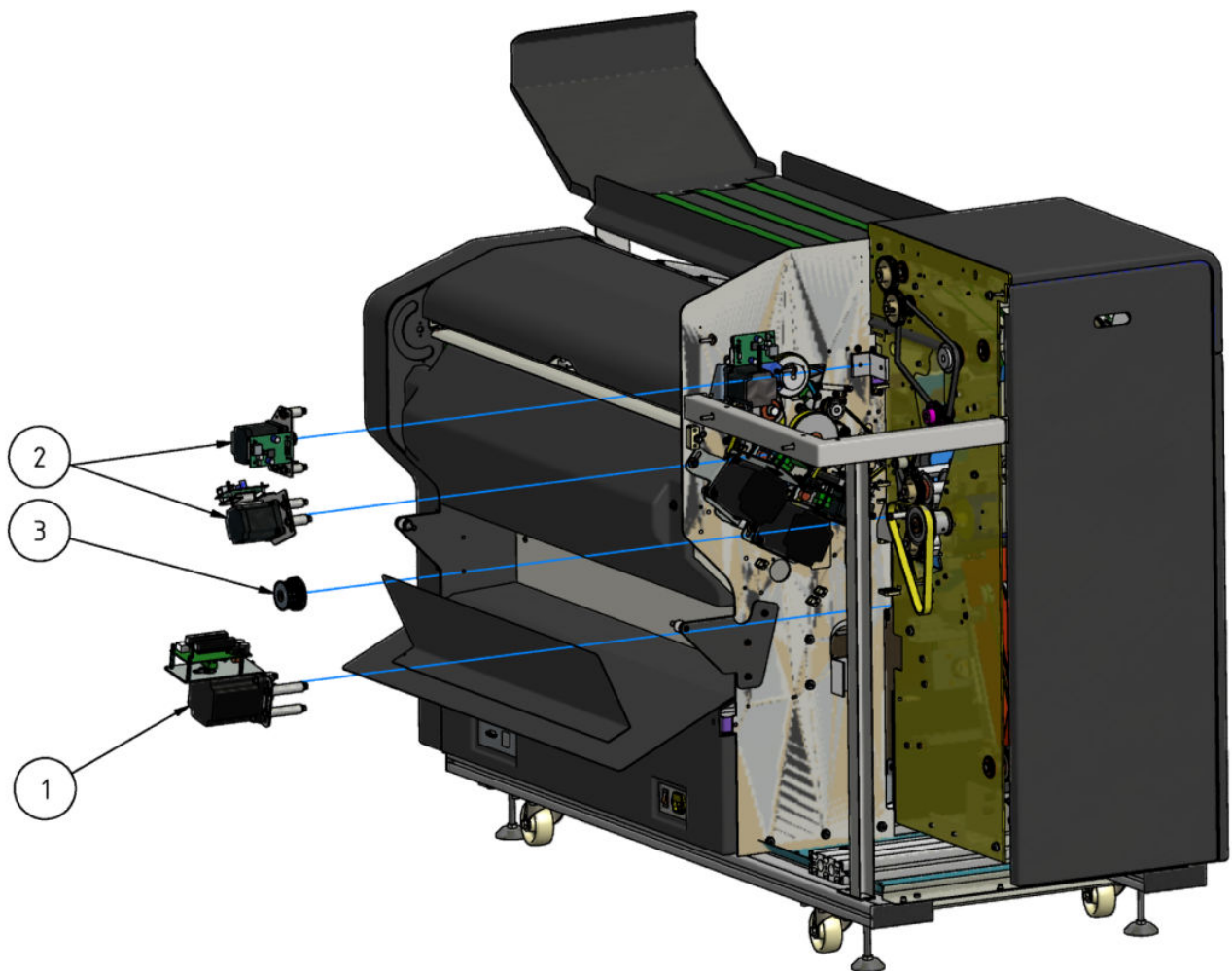
Cross-folder paper path and transport belts



	Part number	Description
1	K5H75-67101	Ejection belt CF outlet (3) (4 mm diameter, 270 mm length) (see note below)
2	K5H75-67137	Transport belt CF top (4) (4 mm diameter, 775 mm length) (see note below) from Serial Number DE62J11001 onwards
3	K5H75-67101	Transport belt CF rear (4) (4 mm diameter, 1580 mm length) (see note below)
4	K5H75-67101	Round-belt tilt tray (4) (3 mm diameter, 650 mm length) (see note below)
5	K5H75-67014	Foam roller (8)
6	K5H75-67073	Safety switch CF
7	K5H75-67125	Paper sensor (2)
8	L3M58-67022	Discharge cable 298 assembly (2)
9	K5H75-67138	Cross-fold spring (2)
10	K5H75-67111	cross-fold spring top (2)

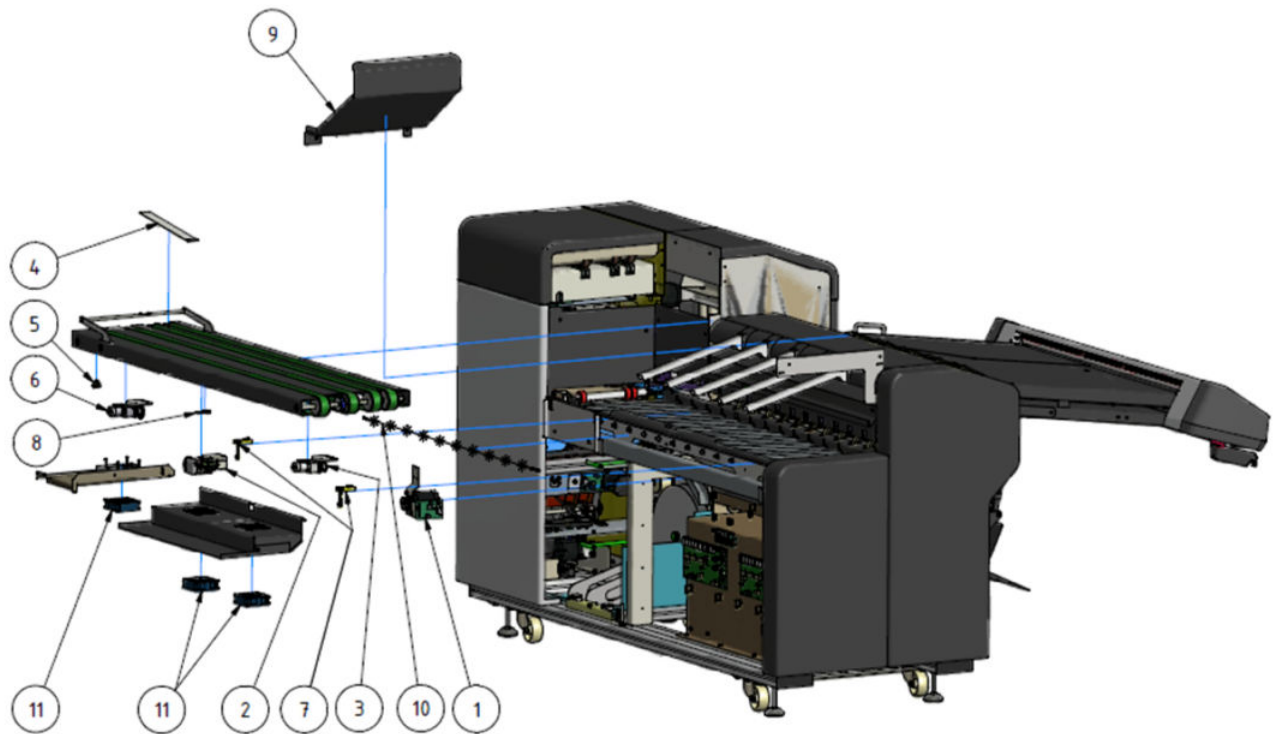
 **NOTE:** Service kit KH575-67101 contains 3 meters of 3mm rubber belt plus 3 meters of 4mm rubber belt. In order to repair the belts, you also need to order the following parts: the Iron Solder SVS kit (K5H75-67099) and the Support and joining tool (KH575-67100).

Cross-folder drive side



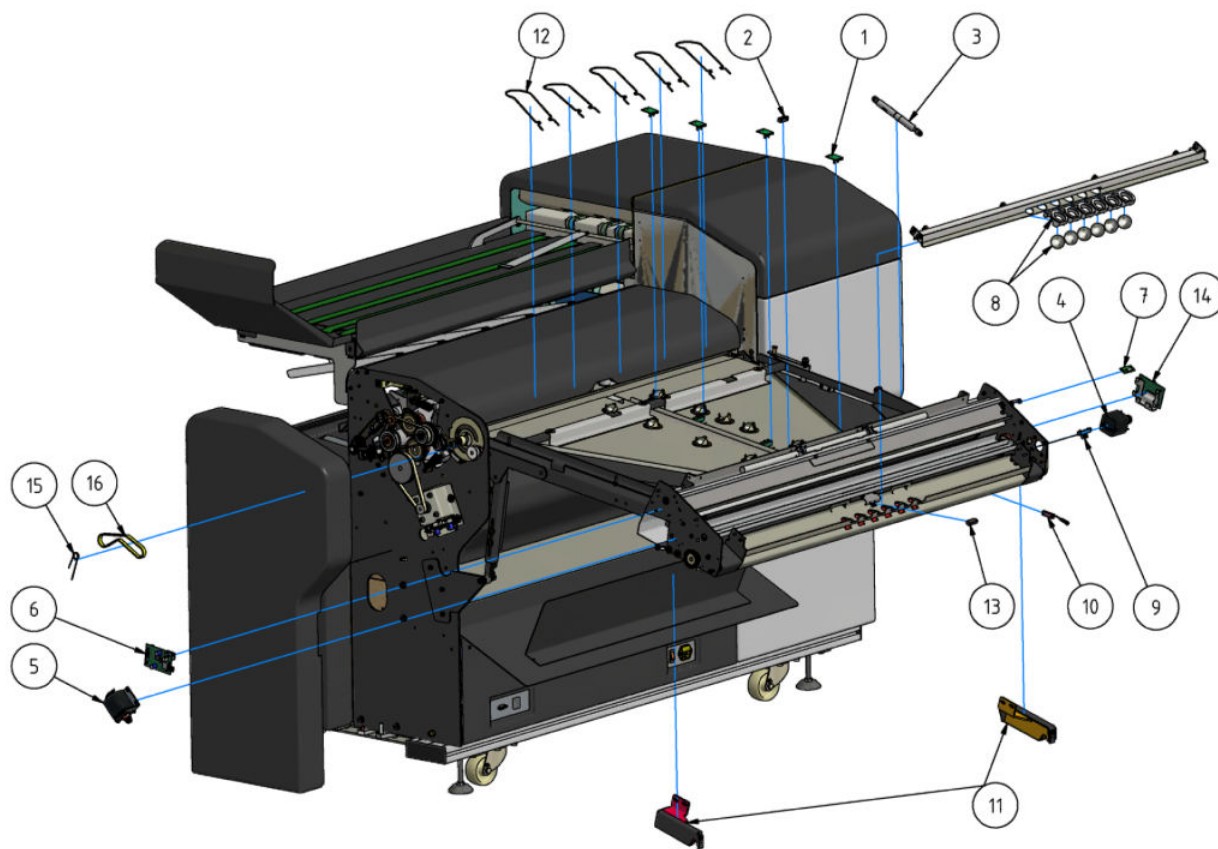
	Part number	Description
1	K5H75-67049	Drive unit fold roller CF X47 (for SNs below DE6B911001)
	K5H75-67156	Drive unit fold roller CF X47
2	K5H75-67065	Motor assembly CF X31CF-X42CF (for SNs below DE6B911001)
	K5H75-67157	Motor assembly CF X31CF-X42CF
3	K5H75-67130	CF folding roller Sprocket

Roll tray and conveyor



	Part number	Description
1	K5H75-67053	Drive unit roll tray X45CF (for SNs below DE6B911001)
	K5H75-67158	Drive unit roll tray X45CF
2	K5H75-67065	Drive unit pressure roller (for SNs below DE57H11001)
	K5H75-67159	Drive unit pressure roller
3	K5H75-67046	Drive unit conveyor (2)
4	K5H75-67058	Foil strip assembly
5	K5H75-67078	Switch
6	K5H75-67112	Drive unit conveyor with sensor (for SNs below DE6B911001)
	K5H75-67160	Drive unit conveyor with sensor (for SNs DE6B911001 and above)
7	K5H75-67133	Long Plot Brackets Service Kit (2 pieces) (from SN DE6B911001)
8	K5H75-67076	W32 sensor
9	K5H75-67002	Conveyor extension
10	L3M58-67007	Discharge cable 1008 (for folder with tabs)
	K5H75-67085	Discharge cable 948 (for folder without tabs)
11	K5H75-67109	Blowing Box Fan (3) (for folder with tabs)
	K5H75-67109	Blowing Box Fan (2) (for folder without tabs)
12	K5H75-67182	Fan to CF-CONTRL. X52 cable

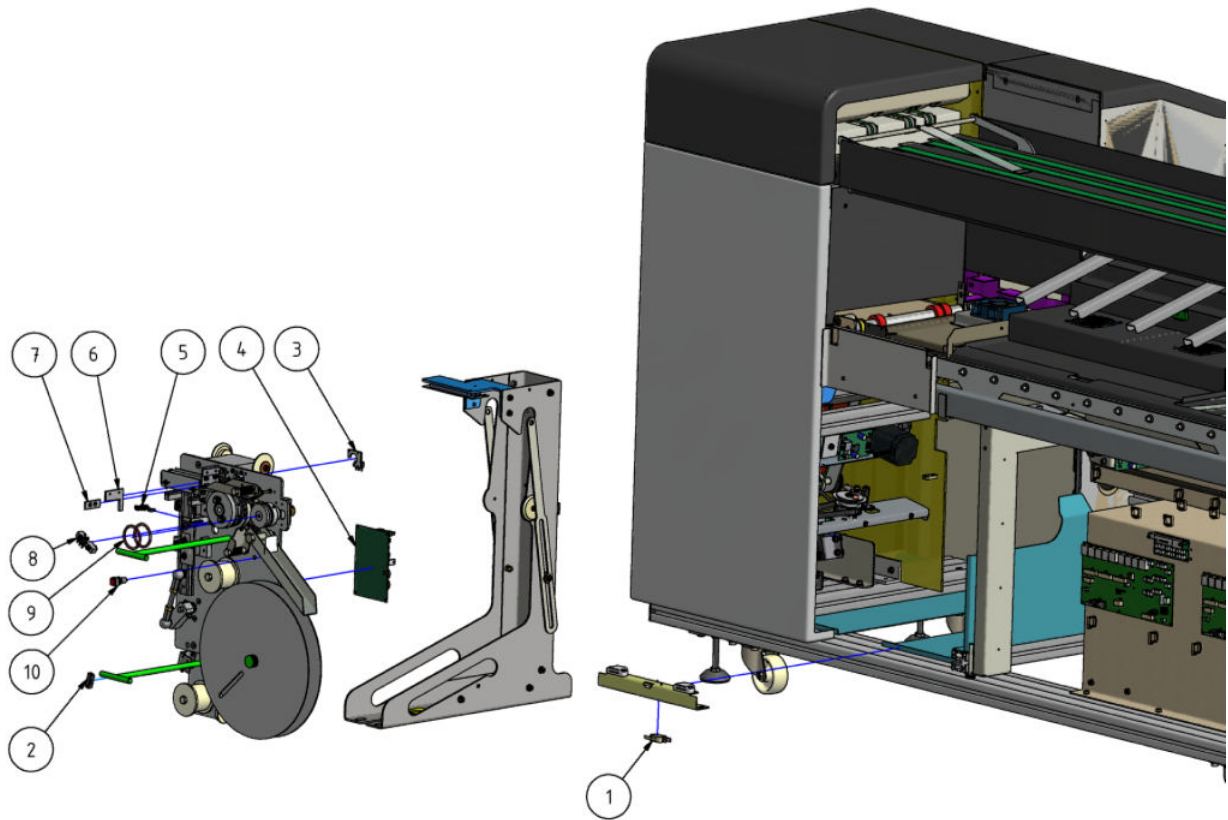
Bridge and interface



	Part number	Description
1	K5H75-67077	Sensor with protector 10 mm (4)
2	K5H75-67075	Bin-full sensor
3	K5H75-67060	Gas spring 350N
4	K5H75-67066	Motor drive shafts interface
5	K5H75-67054	Drive unit switch
6	K5H75-67025	Control board switch (for SNs below DE6B911001)
	K5H75-67161	Control board switch (for SNs DE6B911001 and above)
7	K5H75-67062	LP M 1829 LED Controller
8	K5H75-67091	Ball dia. 32mm and cage SVS KIT
9	K5H75-67076	W32 sensor
10	K5H75-67071	Reed sensor (S 23)
11	K5H75-67008	Printer interface hooks SVS kit
12	K5H75-67003	Bridge grid (5)
13	K5H75-67013	Paper sensor
14	K5H75-67094	Control-board drive interface rake X51FF (for SNs below DE6B911001)

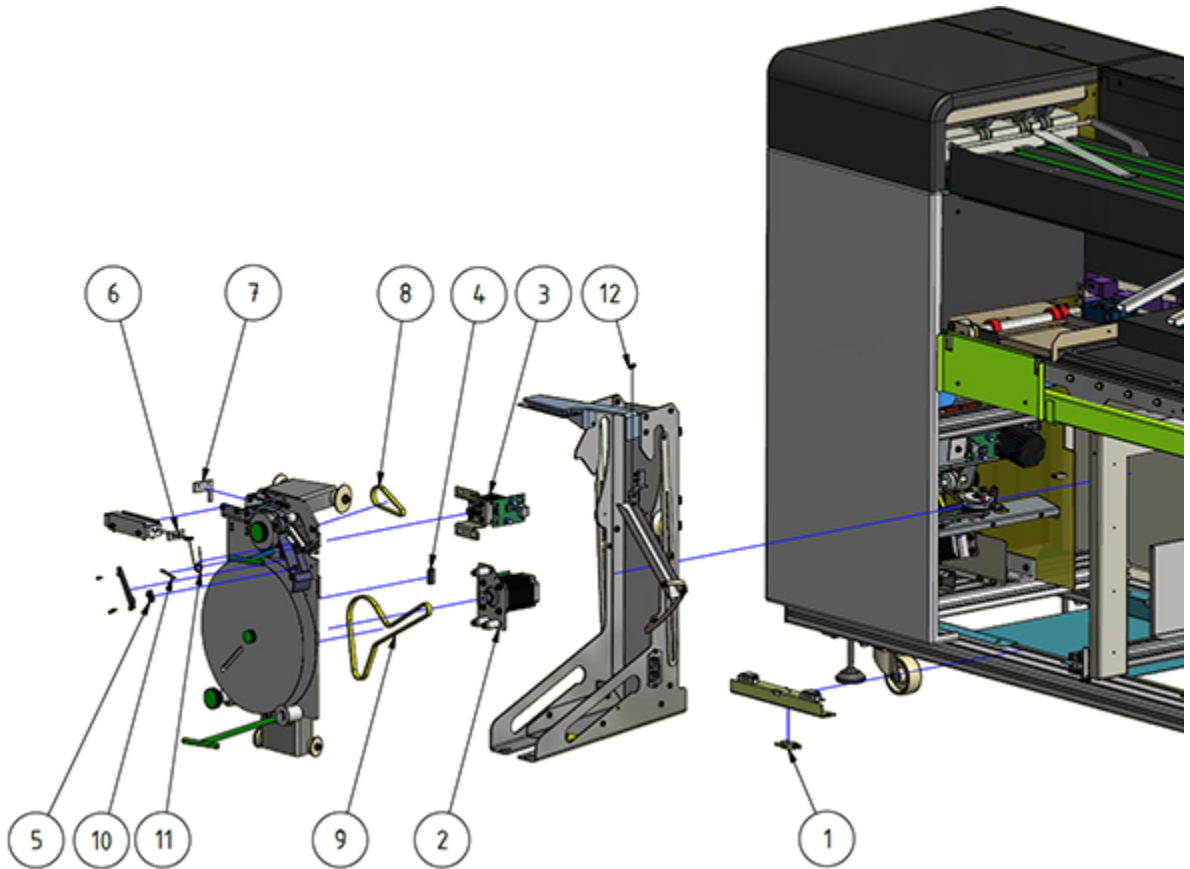
	Part number	Description
	K5H75-67162	Control-board drive interface rake X51FF (for SNs DE6B911001 and above)
15	K5H75-67093	Torsion spring
16	K5H75-67123	Toothed belt 10 T5 - 325 lg. SVS KIT

Tab (HF)



	Part number	Description
1	L3M58-67008	Safety switch tab
2	K5H75-67075	Bin full sensor
3	L3M58-67009	Switch jam detection
4	L3M58-67010	Control board M1304-0
5	K5H75-67076	W32 sensor
6	L3M58-67011	Knife, top
7	L3M58-67012	Knife, bottom
8	L3M58-67013	Holder with micro-switch
9	L3M58-67014	O-ring 37.69 × 3.53 (2)
10	L3M58-67015	Press key

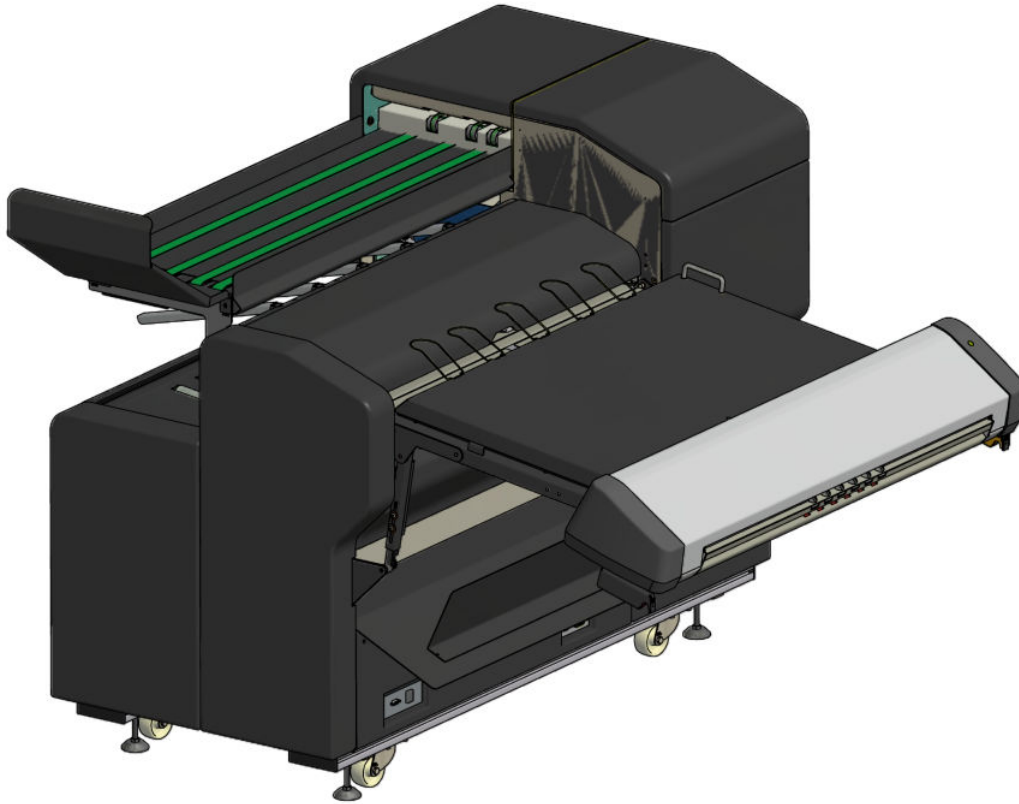
Tab (from S/N DE91XXXXX)



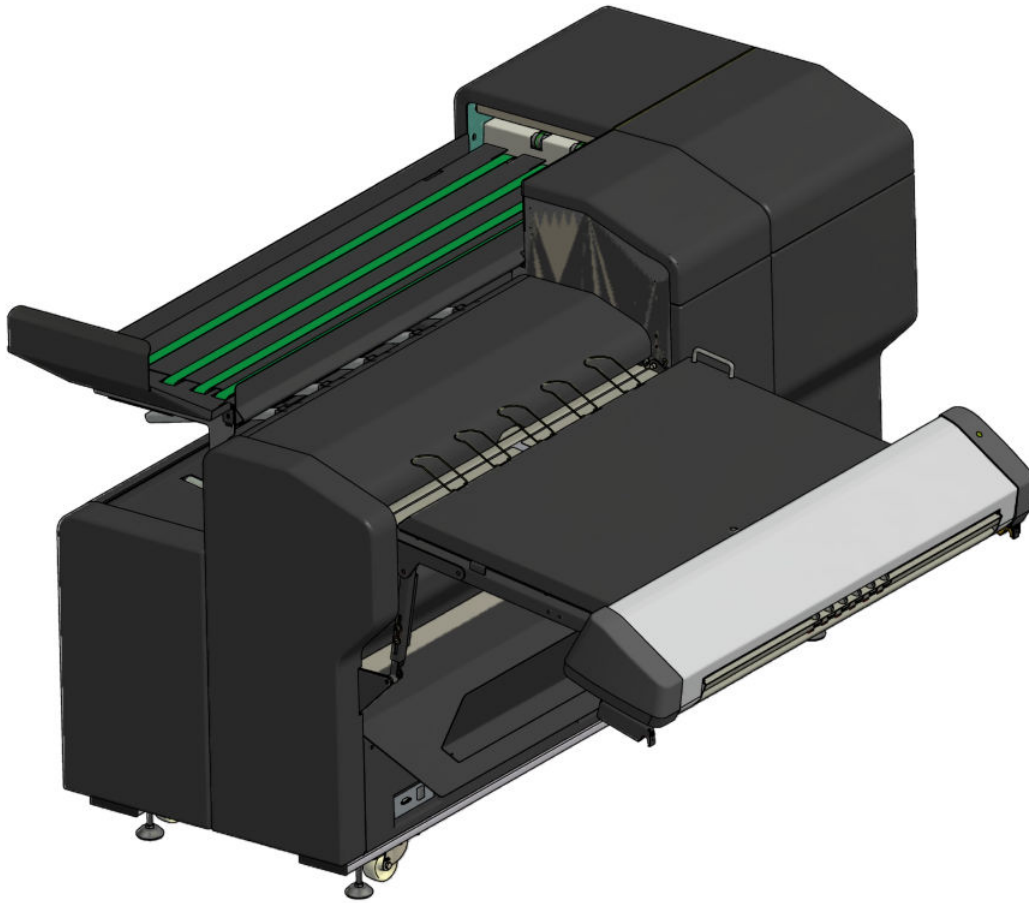
	Part number	Description
2	L3M58-67033	Stamp motor
3	L3M58-67034	Spiked roller motor
5	L3M58-67035	Paper sensor_tab reel identifier
7	L3M58-67036	Top knife
8	L3M58-67037	Toothed belt HTD 3M/216/9M wide
9	L3M58-67038	Toothed belt HTD 5M/710/9M wide
10	L3M58-67039	Discharge brush

Additional low-end folder parts

Assembled folder

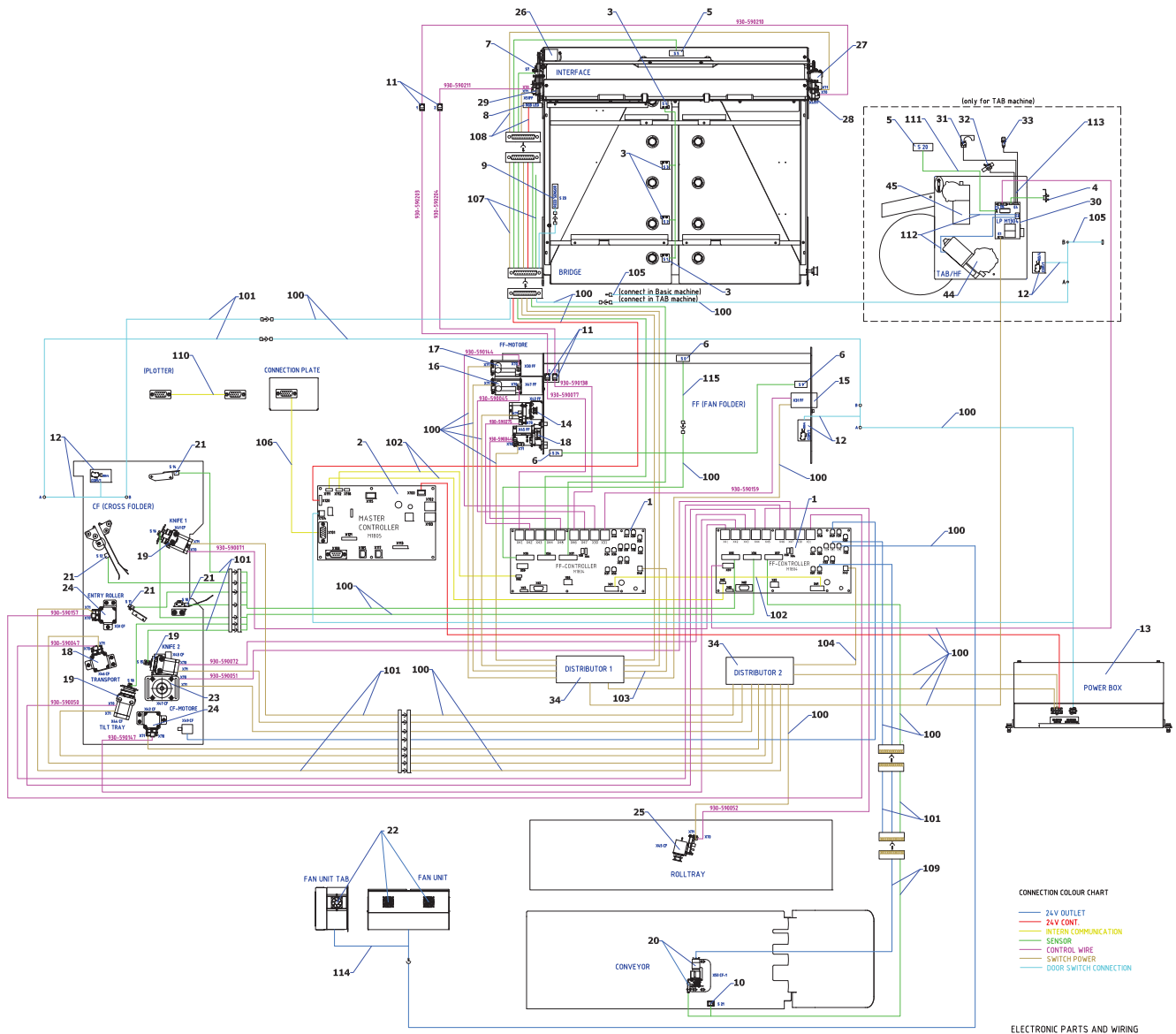


Assembled folder (with TAB)



	Part number	Description
1	1EW99-67001	Rear bottom Cover CF Service Kit (black-painted version of K5H75-67029)
2	1EW99-67002	Front bottom Cover CF Service Kit (black-painted version of K5H75-67027))
3	1EW99-67003	Power box assembly Service Kit (the same as K5H75-67010 but different voltage range, please see specs)
4	1EW99-67005	Drive unit entry roller Service Kit (FFX30). Same picture as #2 here: Cross-folder input and output on page 1618

Electronic parts and wiring



Electronic parts

	Part number	Description
1	K5H75-67059	Fold control board LP M1804 (2)
2	K5H75-67064	Master control board LP
3	K5H75-67077	Sensor M1825 (4)
4	K5H75-67076	W32 sensor (3)
5	K5H75-67075	Sensor PS117 (2)
6	K5H75-67013	Paper sensor PS119 (8)
7	K5H75-67069	PB adaptor for W4 sensor
8	K5H75-67062	LP M 1829 LED controller
9	K5H75-67071	Reed sensor (S 23)
10	K5H75-67078	Switch
12	K5H75-67098	Safety switch with cable
13	K5H75-67010	Power box assembly
14	K5H75-67153	Drive unit swivel rake
15	K5H75-67045	Drive unit bottom rake
16	K5H75-67048	Drive unit fan-folder
17	K5H75-67047	Drive unit entry roller
18	K5H75-67152	Drive unit outlet belt
19	K5H75-67154	Drive unit knife/tilt tray assembly
20	K5H75-67160	Drive unit conveyor with sensor
21	K5H75-67125	Paper Sensor
22	K5H75-67109	Blowing Box Fan SVS Kit
23	K5H75-67049	Drive unit fold roller CF
24	K5H75-67065	Motor assembly (2)
25	K5H75-67053	Drive unit roll tray
26	K5H75-67103	Drive unit pressure roller
27	K5H75-67046	Drive unit conveyor (2)
28	K5H75-67066	Motor drive shafts interface
29	K5H75-67054	Drive unit switch
30	K5H75-67025	Control board switch (2)
31	K5H75-67162	Control board drive switch/FF rake
32	L3M58-67010	Control board M1304-0
33	L3M58-67009	Switch jam detection
34	L3M58-67013	Holder with micro switch

Electronic parts (continued)

	Part number	Description
35	L3M58-67015	Press key
36	K5H75-67102	Power Distribution PCA (2)
	K5H75-67163	Fan to CF-CONTRL. X52 cable (from SN DE6B91 1001)

Wiring

	Part number	Description
100	L3M58-67016	Cable EDS W14 (for folder with tabs) FF: 930-590202 - TAB: 930-590188/A
101	K5H75-67019	Cable tree 6011-TAB 24V / signals CF/FF
102	K5H75-67021	Cable tree FF-Contr.- CF-Contr.+Master
103	K5H75-67017	Cable EVT W3 Distributor 1 – FF-Controller X40
104	K5H75-67018	Cable EVT W4 Distributor 2 – FF-Controller X40
105	K5H75-67016	Cable EDS W4
106	K5H75-67009	CAN cable LP M1805 – connection plate
107	K5H75-67020	Cable tree bridge 6011
108	L3M58-67023	Cable tree interface 6011
109	K5H75-67015	Cable ECF W50/W51/W57 part 2
	L3M58-67030	Cable ECF W50/W51/W57-Tab part 2 (for folder with tabs)
110	K5H75-67024	CAN cable extern
111	L3M58-67017	Cable EHA W6; M1304/E6 - S20 (for folder with tabs)
112	L3M58-67018	Cable EHA W2; M1304/E2 motors (for folder with tabs)
113	L3M58-67019	Cable EHA W4; M1304/E4 micro-switch (for folder with tabs)
114	L3M58-67026	Cable adapter Fan Unit Tab (for folder with tabs)

Tools to support belt repairs and folder adjustments

Part number	Service kit	Comment
K5H75-67098	Safety switch key	Part used to habilitate safety switches without covers to adjust the folder. Adjustment to be done by qualified support personnel.
K5H75-67099	Iron solder	Solder to melt rubber belt ends

Part number	Service kit	Comment
K5H75-67100	Support and joining tool	Support to hold rubber belts while soldering them
K5H75-67113	Iron Solder 110 V SVS Kit	Solder to melt rubber belt ends.

Maintenance activity

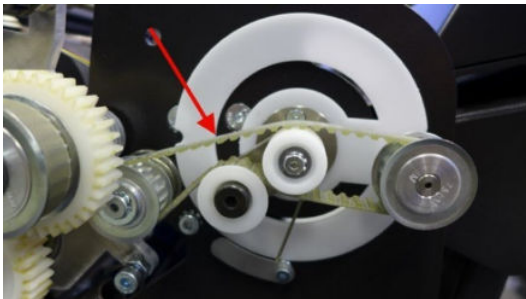
Two services have to be performed:

Maintenance plan

- [First and second service maintenances on page 1633](#) after 300,000 meters or 300,000 copies
- [First and second service maintenances on page 1633](#) after 600,000 meters or 600,000 copies

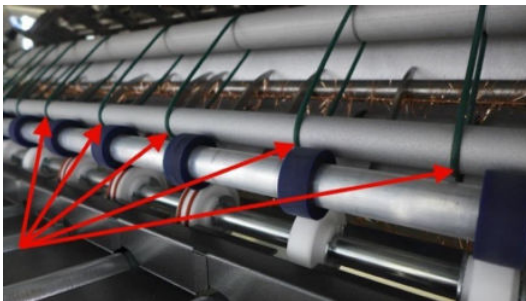
First and second service maintenances

Fan Folder



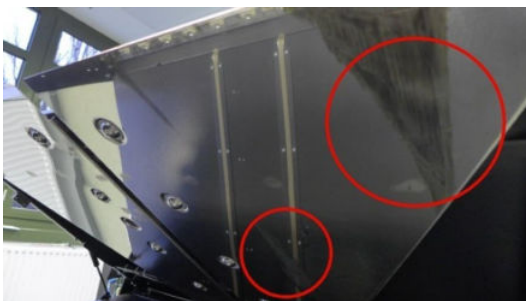
Checking:

- Lightly grease the belt (see picture)
- If any parts are worn out, please exchange them



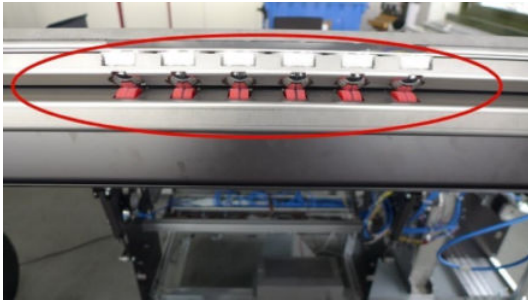
Checking:

- Check the green Fan-folder belts
- If any parts are worn out, please exchange them



Cleaning:

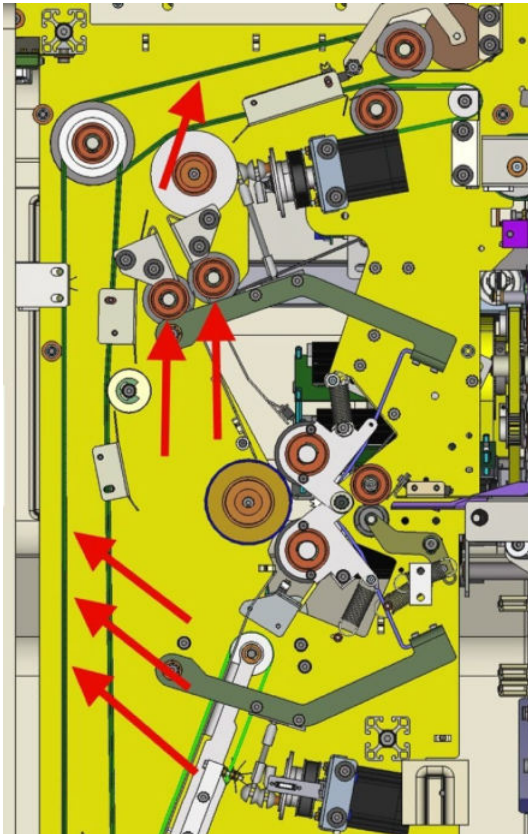
- Open the bridge and clean the paper path with alcohol



Checking:

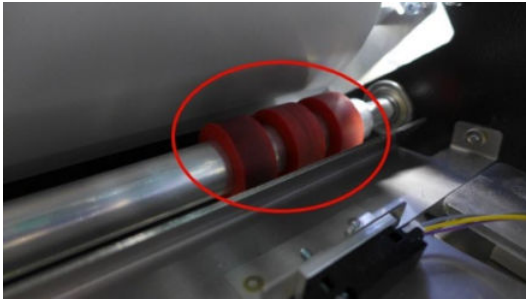
- Clean the interface entrance with alcohol

Cross Folder



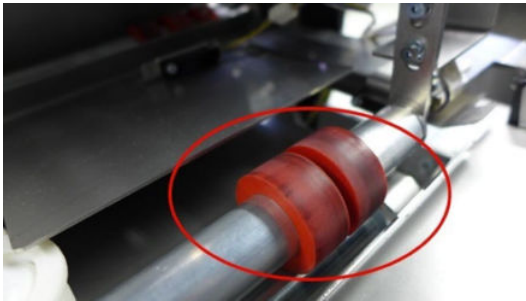
Checking:

- Check the green belts at the back side of the Cross-folder
- Check the Foam roller
- If any parts are worn out, please exchange them

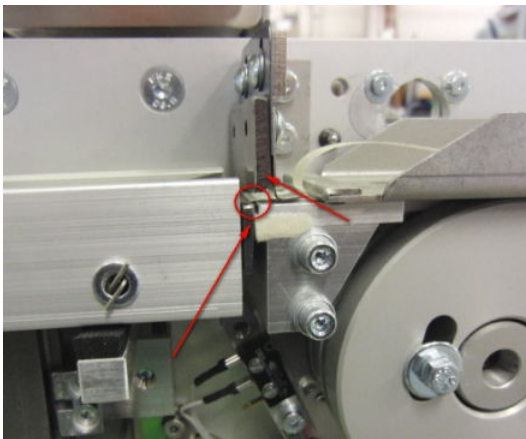


Cleaning:

- Clean the red rubber wheels with alcohol



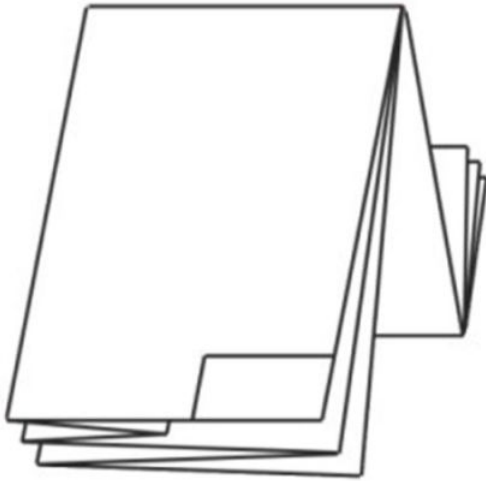
Tab Applicator



Checking:

- Check the upper and lower Tab applicator knives
- Check quality and adjust if necessary

Verify folding quality



Checking:

- Check straightness
See [Folder FF skew adjustment on page 1534](#)
 - Check the accuracy of the Fan-fold
See [Check the accuracy of the Fan-fold on page 1561](#)
 - Check cross-fold size
See [Check cross-fold size on page 1561](#)
 - Check if the cross-fold is straight
See [Check that the cross-fold is straight on page 1562](#)
 - Check manual input
See [Check manual input on page 1563](#)
 - Check the position of the Reinforcement strip
See [Check the position of the reinforcement strip on page 1563](#)
-

Folder reshipment

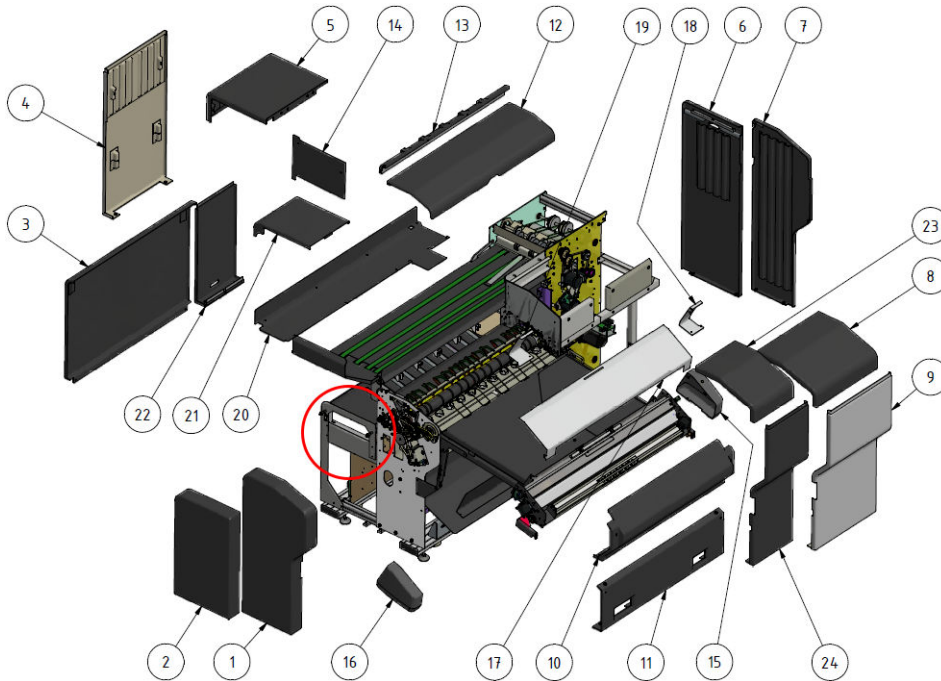
Reshipment to a new site

1. Disassemble the folder by performing the [Folder assembly instructions on page 1364](#) in reverse, omitting the 5000 printer series adjustment.
2. Ship the folder to its new location.
3. Reassemble the folder according to the [Folder assembly instructions on page 1364](#).

Passing through a doorway

1. Adjust the levelling pads to their highest position (see step 16 of the [Folder assembly instructions on page 1364](#)).
2. Depending on the width of the door, you may need to perform the following steps of the [Folder assembly instructions on page 1364](#):
 - Width > 125 cm: steps 5, 10, 15, 16
 - Width 90–125 cm: steps 3–7, 10, 12–16
 - Width 80–90 cm: all steps (two people and half an hour required)
3. Unscrew the gas springs (see step 11 of the [Folder assembly instructions on page 1364](#)).
4. Unscrew the safety screw (see step 6 of the [Folder assembly instructions on page 1364](#)).
5. Lift the bridge (see step 22 of the [Folder assembly instructions on page 1364](#)).
6. Secure the bridge with a rope to prevent it from rotating down.
7. Remove the fan-fold tray (see step 10 of the [Folder assembly instructions on page 1364](#)).

8. Remove the fan-fold cover left (1), the roll tray cover left (2), and the roll tray cover (3) (see below).



9. Remove the metallic part circled in red above.
10. Move the folder carefully to its new location.
11. Reinstall the metallic part and the covers.
12. Reinstall the fan-fold tray (see step 10 of the [Folder assembly instructions on page 1364](#)).
13. Reinstall the safety screw (see step 21 of the [Folder assembly instructions on page 1364](#)).
14. Reinstall the gas springs (see step 11 of the [Folder assembly instructions on page 1364](#)).
15. Let the bridge down (see step 22 of the [Folder assembly instructions on page 1364](#)).
16. Make the final adjustments (see the [Folder assembly instructions on page 1364](#)).

Prepare the folder to be moved up or down stairs by a moving company

1. Adjust the levelling pads to their highest position (see step 16 of the [Folder assembly instructions on page 1364](#)).
2. Remove all the bottom covers.
3. Remove the bridge (see [Install the folder bridge on page 1479](#)).
4. Pass ropes through the bottom corners and lift the folder carefully to its new location.
5. Unscrew the hooks and reinstall the bridge and the bottom covers.
6. Make the final adjustments (see the [Folder assembly instructions on page 1364](#)).

Purchase of tabs

Two-hole tab rolls

- Length of a roll: 200 m = about 1800 tabs with two holes
- Standard material: Foil white, available from stock
- For other materials, please ask for the delivery time
- Minimum purchase: One packaging unit (PU) = 5 rolls

Price list from 01-01-2015

Material	Order number	1 PU = 5 rolls	2 PU = 10 rolls	5 PU = 25 rolls	10 PU = 50 rolls
Foil white	240-242200	€ 40 per roll	€ 37 per roll	€ 34 per roll	€ 31 per roll

These prices apply to items supplied from Berlin.

Contact details

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- ES-TE Folding System GmbH, Zitadellenweg 34, 13599 Berlin

Telephone: +49-303699613

Fax: +49-3036996159

<http://www.es-te.com>

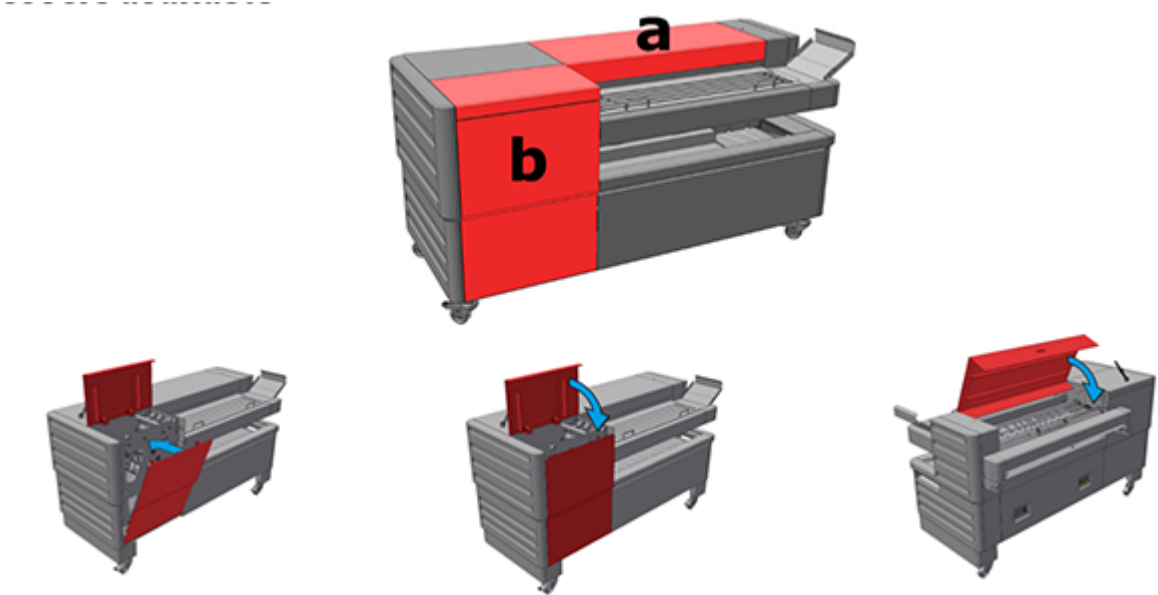
<mailto:info@es-te.de>

14 Folder F40

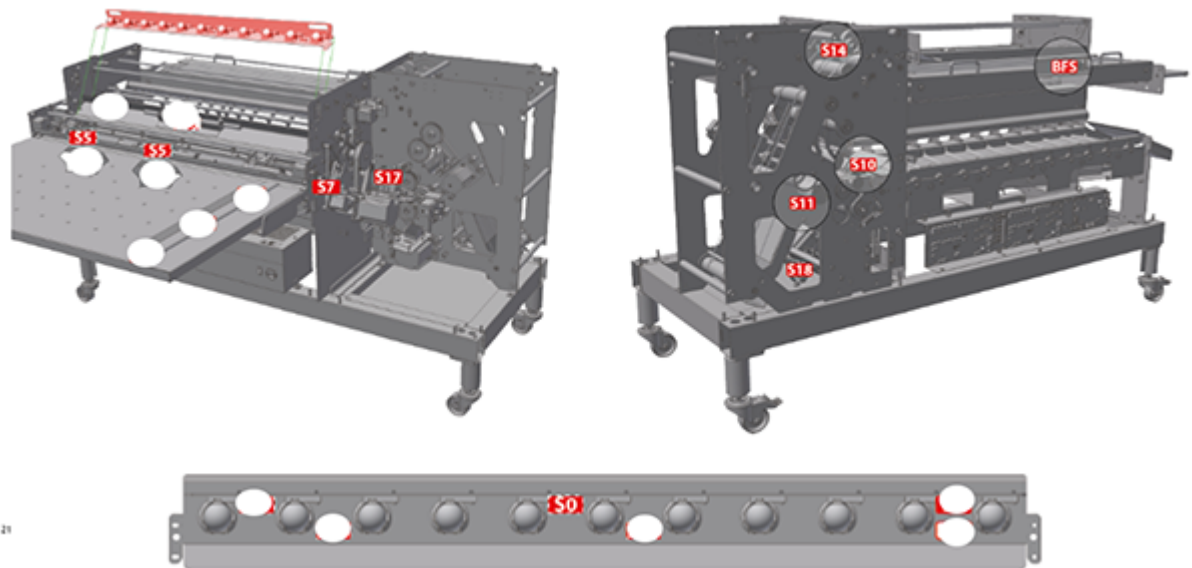
- [Folder overview](#)
- [Folder versions](#)
- [Folder fundamentals](#)
- [Folder specifications](#)
- [Connecting to the printer](#)
- [Folder assembly instructions](#)
- [System error codes](#)
- [Troubleshooting](#)
- [Reset to factory defaults](#)
- [Firmware update](#)
- [Service](#)
- [Adjust folding quality](#)
- [Folding quality specifications](#)
- [Service menu – Parameter configuration: Fan-fold settings](#)
- [Service Menu – Parameter configuration: Cross-fold settings](#)
- [Service Menu – Parameter configuration: Set part number](#)
- [Service Menu – Configuration file](#)
- [Folder electrical devices](#)
- [Folder parts and diagrams](#)
- [Folder removal and installation](#)

Folder overview

Covers available



Sensors available



Folder versions

There is one version of the HP 40 folder:

- HP F40 Folder (3JJ54A)

Other folder SKUs can be found in [Folder versions on page 1332](#).

Folder fundamentals

See section [Folder fundamentals on page 1333](#), they are the same as for other folder SKUs with the exception that **inverse DIN** and **AFNOR** are not supported in the F40 folder.

Folder specifications

Specifications for the 3JJ54A folder

Sheet folding	Face-up
Folding options	Fan-fold, cross-fold
Folding standards supported	DIN 824A, DIN 824B, ANSI, fan-fold only with restrictions: DIN C, ARCH
Cross-folding style	Z and M types
Maximum speed	12 m/min
Minimum speed	Minimum speed of the printer
Compatible with printer basket	Yes
Maximum paper width	914 mm (36 in)
Maximum paper path width	950 mm ± 2 mm
Minimum paper size	A4 landscape
Fan-folded panel size range	170–230 mm
Cross-folded panel size range	250–320 mm
Maximum length of cross-folded job	13 folds (14 layers). Maximum length depends on the CF panel width used
Maximum length of fan-folded job	27 folds (28 layers). Maximum length depends on the FF panel width used
Justification	Center
Margin size range	0–40 mm
Paper weight range with best quality	75–80 g/m ²
Stacking on folder bridge	No
Support for manual folding	No
Number of conveyor trays for cross-folding	1
Conveyor tray capacity	80 A0 sheets
Folder capacity sensors	Conveyor full, out of tab labels, paper on bridge
Folding accuracy	DIN (±2 mm)
Folder life	900,000 A0 sheets or equivalent length
Front panel	No
LED indicators	Yes
Maximum start-up time	30 s
Power cords	Four different sets
Voltage range	100 V – 120 V / 200 V – 240 V

Specifications for the 3JJ54A folder (continued)

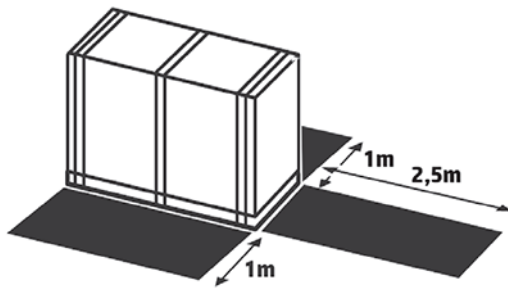
Power save modes	Sleep, Ready
Maximum power consumption	250 W
Operating temperature	15–35°C
Operating humidity	20–80%
Dimensions	1.86 m × 0.86 m × 0.94 m; with packaging 1.85 m × 1.07 m × 1.315 m
Weight	247 kg
Weight with packaging	300 kg
HP printers supported	HP PageWide XL 6000/5X00/4x00/3900 MFP

Connecting to the printer

See [Connecting to the printer on page 1360](#).

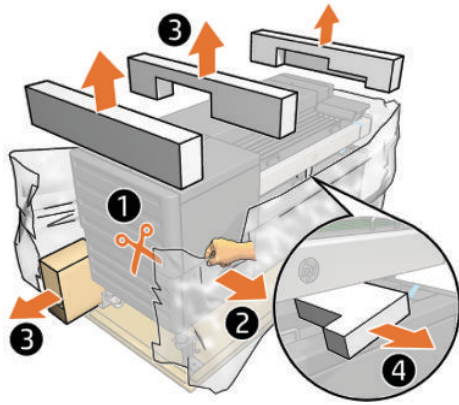
Folder assembly instructions

- The space required for assembly is 2.5 m (8.2 feet) at the front and 1 m (3.3 feet) on each side.

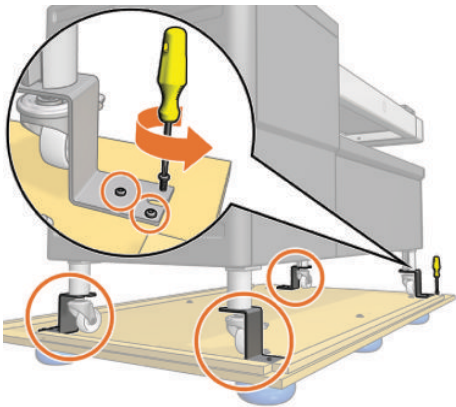


- 2 people are required to perform certain tasks.
 - The time required for assembly is approximately 90 minutes.
 - Tools needed: Allen, torx, and Phillips screwdrivers, and wrench tool.
1. Cut the plastic bag and remove the foams.

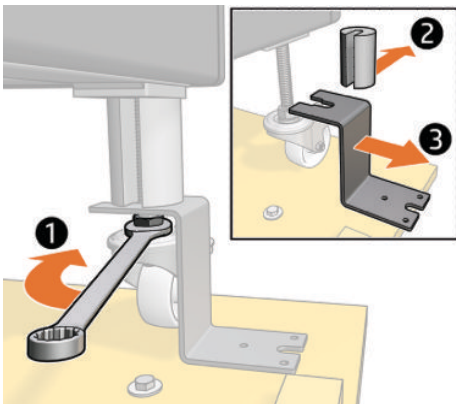
For HP-authorized personnel only



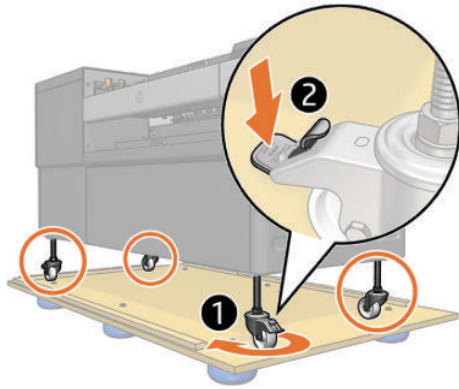
2. Remove the three screws (x4)..



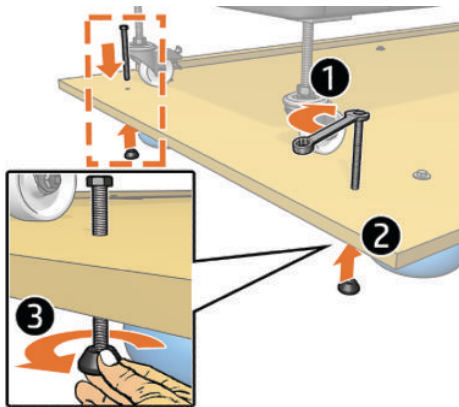
3. Unscrew the nut. Remove the spacer and the four shipping brackets.



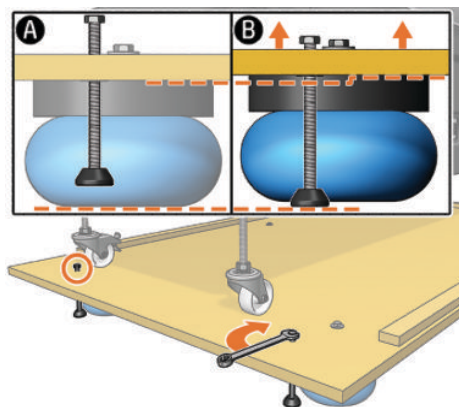
4. Position the four wheels in the direction of the ramp, then lock the two front wheels.




5. The pallet has two long hexagonal headed screws. Put the rounded support below the screws to avoid marking the floor.




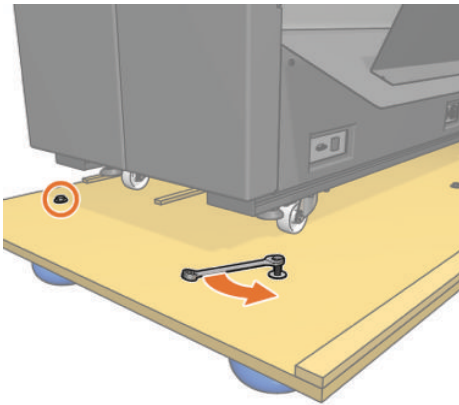
6. Screw down the screws to raise the folder.



7. Unscrew the two air dampened cushions.


 **TIP:** A mechanical screwdriver is recommended to remove the screw from each air dampened cushion.

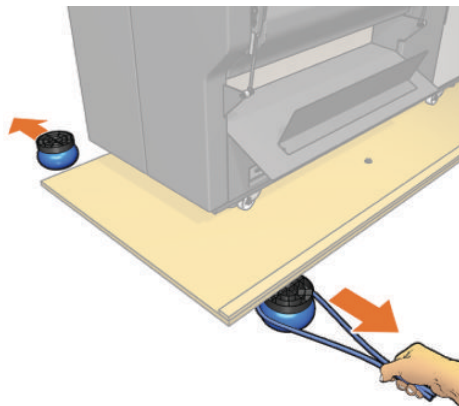
 **IMPORTANT:** Two people are required, as one person must hold the folder on the other side.



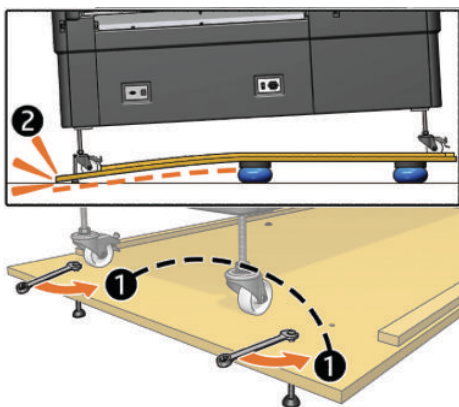
8. Remove the two air dampened cushions.

 **TIP:** Use a cord or rope to remove them easily.

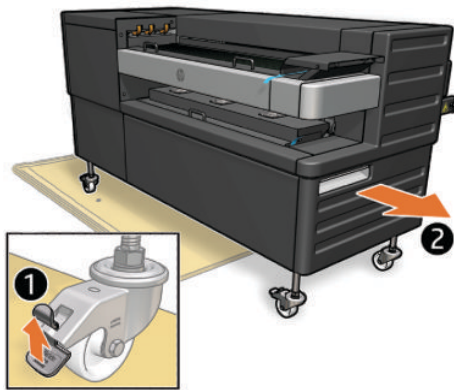
 **IMPORTANT:** Two people are required, as one person must hold the folder on the other side.



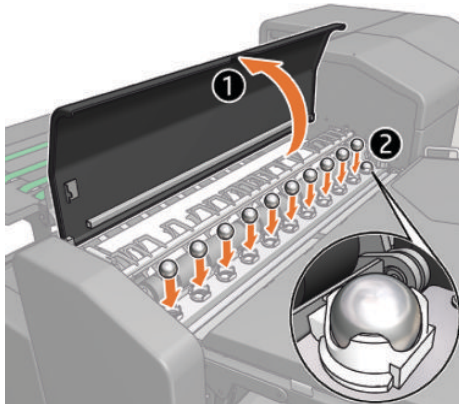
9. Turn the screws a little at a time, first one side, then the other side, to lower the pallet until it reaches the floor.



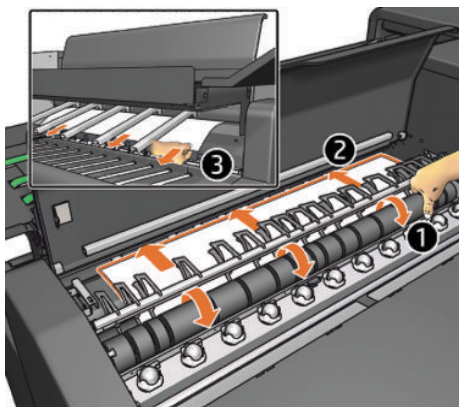
- Using two people, roll the folder off the pallet, using it as a ramp.



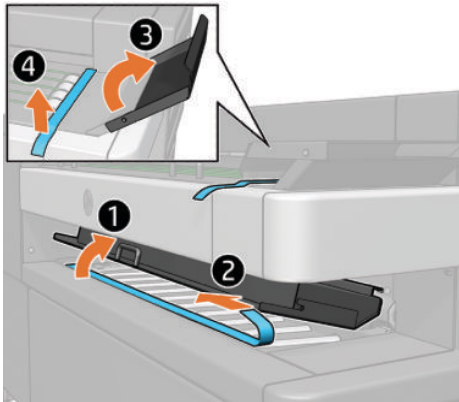
- Open the top cover and make sure that the metal balls on the fan-fold unit are in place.



- Remove the paper. You may need to roll the rollers, and pull the paper from the rear.



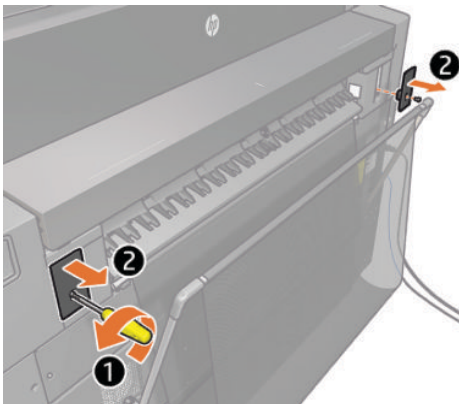
13. Remove the tapes and plastic covers.



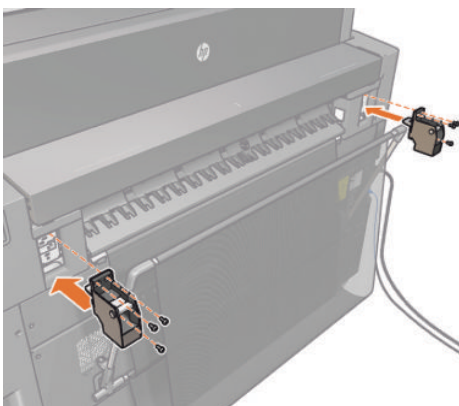
Fix the accessory hooks and level the feet assembly on printers using the folder

These steps should be done in all HP PageWide XL printers that will use the folder.

1. If not done already, remove the covers for the rear accessories.



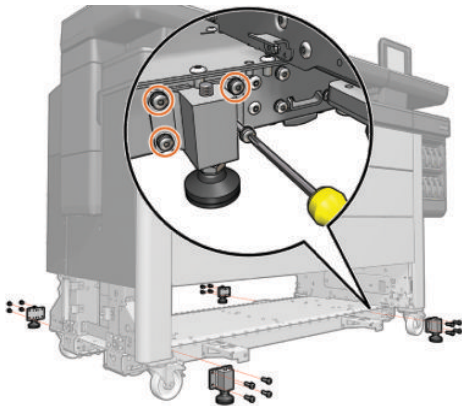
2. Attach the two accessory hooks to the printer with three screws on each side.



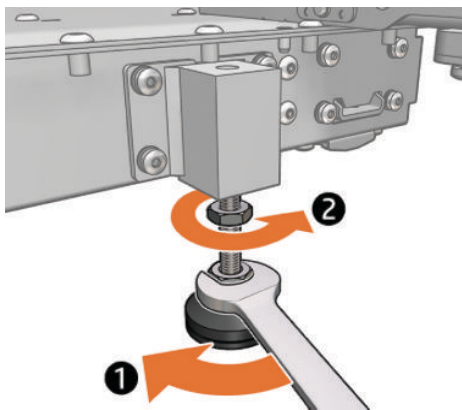
3. Remove the three front and the three back foot covers.



4. Fix the four levelling feet to the structure base with four M6x25 screws on each foot.



5. Level the printer adjusting the height of each foot.

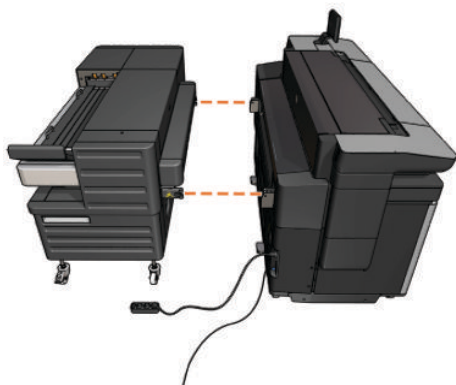


6. Replace all six foot covers.



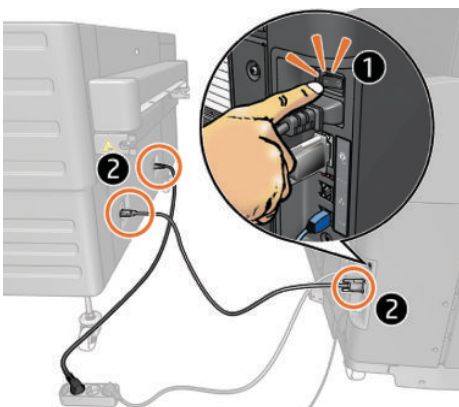
Connect the printer to the folder

1. Place the printer and folder side-by-side, with the printer's output area facing the folder's input area.




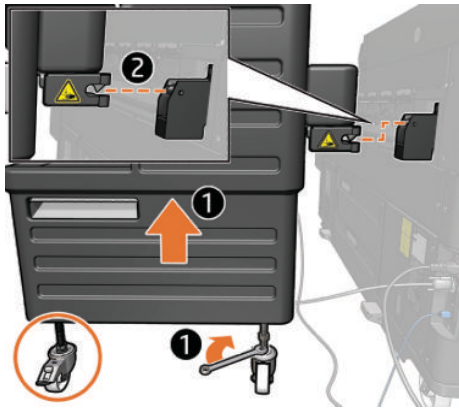
2. Switch off the printer with the rear button. Connect a cable from the folder to the printer and another from the folder to the electrical power supply.

 **NOTE:** The printer's and folder's power cables should be connected to the same power outlet.

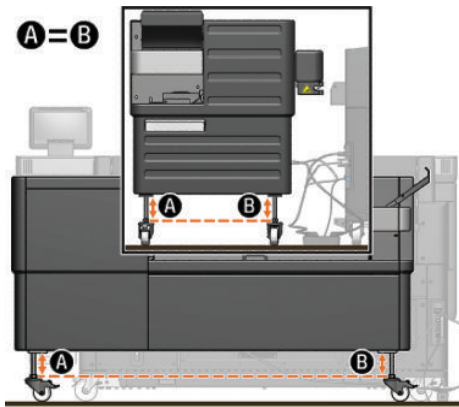


- Level the folder adjusting the height of each foot until the printer's and folder's hooks reach the same height, and the printer's output paper area is aligned with the folder's input area.

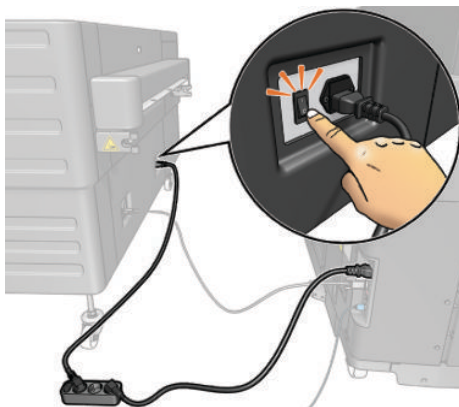
 **TIP:** The brackets removed in step 3 can be used as tools to increase the height.



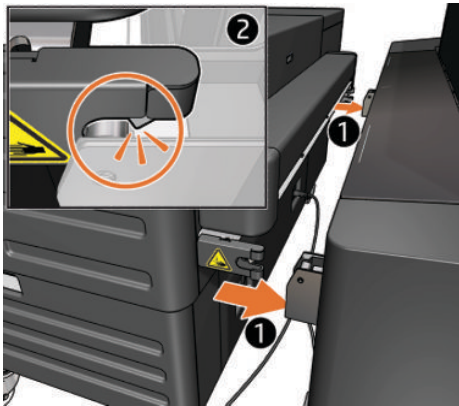
- Adjust the folder's feet, to heighten or lower the hook. Make sure the front and back parts both remain parallel with the floor.



- Switch on the folder with the rear button.



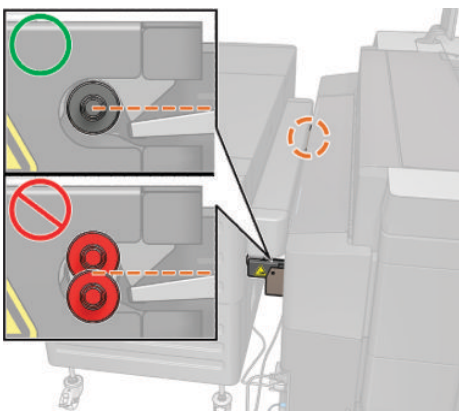
6. Slot the folder into the printer hooks to connect the printer and the folder together.



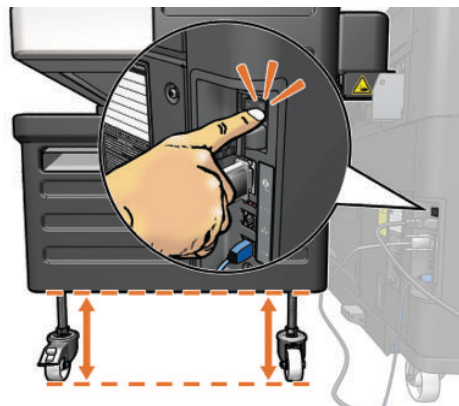
7. Check that the bracket's bar is centered with the hook.

Confirm you can engage and disengage the unit easily.

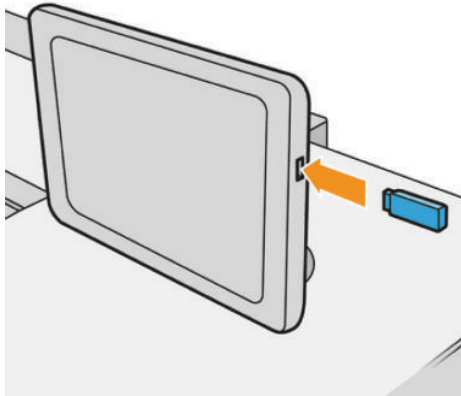
If needed, adjust the folder's feet, to heighten or lower the hook. Make sure the front and back parts both remain parallel with the floor.



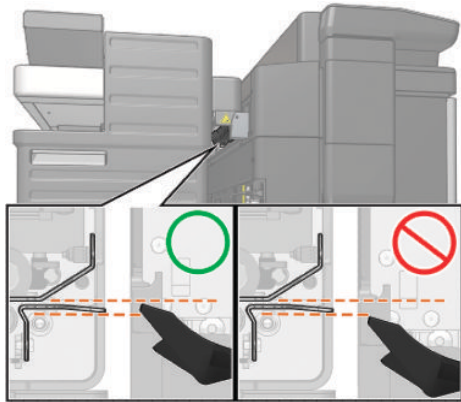
8. Switch on the printer. The printer should recognize and install the folder.



9. Insert the service-key into the USB port.



10. Adjust the diverter to a position slightly above the folder input metal plate from: **Service menu** ► **Accessory utilities** ► **Folder** ► **Calibrate diverter position**.



System error codes

1010-0000-0089 Generic – Wrong event received

Printer is receiving an unknown page ID from Folder.

Call agent:

1. This error may not cause any problem in the printing process, but in most cases it will cause a jam in the Folder. Just follow the media jam process.
2. Re-initialize the Folder, it will be set properly again, and check that you have the latest firmware installed.
3. Ensure there is no paper in the folder media path.

Service engineer:

1. This is a Folder software error, it could be cleaned just rebooting the Folder.
2. Ensure printer and Folder firmware is updated to the latest version available.
3. If the issue persists, it could be caused by flickering of the LB05 sensor.

For HP-authorized personnel only

- a. Check the distance between the LB05 and the paper path.
- b. Replace the sensor.

1010-0000-0090 Generic – Accessory not supported by SKU

Call agent:

1. Check if the printer SKU (part number) supports the accessory.
2. Ensure that the accessory cable is properly connected to the printer.
3. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
4. Detach and unplug the accessory and print using another output destination.

Service engineer:

1. Reconnect and check the accessory interface cable, and replace it if necessary.
2. Check that the product number corresponds to the printer SKU.

1010-0000-0091 Generic – Old firmware version and unable to upgrade

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Unplug the Folder power cord. Reboot and retry.
2. Check that the Folder cabling is undamaged and properly connected. Replace if necessary.
3. Replace, one by one, the Master Controller board, the Cross-folder board, or the Folder Fan boards.

1010-0000-0092 Generic – Unknown firmware version and unable to upgrade

Printer is unable to retrieve which firmware version the Master controller, Folder Fan or Cross-folder boards have, maybe because the Folder is unable to initialize or it is not ready.

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the Folder is up and running with all of its covers closed and retry.
2. Check the cabling of the Master Controller, FF Controller and/or CF Controller PCA.
3. Check the troubleshooting in [Intermittent power supply failures in Folder on page 1489](#).
4. Replace all the boards, one by one.

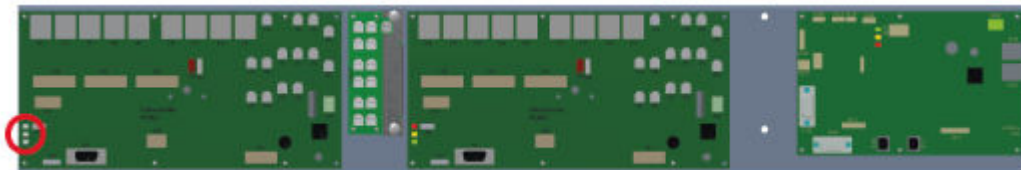
1010-0001-0002 Master controller – Check failure presence initialization error

Call agent:

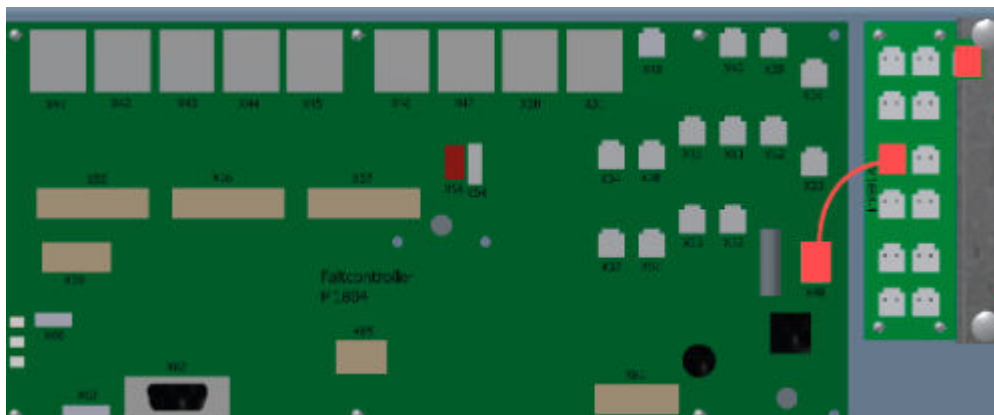
1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check if the failure is due to the FF or CF.
2. Check if the LEDs of the CF- and MC-controller are on and only the FF-controller LEDs are off. If so, continue the process as follows. If everything is OK, go to step 8.

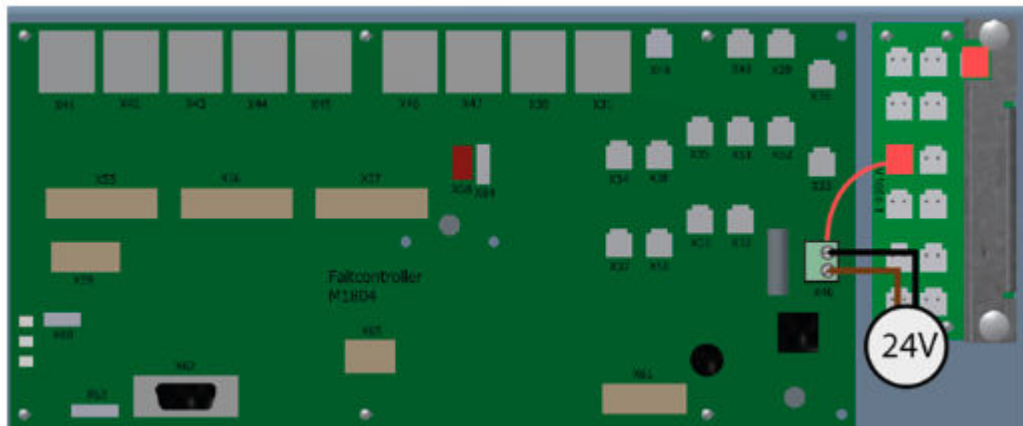


3. Turn off the power of the folder.
4. Remove all the motor power cables from Distributor 1 and FF-controller (in red).

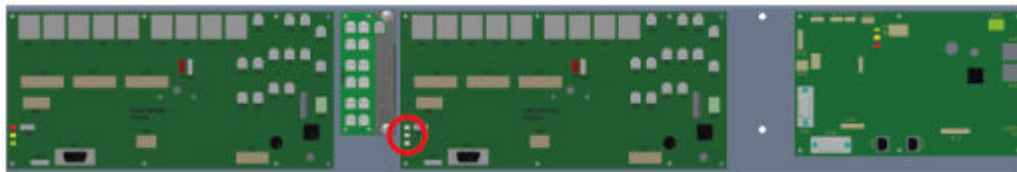


5. Only the power cable of the FF-controller and the power box are plugged.
6. If the controller starts:
 - a. Repeat the following steps as long as the controller starts.
 - i. Turn off the folder.
 - ii. Plug in one motor.
 - iii. Turn on the folder.
 - b. Finally, the controller stays off.
 - c. Follow up the cable from the controller to the motor driver board.
 - d. If the cable is not damaged, replace the motor and driver boards with new ones.

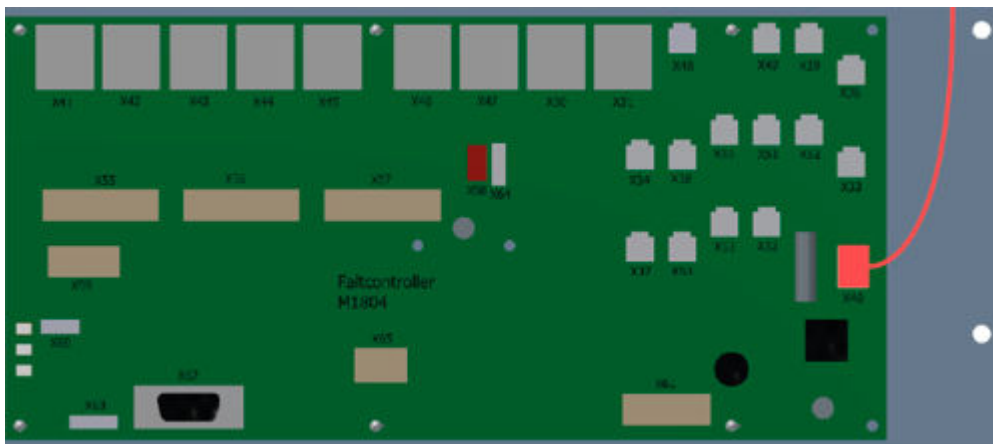
7. If the controller stays off:
 - a. Measure the 24 V voltage at cable EVT W3.



- b. If there is **no power** again, check the distributor and the power box output.
 - c. If there is power, exchange the FF-Controller.
8. The LEDs of the FF- and MC-controller are on and only CF-controller LEDs are off.

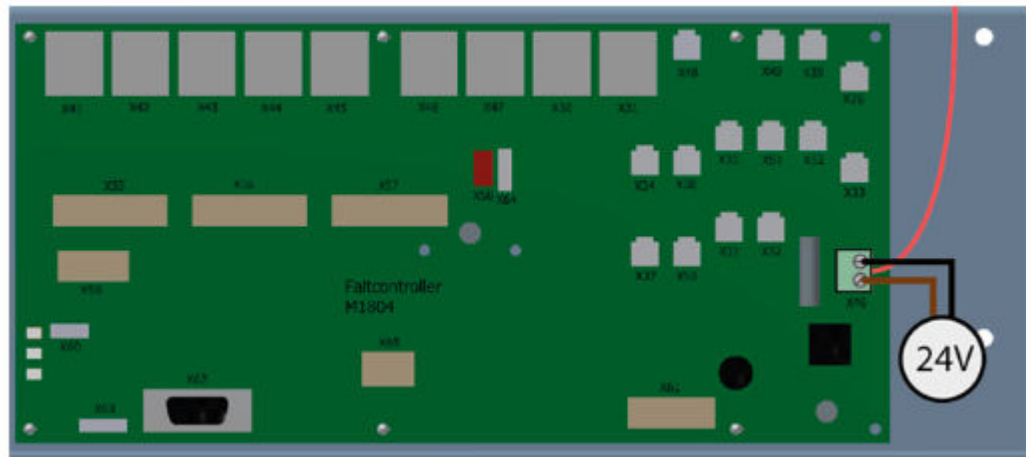


9. Turn off the power of the folder.
10. Remove all the motor power cables from Distributor 2 and CF-controller (in red).



11. Only the power cable of CF-controller and power box are plugged.
12. If the controller starts:
 - a. Repeat the following steps as long as the controller starts.

- i. Turn off the folder.
 - ii. Plug in one motor.
 - iii. Turn on the folder.
- b. Finally, the controller stays off.
 - c. Follow up the cable from the controller to the motor driver board.
 - d. If the cable is not damaged, replace the motor and driver boards with new ones.
13. If the controller stays off:
- a. Measure the 24 V voltage at cable EVT W4.



- b. If there is **no power** again, check the distributor and the power box output.
- c. If there is power, exchange the CF-Controller.

1010-0001-0005 Master controller – Timeout

Routine interrupted during initialization.

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that all the motors and sensors from FF are working properly (Folder diagnostics).
2. Check that the cable from master controller X112 to fan-folder controller X60 is undamaged and unbroken; replace it if necessary.
3. Check that the cable from Fan-folder X40 (930-590178) to Distributor 1 is undamaged and unbroken; replace it if necessary. Use a multimeter to check the electrical conductivity in said cable and check that the cable provides +24 V (continuous).

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4. Check the troubleshooting [Intermittent power supply failures in Folder on page 1489](#).
5. Replace the Fan-Folder Controller PCA.

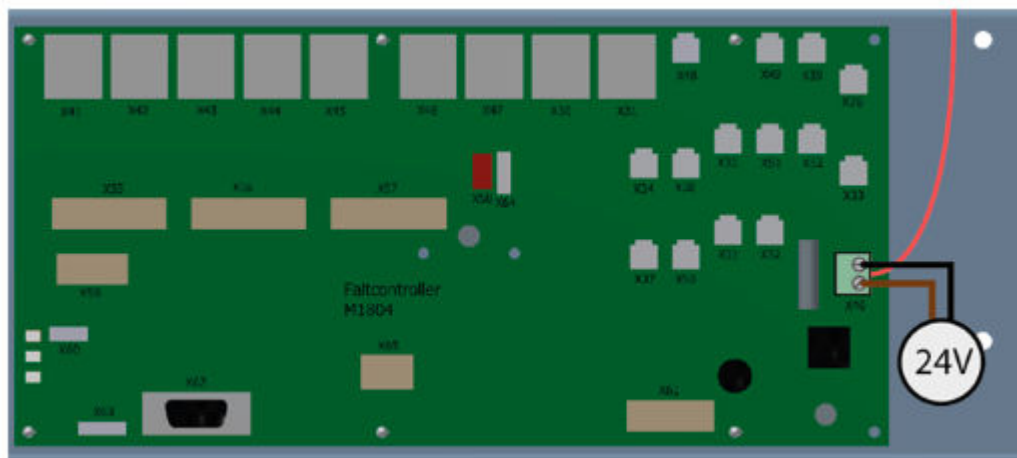
1010-0001-0018 Master controller – Open or closed state

Call agent:

1. Check all covers are properly closed.
2. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
3. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that cover switches are OK.
2. With a multimeter, check if the resistance is OK when the cover is closed (image TBD).
3. Measure the 24 voltage at cable EVT W3 (Fan Fold) or EVT W4 (Cross Fold).



4. If there is **no power** again, check the distributor and the power box output.
5. If there is power, replace the FF-Controller or CF-Controller.

1010-0002-0001 Fan folder – Malfunction error status or state

LB0 or LB05 cut.

Call agent:

1. Check if the sensors LB05 or LB0 are blocked by paper at booting phase.
2. If jam removal does not work perfectly, remove the jam manually.
3. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
4. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LB05/LB0 sensor is properly placed and there is no paper or anything else on it.
2. Check that the LB05/LB0 sensor is properly aligned against the opposite hole to enable proper functionality.
3. Run diagnostic test [1010-11 Check fan-fold sensors on page 528](#). Check that the cable and connectors are undamaged and unbroken; replace them if necessary.



NOTE: After checking the cables and connectors through diagnostics, and before replacing the sensor (in case it is needed), please make sure that the error is not being caused by the printer.

4. Replace the LB05/LB0 sensor if necessary.
5. Check that the FF motors are working properly. Run the FF motor diagnostic tests. Replace the motor or driver if necessary.

1010-0002-0080 Fan folder – Board in wrong spot

The fan-folder board has got the firmware of the cross-folder board.

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Reinstall the firmware.
2. Replace the PCA in the Fan-folder spot for a correct one.

1010-0002-0087 Fan folder – No paper at sensor

Not paper at sensor LB0. The Folder is expecting a plot which never arrived there.

Call agent:

1. Check there is no paper or anything else in the paper path.
2. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
3. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LB0 sensor is properly placed and there is no paper or anything else in the paper path.
2. Run diagnostic test [1010-11 Check fan-fold sensors on page 528](#). Check that the cable and connectors are undamaged and unbroken; replace them if necessary.
3. Replace the LB0 sensor if necessary.
4. Check that the FF motors are working properly. Run the FF motor diagnostic tests. Replace motor or driver if necessary.

1010-0003-0001 Cross folder – Malfunction error status or state

LB10 cut or LB11 cut or LB14 cut.

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LB10/LB11/LB14 sensor is properly placed and there is no paper or anything else on it.
2. Check that the LB10/LB11/LB14 sensor is properly aligned against the opposite hole to enable proper functionality.
3. Run diagnostic test [1010-25 Check cross-fold sensors on page 536](#). Check that the cable and connectors are undamaged and unbroken; replace them if necessary.



NOTE: After checking the cables and connectors through diagnostics, and before replacing the sensor (in case it is needed), please make sure that the error is not being caused by the printer.

4. Replace the LB10/LB11/LB14 sensor if necessary.
5. Check that the CF motors are working properly. Run the CF motor diagnostic tests. Replace the motor or driver if necessary.

1010-0003-0008 Cross folder – Jam

Call agent:

1. Check that there is no paper jammed or any other agent in the paper path (sensor LB11, between sensors LB11 and LB14 or sensor LB14).
2. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
3. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the paper-presence sensors are properly placed, unbroken, and undamaged.
2. Replace the paper-presence sensors.

1010-0003-0047 Cross folder – Zero calibration zero not found homing error

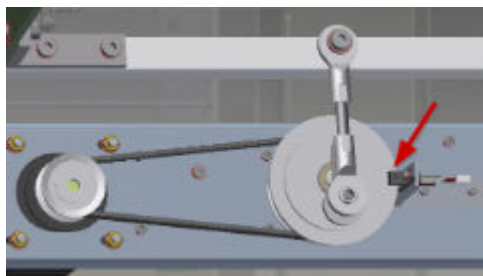
Error initializing the tilt tray.

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check the home tilt tray position. The sensor should see the hole of the encoder.



2. Check if the tilt tray movement is blocked.
3. Replace the broken sensor.

1010-0003-0080 Cross folder – Board in wrong spot

The cross-folder board has got the firmware of the fan-folder board.

Call agent:

1. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
2. Detach and unplug the Folder and print using another output destination.

Service engineer:

- ▲ Replace the PCA in the Cross-folder spot for a correct one.

1010-0003-0087 Cross folder – No paper in sensor

No paper at LB10, LB11 or LB14.

Call agent:

1. Check there is no paper or anything else in the paper path.
2. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
3. Detach and unplug the Folder and print using another output destination.

Service engineer:

1. Check that the LB10/LB11/LB14 sensor is properly placed and there is no paper or anything else on it.
2. Run diagnostic test [1010-25 Check cross-fold sensors on page 536](#). Check that the cable and connectors are undamaged and unbroken; replace them if necessary.
3. Replace the LB10/LB11/LB14 sensor if necessary.
4. Check that the CF motors are working properly. Run the CF motor diagnostic tests. Replace the motor or driver if necessary.

1010-0003-0088 Cross folder – Wrong file format


Erroneous CSV file.

Call agent:

1. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
2. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
3. Detach and unplug the Folder and print using another output destination.

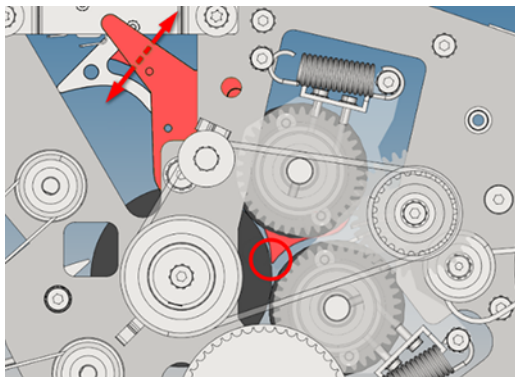
Service engineer:

1. Upgrade printer and Folder firmware to the latest version.
2. Through the folder diagnostics (accessible through the service menu or the diagnostic menu), run the diagnostic test for each CF motor.
3. Run the sensor diagnostic tests.
4. Ensure that there is no paper/TAB preventing the paper from passing through the CF.

 **NOTE:** This error indicates that the CF is not able to perform the required folds. A failure of the upper knife or lower knife could produce such a symptom / System error.

Troubleshooting

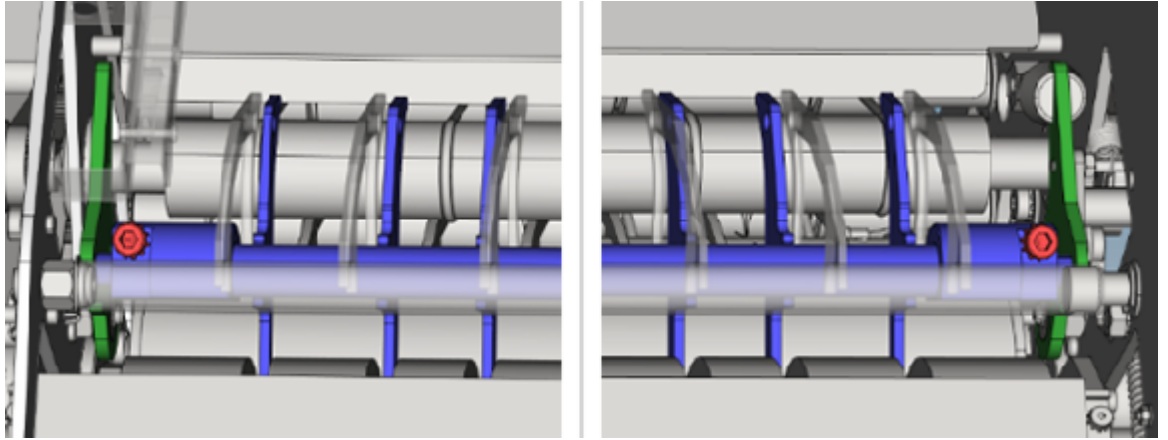
FF guides – no contact



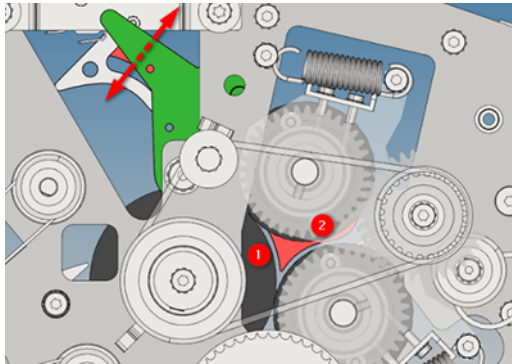
The paper guide should not touch the main roller. If it does:

1. Loosen the screws marked in red.

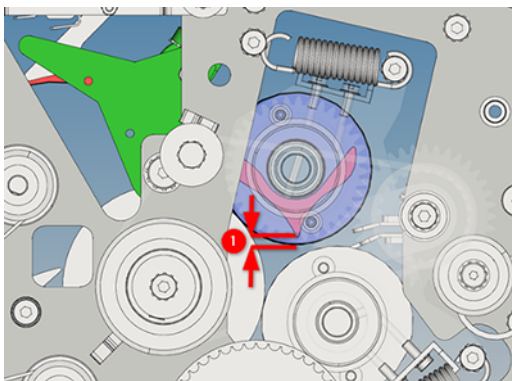
2. The inner part of the paper guide (in blue) is now movable with respect to the outer brackets (in green)



3. Move the inner (in red) and outer (in green) part of the guide until its appearance in the folding triangle is as shown in the picture.
4. After screwing back, re-check the position just in case.



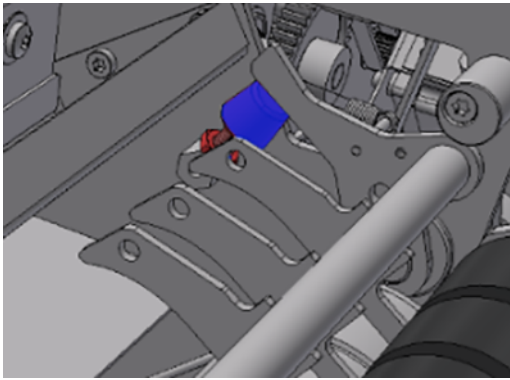
FF guides – home position



In the home position, the paper guide must not be visible in the paper path.

1. The guide fingers should be hidden inside the upper folding roller and should be at a distance of 3 mm to its lower edge.

Verify that the paper guide does not touch the inner core of the folding roller.



To adjust the home position, there is a stopper located at the drive side of the paper guide.


2. Loosen the lock nut (in red) of the stopper (in blue)
3. Turn the stopper to adjust the home position.

Turning it clockwise will increase the distance between the paper guide fingers and the lower edge of the folding roller.

Turning it counter-clockwise will decrease the distance between the paper guide fingers and the lower edge of the folding roller.

Reset to factory defaults

You can press the **Reset** button to restore factory default settings if the folder misbehaves in some way that could be related to the firmware.

 **IMPORTANT:** The **Reset** button takes effect immediately, with no prompt for confirmation: all parameter values are lost and set to the “by default” value. You may find it useful to save your parameters before pressing the button.

After reset, follow the instructions in [Folding quality specifications on page 1560](#).

Firmware update

The folder’s firmware is updated automatically whenever you update the printer’s firmware, and whenever a controller board on the folder is replaced and a firmware update is needed.

Service

Sidebar items	After changing a value, press Save to save the settings.
<ul style="list-style-type: none">• START: Toggles main motor running• STOP: Toggles main motor stop• ALTERNATE: Lets the main motor alternate its direction after a varying number of steps	
Interface settings	Fan-fold steps

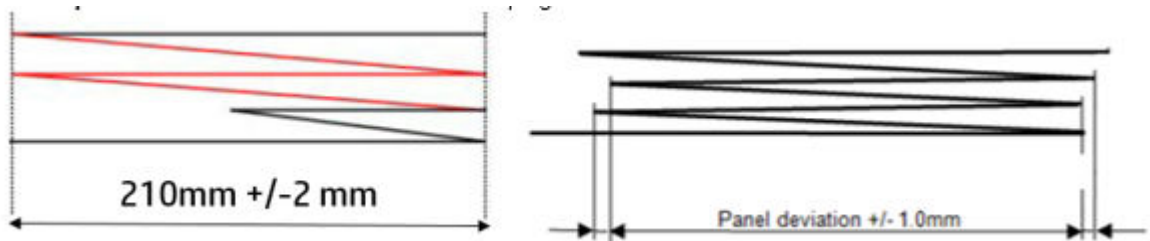
Fan-fold settings	<ul style="list-style-type: none"> • Panel • 1st sheet • Last sheet online • Minimal residual length • Max. fan-fold • High speed • Adjustment FF paper guide (FFX42)
Cross-fold settings	<ul style="list-style-type: none"> • Light barrier 11 adjustment • Upper running direction • Roll tray reverse delay • Folding flap position (CFX43) • Max. cross-fold • Conveyor steps • Time out BIN_FULL
Test interface	<ul style="list-style-type: none"> • Run interface flap motor (FFX41) • Run interface transport motor (FFX46)
Test fan-fold	<ul style="list-style-type: none"> • Run main motor (FFX47) • Run feeding motor (FFX30) • Run paper guide (FFX49) • Test sensors
Test cross-fold	<ul style="list-style-type: none"> • Run tilt tray flap (CXF44) • Run roller tray (CFX45) • Run upper transport motor (CFX42) • Run bin motor (CFX50) • Test sensors
Master controller	<ul style="list-style-type: none"> • Reset to factory defaults (from service menu)

Adjust folding quality

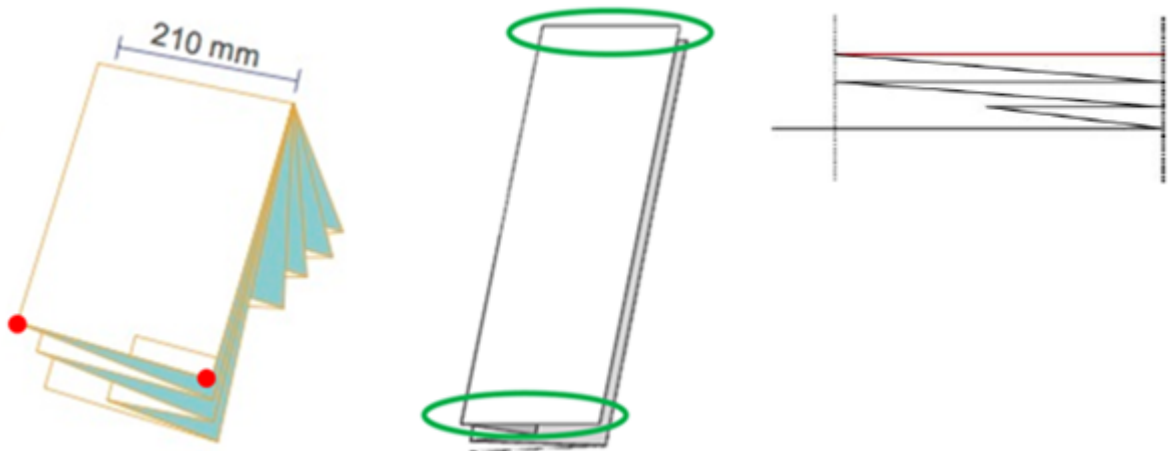
FF dimensions adjustment

1. Print the Folder calibration plot on an A0 roll.

- Go to **Settings ► Service Menu ► Accessory Utilities ► Folder Utilities ► Calibration Plot**.
 - Folding Style: DIN B 210x297 (print to a 841 mm roll size).
 - Print 3 or 4 copies and take the last one as a reference.
2. If no A0 roll is available, you may use a 36" roll but the cross folding lines won't be aligned with the calibration plot lines.
- Folding Style: DIN B 210x305.
3. Check if the fan-fold panel width is 210 mm. If not, modify the **Fan Fold Panel Width** folder parameter on the Service menu and print the calibration plot again. Package width tolerance +/-2 mm with a +/-1 mm panel deviation. See [Panel width on page 1565](#).



4. Check if the fan-fold width of the first sheet is 210 mm between the two points highlighted below (red). Please, measure on both sides on the plot. If the length is not the same, please check if the fan-fold skew is in specs. If so, adjust the longest length in order to match a 210 mm distance (modify the "Fan Fold First Sheet" folder parameter on the Service menu and print the calibration plot again). The first sheet should be in line with the following folds, to a **tolerance of -3 to 0 mm**. See [First sheet on page 1565](#).

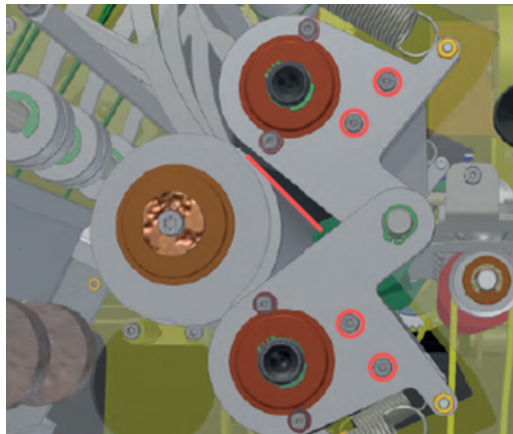


5. Check if the fan-fold last sheet is properly calibrated. Print an A0 DIN B and check that the last fold does not surpass the panel width (the last fold will also measure 210 mm). If it does, modify the "Fan Fold last sheet online" folder parameter on the Service menu. See [Last sheet online on page 1669](#). **The last sheet should have the same size with a +/-2 mm tolerance.**

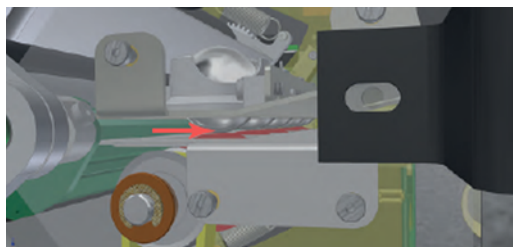
Folder CF skew adjustment



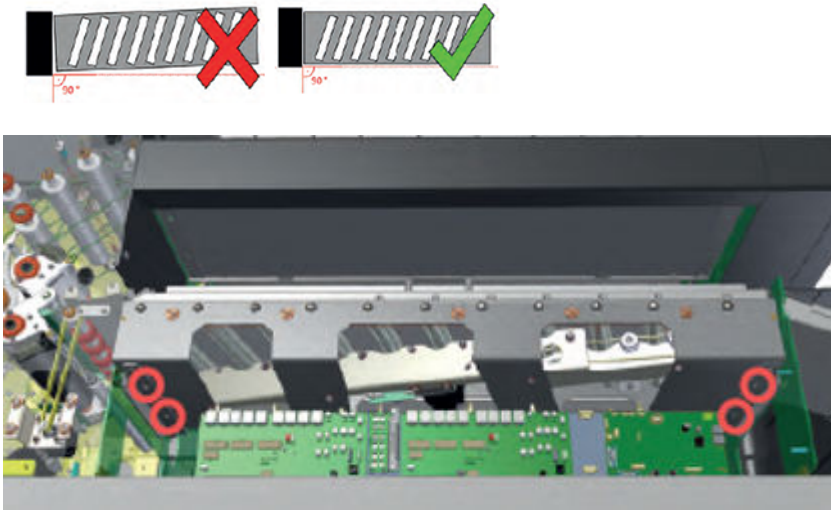
1. Check the parallelism of the folding rollers. No gap must be between the rubber and the metal folding roller.



2. Check if all the balls of the CF entry area are properly touching the red rubber rollers.



3. Check if the roll tray is perpendicular to main folding roller.



CF dimensions adjustment LB11

See [CF dimensions adjustment LB11 on page 1503](#).

Tilt tray adjustment

See [Tilt tray adjustment on page 1506](#).

Further adjustments

Torsion spring at the Fan-fold exit

See [Torsion spring at the Fan-fold exit on page 1514](#).

Adjustment of the Fan-fold paper guides

See [Adjustment of the Fan-fold paper guides on page 1522](#).

Folding quality specifications

See [Folding quality specifications on page 1560](#).

Service menu – Parameter configuration: Fan-fold settings

Panel width

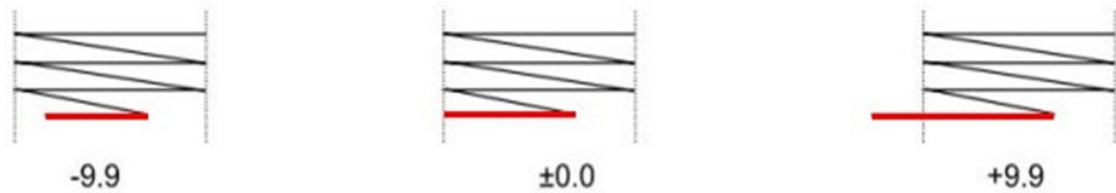
See [Panel width on page 1565](#).

First sheet

See [First sheet on page 1565](#).

Last sheet online

This value is for the correction of the last sheet size.



Max fan-fold

See [Max fan-fold on page 1568](#).

High speed

Adjustment of the maximum main fold motor speed.

- Decreasing it will cause trouble since it will decrease the ISD virtually.
- Increasing it too much could end up in blocking motors, especially when the plot is quite long. Also, the panel width of each layer could differ, since the motors cannot be stopped fast enough.

Recommended value: 2900.

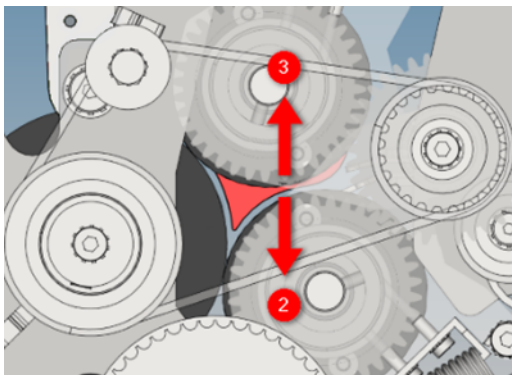
Adjustment FF paper guide (FFX42)

Fine-tuning of the guide position.

- Increasing the value will move the paper guide lower inside the folding triangle. Increasing it too much could cause the guide to touch the metal folding roller and make marks on it.
- Decreasing the value will move the paper guide higher out of the folding triangle. Decreasing it too much will disable the purpose of the guide.

Range: ± 20 steps

Recommended value: 0



Service Menu – Parameter configuration: Cross-fold settings

Sensor 11 adjustment

See [Sensor 11 adjustment on page 1573](#).

Panel width adjustment upper running direction

See [Panel width adjustment upper running direction on page 1575](#).

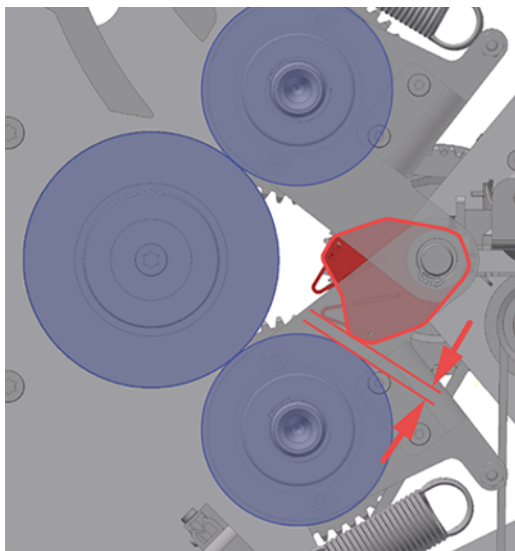
Folding flap position (CFX43)

CF folding flap position adjustment.

- After the start, the flap is in the start position.
- The optimal distance between the folding roller and the folding flap is approximately 3.5 mm.
- To adjust the correct distance use the **up** or **down** button in the CF service menu.
- If the correct distance is reached, exit the service menu and reboot the folder.
- Not having the proper value could lead to folding quality issues. If so, the paper will not run properly between the folding rollers and the folding flap could also touch the folding rollers causing marks.

Range: ± 100 steps

Recommended value: 40



Max cross-fold

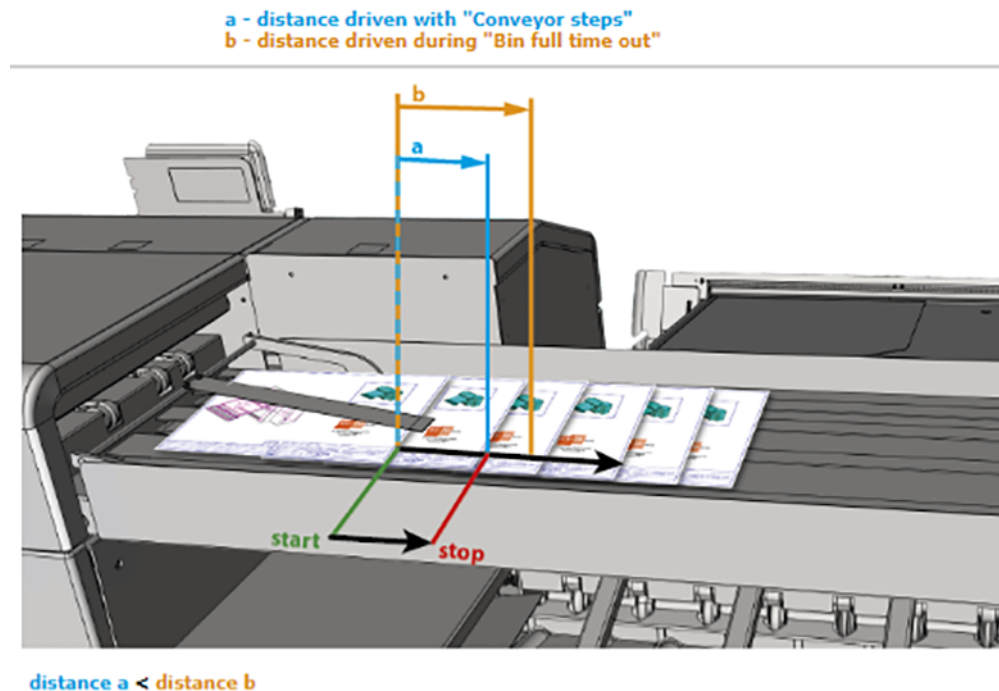
See [Max cross-fold on page 1569](#).

Conveyor steps

The number of Conveyor steps defines the distance between copies. The package stops after running the amount of steps set.

If the motor is switched on for longer (more steps), the distance will increase. Setting 30 steps does not make too much sense, but could be needed in special conditions. If the number of steps is increased that much however, you will need to give the process more time in the **Time out BIN_FULL** setting.

Recommended value: 40 steps

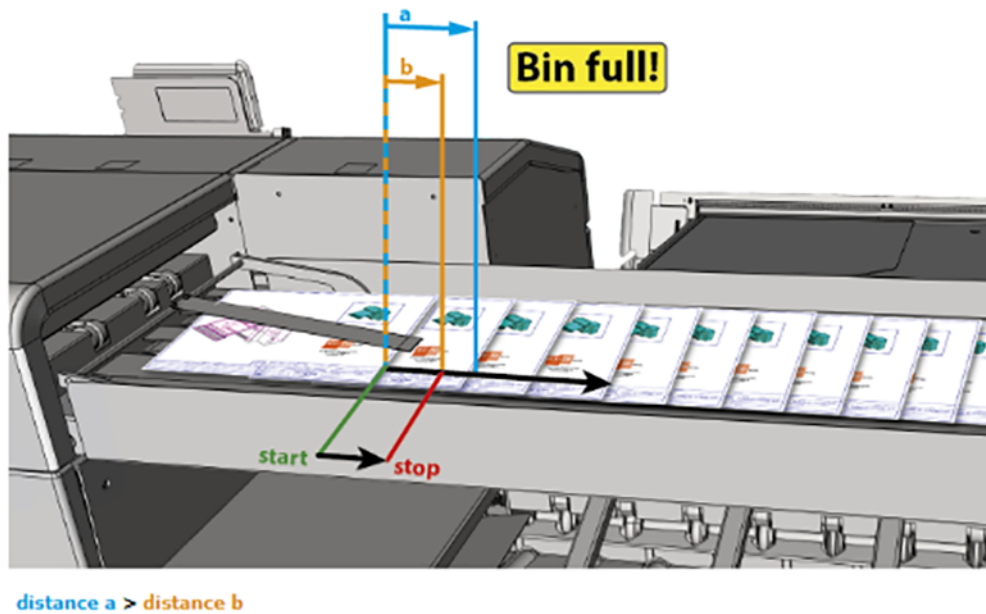


BIN_FULL timeout

This timeout defines how many copies are needed to trigger a BIN_FULL. The power of the motor is insufficient to transport all the stored packages for the set amount of steps during the set time.

The longer the time, the more copies that will be needed to trigger the BIN_FULL condition. The default value is related to Folder type, as the conveyors are of different sizes.

Recommended value: 2000



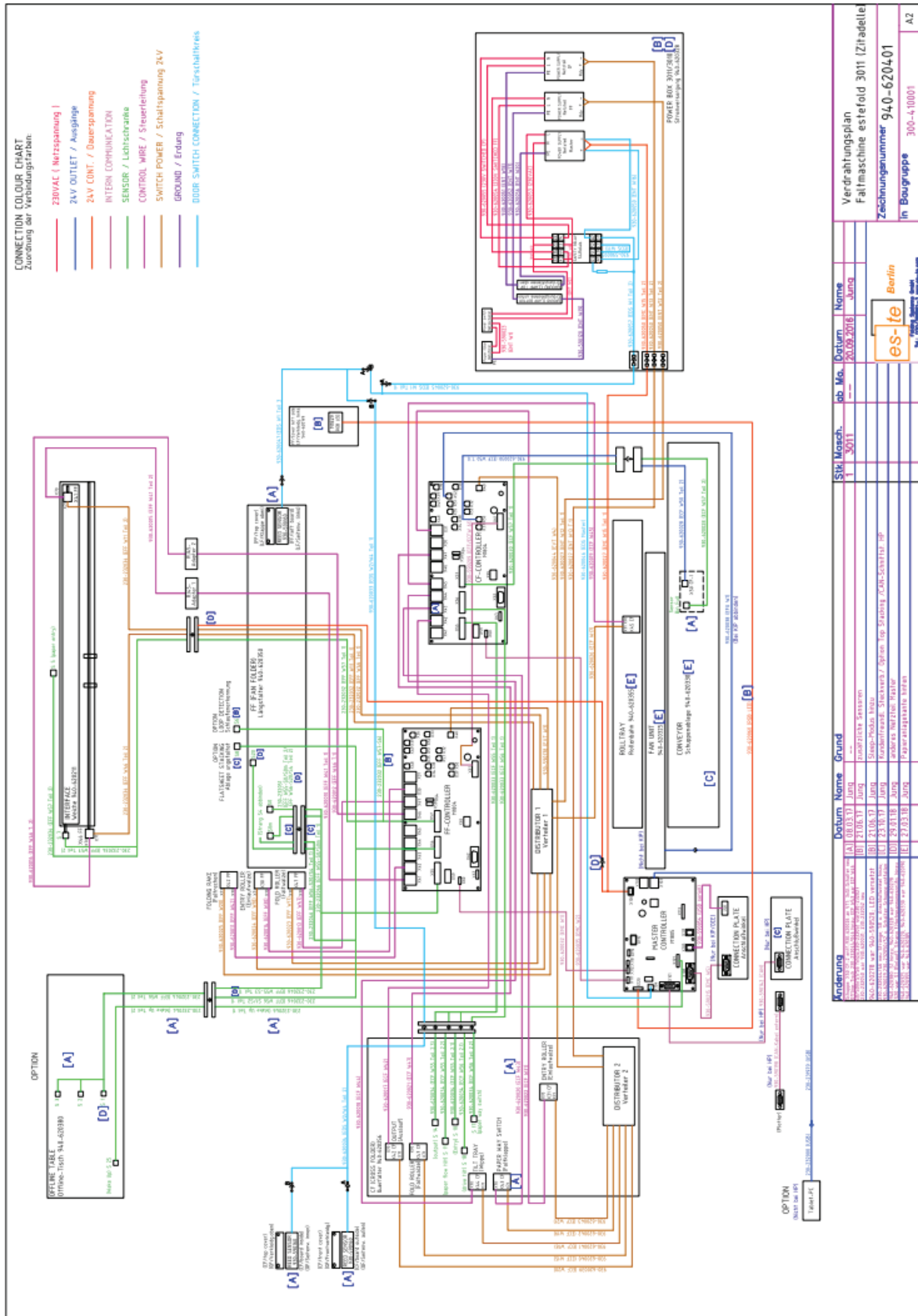
Service Menu – Parameter configuration: Set part number

See [Service Menu – Parameter configuration: Set part number on page 1578](#).

Service Menu – Configuration file

See [Service Menu – Configuration file on page 1579](#).

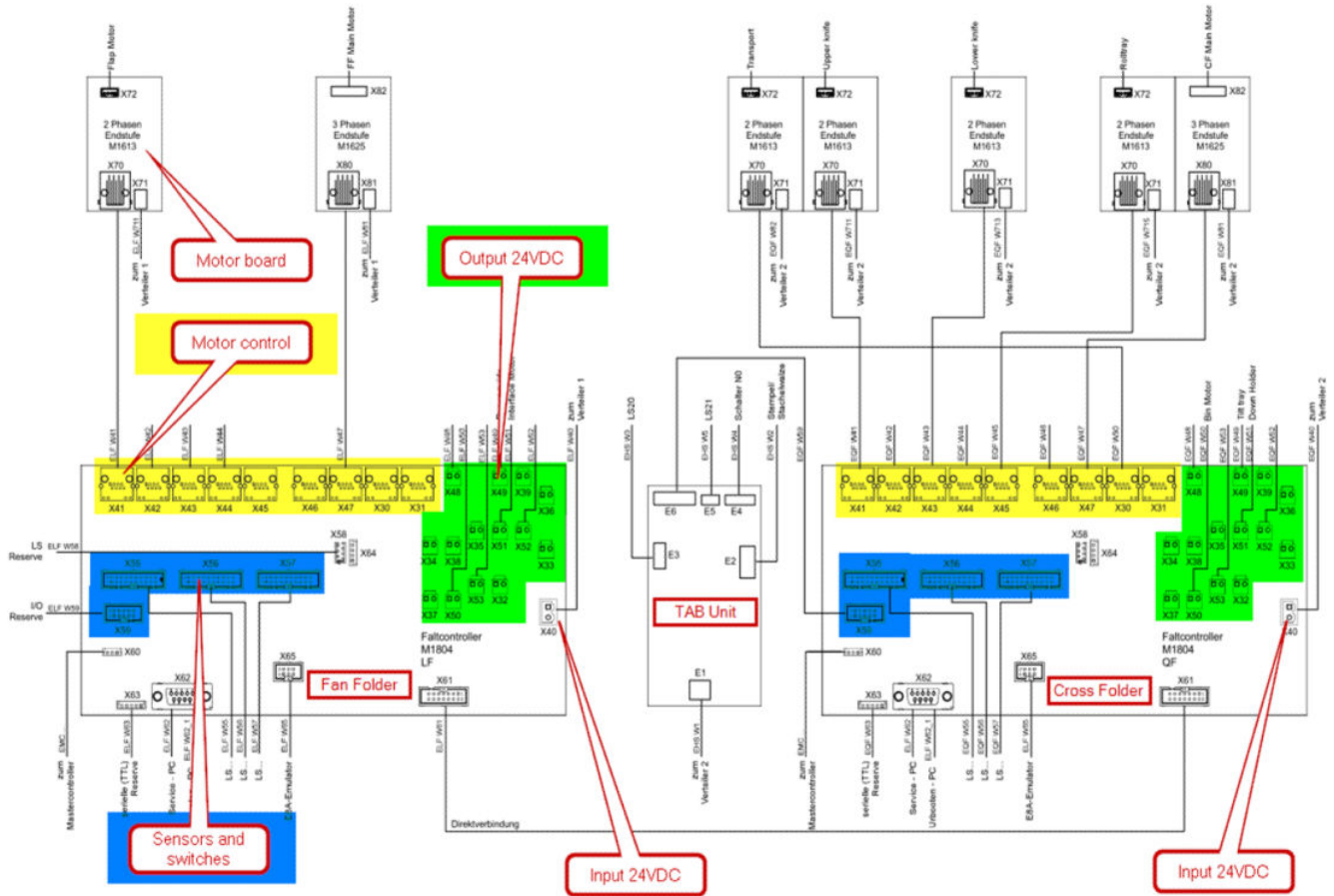
Folder electrical devices



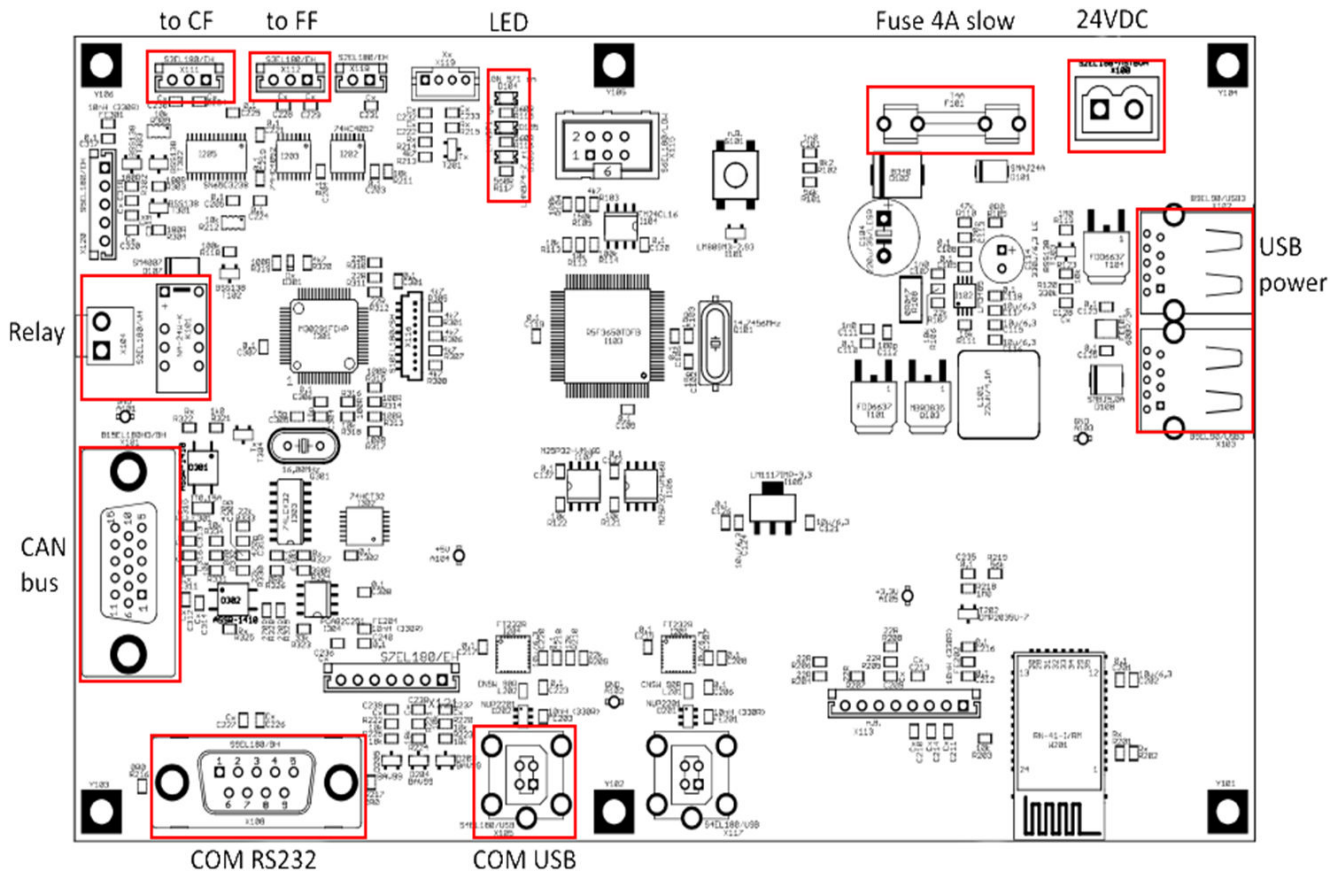
Änderung	Datum	Name	Grund	Stk. Mensch.	ab. Mo.	ab. Datum	Name
[A] 08.03.17	Juni	Frankfurt	Frankfurt	1	3011	20.09.2016	Jung
[B] 21.06.17	Juni	Frankfurt	Frankfurt				
[C] 21.06.17	Juni	Frankfurt	Frankfurt				
[D] 23.10.18	Juni	Frankfurt	Frankfurt				
[E] 27.02.19	Juni	Frankfurt	Frankfurt				

Verdrahtungsplan
Faltrmaschine estiefold 3011 (Zihradelle)
Zeichnungsnummer 940-6204.01
in Baugruppe 300-4.10001

es-te Berlin
H. Wegmann, H. Wegmann, H. Wegmann



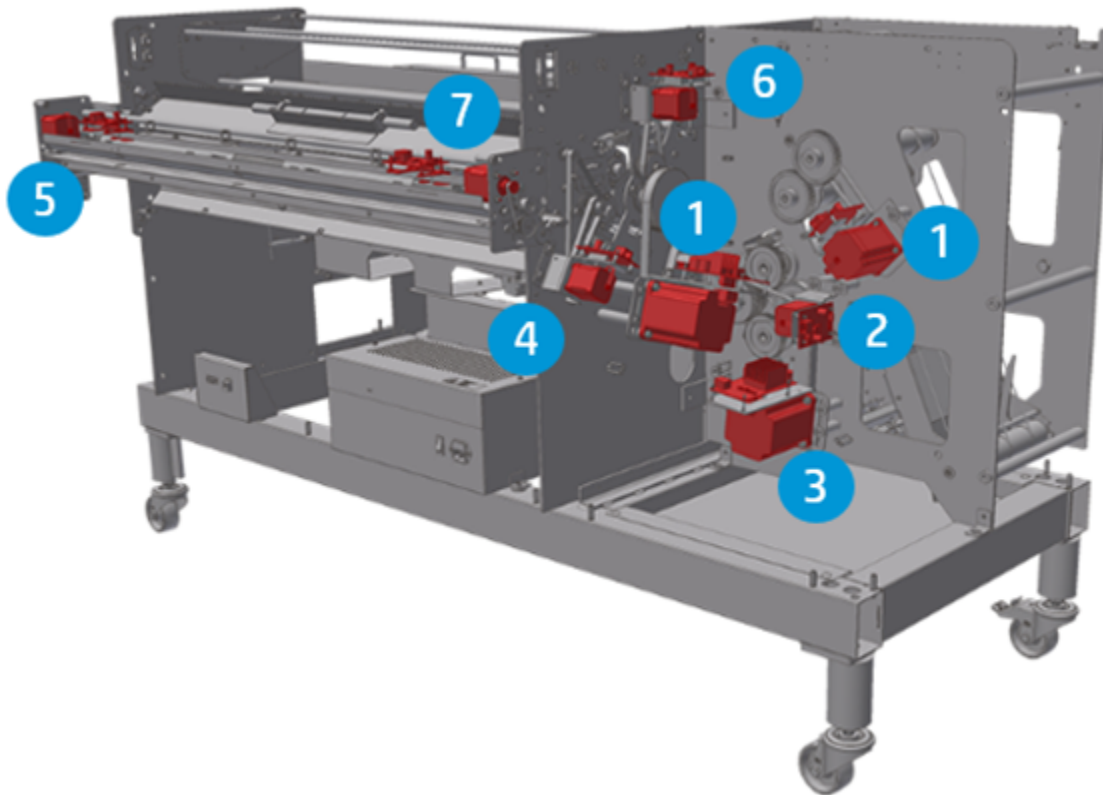
Main board — Master controller



You can check the status of the Master controller PCA by the indicators (LEDs):

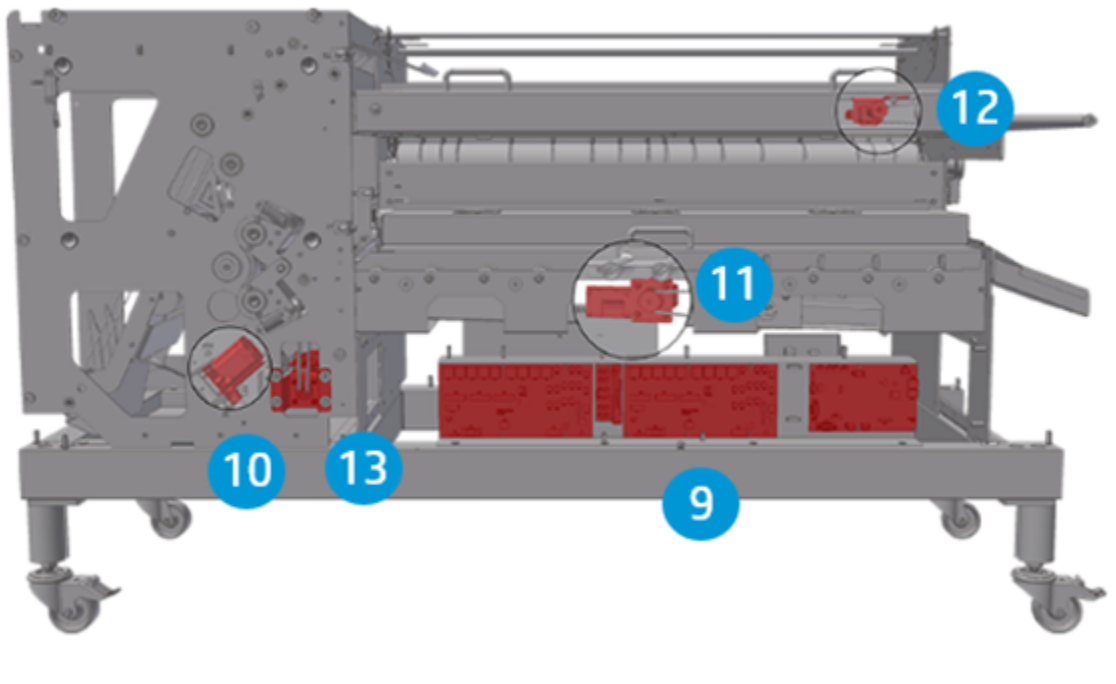
LED color	Behavior	Description
Green	Blinking 0.5 Hz	Power on
Orange	Permanently on	Switched off by losing the contact between the MC and the internal CAN controller
Red	Blinking	Showing the traffic on the CAN bus. Status change on every message

Main motors



4

Item	Device name	Function
1	CF X42	Cross-folder upper exit motor
2	CF X43	Cross-folder folding flap
3	CF X47	Cross-folder main motor
4	FF X30	Fan-folder entry roller
5	FF X41	Interface flap motor
6	FF X42	Fan-folder paper guide
7	FF X46	Interface transport motor
8	FF X47	Fan-folder main motor

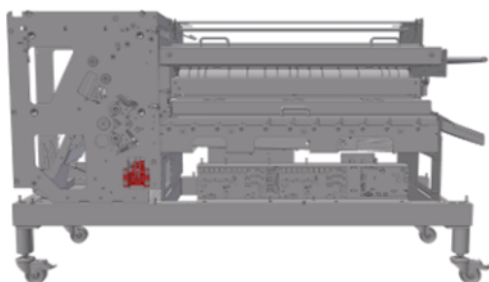


Item	Device name	Function
9	Controller boards	Master controller, fan-fold controller, cross-fold controller
10	CF X44	Cross-fold tilt tray
11	CF X45	Cross-fold roller tray
12	CF X50	Conveyor
13	CF X31	Cross-fold entry roller

Motor PCA driver configuration

CF X31 – Feeding roller

This motor feeds the paper into the cross-folder.

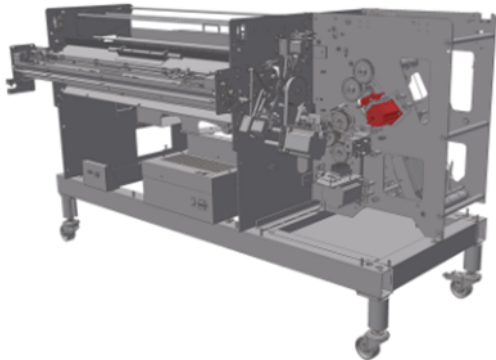


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	1	2	3	4	5	6	7	8
On	X	X			X		X	X
Off			X	X		X		

CF X42 – Upper exit transport

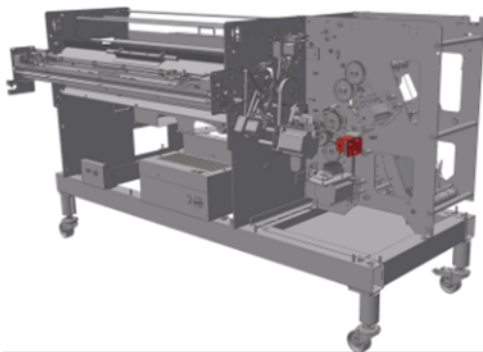
This motor drives the upper exit belts.



	1	2	3	4	5	6	7	8
On	X	X		X		X	X	X
Off			X		X			

CF X43 – Folding flap

This motor moves the folding flap.

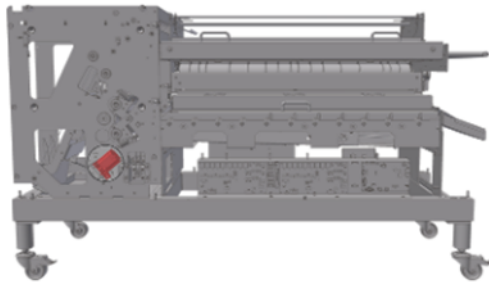
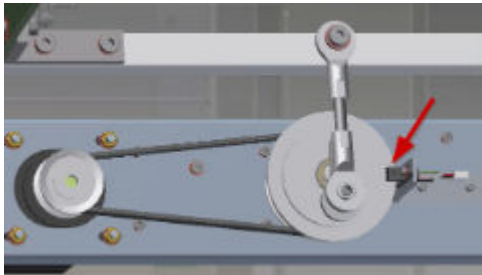


	1	2	3	4	5	6	7	8
On	X	X					X	X
Off			X	X	X	X		

CF X44 – Tilt tray

This motor moves the tilt tray.

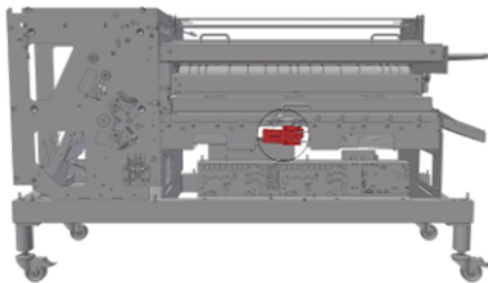
Home position (red arrow)



	1	2	3	4	5	6	7	8
On	X		X			X	X	
Off		X		X	X			X

CF X45 – Roll tray motor

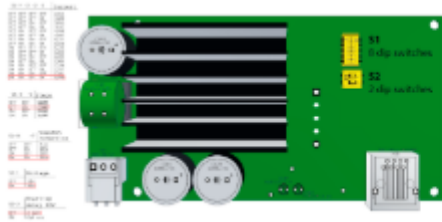
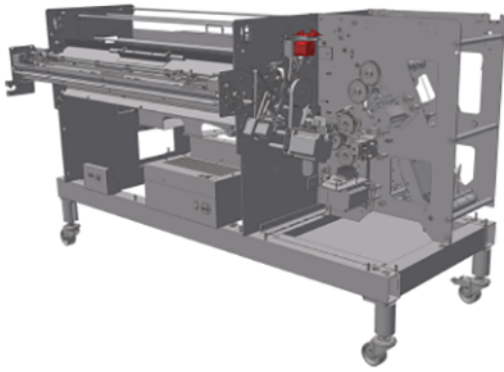
This motor drives the roller tray.



	1	2	3	4	5	6	7	8
On	X	X		X	X	X	X	
Off			X					X

CF X47 – CF main fold motor

This motor drives the folding rollers.

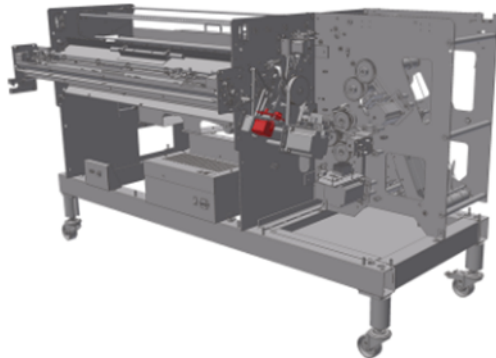


M1900 (10 dip switches)

	S1 -1	S1 -2	S1 -3	S1 -4	S1 -5	S1 -6	S1 -7	S1 -8	S2 -1	S2 -2
ON	x	x	x	x	x		x	x		x
OFF						x				x

FF X30 – Fan-folder folding motor

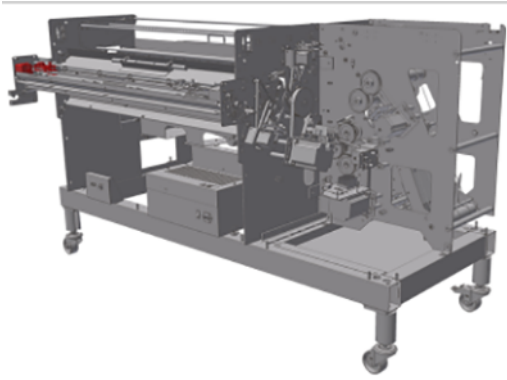
This motor drives the fan-folder entry roller. It is synchronized to the main fold motor FFX47.



	1	2	3	4	5	6	7	8
On	x						x	x
Off		x	x	x	x	x		

FF X41 – Fan-folder interface flap motor

This motor moves the interface flap to different positions. These positions direct the paper into the bridge for folding or onto the bridge for stacking. Sensor 7.

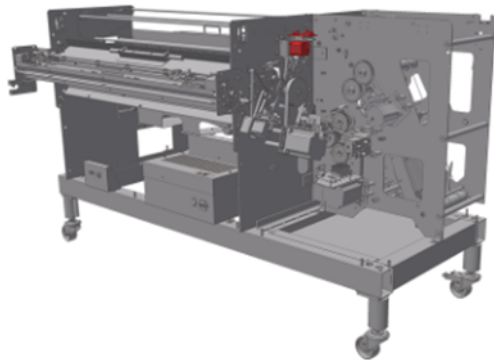


	1	2	3	4	5	6	7	8
On	X	X	X			X	X	
Off				X	X			X

 **NOTE:** The position of the flap could be corrected by changing the values of the settings **Step Fold** and **Step Stack**.

FF X42 – Fan-folder paper guide

This gear moves the paper guide. It guides the leading edge downwards in the folding triangle. Sensor 24.

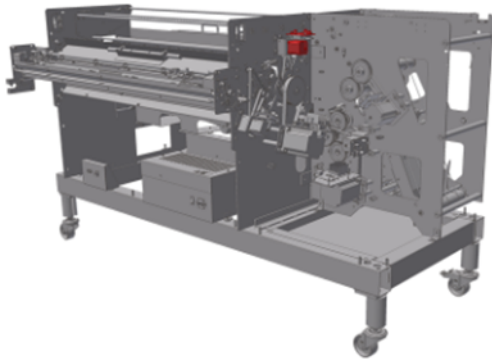


	1	2	3	4	5	6	7	8
On		X	X		X			X
Off	X			X		X	X	

FF X46 – Interface transport motor

This motor drives the transport roller of the interface. The speed is given by a printer command. If it does not start, a communication issue is possible. Check the device in the Diagnostics in order to understand the root cause.

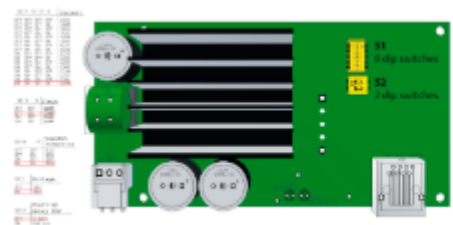
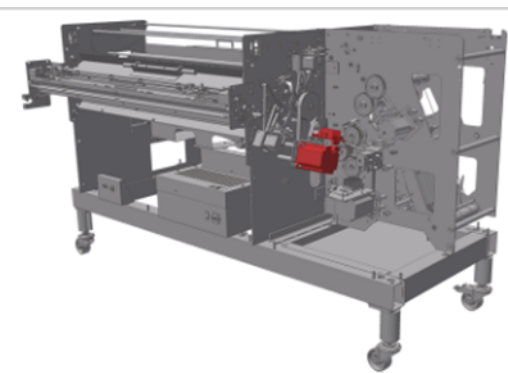
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	1	2	3	4	5	6	7	8
On	X		X			X	X	
Off		X		X	X			X

FF X47 – Fan-folder folding motor

This motor drives the feeding roller. It is synchronized to the feeding motor FFX30.



M1900 (10 dip switches)

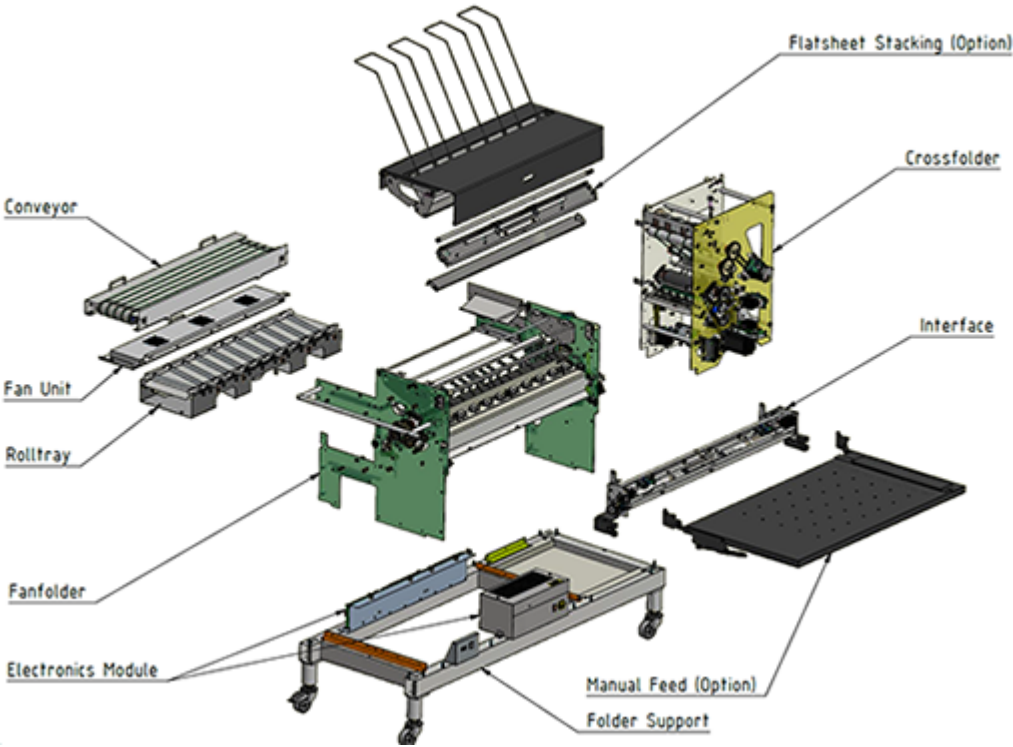
	S1 -1	S1 -2	S1 -3	S1 -4	S1 -5	S1 -6	S1 -7	S1 -8	S2 -1	S2 -2
ON	x	x	x	x	x		x	x		x
OFF						x				x

Folder parts and diagrams

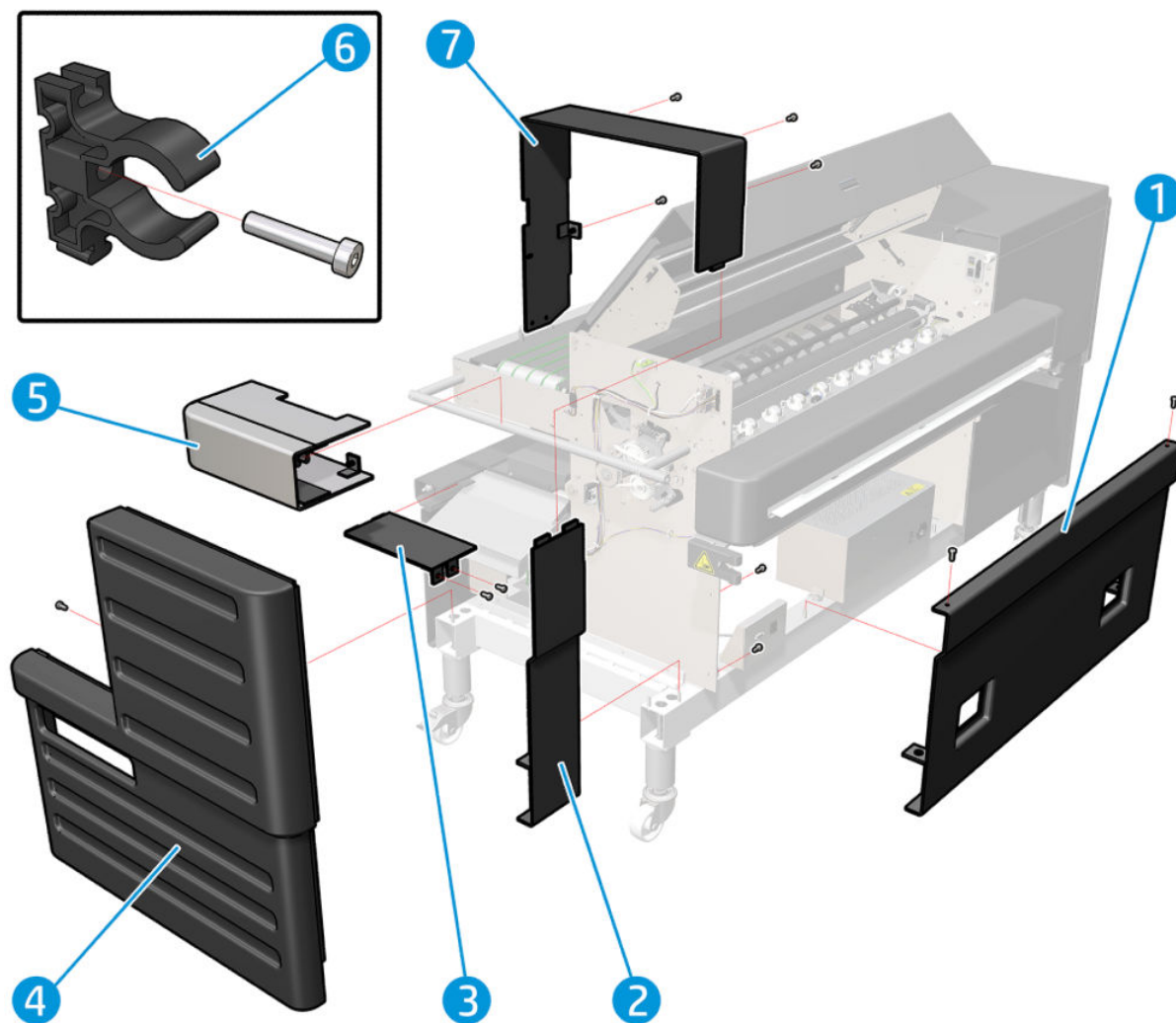
Assembled folder



Folder components

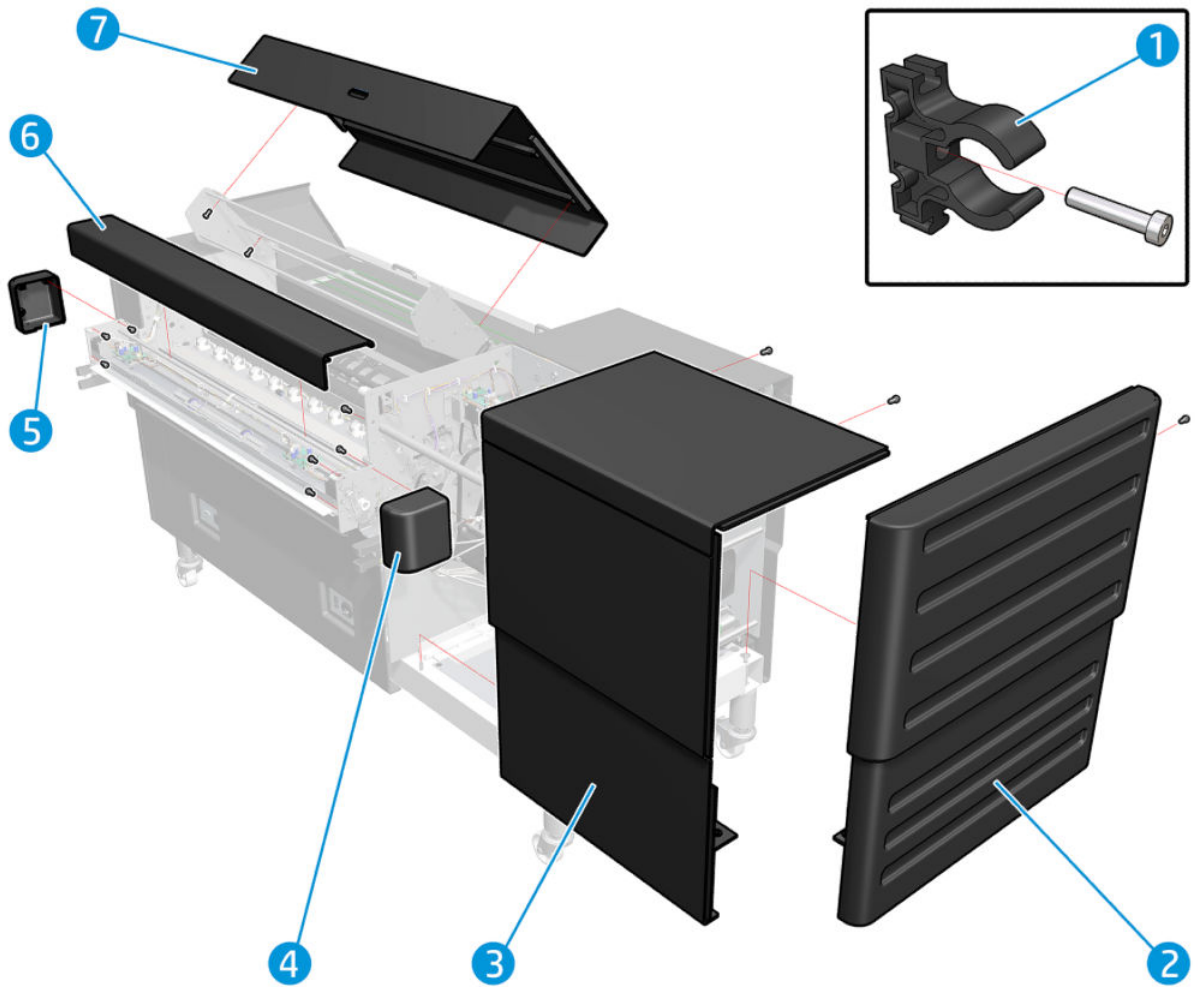


Covers (I)



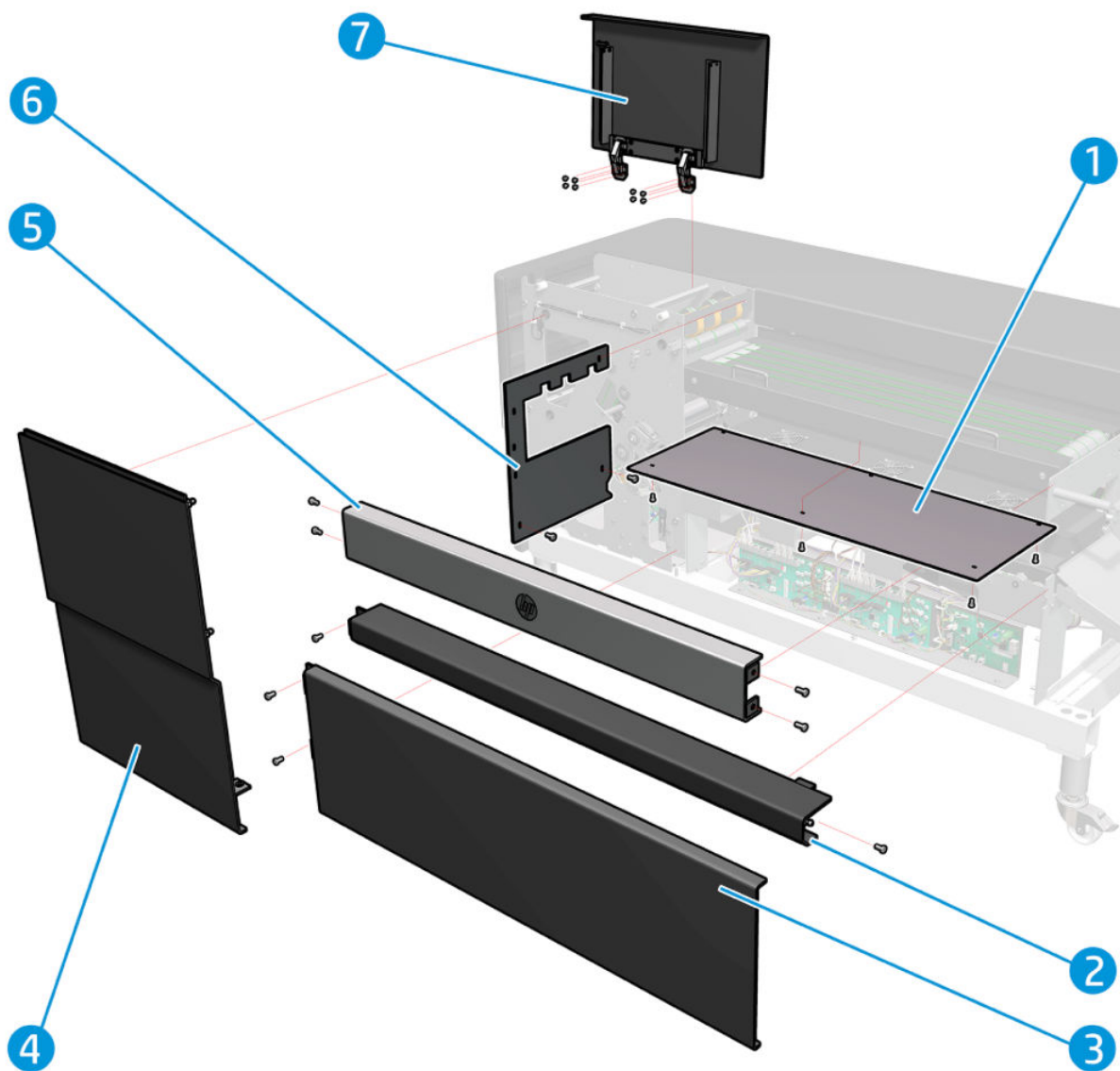
	Part number	Description
1	3JJ54-67003	Fan-fold bottom cover
2	3JJ54-67071	Fan-fold strip cover
3	3JJ54-67073	Roll tray strip cover
4	3JJ54-67070	Fan-fold door
5	3JJ54-67072	Conveyor cover
6	3JJ54-67089	Covers hook
7	3JJ54-67076	Fan-fold top strip cover

Covers (II)



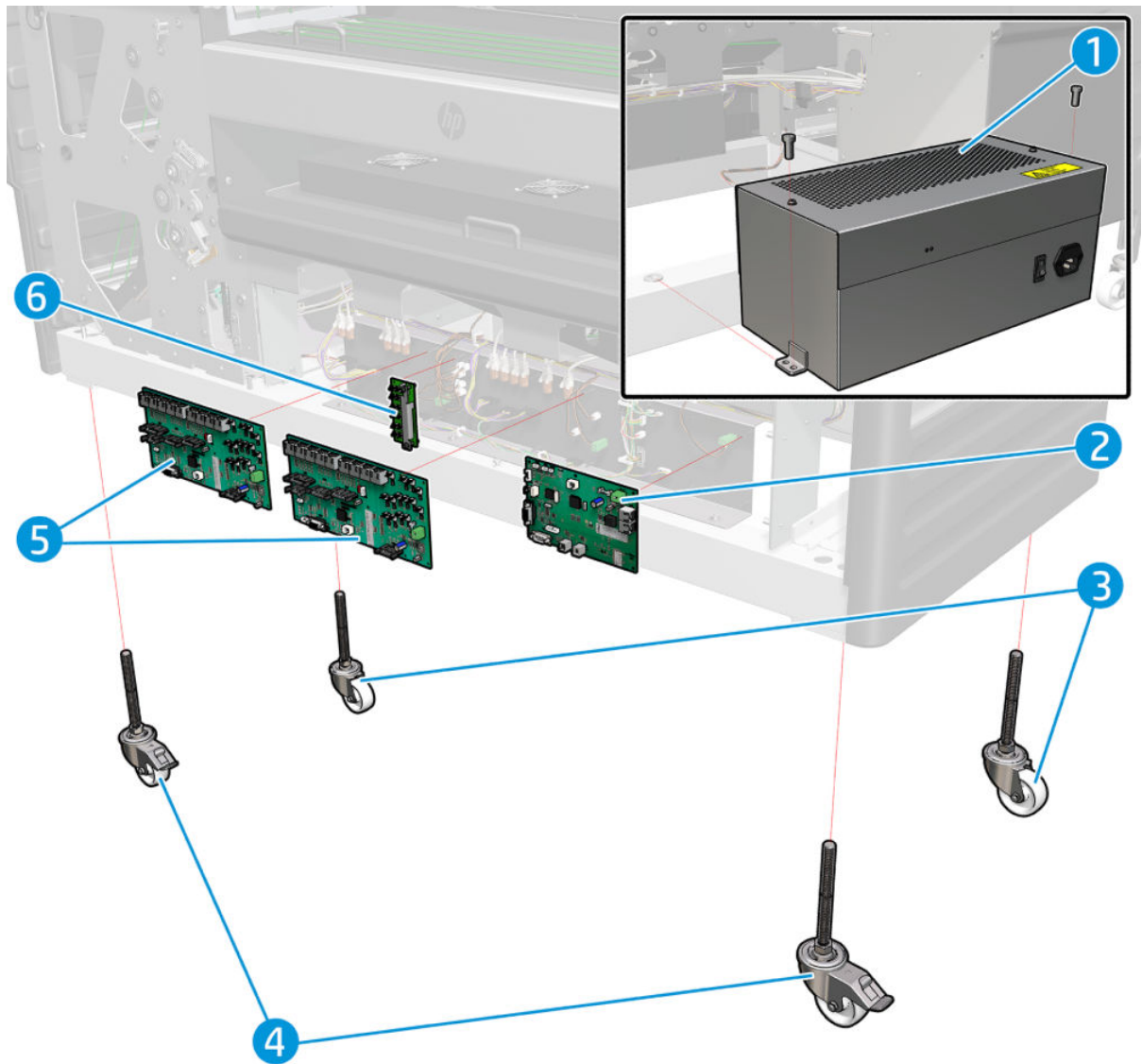
	Part number	Description
1	3JJ54-67089	Covers hook
2	3JJ54-67069	Cross-fold door
3	3JJ54-67004	FF/CF front cover
4	3JJ54-67078	Lid interface – right side
5	3JJ54-67079	Lid interface – left side
6	3JJ54-67077	Interface top cover
7	3JJ54-67018	Fan-fold top cover

Covers (III)



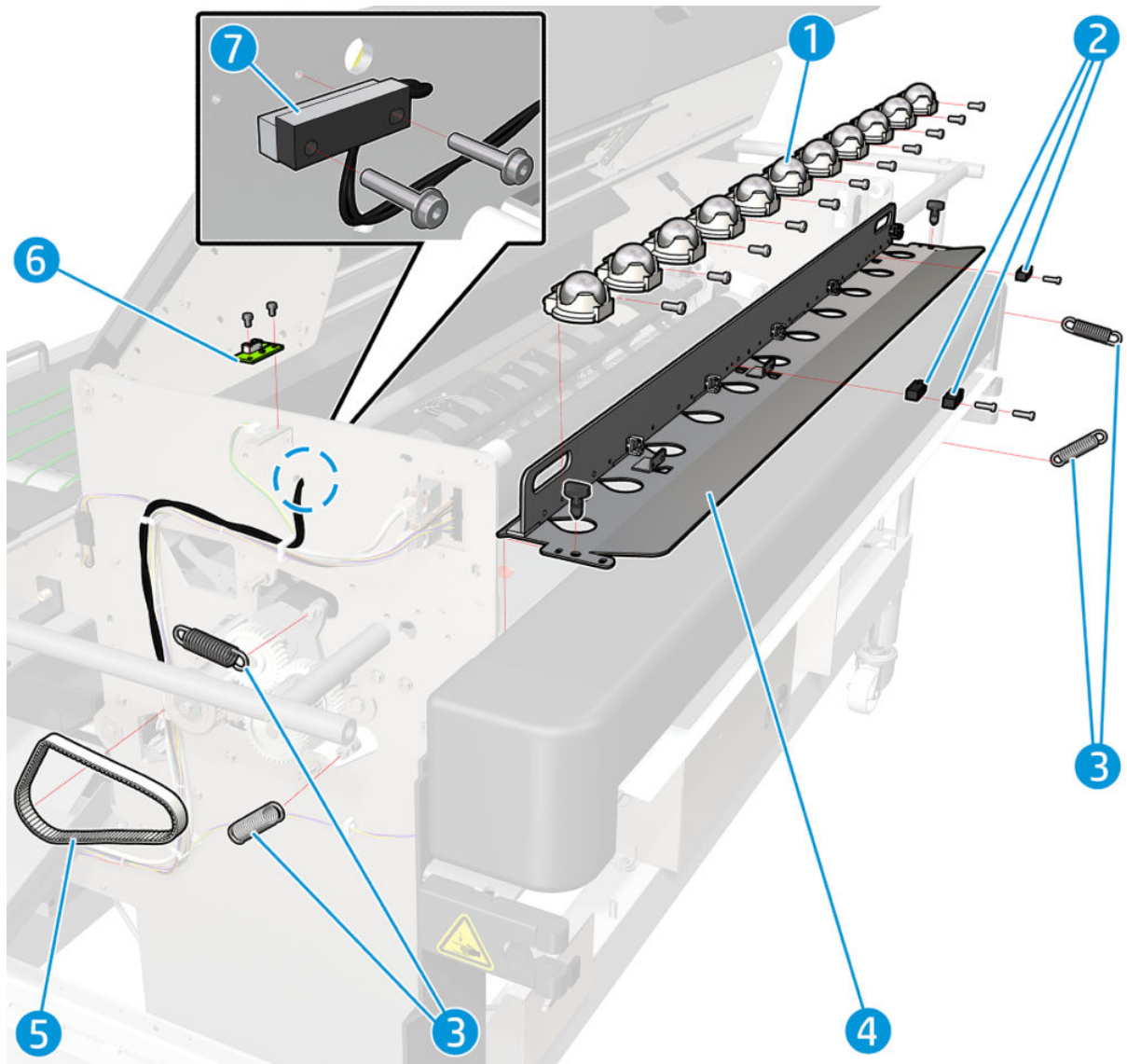
	Part number	Description
1	3JJ54-67075	Conveyor bottom cover
2	3JJ54-67005	Roll tray panel
3	3JJ54-67006	Control boards cover
4	3JJ54-67009	Cross-fold rear door
5	3JJ54-67074	Conveyor panel
6	3JJ54-67008	Cross-fold entry cover
7	3JJ54-67010	Cross-fold top door

Electronics module and folder support



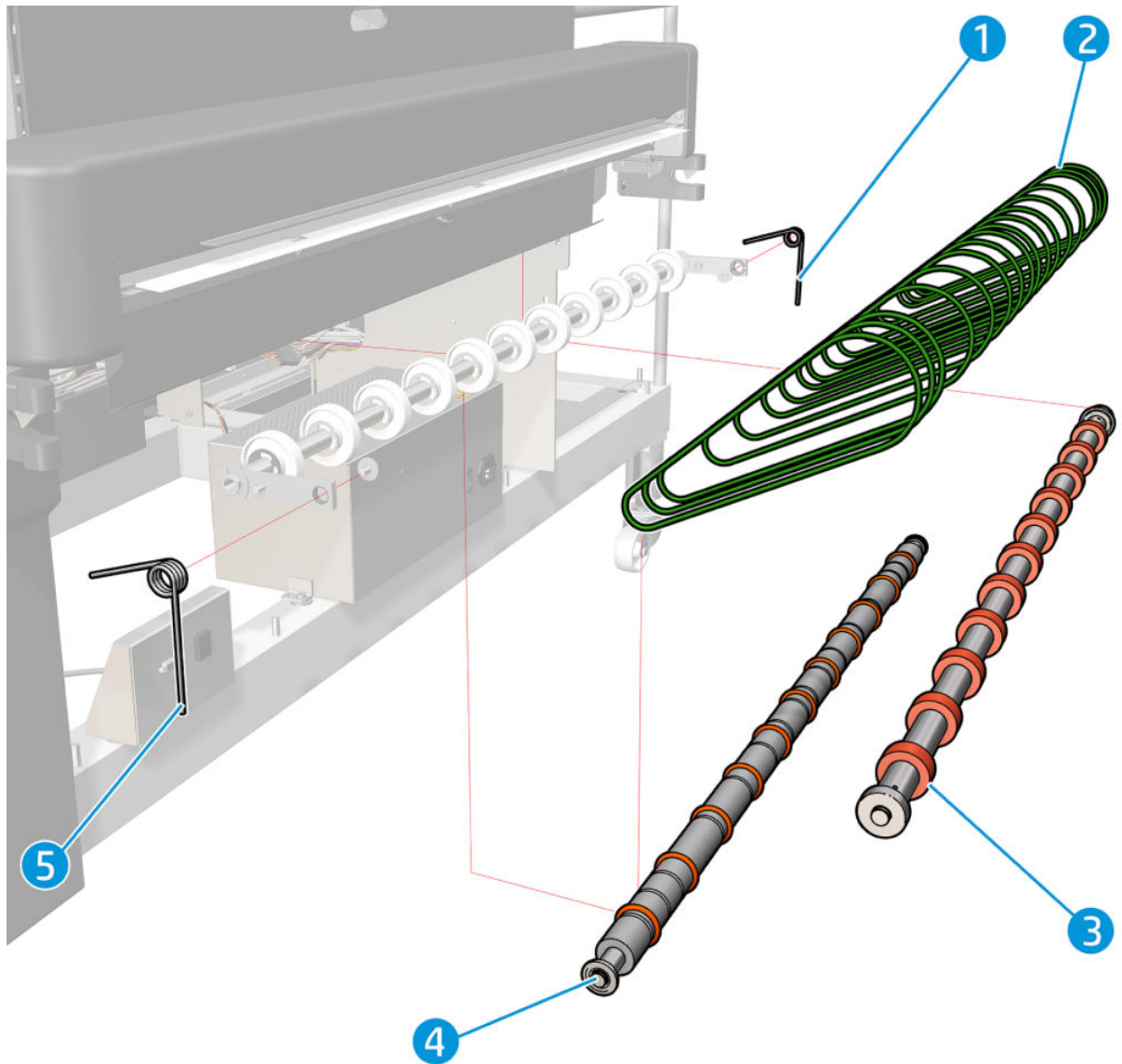
	Part number	Description
1	3JJ54-67012	PSU box assembly
2	K5H75-67064	Master controller
3	3JJ54-67013	Caster wheels without break (x2)
4	3JJ54-67014	Caster wheels with break (x2)
5	K5H75-67059	FF/CF Control board (x1)
6	3JJ54-67011	24V PCA distributor

Fan-folder (I) – Input and output



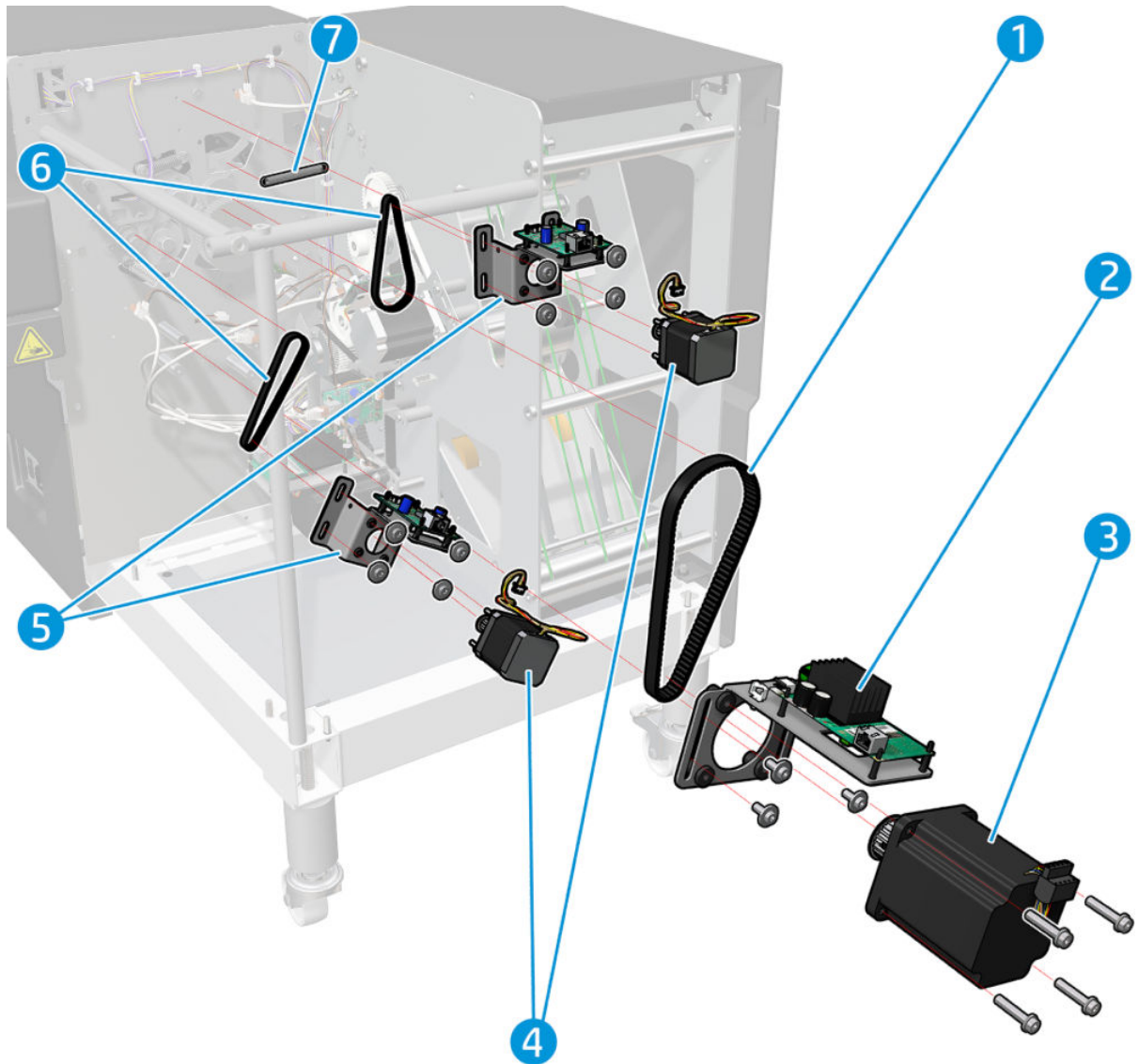
	Part number	Description
1	K5H75-67091	Diameter 32 mm ball and cage kit
2	3JJ54-67030	Paper sensor – LB5
3	3JJ54-67081	Folder springs set
4	3JJ54-67066	FF entry metal roof (without balls)
5	3JJ54-67053	Folder toothed belt set
6	K5H75-67062	LP M1829 LED Controller
7	K5H75-67071	Reed sensor

Fan-folder (II) – Input and output



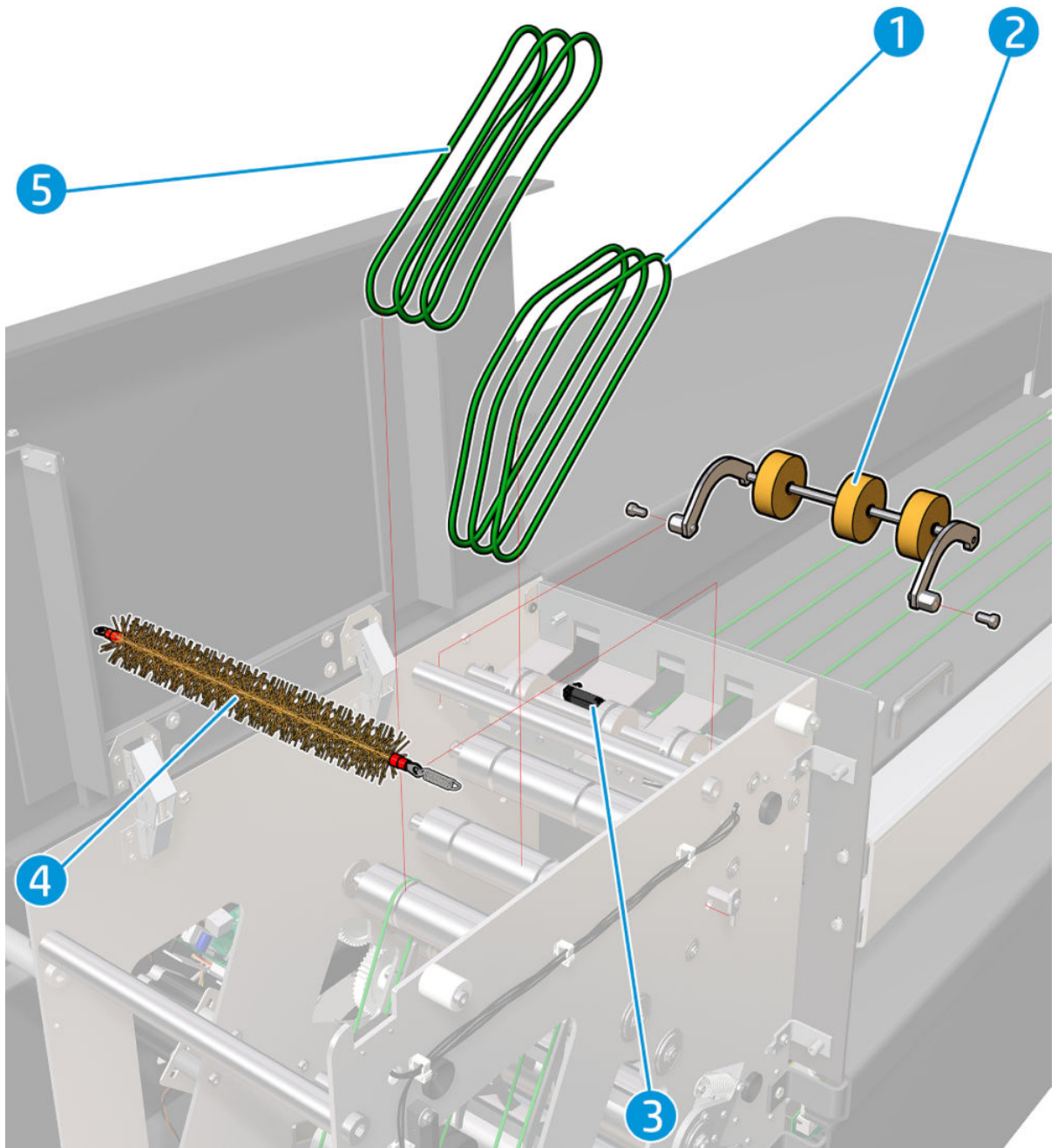
	Part number	Description
1	3JJ54-67082	Folder springs set (right)
2	3JJ54-67080	FF outlet belt (16) kit with 3M of rubber (TBD)
3	3JJ54-67051	FF input roller with bearing
4	3JJ54-67054	FF output shaft
5	3JJ54-67083	Folder springs set (left)

Fan-folder (III) – Drive side



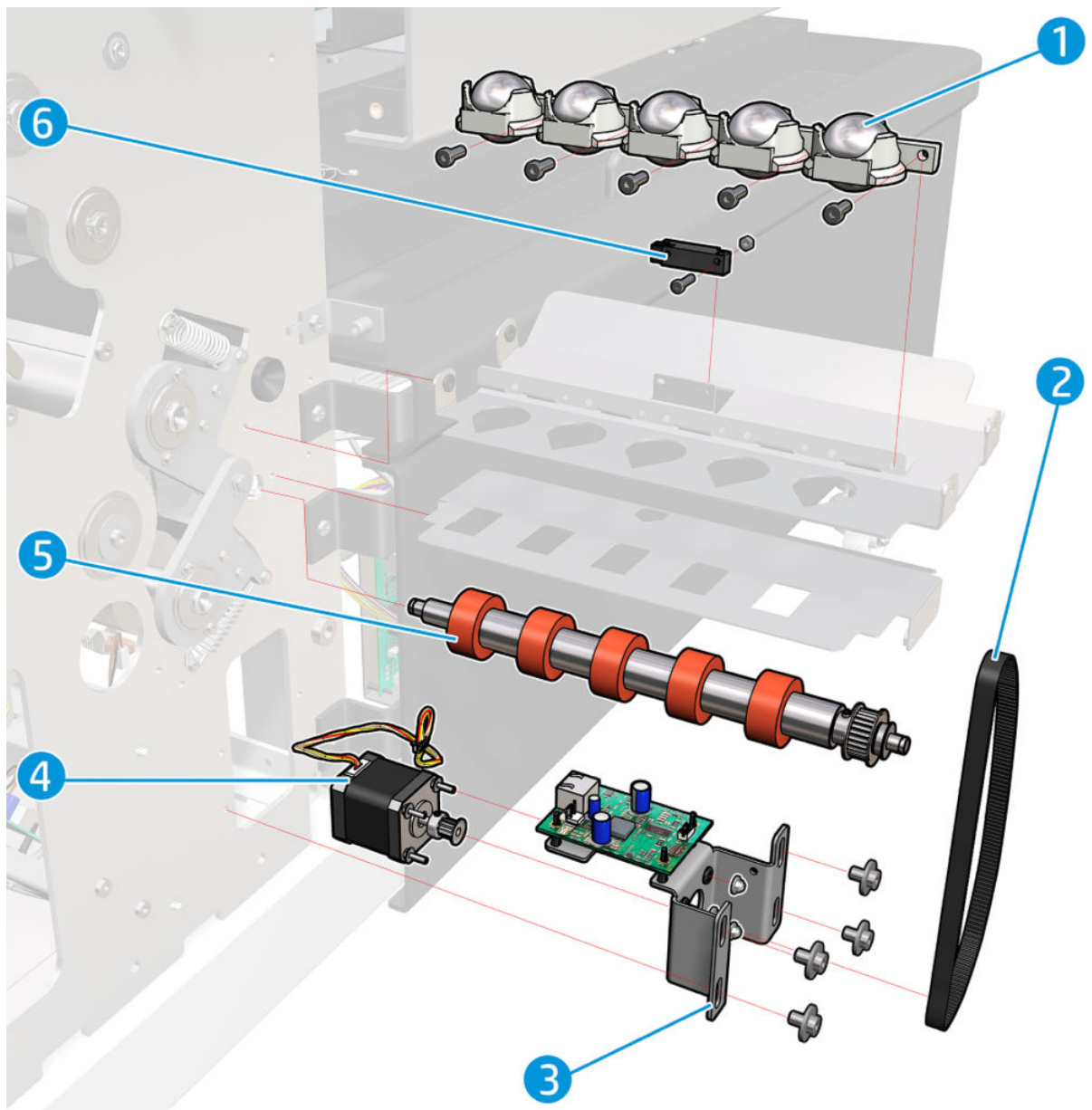
	Part number	Description
1	3JJ54-67055	FF X47 toothed belt
2	K5H75-67169	FF X30 + FF X47 + CFX47 board only — LP M1900 motor controller
3	3JJ54-67033	FF X47 – Fan-fold main motor
4	3JJ54-67021	CF entry motor controller assembly
5	3JJ54-67020	CF PCA + bracket controller assembly
6	3JJ54-67056	FF X30/FF X42 toothed belt
7	K5H75-67092	FF HR tension spring

Cross-folder (I) – Input and output



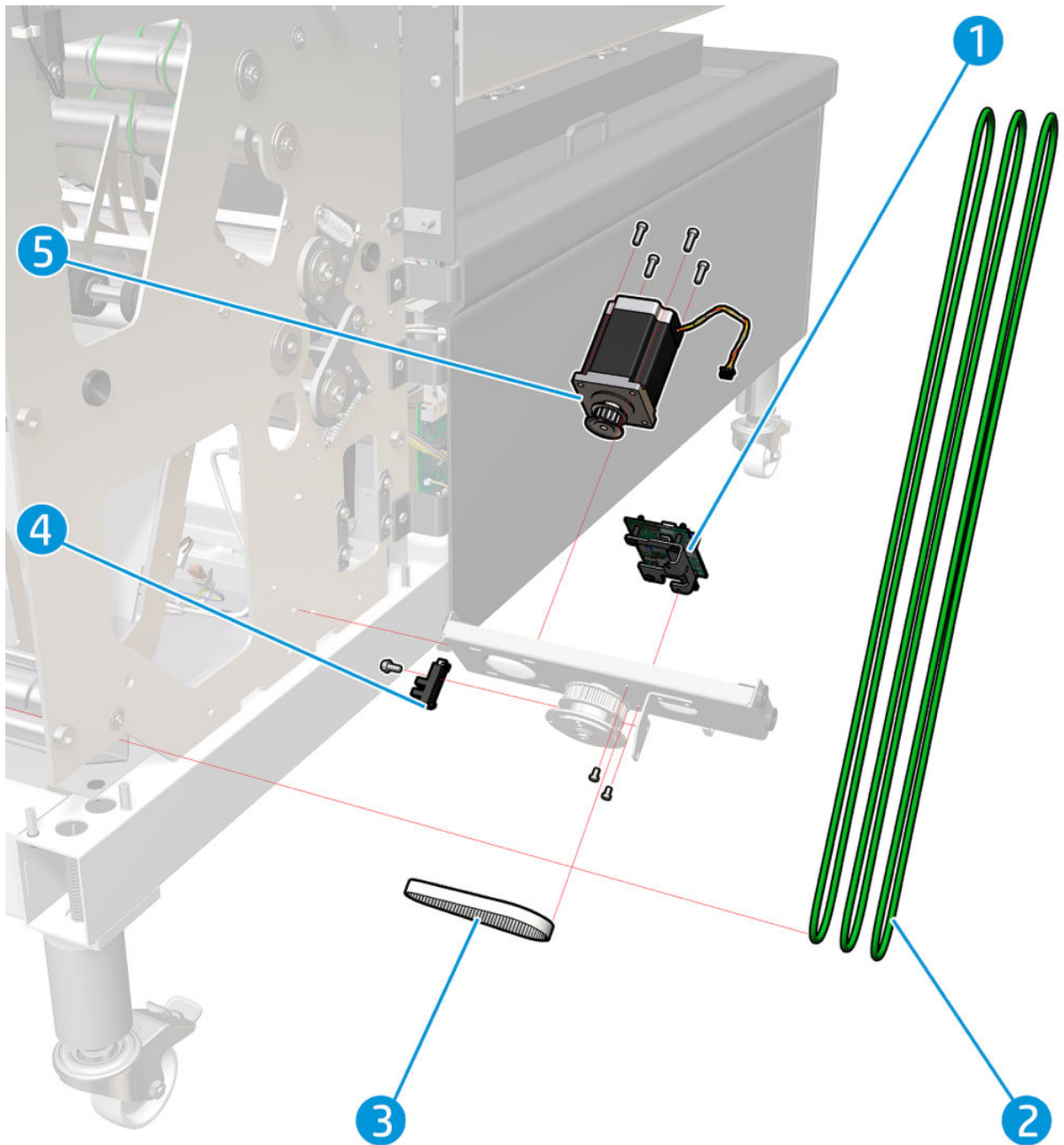
	Part number	Description
1	3JJ54-67017	CF upper path transport belt, bottom (3)
2	3JJ54-67019	Pressure roller foam set
3	K5H75-67125	Paper sensor black connector (top)
4	3JJ54-67084	CF exit discharge cable
5	3JJ54-67016	CF upper path transport belt, top (3)

Cross-folder (II) – Input and output



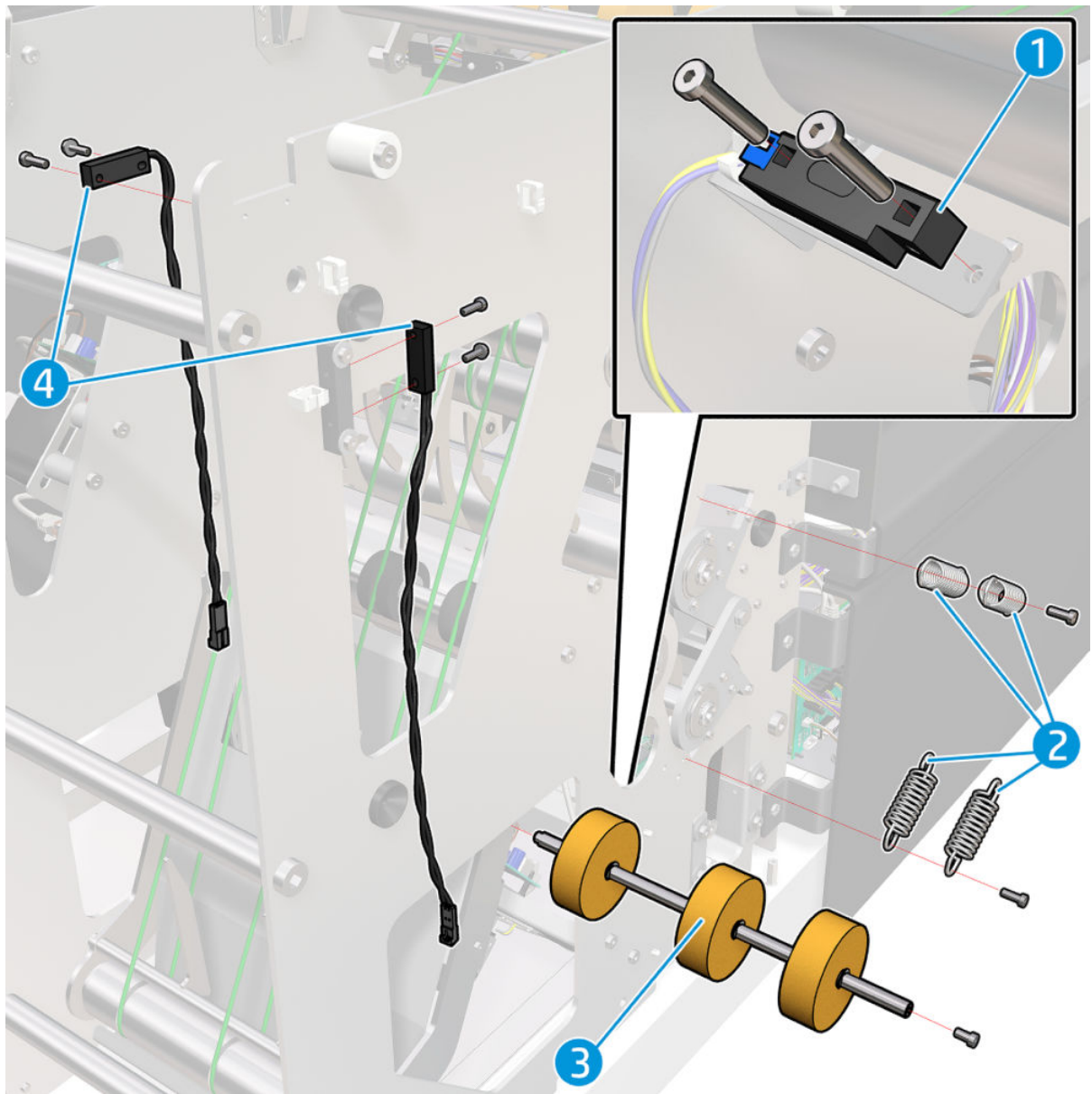
	Part number	Description
1	K5H75-67091	Diameter 32 mm ball and cage kit
2	TBD	HTD 3M/420 Toothed belt
3	3JJ54-67020	CF PCA + bracket controller assembly
4	3JJ54-67021	CF entry motor controller assembly
5	3JJ54-67052	CF input-roller with bearing
6	K5H75-67125	Paper sensor black connector (bottom)

Cross-folder (III) – Paper path



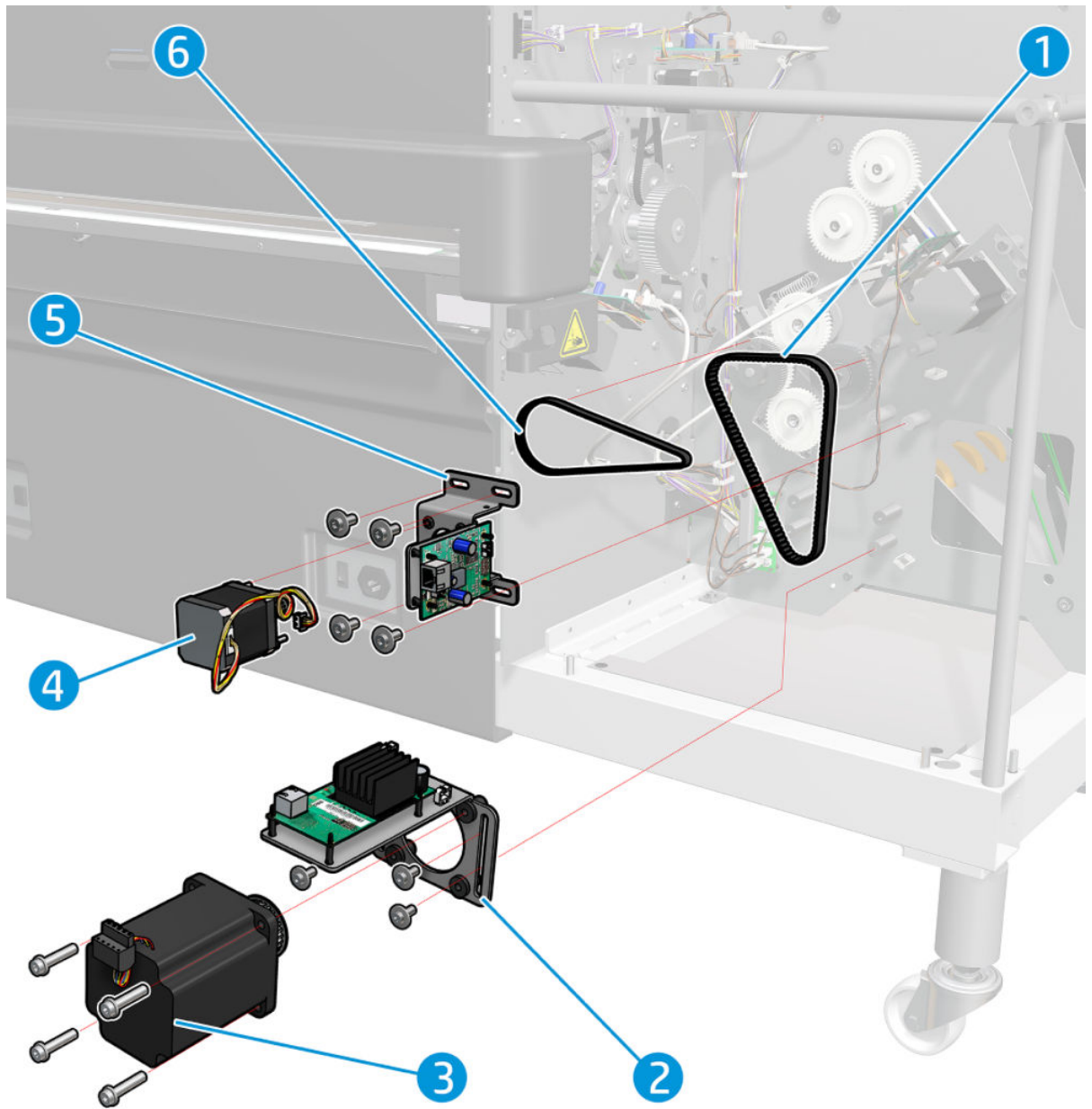
	Part number	Description
1	K5H75-67162	Control board drive interface
2	3JJ54-67022	CF + FF Media transition belt sets
3	3JJ54-67058	CF X44 Toothed belt
4	3JJ54-67031	Fork type sensor – LB11
5	3JJ54-67036	CF X44 Tilt tray motor

Cross-folder (IV) – Paper path



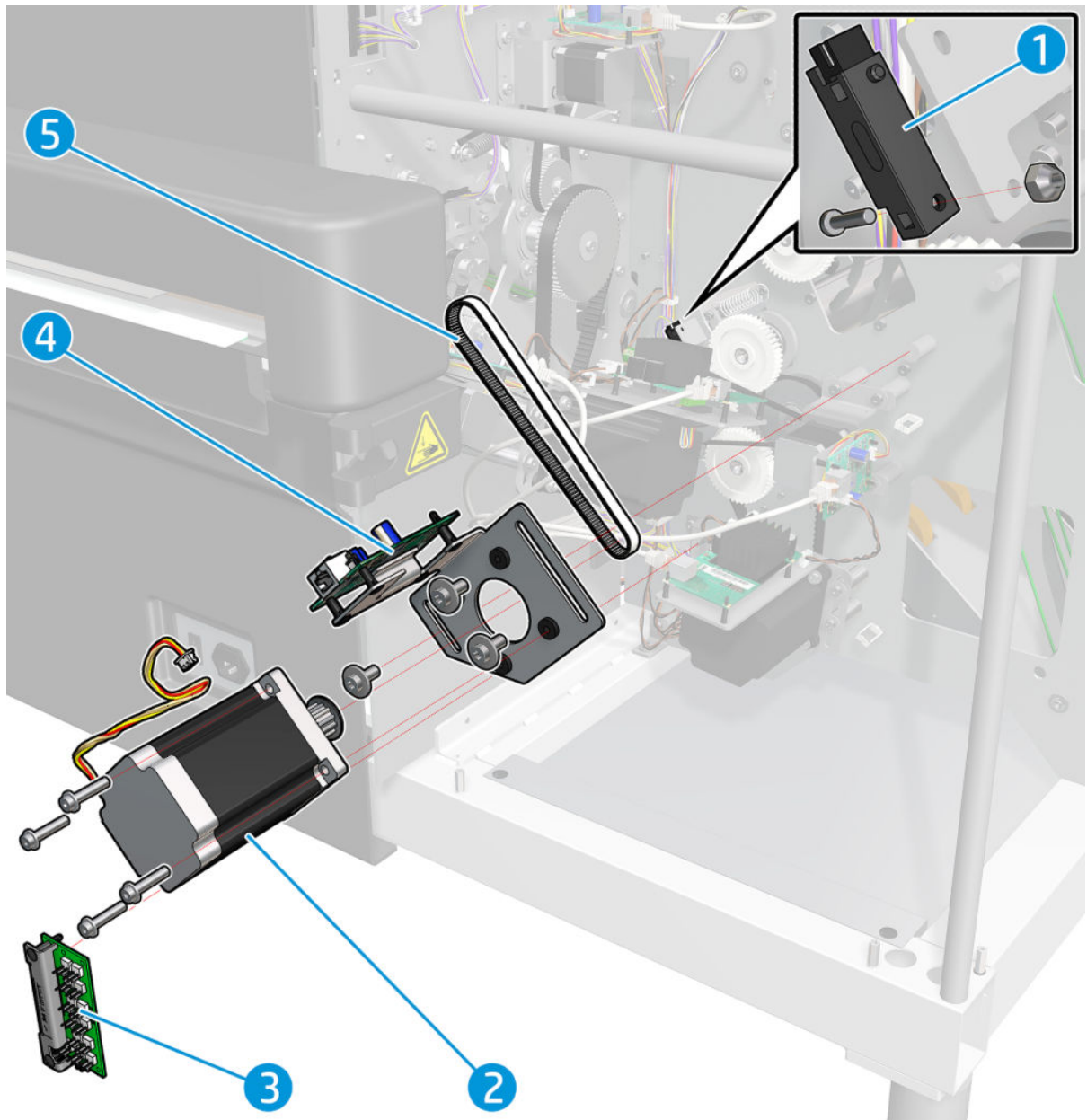
	Part number	Description
1	K5H75-67125	Paper sensor black connector
2	K5H75-67138	Cross-fold spring
3	3JJ54-67023	Pressure roller foam set
4	K5H75-67071	Reed sensor

Cross-folder (IV) Drive side



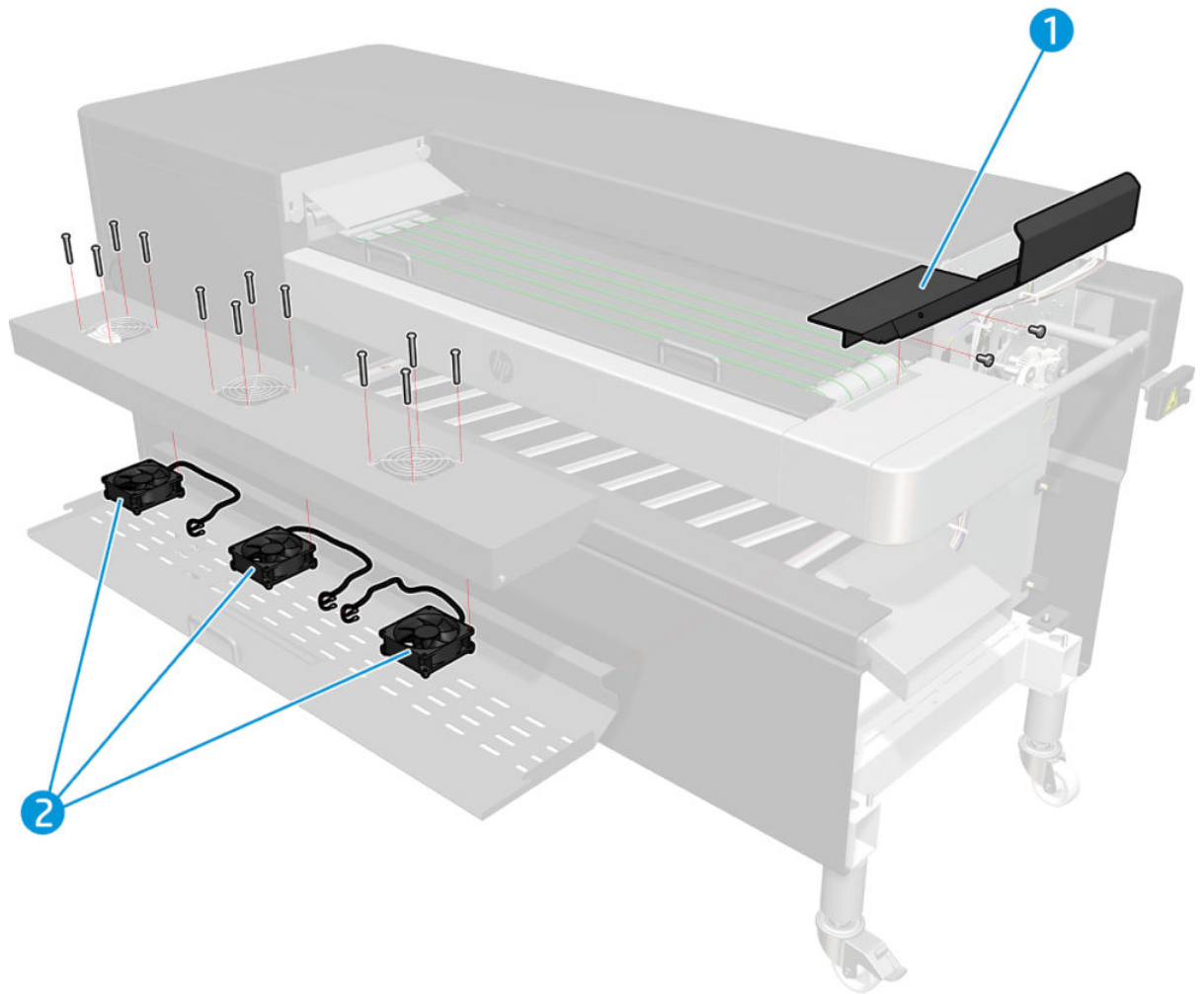
	Part number	Description
1	3JJ54-67060	CF X47 toothed belt
2	K5H75-67169	FF X30 + FF X47 + CF X47 Board only – LP M1900 motor controller
3	3JJ54-67037	CF X47 Cross-fold main motor
4	3JJ54-67021	CF entry motor controller assembly
5	3JJ54-67020	CF PCA + bracket controller assembly
6	TBD	HTD 3M/420 Toothed belt

Cross-folder (V) Drive side



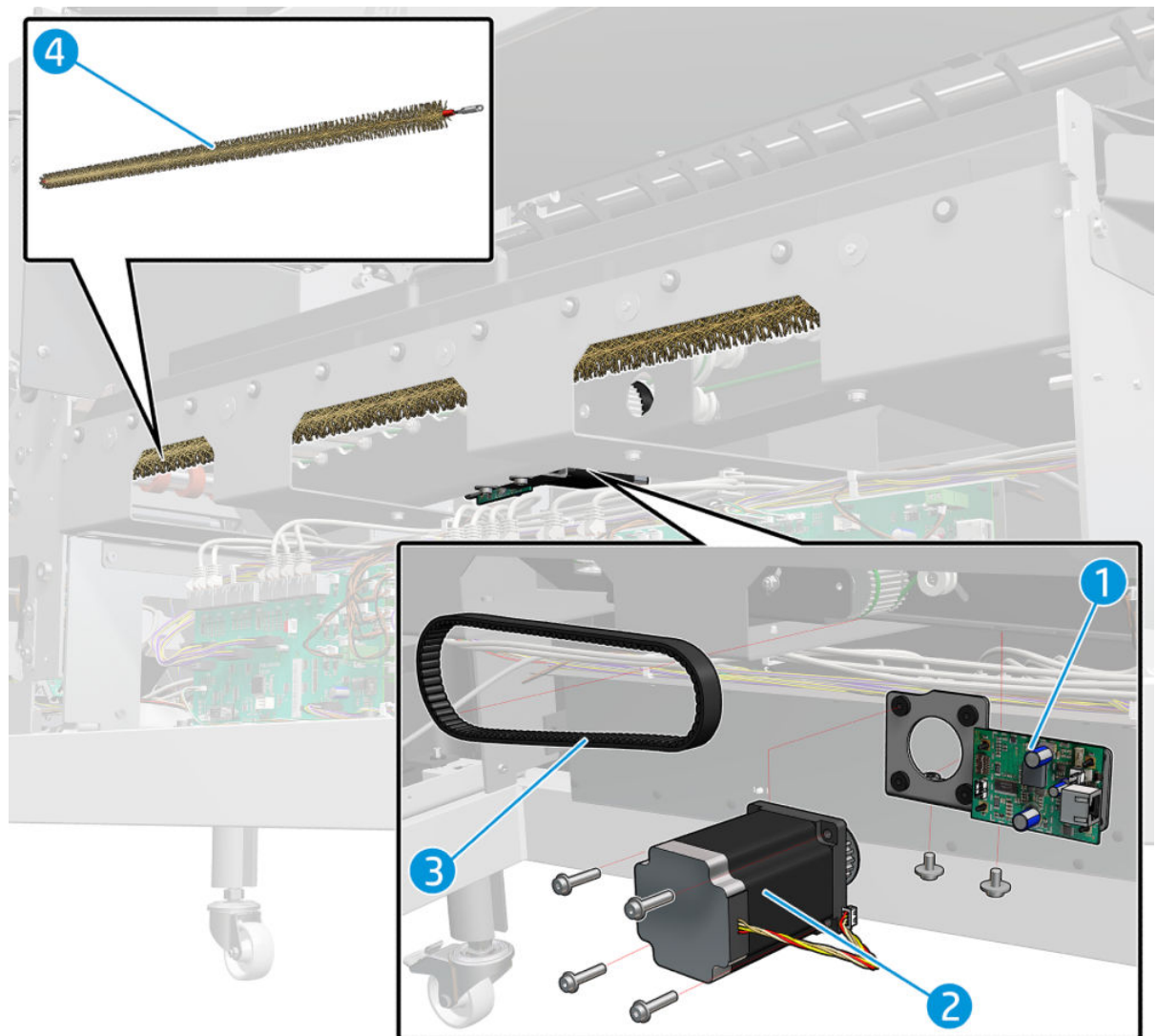
	Part number	Description
1	K5H75-67125	Paper sensor black connector
2	3JJ54-67024	CF drive motor
3	3JJ54-67011	24V PCA distributor
4	3JJ54-67039	CF X42 PCA – CF upper exit controller
5	3JJ54-67059	CF X42 Toothed belt

Fan unit and conveyor



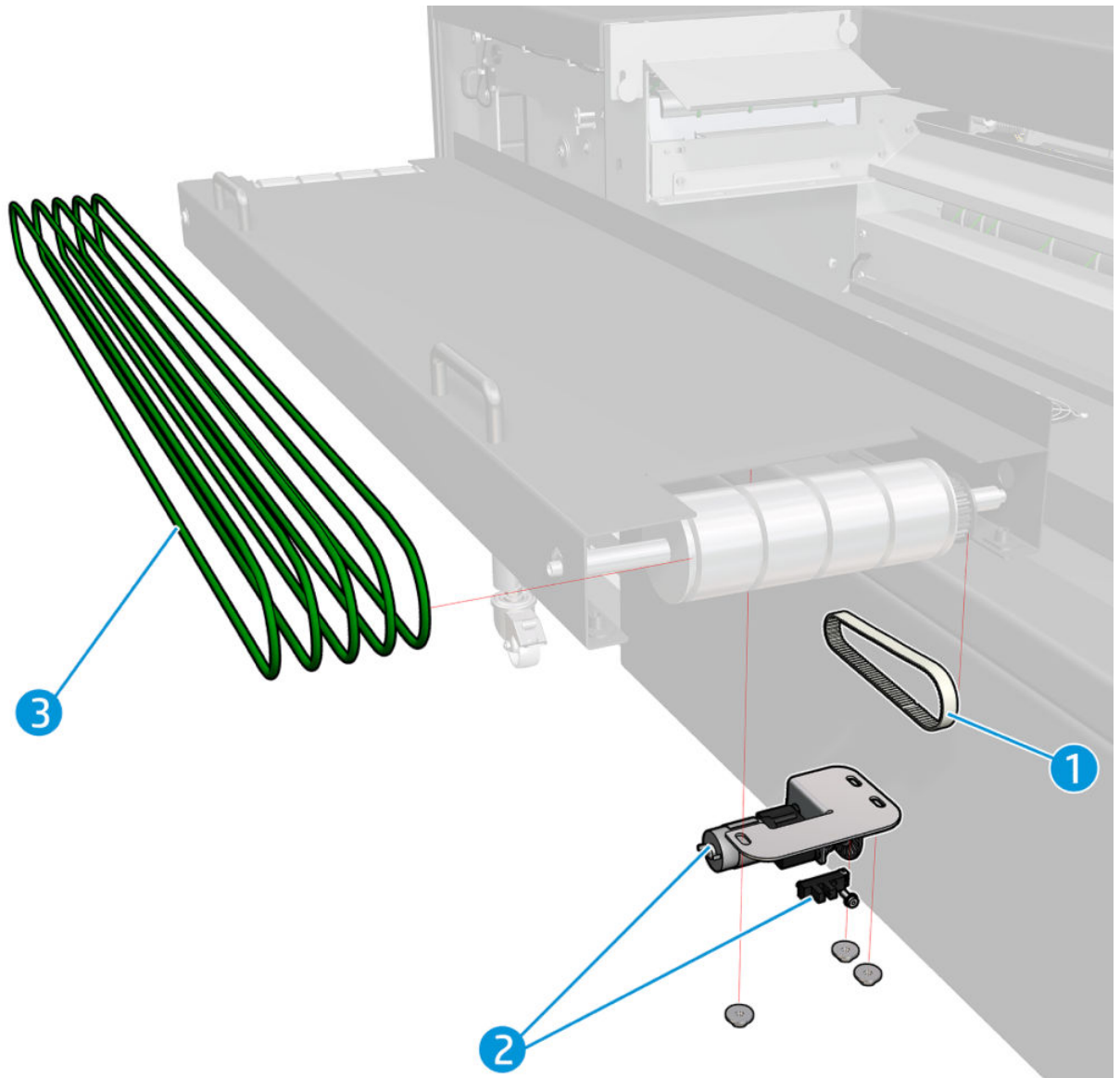
	Part number	Description
1	3JJ54-67087	Conveyor extension
2	K5H75-67109	Blowing box fan

Roll tray



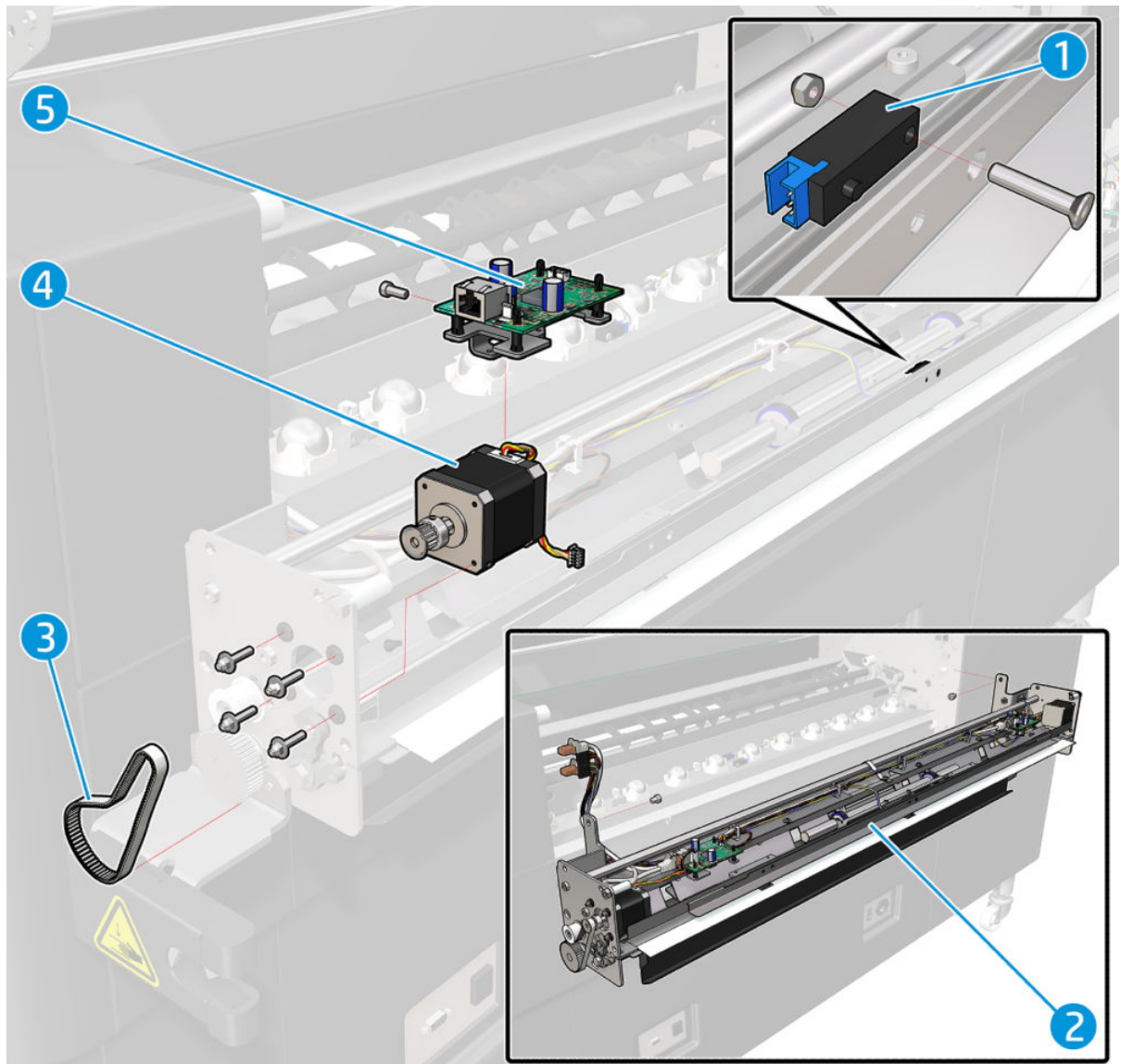
	Part number	Description
1	3JJ54-67041	CF X45 PCA – roller tray controller
2	3JJ54-67025	Roll tray drive motor
3	3JJ54-67061	CF X45 toothed belt
4	3JJ54-67085	FF exit discharge cable

Conveyor



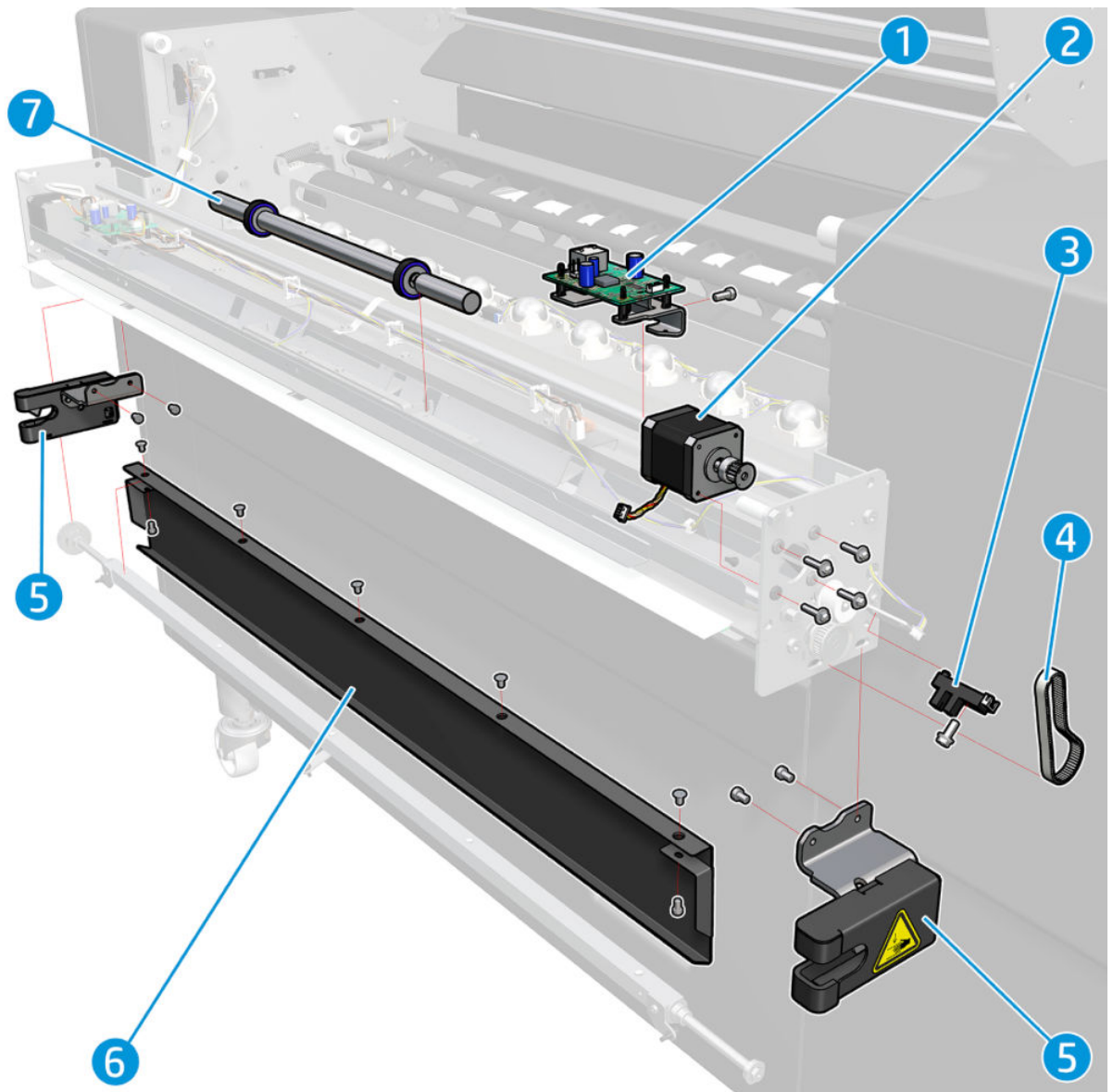
	Part number	Description
1	3JJ54-67062	CF X50 toothed belt
2	K5H75-67160	Drive unit conveyor with sensor
3	3JJ54-67026	Transport belt CF tilt tray (3)

Interface (I)



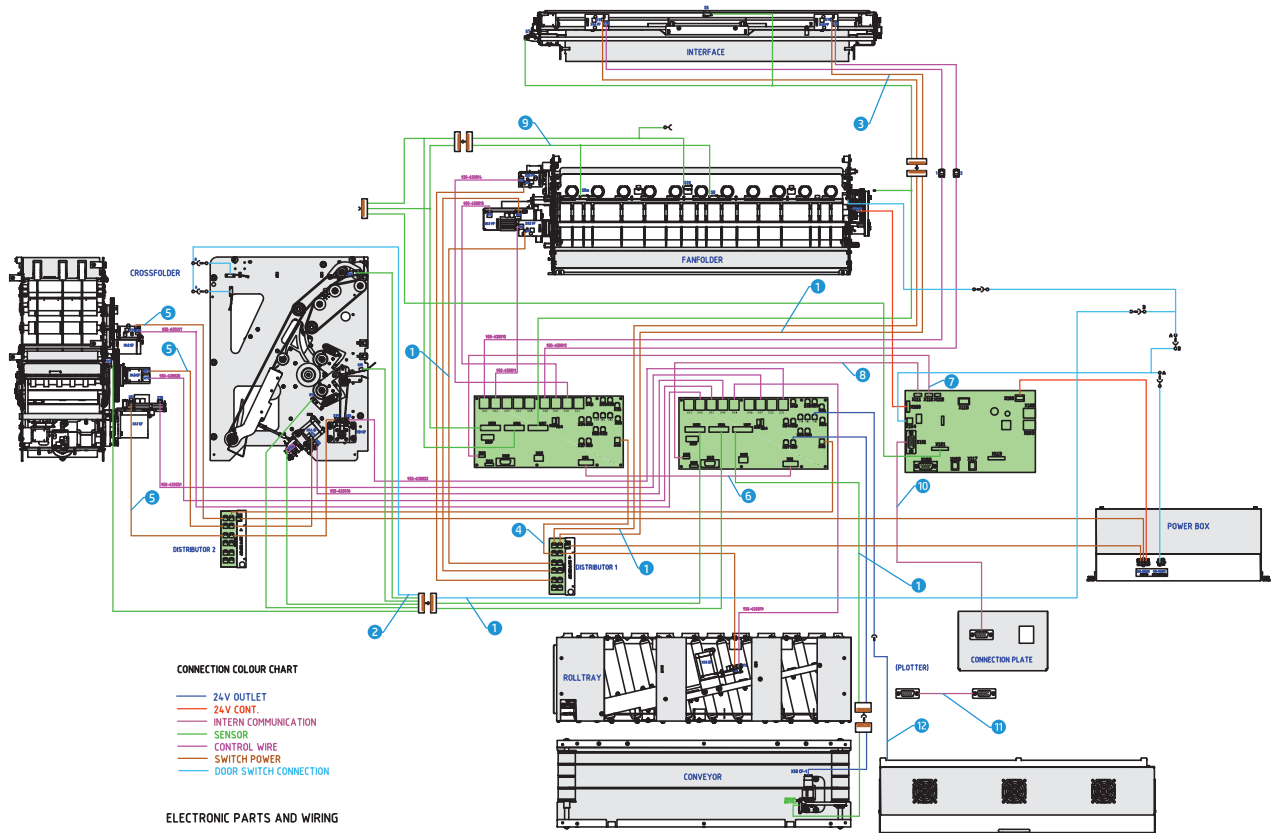
	Part number	Description
1	3JJ54-67030	Paper sensor – LB5
2	3JJ54-67028	Folder interface assembly
3	3JJ54-67064	FF X42 toothed belt
4	3JJ54-67042	FF X46 – interface transport motor
5	K5H75-67161	Control board switch

Interface (II)



	Part number	Description
1	3JJ54-67043	FF X46 PCA – interface transport controller
2	3JJ54-67042	FF X46 – interface transport motor
3	3JJ54-67031	Fork type sensor – LB11
4	3JJ54-67063	FF X46 toothed belt
5	3JJ54-67027	Folder interface hooks, Left and Right
6	3JJ54-67068	FF interface metal sheet flap
7	TBD	Press roller sheet tray

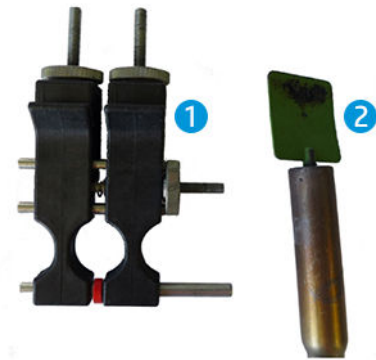
Electronics



Folder removal and installation

How to weld the green belts

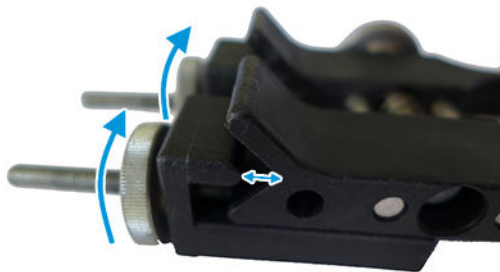
1. Weld the green belt. The required tools are:
 - Special holder tool
 - Soldering iron with welding plate.



2. Turn the knurled screw until the gap is about 6 mm.

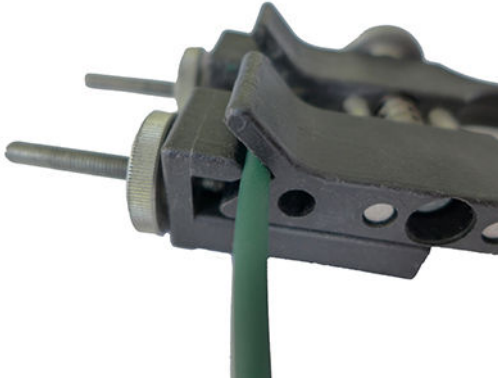


3. Turn both knurled screws to open the belt holder.

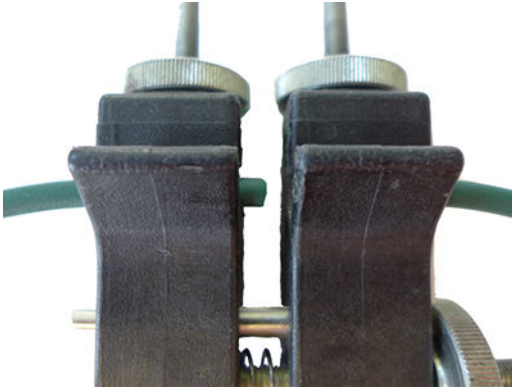


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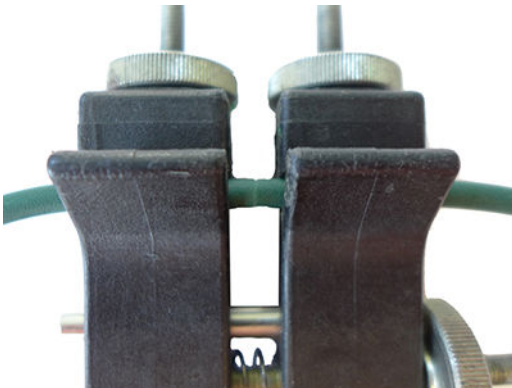
4. Insert the end of the belt in the holder and fasten the knurled screws slightly so that it is still possible to move the belt. Do the same on the other side.



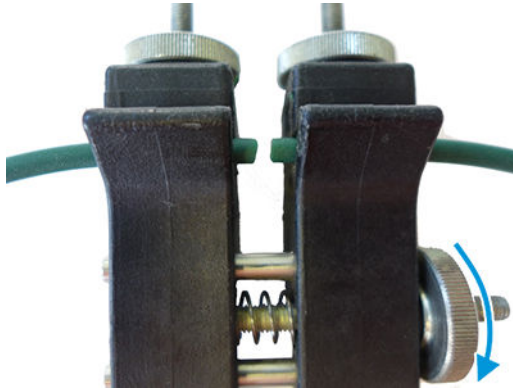
5. Push the belt in the holder until the end sticks out about 3 mm and fasten the appropriate knurled screw.



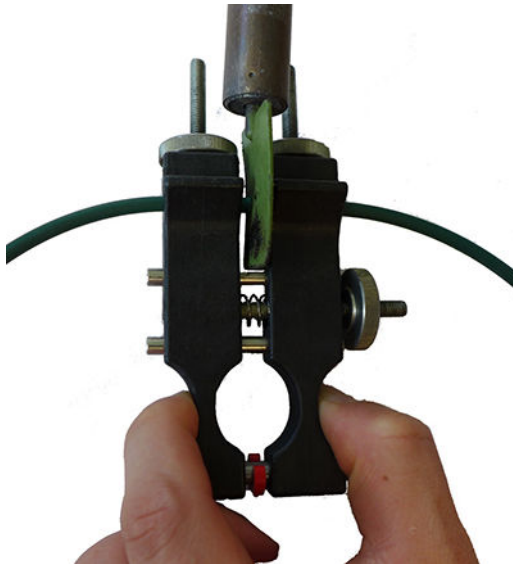
6. Push the belt on the other side of the holder until the two ends have contact and fasten the appropriate knurled screw.



7. Turn the knurled screw to open a gap between the two ends of the belt.

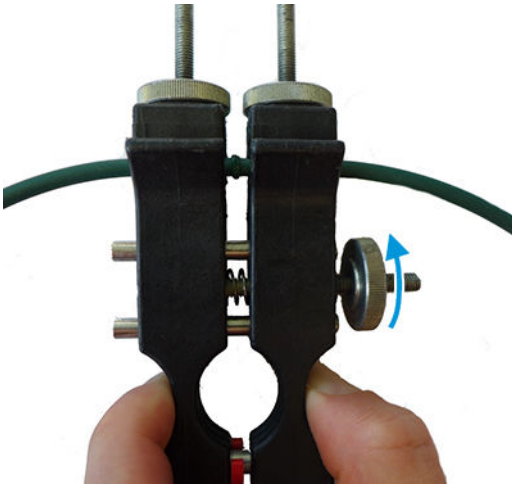


8. Place the hot soldering iron between the two ends and press the two ends of the belt against the welding plate. Hold this position for about 3 seconds.



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9. Release the holder, remove the soldering iron and press the two ends together again. Hold the tool in this position and fasten the knurled screw. Wait about ten seconds. Loosen all knurled screws and remove the belt from the holder tool.



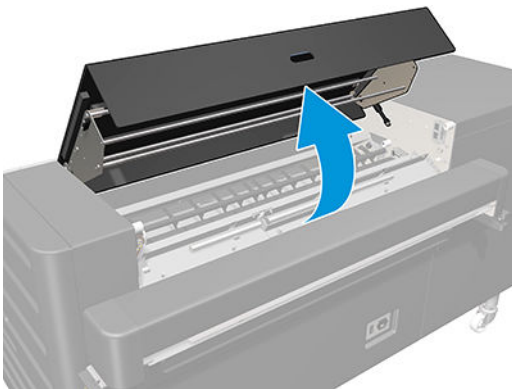
10. Remove the protruding burrs of the weld seam carefully with side-cutting pliers.



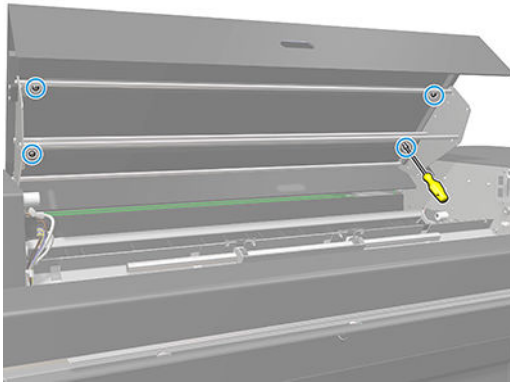
Fan-fold top cover (3JJ54-67018)

Removal

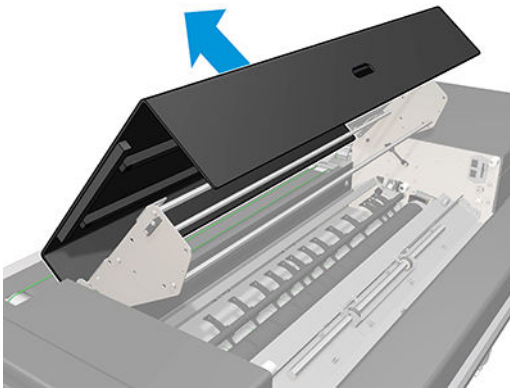
1. Open the Deflectors top cover.



2. Remove four screws.



3. Gently move the Fan-fold top cover and remove it.



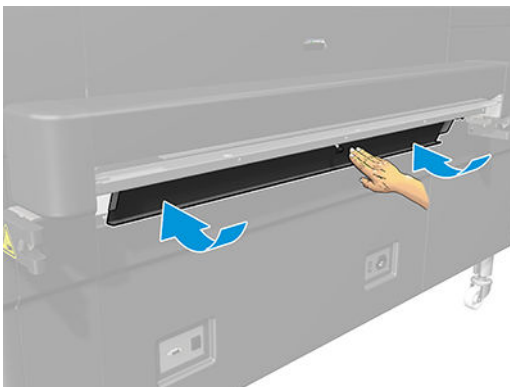
Installation

- ▲ Reverse the removal steps

Fan-fold bottom cover (3JJ54-67003)

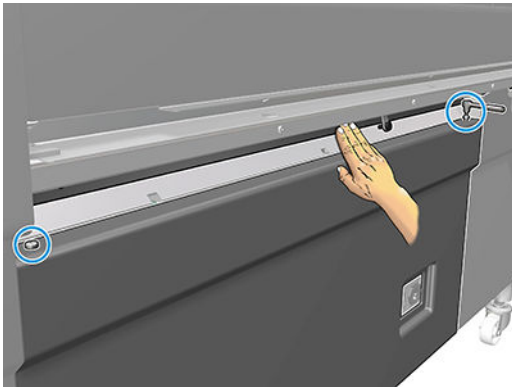
Removal

1. Rotate the tray.

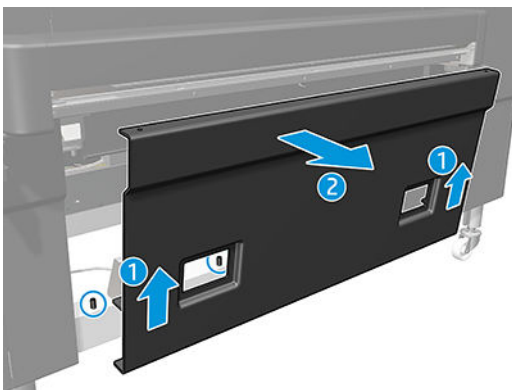


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2. Keep the tray rotated and remove two screws.

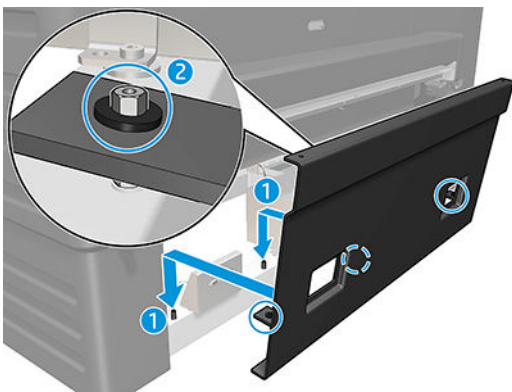


3. Slide up the Fan-fold bottom cover and remove it.



Installation

- ▲ Insert the Fan-fold bottom cover into the two pins and then place the two screws.

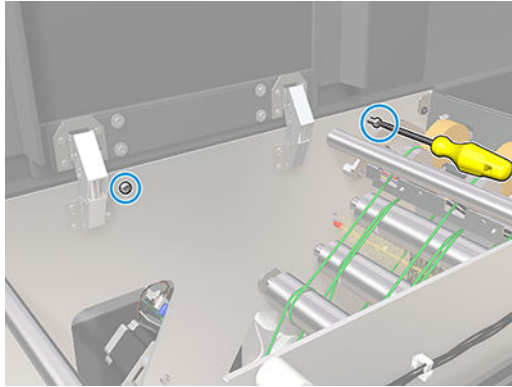


FF/CF front cover (3JJ54-67004)

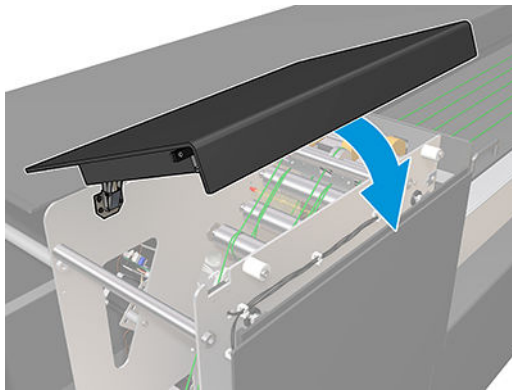
Removal

1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).

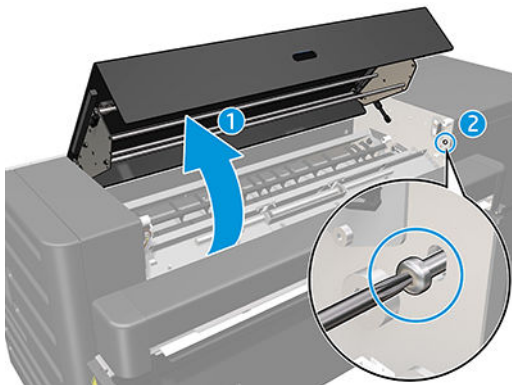
2. Remove two screws.



3. Close the CF top cover.

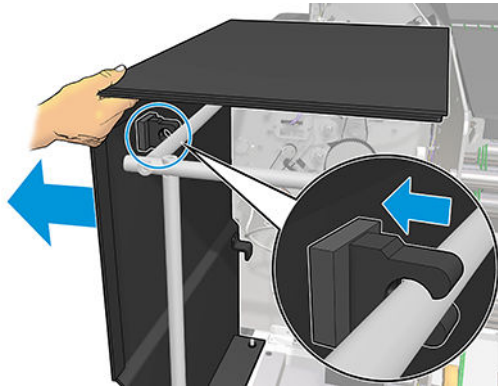


4. Open the Deflectors top cover and remove one screw.

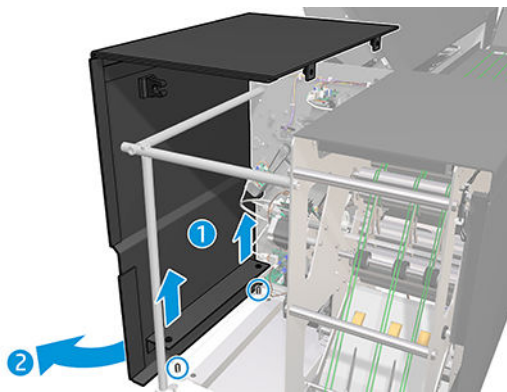


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5. Carefully unclip one clip pulling towards you.

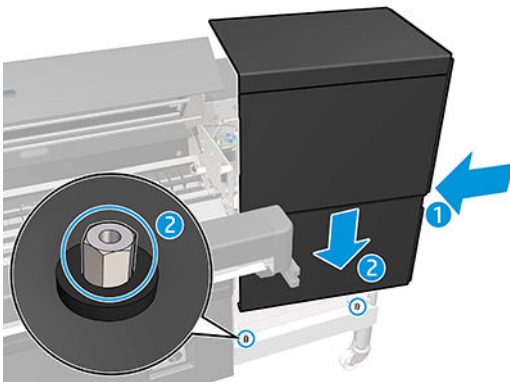


6. Slide up the FF/CF front cover and remove it.



Installation

1. Insert the CF door into the two pins and clip it.



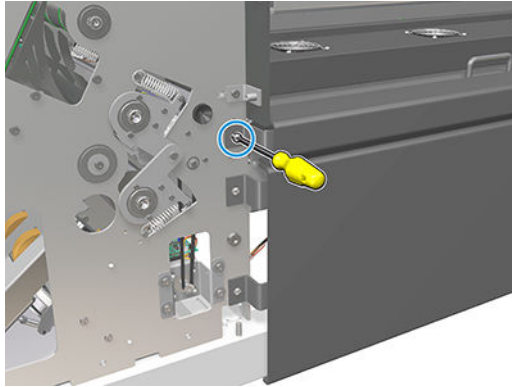
2. Reverse the removal steps

Roll tray panel (3JJ54-67005)

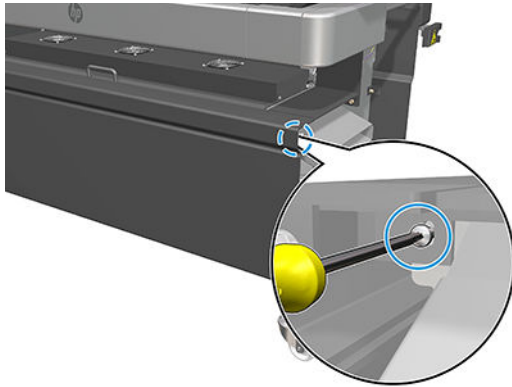
Removal

1. Remove the Cross-fold rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).

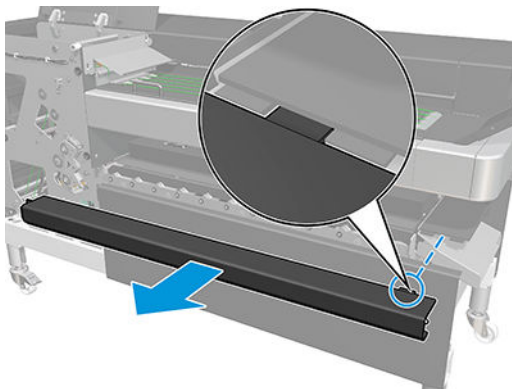
2. Remove one screw on the right side.



3. Remove the Fan-fold door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).
4. Remove one screw on the left side.



5. Remove the roll tray panel.



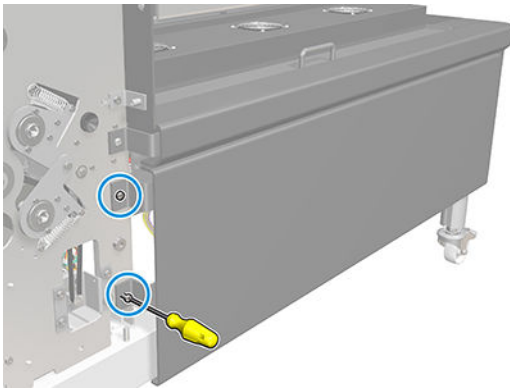
Installation

- ▲ Reverse the removal steps

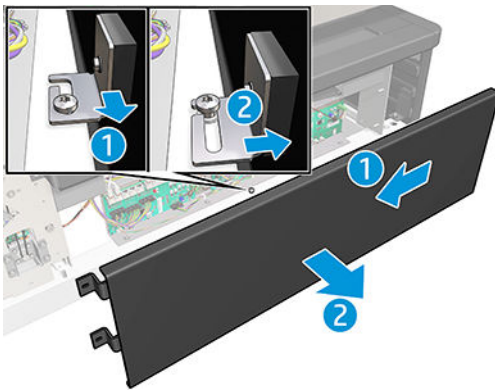
Control boards cover (3JJ54-67006)

Removal

1. Remove the Cross-fold rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove two screws.

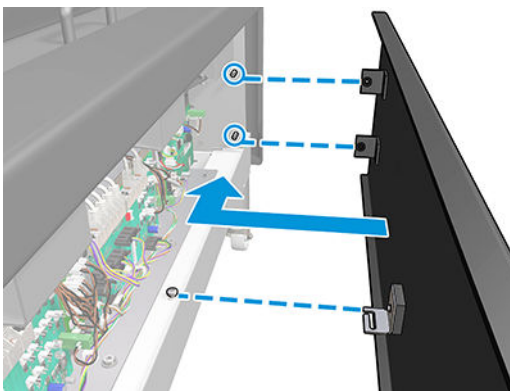


3. Slide the Control boards cover to the left and remove it.



Installation

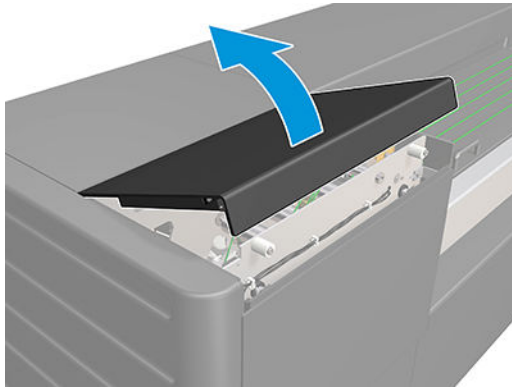
- ▲ Insert the Control boards cover into the two pins and hook.



Cross-fold rear door (3JJ54-67009)

Removal

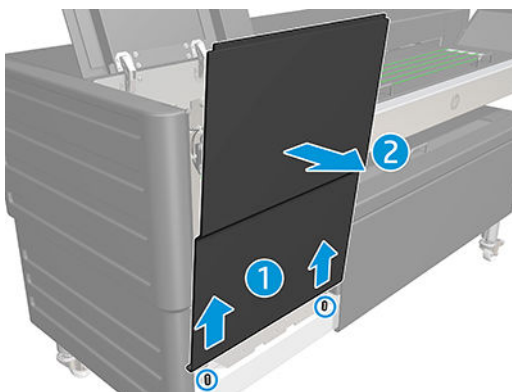
1. Open the CF top cover.



2. Carefully unclip the four clips pulling towards you.



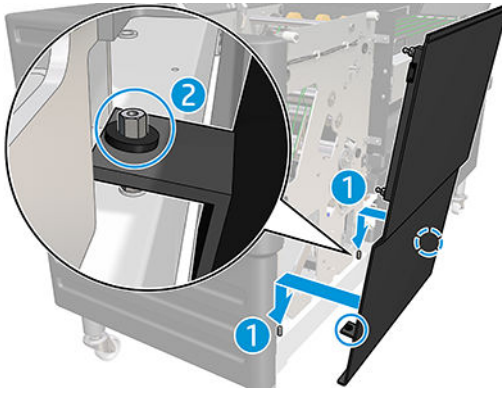
3. Slide up the Cross-fold rear door and remove it.



Installation

- ▲ Insert the Cross-fold rear door into the two pins and then clip the four clips.

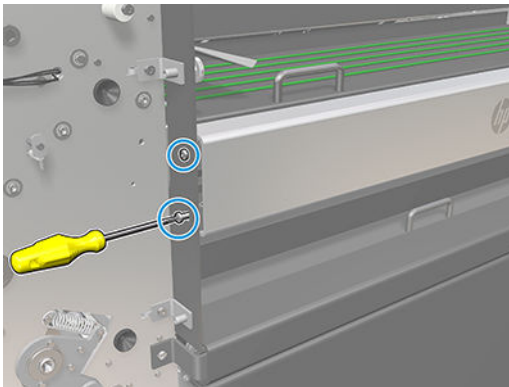
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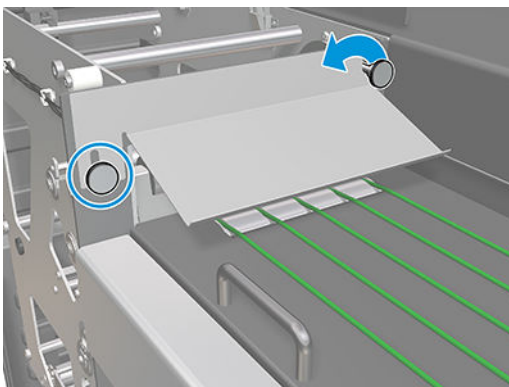
Cross-fold entry cover (3JJ54-67008)

Removal

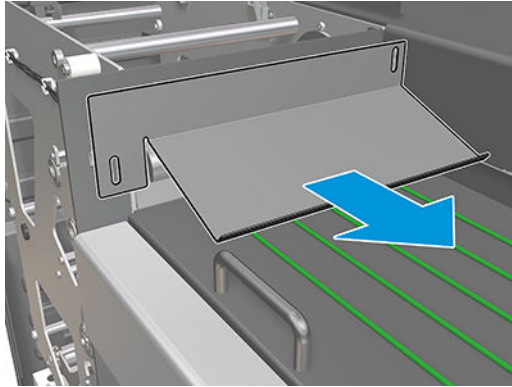
1. Remove the Cross-fold rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove two screws.



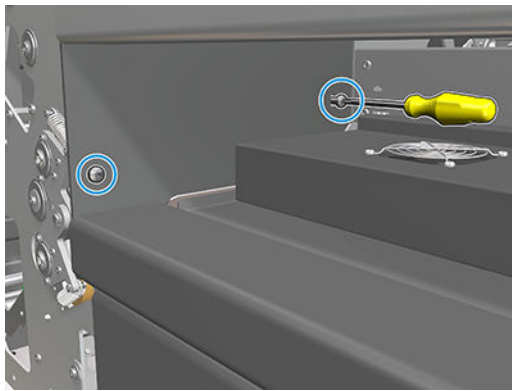
3. Remove two knurled screws.



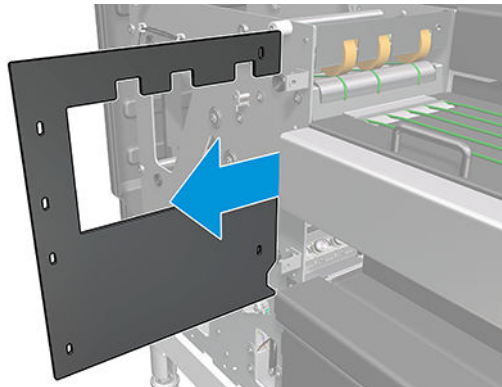
4. Remove the metal plate.



5. Remove two screws.



6. Remove the CF entry cover.



Installation

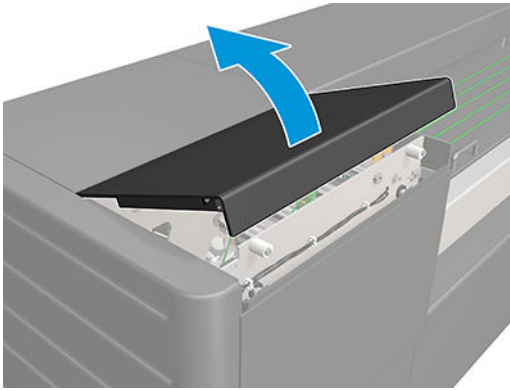
- ▲ Reverse the removal steps

Cross-fold top door (3JJ54-67010)

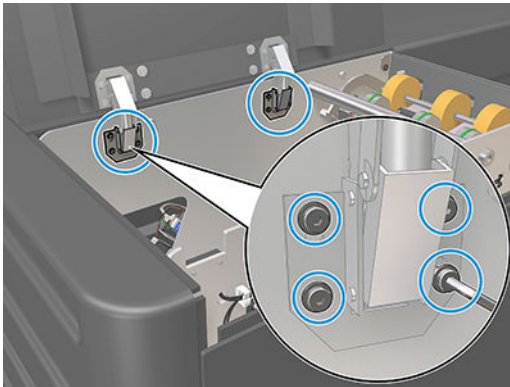
Removal

1. Open the CF top cover.

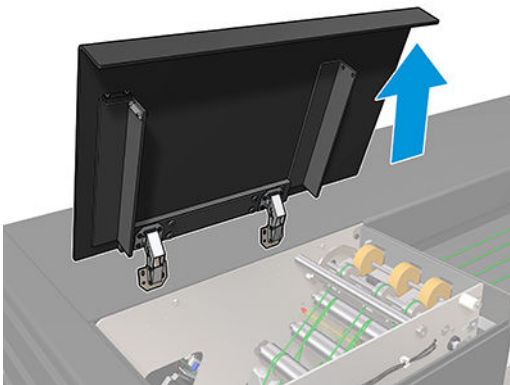
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2. Remove four screws from each hinge.



3. Remove the Cross-fold top door.



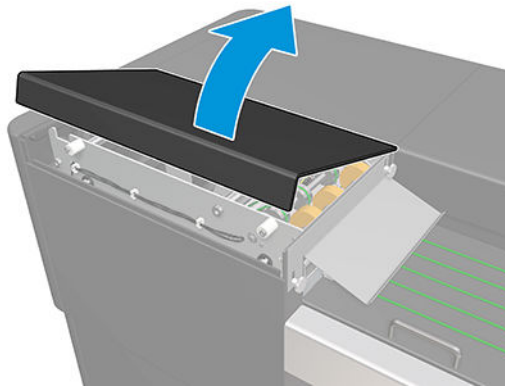
Installation

- ▲ Reverse the removal steps

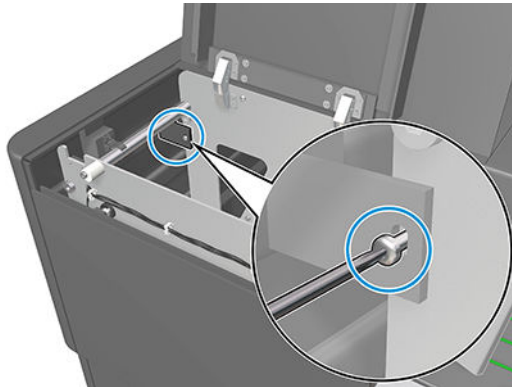
Cross-fold door (3JJ54-67069)

Removal

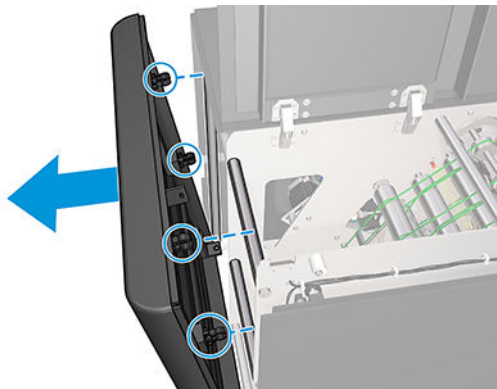
1. Open the CF top cover.



2. Remove one screw.

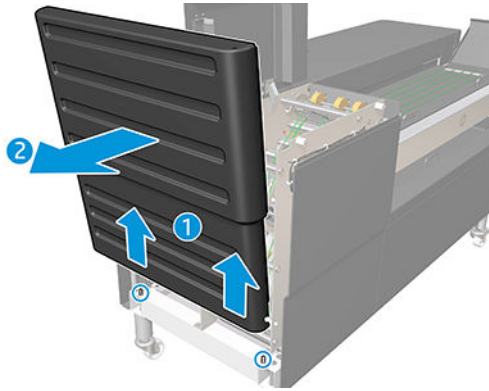


3. Carefully unclip the four clips pulling towards you.



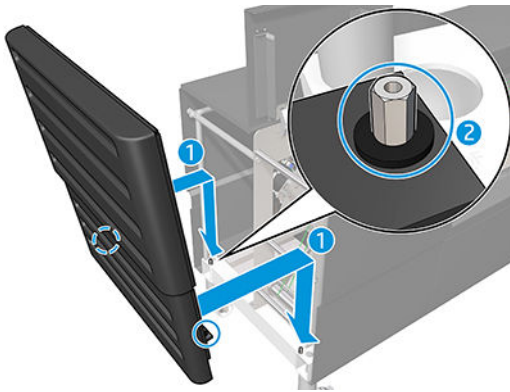
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4. Slide up the CF door and remove it.



Installation

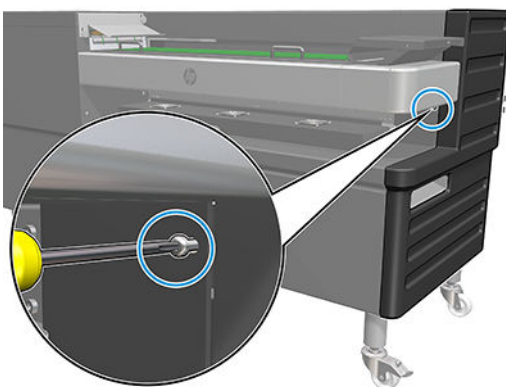
- ▲ Insert the CF door into the two pins and then clip the four clips.



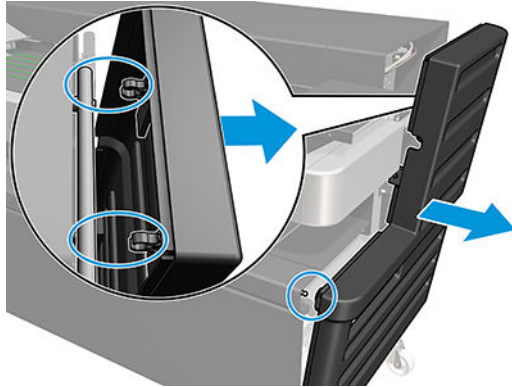
Fan-fold door (3JJ54-67070)

Removal

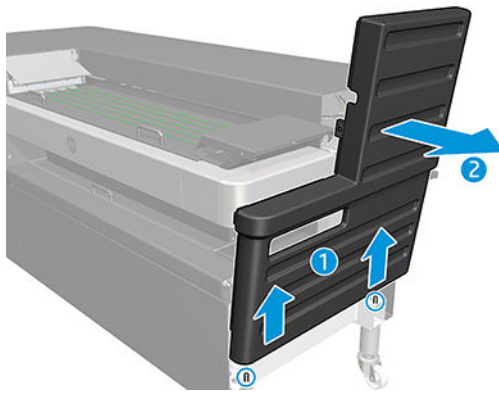
1. Remove one screw.



- Carefully unclip the three clips pulling towards you.

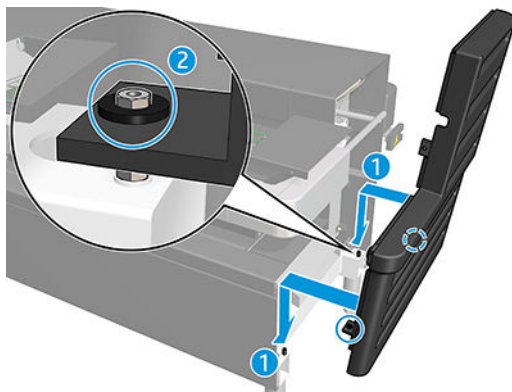


- Slide up the FF door and remove it.



Installation

- ▲ Insert the FF door into the two pins and then clip the three clips.

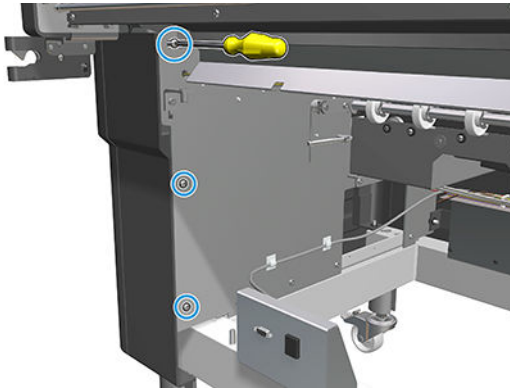


Fan-fold strip cover (3JJ54-67071)

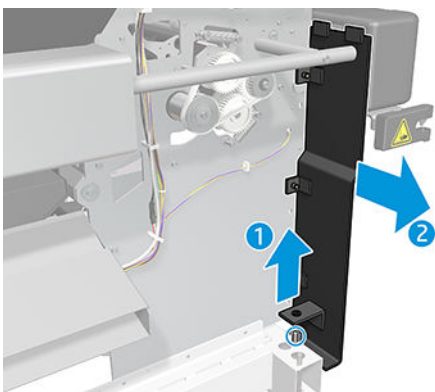
Removal

- Remove the FF bottom cover. See [Fan-fold bottom cover \(3JJ54-67003\) on page 1707](#).

2. Remove three screws.

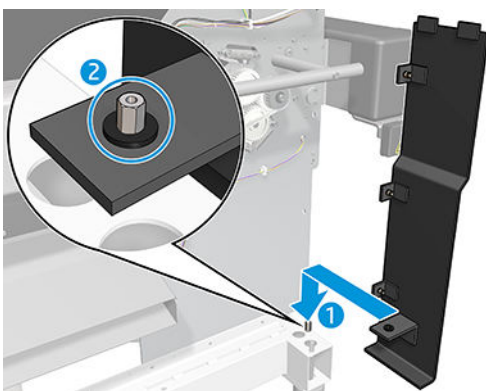


3. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).
4. Remove the Roll tray strip cover. See [Roll tray strip cover \(3JJ54-67073\) on page 1722](#).
5. Remove the FF top strip cover. See [Fan-fold top strip cover \(3JJ54-67076\) on page 1724](#).
6. Slide up the FF strip cover and remove it.



Installation

1. Insert the FF strip cover into one pin.

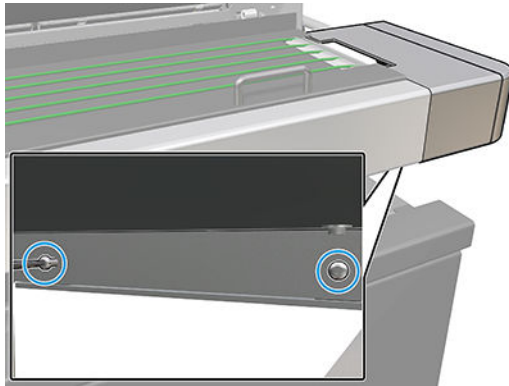


2. Reverse the removal steps

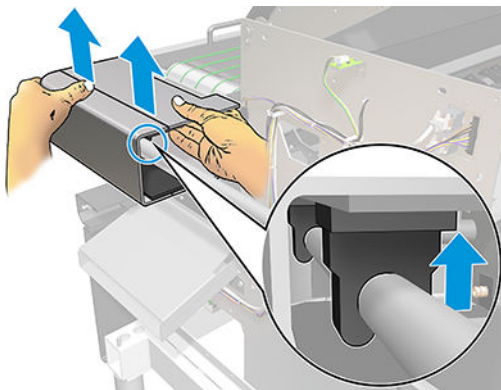
Conveyor cover (3JJ54-67072)

Removal

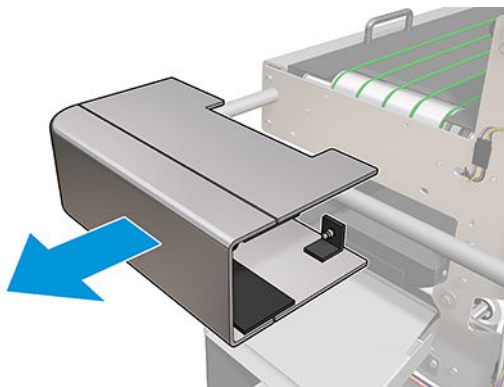
1. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).
2. Remove the Roll tray strip cover. See [Roll tray strip cover \(3JJ54-67073\) on page 1722](#).
3. Remove the FF top strip cover. See [Fan-fold top strip cover \(3JJ54-67076\) on page 1724](#).
4. Remove the Conveyor extension. See [Conveyor extension \(3JJ54-67087\) on page 1876](#).
5. Remove two screws.



6. Move gently the cover for unclip the two clips.



7. Remove the Conveyor cover.



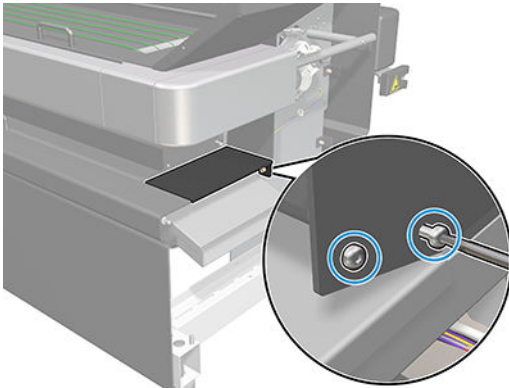
Installation

- ▲ Reverse the removal steps

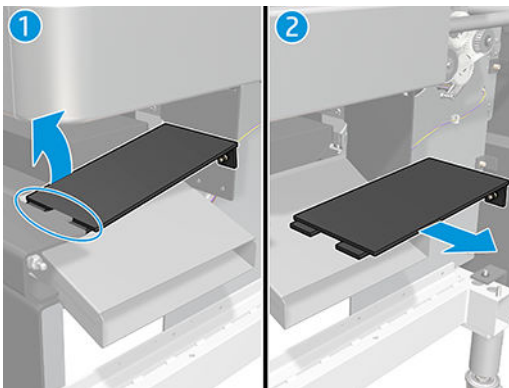
Roll tray strip cover (3JJ54-67073)

Removal

1. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).
2. Remove two screws.



3. Remove the Roll tray strip cover.



Installation

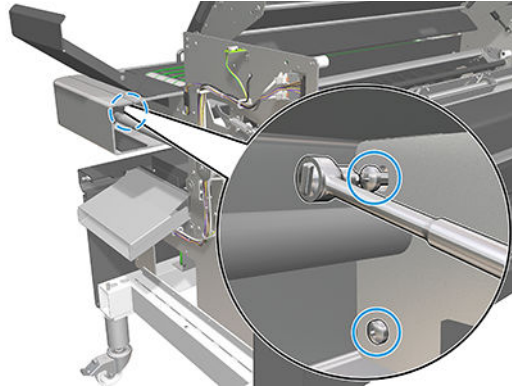
- ▲ Reverse the removal steps

Conveyor panel (3JJ54-67074)

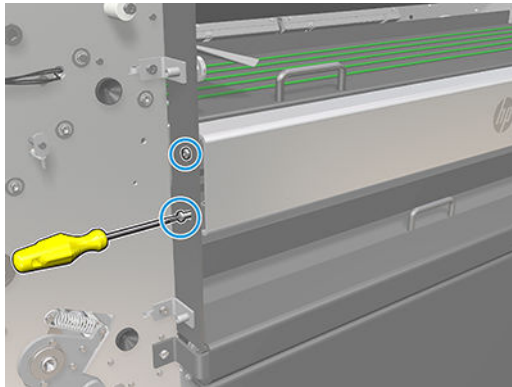
Removal

1. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).
2. Remove the Roll tray strip cover. See [Roll tray strip cover \(3JJ54-67073\) on page 1722](#).
3. Remove the FF top strip cover. See [Fan-fold top strip cover \(3JJ54-67076\) on page 1724](#).

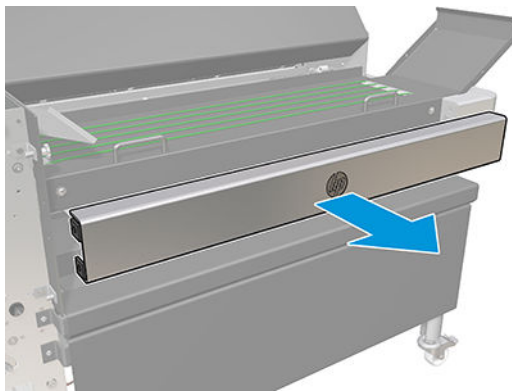
4. Remove two screws.



5. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
6. Remove two screws on the right side.



7. Remove the Conveyor panel.



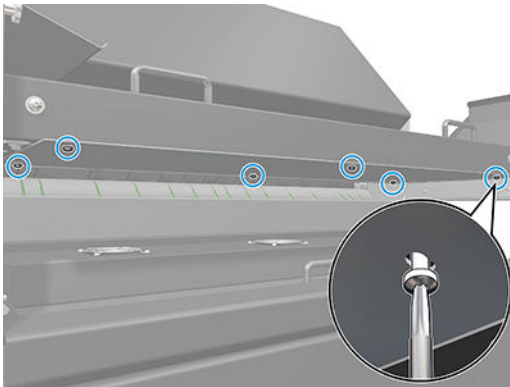
Installation

- ▲ Reverse the removal steps

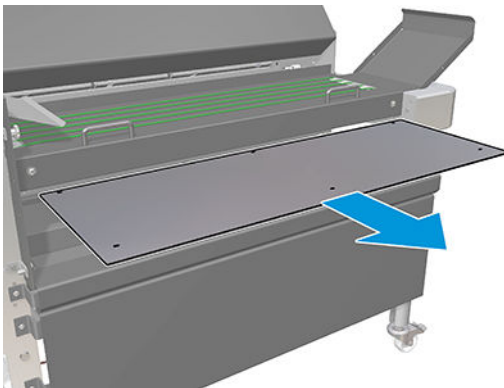
Conveyor bottom cover (3JJ54-67075)

Removal

1. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).
2. Remove the Roll tray strip cover. See [Roll tray strip cover \(3JJ54-67073\) on page 1722](#).
3. Remove the FF top strip cover. See [Fan-fold top strip cover \(3JJ54-67076\) on page 1724](#).
4. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
5. Remove the Conveyor panel. See [Conveyor panel \(3JJ54-67074\) on page 1722](#).
6. Remove six screws.



7. Remove the Conveyor bottom cover.



Installation

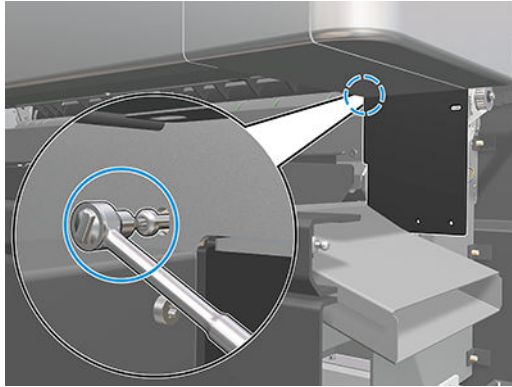
- ▲ Reverse the removal steps

Fan-fold top strip cover (3JJ54-67076)

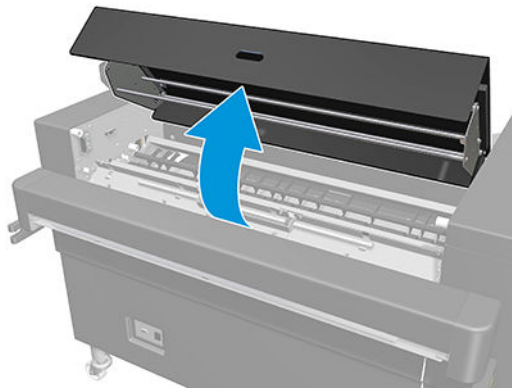
Removal

1. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).
2. Remove the Roll tray strip cover. See [Roll tray strip cover \(3JJ54-67073\) on page 1722](#).

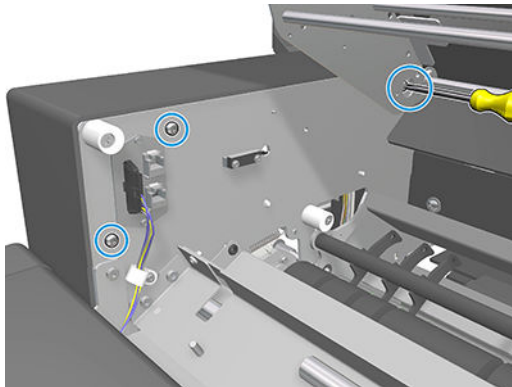
3. Remove one screw.



4. Open the Deflectors top cover.

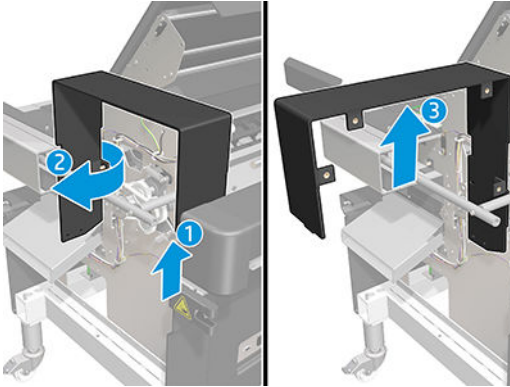


5. Remove three screws.



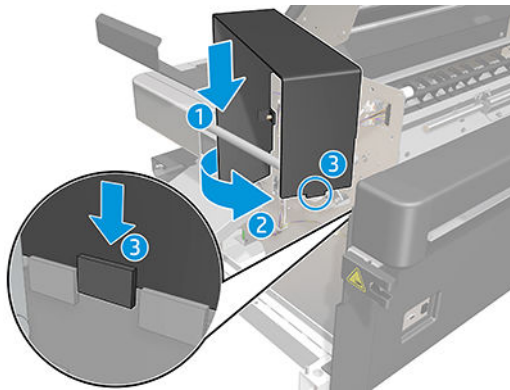
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6. Remove the FF top strip cover.



Installation

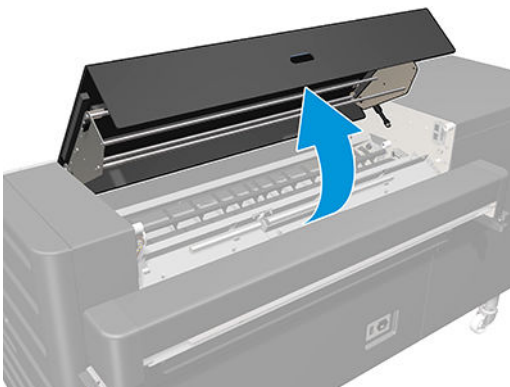
- ▲ Insert the cover rotating it and through the tabs.



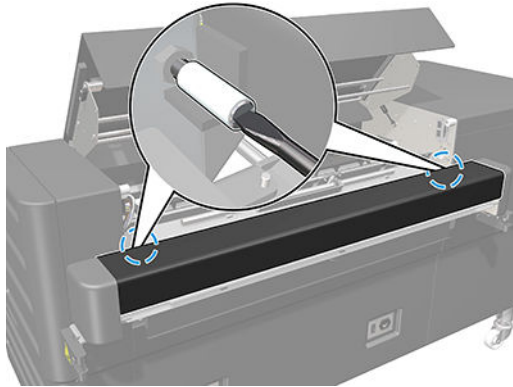
Interface top cover (3JJ54-67077)

Removal

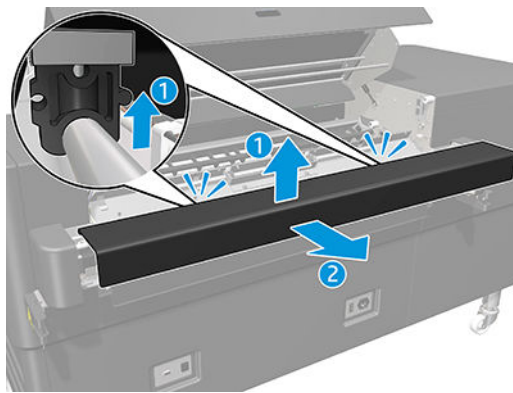
1. Open the Deflectors top cover.



2. Remove two screws.



3. Remove the Interface top cover.



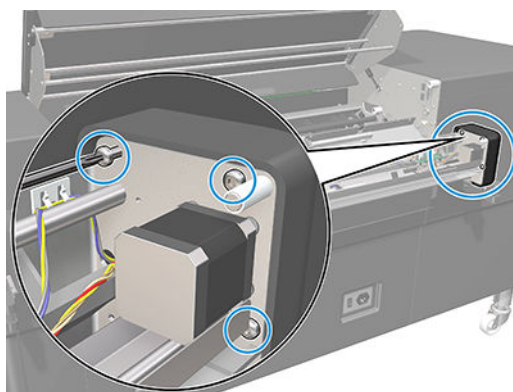
Installation

- ▲ Reverse the removal steps

Lid interface – Right side (3JJ54-67078)

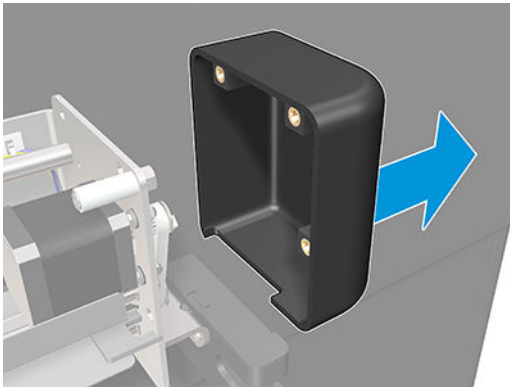
Removal

1. Remove the Interface top cover. See [Interface top cover \(3JJ54-67077\) on page 1726](#).
2. Remove three screws.



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3. Remove the Lid interface.



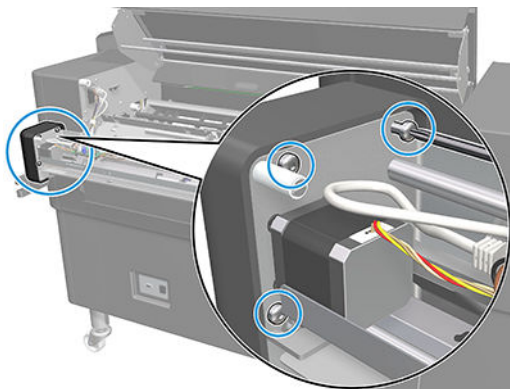
Installation

- ▲ Reverse the removal steps

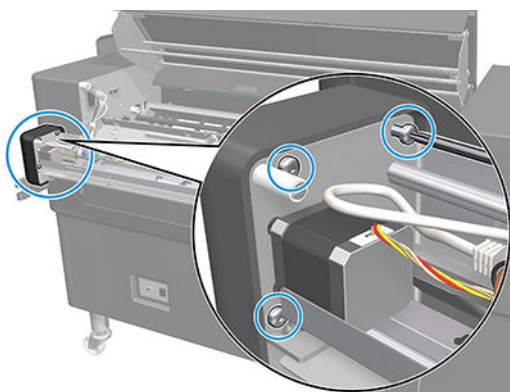
Lid interface – Left side (3JJ54-67079)

Removal

1. Remove the Interface top cover. See [Interface top cover \(3JJ54-67077\) on page 1726](#).
2. Remove three screws.




3. Remove the Lid interface.

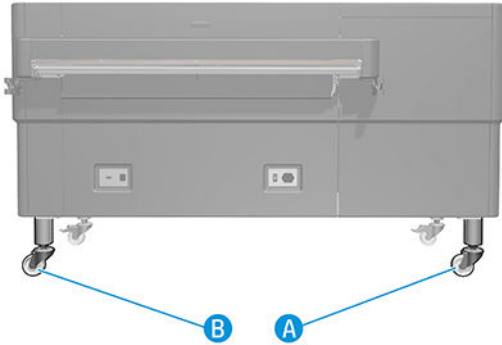


Installation

- ▲ Reverse the removal steps

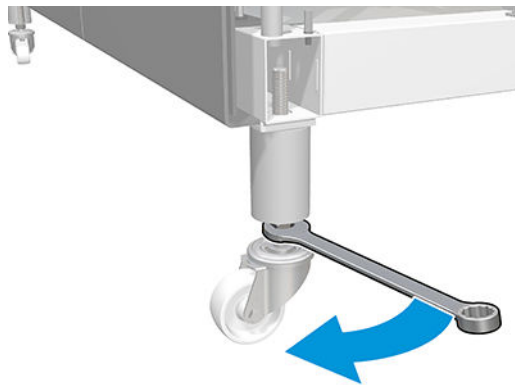
Caster wheels without break (x2) (3JJ54-67013)

 **NOTE:** Locate the wheel to replace.

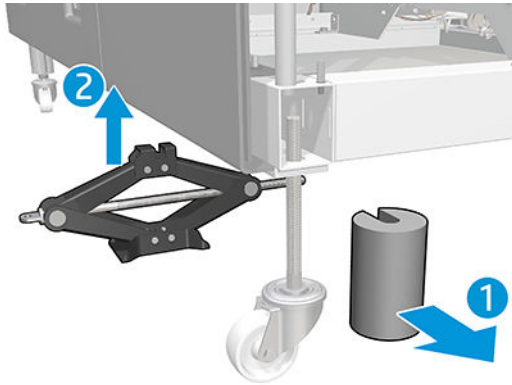


Removal – Case A: left side

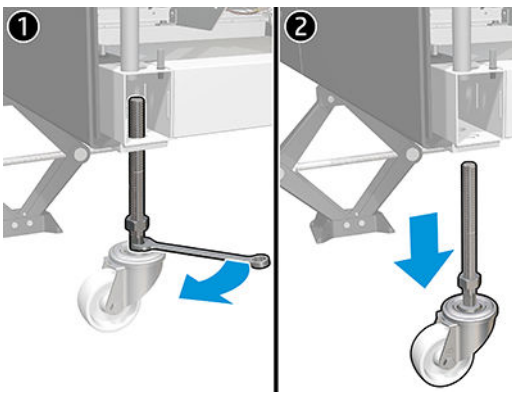
1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
3. Loosen the nut.



4. Remove the metallic trim and lift the folder with a hydraulic jack (or similar).



5. Unscrew the caster wheel and remove it.




Removal – Case B: right side

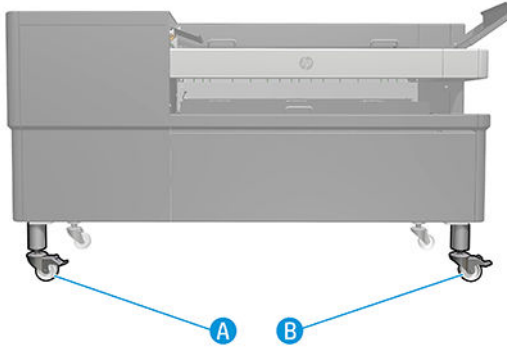
1. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).
2. Follow the steps 3 to 5 of Case A

Installation

- ▲ Reverse the removal steps.

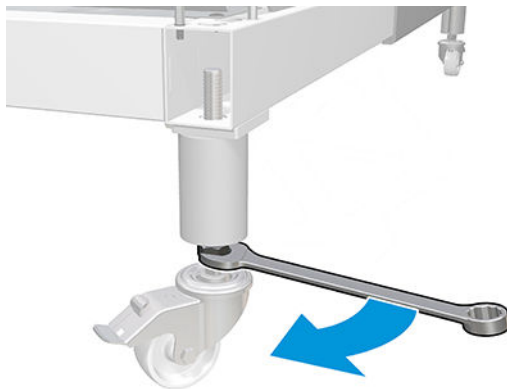
Caster wheels with break (x2) (3JJ54-67014)

 **NOTE:** Locate the wheel to replace.

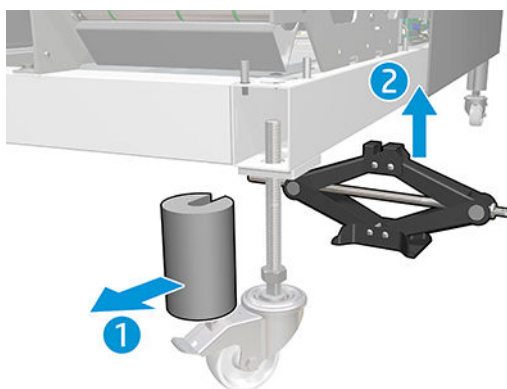


Removal – Case A: left side

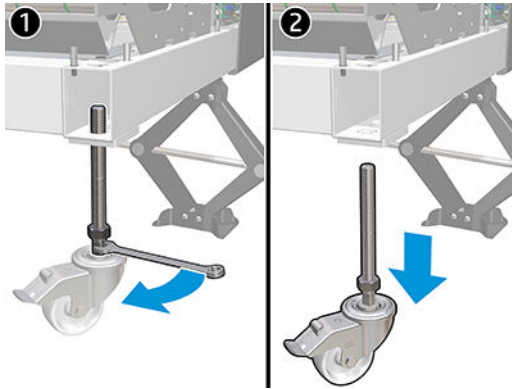
1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
3. Loosen the nut.



4. Remove the metallic trim and lift the folder with a hydraulic jack (or similar).



5. Unscrew the caster wheel and remove it.



Removal – Case B: right side

1. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).
2. Follow the steps 3 to 5 of Case A

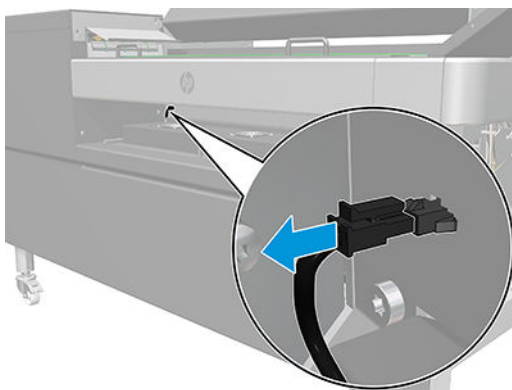
Installation

- ▲ Reverse the removal steps.

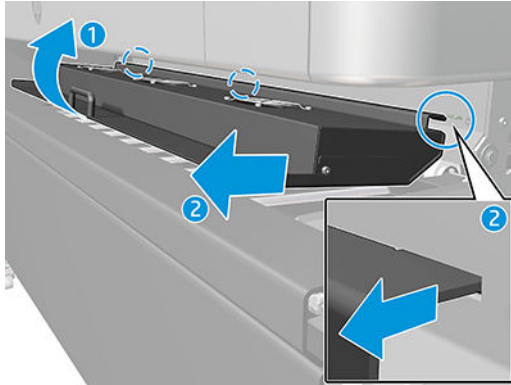
FF outlet belt (16) kit with 3M rubber (3JJ54-67080)

Removal

1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
3. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).
4. Remove the Roll tray strip cover. See [Roll tray strip cover \(3JJ54-67073\) on page 1722](#).
5. Remove the FF top strip cover. See [Fan-fold top strip cover \(3JJ54-67076\) on page 1724](#).
6. Disconnect the cable.



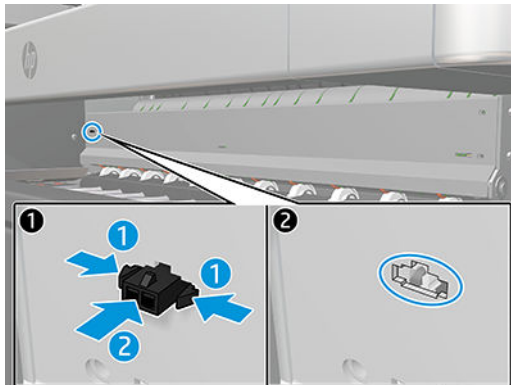
7. Remove the fan unit



8. Remove four screws.

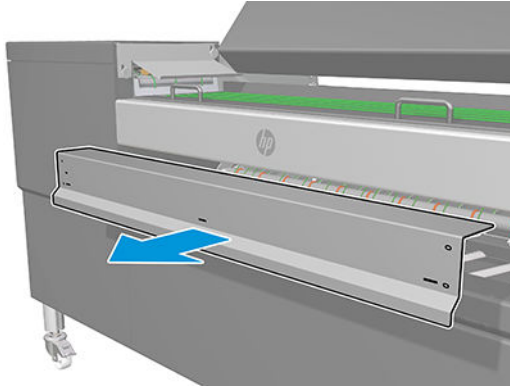


9. Unclip the connector.

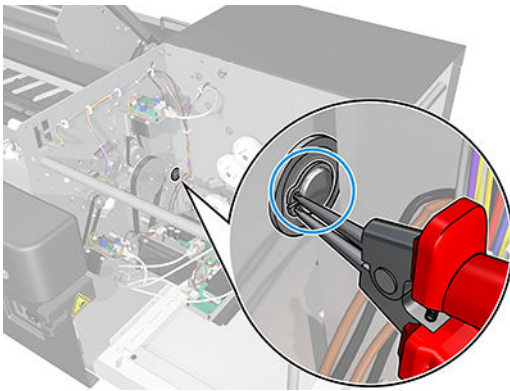


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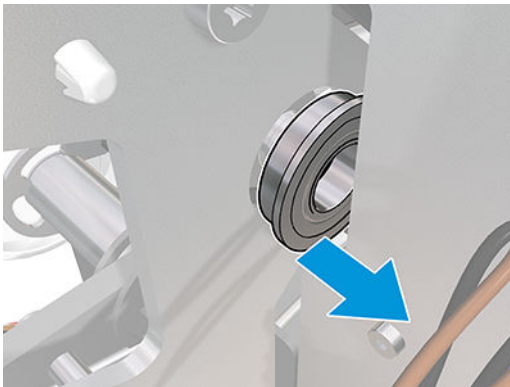
10. Remove the metal plate.



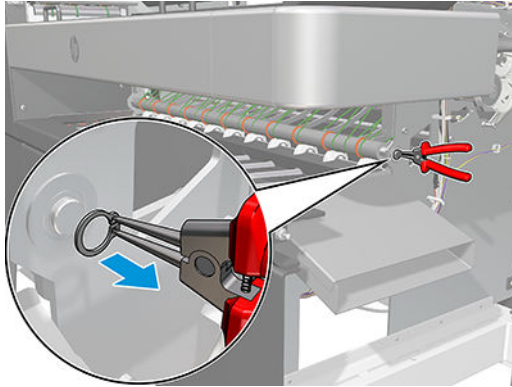
11. Remove the circlip.



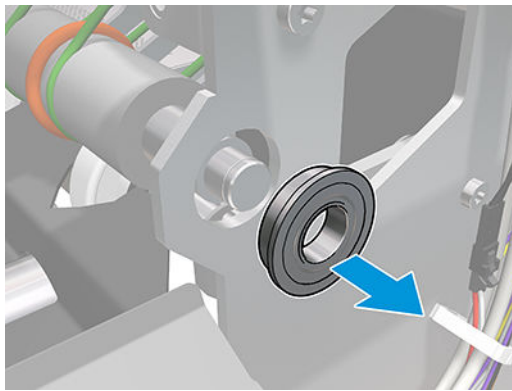
12. Remove the bushing.



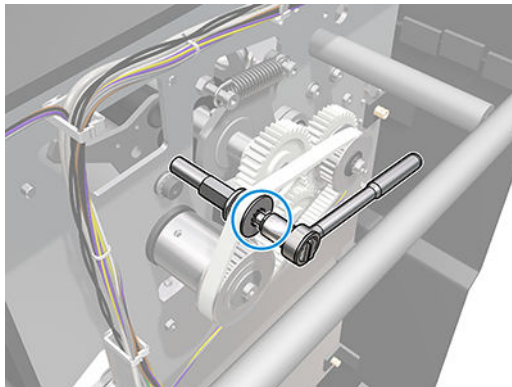
13. Remove the circlip.



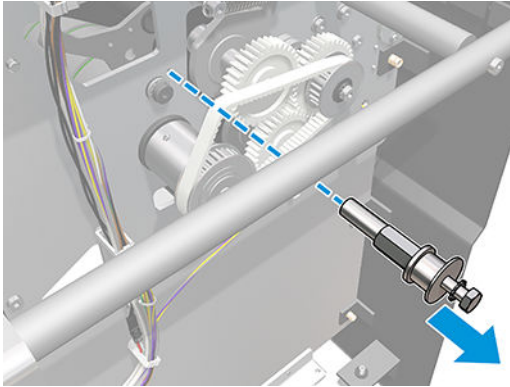
14. Remove the bushing.



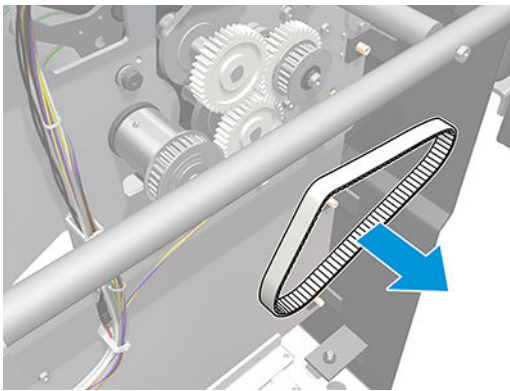
15. Remove the bolt.



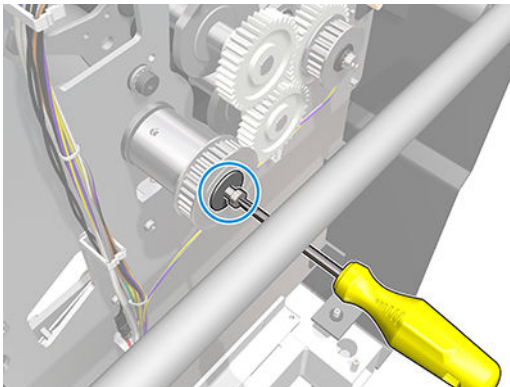
16. Remove the tensioner with the bolt.



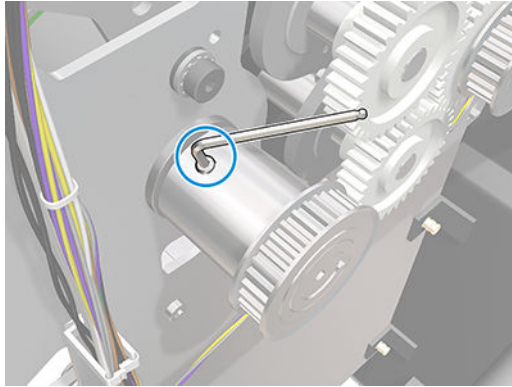
17. Remove the Folder toothed belt set.



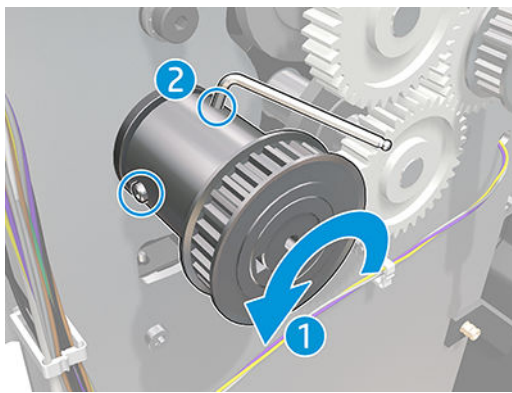
18. Remove the screw.



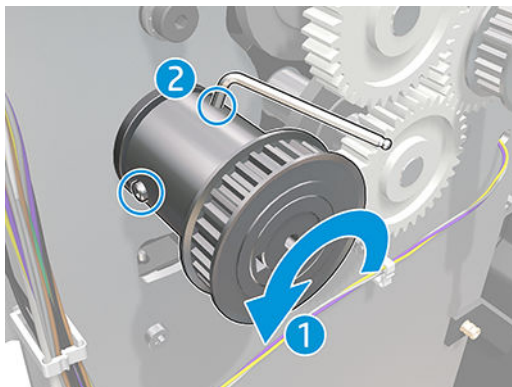
19. Loosen the Allen screw.



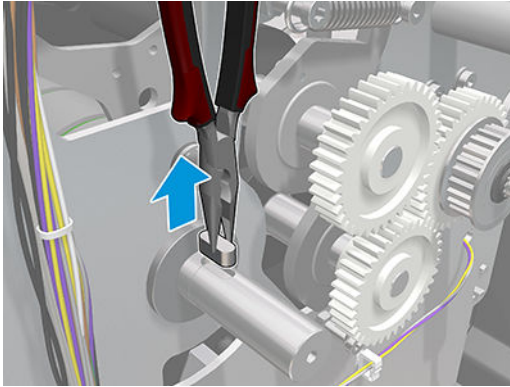
20. Rotate the gear until reach the other 2 Allen screws and loose them.



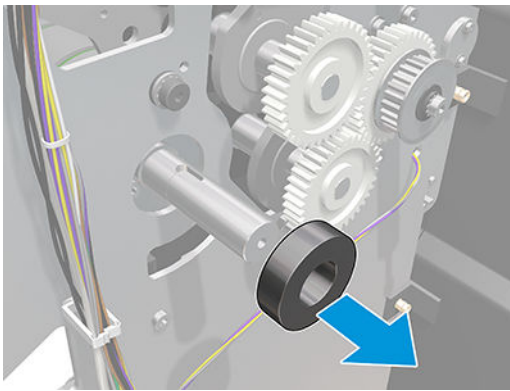
21. Remove the gear.



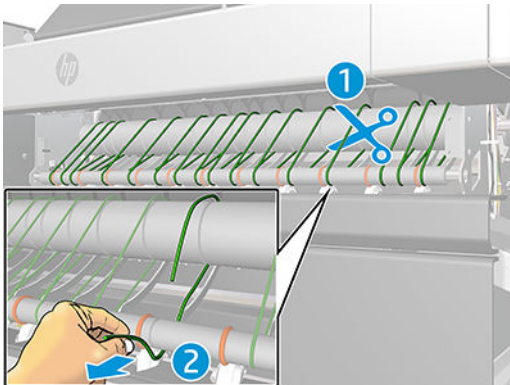
22. Remove the metal block.



23. Remove the bearing.

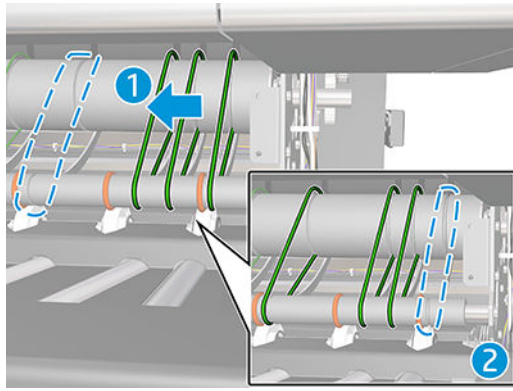


24. Cut the damage belt and remove it.

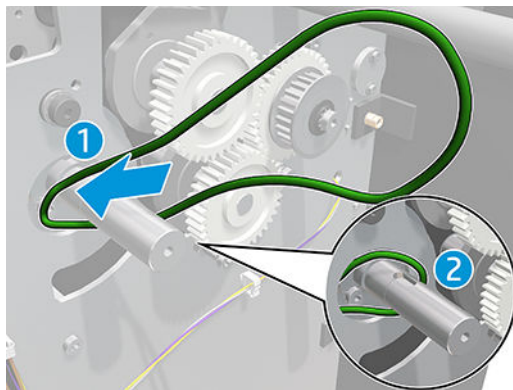


Installation of the belt

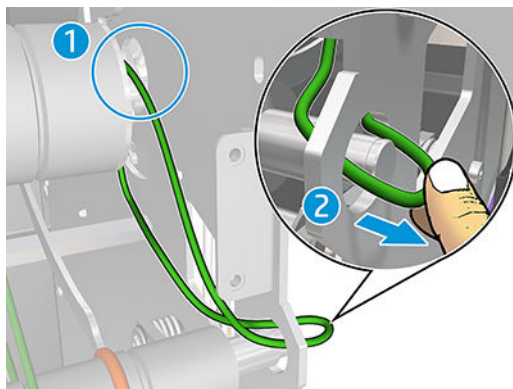
1. Move the belts to their slot, and leave the slot of the right side free.



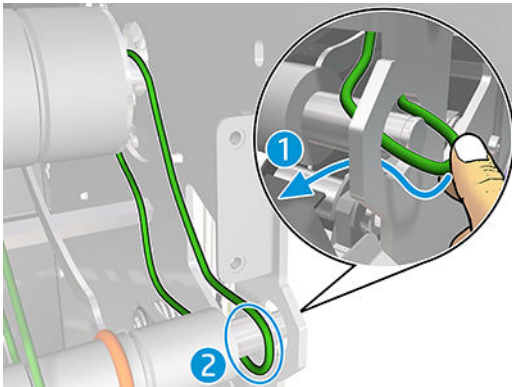
2. Pass the belt through the hole of the side plate and engage the belt with the end of the roller.



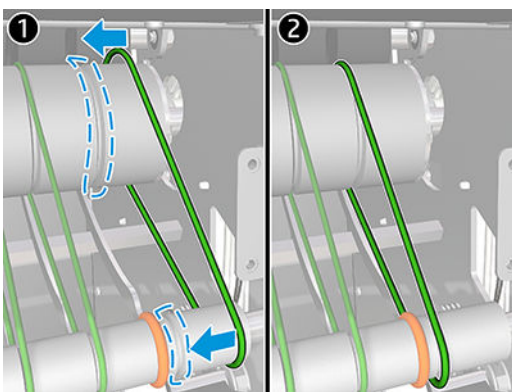
3. Leave the belt as indicated in number 1 and then pass it through the hole of the side plate.



4. Engage the belt with the end of the output shaft.

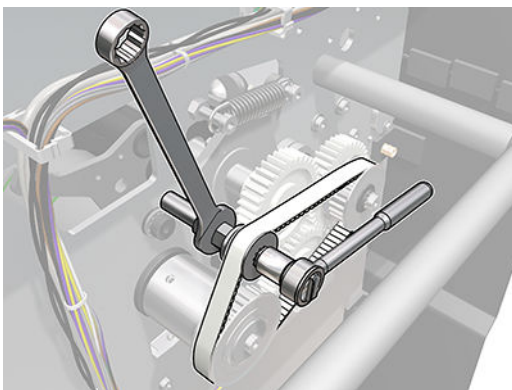


5. Move the belt until the slots.



Installation

1. Screw the tensioner with a wrench to tension the folder toothed belt set.



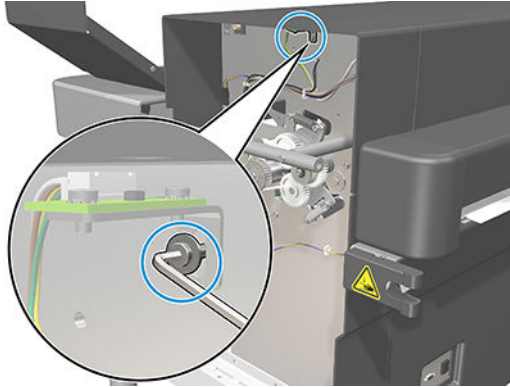
2. Reverse the removal steps.

LP M1829 LED controller (K5H75-67062)

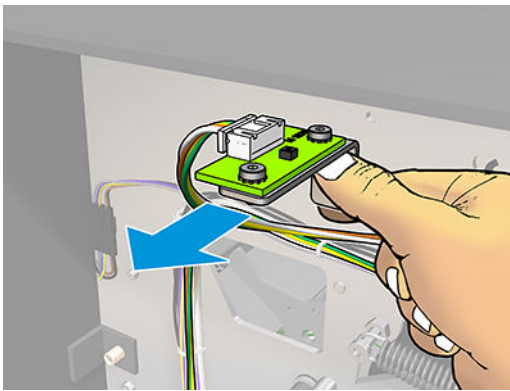
Removal

1. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).

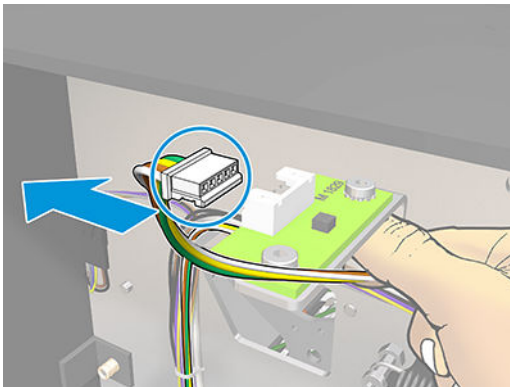
2. Remove one screw.



3. Remove the LED controller with the bracket.

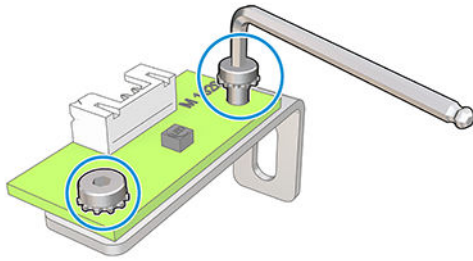


4. Disconnect the cable.

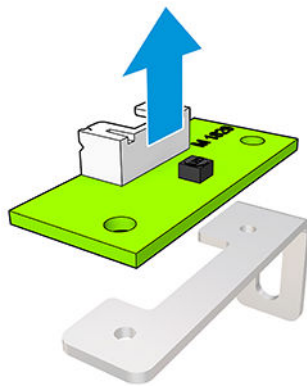


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5. Remove two screws.



6. Remove the LED controller.



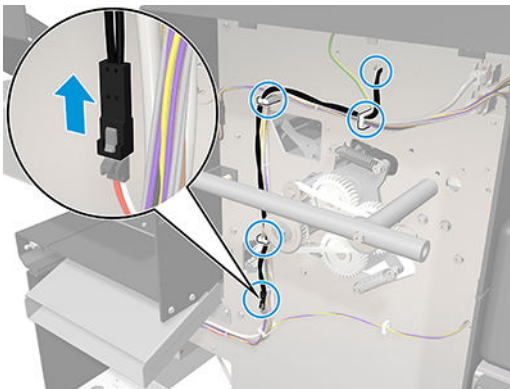
Installation

- ▲ Reverse the removal steps.

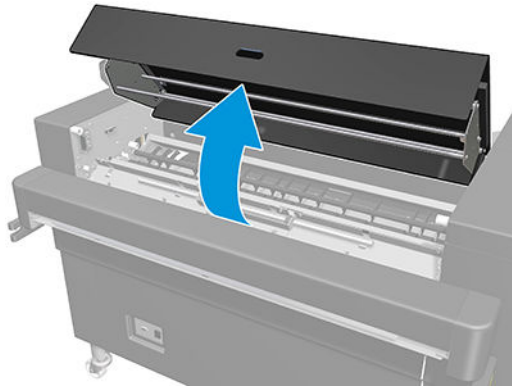
Reed sensor (K5H75-67071) – FF input and output

Removal

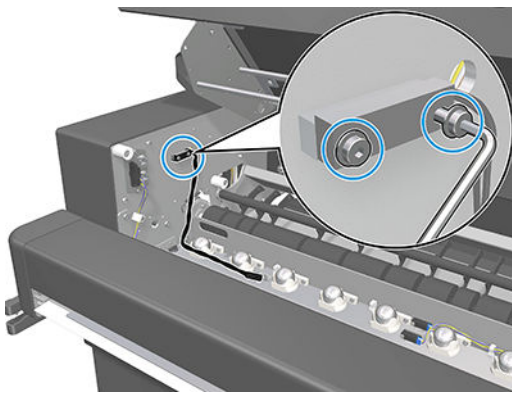
1. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).
2. Disconnect the cable sensor and unrout the cable.



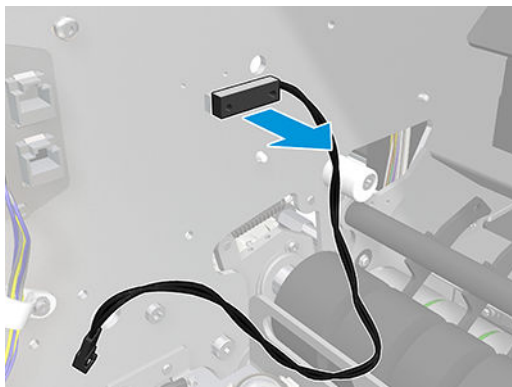
3. Open the Deflectors top cover.



4. Remove two screws.



5. Remove the Reed sensor.



Installation

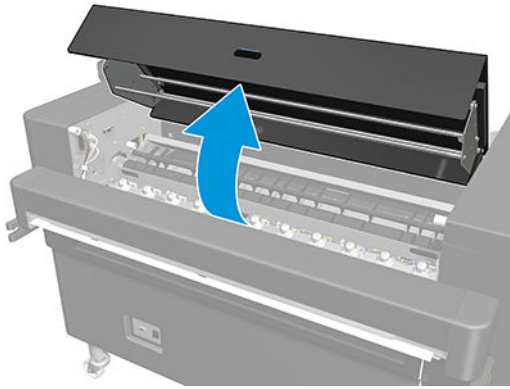
- ▲ Reverse the removal steps.

Diameter 32 mm ball and cage kit (K5H75-67091) – FF input and output

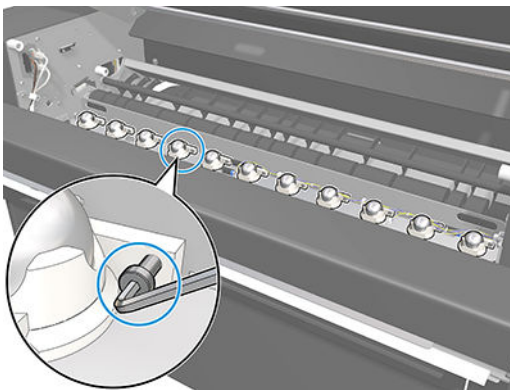
Removal

1. Open the Deflectors top cover.

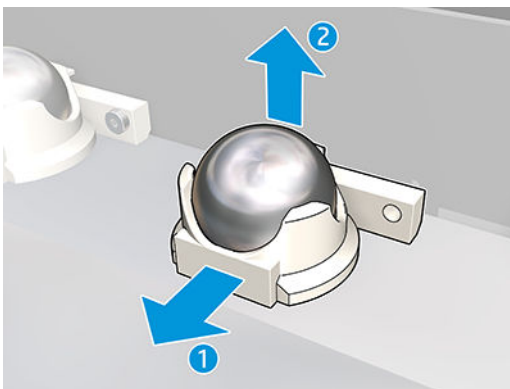
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2. Replace the defective ball and cage kit by removing one screw.



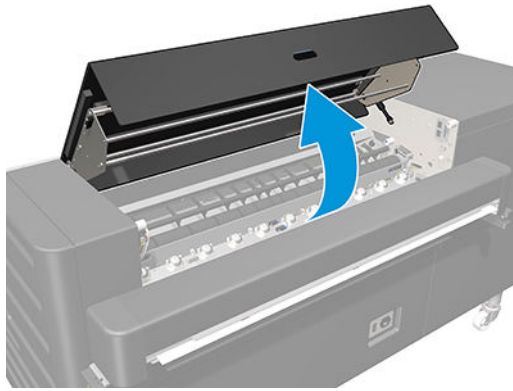
3. Remove the ball and cage kit.



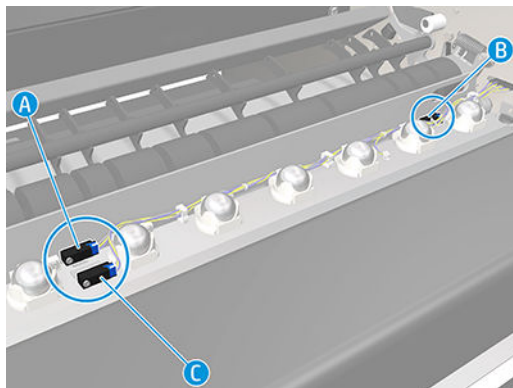
Paper sensor – LB5 (3JJ54-67030) – FF input and output

Removal

1. Open the Deflectors top cover.



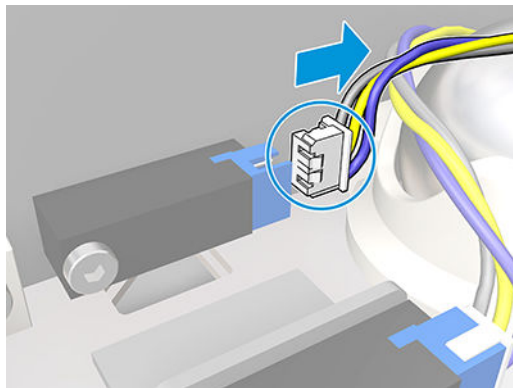
2. Locate the Paper sensors – LB5.



3. There are three cases:

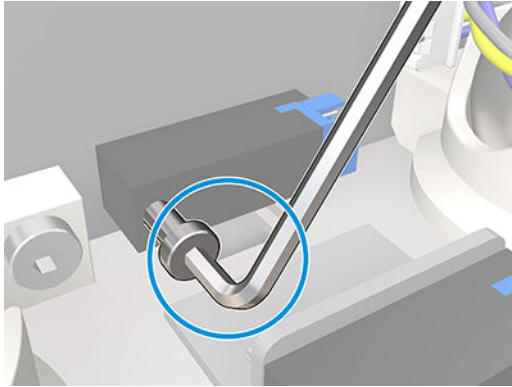
Case A

- a. Disconnect the sensor cable.

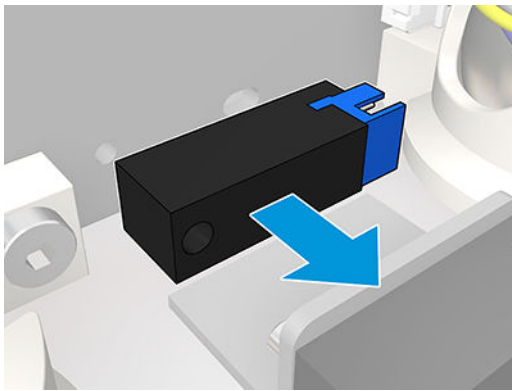


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- b. Remove the screw and nut.

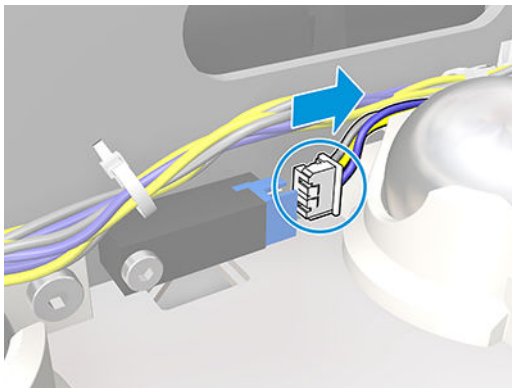


- c. Remove the paper sensor.

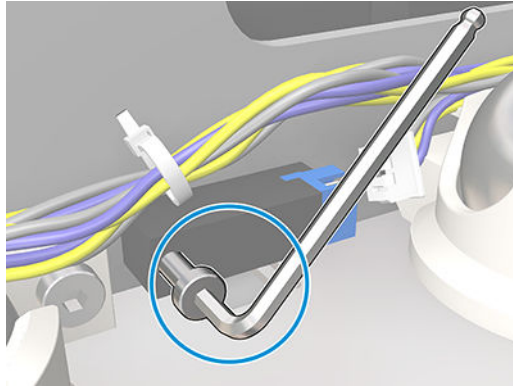


Case B

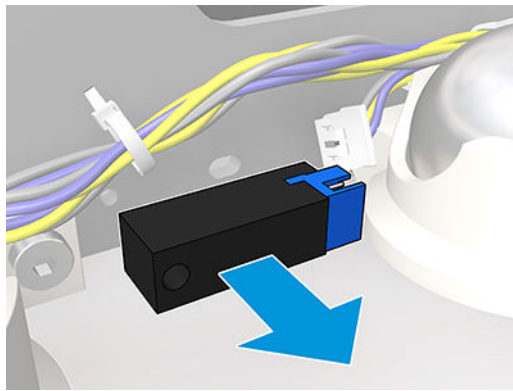
- a. Disconnect the sensor cable.



- b. Remove the screw and nut.

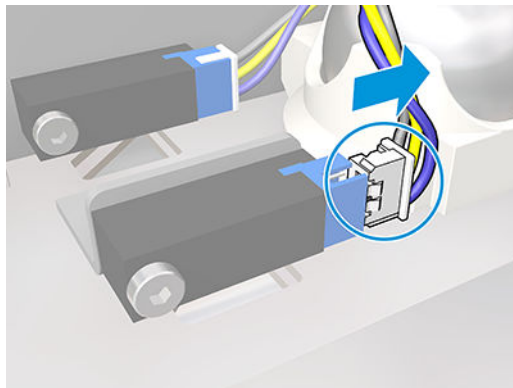


- c. Remove the paper sensor.



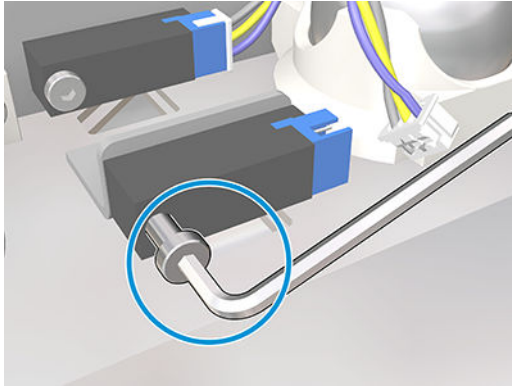
Case C

- a. Disconnect the sensor cable.

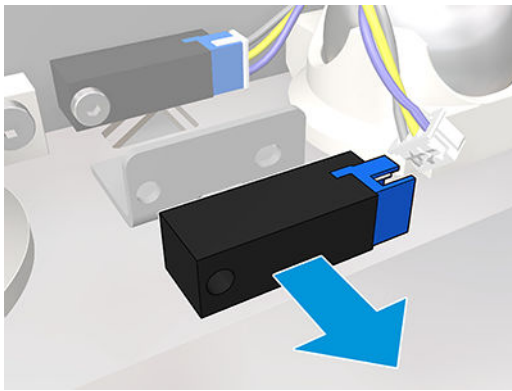


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- b. Remove the screw and nut.



- c. Remove the paper sensor.



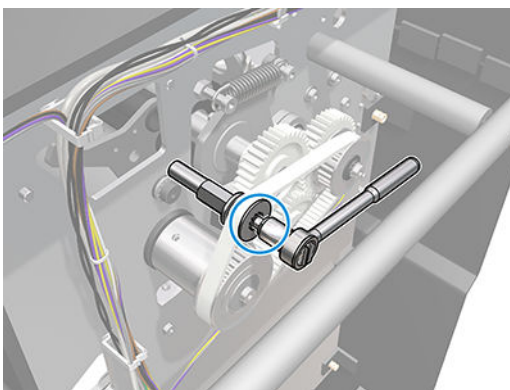
Installation

- ▲ Reverse the removal steps.

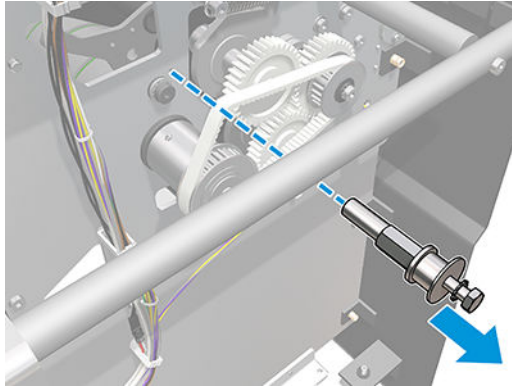
Folder toothed belt set (3JJ54-67053)

Removal

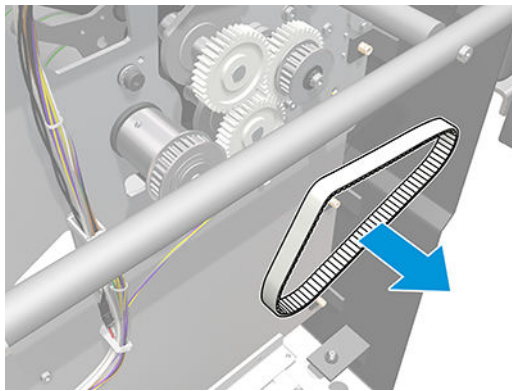
1. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).
2. Remove the bolt.



3. Remove the tensioner with the bolt.

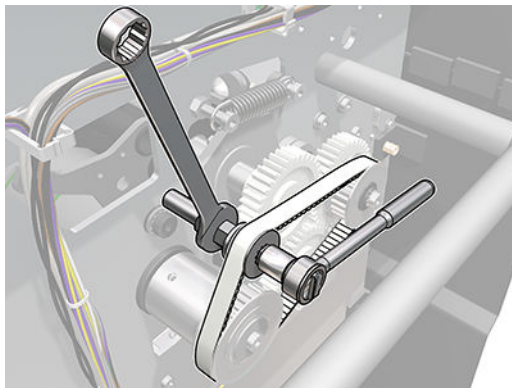


4. Remove the Folder toothed belt set.



Installation

- ▲ Screw the tensioner with a wrench to tension the Folder tooth belt set.



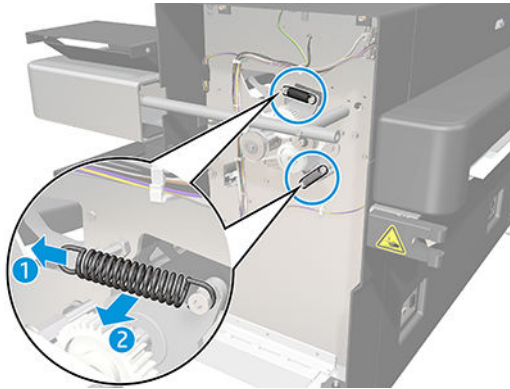
Folder springs set (3JJ54-67081)

Removal – Case A (left side)

1. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).

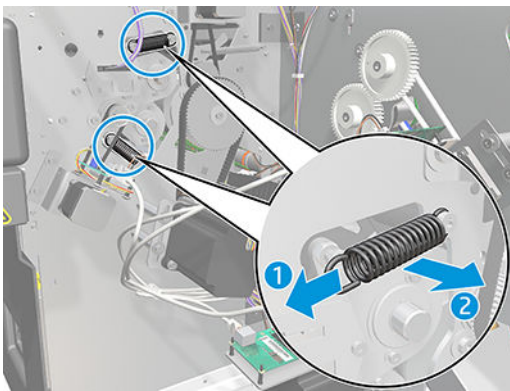
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2. Locate the Folder spring on the left side and remove.



Removal – Case B (right side)

1. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
3. Locate the Folder spring on the right side and remove.



Installation

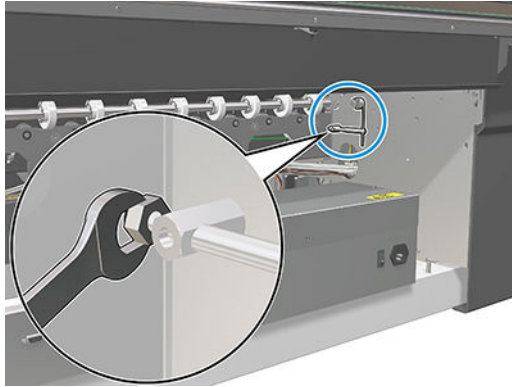
- ▲ Reverse the removal steps.

Folder springs set – right (3JJ54-67082)

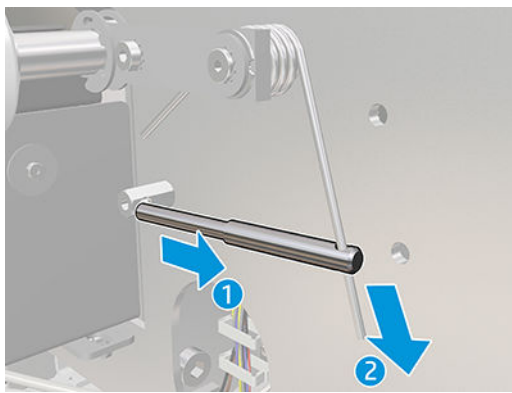
Removal

1. Remove the FF bottom cover. See [Fan-fold bottom cover \(3JJ54-67003\) on page 1707](#).

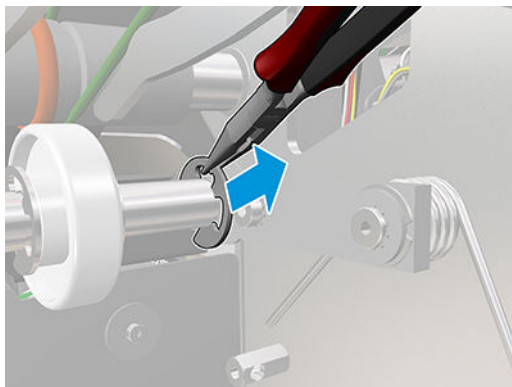
2. Remove the nut to remove the spring tension.



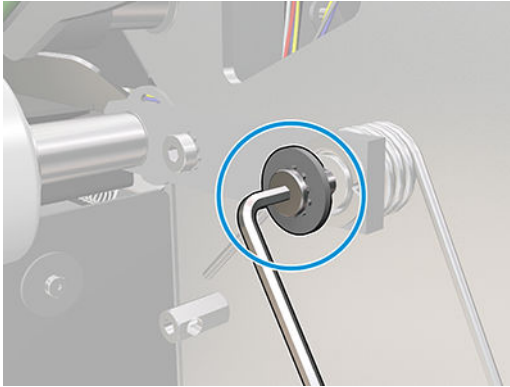
3. Remove the shaft.



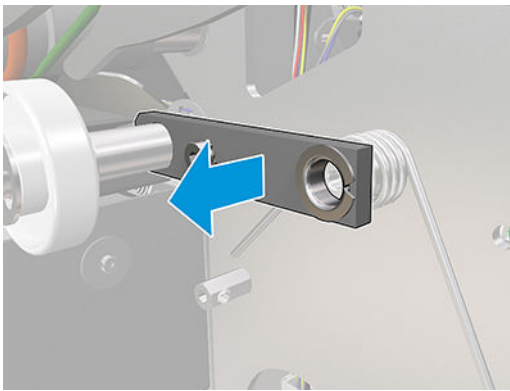
4. Remove one circlip.



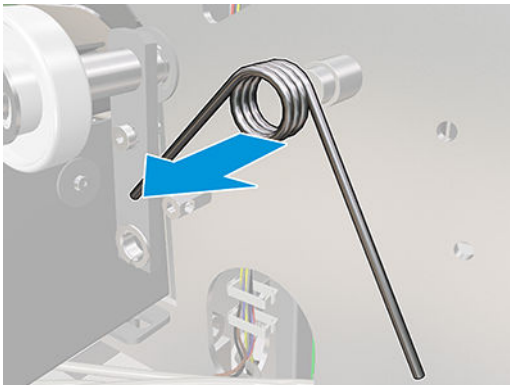
5. Remove the screw and two spacers.



6. Move the metal plate.



7. Remove the spring.



Installation

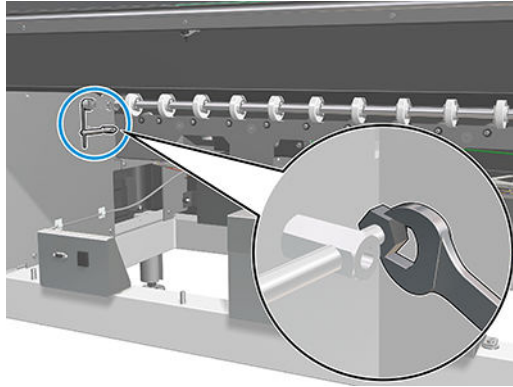
- ▲ Reverse the removal steps.

Folder springs set – left (3JJ54-67083)

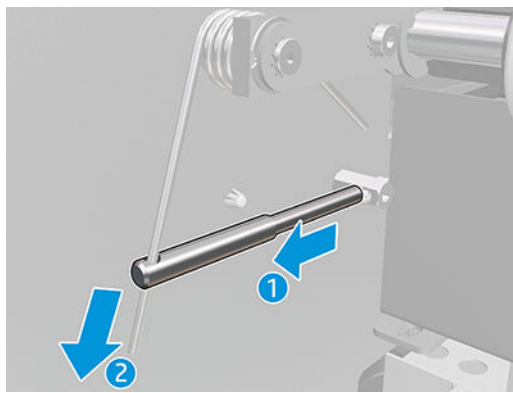
Removal

1. Remove the FF bottom cover. See [Fan-fold bottom cover \(3JJ54-67003\) on page 1707](#).

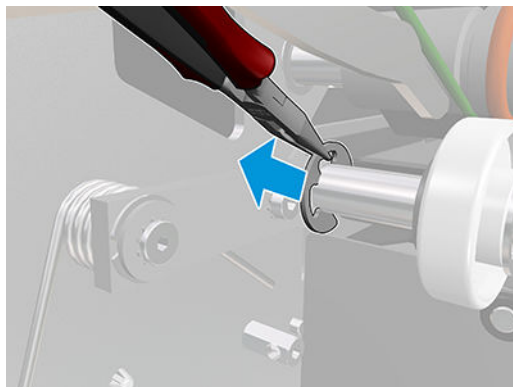
2. Remove the nut to remove the spring tension.



3. Remove the shaft.

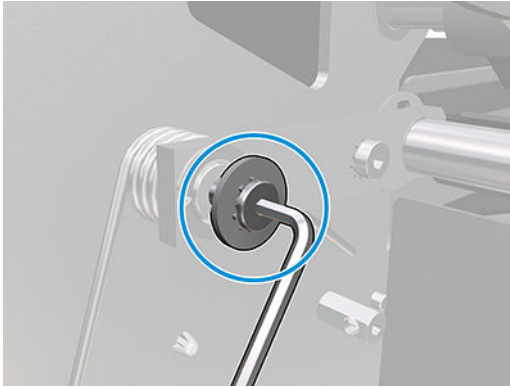


4. Remove one circlip.

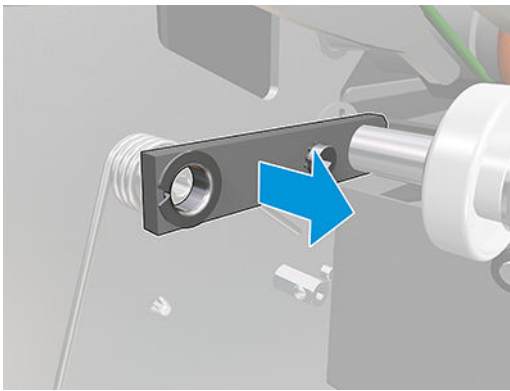


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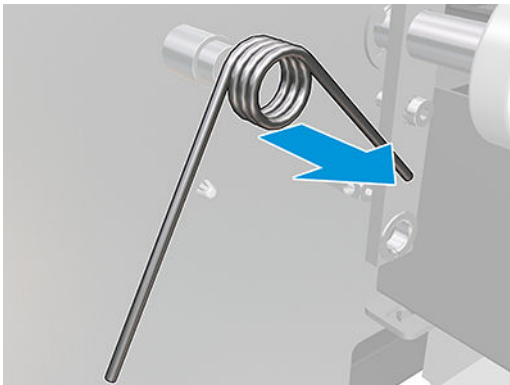
5. Remove the screw and two spacers.



6. Move the metal plate.



7. Remove the spring.



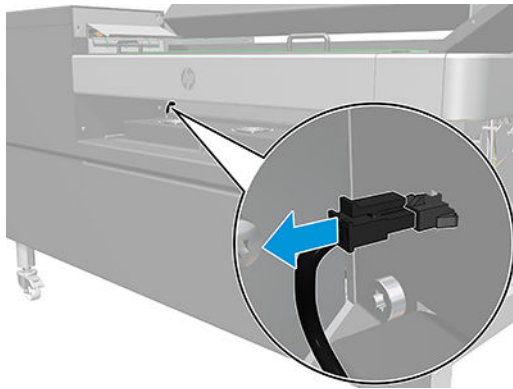
Installation

- ▲ Reverse the removal steps.

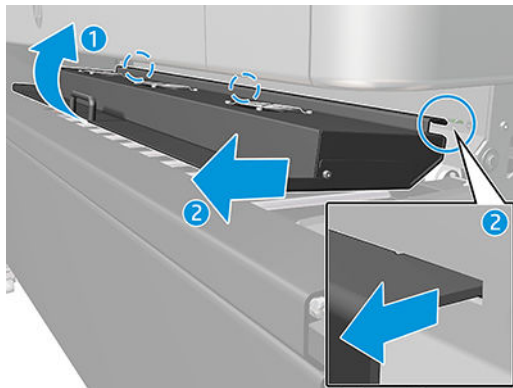
FF output shaft (3JJ54-67054)

Removal

1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
3. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).
4. Remove the Roll tray strip cover. See [Roll tray strip cover \(3JJ54-67073\) on page 1722](#).
5. Remove the FF top strip cover. See [Fan-fold top strip cover \(3JJ54-67076\) on page 1724](#).
6. Disconnect the cable.



7. Remove the fan unit

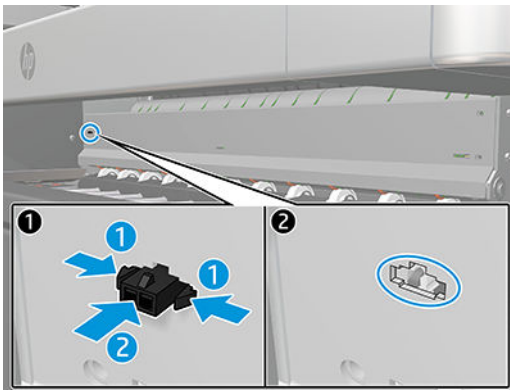


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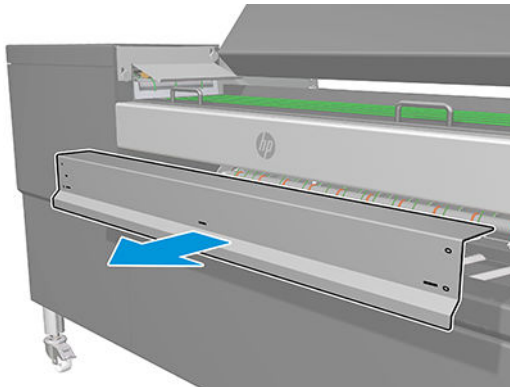
8. Remove four screws.



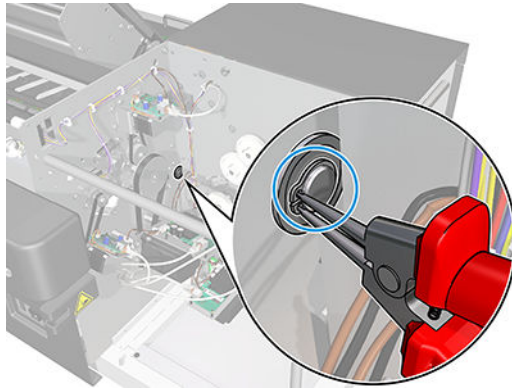
9. Unclip the connector.



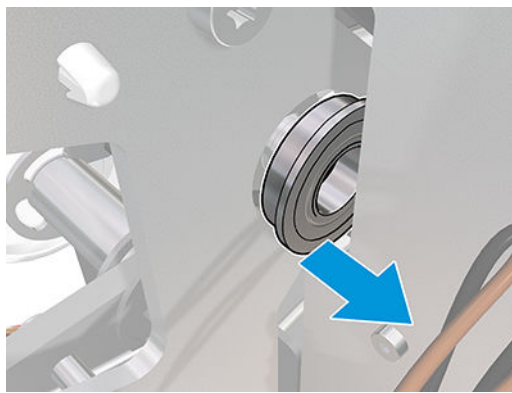
10. Remove the metal plate.



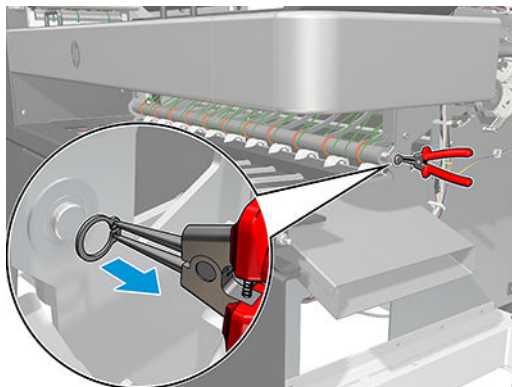
11. Remove the circlip.



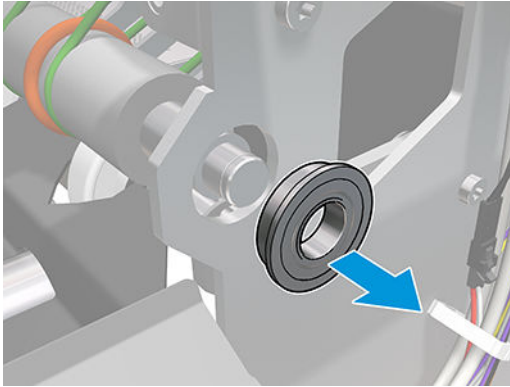
12. Remove the bushing.



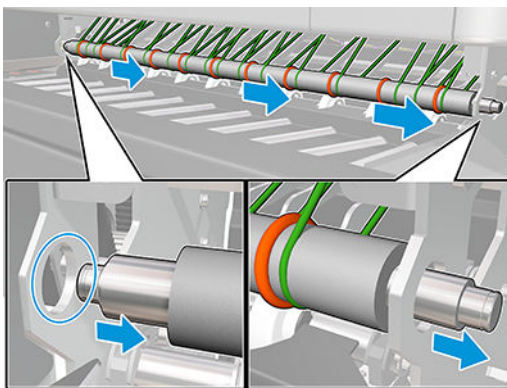
13. Remove the circlip.



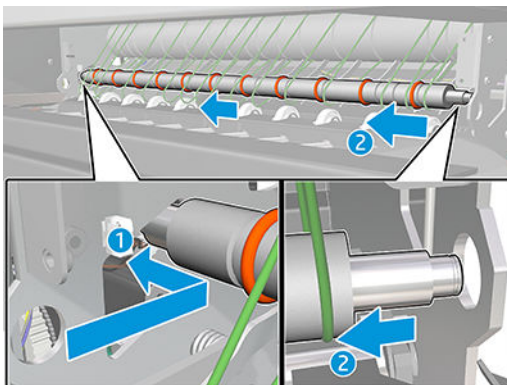
14. Remove the bushing.



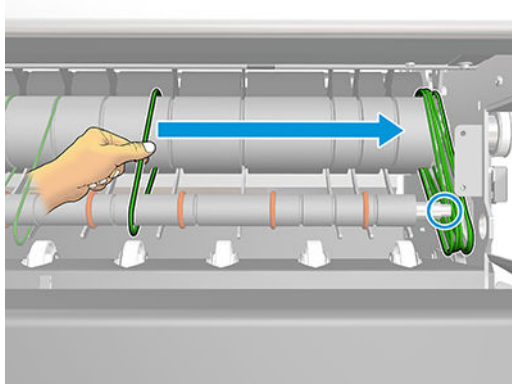
15. Slide the Output shaft to the right until get free from the left hole.



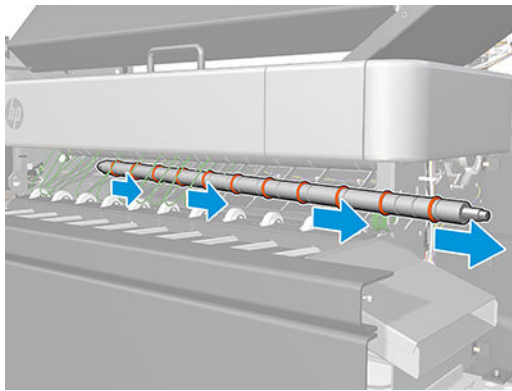
16. Slide the Output shaft to the left through the rectangular hole until get free from the right hole.



17. Move the necessary belts to the right until you see that you can remove the Output shaft.



18. Remove the FF output shaft.



Installation

- ▲ Reverse the removal steps.

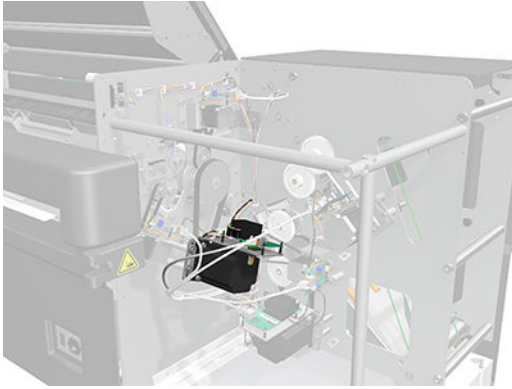
FF X47 – Fan-fold main motor (3JJ54-67033)

Removal

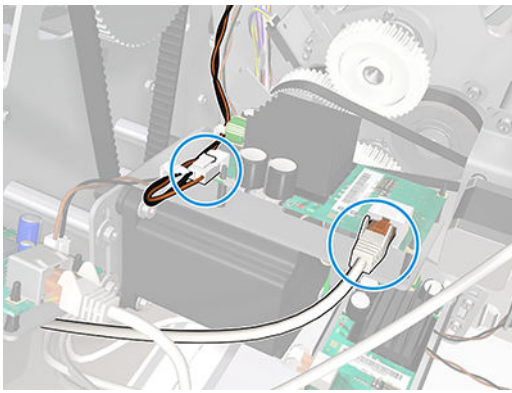
1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).

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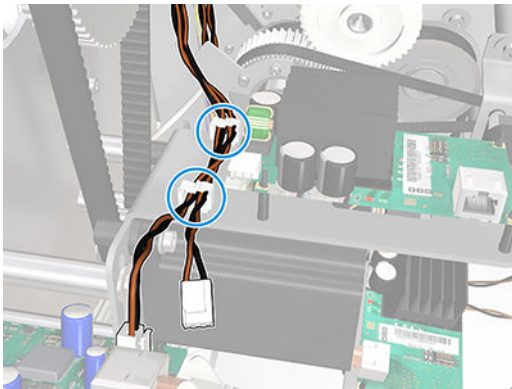
3. Locate the FF main motor.




4. Disconnect the two cables from the PCA

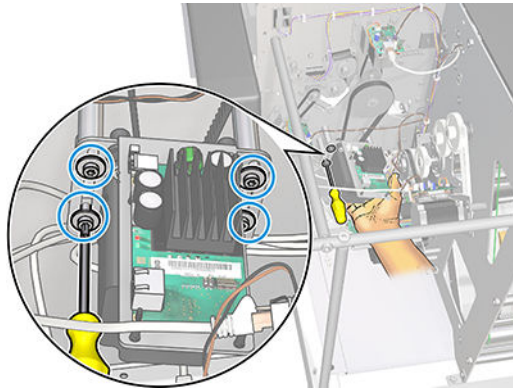


5. Unroute the cables from the two clamps.

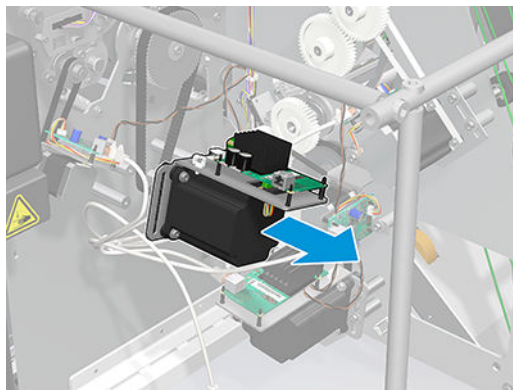


6. Remove four screws.

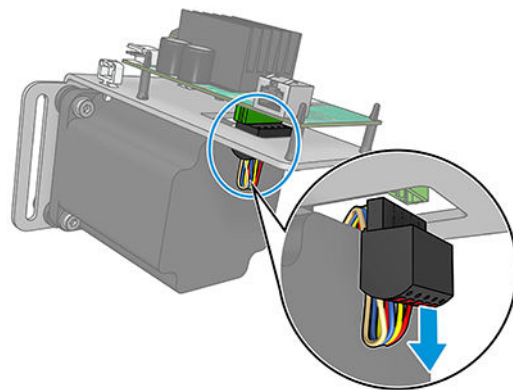
 **IMPORTANT:** Hold the FF main motor while you remove the screws.



7. Remove the Fan-fold main motor (FF X47) assembly.

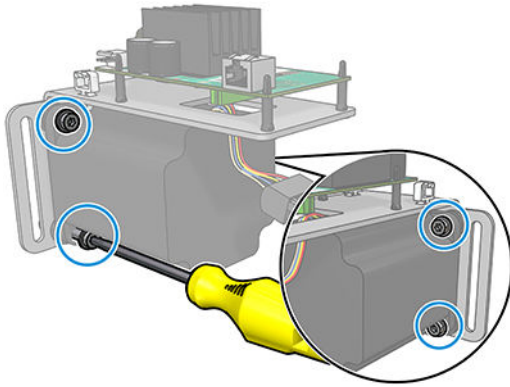


8. Disconnect the motor cable from the PCA.

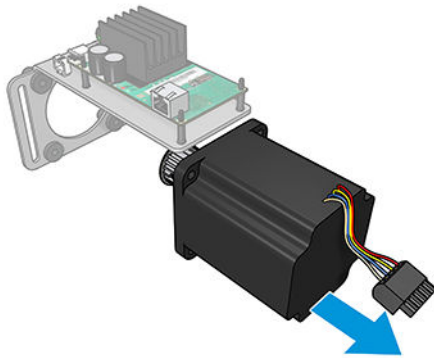


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9. Remove four screws.

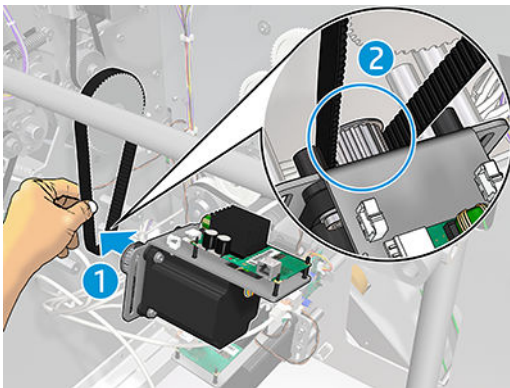


10. Remove the Fan-fold main motor from the LP M1900 motor controller.

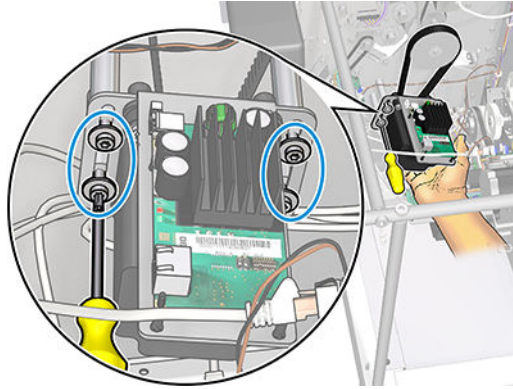


Installation

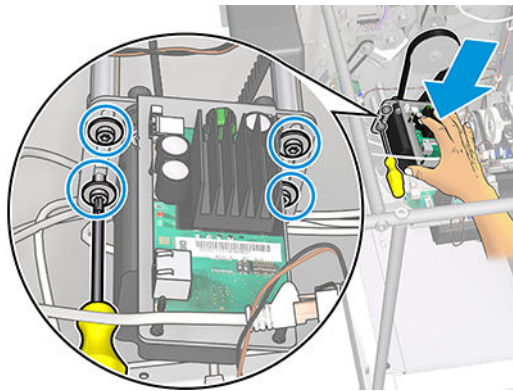
1. Remember to attach the belt to the pulley of the Fan-fold main motor.



2. Place the four screws loosely to tension the belt.



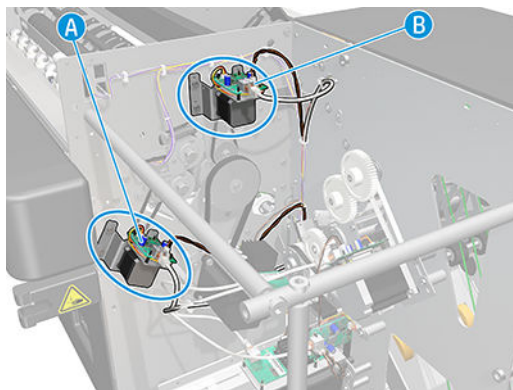
3. Tighten the four screws and, at the same time, push the Fan-fold main motor down tensioning the belt.



FF X30/FF X42 FF entry motor controller assembly (3JJ54-67021)

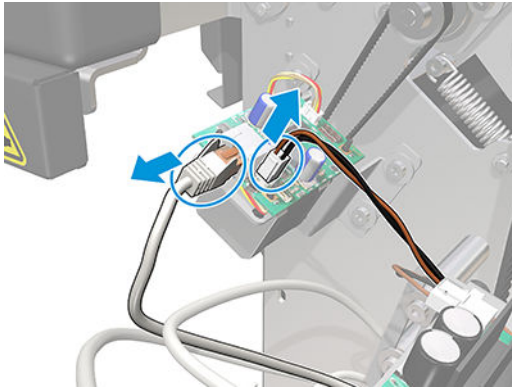
Removal

1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
3. Locate the FF X30/FF X42 FF entry motor controller.




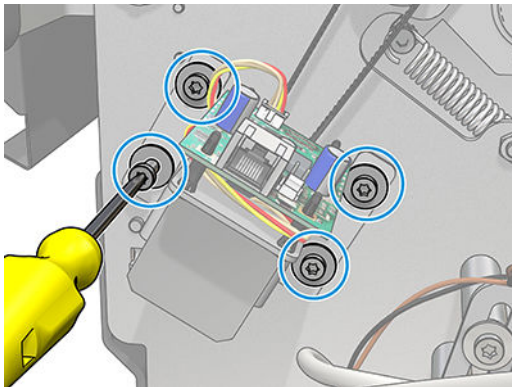
Case A: FF X30 FF entry motor controller

- a. Disconnect the 2 cables from the PCA.

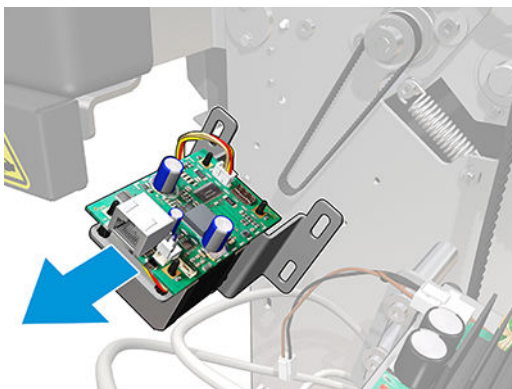


- b. Remove four screws.

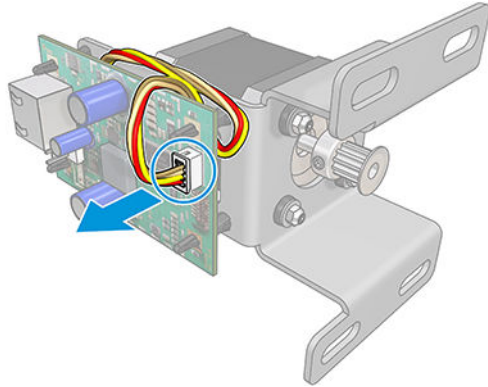
 **IMPORTANT:** Hold the FF X30 entry motor controller while you remove the screws.



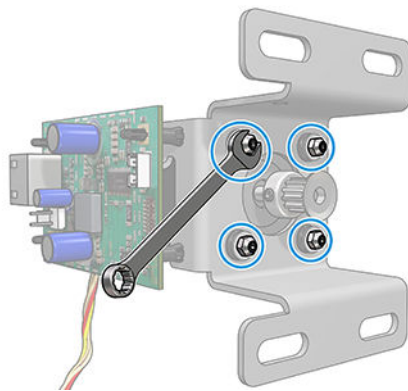
- c. Remove the FF X30 entry motor controller assembly.



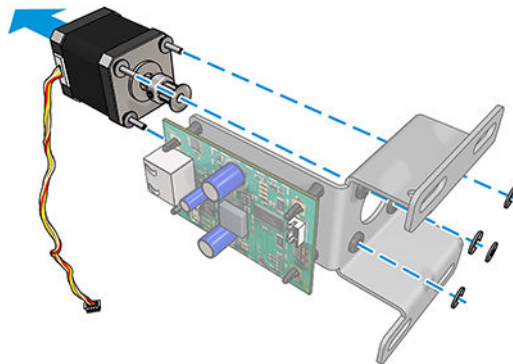
- d. Disconnect the cable from the PCA and unroute it.



- e. Remove four nuts.

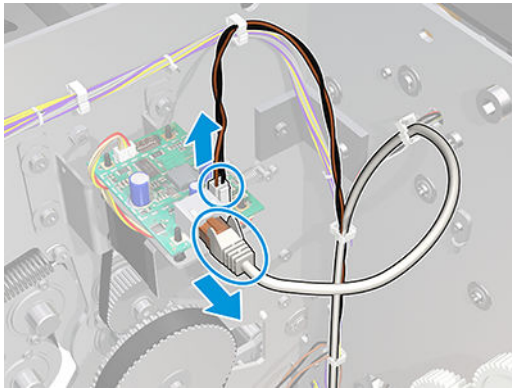


- f. Remove the FF X30 entry motor controller (be careful not to lose the washers).




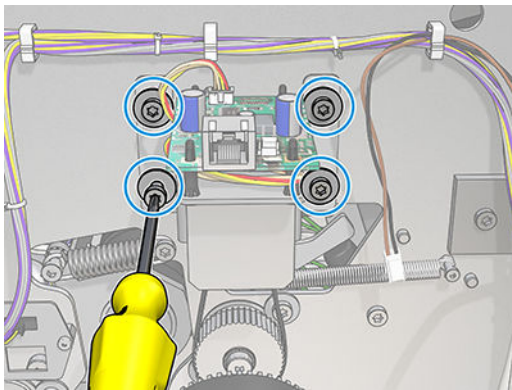
Case B: FF X42 FF entry motor controller

- a. Disconnect the 2 cables from the PCA.

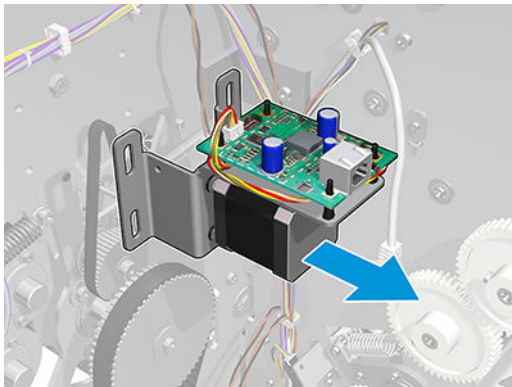


- b. Remove four screws.

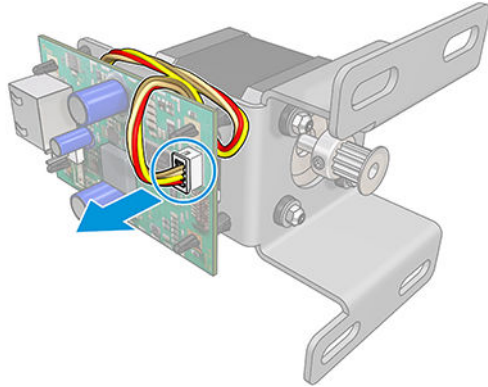
 **IMPORTANT:** Hold the FF X342 entry motor controller while you remove the screws.



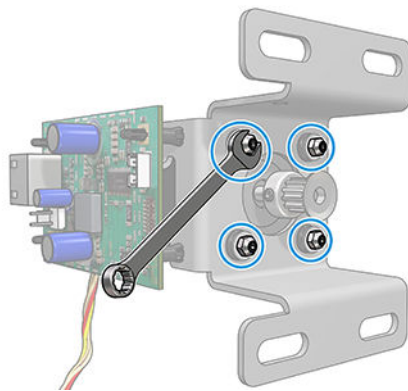
- c. Remove the FF X42 entry motor controller assembly.



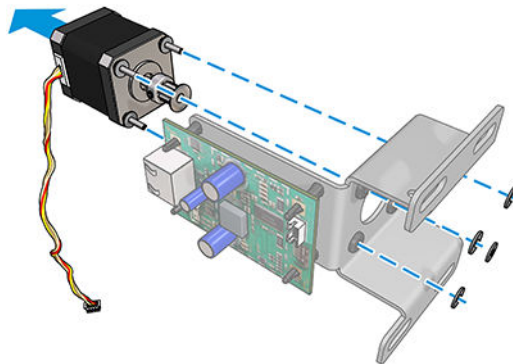
- d. Disconnect the cable from the PCA and unroute it.



- e. Remove four nuts.



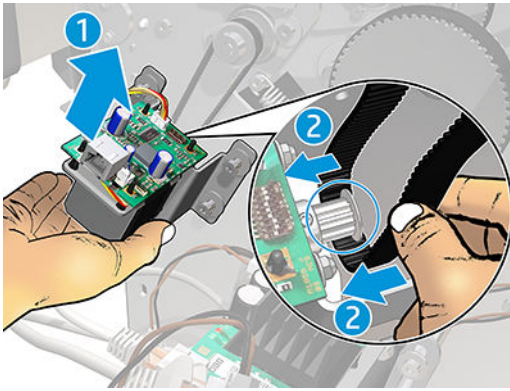
- f. Remove the FF X30 entry motor controller (be careful not to lose the washers).



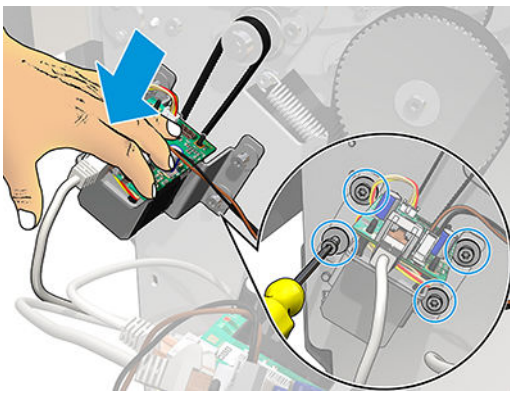
Installation – Case A: FF X30 FF entry motor controller

1. Remember to attach the belt to the pulley.

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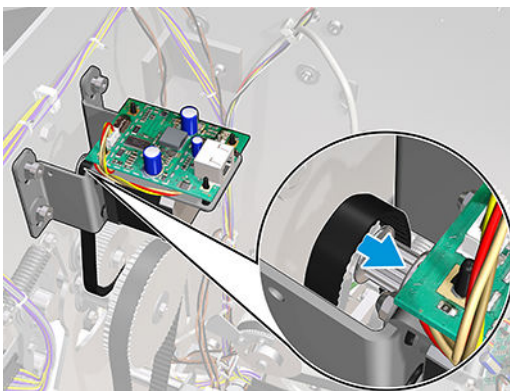


2. Tighten the four screws and, at the same time, push the PCA+bracket controller assembly down tensioning the belt.

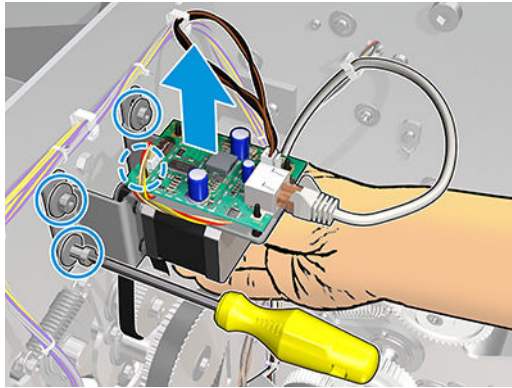


Installation – Case B: FF X42 FF entry motor controller

1. Remember to attach the belt to the pulley.



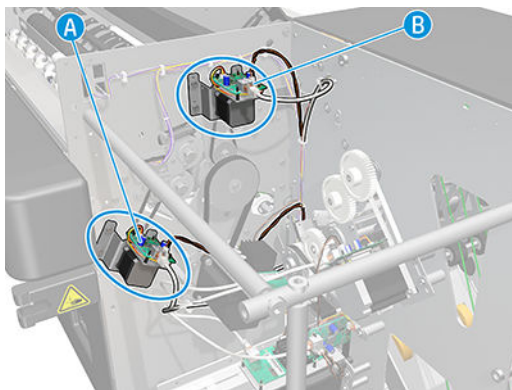
2. Tighten the four screws and, at the same time, push the PCA+bracket controller assembly down tensioning the belt.



PCA+bracket controller assembly – FF drive side (3JJ54-67020)

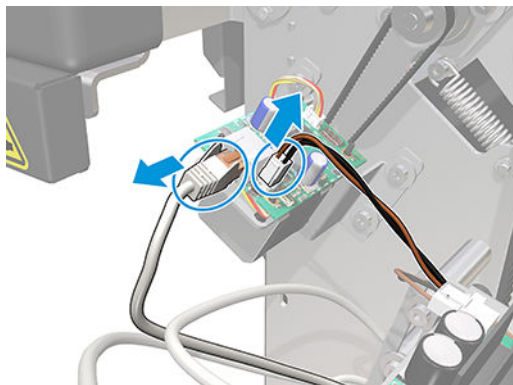
Removal

1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
3. Locate the FF X30/FF X42 FF entry motor controller.




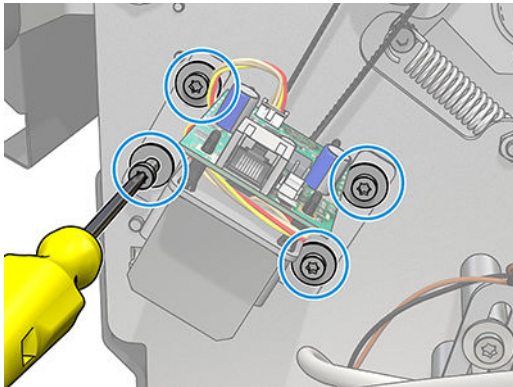
Case A: FF X30 FF entry motor controller

- a. Disconnect the 2 cables from the PCA.

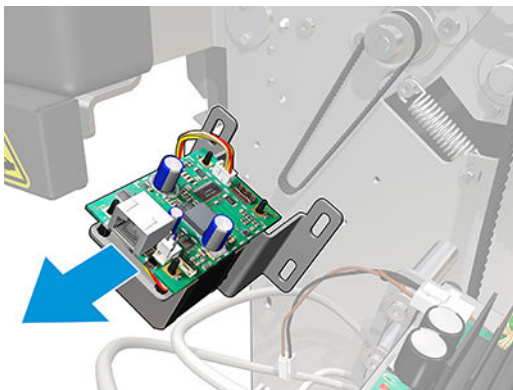


- b. Remove four screws.

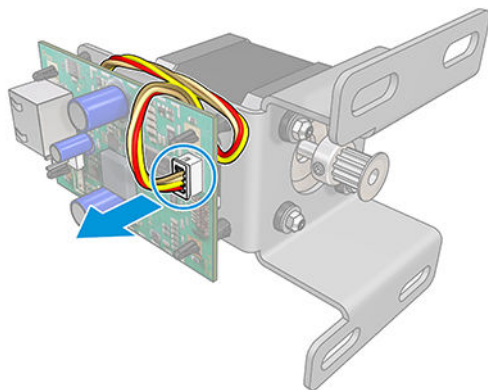
 **IMPORTANT:** Hold the FF X30 entry motor controller while you remove the screws.



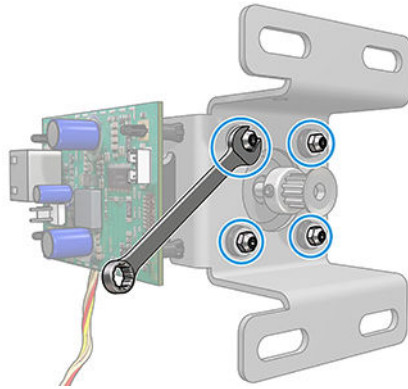
- c. Remove the FF X30 entry motor controller assembly.



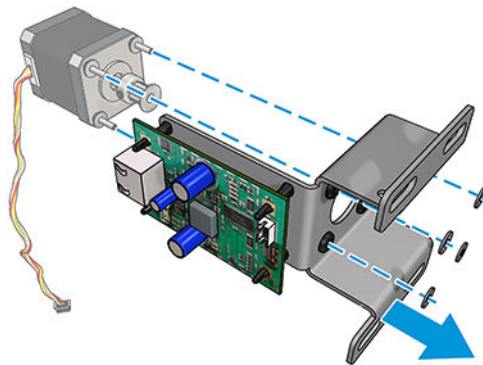
- d. Disconnect the cable from the PCA and unroute it.



- e. Remove four nuts.

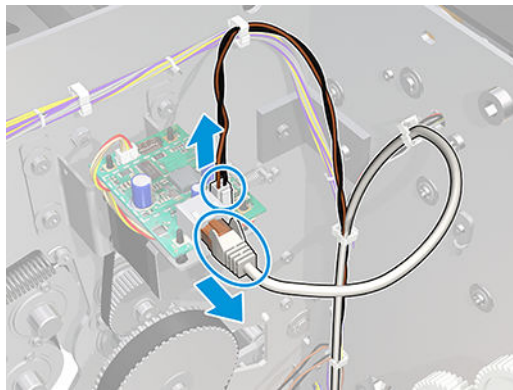


- f. Remove the FF PCA + bracket controller assembly (be careful not to lose the washers).




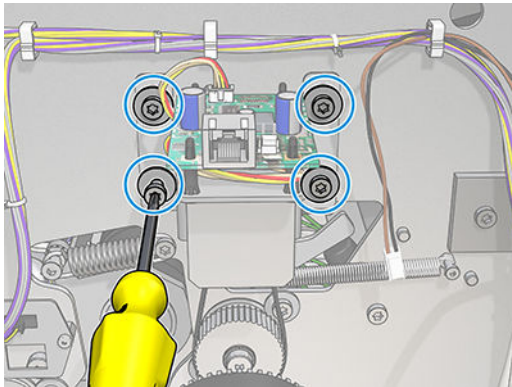
Case B: FF X42 FF entry motor controller

- a. Disconnect the 2 cables from the PCA.

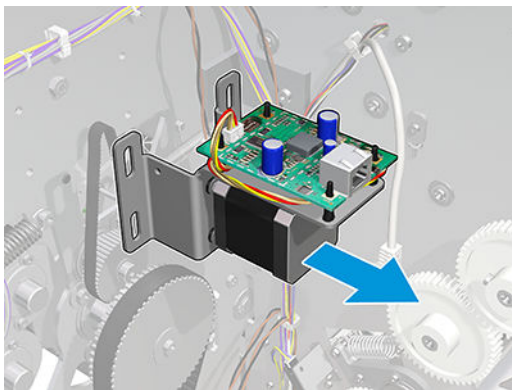


- b. Remove four screws.

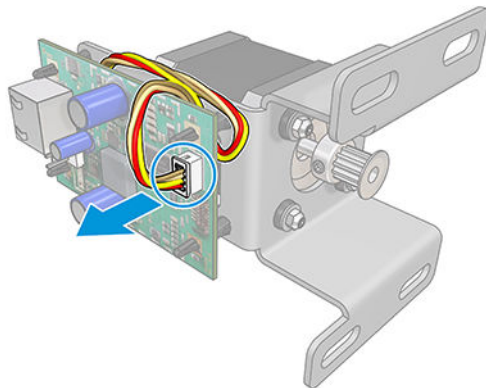
 **IMPORTANT:** Hold the FF X342 entry motor controller while you remove the screws.



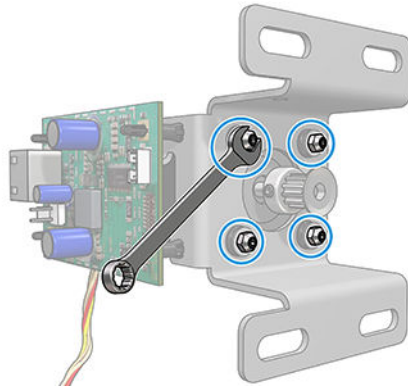
- c. Remove the FF X42 entry motor controller assembly.



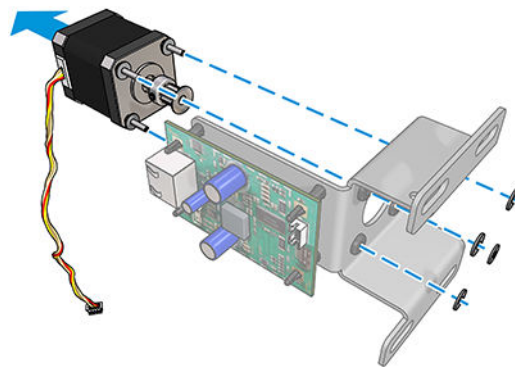
- d. Disconnect the cable from the PCA and unroute it.




- e. Remove four nuts.

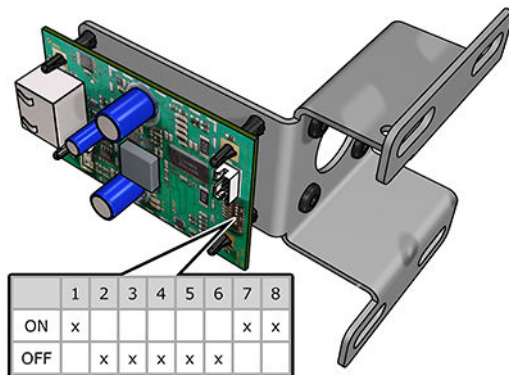


- f. Remove the FF entry motor controller (be careful not to lose the washers).

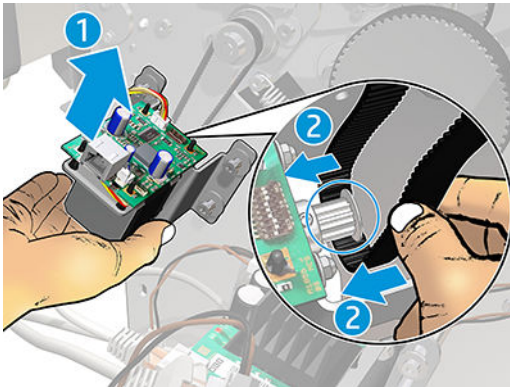


Installation – Case A: FF X30 FF entry motor controller

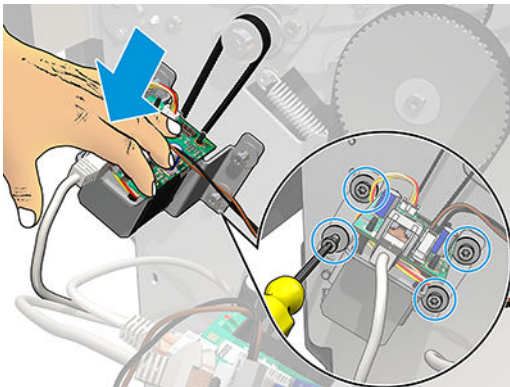
1.  **IMPORTANT:** Set the 8 dip switches of the PCA.




2. Remember to attach the belt to the pulley.

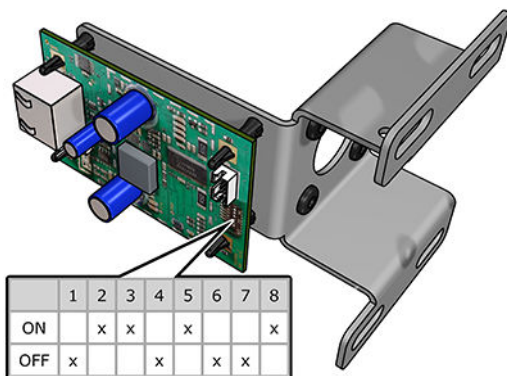


3. Tighten the four screws and, at the same time, push the PCA+bracket controller assembly down tensioning the belt.

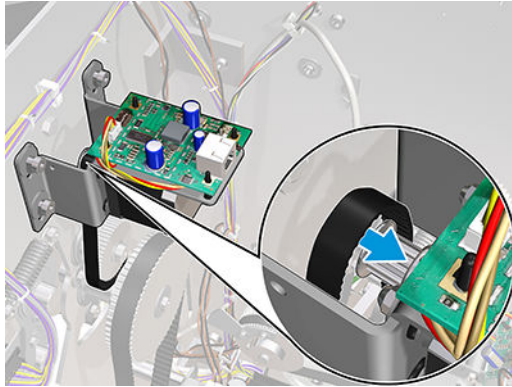


Installation – Case B: FF X42 FF entry motor controller

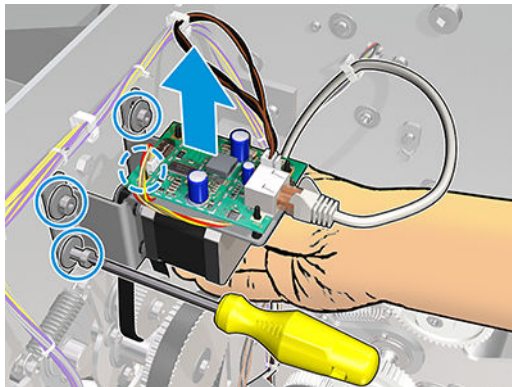
1.  **IMPORTANT:** Set the 8 dip switches of the PCA.



2. Remember to attach the belt to the pulley.



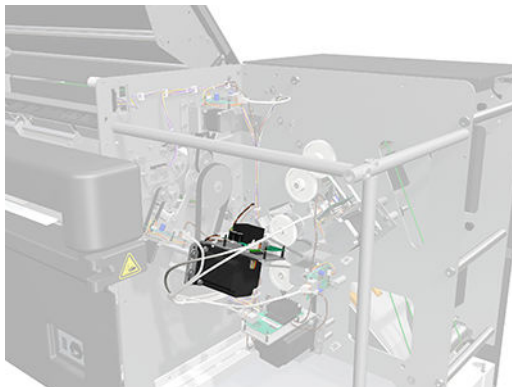
3. Tighten the four screws and, at the same time, push the PCA+bracket controller assembly down tensioning the belt.



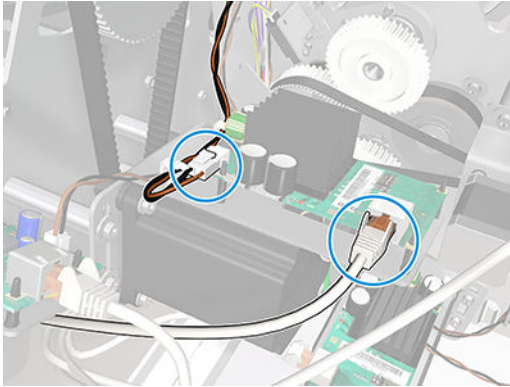
LP M1900 motor controller – FF drive side (K5H75-67169)

Removal

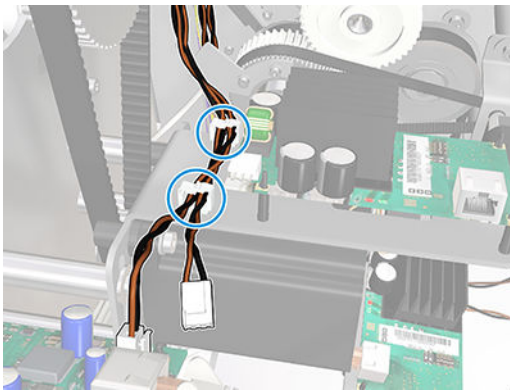
1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
3. Locate the FF main motor.




4. Disconnect the two cables from the PCA

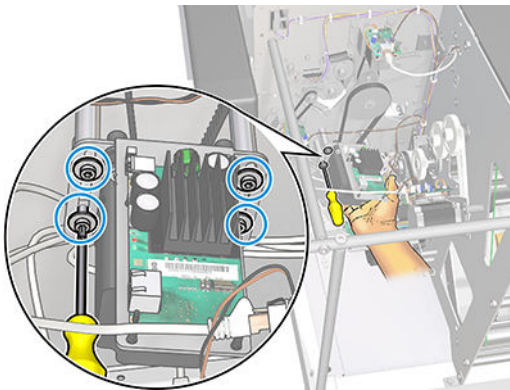


5. Unroute the cables from the two clamps.

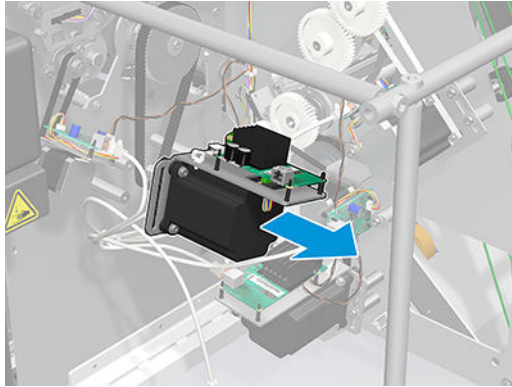


6. Remove four screws.

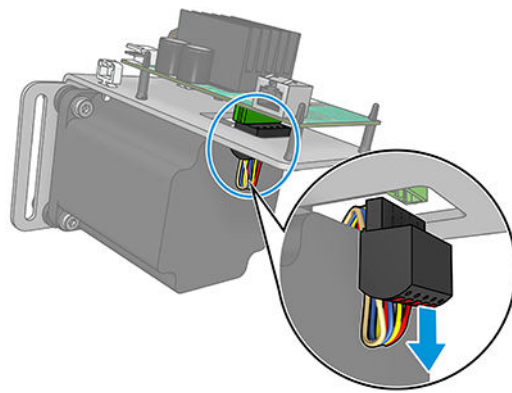
 **IMPORTANT:** Hold the FF main motor while removing the screws.



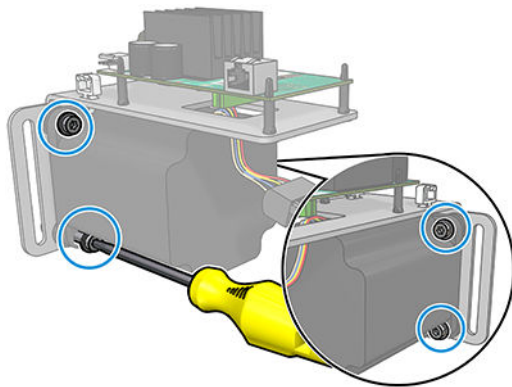
7. Remove the Fan-fold main motor (FF X47) assembly.



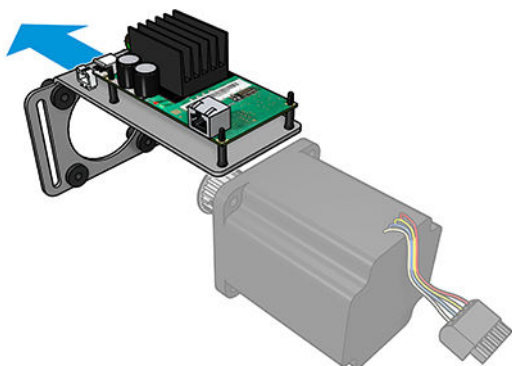
8. Disconnect the motor cable from the PCA.




9. Remove four screws.

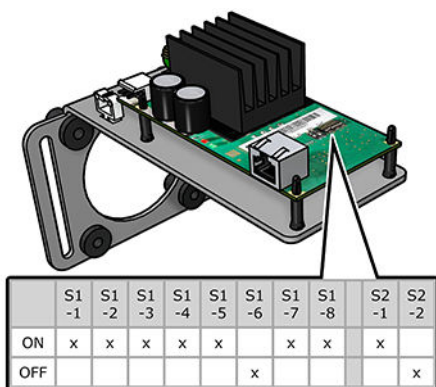


10. Remove the LP M1900 motor controller from the FF main motor.

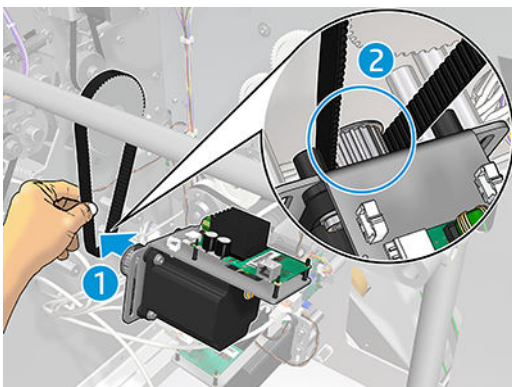


Installation

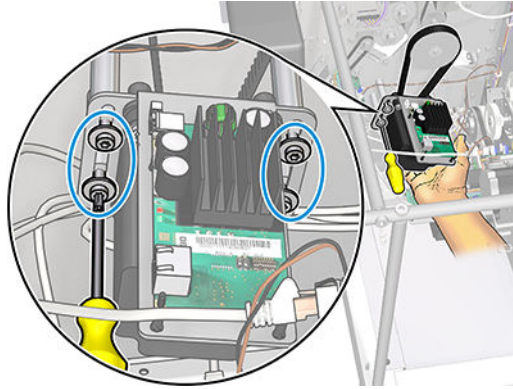
1.  **IMPORTANT:** Set the ten dip switches of the PCA.



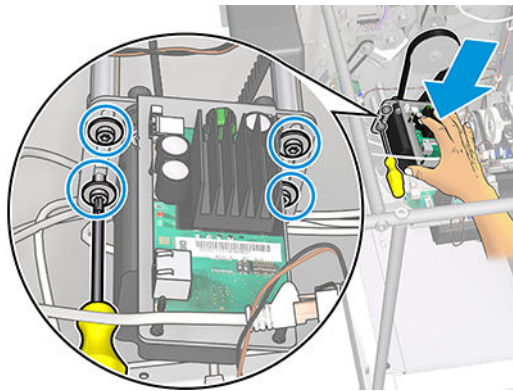
2. Remember to attach the belt to the pulley of the Fan-fold main motor.



3. Place the four screws loosely to tension the belt.



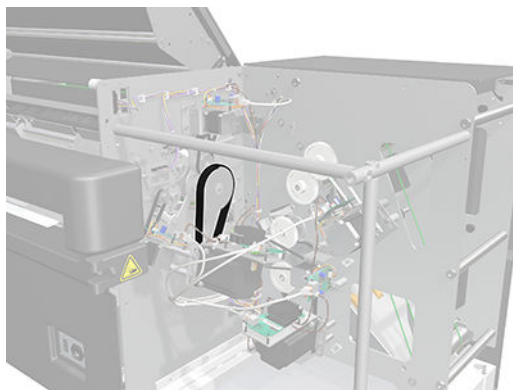
4. Tighten the four screws and, at the same time, push the Fan-fold main motor down tensioning the belt.



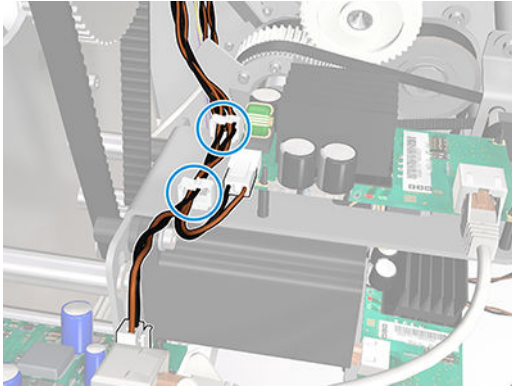
FF X47 Toothed belt (3JJ54-67055)

Removal


1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
3. Locate the Toothed belt.

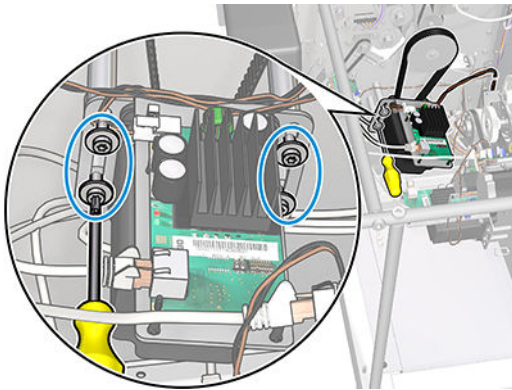


4. Unroute the cables from the two clamps, only to avoid damaging them.

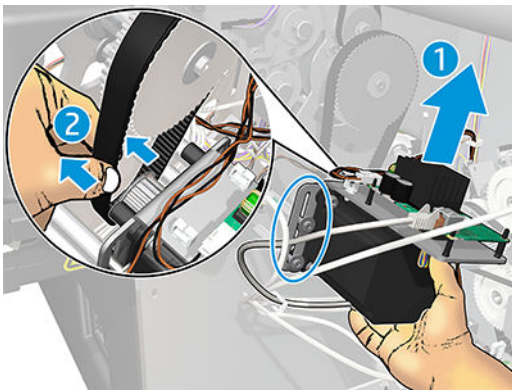


5. Loosen the four screws.

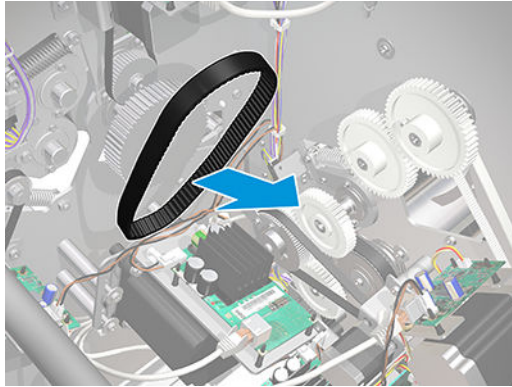
 **IMPORTANT:** Do not remove them.



6. Slide up the Main motor and detach the belt from the pulley of the Fan-folder motor (FF X47) assembly

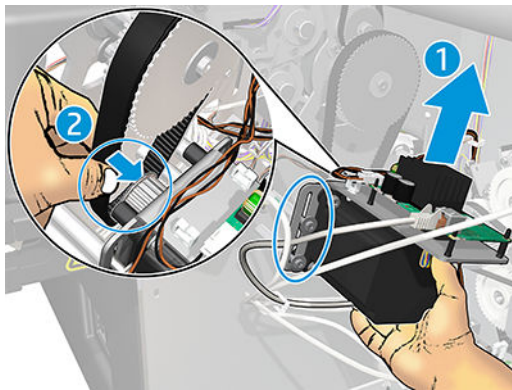


7. Remove the toothed belt.

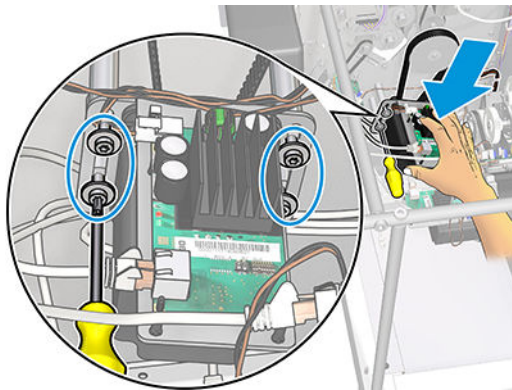


Installation

1. Slide up the Main motor and attach the belt to the pulley of the Fan-fold motor (FF X47) assembly.



2. Tighten the four screws and, at the same time, push the Fan-fold motor (FF X47) assembly down tensioning the belt.



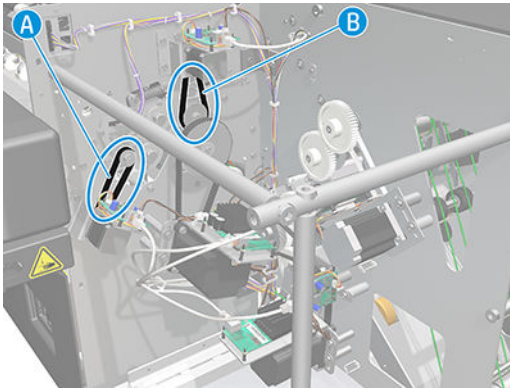
FF X30/FF X42 toothed belt (3JJ54-67056)

Removal

1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).

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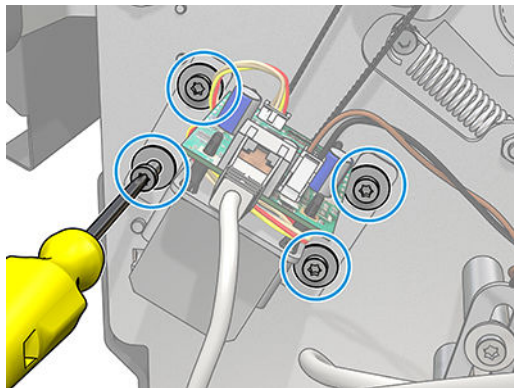
3. Locate the FF X30/FF X42 FF toothed belt.



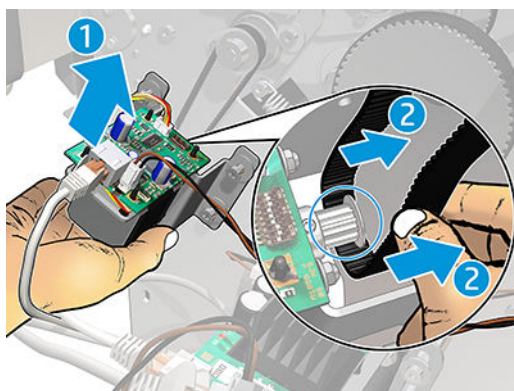
Case A: FF X30 toothed belt

- a. Loosen four screws.

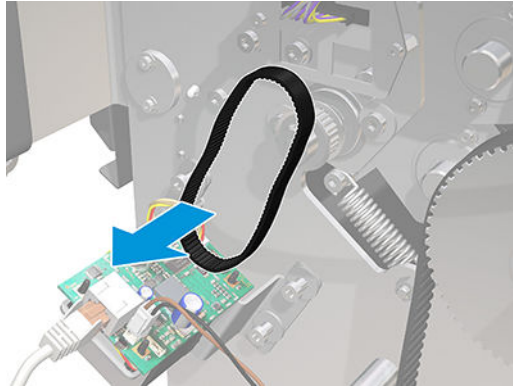
 **IMPORTANT:** Do not remove them.



- b. Slide up the PCA+bracket controller assembly and detach the belt from the pulley of the motor.




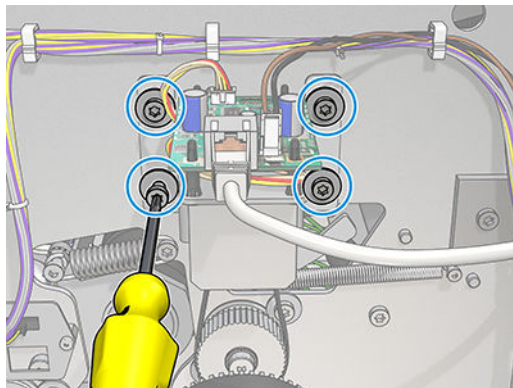
- c. Remove the FF X30 toothed belt.



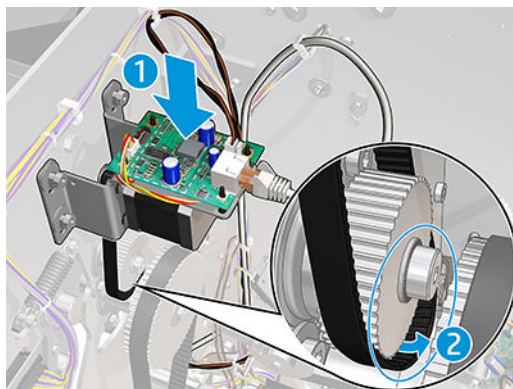
Case B: FF X42 toothed belt

- a. Loosen four screws.

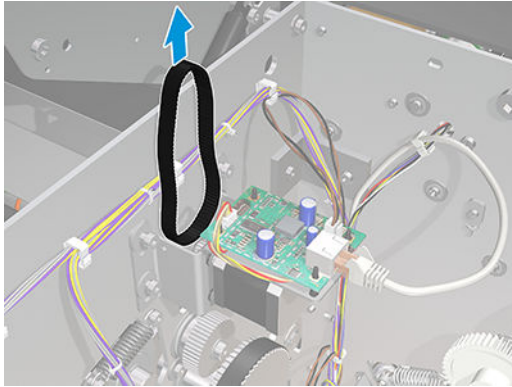
 **IMPORTANT:** Do not remove them.



- b. Slide down the PCA+bracket controller assembly and detach the belt from the pulley of the gear.

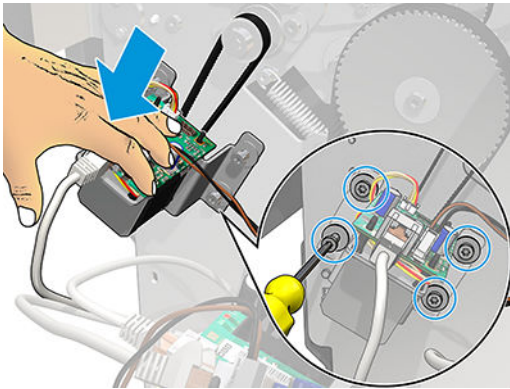


- c. Remove the FF X42 toothed belt.



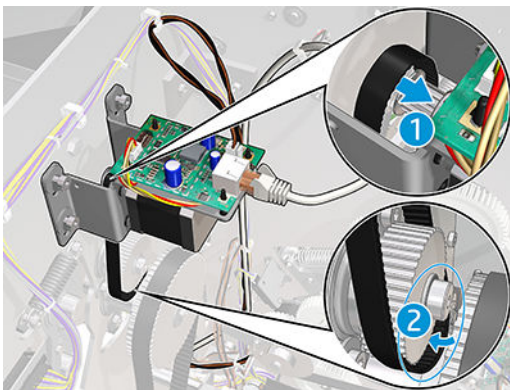
Installation – Case A: FF X30 toothed belt

- ▲ Tighten the four screws and, at the same time, push the PCA+bracket controller assembly down tensioning the belt.

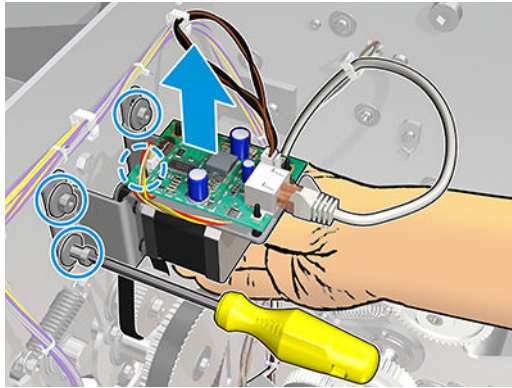


Installation – Case B: FF X42 FF toothed belt

- 1. Remember to attach the belt to the pulley and then to the gear.



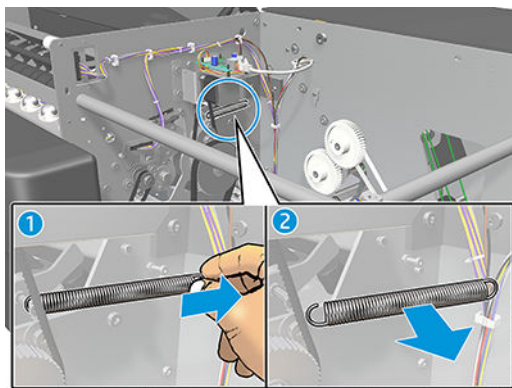
2. Tighten the four screws and, at the same time, push the PCA+bracket controller assembly up tensioning the belt.



FF HR Tension spring (K5H75-67092)

Removal

1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
3. Locate the Tension spring.



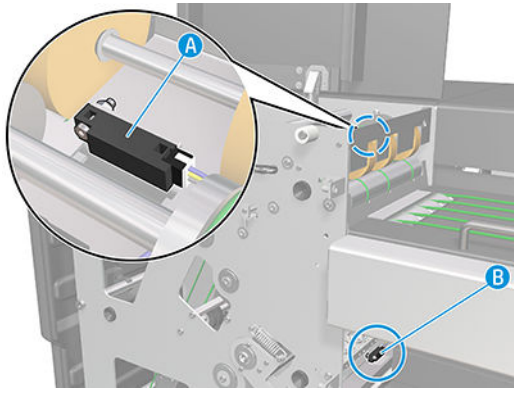
Installation

- ▲ Reverse the removal steps.

Paper sensor black connector (K5H75-67125) – CF input and output

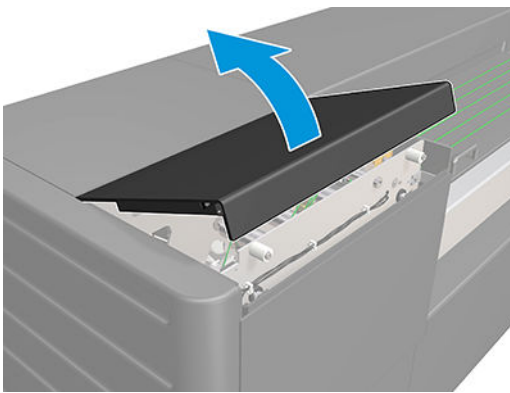
 **NOTE:** Locate the Paper sensors.

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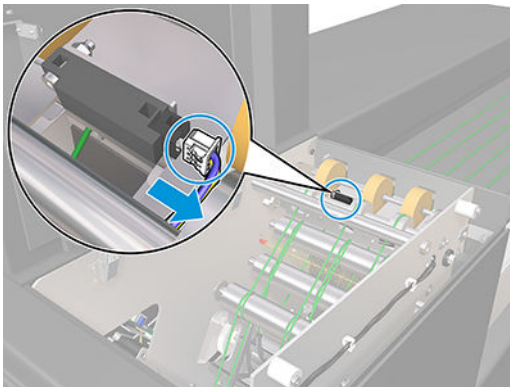


Removal – Case A (top)

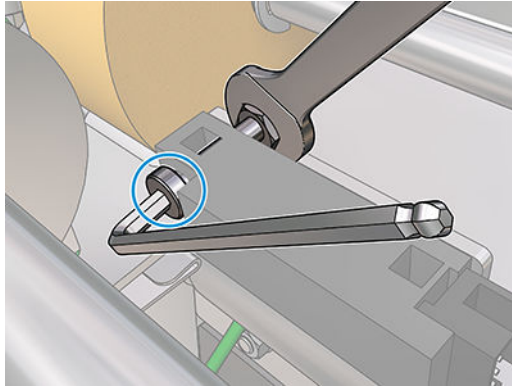
1. Open the CF top cover.



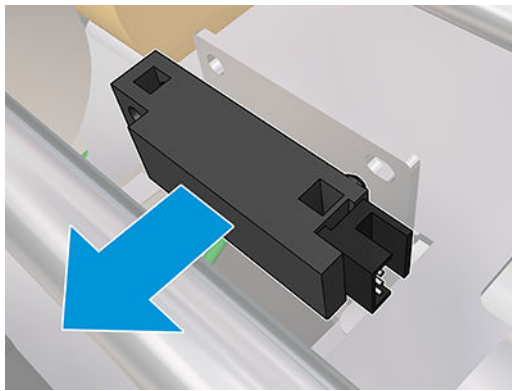
2. Disconnect the cable.



3. Remove the screw and the nut.

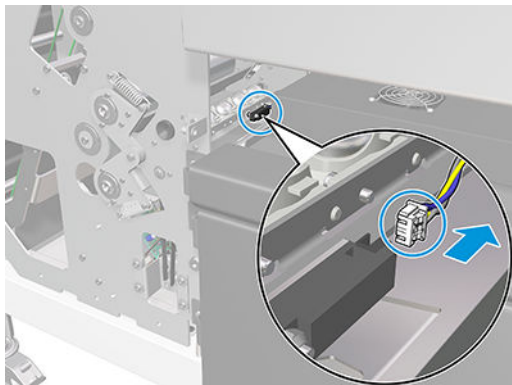


4. Remove the paper sensor.



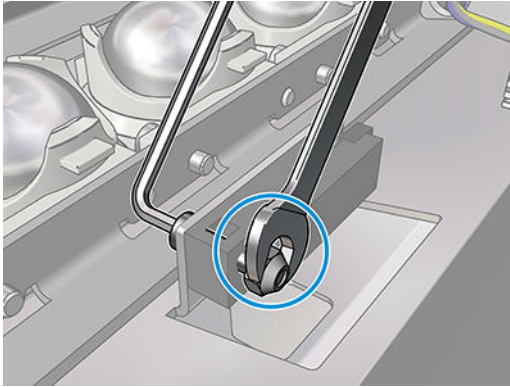
Removal – Case B (bottom)

1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the CF entry cover. See [Cross-fold entry cover \(3JJ54-67008\) on page 1714](#).
3. Disconnect the cable.

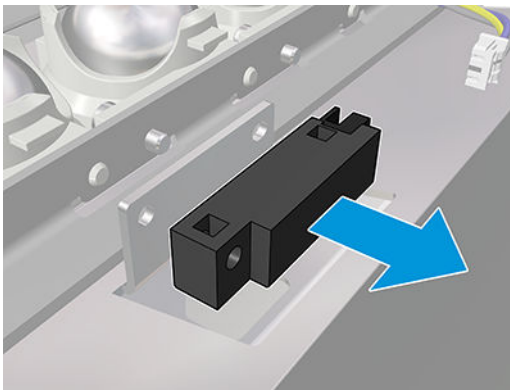


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4. Remove the screw and the nut.



5. Remove the paper sensor.



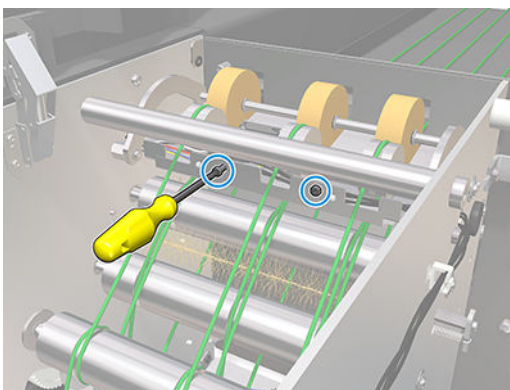
Installation

- ▲ Reverse the removal steps.

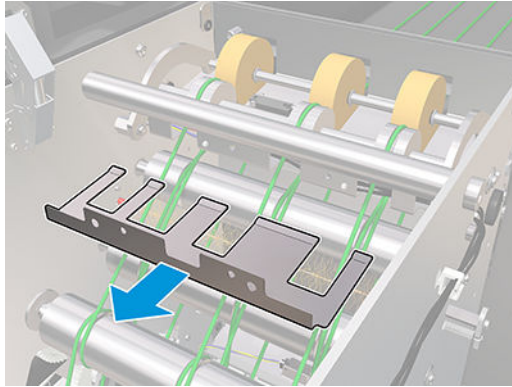
CF upper path transport belt, top (3) (3JJ54-67016)

Removal

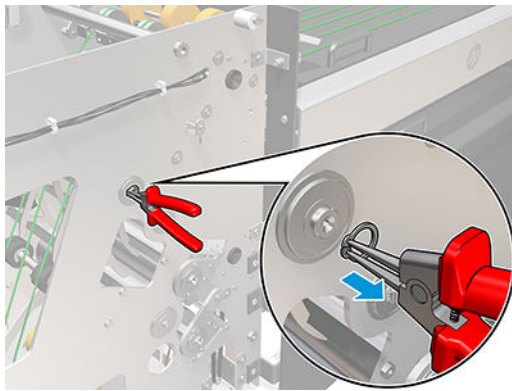
1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove two screws.



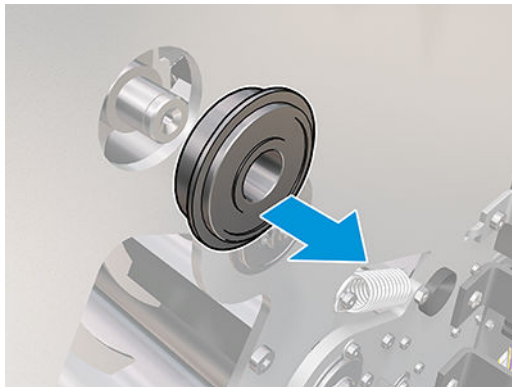
3. Remove the metal plate.



4. Remove the circlip.

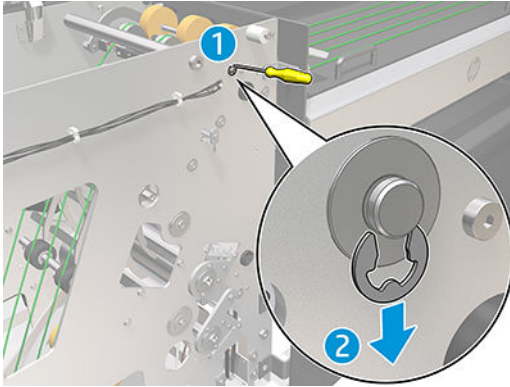


5. Remove the bearing.

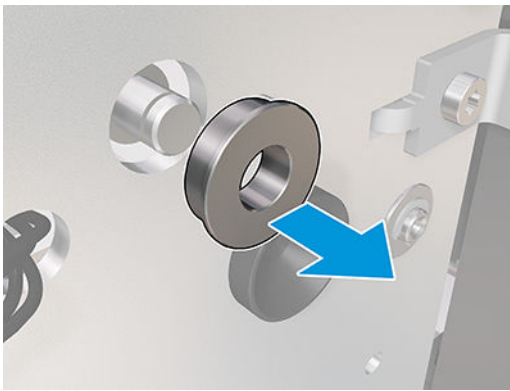


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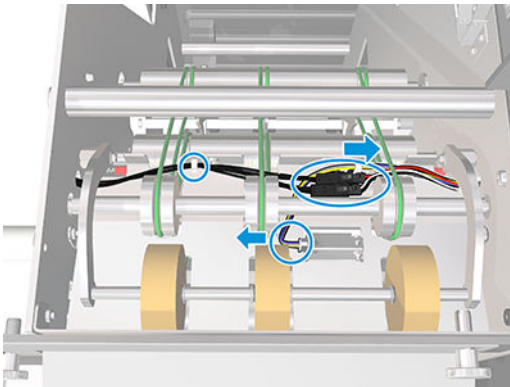
6. Remove the circlip.



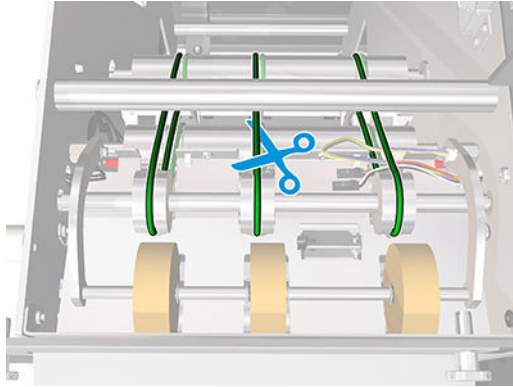
7. Remove the bushing.



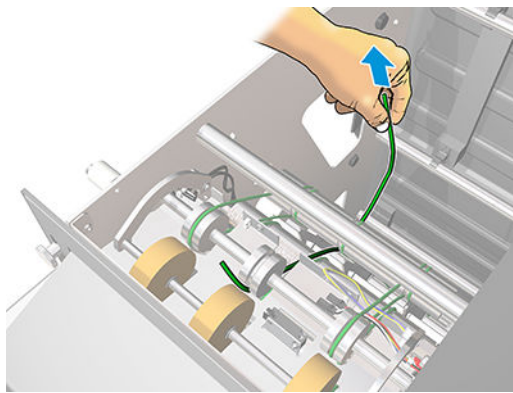
8. Disconnect the three connectors and unrout the cables from the two clamps.



9. Cut the damaged belt. In the image below, the middle one.




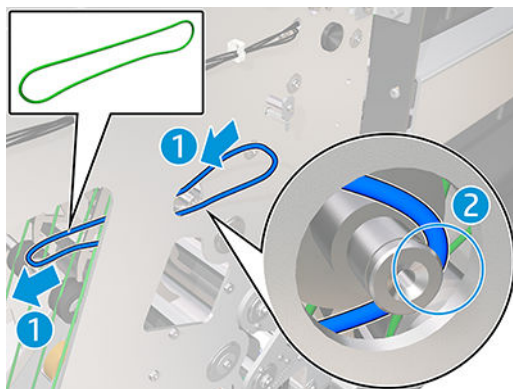
10. Remove the damage belt.



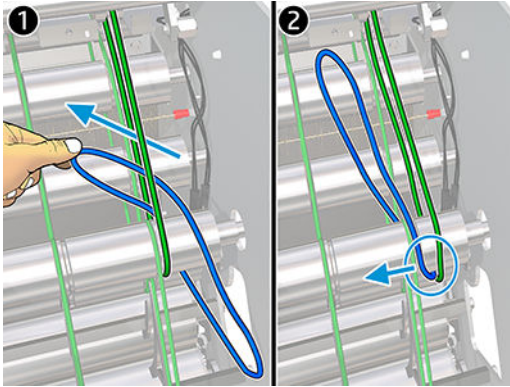
Installation of the belt

1. Pass the belt through the hole of the side plate and engage the belt with the end of the roller.

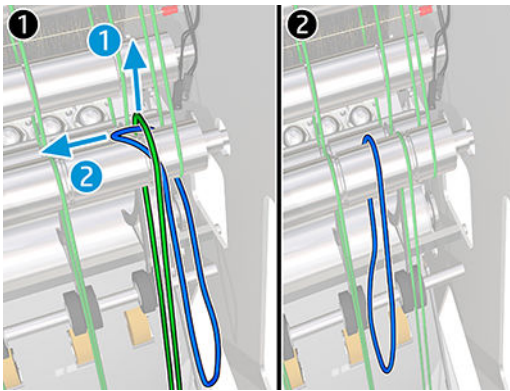
 **NOTE:** The new belt is shown in blue to better understand the graphics.



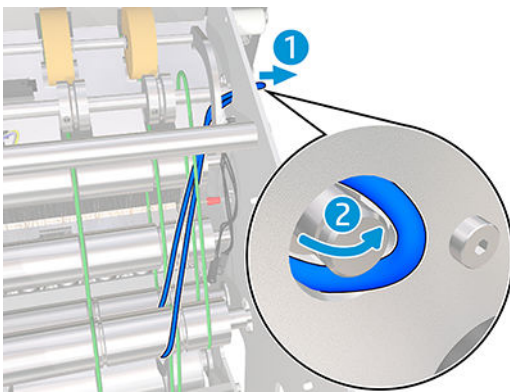
2. Pass the new belt through the top belt.



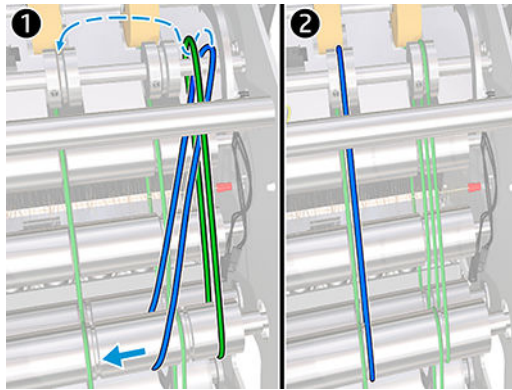
3. Pass the new belt through the transition belt.



4. Pass the belt through the hole of the side plate and engage the belt with the end of the roller. (Move the necessary belts to the right.)



5. Pass the new belt through the top belt and leave it in this correct position. Leave the rest of belts moved in their correct position.



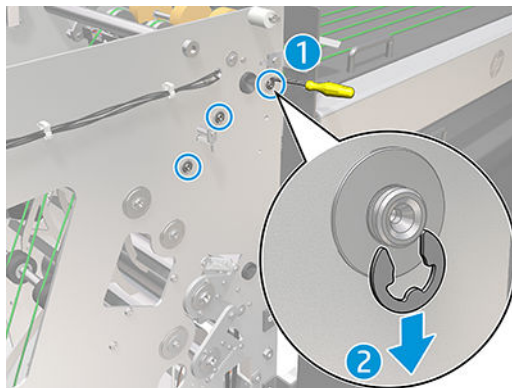
Installation

- ▲ Reverse the removal steps.

CF upper path transport belt, bottom (3) (3JJ54-67017)

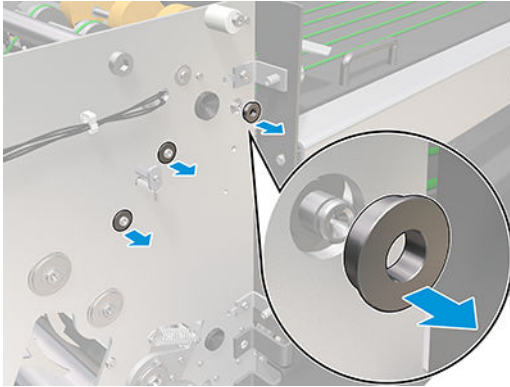
Removal

1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
3. Remove the 3 circlips.

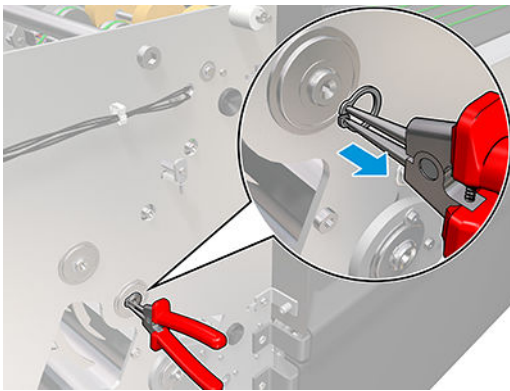


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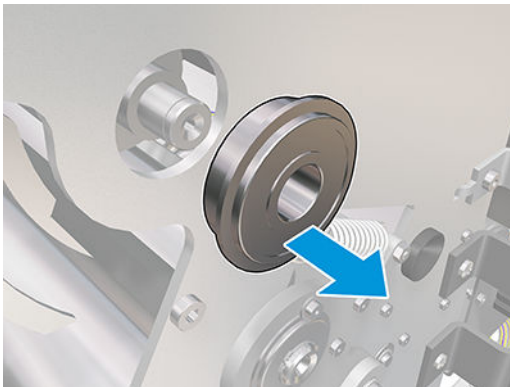
4. Remove the 3 bearings.



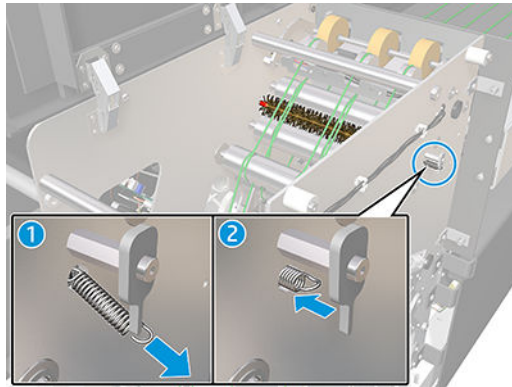
5. Remove the circlip.



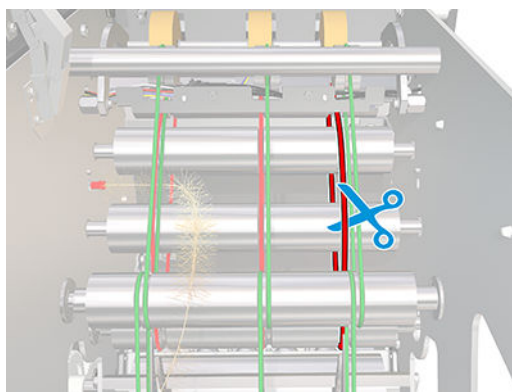
6. Remove the bushing.



7. Unhook the spring and the cable from the back.



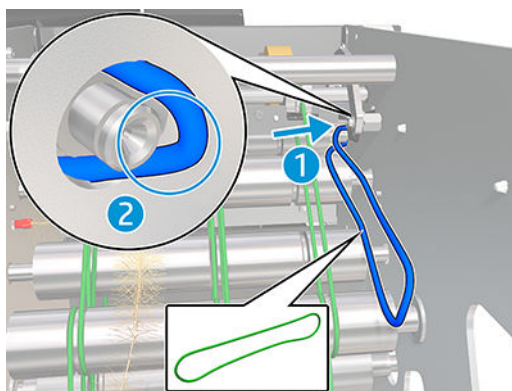
8. Cut the damaged belt and remove it. In the image below, the right one.



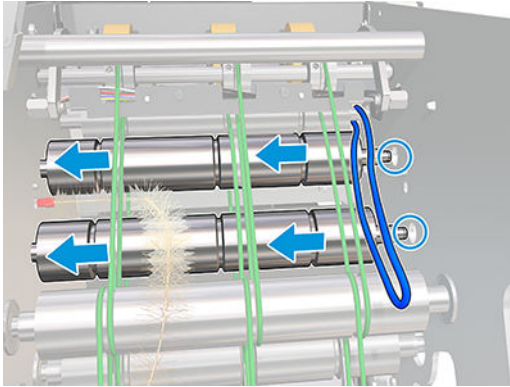
Installation of the belt

1. Pass the new belt through the hole of the side plate and engage the belt with the end of the roller.

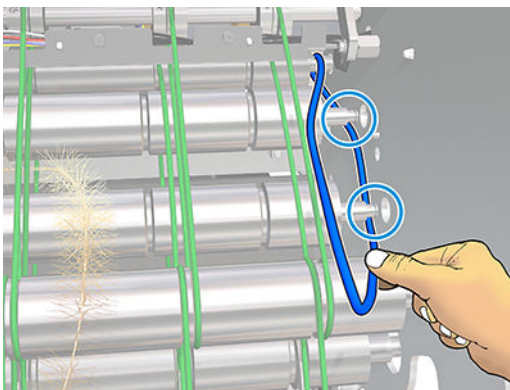
 **NOTE:** The new belt is shown in blue to better understand the graphics.



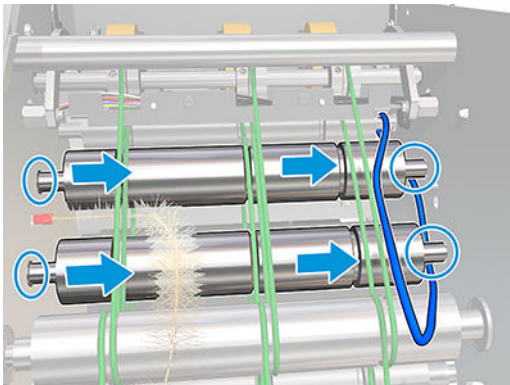
2. Slide the two rollers to the left side to get a gap for pass the belt.



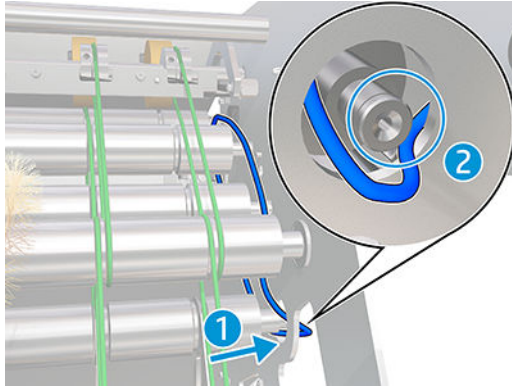
3. Pass the new belt through the two rollers.



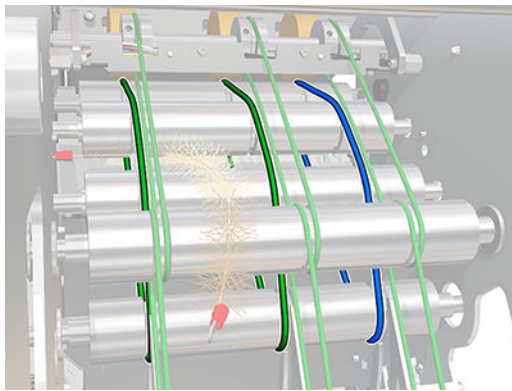
4. Slide the two rollers to the right. Make sure the left bushings of the rollers are mounted correctly.



5. Pass the belt through the hole of the side plate and engage the belt with the end of the roller.



6. Mount the belt in their position.



Installation

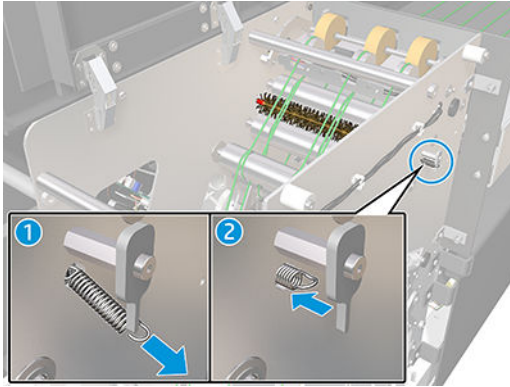
- ▲ Reverse the removal steps.

CF exit discharge cable (3JJ54-67084)

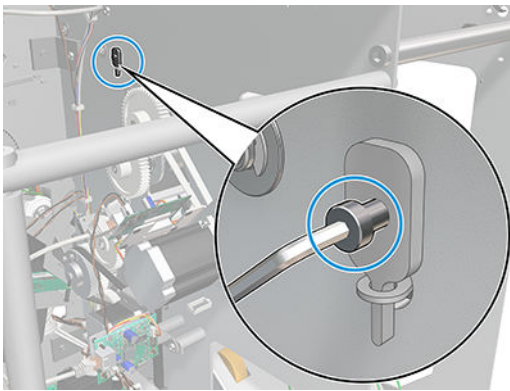
Removal

1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).

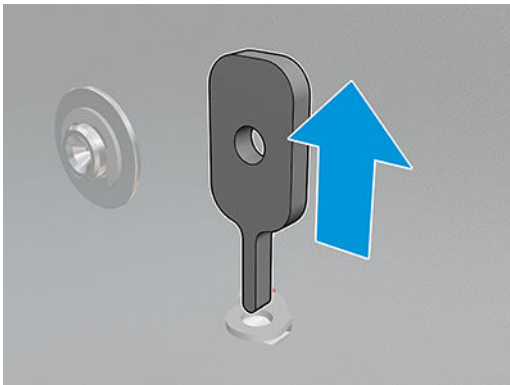
3. Unhook the spring and the cable on the rear side.



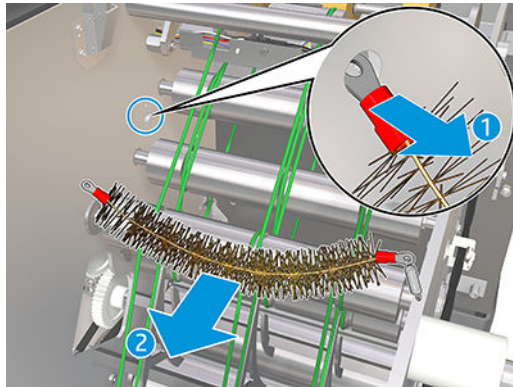
4. Remove one screw on the front side.



5. Remove the spring retainer.



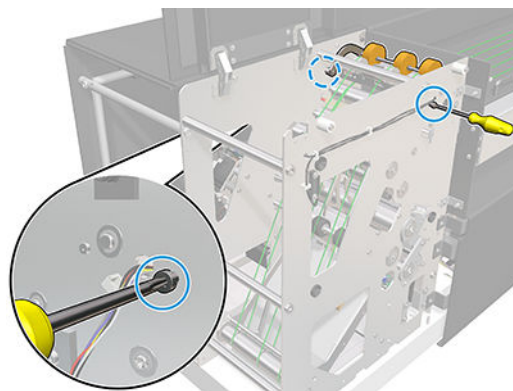
6. Remove the discharge cable.



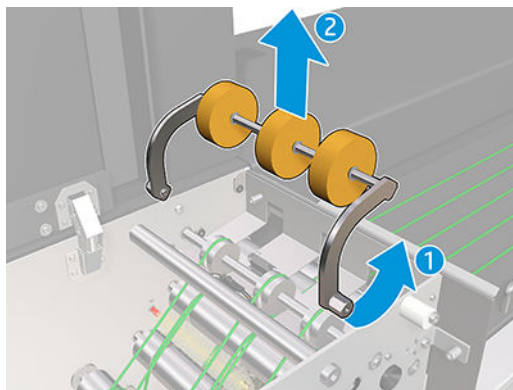
Pressure roller foam set (3JJ54-67019)

Removal

1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
3. Remove two screws.



4. Remove the pressure roller foam set.




Installation

- ▲ Reverse the removal steps.

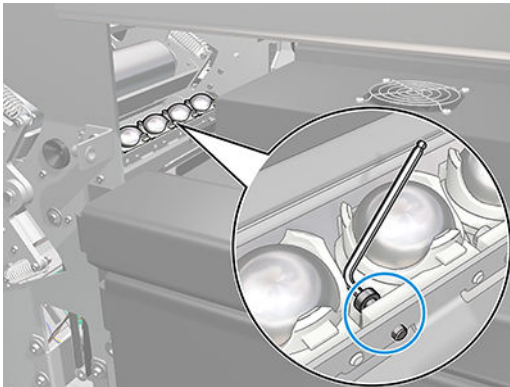
Diameter 32 mm ball and cage kit (K5H75-67091) – CF input and output

Removal

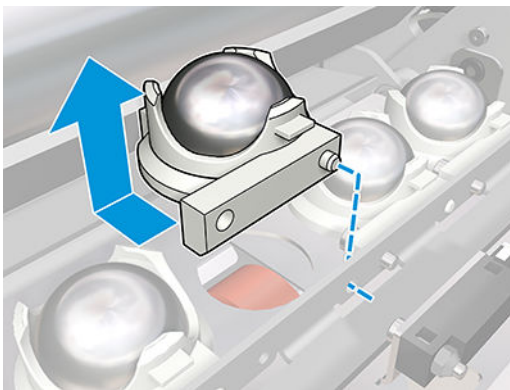
1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the CF entry cover. See [Cross-fold entry cover \(3JJ54-67008\) on page 1714](#).

 **NOTE:** For better access, remove the fans assembly module.

3. Remove the Allen screw from the defective ball and cage kit.



4. Remove the ball and cage kit.



Installation

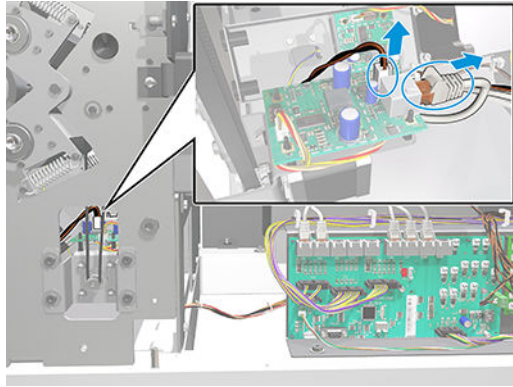
- ▲ Reverse the removal steps.

CF PCA (3JJ54-67020)

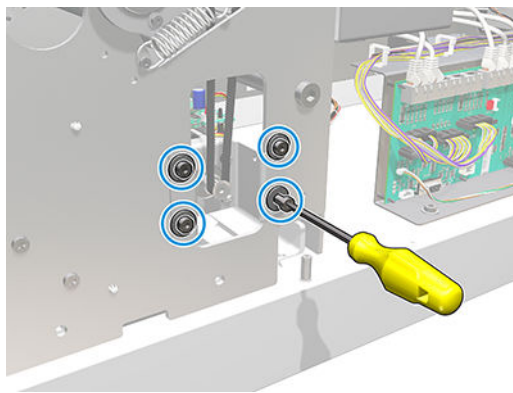
Removal

1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the Control boards cover. See [Control boards cover \(3JJ54-67006\) on page 1712](#).

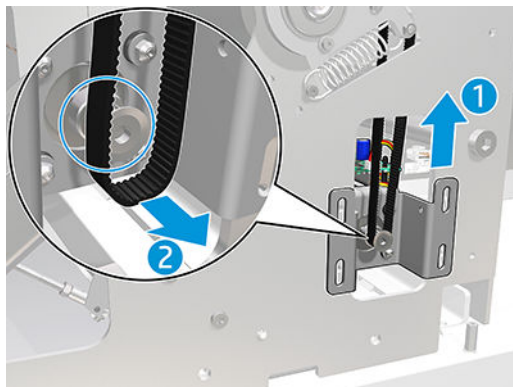
3. Disconnect the two cables from the PCA.



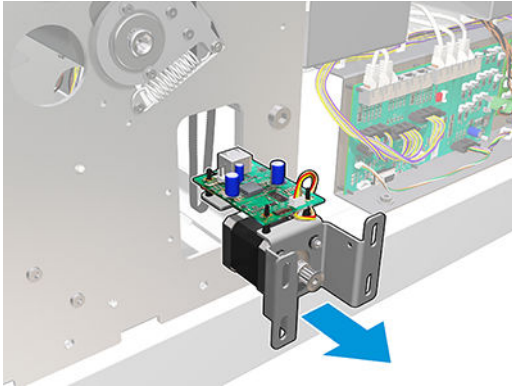
4. Remove the four screws.



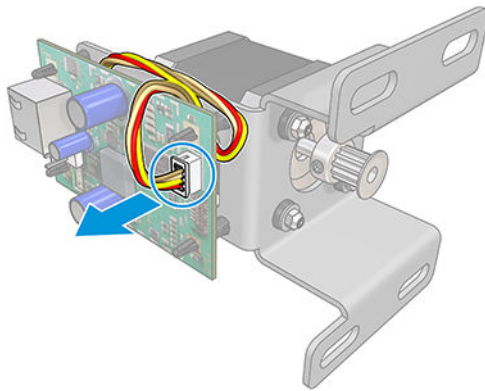
5. Lift up the CF entry motor controller assembly and detach the belt from the motor pulley.



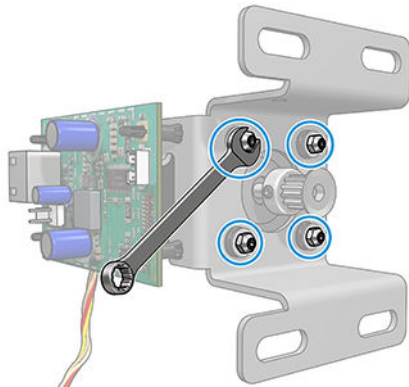
6. Remove the CF entry motor controller assembly with the PCA.



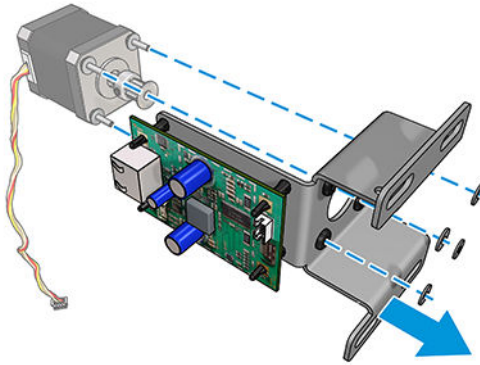
7. Disconnect the cable from the PCA and unroute it.



8. Remove the four nuts.

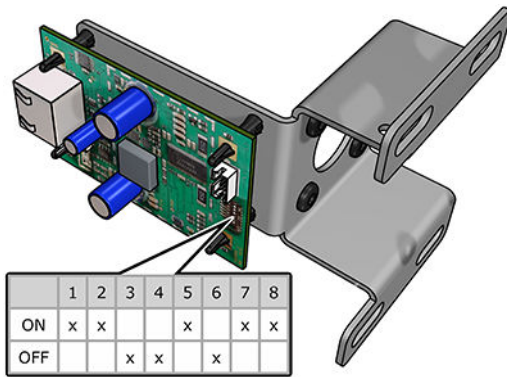


- Remove the CF PCA + bracket controller assembly (be careful not to lose the washers).

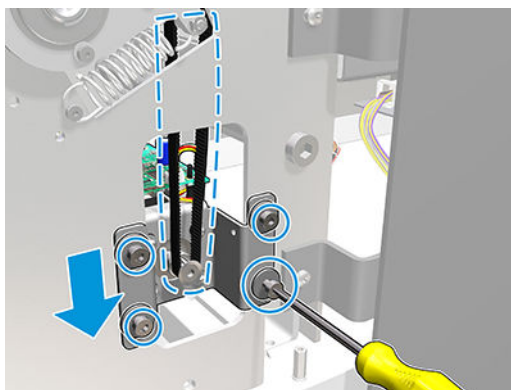


Installation

-  **IMPORTANT:** Set the 8 dip switches of the PCA.




- Tighten the four screws and, at the same time, push down the Cross-folder entry motor controller assembly tensioning the belt.



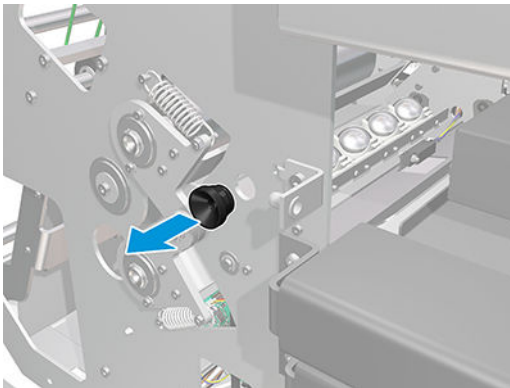
HTD 3M/420 Toothed belt (PN TBD) – CF input and output

Removal

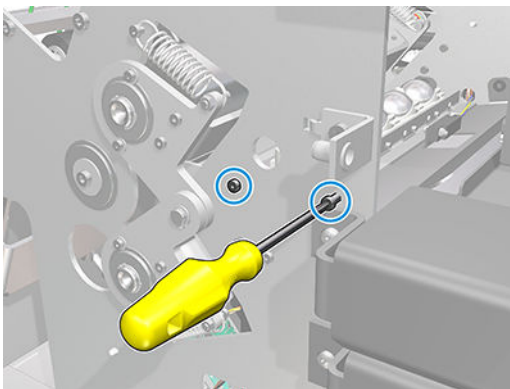
1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
3. Remove the CF entry cover. See [Cross-fold entry cover \(3JJ54-67008\) on page 1714](#).
4. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).

 **NOTE:** For better access, remove the fans assembly module.

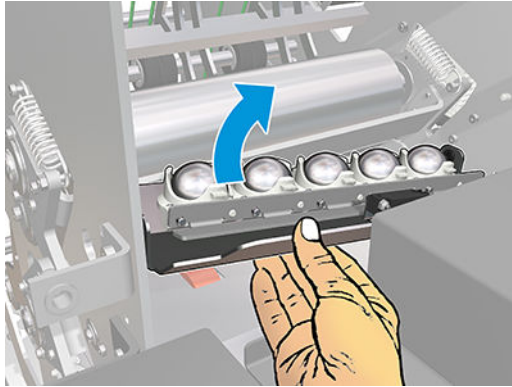
5. Remove the rubber.



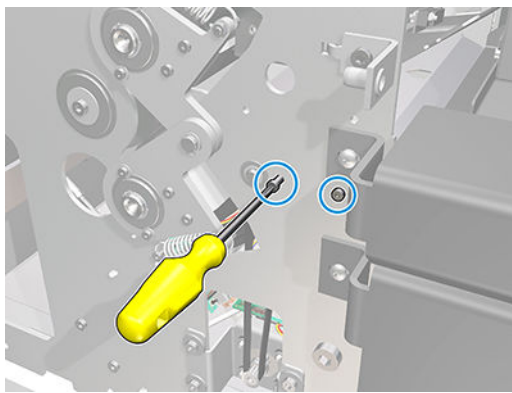
6. Remove the 2 screws.



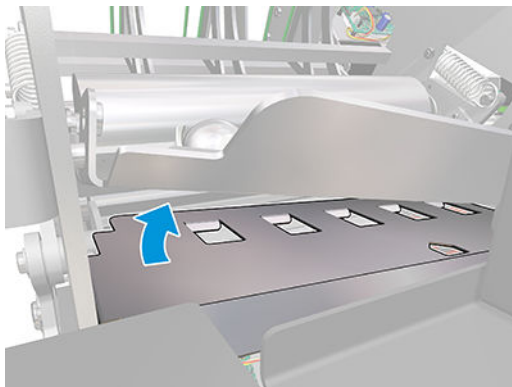
7. Lift up the tray with the balls (be careful not to break the sensor cable).



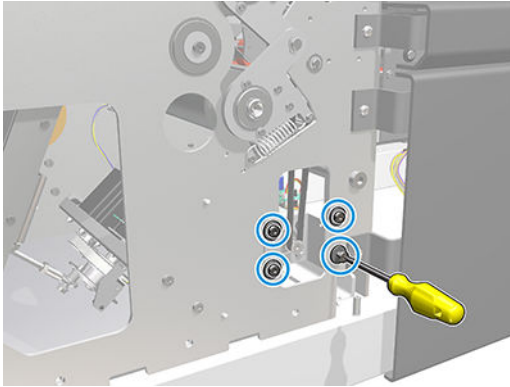
8. Remove the 2 screws.



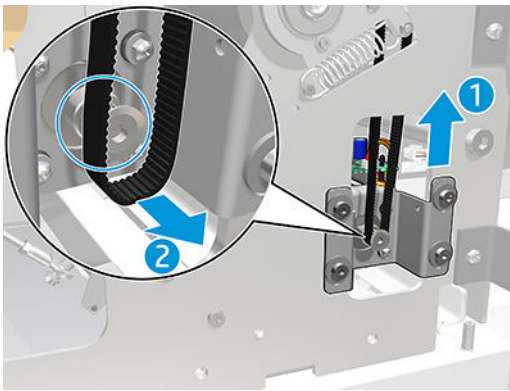
9. Lift up the tray.



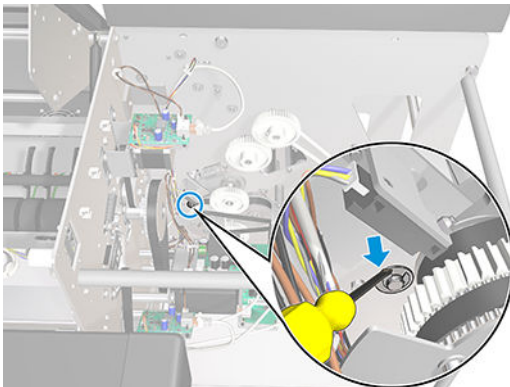
10. Loosen the 4 screws.



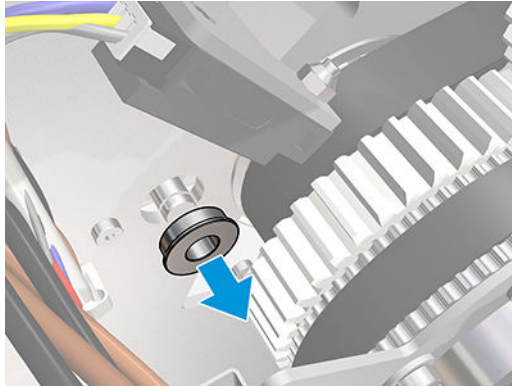
11. Lift up the CF entry motor controller assembly and detach the belt from the motor pulley.



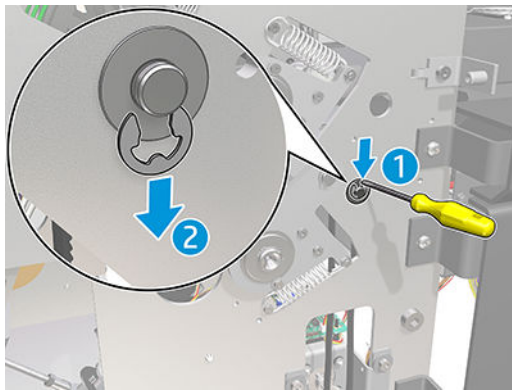
12. Remove the circlip (be careful not to lose it).



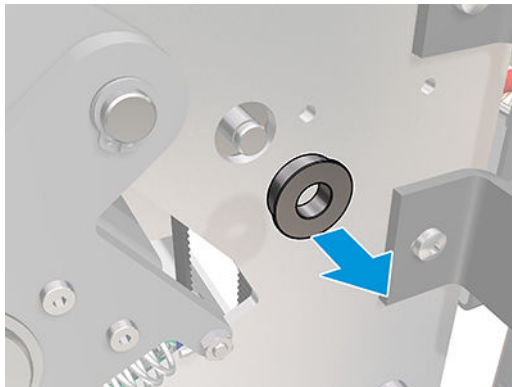
13. Remove the bushing.



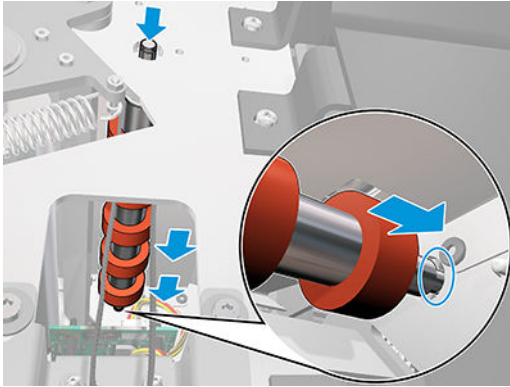
14. Remove the circlip (be careful not to lose it).



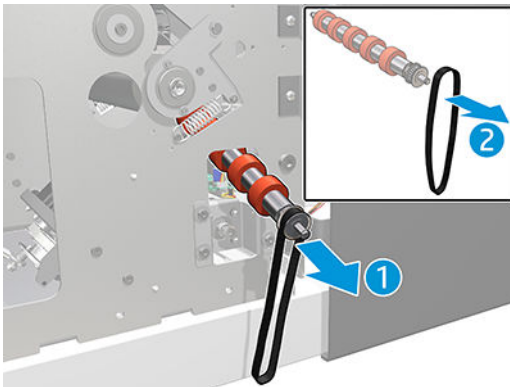
15. Remove the bushing.



16. Slide the CF input-roller to inside.

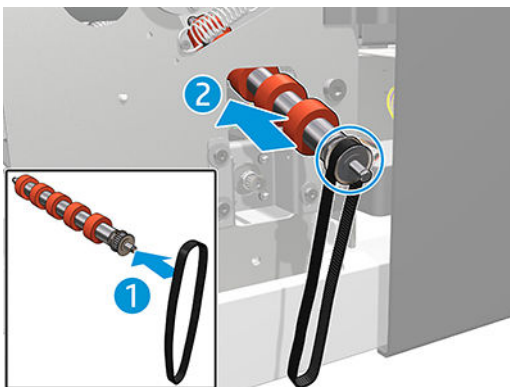


17. Remove the CF input-roller with the belt (be careful not to damage the PCA while you remove it). Then remove the belt from the CF input-roller.

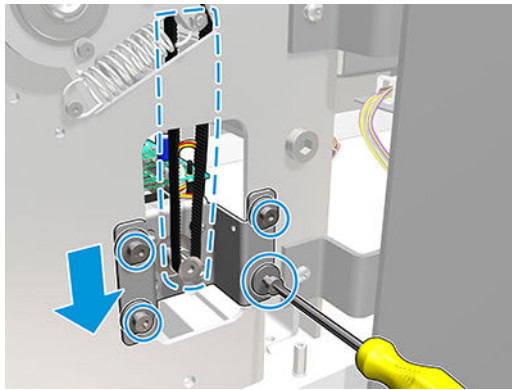


Installation

1. Attach the belt to the CF input-roller and mount it all together.



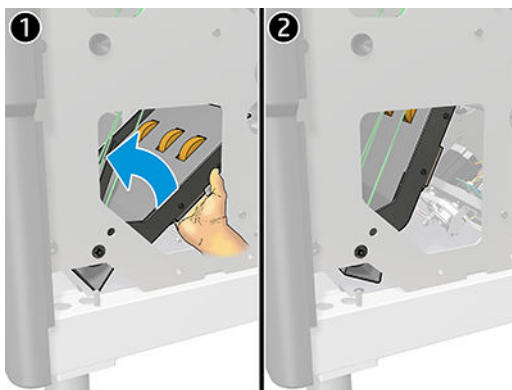
2. Tighten the four screws and, at the same time, push down the CF entry motor controller assembly, tensing the belt.



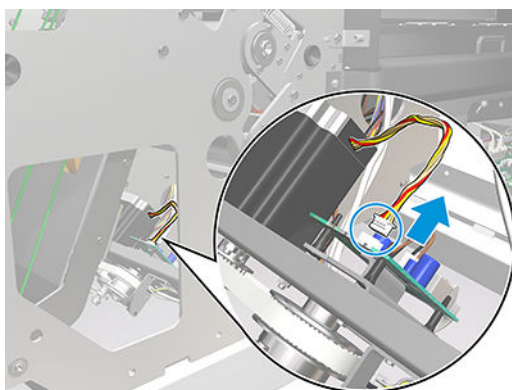
CF X44 Tilt tray motor (3JJ54-67036)

Removal

1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the Control boards cover. See [Control boards cover \(3JJ54-67006\) on page 1712](#).
3. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#). (Optional, for better access.)
4. If necessary, rotate the assembly to have better access.

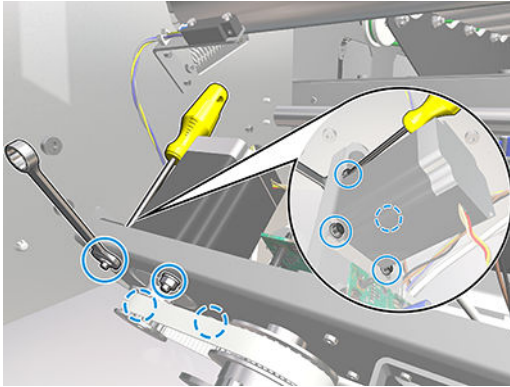


5. Disconnect the cable from the Control board drive interface.

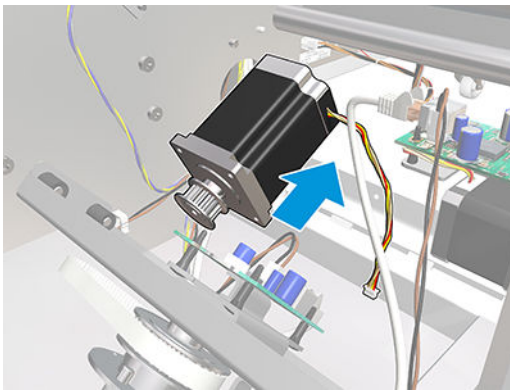


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6. Remove the four screws, nuts and washers.

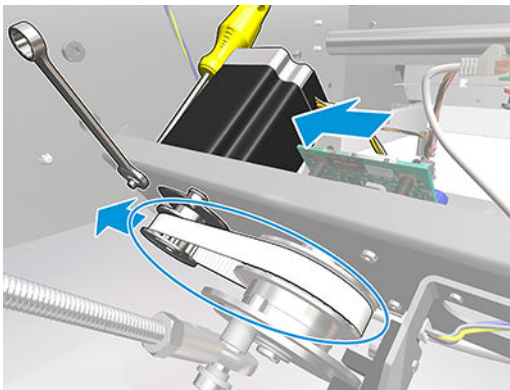


7. Remove the CF X44 Tilt tray motor.



Installation

- ▲ Push the CF X44 Tilt tray motor tensioning the belt and, at the same time, screw the 4 nuts and screws.

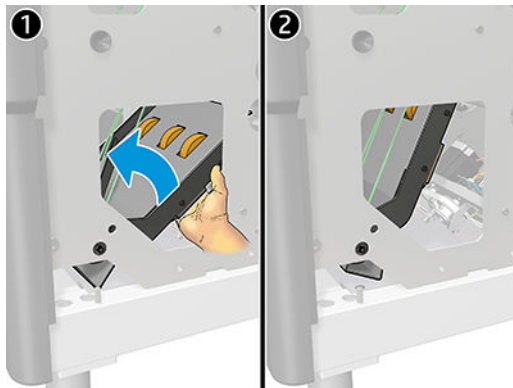


Control board drive interface (K5H75-67162)

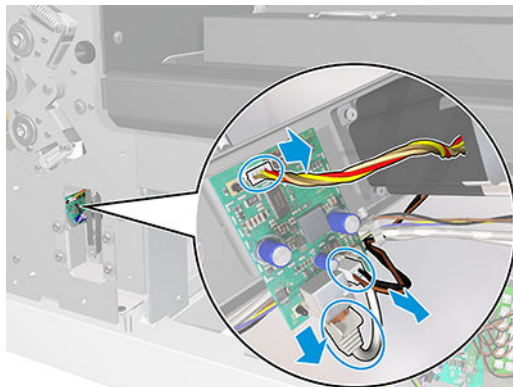
Removal

1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the Control boards cover. See [Control boards cover \(3JJ54-67006\) on page 1712](#).

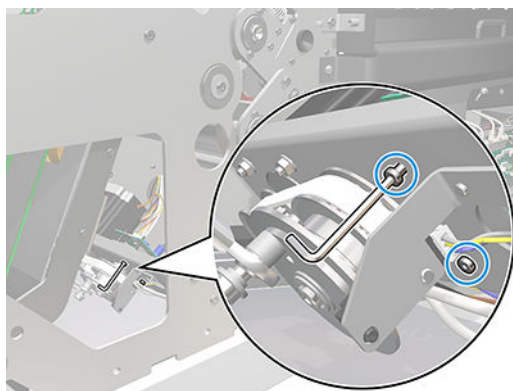
3. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#). (Optional, for better access.)
4. If necessary, rotate the assembly to have better access.



5. Disconnect the three cable from the Control board drive interface.

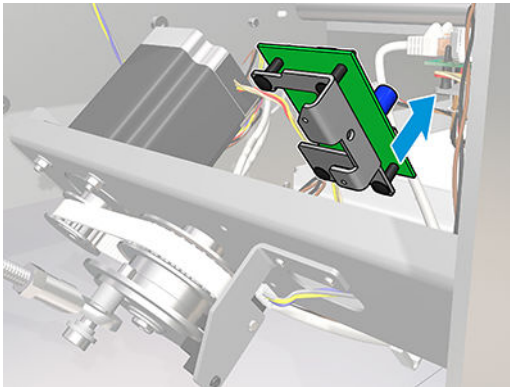


6. Remove the two Allen screws.



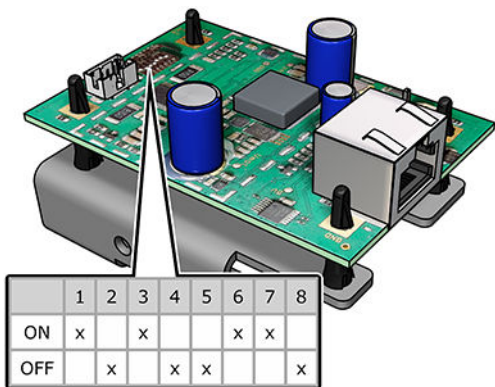
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7. Remove the Control board drive interface.



Installation

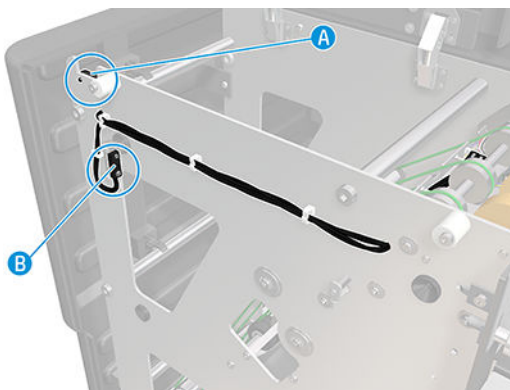
-  **IMPORTANT:** Set the 8 dip switches of the PCA.



Reed sensor (K5H75-67071) – CF paper path

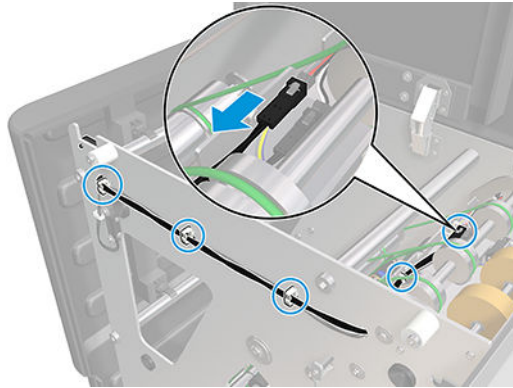
Removal

1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Locate the Reed sensors.

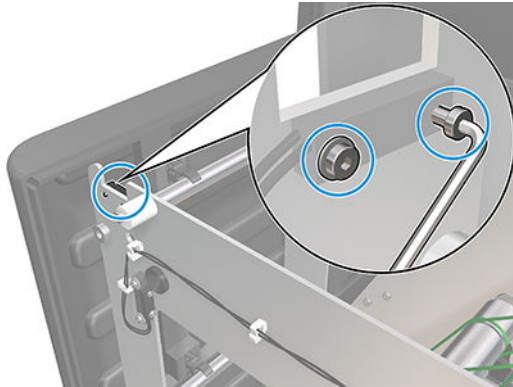


Case A

- a. Disconnect the cable sensor and unrout the cable.



- b. Remove two screws.

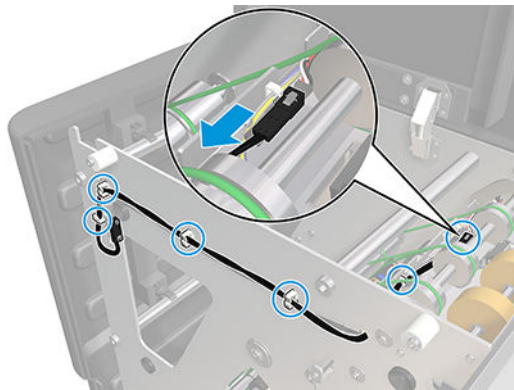


- c. Remove the Reed sensor.

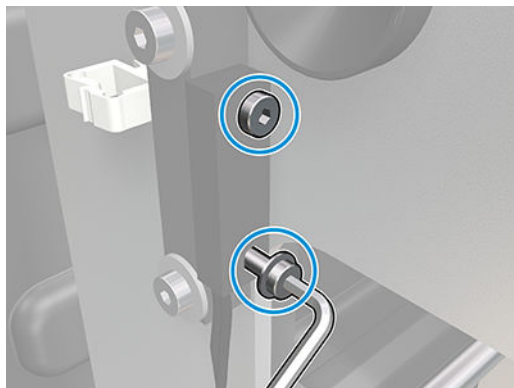


Case B

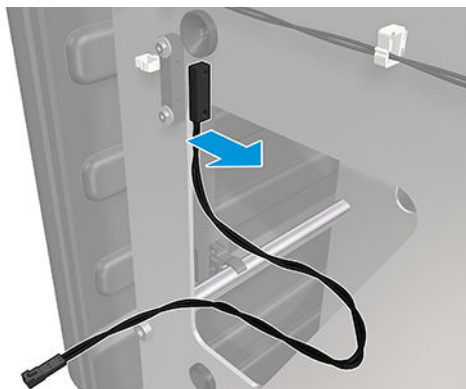
- a. Disconnect the cable sensor and unrout the cable.



- b. Remove two screws.



- c. Remove the Reed sensor.



Installation

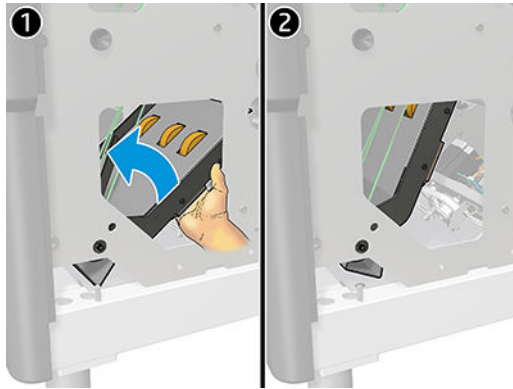
- ▲ Reverse the removal steps.

Paper sensor black connector (K5H75-67125) – CF paper path

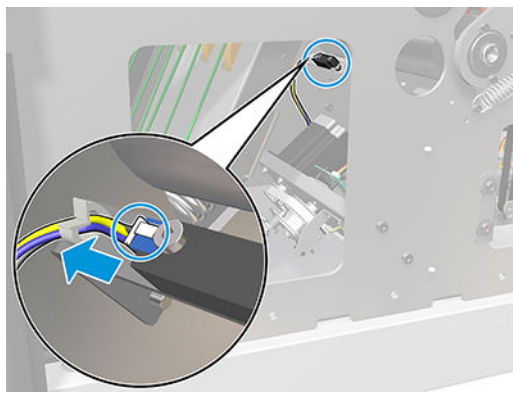
Removal – Option A

1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).

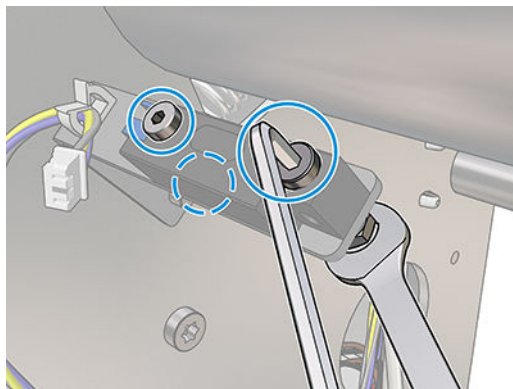
2. If necessary, rotate the assembly to have better access.



3. Disconnect the cable.

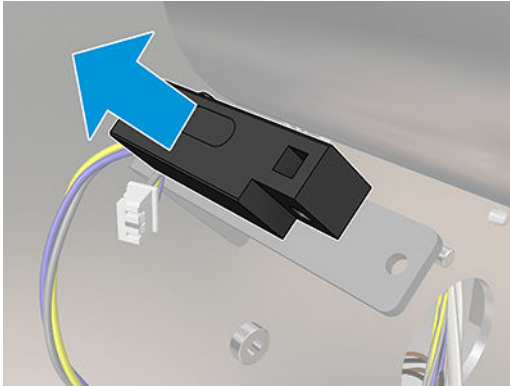


4. Remove two screws and two nuts.



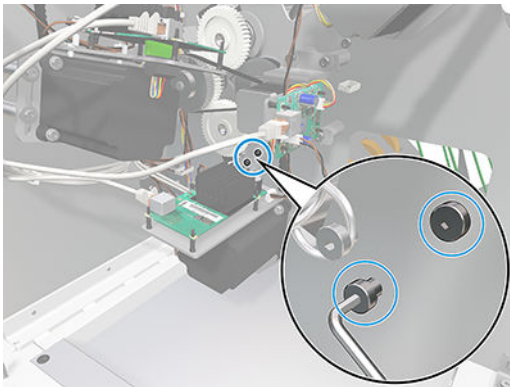
For HP-authorized personnel only

5. Remove the paper sensor.

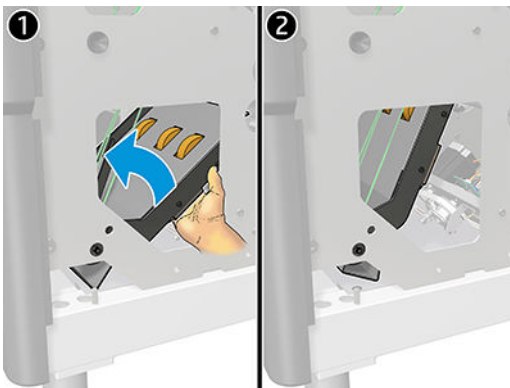


Removal – Option B

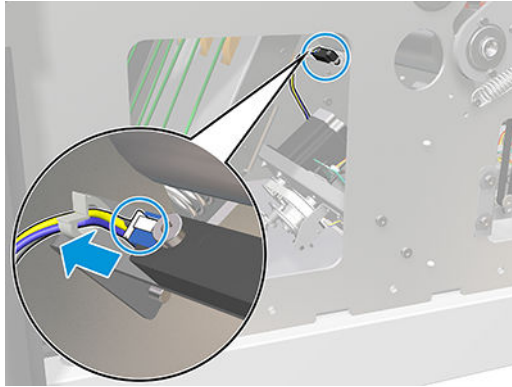
1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
3. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
4. Remove 2 screws.



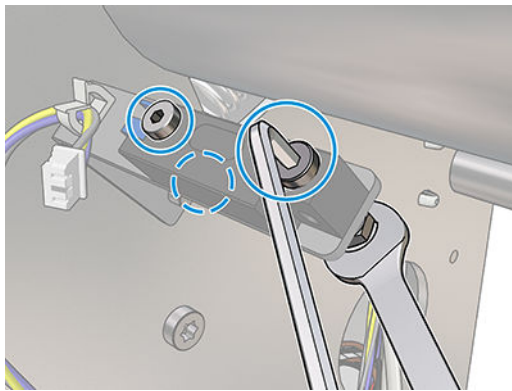
5. If necessary, rotate the assembly to have better access.



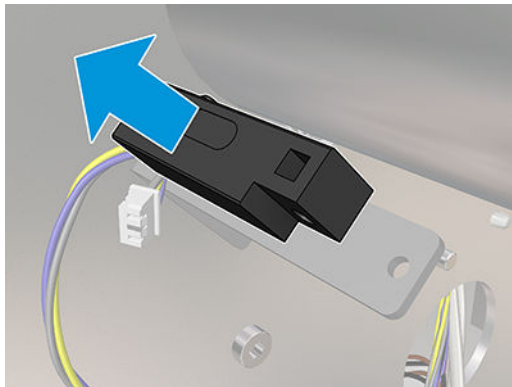
6. Disconnect the cable.



7. Remove two screws and two nuts.



8. Remove the paper sensor.



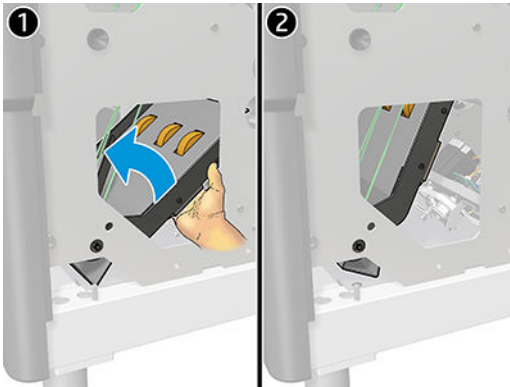
Installation

- ▲ Reverse the removal steps.

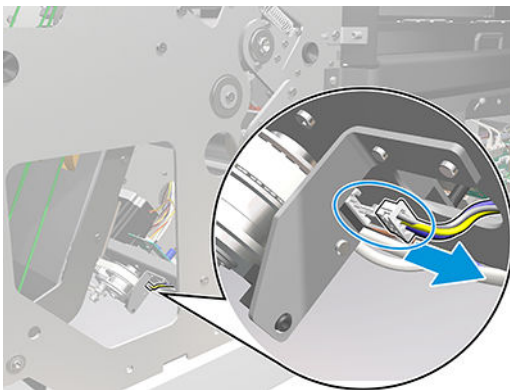
Fork type sensor – LB11 (3JJ54-67031) – CF paper path

Removal

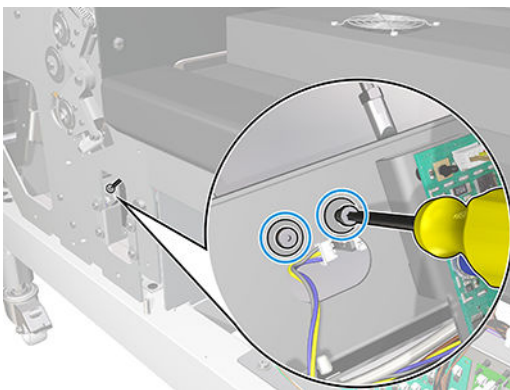
1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the Control boards cover. See [Control boards cover \(3JJ54-67006\) on page 1712](#).
3. If necessary, rotate the assembly to have better access.



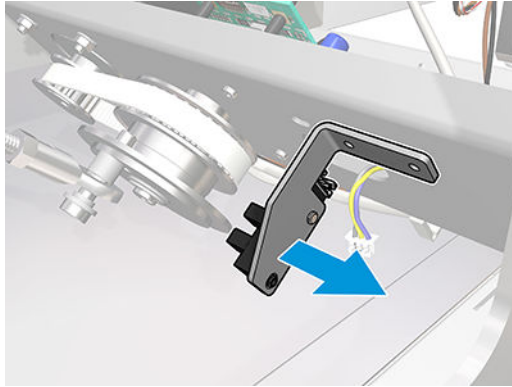
4. Disconnect the cable.



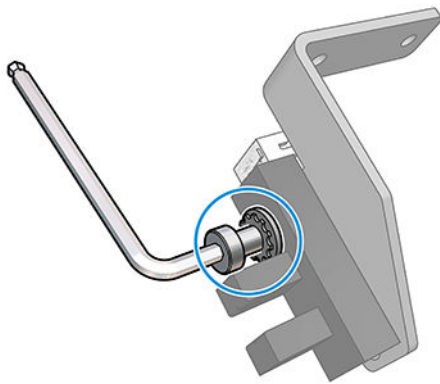
5. Remove the two screws.



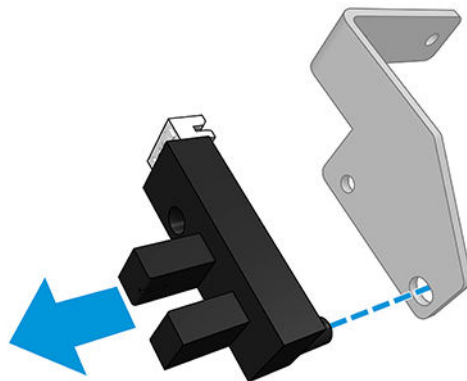
6. Remove the Fork type sensor with the support.



7. Remove the Allen screw and the washers.



8. Remove the Fork type sensor.



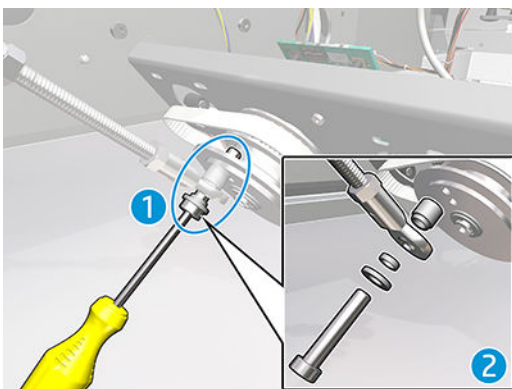
Installation

- ▲ Reverse the removal steps.

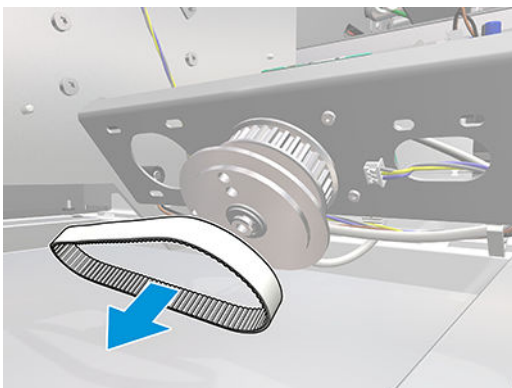
CF X44 Toothed belt (3JJ54-67058)

Removal

1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the Control boards cover. See [Control boards cover \(3JJ54-67006\) on page 1712](#).
3. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#). (Optional, for better access.)
4. Remove the CF X44 Tilt tray motor. See [CF X44 Tilt tray motor \(3JJ54-67036\) on page 1809](#).
5. Remove the sensor. See [Fork type sensor – LB11 \(3JJ54-67031\) – CF paper path on page 1818](#).
6. Remove the screw, the washers and bushing.

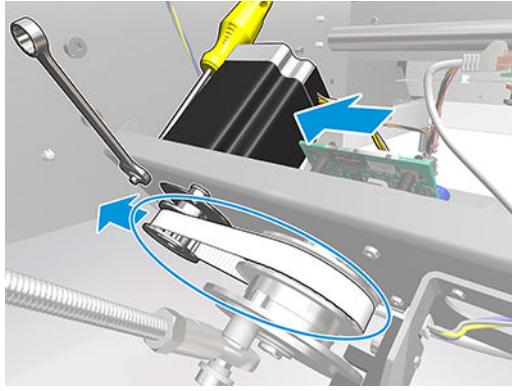


7. Remove the CF X44 Toothed belt.



Installation

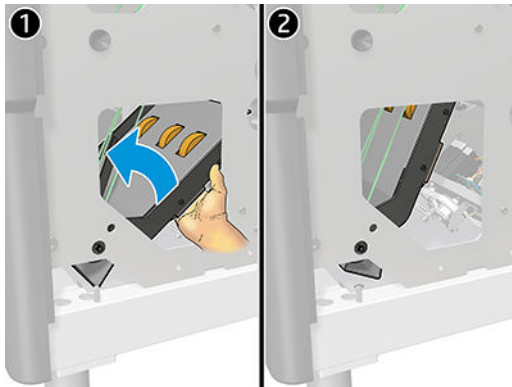
- ▲ Push the CF X44 Tilt tray motor tensioning the belt and, at the same time, screw the 4 nuts and screws.



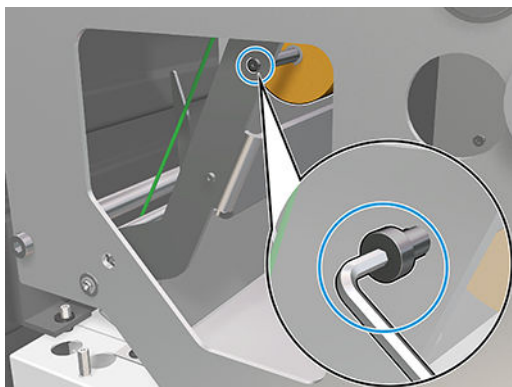
Pressure roller foam set (3JJ54-67023)

Removal

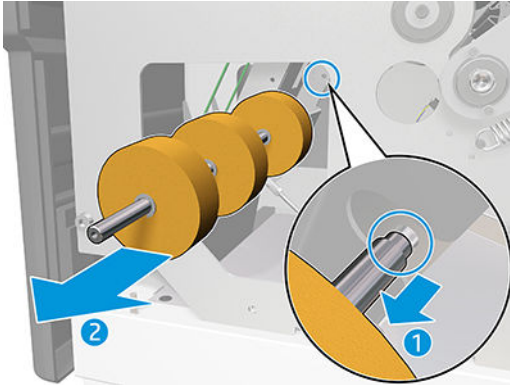
1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\)](#) on page 1713.
2. If necessary, rotate the assembly to have better access.



3. Remove one screw.



4. Remove the pressure roller foam set.



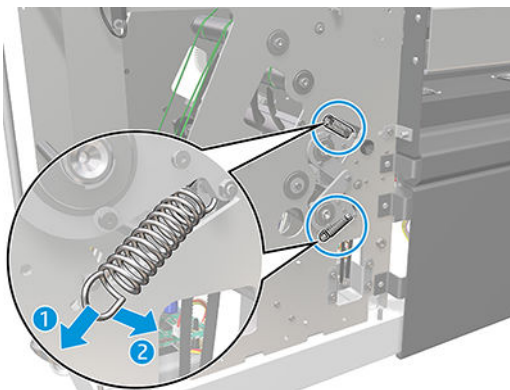
Installation

- ▲ Reverse the removal steps.

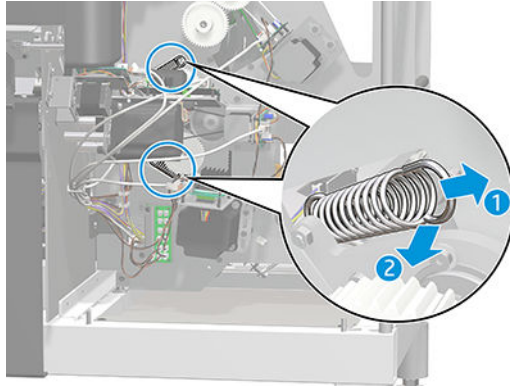
Cross-fold spring (K5H75-67138)

Removal

1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
3. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
4. Locate the two spring on the rear side and remove them.



5. Locate the two spring on the front side and remove them.



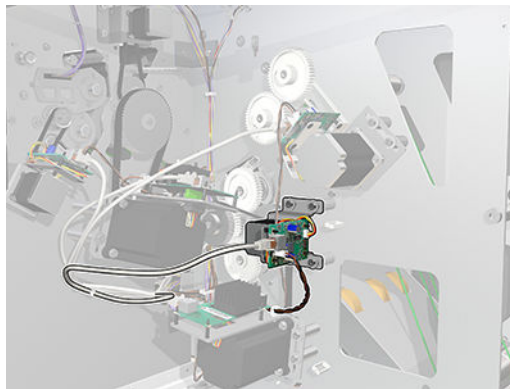
Installation

- ▲ Reverse the removal steps.

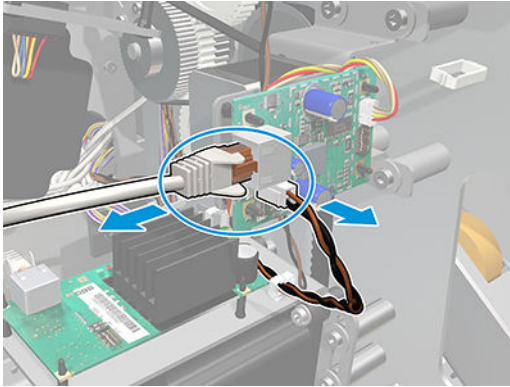
CF entry motor controller assembly (3JJ54-67021)

Removal

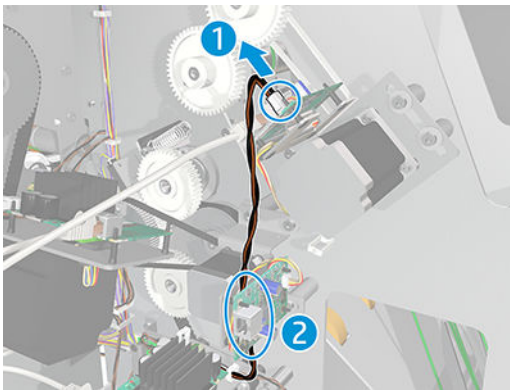
1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
3. Locate the CF folding flap motor (CF X43).




4. Disconnect the two cables from the PCA.

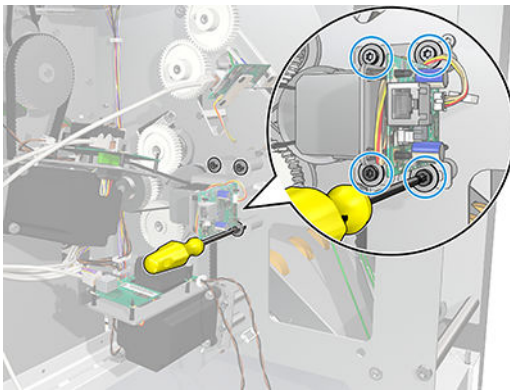


5. If the cable is routed as shown in the image, disconnect it from the PCA and unrout it.

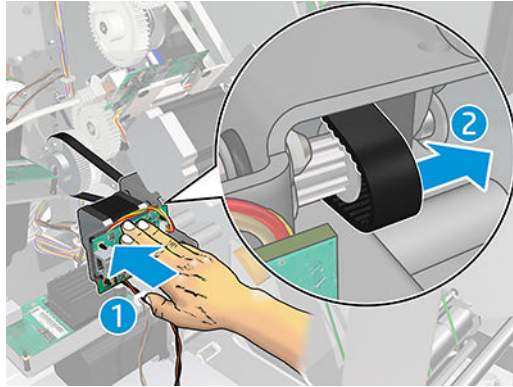


6. Loosen the four screws.

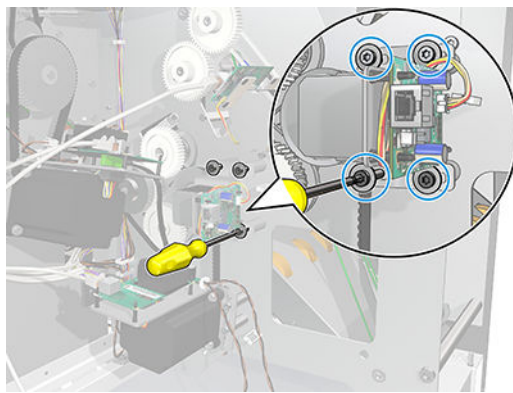
 **IMPORTANT:** Do not remove them.



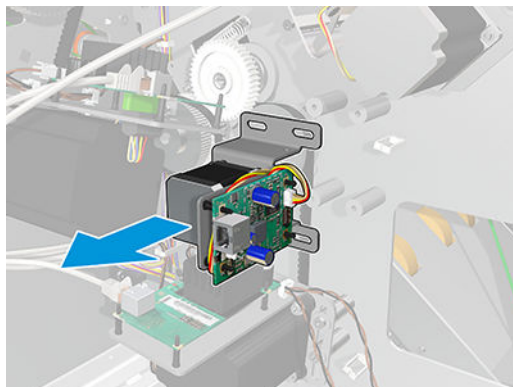
7. Slide the CF folding flap motor (CF X43) to the left and detach the belt from the pulley.



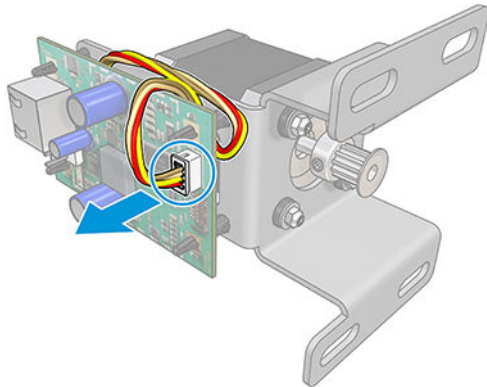
8. Remove the four screws.



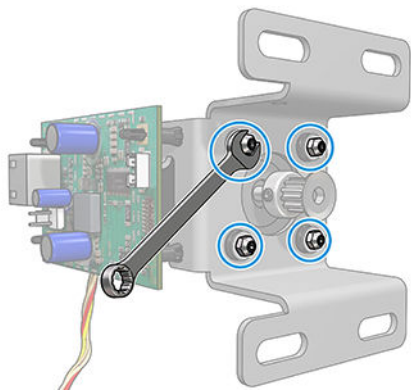
9. Remove the CF folding flap motor (CF X43).



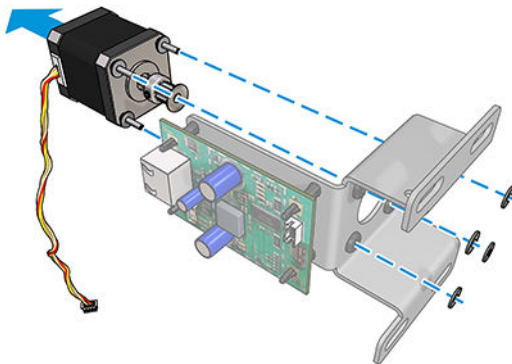
10. Disconnect the cable from the PCA and unrout it.



11. Remove the four nuts.

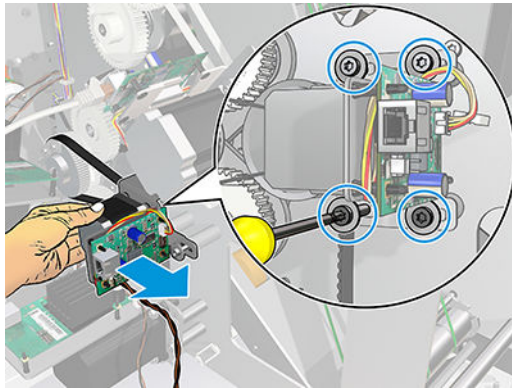


12. Remove the CF entry motor controller assembly (be careful not to lose the washers).



Installation

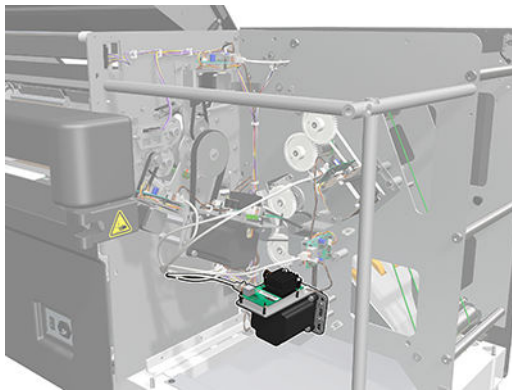
- ▲ Tighten the four screws and, at the same time, push to the right the Cross-folder folding flap motor (CF X43) tensioning the belt.



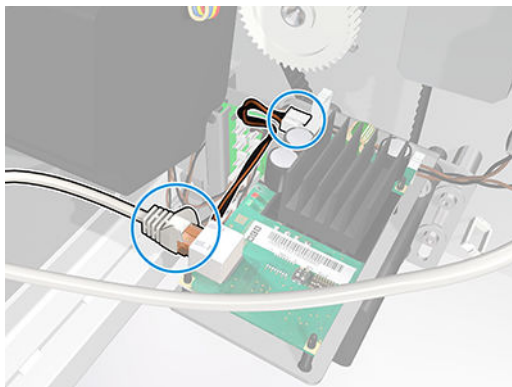
CF X47 – Cross-fold main motor (3JJ54-67037)

Removal

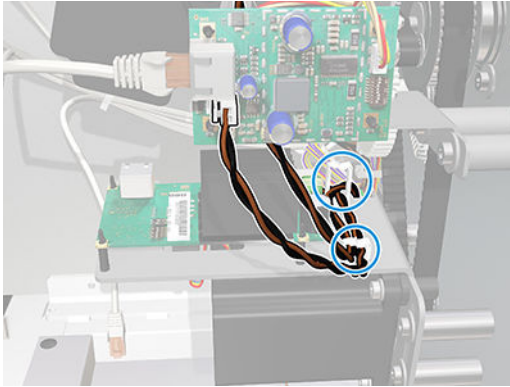
1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
3. Locate the CF main motor.




4. Disconnect the two cables from the PCA.

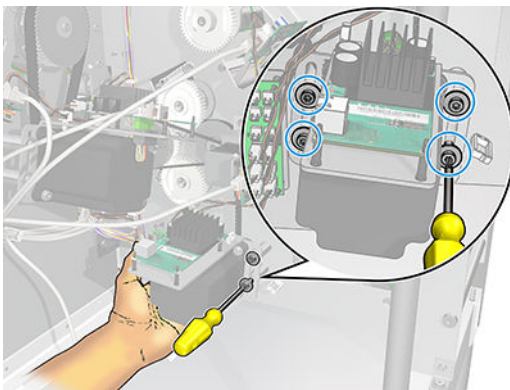


5. Unroute the cables from the two clamps.

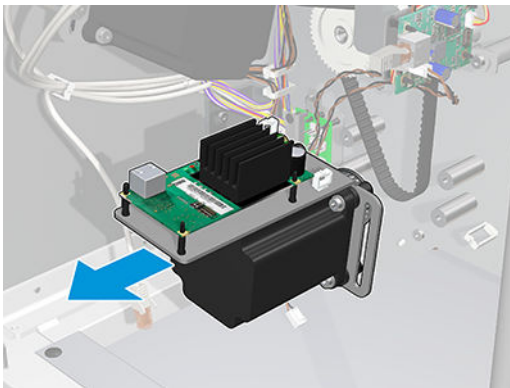


6. Remove four screws.

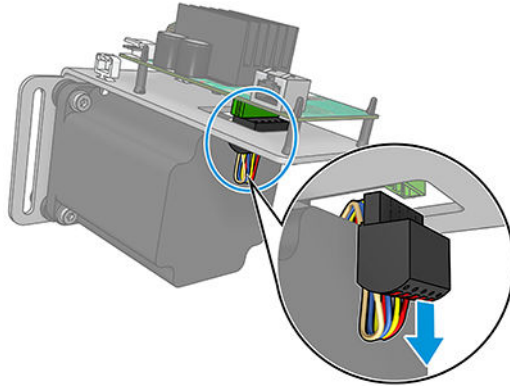
 **IMPORTANT:** Hold the CF main motor while removing the screws.



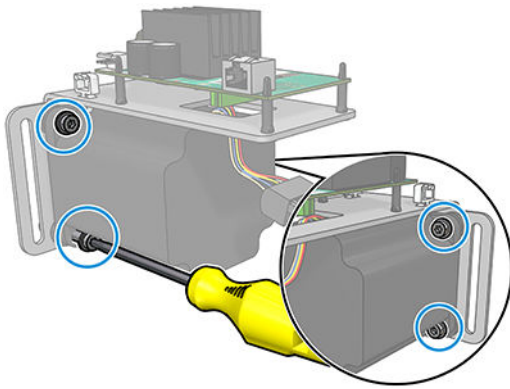
7. Remove the Cross-fold main motor (CF X47) assembly.



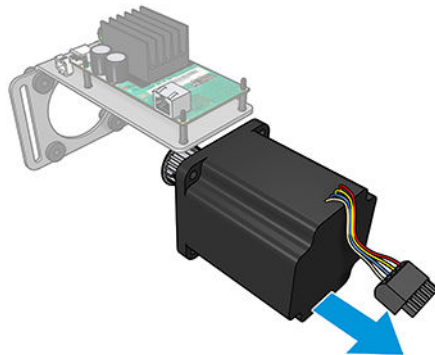
8. Disconnect the motor cable from the PCA.



9. Remove four screws.

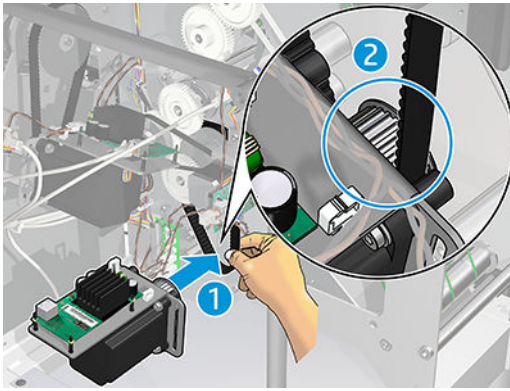


10. Remove the CF X47 Cross-fold main motor from the LP M1900 motor controller.

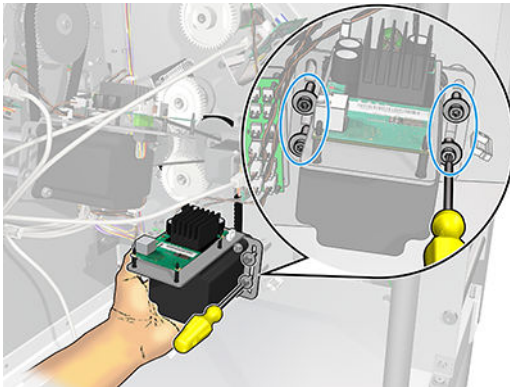


Installation

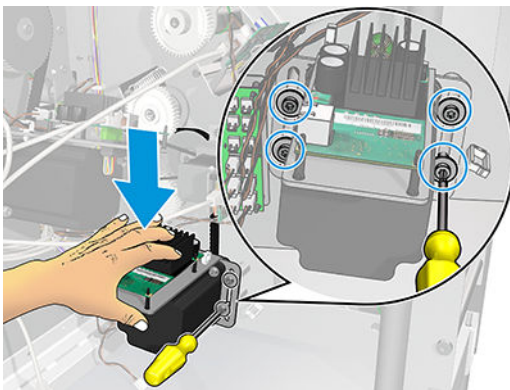
1. Remember to attach the belt to the pulley of the CF main motor (CF X47) assembly.



2. Place the four screws loosely to tension the belt.



3. Tighten the four screws and, at the same time, push down the CF main motor (CF X47) assembly, tensioning the belt.

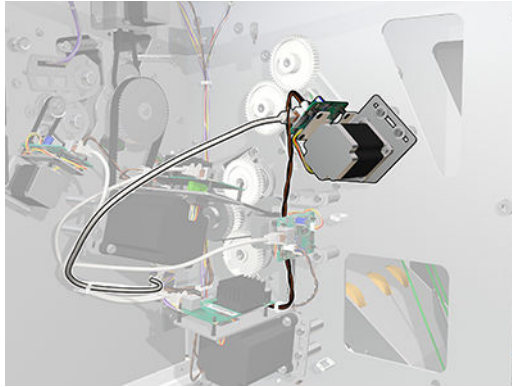


Cross-fold drive motor (3JJ54-67024)

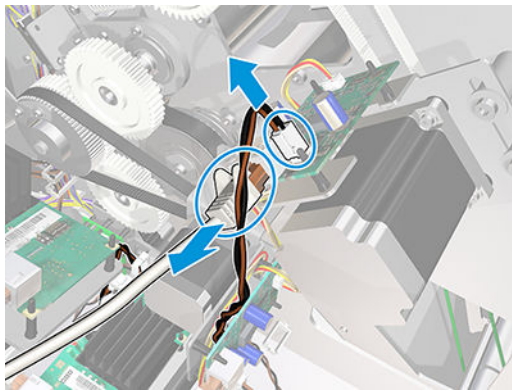
Removal

1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).


3. Locate the CF drive motor.

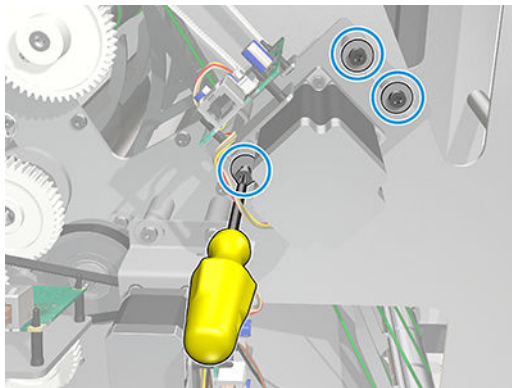


4. Disconnect the two cables from the PCA.

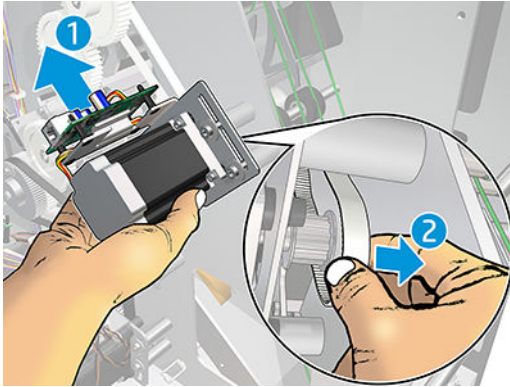


5. Loosen the 3 screws.

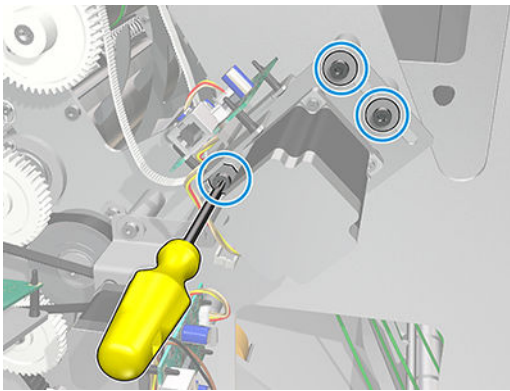
 **IMPORTANT:** Do not remove the screws.



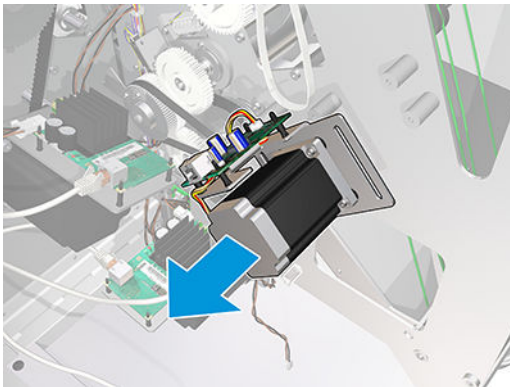
6. Slide up the CF drive Motor and detach the belt from the pulley.



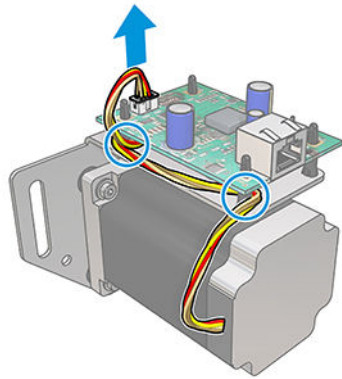
7. Remove three screws.



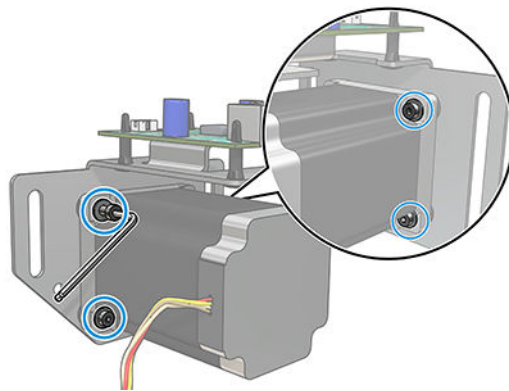
8. Remove the CF drive motor assembly.



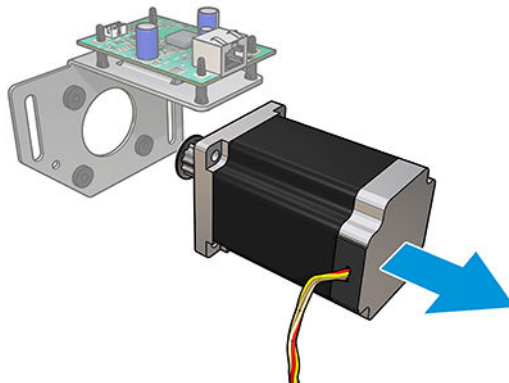
9. Disconnect the cable from the PCA and unrout it.



10. Remove four screws.

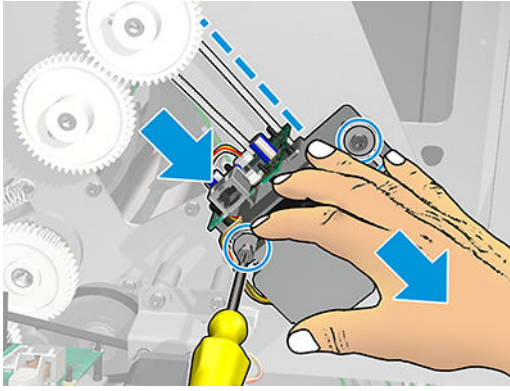


11. Remove the CF drive motor.



Installation

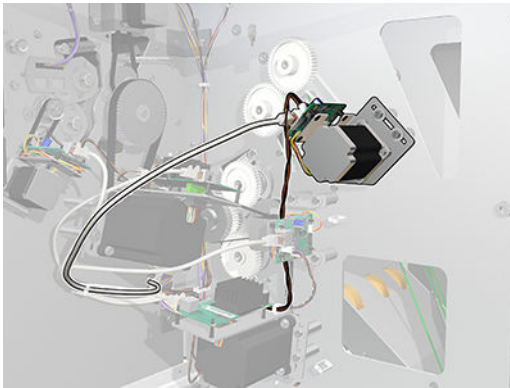
- ▲ Tighten the three screws and, at the same time, push down the CF drive motor, tensioning the belt.



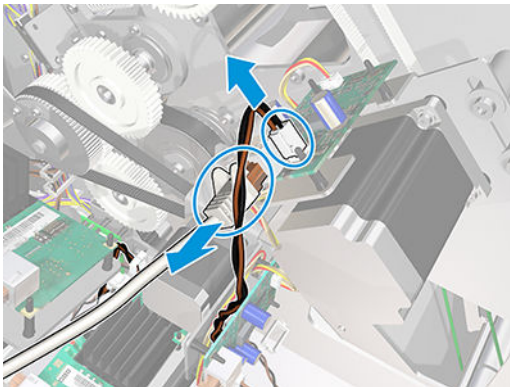
CF X42 PCA – CF upper exit controller (3JJ54-67039)

Removal


1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
3. Locate the CF drive motor.

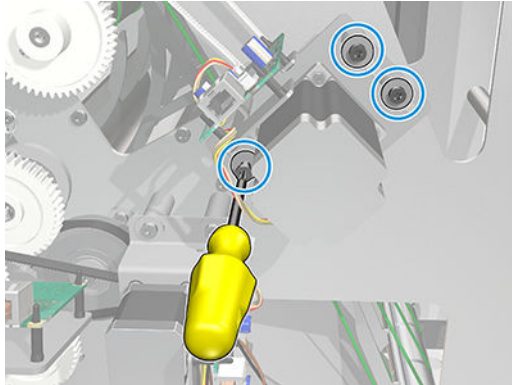


4. Disconnect the two cables from the PCA.

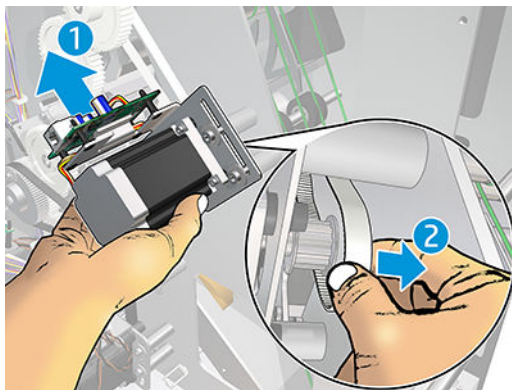


5. Loosen the 3 screws.

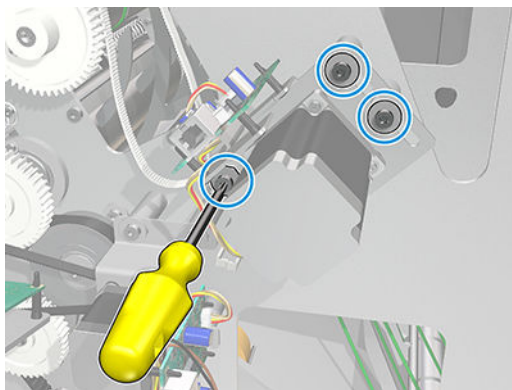
 **IMPORTANT:** Do not remove the screws.



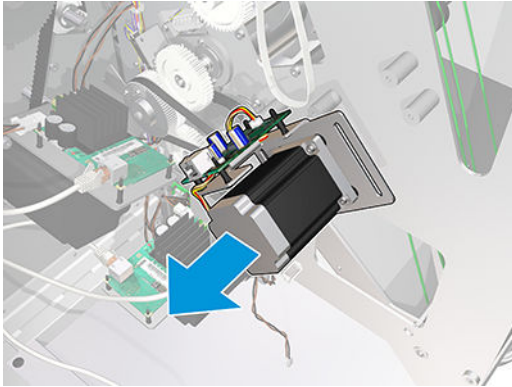
6. Slide up the CF drive motor and detach the belt from the pulley.



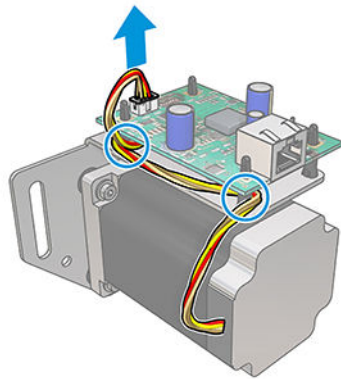
7. Remove three screws.



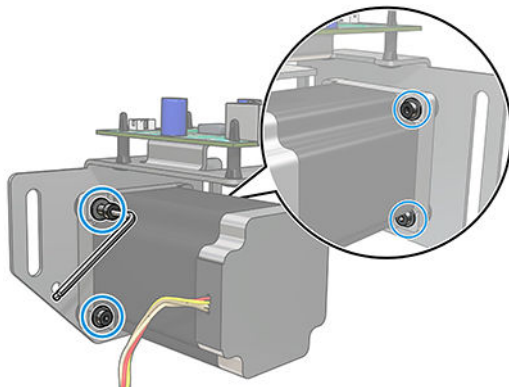
8. Remove the CF drive motor assembly.



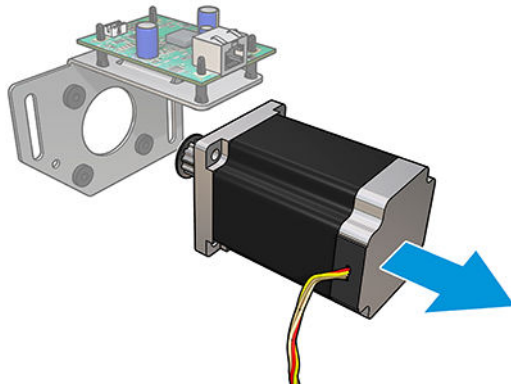
9. Disconnect the cable from the PCA and unroute it.



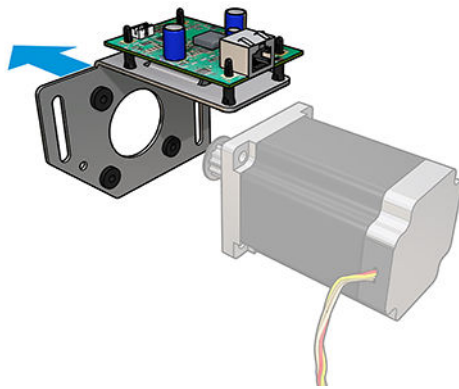
10. Remove four screws.




11. Remove the CF drive motor.

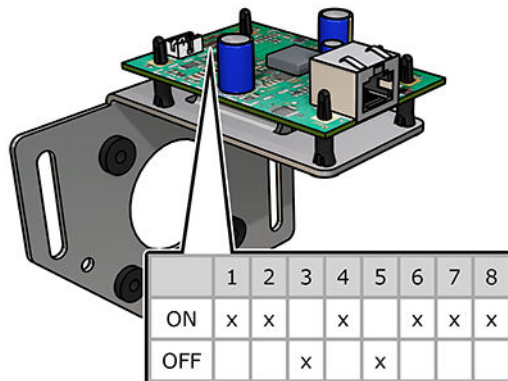


12. Remove the CF X42 PCA – CF upper exit controller.

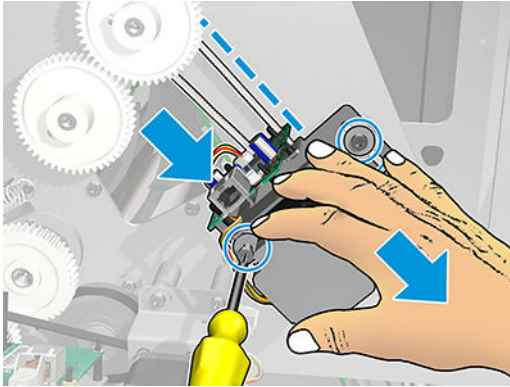


Installation

1.  **IMPORTANT:** Set the 8 dip switches of the PCA.



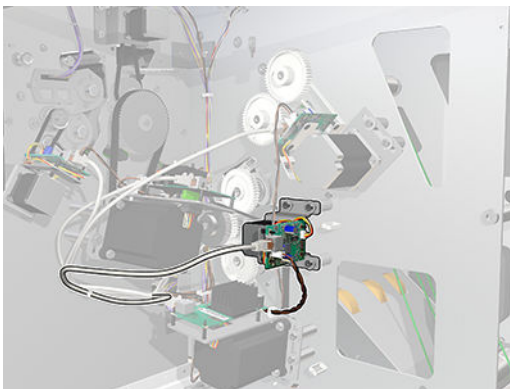
2. Tighten the four screws and, at the same time, push down the CF drive motor, tensioning the belt.



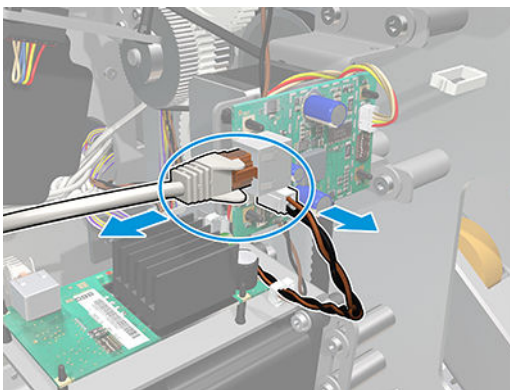
CF PCA + bracket controller assembly (3JJ54-67020)

Removal

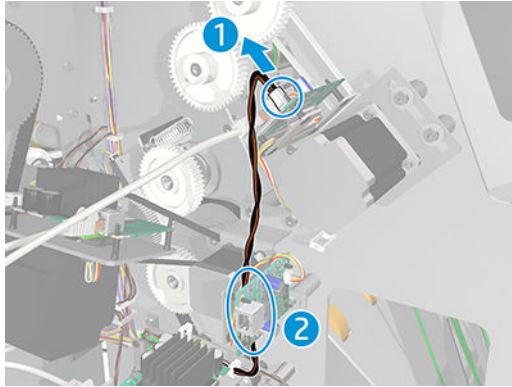
1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
3. Locate the CF folding flap motor (CF X43).




4. Disconnect the two cables from the PCA.

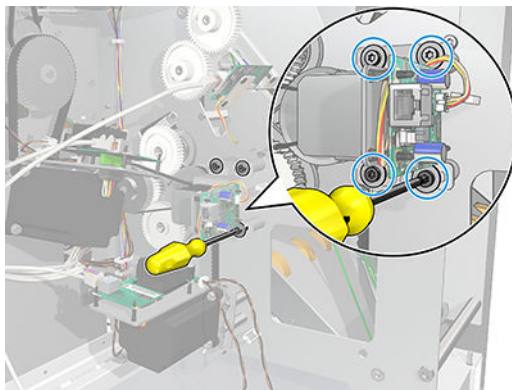


5. If the cable is routed as shown in the image, disconnect it from the PCA and unroute it.

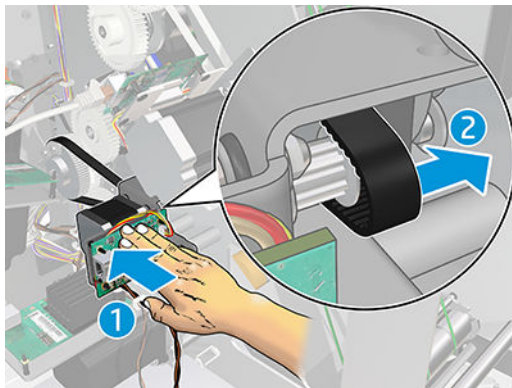


6. Loosen the four screws.

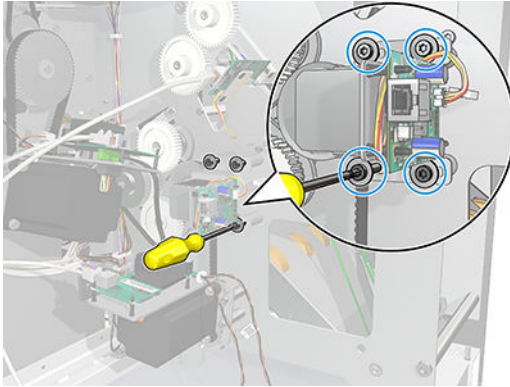
 **IMPORTANT:** Do not remove them.



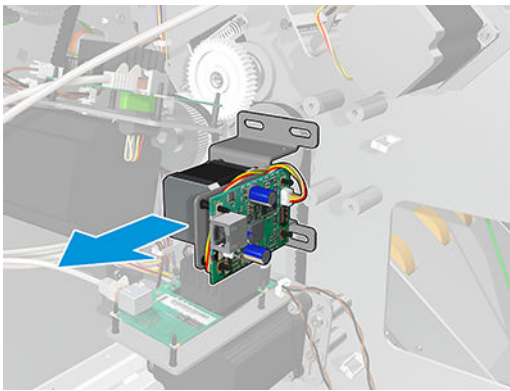
7. Slide the CF folding flap motor (CF X43) to the left and detach the belt from the pulley.



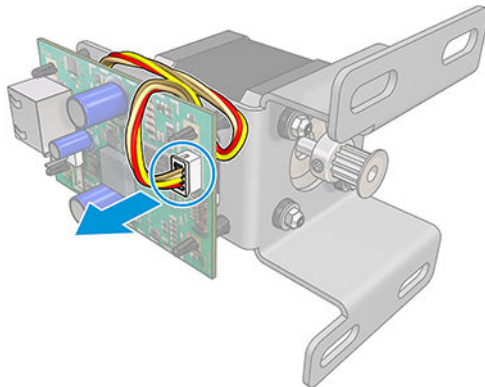
8. Remove the four screws.



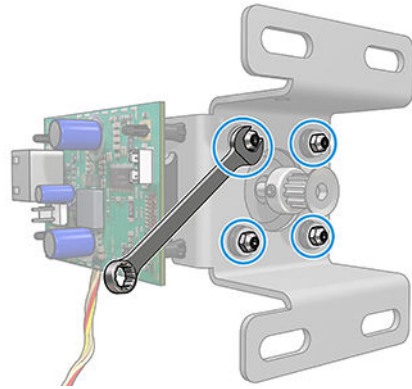
9. Remove the CF folding flap motor (CF X43).



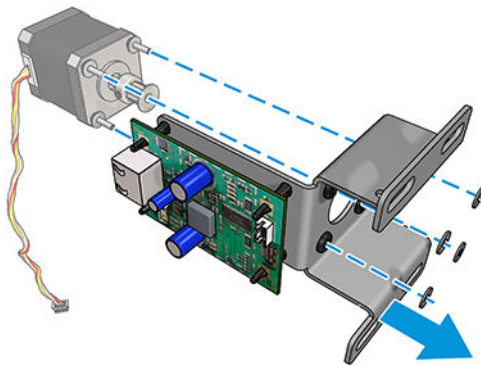
10. Disconnect the cable from the PCA and unroute it.




11. Remove the four nuts.

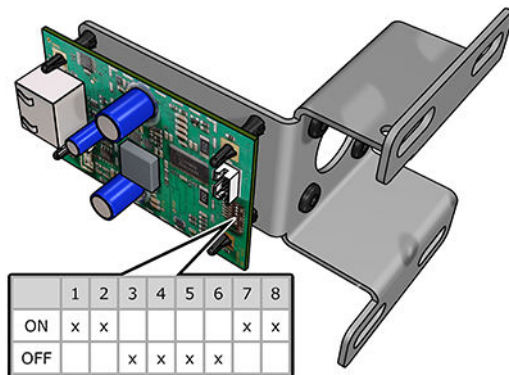


12. Remove the CF PCA + bracket controller assembly (be careful not to lose the washers).

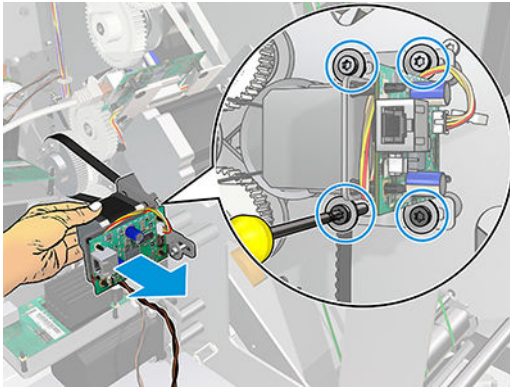


Installation

1.  **IMPORTANT:** Set the 8 dip switches of the PCA.



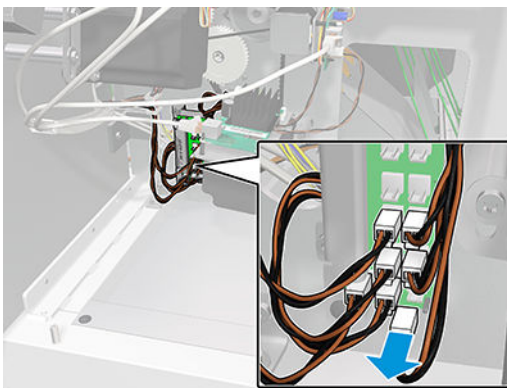
2. Tighten the four screws and, at the same time, push to the right the Cross-folder folding flap motor (CF X43) tensioning the belt.



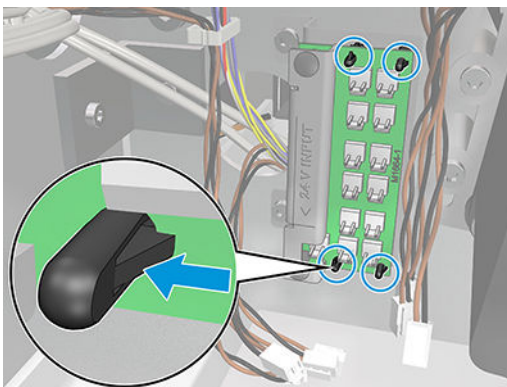
PCA distributor – CF drive side (3JJ54-67011)

Removal

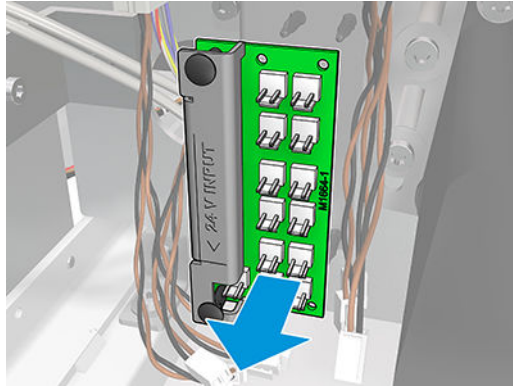
1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
3. Disconnect the cables from the board.



4. Unclip the board.



5. Remove the board.



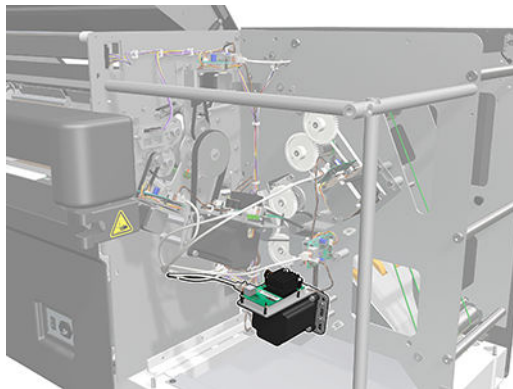
Installation

- ▲ Reverse the removal steps

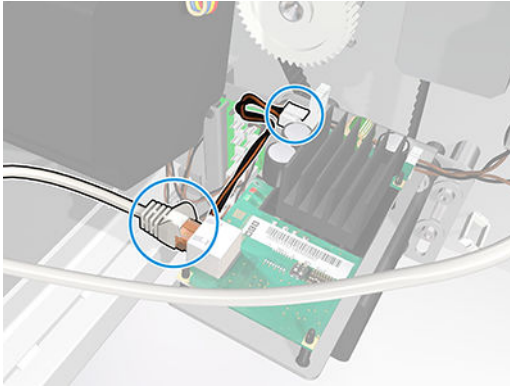
LP M1900 motor controller (CF – drive side) (K5H75-67169)

Removal

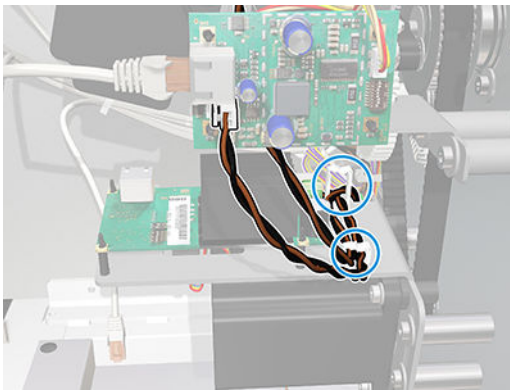
1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
3. Locate the CF main motor.




4. Disconnect the two cables from the PCA.

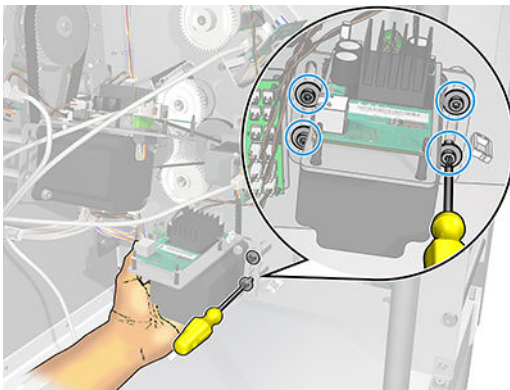


5. Unroute the cables from the two clamps.

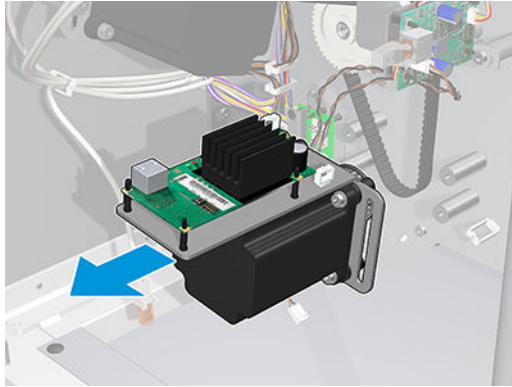


6. Remove four screws.

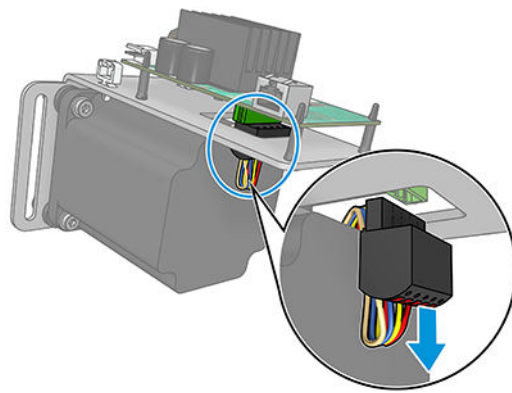
 **IMPORTANT:** Hold the CF main motor while removing the screws.



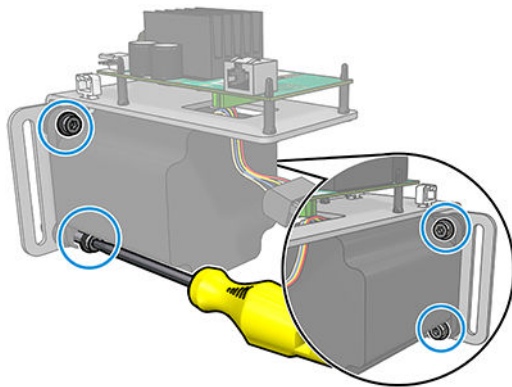
7. Remove the Cross-fold main motor (CF X47) assembly.



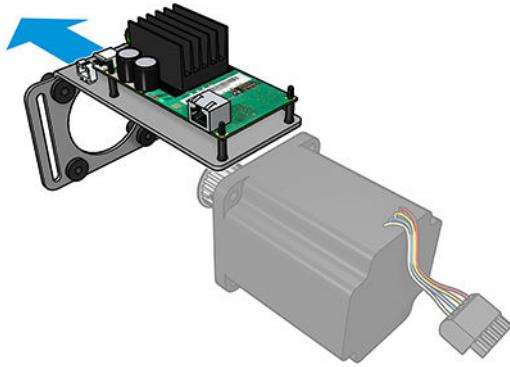
8. Disconnect the motor cable from the PCA.



9. Remove four screws.

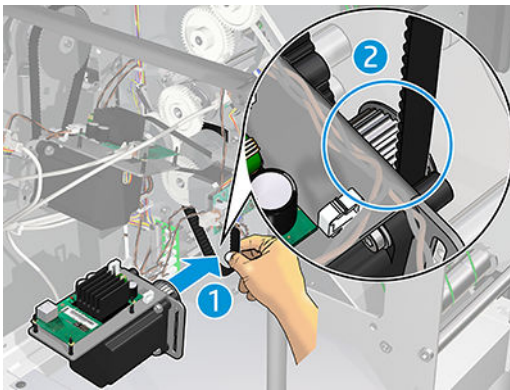


10. Remove the CF X47 Cross-fold main motor from the LP M1900 motor controller.

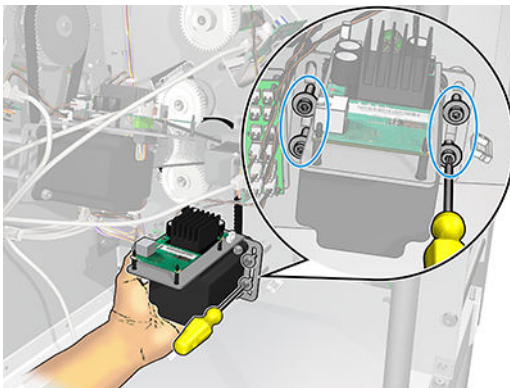


Installation

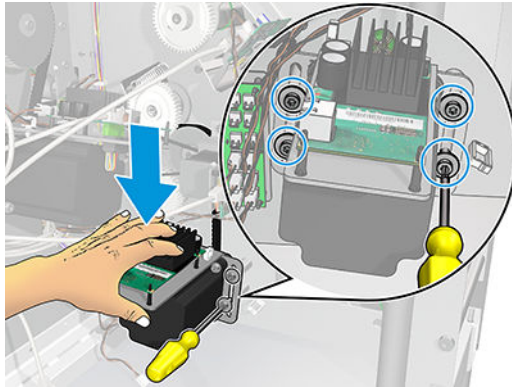
1. Remember to attach the belt to the pulley of the CF main motor (CF X47) assembly.



2. Place the four screws loosely to tension the belt.



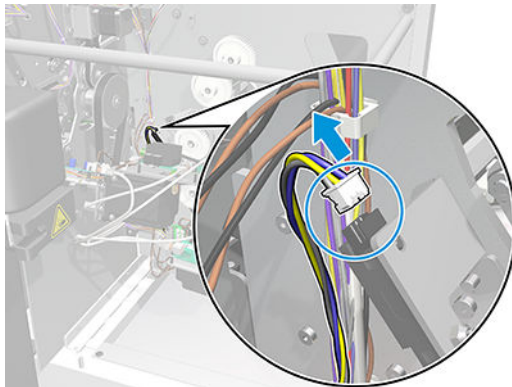
3. Tighten the four screws and, at the same time, push down the CF main motor (CF X47) assembly, tensioning the belt.



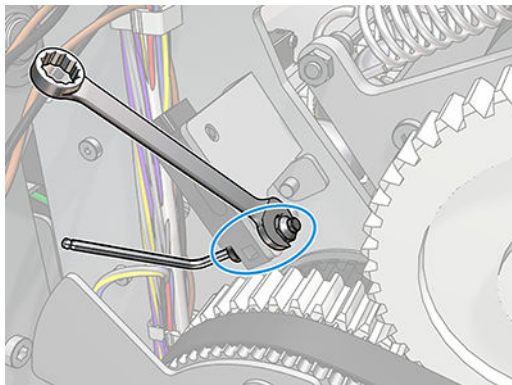
Paper sensor black connector (K5H75-67125) – CF drive side

Removal

1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
3. Disconnect the cable.

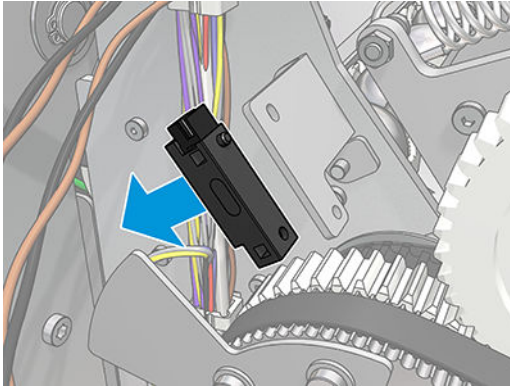


4. Remove the screw and the nut.



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5. Remove the paper sensor black connector.



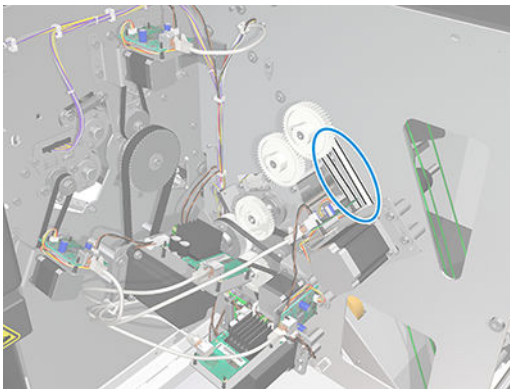
Installation

- ▲ Reverse the removal steps.

CF X42 Toothed belt (3JJ54-67059)

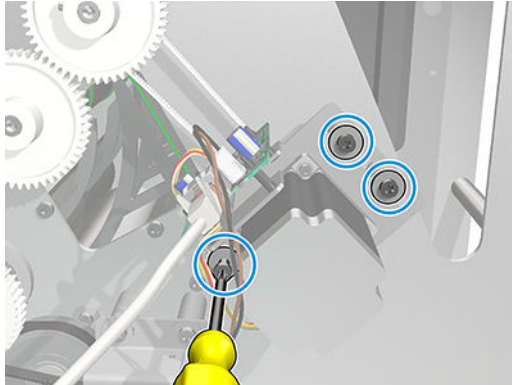
Removal

1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
3. Locate the Toothed belt CF X42.

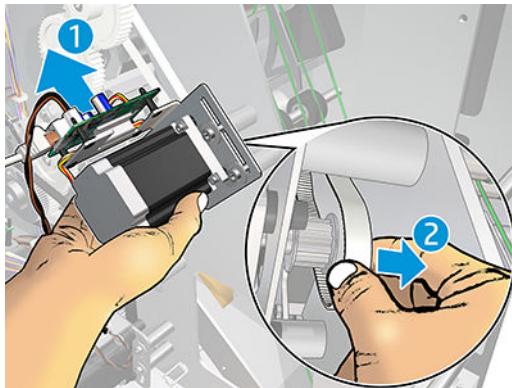


4. Loosen the three screws.

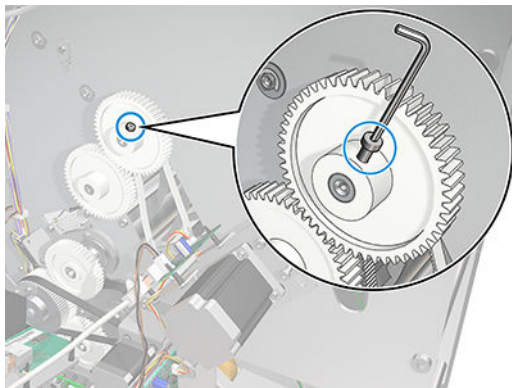
 **IMPORTANT:** Do not remove them.



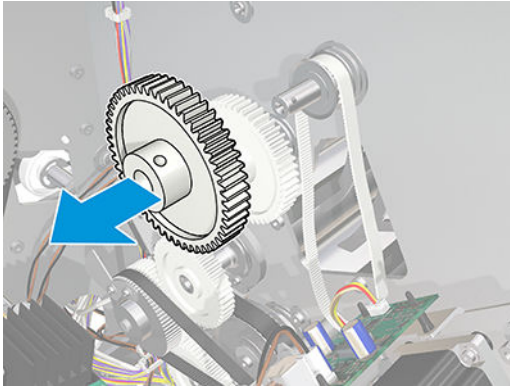
5. Slide up the CF drive motor and detach the belt from the pulley.



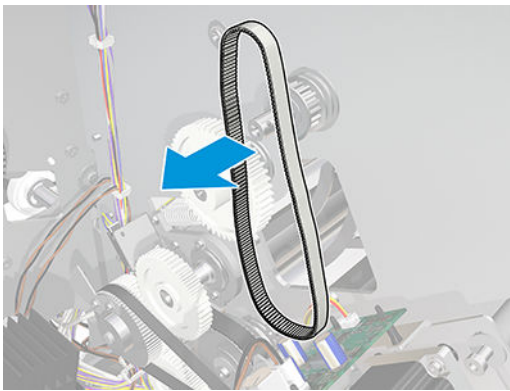
6. Remove one screw.



7. Remove the gear.

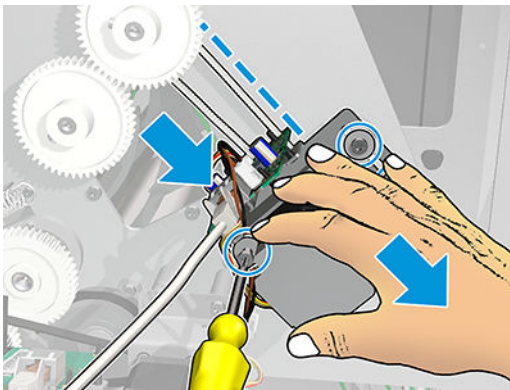


8. Remove the toothed belt CF X42.



Installation

- ▲ Tighten the three screws and, at the same time, push down the CF drive motor, tensioning the belt.

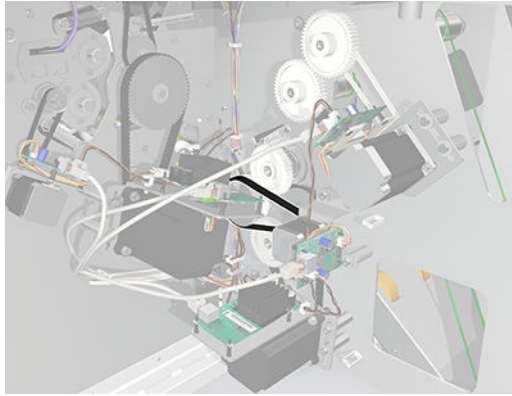


HTD 3M/420 Toothed belt (PN TBD) – CF drive side


Removal

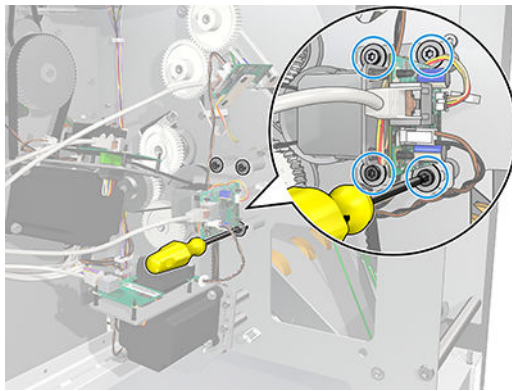
1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).

3. Locate the Toothed belt HTD 3M/420.

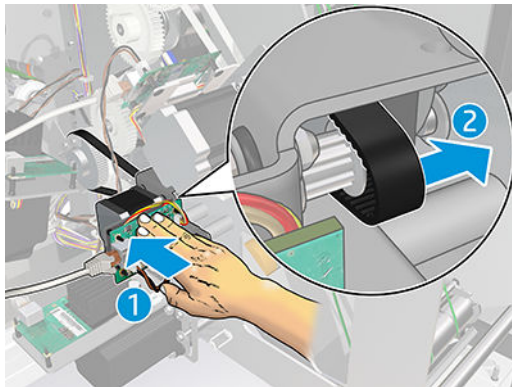


4. Loosen the four screws.

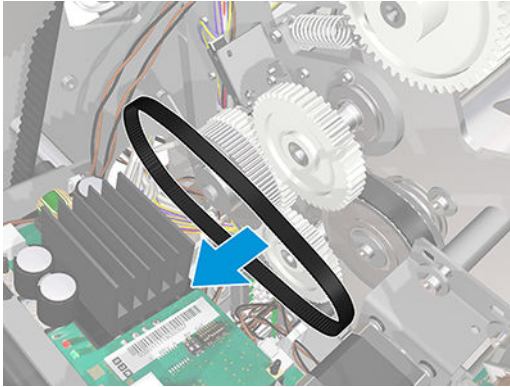
 **IMPORTANT:** Do not remove them.



5. Slide to the left the Folding flap motor (CF X43) and detach the belt from the pulley.

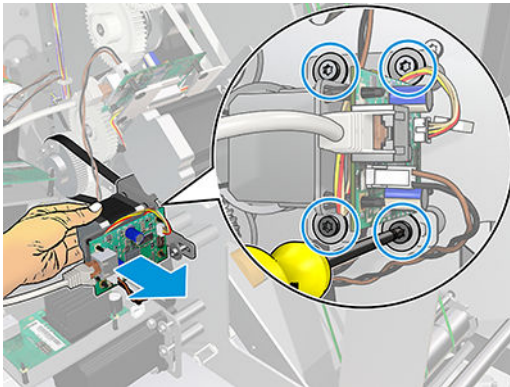


6. Remove the toothed belt HTD 3M/420.



Installation

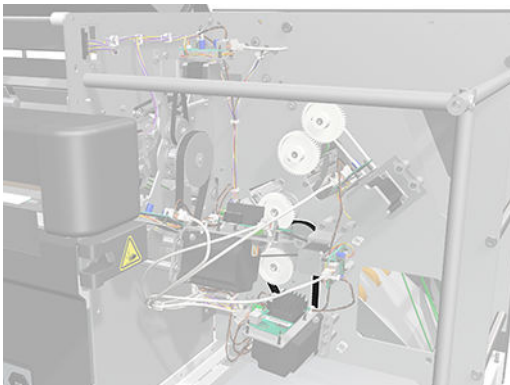
- ▲ Tighten the four screws and, at the same time, push the Folding flap motor (CF X43) to the right, tensioning the belt.



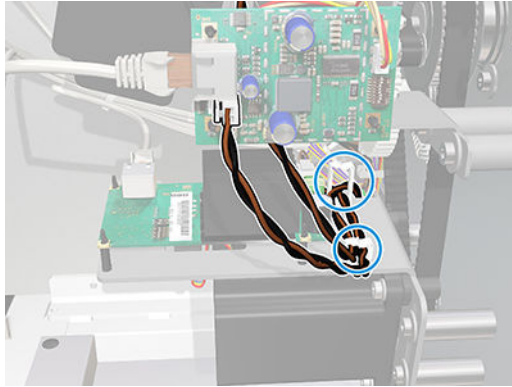
CF X47 Toothed belt (3JJ54-67060)

Removal

1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
3. Locate the Toothed belt.

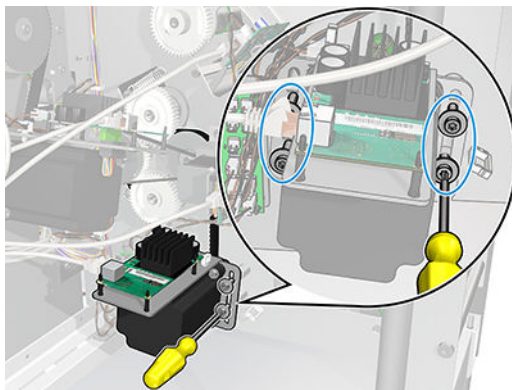


4. Unroute the cables from the two clamps, only to avoid damaging them.

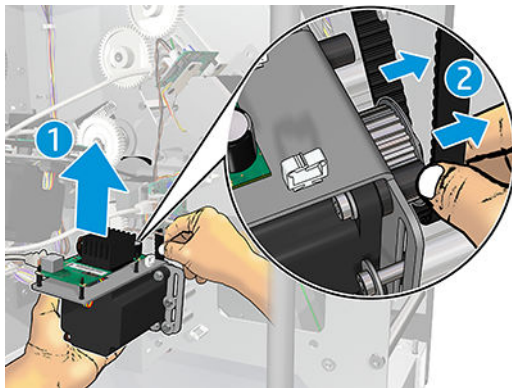


5. Loosen the four screws.


 **IMPORTANT:** Do not remove them.

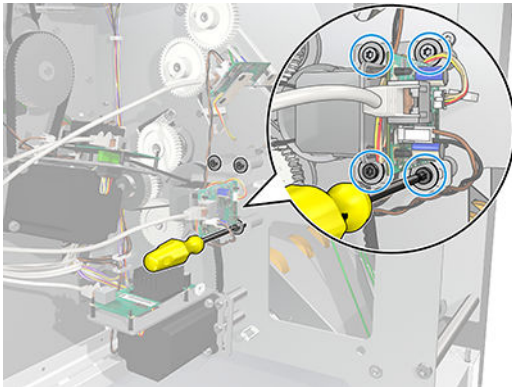


6. Slide up the CF main motor and detach the belt from the pulley of the Cross-folder main motor (CF X47) assembly

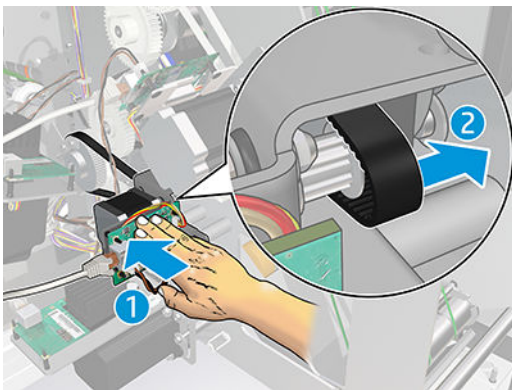


7. Loosen the four screws.

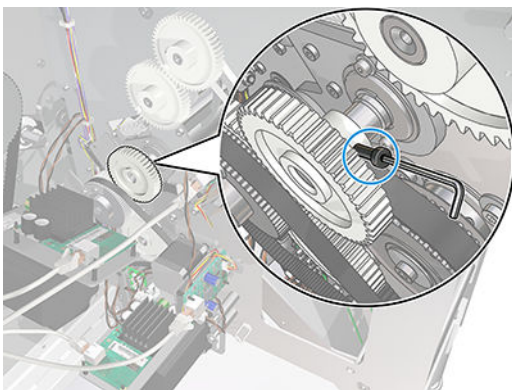
 **IMPORTANT:** Do not remove them.



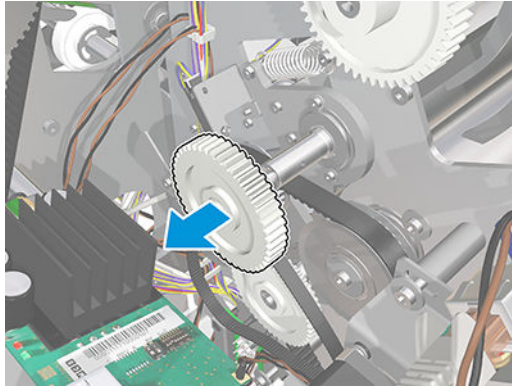
8. Slide to the left the Folding flap motor (CF X43) and detach the belt from the pulley.



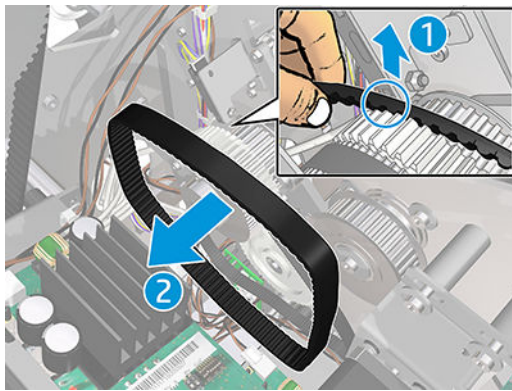
9. Remove the Allen screw.



10. Remove the gear.

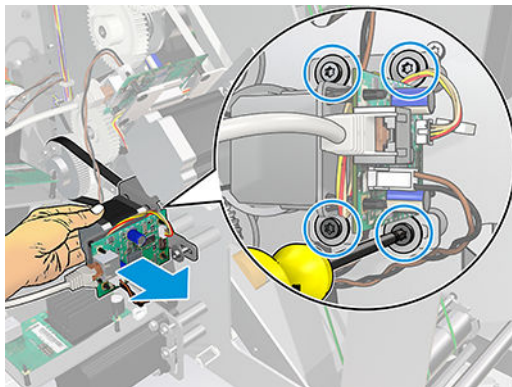


11. Remove the toothed belt.



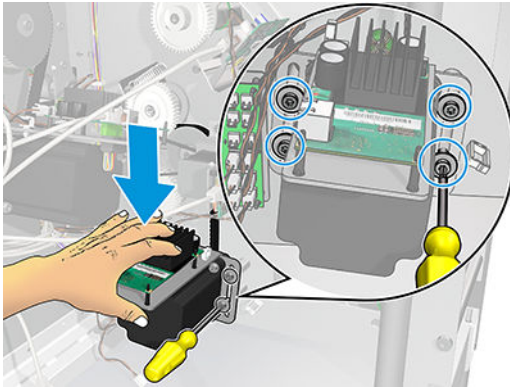
Installation

1. Tighten the four screws and, at the same time, push the Folding flap motor (CF X43) assembly to the right, tensioning the belt.



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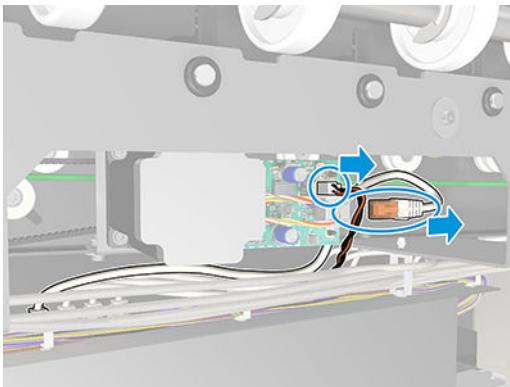
2. Tighten the four screws and, at the same time, push down the Cross-fold main motor (CF X47) assembly, tensioning the belt.



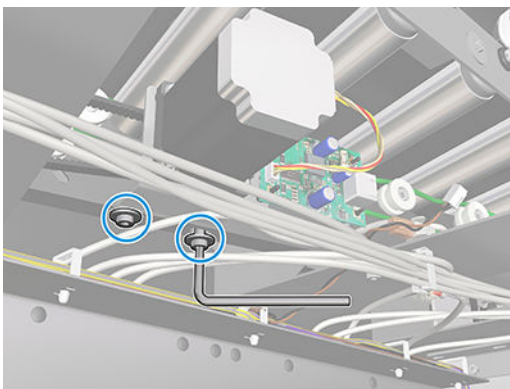
Roll tray drive motor (3JJ54-67025)

Removal

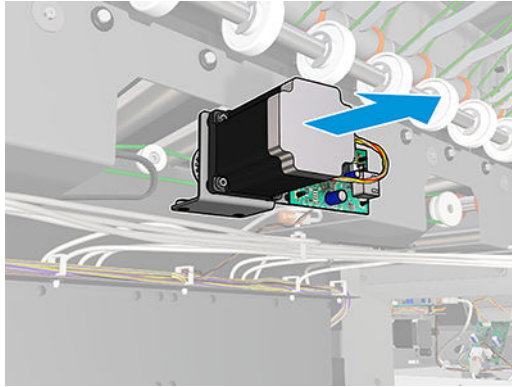
1. Remove the FF bottom cover. See [Fan-fold bottom cover \(3JJ54-67003\) on page 1707](#).
2. Disconnect the two cables from the CF X45 PCA.



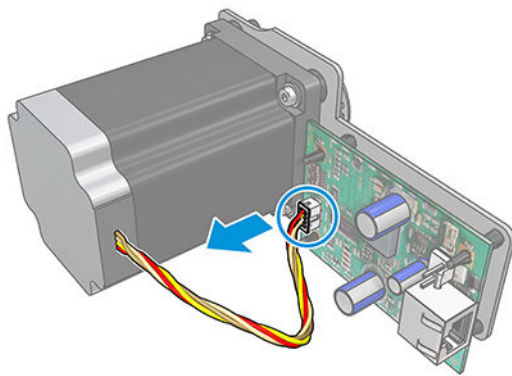
3. Remove two screws. (Hold the Roll tray drive motor to prevent it to fall down.)



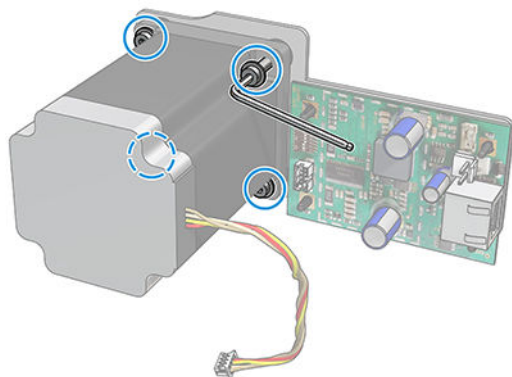
4. Remove the Roll tray drive motor with the PCA.



5. Disconnect the motor cable from the CF X45 PCA.

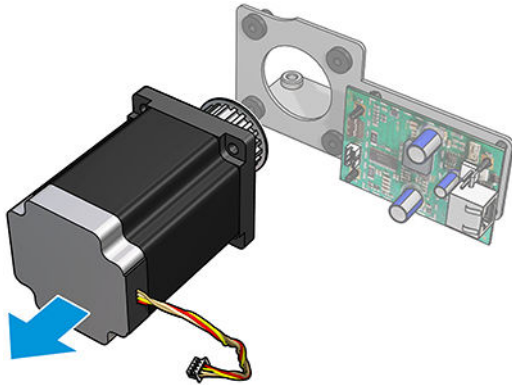


6. Remove the four Allen screws.



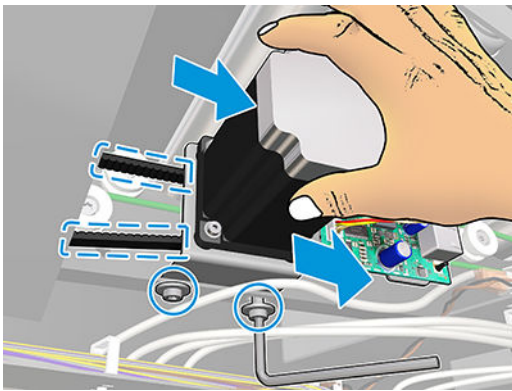
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7. Remove the Roll tray drive motor.



Installation

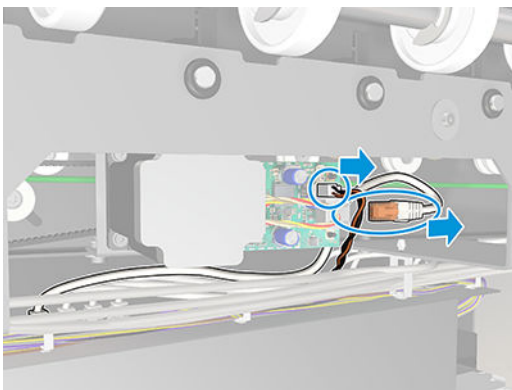
- ▲ Tighten the two screws and, at the same time, push the Roll tray drive motor to the right, tensioning the belt.



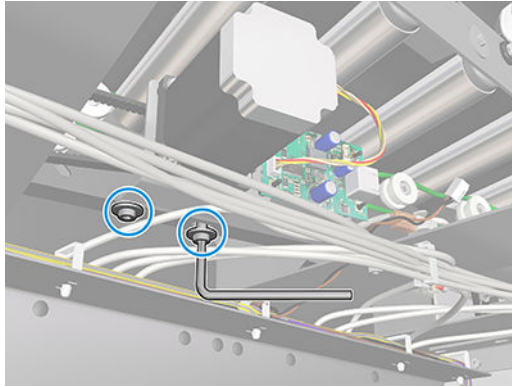
CF X45 PCA – roller tray controller (3JJ54-67041)

Removal

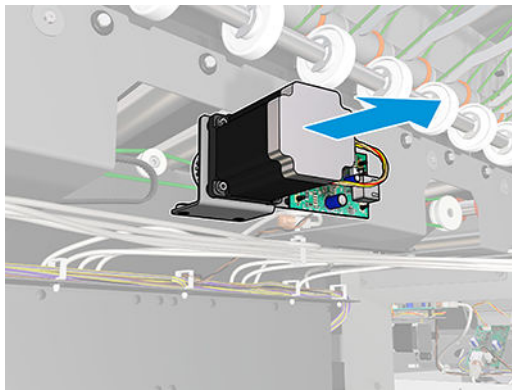
1. Remove the FF bottom cover. See [Fan-fold bottom cover \(3JJ54-67003\) on page 1707](#).
2. Disconnect the two cables from the CF X45 PCA.



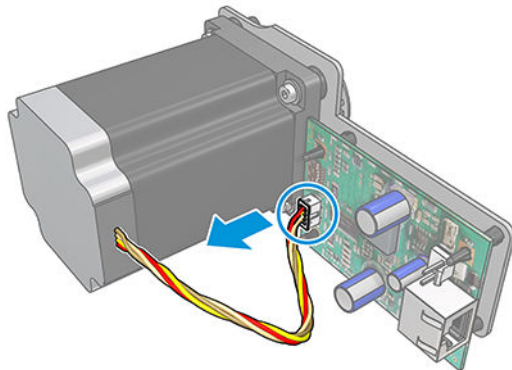
3. Remove two screws. (Hold the Roll tray drive motor to prevent it to fall down.)



4. Remove the Roll tray drive motor with the PCA.

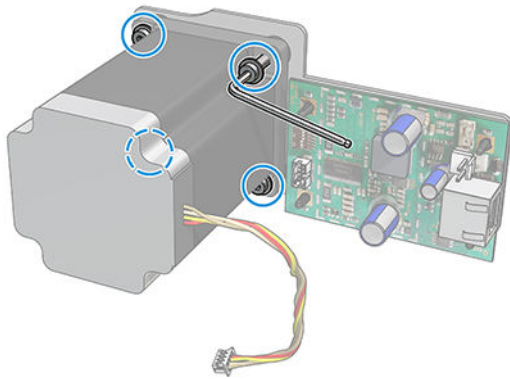


5. Disconnect the motor cable from the CF X45 PCA.

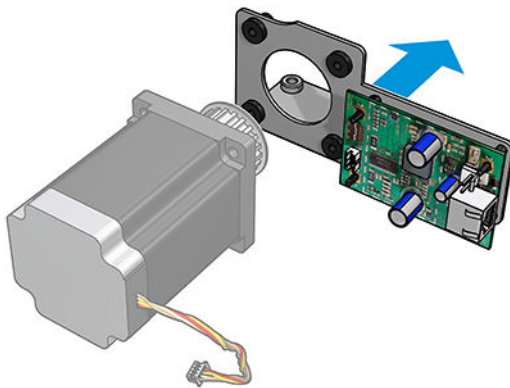


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6. Remove the four Allen screws.

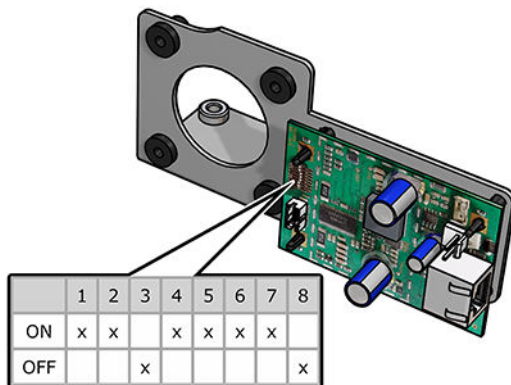


7. Remove the Roll tray drive motor.

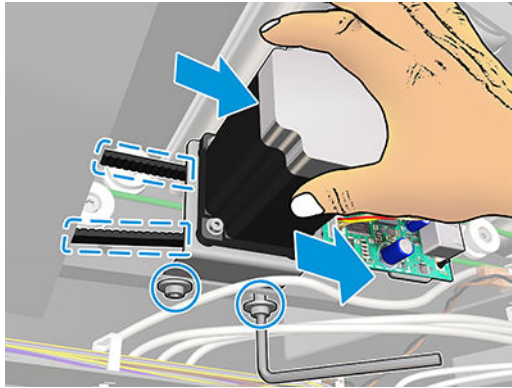


Installation

1.  **IMPORTANT:** Set the 8 dip switches of the PCA.



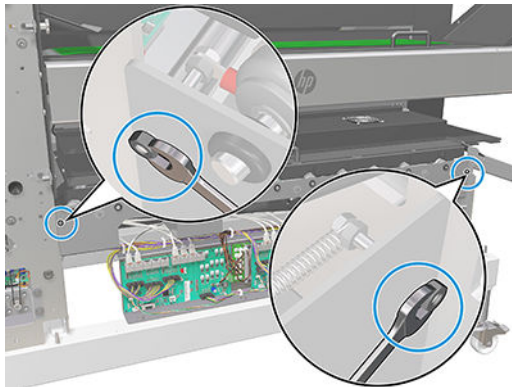
2. Tighten the two screws and, at the same time, push the Roll tray drive motor to the right, tensioning the belt.



FF exit discharge cable (3JJ54-67085)

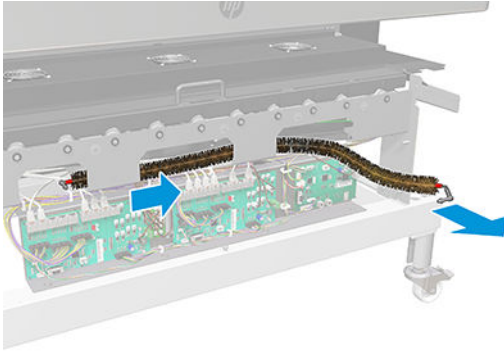
Removal

1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the Control boards cover. See [Control boards cover \(3JJ54-67006\) on page 1712](#).
3. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).
4. Remove the Roll tray panel. See [Roll tray panel \(3JJ54-67005\) on page 1710](#).
5. Remove two nuts.

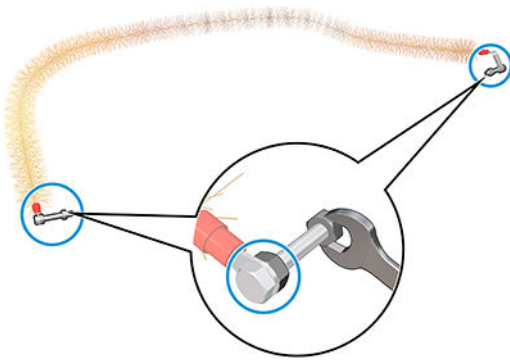


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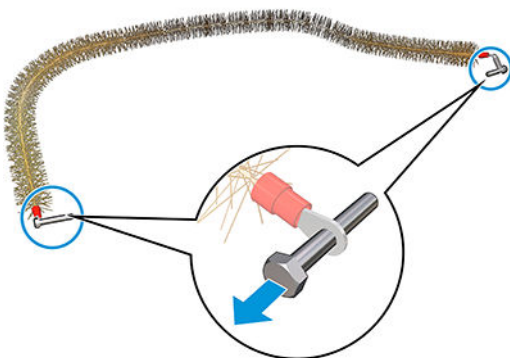
6. Unroute the FF exit discharge cable.



7. Remove two nuts on both sides.



8. Remove two screws and the FF exit discharge cable.



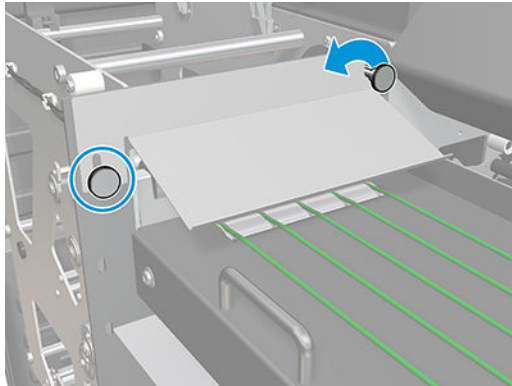
Installation

- ▲ Reverse the removal steps

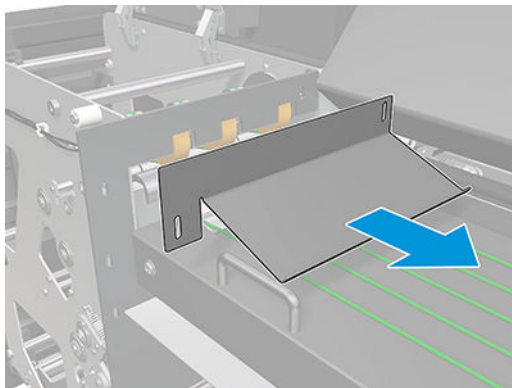
Drive unit conveyor with sensor (K5H75-67160)

Removal

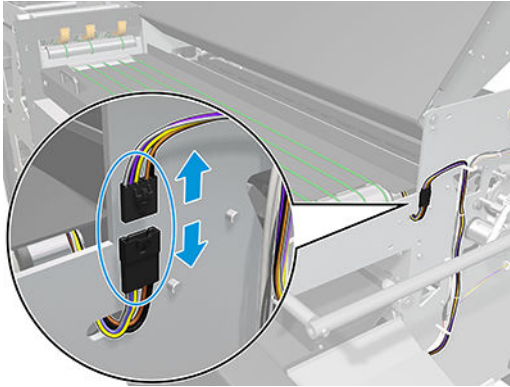
1. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).
2. Remove the Roll tray strip cover. See [Roll tray strip cover \(3JJ54-67073\) on page 1722](#).
3. Remove the FF top strip cover. See [Fan-fold top strip cover \(3JJ54-67076\) on page 1724](#).
4. Remove the Conveyor extension. See [Conveyor extension \(3JJ54-67087\) on page 1876](#).
5. Remove the Conveyor cover. See [Conveyor cover \(3JJ54-67072\) on page 1721](#).
6. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
7. Remove the Conveyor panel. See [Conveyor panel \(3JJ54-67074\) on page 1722](#).
8. Remove two knurled screws.



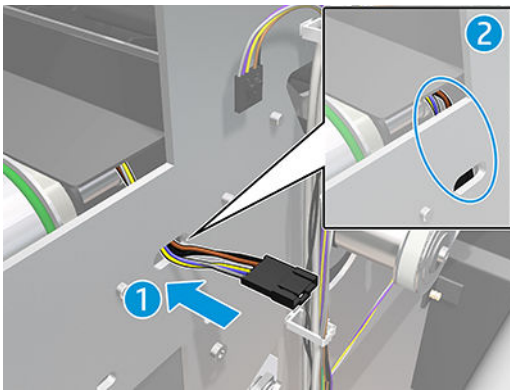
9. Remove the metal plate.



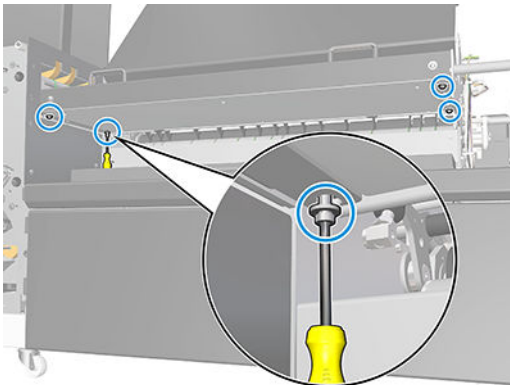
10. Disconnect the cable.



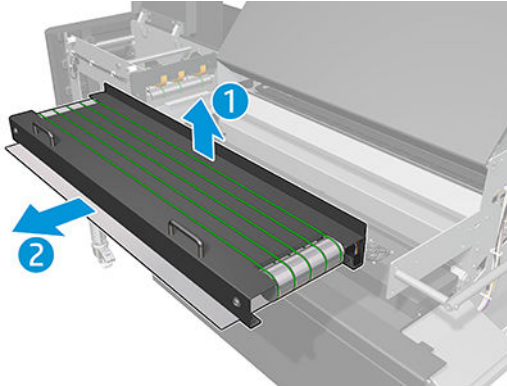
11. Pass the cable through the hole.



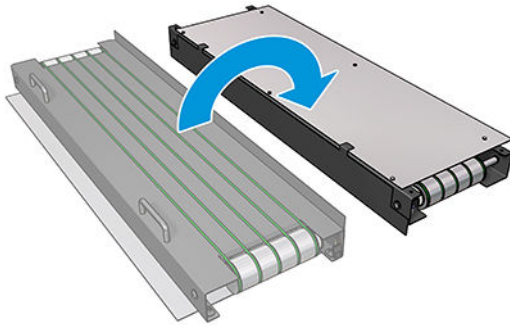
12. Remove four screws.



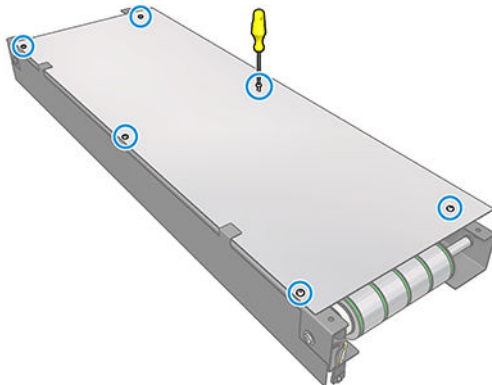
13. Remove the Conveyor assembly.



14. Rotate the Conveyor assembly 180 degrees and leave it on a flat surface (be careful not to scratch it).

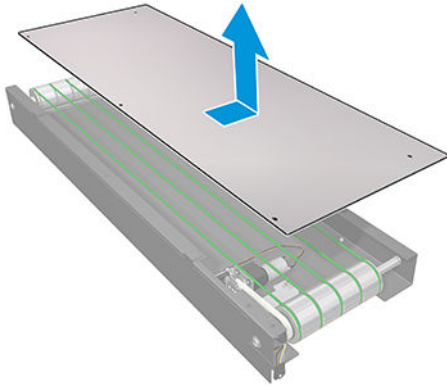


15. Remove six screws.

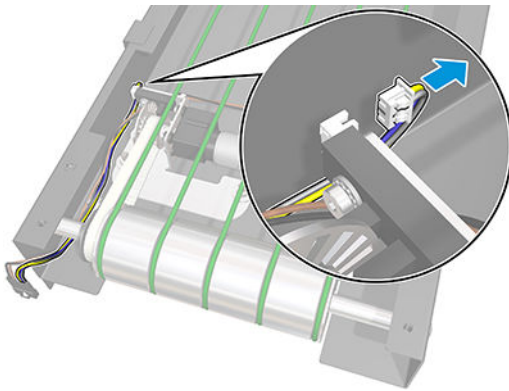


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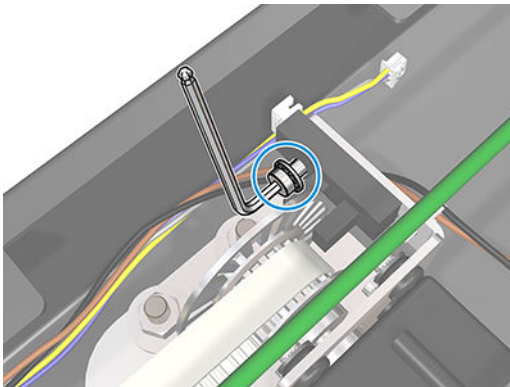
16. Remove the metal plate.



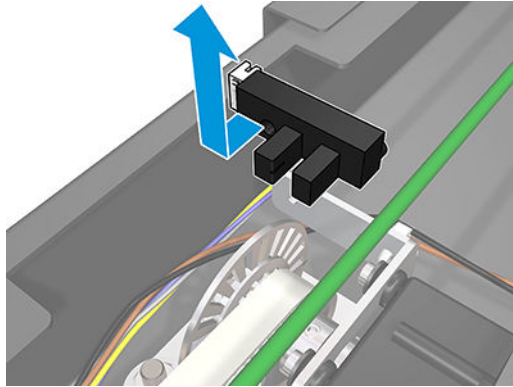
17. Disconnect the sensor cable.



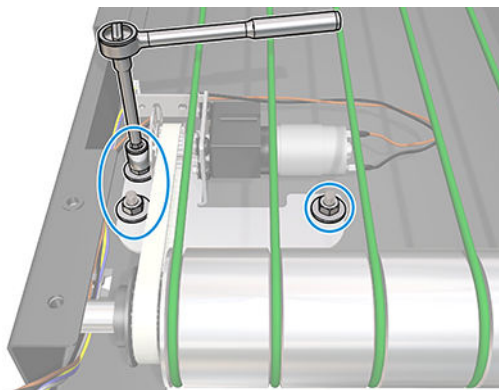
18. Remove the screw.



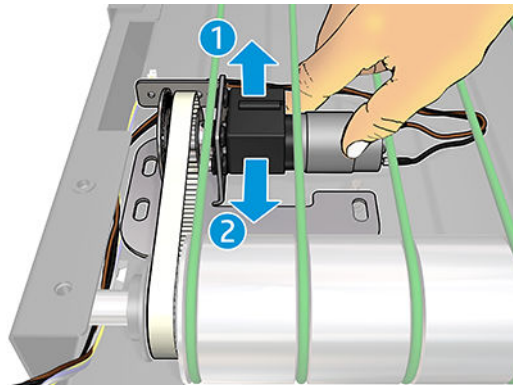
19. Remove the sensor.



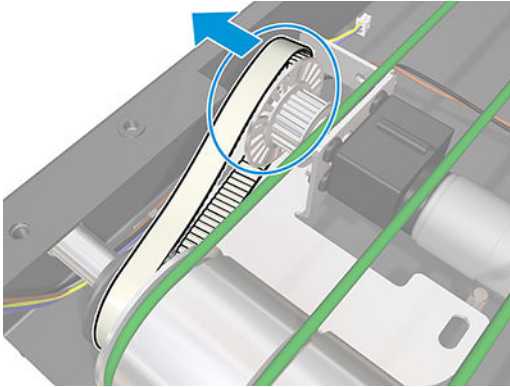
20. Remove the three nuts and washers.



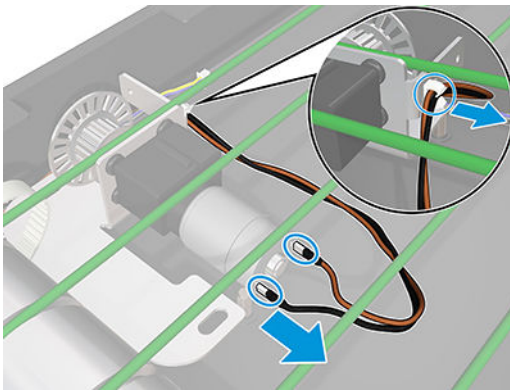
21. Leave the Drive unit conveyor close to the roller to loosen the tension of the belt.



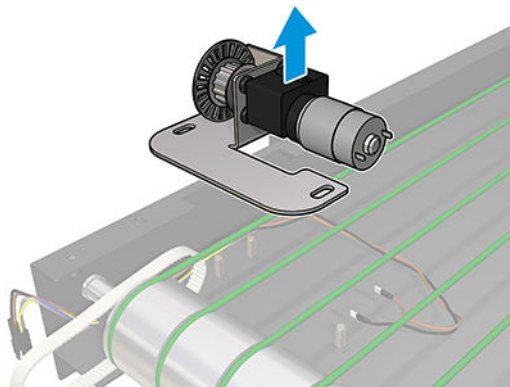
22. Remove the belt from the motor pulley.



23. Unplug the cable from the motor and unrout it from the clamp of the Drive unit conveyor.

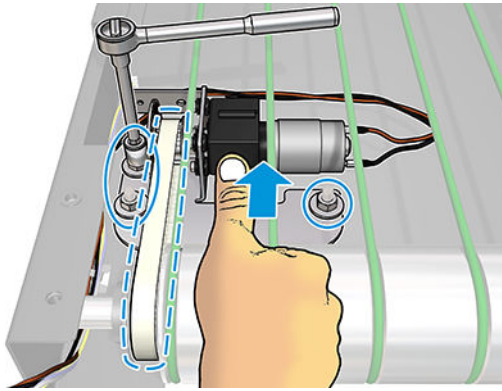


24. Remove the Drive unit conveyor.



Installation

1. Push the Drive unit conveyor tensioning the belt and, at the same time, screw the 3 nuts.

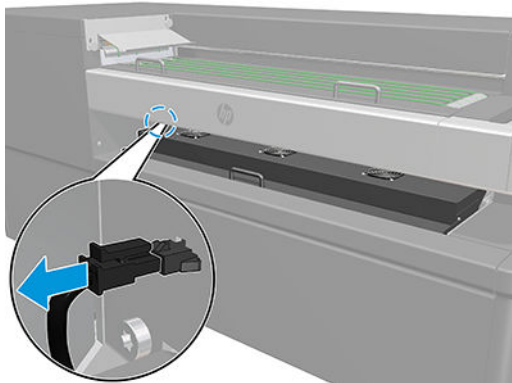


2. Reverse the removal steps

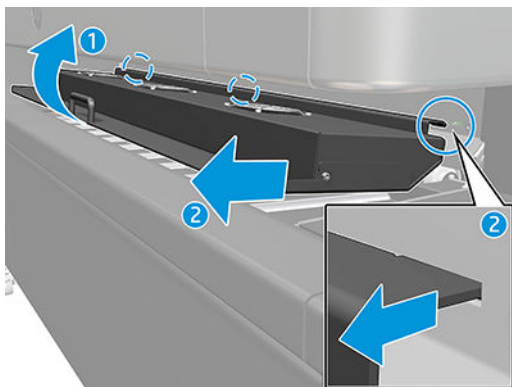
Blowing box fan (K5H75-67109)

Removal

1. Disconnect the cable.

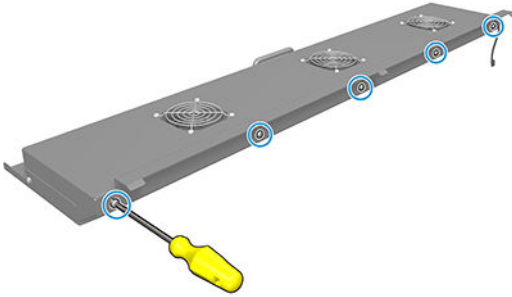


2. Remove the fan unit.

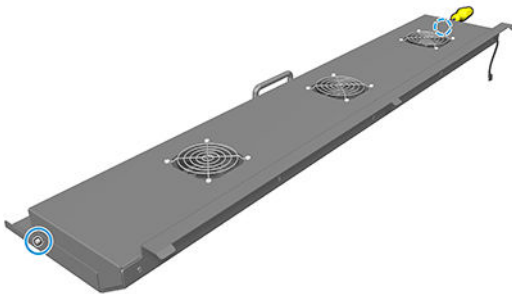


For HP-authorized personnel only

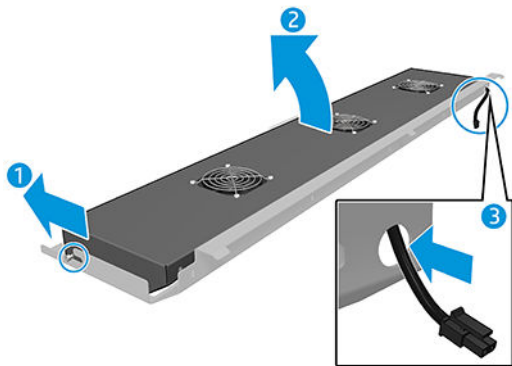
3. Place the Fan unit in safe place and remove five screws.



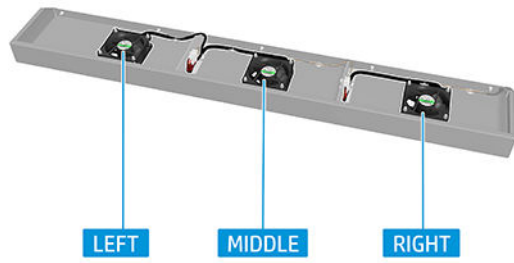
4. Loosen two screws.



5. Remove the cover.

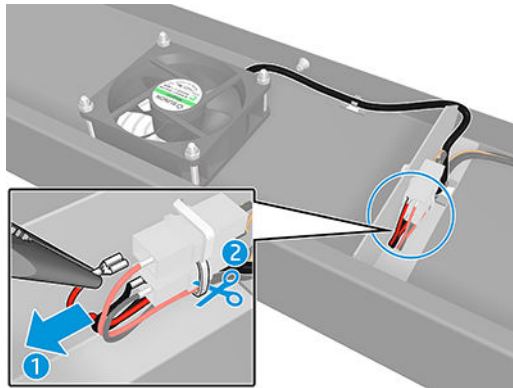


6. Locate the fan to be replaced: left, middle or right.

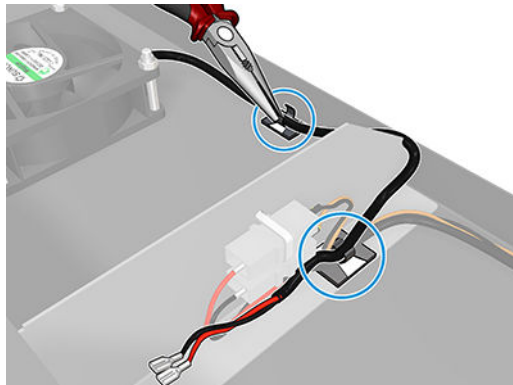


Left fan

- a. Disconnect the cable fan and cut one clamp.

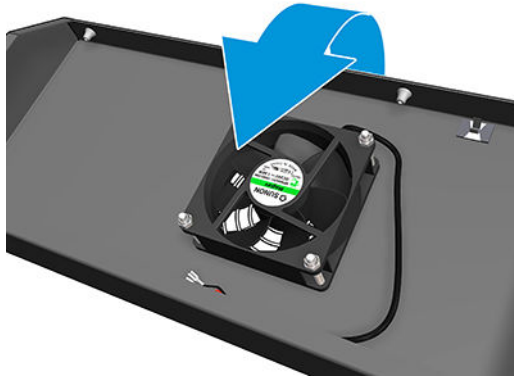


- b. Open two clamps and unrout the cable.

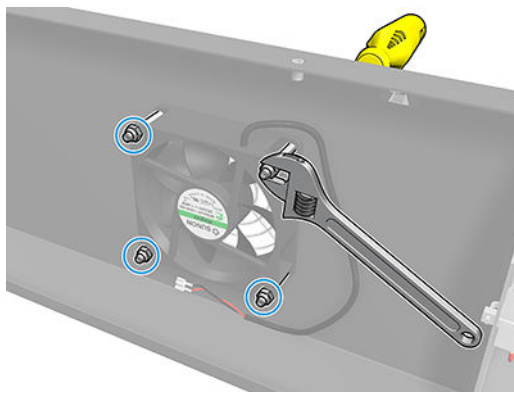


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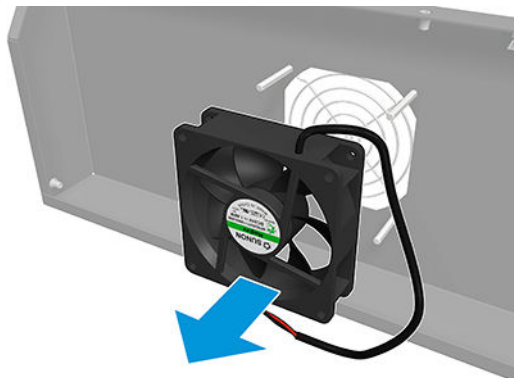
- c. Rotate the fan unit.



- d. Remove four nuts.

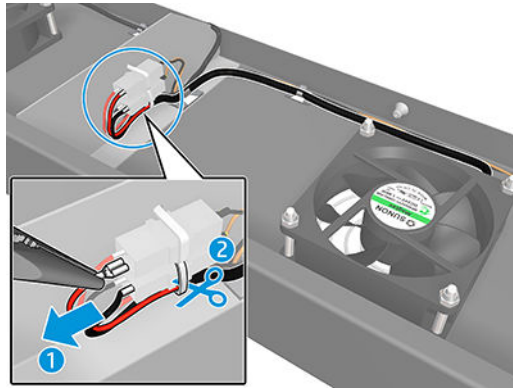


- e. Remove the fan.

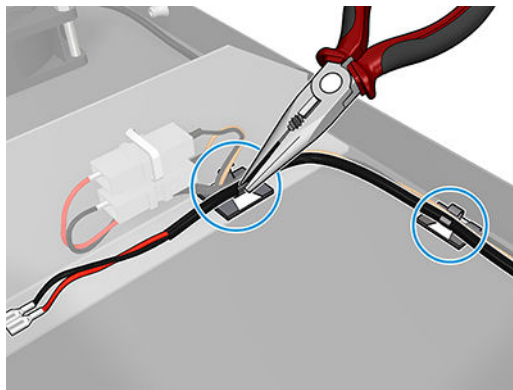


Middle fan

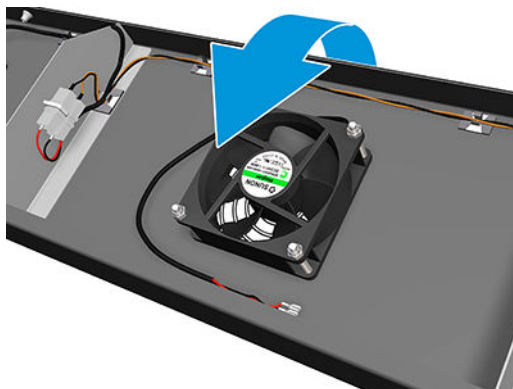
- a. Disconnect the cable fan and cut one clamp.



- b. Open two clamps and unrout the cable.

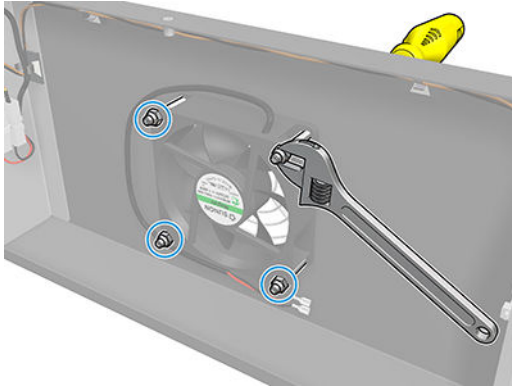


- c. Rotate the fan unit.

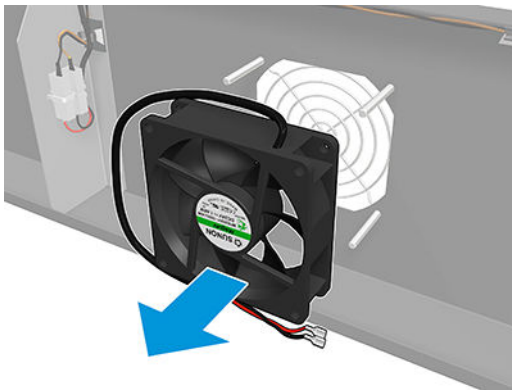


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- d. Remove four nuts.

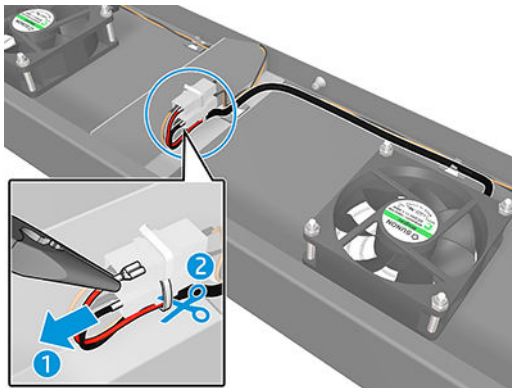


- e. Remove the fan.

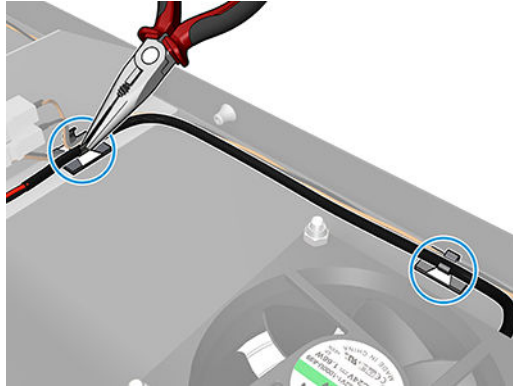


Right fan

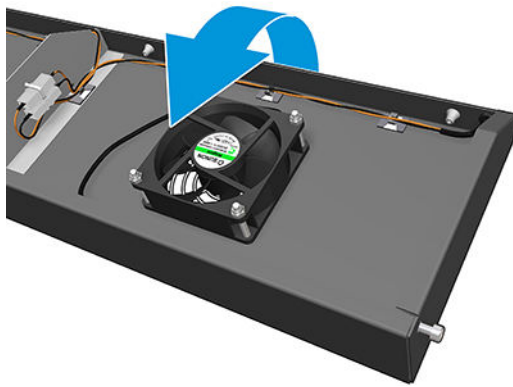
- a. Disconnect the cable fan and cut one clamp.



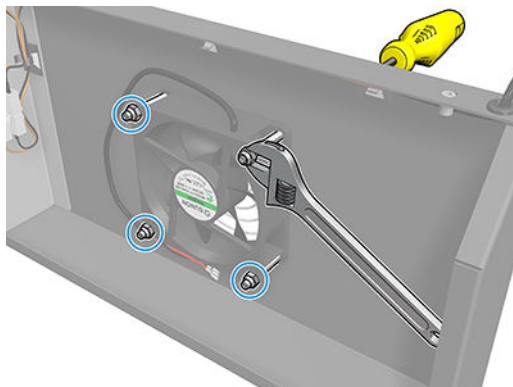
- b. Open two clamps and unrout the cable.



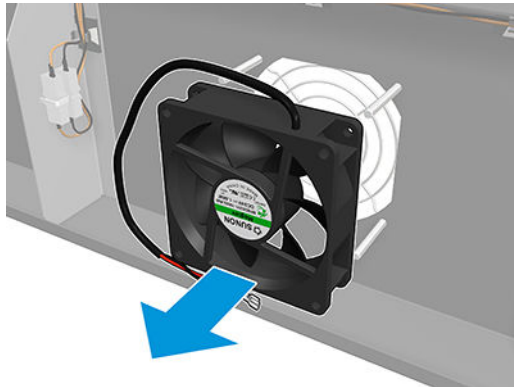
- c. Rotate the fan unit.



- d. Remove four nuts.

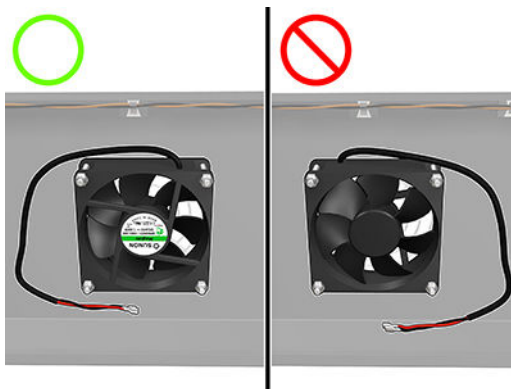


- e. Remove the fan.



Installation

1. Place the corresponding fan properly.



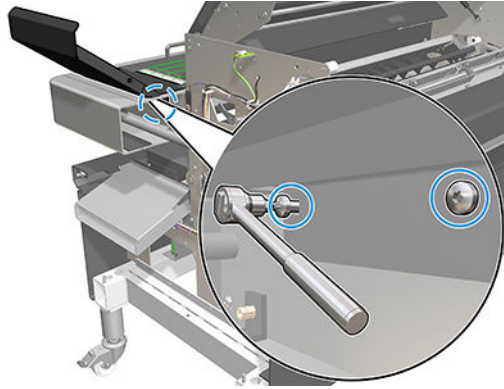
2. Reverse the corresponding removal steps.

Conveyor extension (3JJ54-67087)

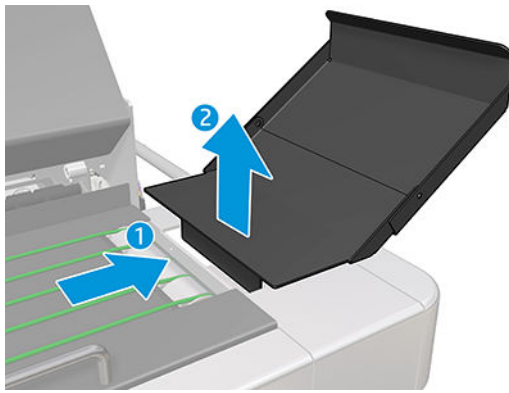
Removal

1. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).
2. Remove the Roll tray strip cover. See [Roll tray strip cover \(3JJ54-67073\) on page 1722](#).
3. Remove the FF top strip cover. See [Fan-fold top strip cover \(3JJ54-67076\) on page 1724](#).

4. Remove two screws.

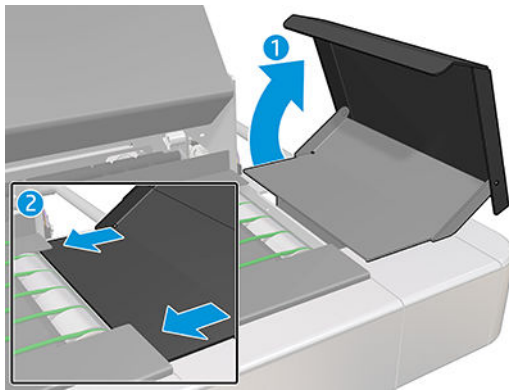


5. Slide and remove the Conveyor extension.



Installation

1. Before installing the Conveyor extension, open it.

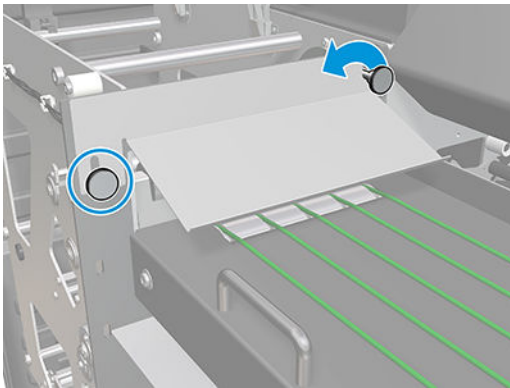


2. Reverse the removal steps

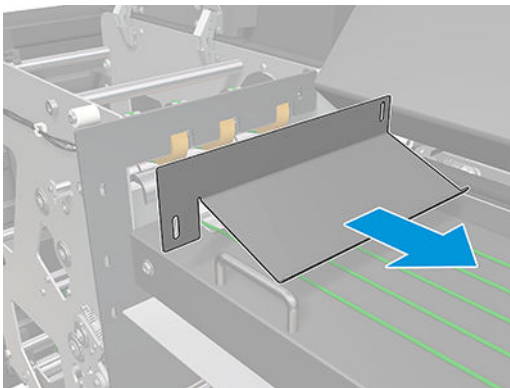
Transport belt CF tilt tray (3JJ54-67026)

Removal

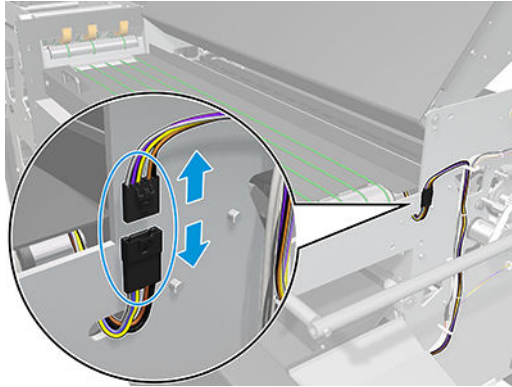
1. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).
2. Remove the Roll tray strip cover. See [Roll tray strip cover \(3JJ54-67073\) on page 1722](#).
3. Remove the FF top strip cover. See [Fan-fold top strip cover \(3JJ54-67076\) on page 1724](#).
4. Remove the Conveyor extension. See [Conveyor extension \(3JJ54-67087\) on page 1876](#).
5. Remove the Conveyor cover. See [Conveyor cover \(3JJ54-67072\) on page 1721](#).
6. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
7. Remove the Conveyor panel. See [Conveyor panel \(3JJ54-67074\) on page 1722](#).
8. Remove two knurled screws.



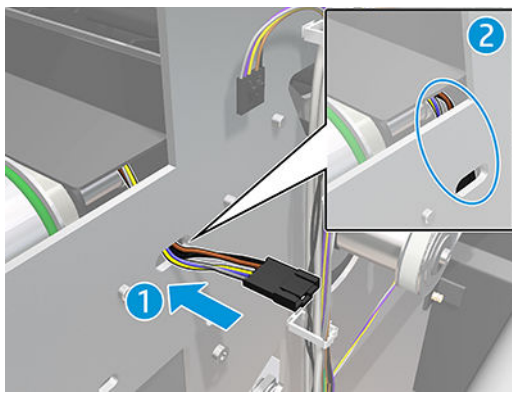
9. Remove the metal plate.



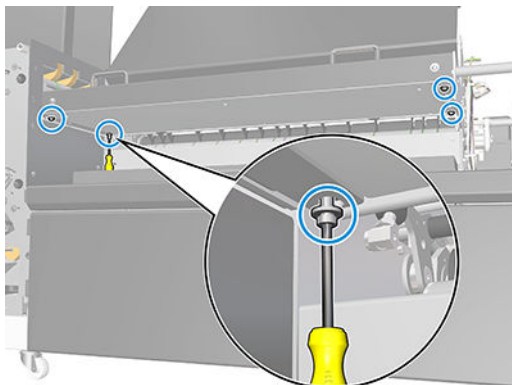
10. Disconnect the cable.



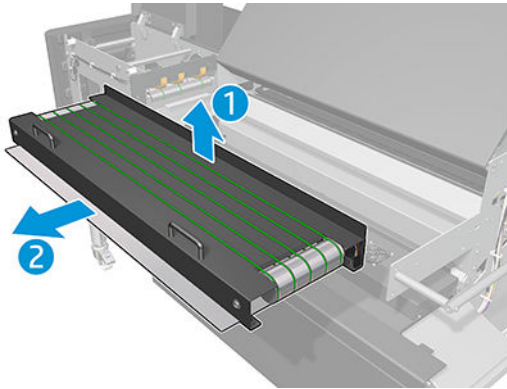
11. Pass the cable through the hole.



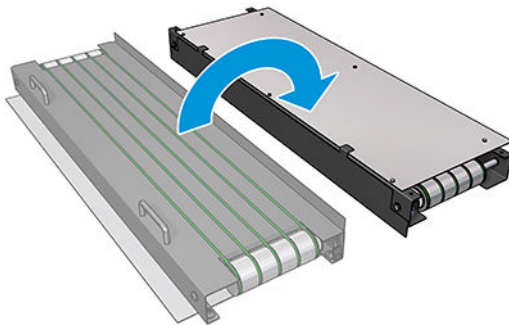
12. Remove four screws.



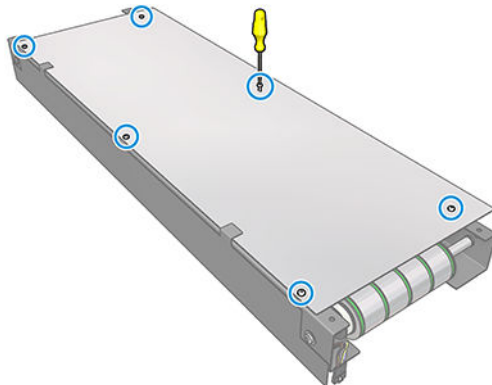
13. Remove the Conveyor assembly.



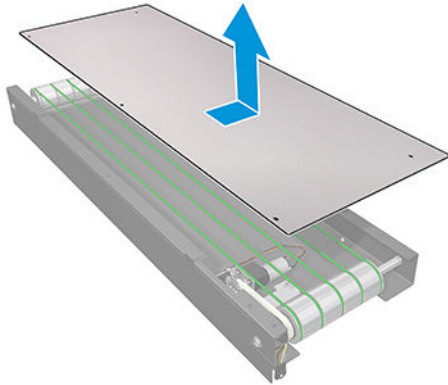
14. Rotate the Conveyor assembly 180 degrees and leave it on a flat surface (be careful not to scratch it).



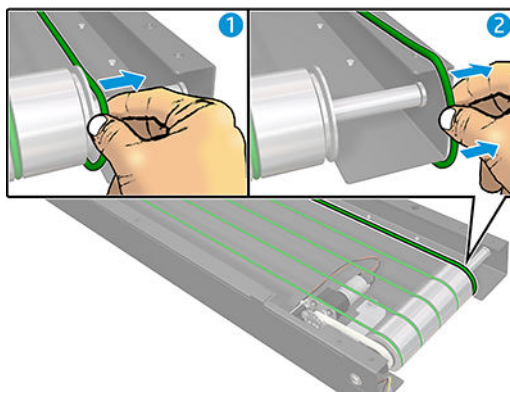
15. Remove six screws.



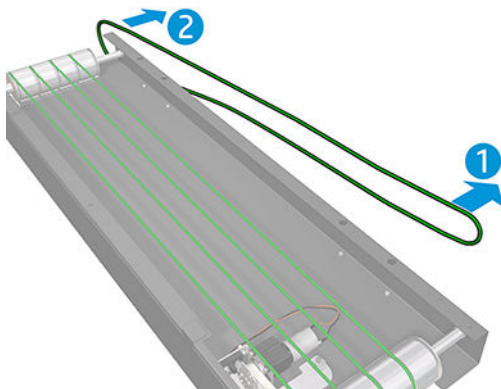
16. Remove the metal plate.



17. Remove the belt from one side.



18. Remove the belt from the other side.



Installation

- ▲ Reverse the removal steps

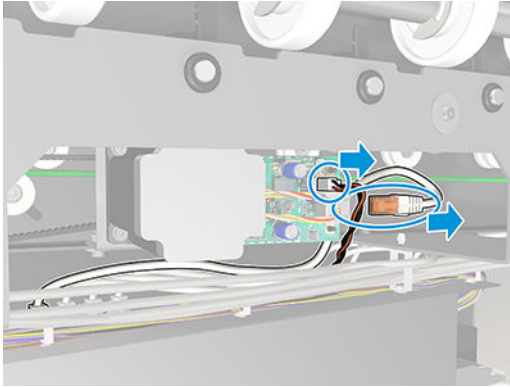
CF X45 Toothed belt (3JJ54-67061)

Removal

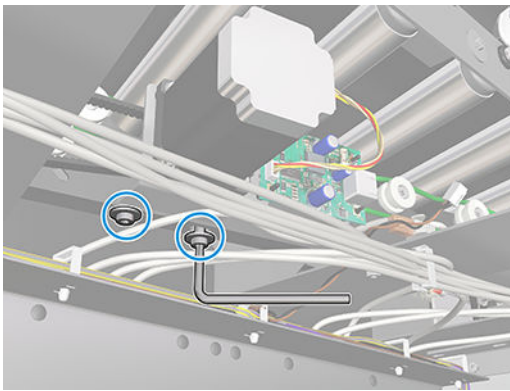
1. Remove the FF bottom cover. See [Fan-fold bottom cover \(3JJ54-67003\) on page 1707](#).

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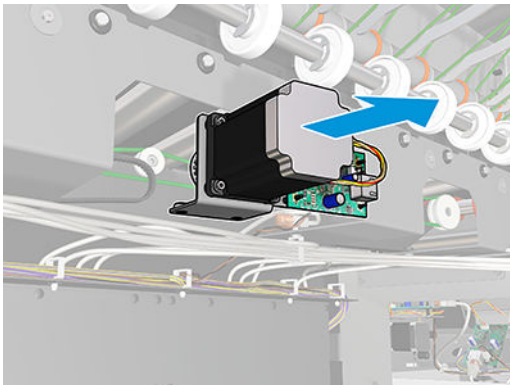
2. Disconnect the two cables from the CF X45 PCA.



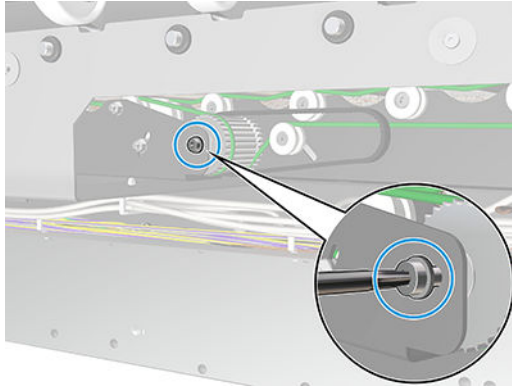
3. Remove two screws (hold the Roll tray drive motor to prevent it to fall down).



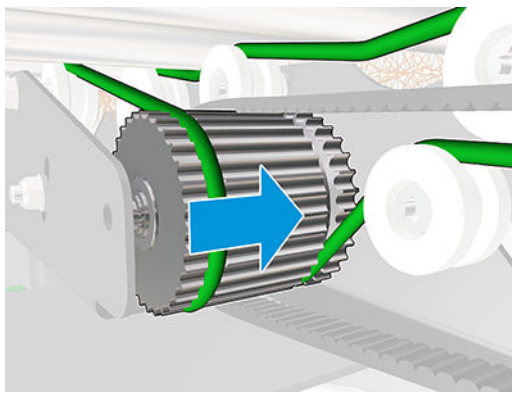
4. Remove the Roll tray drive motor with the PCA.



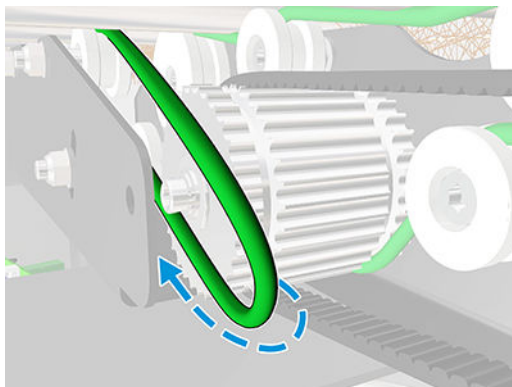
5. Remove one screw.



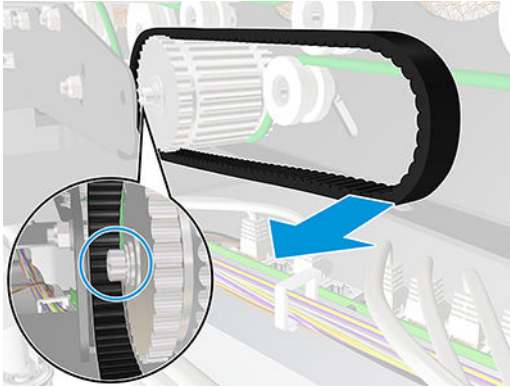
6. Move the gear.



7. Move the belt.

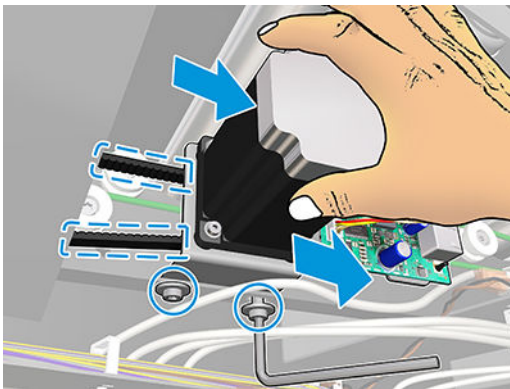


8. Remove the CF X45 toothed belt.



Installation

- ▲ Tighten the two screws and, at the same time, push the Roll tray drive motor to the right tensioning the belt.

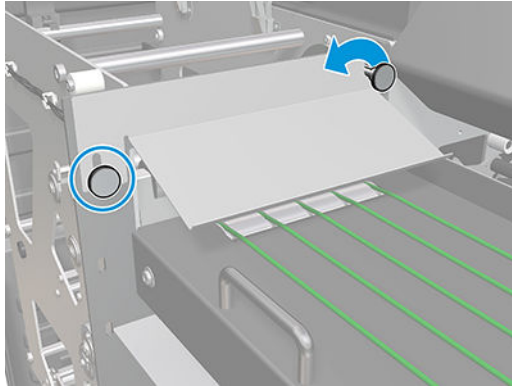


CF X50 Toothed belt (3JJ54-67062)

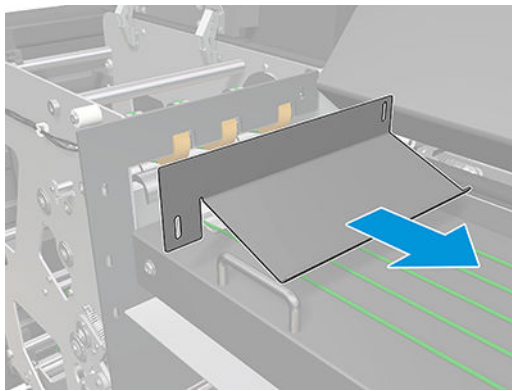
Removal

1. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).
2. Remove the Roll tray strip cover. See [Roll tray strip cover \(3JJ54-67073\) on page 1722](#).
3. Remove the FF top strip cover. See [Fan-fold top strip cover \(3JJ54-67076\) on page 1724](#).
4. Remove the Conveyor extension. See [Conveyor extension \(3JJ54-67087\) on page 1876](#).
5. Remove the Conveyor cover. See [Conveyor cover \(3JJ54-67072\) on page 1721](#).
6. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
7. Remove the Conveyor panel. See [Conveyor panel \(3JJ54-67074\) on page 1722](#).

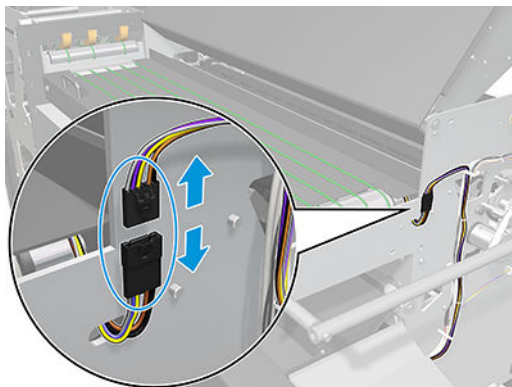
8. Remove two knurled screws.



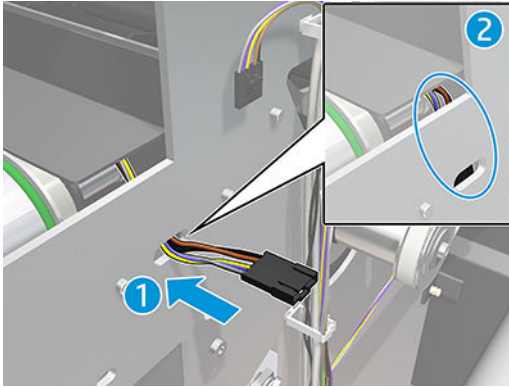
9. Remove the metal plate.



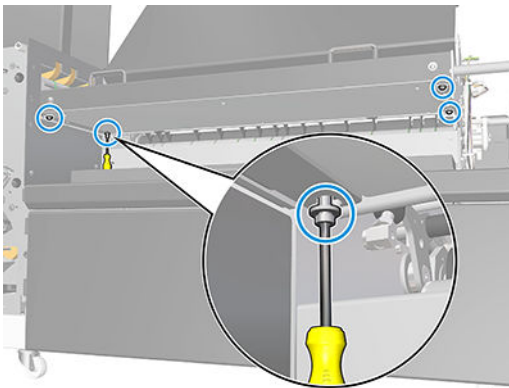
10. Disconnect the cable.



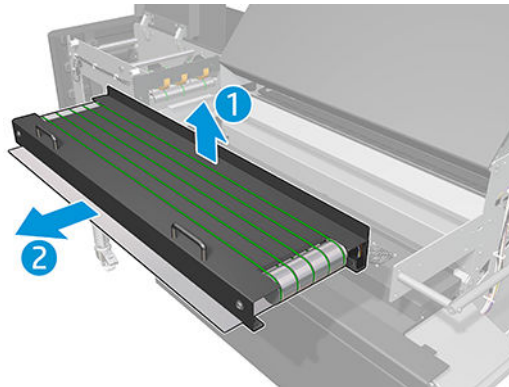
11. Pass the cable through the hole.



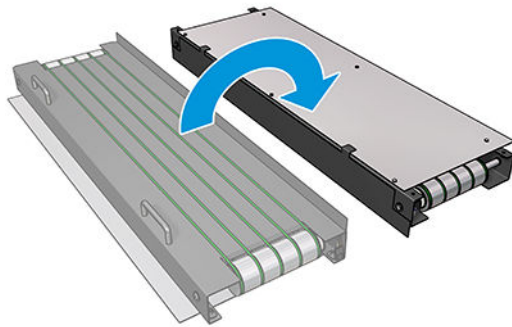
12. Remove four screws.



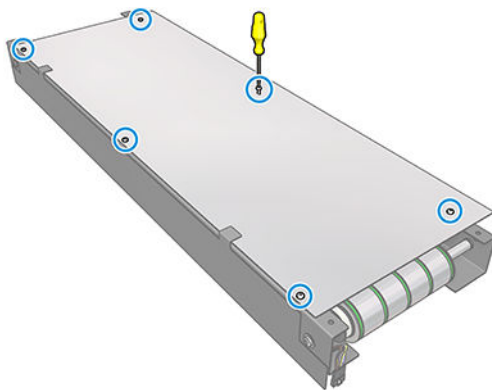
13. Remove the Conveyor assembly.



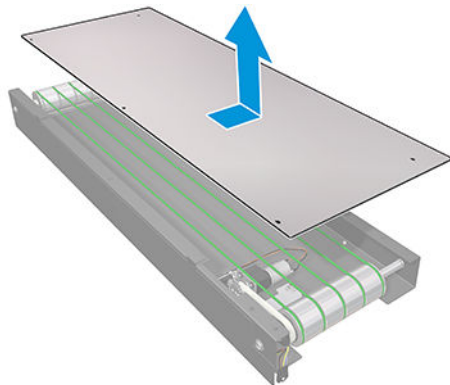
14. Rotate the Conveyor assembly 180 degrees and leave it on a flat surface (be careful not to scratch it).



15. Remove six screws.

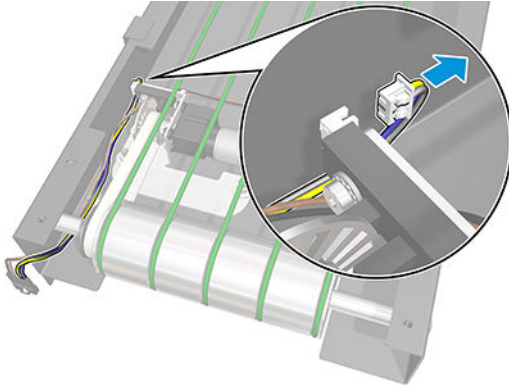


16. Remove the metal plate.

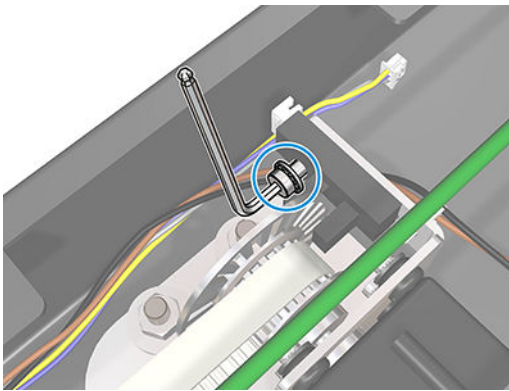


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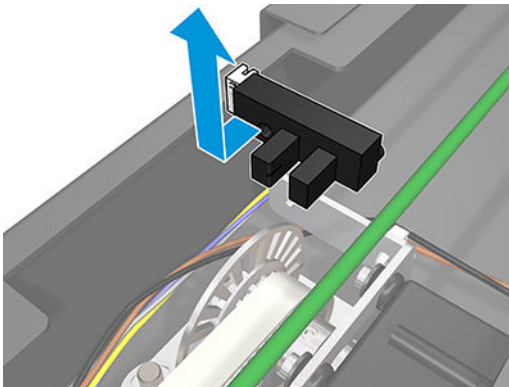
17. Disconnect the sensor cable.



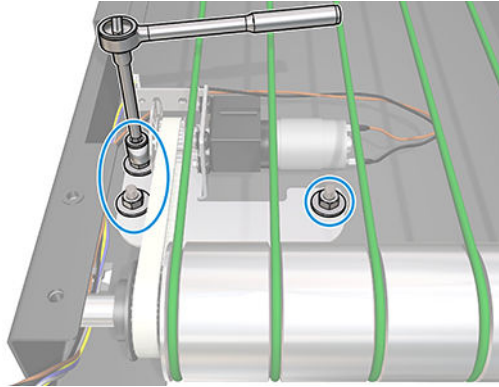
18. Remove the screw.



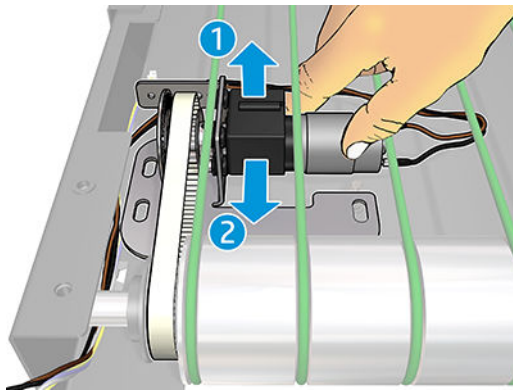
19. Remove the sensor.



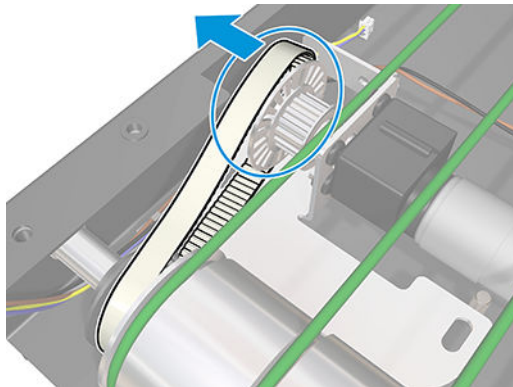
20. Remove the three nuts and washers.



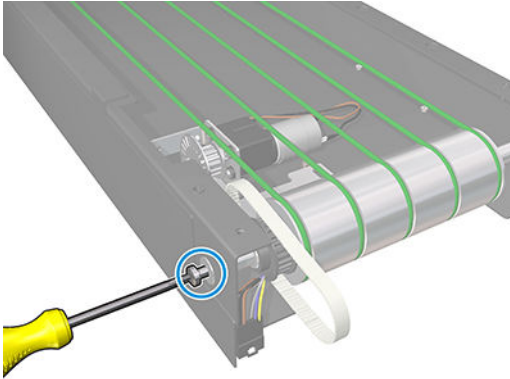
21. Leave the Drive unit conveyor close to the roller to loosen the tension of the belt.



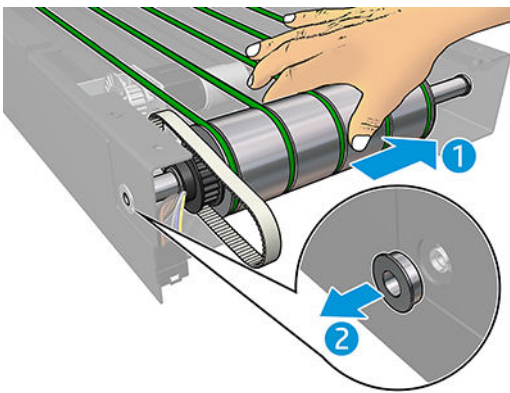
22. Remove the belt from the motor pulley.



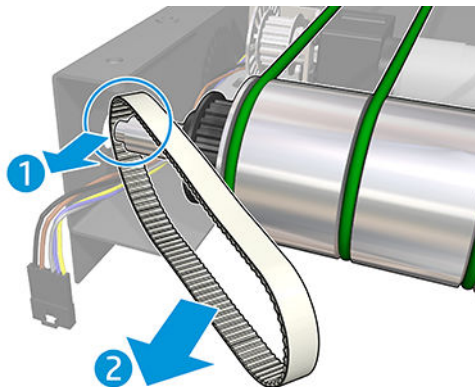
23. Remove the screw.



24. Slide the roller to the right to remove the bushing.

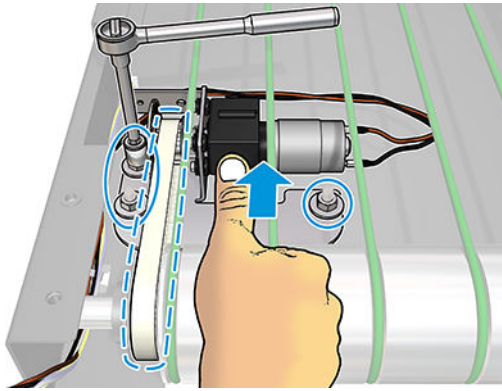


25. Remove the CF X50 toothed belt.



Installation

1. Push the Drive unit conveyor tensioning the belt and, at the same time, screw the 3 nuts.

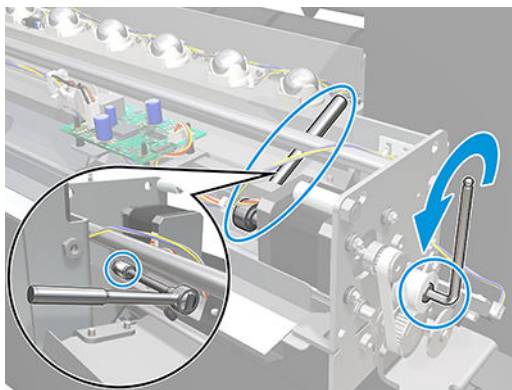


2. Reverse the removal steps

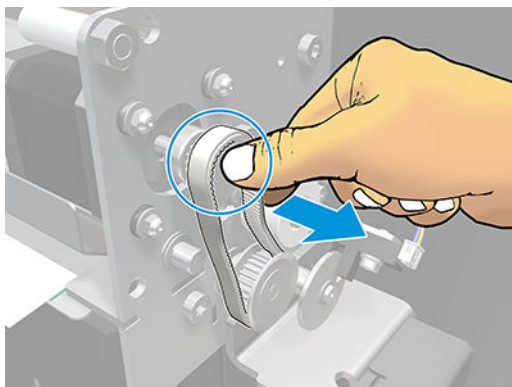
FF X46 – interface transport motor (3JJ54-67042)

Removal – Right side

1. Remove the Interface top cover. See [Interface top cover \(3JJ54-67077\) on page 1726](#).
2. Remove the Lid interface – Right side. See [Lid interface – Right side \(3JJ54-67078\) on page 1727](#).
3. To lose tension of the belt, loosen the screw with Allen key (at the same time, fix the nut with a ratchet wrench).

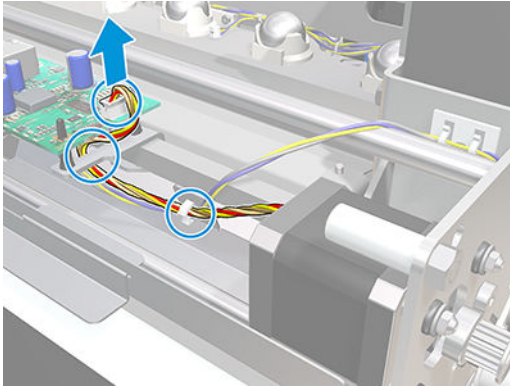


4. Remove the FF X46 Toothed belt from the pulley of the motor.

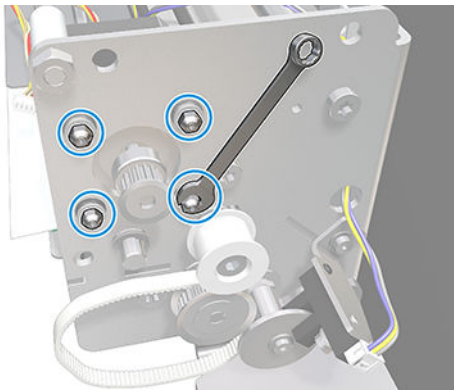


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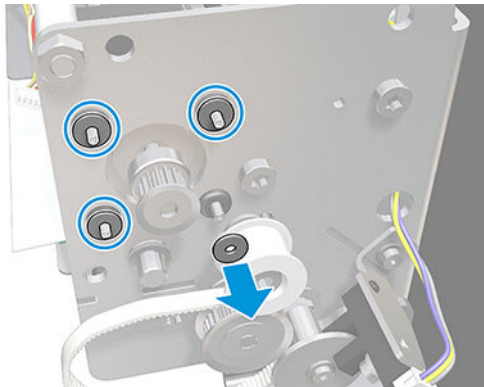
5. Disconnect the motor cable from the FF X46 PCA – interface transport controller and unrout it.



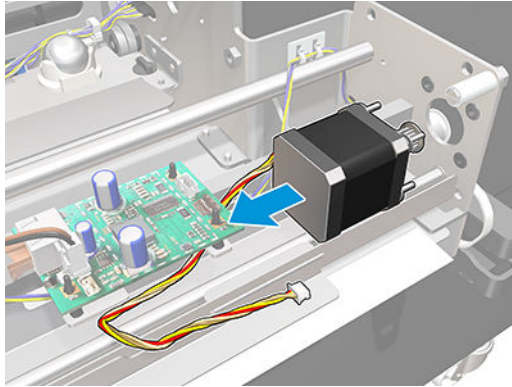
6. Remove the 4 nuts.



7. Remove the 4 washers.

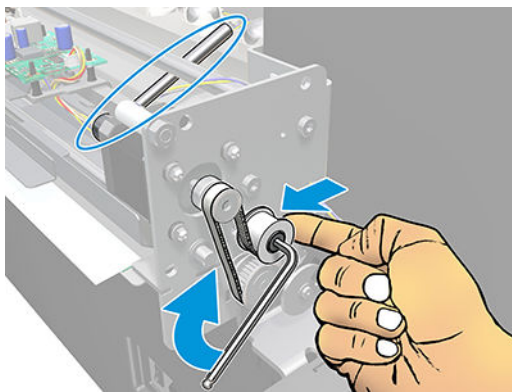


8. Remove the FF X46 – interface transport motor (be careful not to lose the 4 washers).



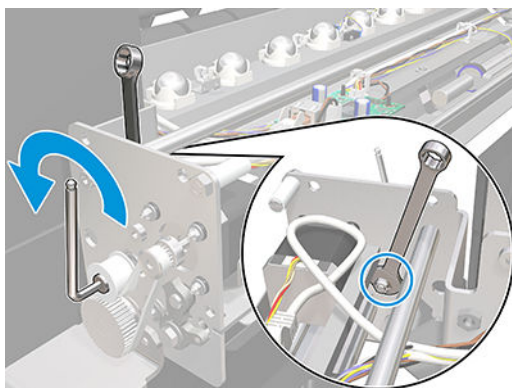
Installation – Right side

- ▲ Tension the belt pushing the pulley and, at the same time, tighten the screw.



Removal – Left side

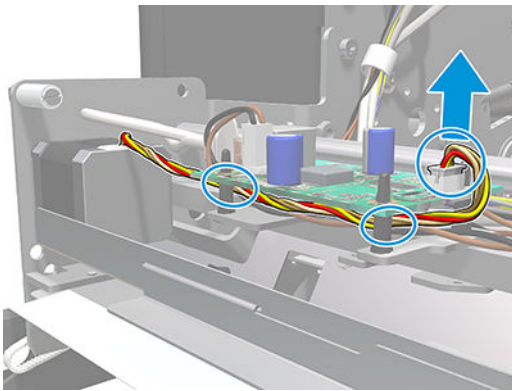
1. Remove the Interface top cover. See [Interface top cover \(3JJ54-67077\) on page 1726](#).
2. Remove the Lid interface – Left side. See [Lid interface – Left side \(3JJ54-67079\) on page 1728](#).
3. To lose tension of the belt, loosen the screw with Allen key (at the same time, fix the nut with a ratchet wrench).



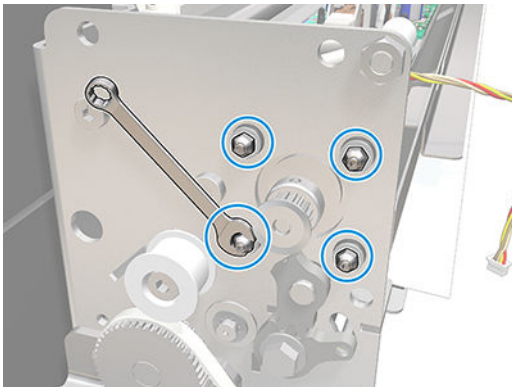
4. Remove the FF X42 Toothed belt from the pulley of the motor.



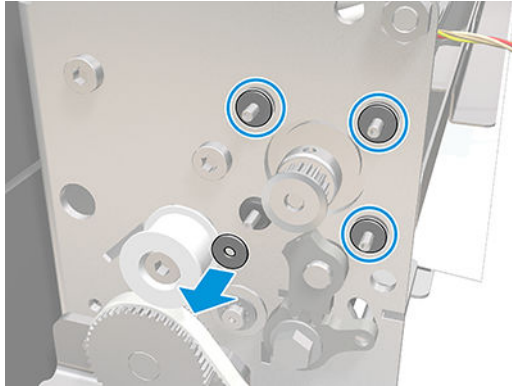
5. Disconnect the motor cable from the Control board switch and unrout it.



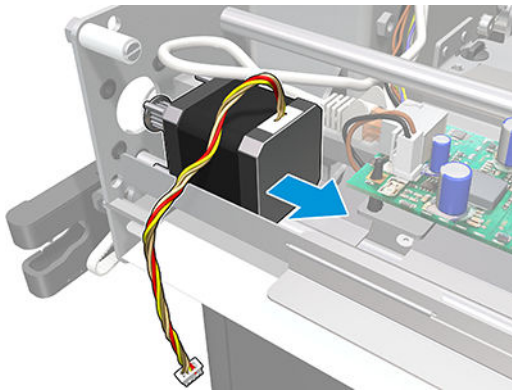
6. Remove the 4 nuts.



7. Remove the 4 washers.

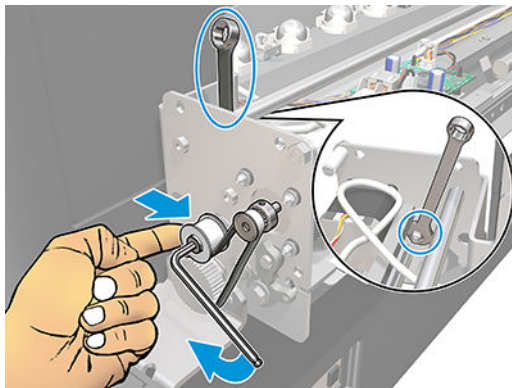


8. Remove the FF X46 – interface transport motor (be careful not to lose the 4 washers).



Installation – Left side

- ▲ Tension the belt pushing the pulley and, at the same time, tighten the screw.



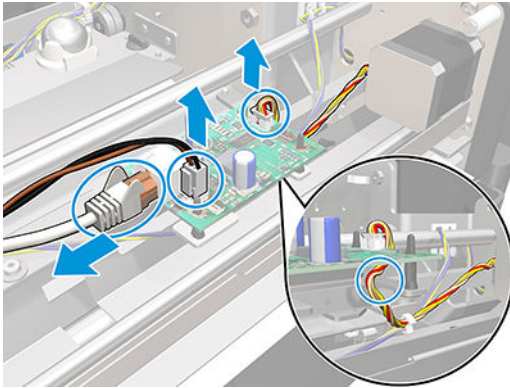
FF X46 PCA – interface transport controller (3JJ54-67043)

Removal

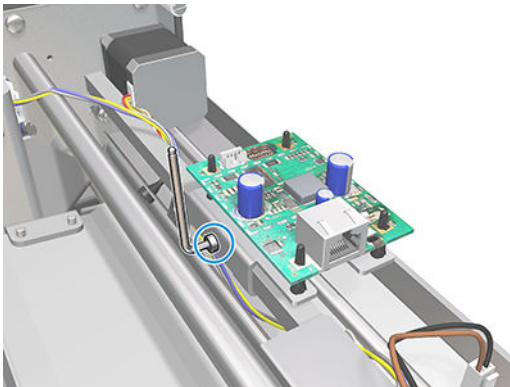
1. Remove the Interface top cover. See [Interface top cover \(3JJ54-67077\) on page 1726](#).

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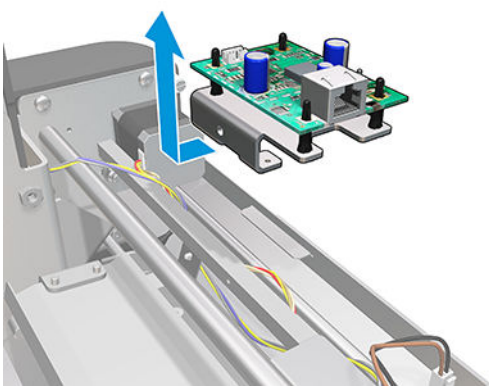
2. Disconnect the 3 cables from the FF X46 PCA – interface transport controller and unroute the interface transport motor cable.




3. Remove the screw with the Allen key.

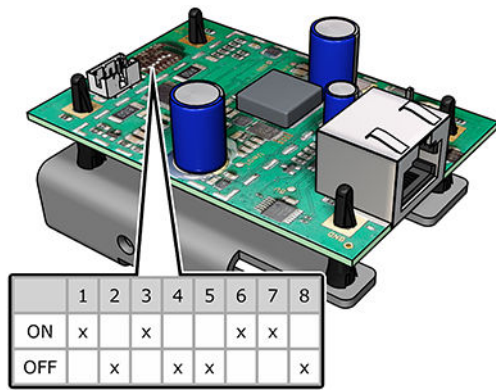


4. Remove the FF X46 PCA - interface transport controller.

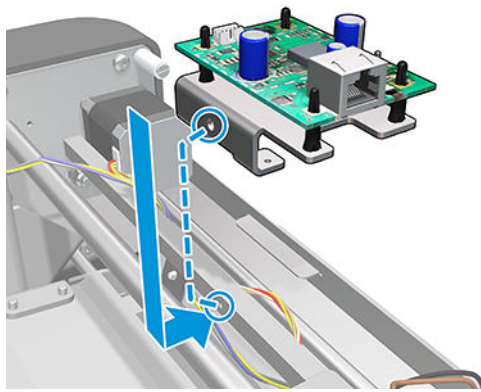


Installation

1.  **IMPORTANT:** Set the 8 dip switches of the PCA.



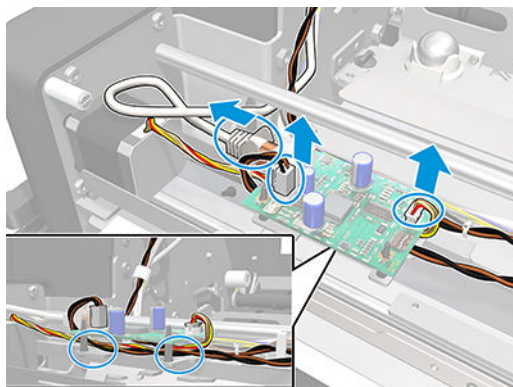
2. Locate the hole of the bar to align with the hole of the FF X46 PCA – interface transport controller and mount it.



Control board switch (K5H75-67161)

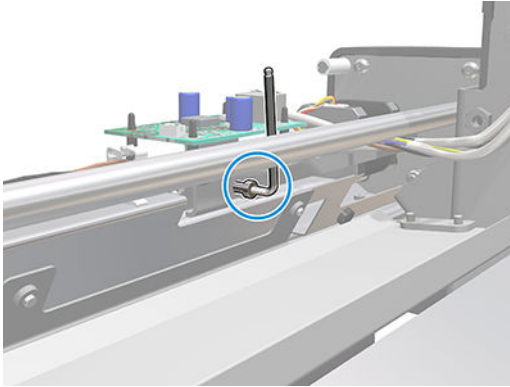
Removal

1. Remove the Interface top cover. See [Interface top cover \(3JJ54-67077\)](#) on page 1726.
2. Disconnect the 3 cables from the Control board switch and unrout the two cables.

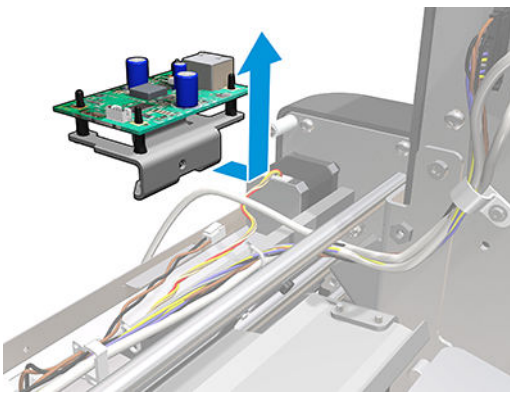


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3. Remove the screw with the Allen key.

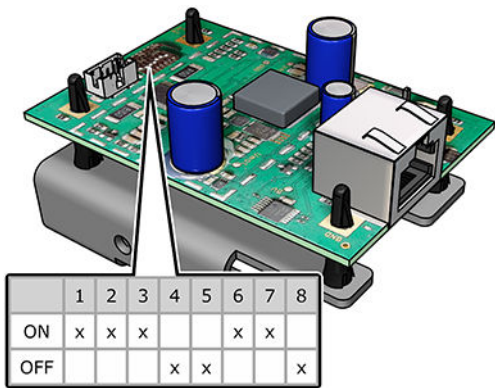


4. Remove the Control board switch.

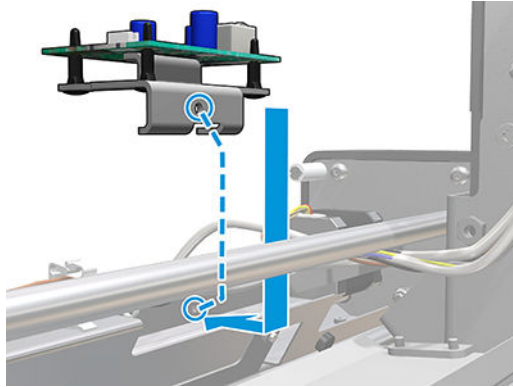


Installation

1.  **IMPORTANT:** Set the 8 dip switches of the PCA.



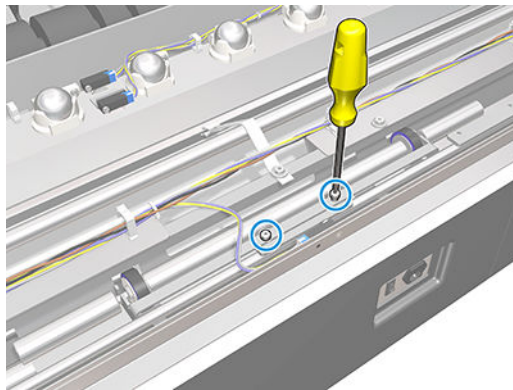
2. Locate the hole of the bar to align with the hole of the Control board switch and mount it.



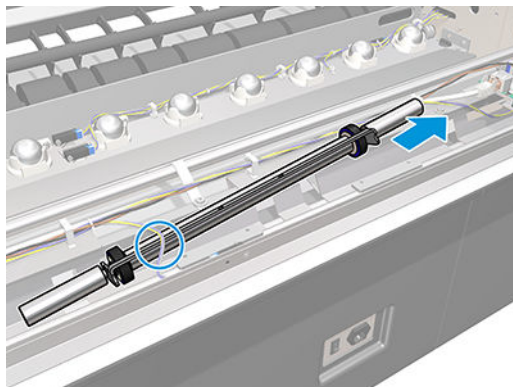
Press roller sheet tray (TBD)

Removal

1. Remove the Interface top cover. See [Interface top cover \(3JJ54-67077\) on page 1726](#).
2. Remove two screws.

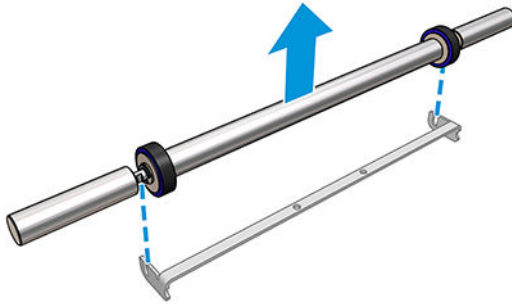


3. Remove the Press roller sheet tray (be careful not to damage the sensor cable).



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4. Remove the Press roller sheet tray.



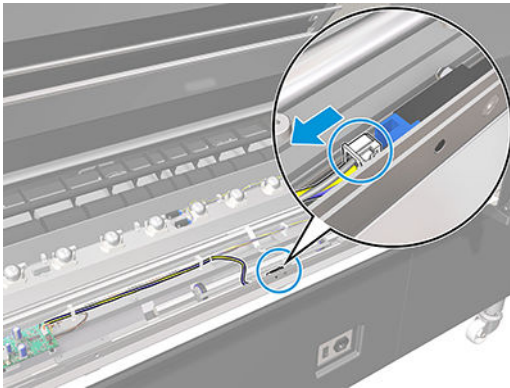
Installation

- ▲ Reverse the removal switch.

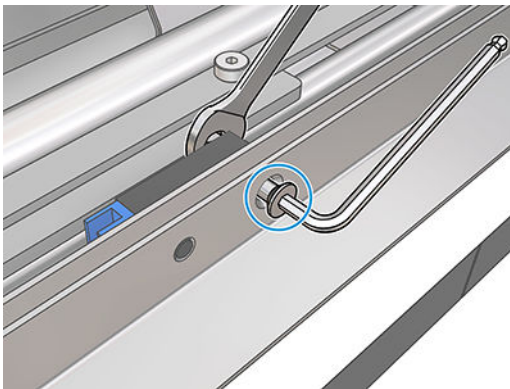
Paper sensor – LB5 (3JJ54-67030) – Interface

Removal

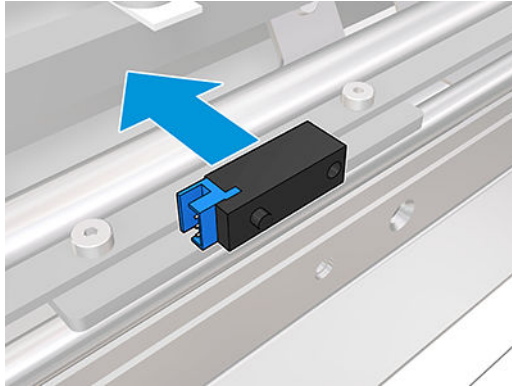
1. Remove the Interface top cover. See [Interface top cover \(3JJ54-67077\) on page 1726](#).
2. Disconnect the sensor cable.



3. Remove the screw and nut.



4. Remove the paper sensor.



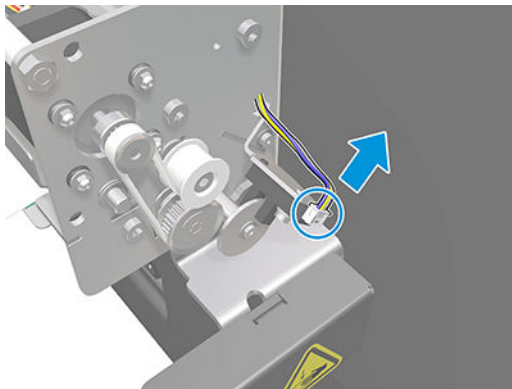
Installation

- ▲ Reverse the removal steps.

Fork type sensor – LB11 (3JJ54-67031) – Interface

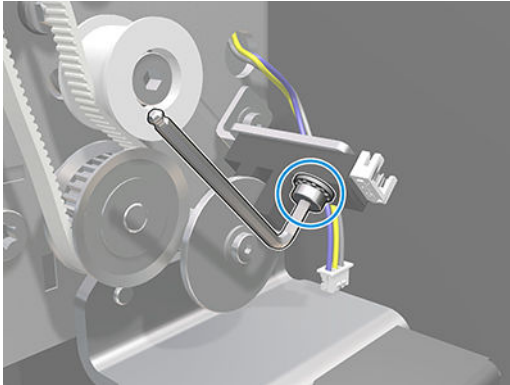
Removal

1. Remove the Interface top cover. See [Interface top cover \(3JJ54-67077\) on page 1726](#).
2. Remove the Lid interface – Left side. See [Lid interface – Left side \(3JJ54-67079\) on page 1728](#).
3. Disconnect the cable from the Fork type sensor.

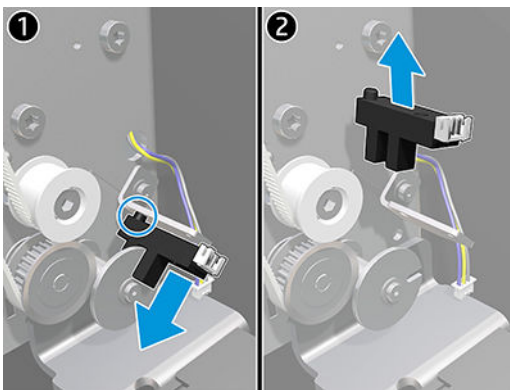


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4. Remove the screw with the Allen key (be careful not to lose the washers).



5. Remove the Fork type sensor.



Installation

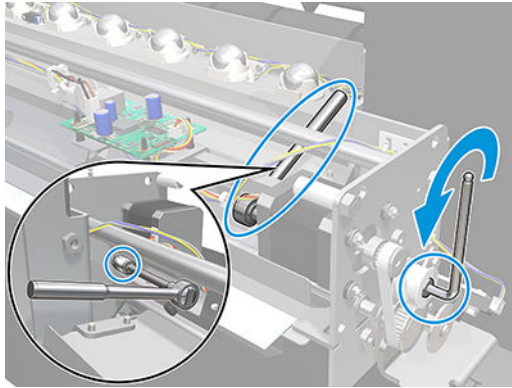
- ▲ Reverse the removal steps.

FF X46 Toothed belt (3JJ54-67063)

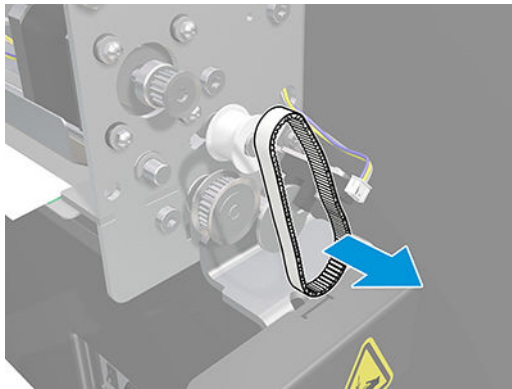
Removal

1. Remove the Interface top cover. See [Interface top cover \(3JJ54-67077\) on page 1726](#).
2. Remove the Lid interface – Right side. See [Lid interface – Right side \(3JJ54-67078\) on page 1727](#).

3. To lose the tension of the belt, loosen the screw with an Allen key (and, at the same time, fix the nut with a ratchet wrench).

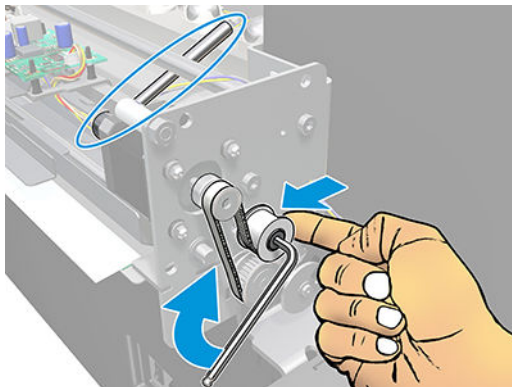


4. Remove the FF X46 Toothed belt.



Installation

- ▲ Tension the belt pushing the pulley and, at the same time, tighten the screw.



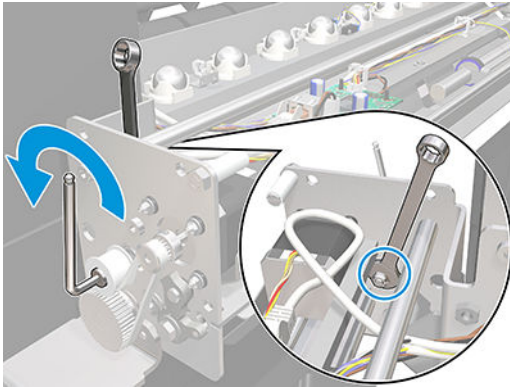
FF X42 Toothed belt (3JJ54-67064)

Removal

1. Remove the Interface top cover. See [Interface top cover \(3JJ54-67077\) on page 1726](#).
2. Remove the Lid interface – Left side. See [Lid interface – Left side \(3JJ54-67079\) on page 1728](#).

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3. To lose the tension of the belt, loosen the screw with an Allen key (and, at the same time, fix the nut with a ratchet wrench).

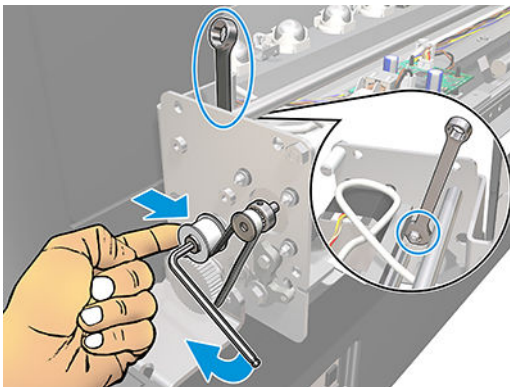


4. Remove the FF X42 Toothed belt.



Installation

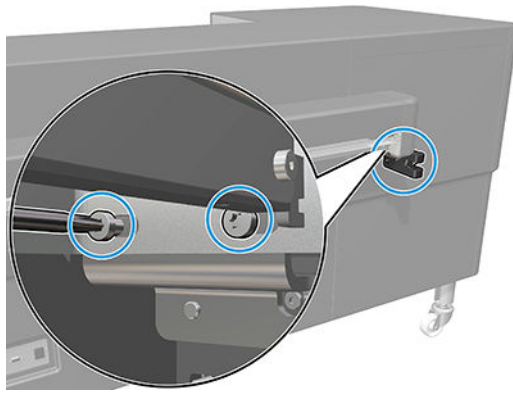
- ▲ Tension the belt pushing the pulley and, at the same time, tighten the screw.



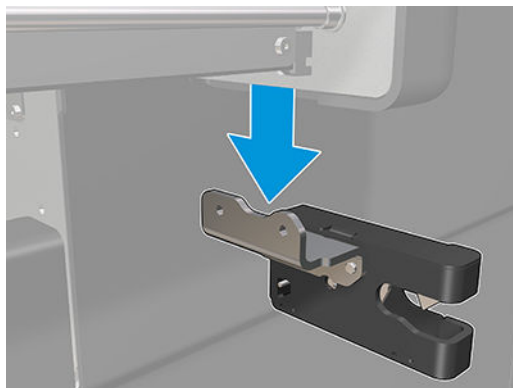
Folder interface hooks, Left and Right (3JJ54-67027)

Removal

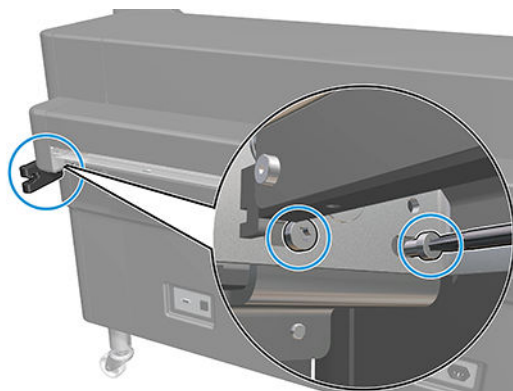
1. Remove two screws on the right side.



2. Remove the Right folder interface hook.

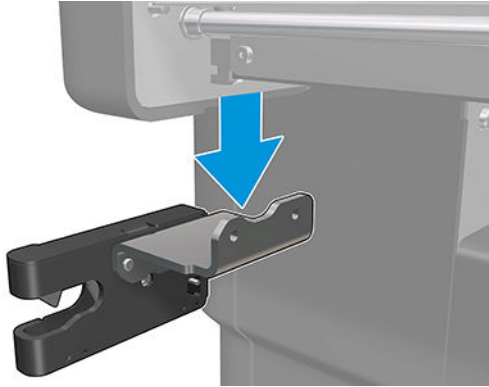


3. Remove two screws on the left side.



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4. Remove the Left folder interface hook.



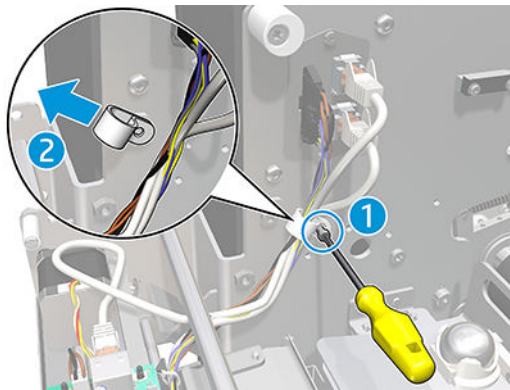
Installation

- ▲ Reverse the removal steps

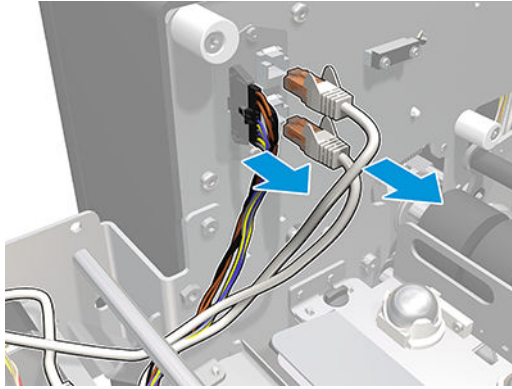
Folder interface assembly (3JJ54-67028)

Removal

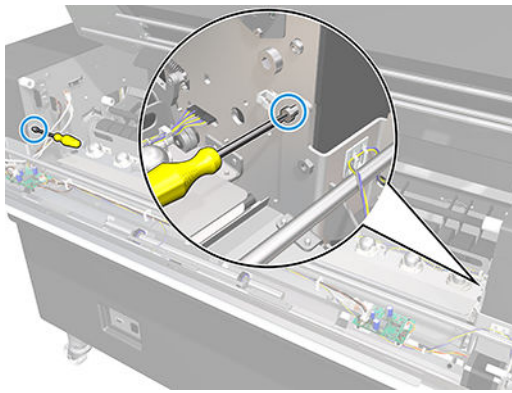
1. Remove the Interface top cover. See [Interface top cover \(3JJ54-67077\) on page 1726](#).
2. Remove the Lid interface – Right side. See [Lid interface – Right side \(3JJ54-67078\) on page 1727](#).
3. Remove the Lid interface – Left side. See [Lid interface – Left side \(3JJ54-67079\) on page 1728](#).
4. Remove the screw with the washer and the clamp.



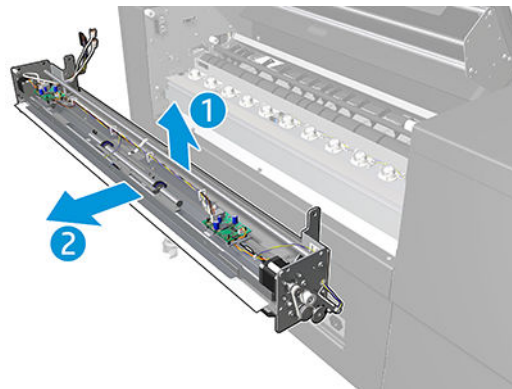
5. Disconnect the 3 cables.



6. Remove the 2 screws.

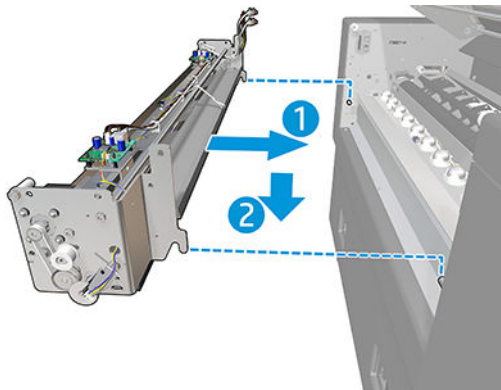


7. Take down the Folder interface assembly and remove it.



Installation

- ▲ Locate the two hooks and hang the Folder interface assembly.

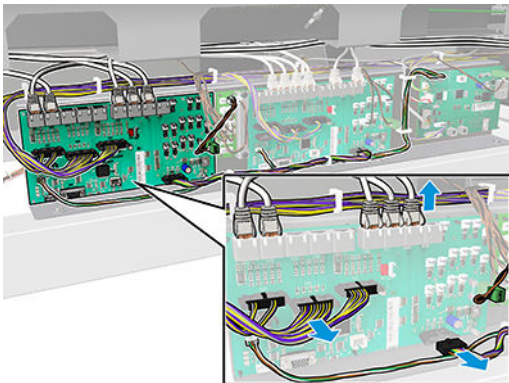


FF/CF control board – LP M1804 (K5H75-67059)

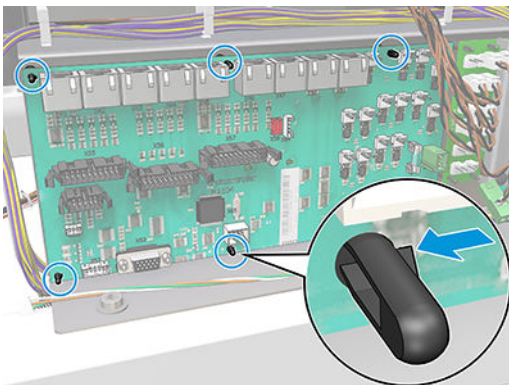
Fan-folder board

Removal

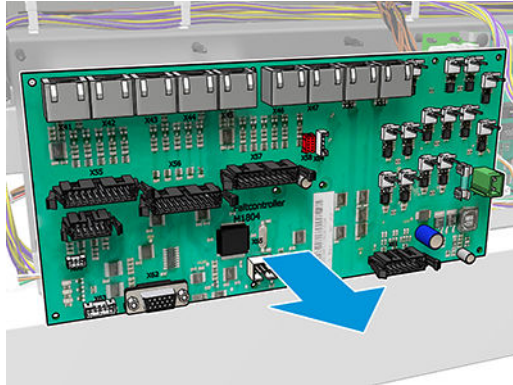
1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the Control boards cover. See [Control boards cover \(3JJ54-67006\) on page 1712](#).
3. Disconnect the cables from the board.



4. Unclip the board.



5. Remove the board.



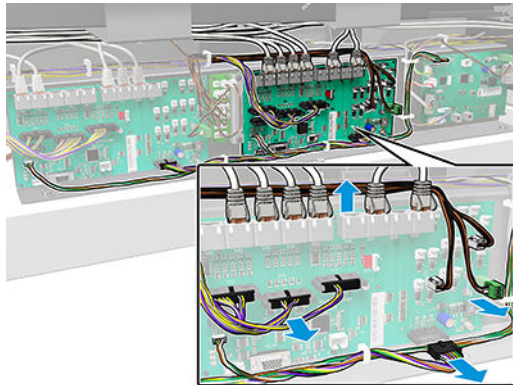
Installation

- ▲ Reverse the removal steps

Cross-folder board

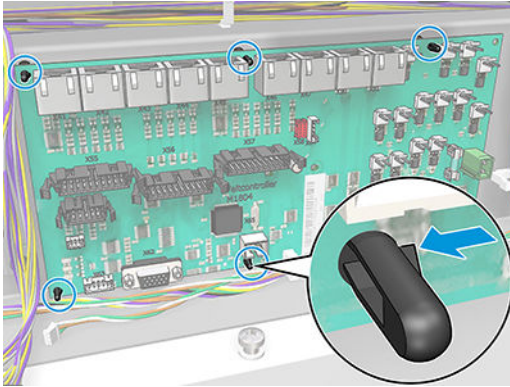
Removal

1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the Control boards cover. See [Control boards cover \(3JJ54-67006\) on page 1712](#).
3. Disconnect the cables from the board.

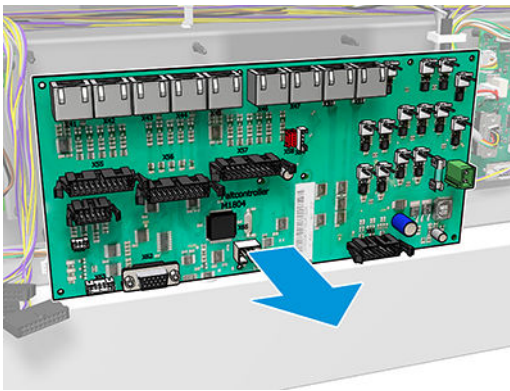


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4. Unclip the board.



5. Remove the board.



Installation

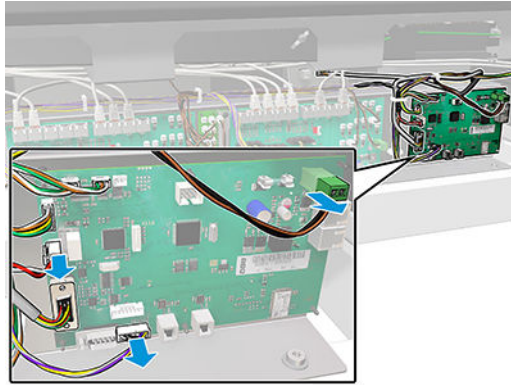
- ▲ Reverse the removal steps

Master controller – LP M1805 (K5H75-67064)

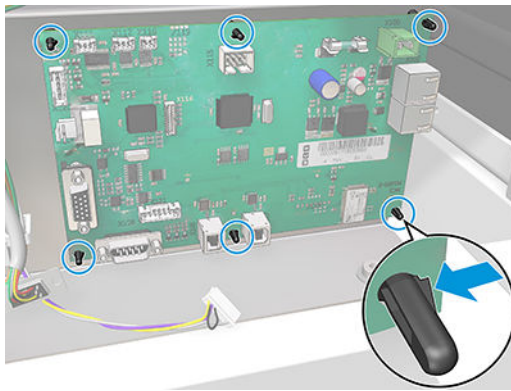
Removal

1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the Control boards cover. See [Control boards cover \(3JJ54-67006\) on page 1712](#).

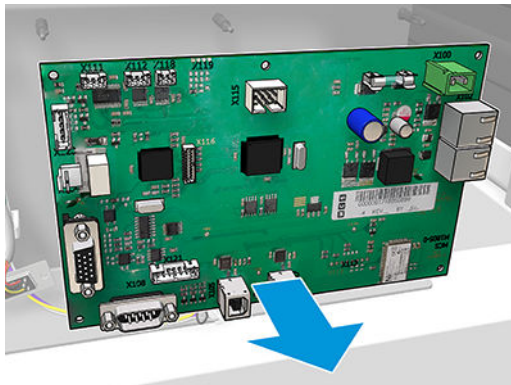
3. Disconnect the cables from the board.



4. Unclip the board.



5. Remove the board.



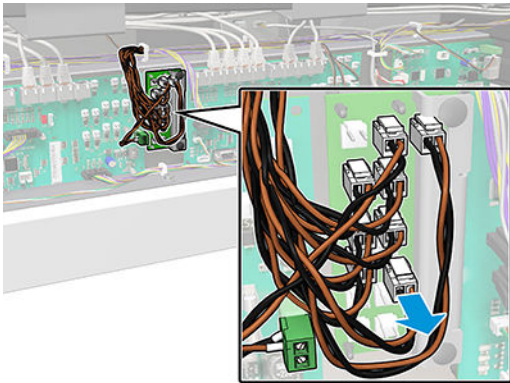
Installation

- ▲ Reverse the removal steps

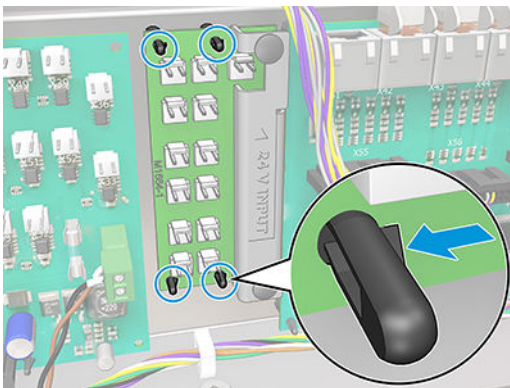
24 V PCA distributor (3JJ54-67011)

Removal

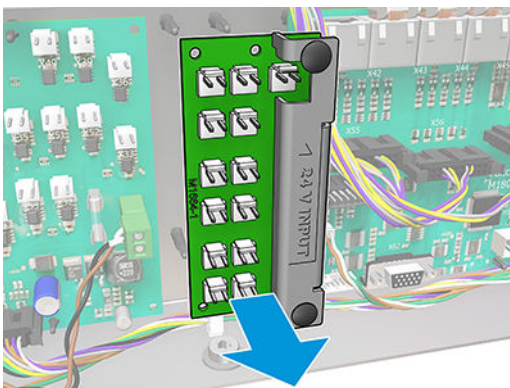
1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the Control boards cover. See [Control boards cover \(3JJ54-67006\) on page 1712](#).
3. Disconnect the cables from the board.



4. Unclip the board.



5. Remove the board.



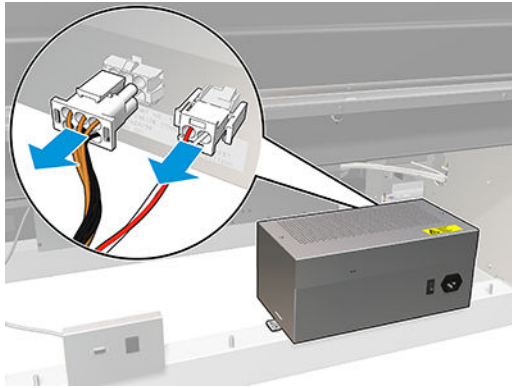
Installation

- ▲ Reverse the removal steps

PSU box assembly (3JJ54-67012)

Removal

1. Remove the FF bottom cover. See [Fan-fold bottom cover \(3JJ54-67003\) on page 1707](#).
2. Disconnect the cables from the PSU box assembly.



3. Remove two screws.



4. Remove the PSU box assembly.




Installation

- ▲ Reverse the removal steps

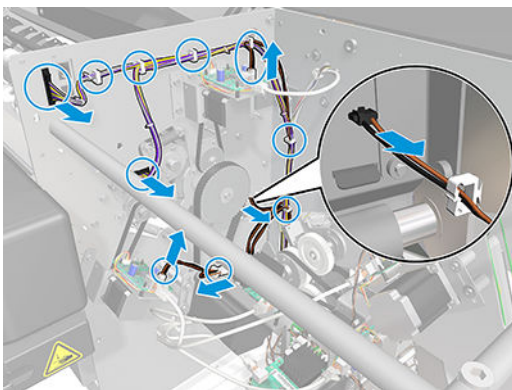
Cable tree 1 / 3011 – 24 V/ signals FF/CF (3JJ54-67044)

Removal

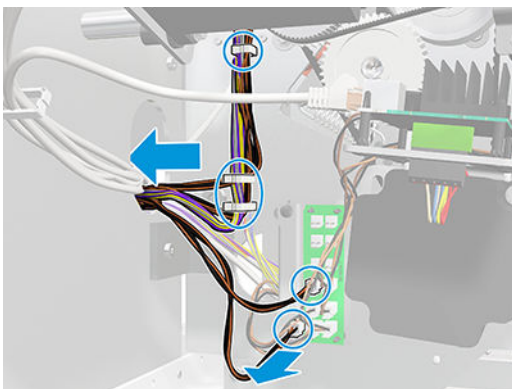
1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
3. Remove the FF bottom cover. See [Fan-fold bottom cover \(3JJ54-67003\) on page 1707](#).
4. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
5. Remove the Control boards cover. See [Control boards cover \(3JJ54-67006\) on page 1712](#).
6. Remove the CF entry cover. See [Cross-fold entry cover \(3JJ54-67008\) on page 1714](#).
7. Remove the FF top strip cover. See [Fan-fold top strip cover \(3JJ54-67076\) on page 1724](#).

 **NOTE:** If necessary, remove the cable ties.

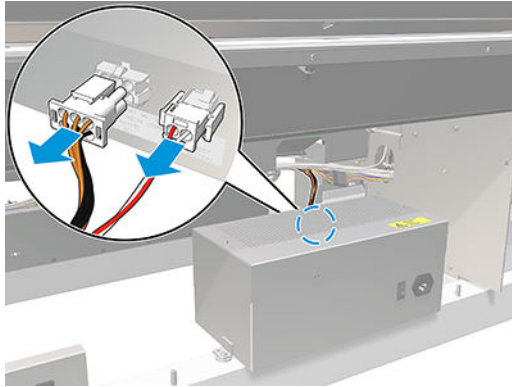
8. Disconnect and unroute the cables on the right side.



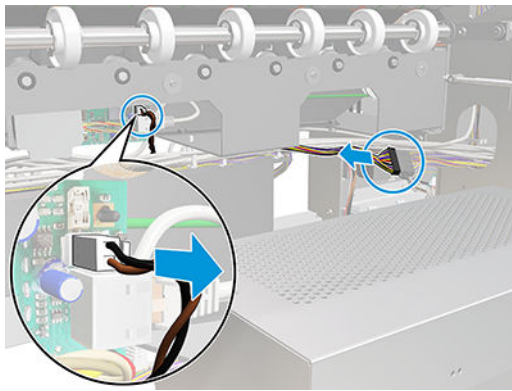
9. Disconnect two cables, and unroute the cables on the right side.



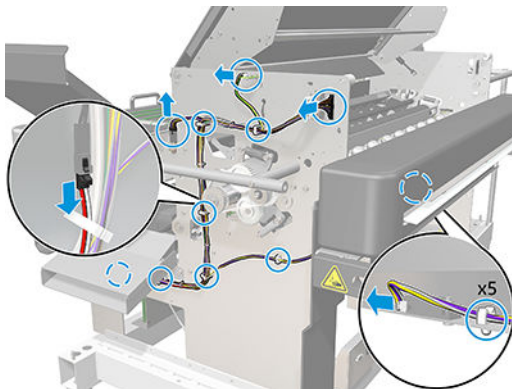
10. Disconnect the cables from the Power box.



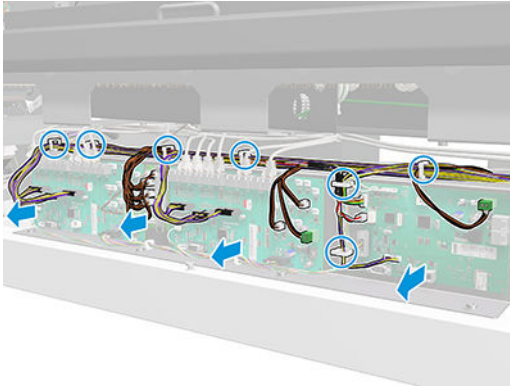
11. Disconnect 2 cables, one from the PCA, and unroute them.



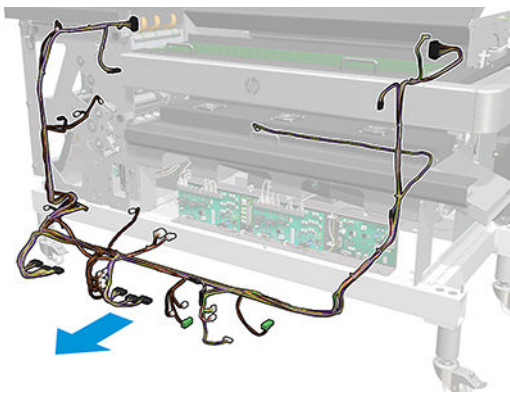
12. Disconnect and unroute the cables on the left side.



13. Disconnect the cables from the PCAs and unrout them.



14. Remove the cable tree 1.



Installation

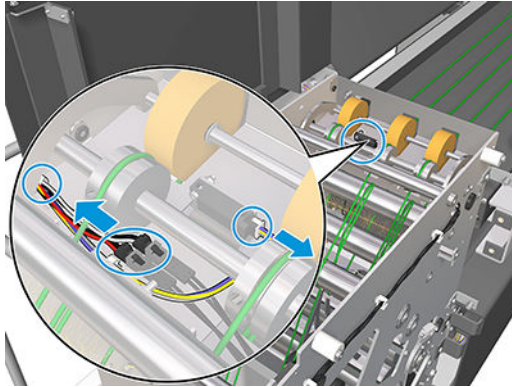
- ▲ Reverse the removal steps

Cable tree 2 / 3011 – 24 V/ signals CF (3JJ54-670445)

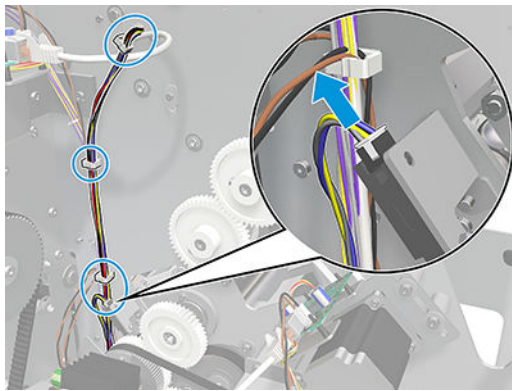
Removal

1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
3. Remove the FF bottom cover. See [Fan-fold bottom cover \(3JJ54-67003\) on page 1707](#).
4. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
5. Remove the CF entry cover. See [Cross-fold entry cover \(3JJ54-67008\) on page 1714](#).

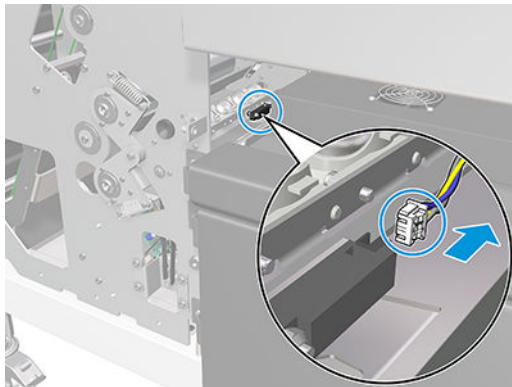
6. Locate the sensor, disconnect 3 cables and unroute them.



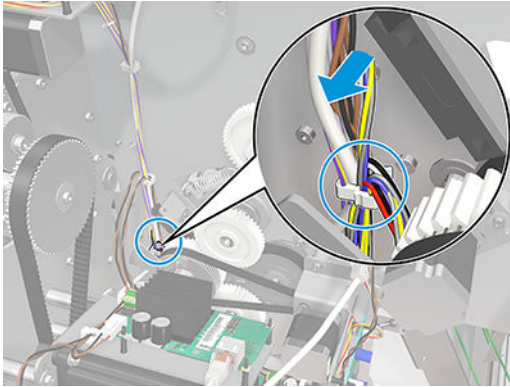
7. Disconnect the cable and unroute them.



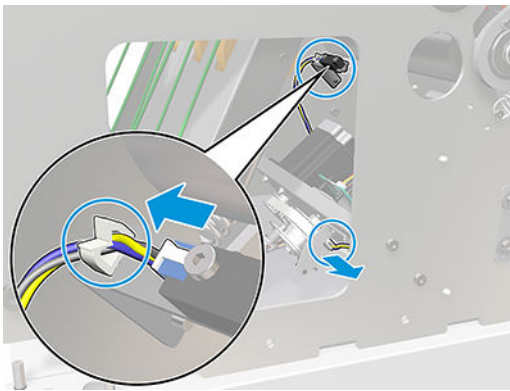
8. Locate the paper sensor and disconnect the cable.



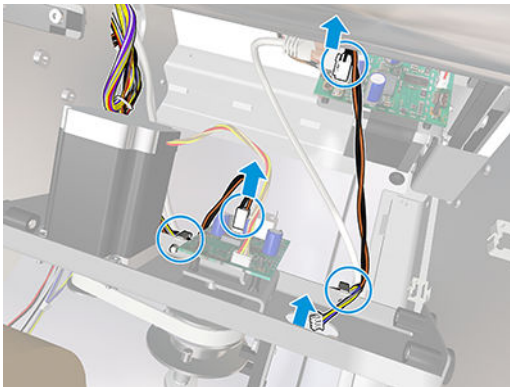
9. Unroute the cables.



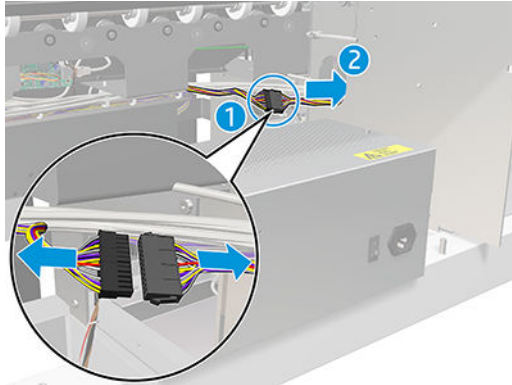
10. Disconnect 2 cables and unroute them.



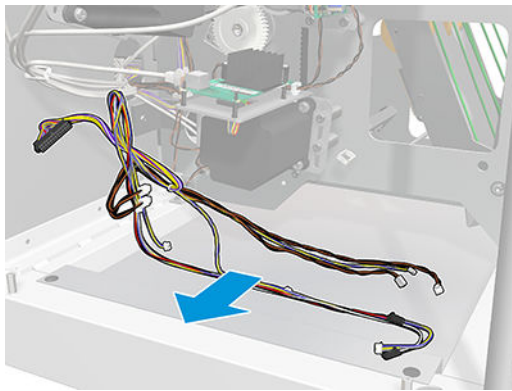
11. Disconnect 2 cables from the PCA and unroute them.



12. Disconnect the cables and unroute them.



13. Remove the cable tree 12.



Installation


- ▲ Reverse the removal steps

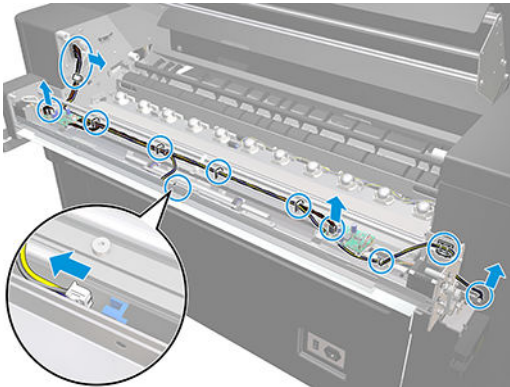
Cable tree interface 3011 (3JJ54-67046)

Removal

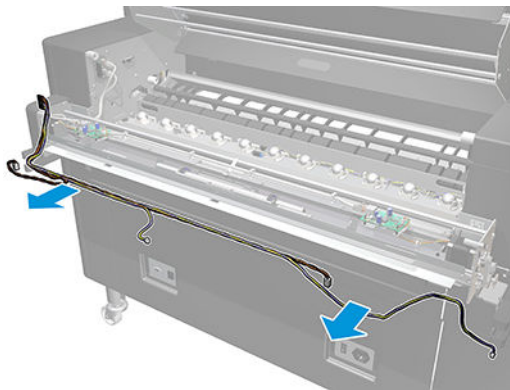
1. Remove the Interface top cover. See [Interface top cover \(3JJ54-67077\) on page 1726](#).
2. Remove the Lid interface – Right side. See [Lid interface – Right side \(3JJ54-67078\) on page 1727](#).

3. Disconnect 5 cables and unroute them.

 **NOTE:** If necessary, remove the cable ties.



4. Remove the cable.



Installation

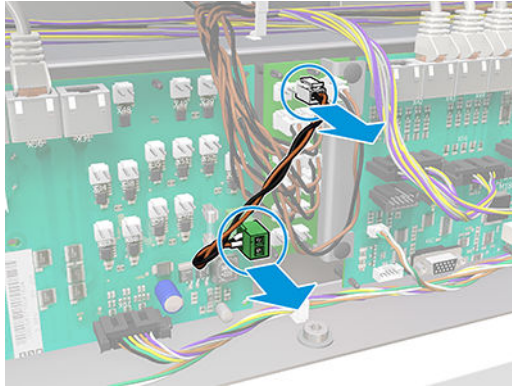
- ▲ Reverse the removal steps.

Cable EVT W3 (Distributor 1 – FF-Controller X40) (K5H75-67017)

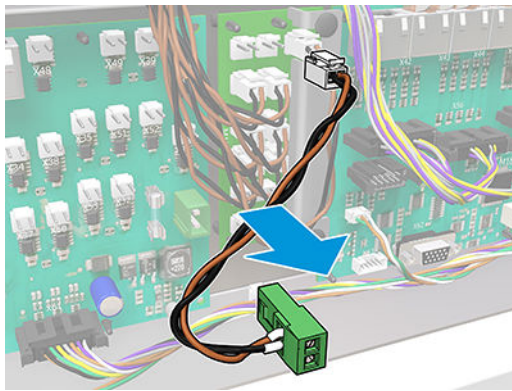
Removal

1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the Control boards cover. See [Control boards cover \(3JJ54-67006\) on page 1712](#).

3. Disconnect the cable from the Distributor 1 and from the FF X40 Control board.



4. Remove the cable.



Installation

- ▲ Reverse the removal steps.

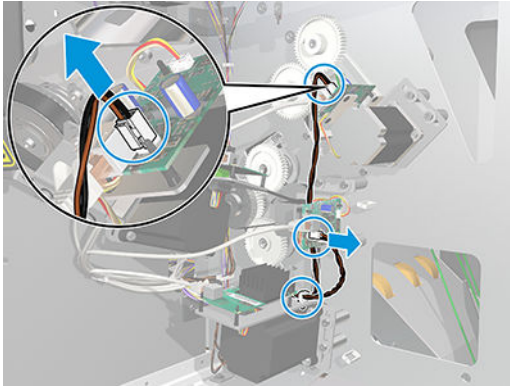
Cable tree 3 / 3011 - 24 V for CF drives (3JJ54-67047)

Removal

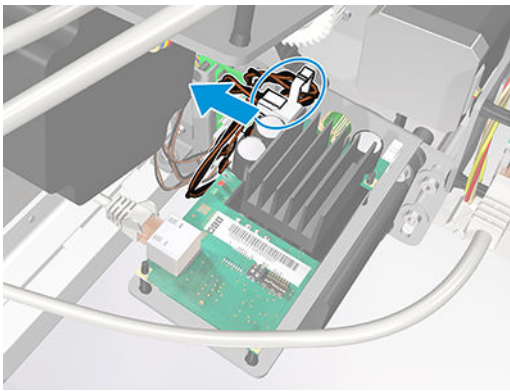
1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).

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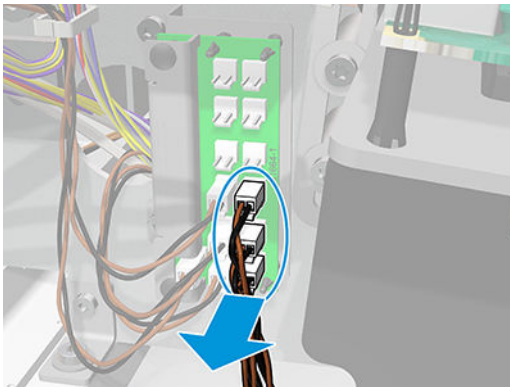
3. Disconnect 2 cables from the PCA and unroute them.



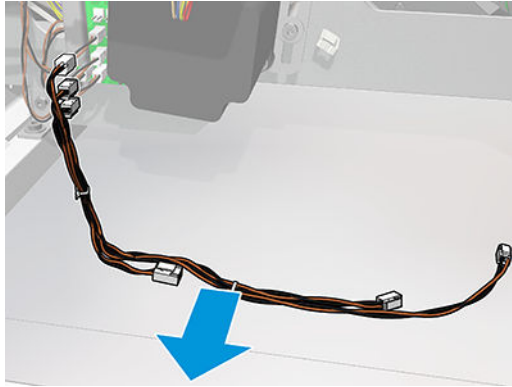
4. Disconnect the cable from the PCA and unroute it.



5. Disconnect three cables from the Distributor 2.



6. Remove the cable.




Installation

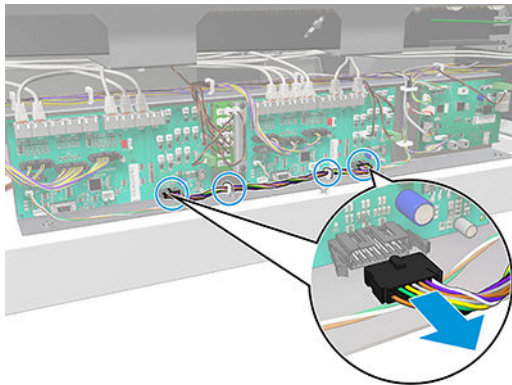
- ▲ Reverse the removal steps.

Cable EFF/ECF W61 (FF Contr.X61 – CF-Contr.X61) (3JJ54-67048)

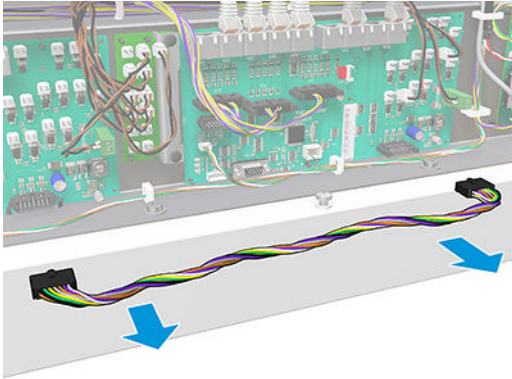
Removal

1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the Control boards cover. See [Control boards cover \(3JJ54-67006\) on page 1712](#).
3. Disconnect the cable from the two fold control boards and unrout the cable from the clamps.

 **NOTE:** If necessary, remove the cable ties.



4. Remove the cable.




Installation

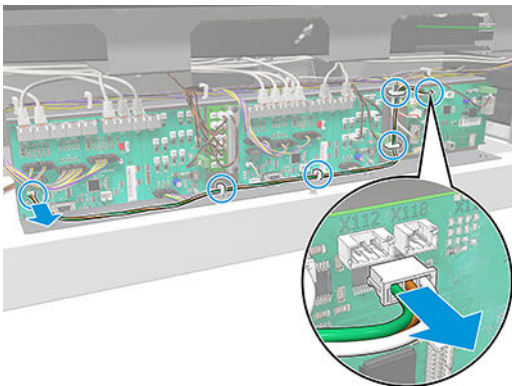
- ▲ Reverse the removal steps.

Cable EMC W1 (M1805-X112 - FF-Contr.X60) (3JJ54-67049)

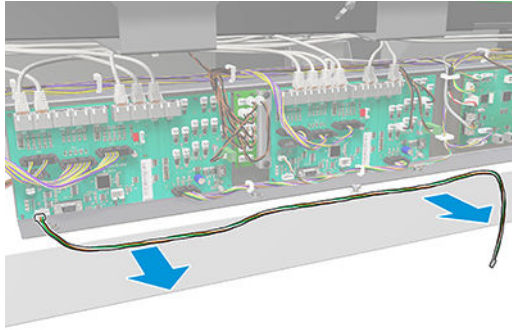
Removal

1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the Control boards cover. See [Control boards cover \(3JJ54-67006\) on page 1712](#).
3. Disconnect the cable from the FF X60 Control board and the LP X112 Master control board. Unroute the cable from the clamps.

 **NOTE:** If necessary, remove the cable ties.



4. Remove the cable.



Installation

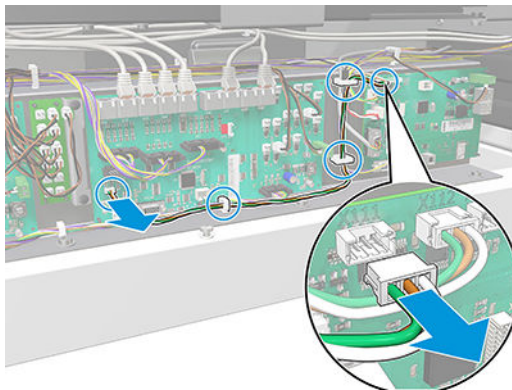
- ▲ Reverse the removal steps.

Cable EMC W2 (M1805-X111 - CF-Contr.X60) (3JJ54-67050)

Removal

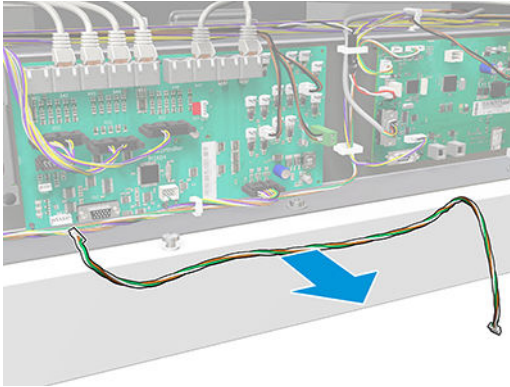
1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the Control boards cover. See [Control boards cover \(3JJ54-67006\) on page 1712](#).
3. Disconnect the cable from the CF X60 Control board and the LP X111 Master control board. Unroute the cable from the clamps.

 **NOTE:** If necessary, remove the cable ties.



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4. Remove the cable.



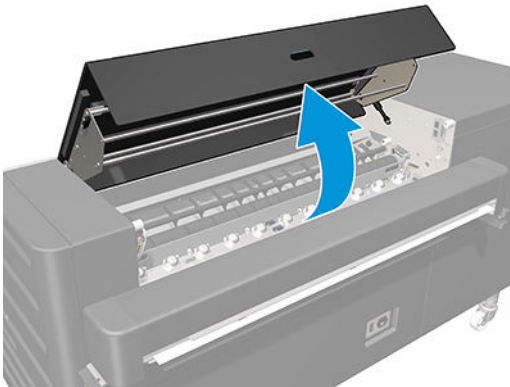
Installation

- ▲ Reverse the removal steps.

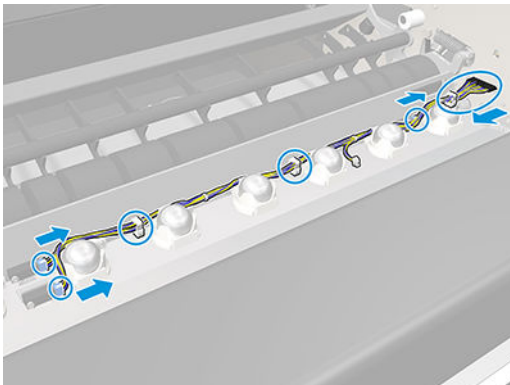
FF entry cable – part 2 (TBD)

Removal

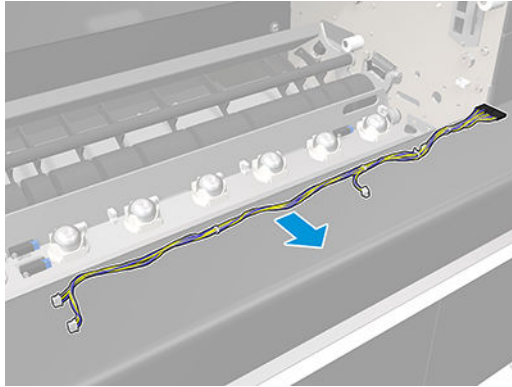
1. Open the Deflectors top cover.



2. Locate the Paper sensors – LB5 (FF input and output). Disconnect the cables and unroute them.



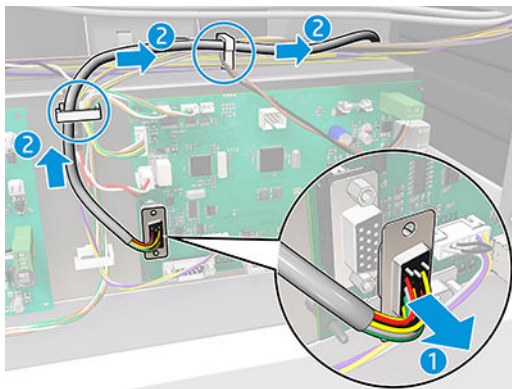
3. Remove the cable.



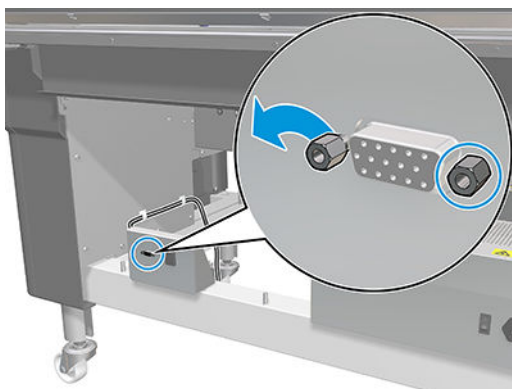
CAN cable LP M1805/X101 – Connection plate (K5H75-67009)

Removal

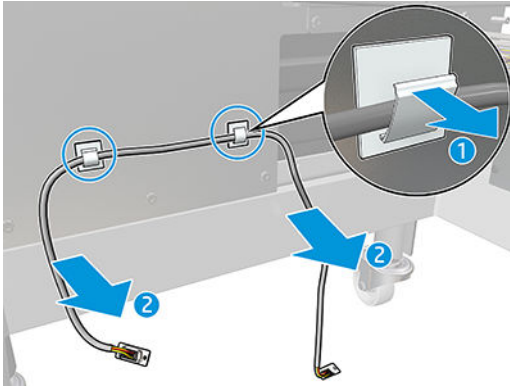
1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the Control boards cover. See [Control boards cover \(3JJ54-67006\) on page 1712](#).
3. Disconnect the cable from the Master control board and unroute it.



4. Remove the FF bottom cover. See [Fan-fold bottom cover \(3JJ54-67003\) on page 1707](#).
5. Disconnect the cable from the communication port.



6. Unroute and remove the cable.



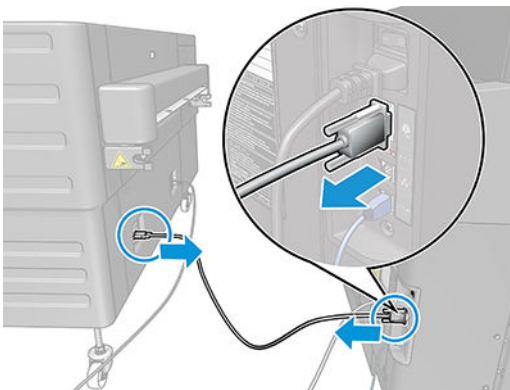
Installation

- ▲ Reverse the removal steps

CAN cable external (K5H75-67024)

Removal

- ▲ Disconnect the CAN cable external and remove it.



Installation

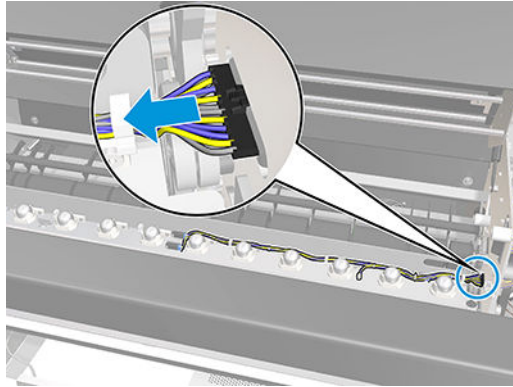
- ▲ Reverse the removal steps.

FF Input-roller with bearing (3JJ54-67051)

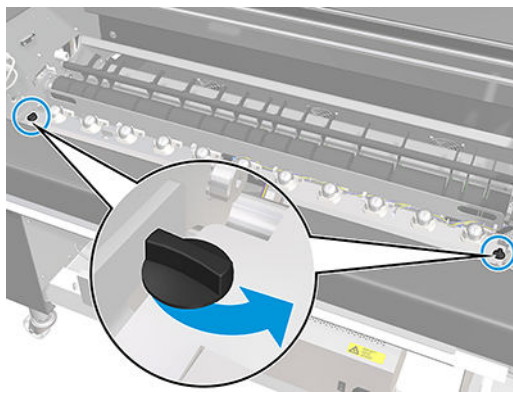
Removal

1. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
2. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).
3. Remove the FF X30 toothed belt (case A). See [FF X30/FF X42 toothed belt \(3JJ54-67056\) on page 1781](#).
4. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).
5. Remove the FF bottom cover. See [Fan-fold bottom cover \(3JJ54-67003\) on page 1707](#).

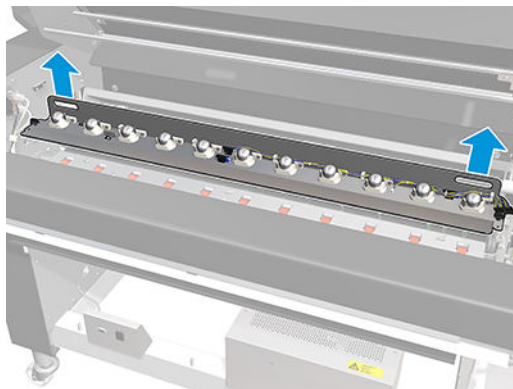
6. Disconnect the cable.



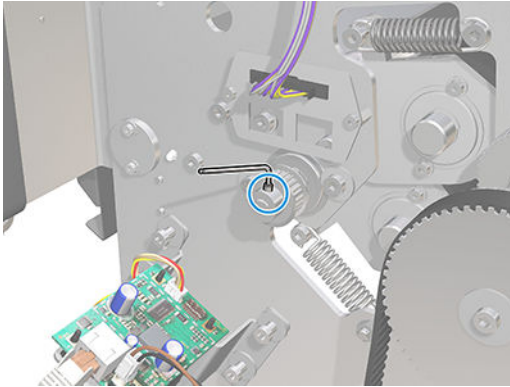
7. Open the two latches.



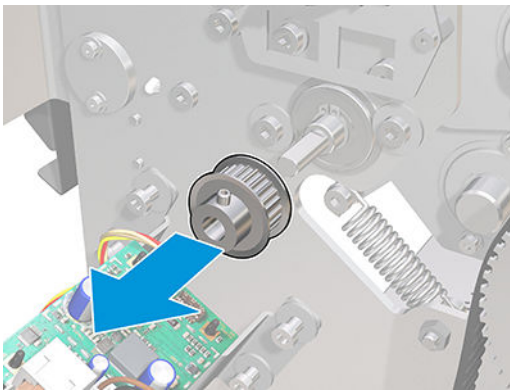
8. Remove the FF entry metal roof.



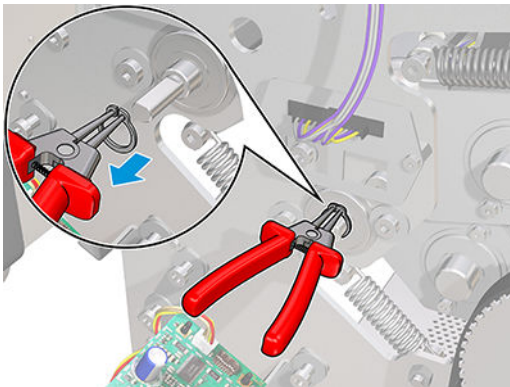
9. Loosen the Allen screw.



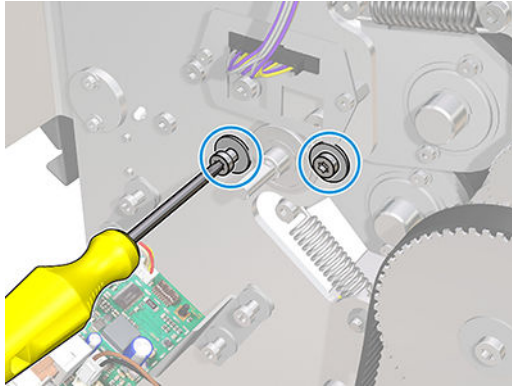
10. Remove the gear.



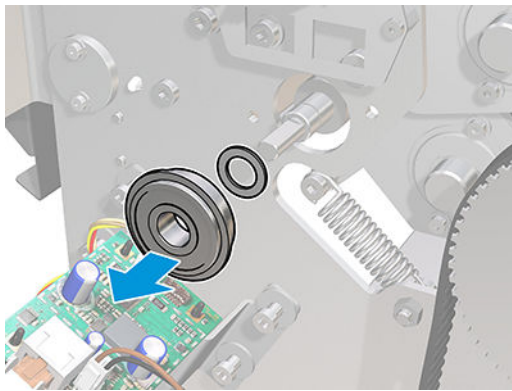
11. Remove the circlip.



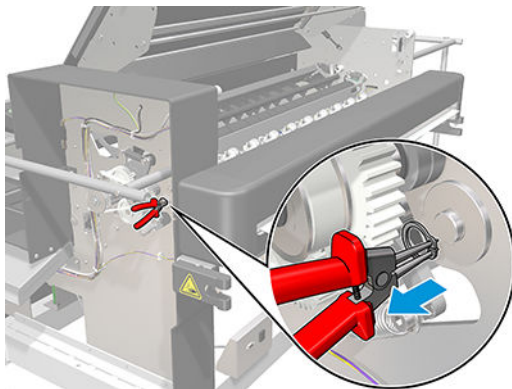
12. Remove the two screws and two washers.



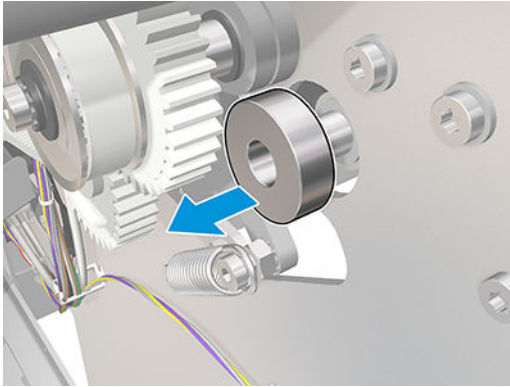
13. Remove the bushing and the washer.



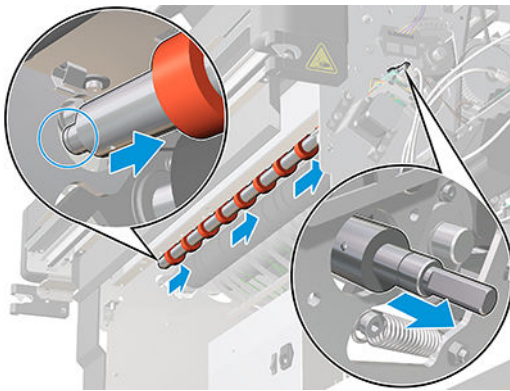
14. Remove the circlip.



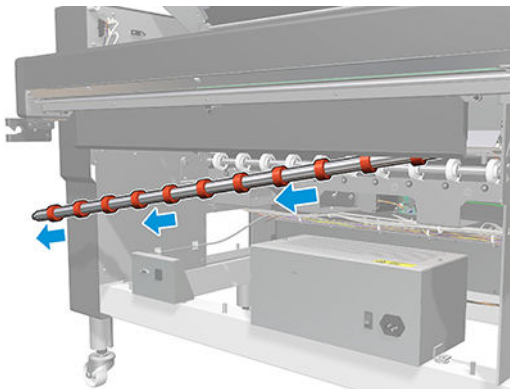
15. Remove the bearing.



16. Slide the FF input roller to the right until it gets free from the left hole.

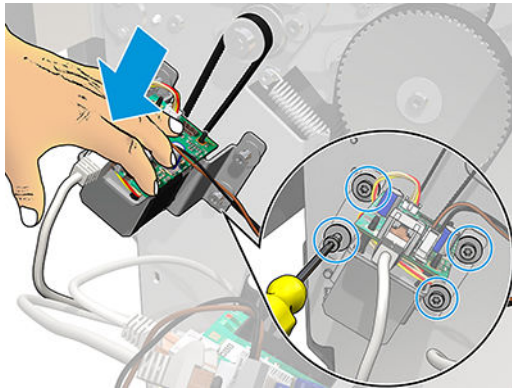


17. Remove the FF input roller.



Installation

- ▲ Tighten the four screws and, at the same time, push down the PCA+bracket controller assembly, tensioning the belt.



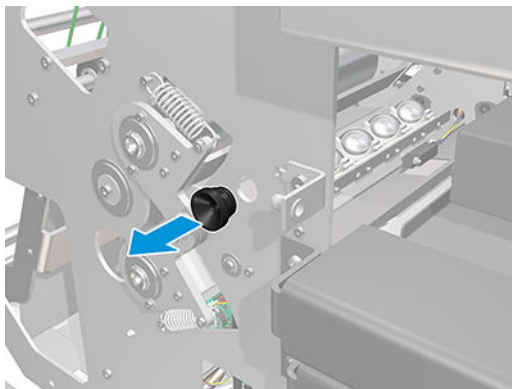
CF Input-roller with bearing (3JJ54-67052)

Removal

1. Remove the CF rear door. See [Cross-fold rear door \(3JJ54-67009\) on page 1713](#).
2. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
3. Remove the CF entry cover. See [Cross-fold entry cover \(3JJ54-67008\) on page 1714](#).
4. Remove the FF/CF front cover. See [FF/CF front cover \(3JJ54-67004\) on page 1708](#).

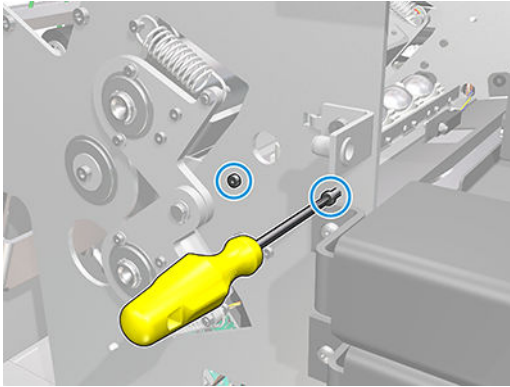
 **NOTE:** For better access, remove the fans assembly module.

5. Remove the rubber.

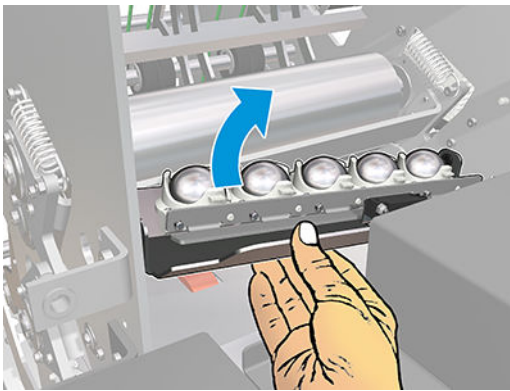


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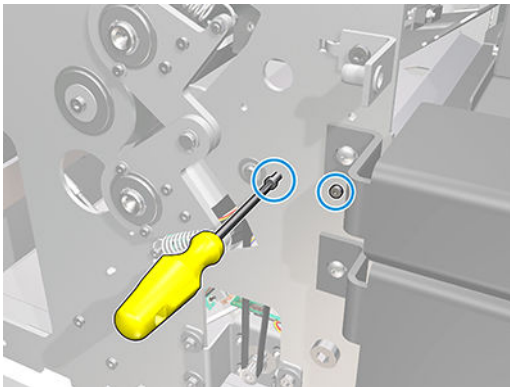
6. Remove the 2 screws.



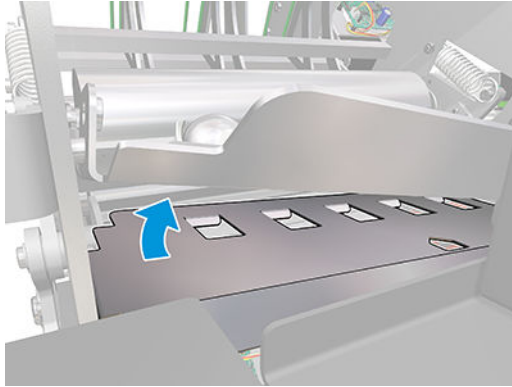
7. Lift up the tray with the balls (be careful not to break the sensor cable).



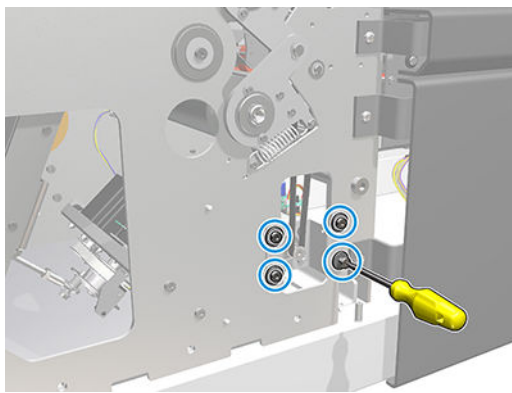
8. Remove the 2 screws.



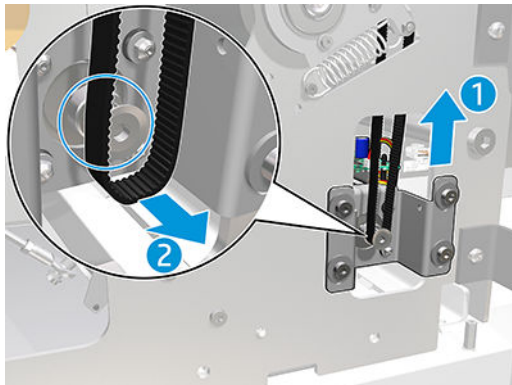
9. Lift up the tray.



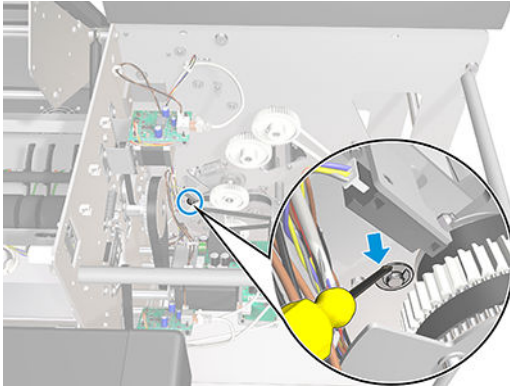
10. Loosen the 4 screws.



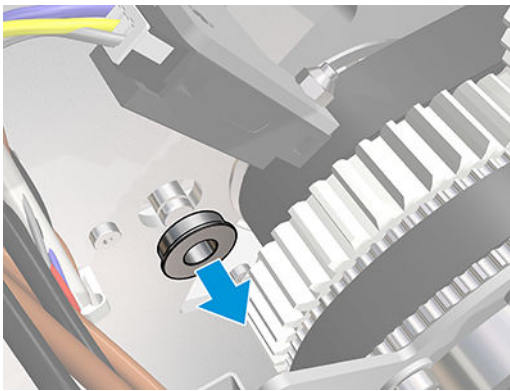
11. Lift up the CF entry motor controller assembly and detach the belt from the motor pulley.



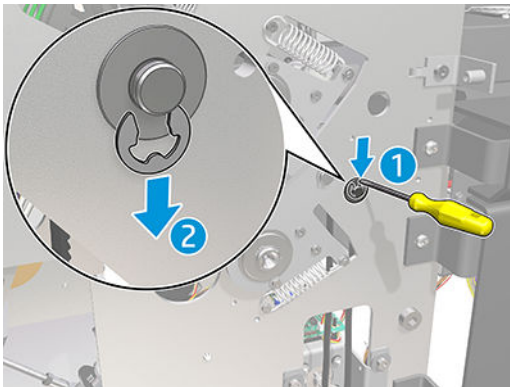
12. Remove the circlip (be careful not to lose it).



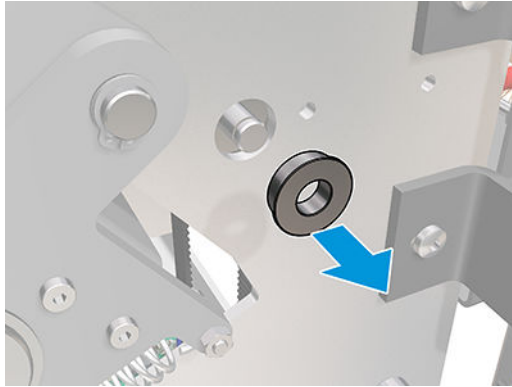
13. Remove the bushing.



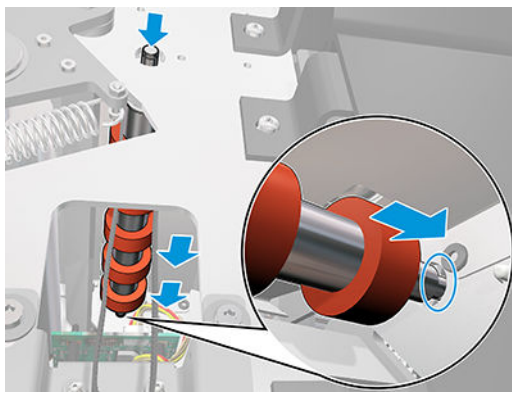
14. Remove the circlip (be careful not to lose it).



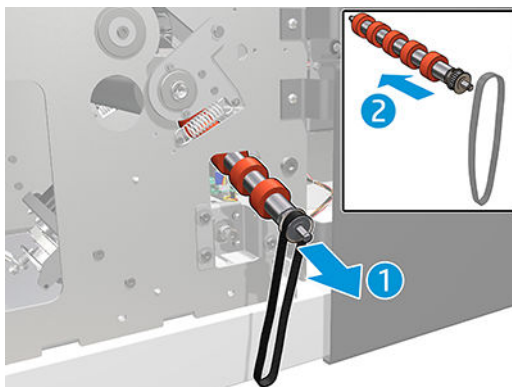
15. Remove the bushing.



16. Slide the CF input-roller to inside.



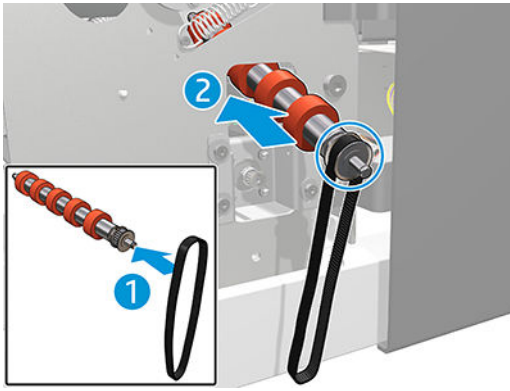
17. Remove the CF input-roller with the belt (be careful not to damage the PCA while you remove it). Then remove the belt from the CF input-roller.



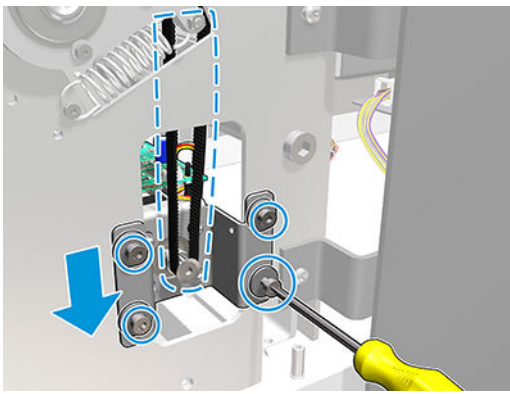
Installation

1. Attach the belt to the CF input-roller and mount it all together.

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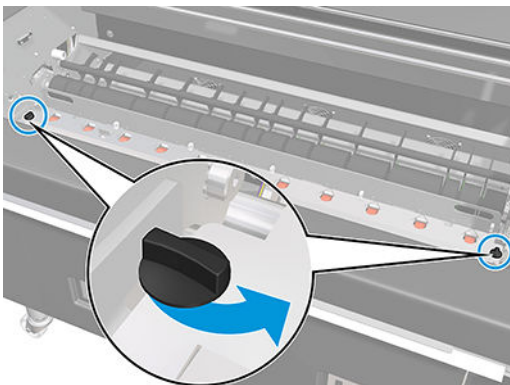
2. Tighten the four screws and, at the same time, push down the CF entry motor controller assembly, tensioning the belt.



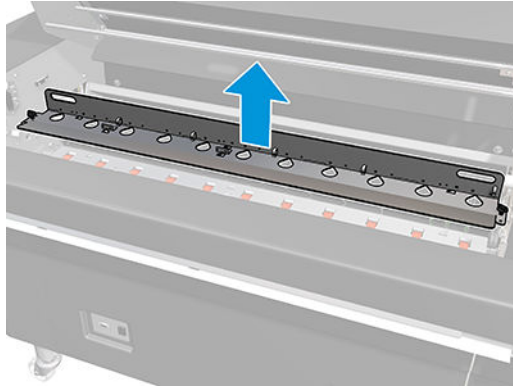
FF entry metal roof (without balls) (3JJ54-67066)

Removal

1. Remove the Diameter 32 mm ball and cage kit. See [Diameter 32 mm ball and cage kit \(K5H75-67091\) – FF input and output on page 1743](#).
2. Remove the FF entry cable – part 2. See [FF entry cable – part 2 \(TBD\) on page 1926](#).
3. Remove the Paper sensors – LB5 (FF input and output). See [Paper sensor – LB5 \(3JJ54-67030\) – FF input and output on page 1744](#).
4. Rotate two hand screws.



5. Remove the FF entry metal roof.



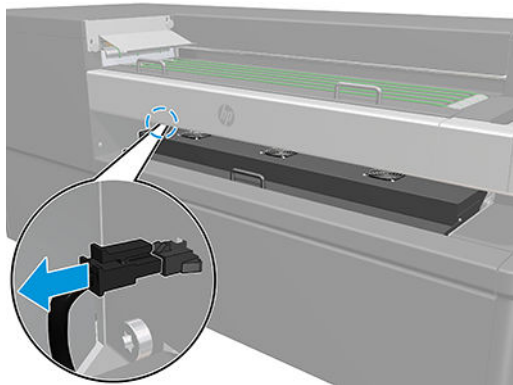
Installation

- ▲ Reverse the removal steps

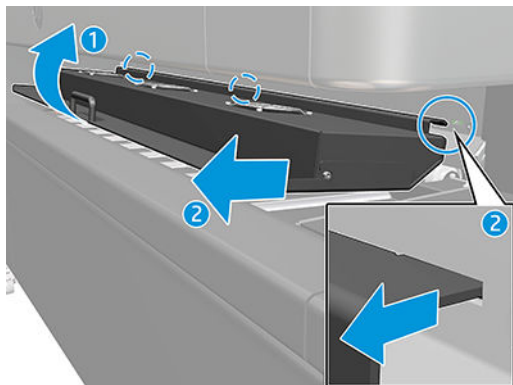
Fan cable adapter (3JJ54-67067)

Removal

1. Disconnect the cable.

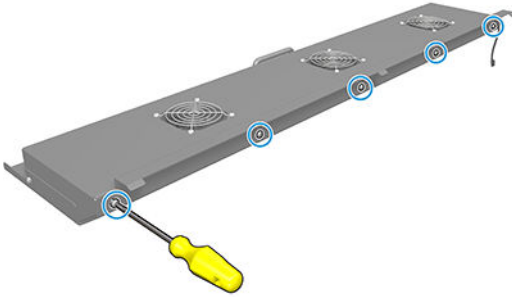


2. Remove the fan unit.

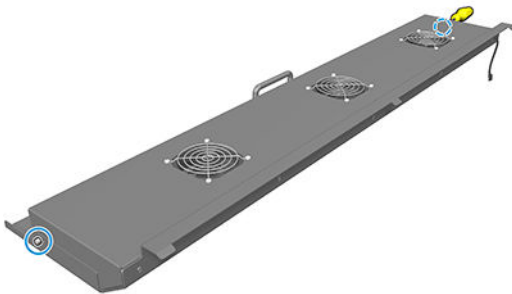


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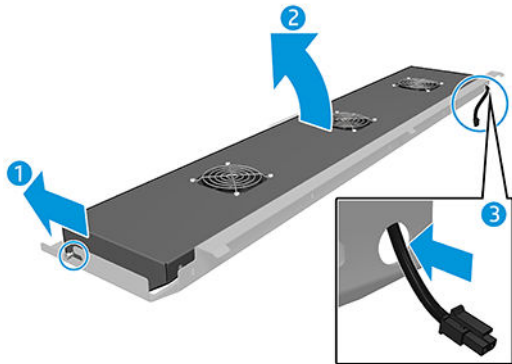
3. Place the Fan unit in safe place and remove five screws.



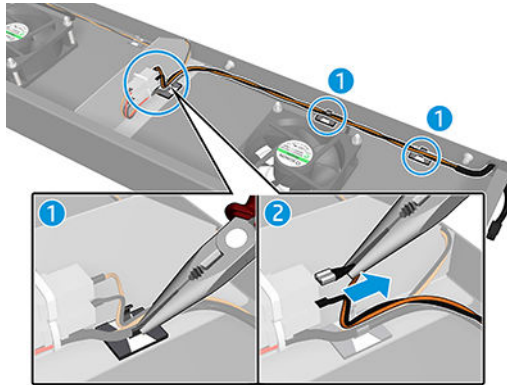
4. Loosen two screws.



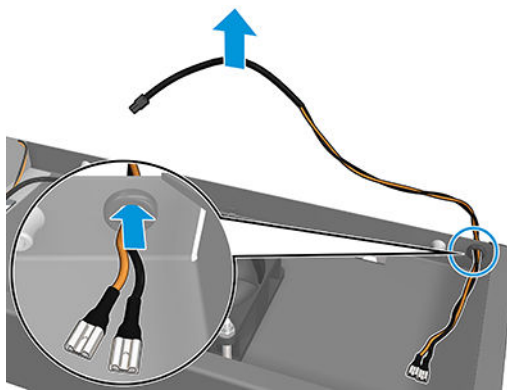
5. Remove the cover.



6. Open three clamps and disconnect the Fan cable adapter.



7. Unroute and remove the cable.



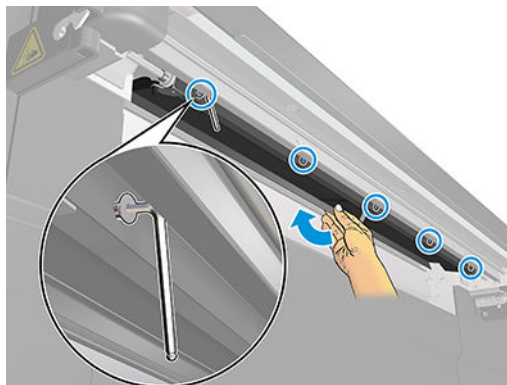
Installation


- ▲ Reverse the removal steps.

FF interface metal sheet flap (3JJ54-67068)

Removal

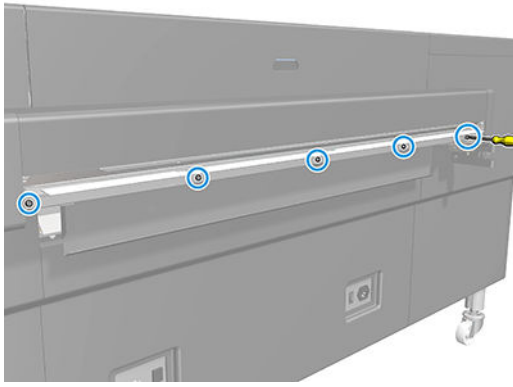
1. Rotate up the interface metal sheet flap and remove five Allen screws.



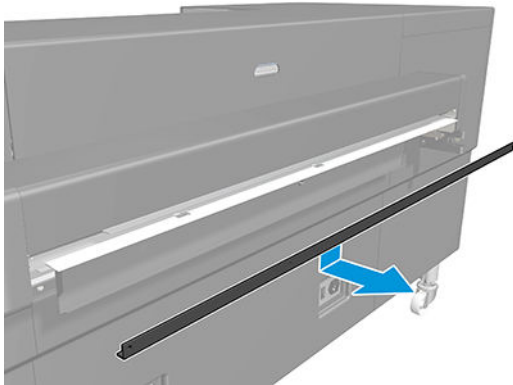
 **NOTE:** if you do not have the proper tool, you can get better access following these steps.

- a. Remove 5 screws.

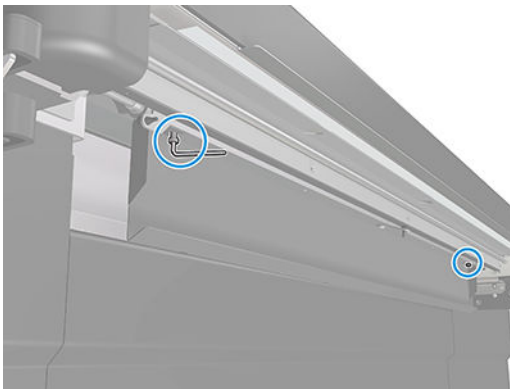
For HP-authorized personnel only



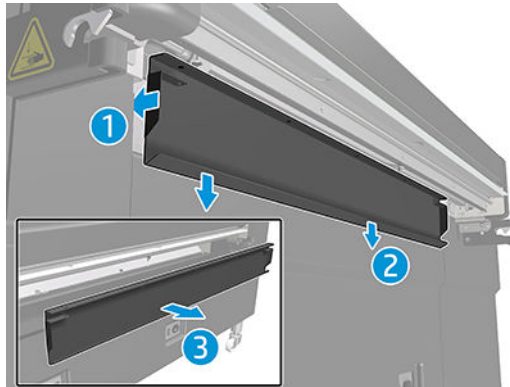
- b. Remove the metal part.



- 2. Remove two Allen screws.



3. Remove the FF interface metal sheet flap.



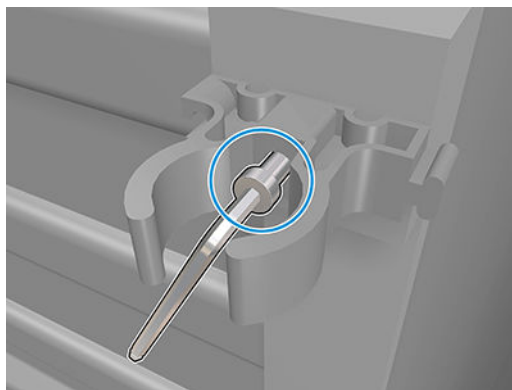
Installation

- ▲ Reverse the removal steps.

Covers hook (3JJ54-67089)

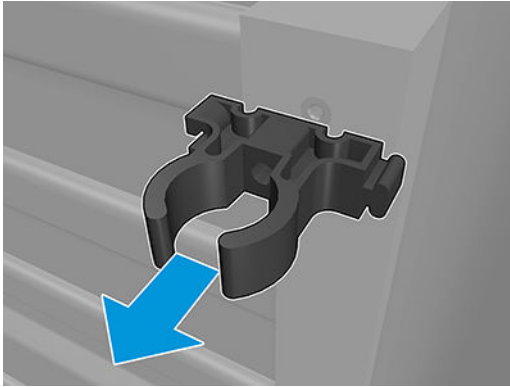
Removal

1. Remove the cover to repair.
 - a. Remove the CF door. See [Cross-fold door \(3JJ54-67069\) on page 1716](#).
 - b. Remove the FF door. See [Fan-fold door \(3JJ54-67070\) on page 1718](#).
2. Remove one screw on the affected cover hook.



For HP-authorized personnel only

3. Remove the cover hook.



Installation

- ▲ Reverse the removal steps

15 High-capacity stacker

- [Operating principles and systems](#)
- [Main stacker specifications](#)
- [Safety requirements](#)
- [High-capacity stacker assembly instructions](#)
- [Stacker service kits](#)
- [Stacker Ee-box diagram \(CZ319-67009\)](#)
- [Printer information](#)
- [Diagnostics and system errors](#)
- [Troubleshooting](#)
- [Diverter Valve adjustment to High Capacity Stacker](#)
- [Stacker parts and diagrams](#)
- [Removal and installation](#)
- [Calibration](#)
- [Moving and reshipping the stacker](#)

Operating principles and systems

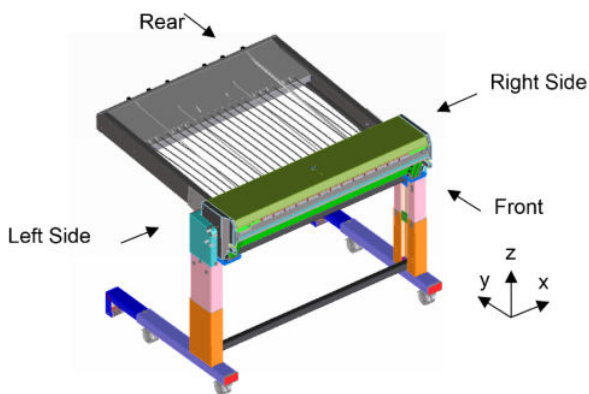
By default, the cut printed pages are sent from the printer to the high-capacity stacker, where the prints are neatly stacked face up.

The stacker can accommodate 500 plain paper sheets of A1 or A0 size at 80 g/m². Its capacity for different paper types or sizes may be lower, depending on density and weight. It can handle all paper types accepted by the printer.

Printed pages are stacked face up and in reverse order with respect to the order of the pages in the document sent (if multipage). To change this order, use the setting **First page on top** in the submission software.

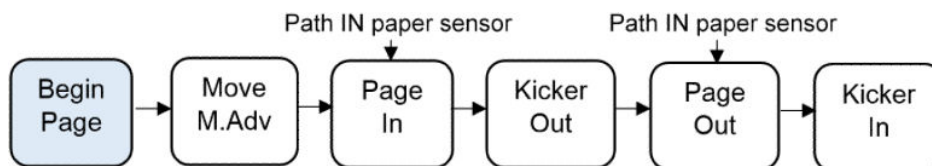
If the printer is printing at full speed, it will take about 20 minutes for the stacker to fill up with paper. You can pause the job queue from the job queue application, if you want to collect part of the job before it finishes.

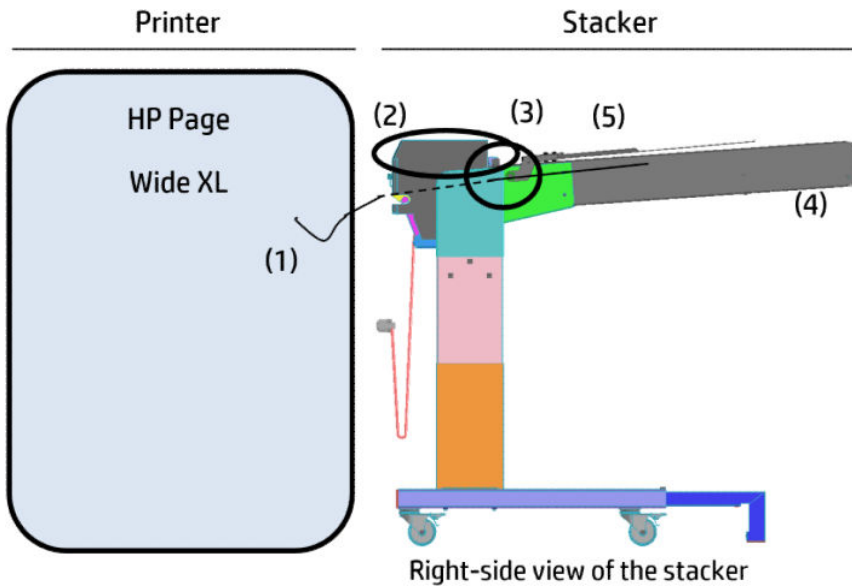
The coordinate system is illustrated below:



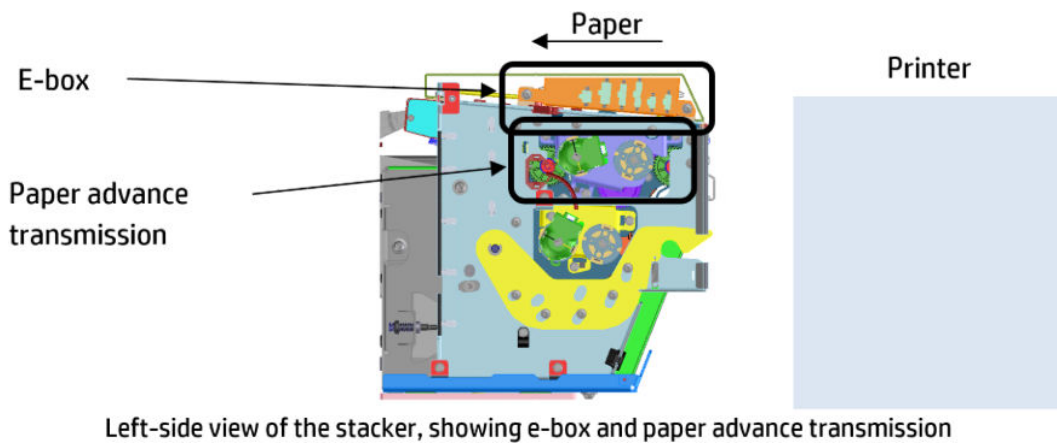
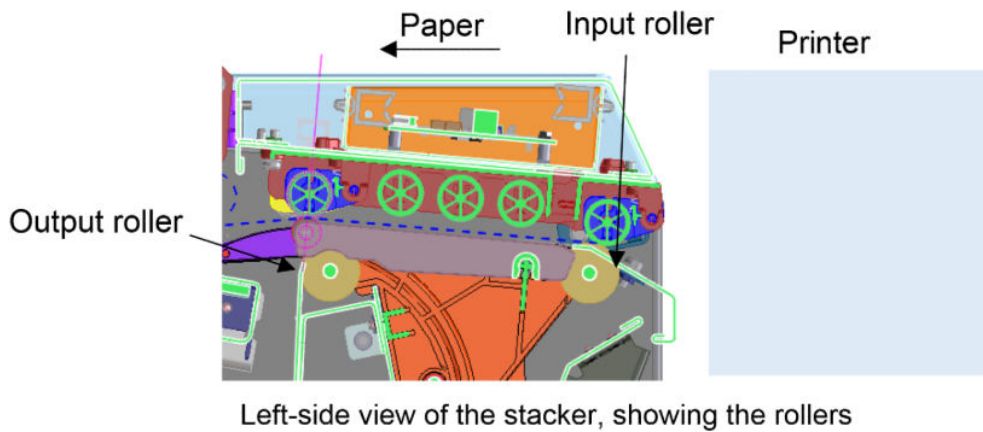
The stacker has two positions depending on the printer's height. If the printer has a three-drawer structure, the stacker's legs should be extended, but when the printer has a two-drawer structure they should be lowered.

The stacker operates as follows:

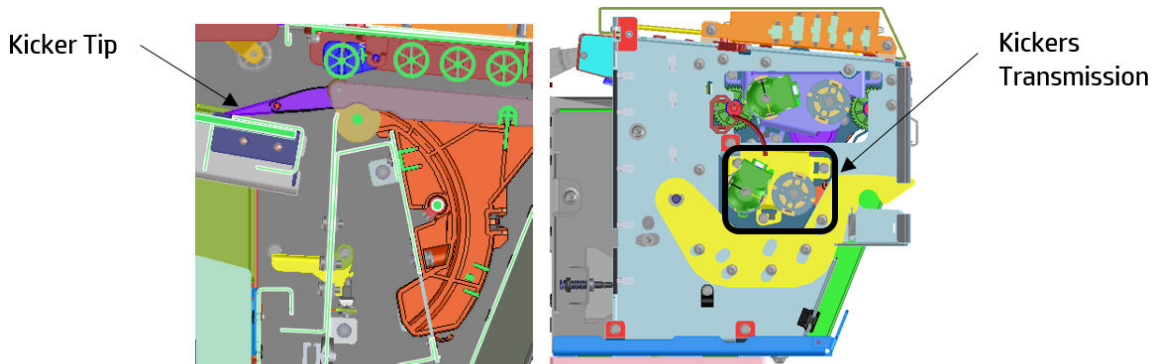




1. Paper bubble between printer and stacker, to avoid overstretching the paper.
2. Paper advance: input and output rollers. They turn on whenever the printer sends a new page, and keep turning until the last page has passed through.

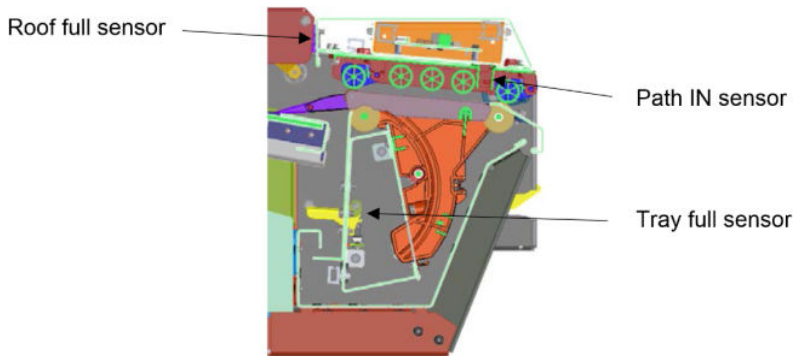


3. Kickers assembly. The kickers move out before the leading edge and move in before the trailing edge.
Leading edge in Path IN sensor + delay: triggers kickers out.
Trailing edge in Path IN sensor + delay: triggers kickers in.



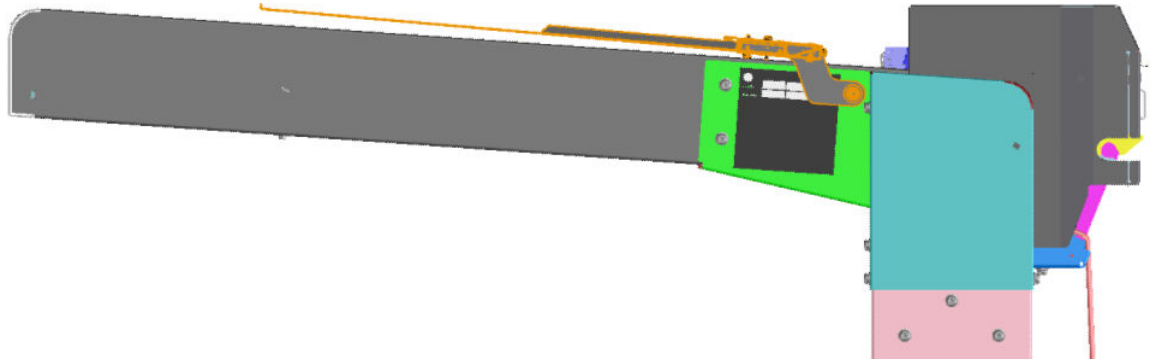
Left Side Views of the Stacker showing the kickers and their transmission

4. Stacker tray. This tray supports the stack of printed paper. It is flexible: the end near the printer bends downwards according to the thickness of the stack.
 - The tray-full sensor detects maximum deflection of the flexible tray.
 - The stacker does not have a heater. Curling is controlled with the U-shaped tray and the accessory roof.
 - The roof-full sensor detects the top of the stack and is triggered before the stack blocks the output path. Used when the paper doesn't weigh enough to move down the tray.




Left-side view of the stacker, showing the sensors

5. Accessory roof, which prevents excessive curling of the paper and ensures that it stays flat on the tray.

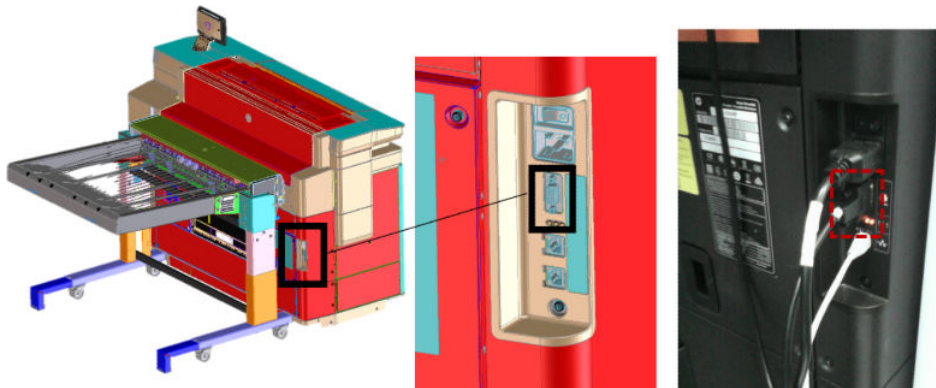


Connect the stacker


To connect the stacker, you must connect the CAN/power cable and activate the two printer sensors on the latches.

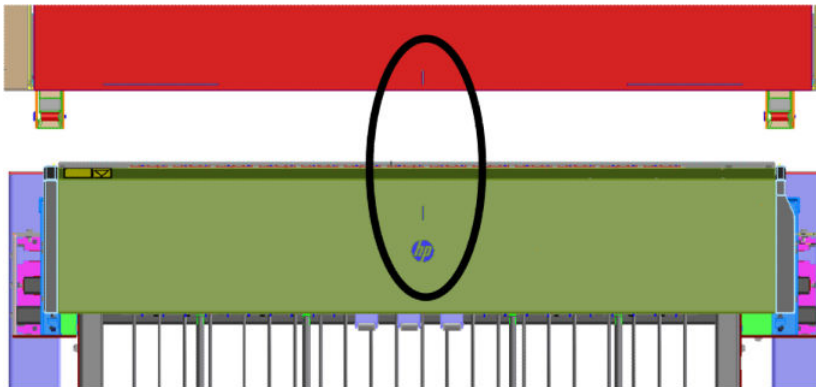
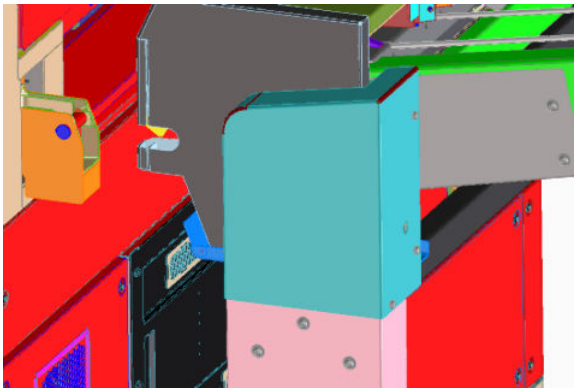
 **NOTE:** There are no LEDs: you interact only with the front panel.

1. Connect the CAN/power cable from the front of the chassis to the printer.

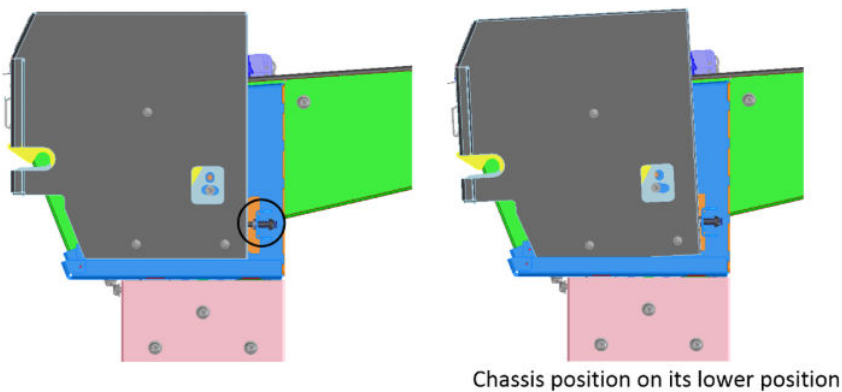


2. Place the stacker to face the printer with the aid of the top central marks on stacker and printer.

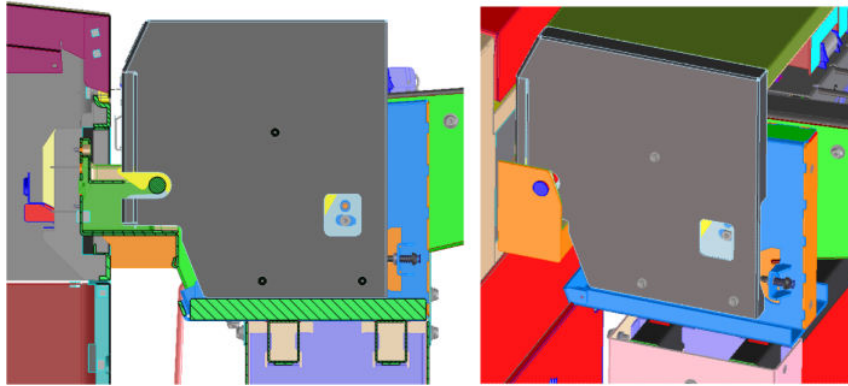
 **NOTE:** The lines are just references for latching. Once latched, they may appear misaligned by 10–20 mm.



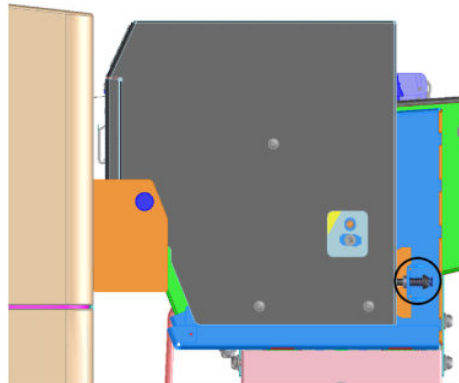
3. Adjust the chassis height.
 - a. Remove the outer covers (CZ319-67021 and CZ319-67022).
 - b. Loosen the indicated screw (on both sides of the chassis) until the chassis is at its lower position.



- c. Latch the stacker to the printer. The stacker may need to be raised by hand to latch it on both sides. Make sure that it is latched on both sides.



- d. Tighten the adjustment screws until they slightly touch the side plate (do not force the screws).



- e. Make sure that the stacker can latch and unlatch smoothly.
- f. Put back the outer covers (see [Outer covers \(CZ319-67021, CZ319-67022\) on page 1992](#)).

Main stacker specifications

HP product number

Parameter	Value	Comments
HP PageWide XL Series High-Capacity Stacker	CZ319A	
NIAGARA_HC_STACKER_ASSY	CZ319-60001	Adjustable stand height (installation), for printers with two or three drawers Not compatible with 3900/4000/4100/4500/4600 series printers

Specifications



Parameter	Value	Comments
Sheet stacking	Face up	The printer ejects the printed page with the image on the upper surface
Stacker capacity	500	When stacking one size of plain paper, A0 or A1 Capacity may be lower for other sizes and paper types
Maximum stacker speed	34 D/min (landscape)	
Maximum linear speed supported	15 ips nominal	15 ips plus the 3% needed to control the bubble
Minimum stacking speed	The minimum speed supported by the printer	
Printer long jobs (longer than E size)	The stacker will accept them	Attended use may be required for longer plots to prevent them from falling on the floor
Maximum sheet size supported on the stacker table	40-inch-wide sheets (E size portrait)	40-inch-wide sheets supported only on the stacker with the addition of indexing (± 5 mm nominal) and the position tolerance of the stacker related to the printer E size supported according to stacker capacity
Minimum sheet size supported	A4 landscape	
Paper justification	Center	
Paper set supported	Full paper set supported by the printer, with 3-inch roll core	
Number of stacker trays	1	No multi-tray
Basket for non-supported paper	No	The interface is provided with the stacker, but the bin textile is provided by HP
Stacker capacity sensors	Full	The stacker will feed back only the Full signal—no incremental capacity nor empty status signal feedback

Specifications (continued)

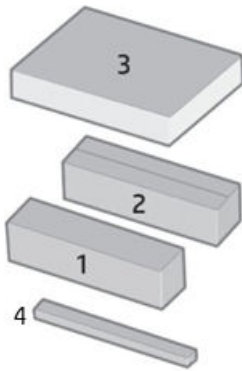
Parameter	Value	Comments
LED indicators	No	The printer's front panel provides stacker feedback
Power cords	N/A	Power is provided by the printer, using the stacker connectivity cable
Voltage range	32 V	Direct supply from the printer, not limited below LPS requirement (100 VA) but to 160 W
Power switch	No	Power is provided by the printer, using the stacker connectivity cable
Power save modes	Sleep and Ready	Levels of power consumption: Sleep: 0 W (printer cuts current output off through the CAN). Ready: 1.5 W.
Stand extensions for dual height support	Two heights, to support two-drawer and three-drawer printers	
Roller casters	Yes	Roller caster with brake so that the stacker can be positioned easily
Levelling and I/F matching with printer	No levelling feet	The stacker engine (mech) can be adjusted in Z to reach Accessory Printer reference
Printer/stacker opening	Front parallel pull/push	
Location of CAN bus and AC connections	Rear, left	Rear side of the printer, opposite to the front-panel side

Safety requirements

Label / Explanation:

Label	Explanation
	Risk of trapped fingers. Do not touch rollers. Danger that your hands may become trapped between rollers.
<p>Located on the front side of the roof</p> 	Risk of trapped fingers. Do not touch gears while moving. Danger that your hands may become trapped between gearwheels.
<p>Located on the bracket covering the gears</p>	

High-capacity stacker assembly instructions



Box contents

1. Stand
2. Chassis
3. Tray
4. Accessory Roof



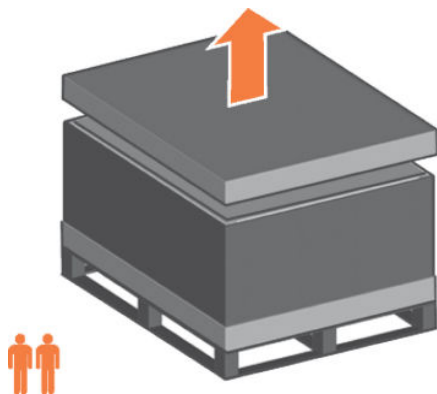
Two people are required for some assembly tasks.



Assembling the stacker can be expected to take about 45 minutes.

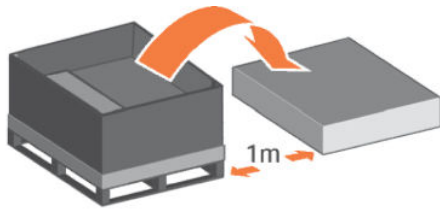
Tools required

- T20 Screwdriver
 - T30 Screwdriver
1. Remove the upper lid of box 1, containing the stand.

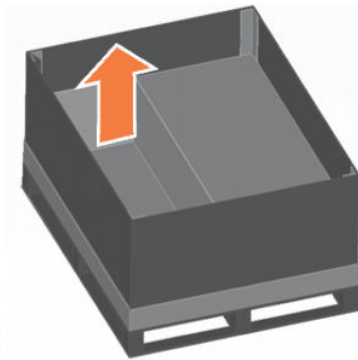


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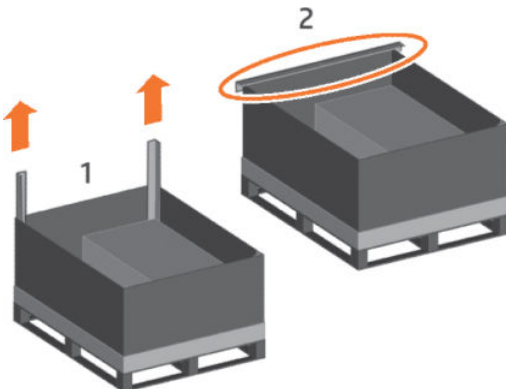
2. Remove the upper tray box and place it carefully on the ground, leaving a minimum of 1 meter between it and the tray.



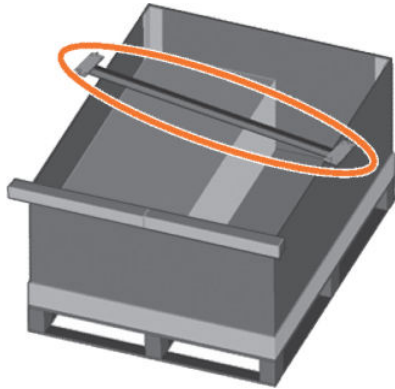
3. Remove the stand pieces from the packaging.



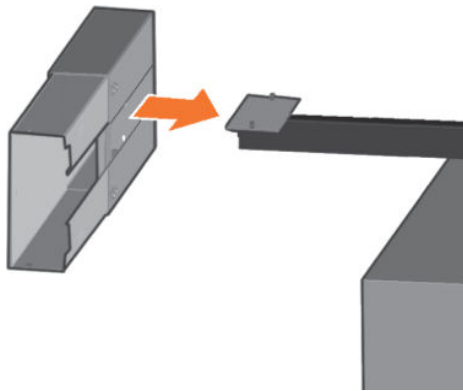
4. Remove the two corners from the packaging stand tray and place them on the box edge.



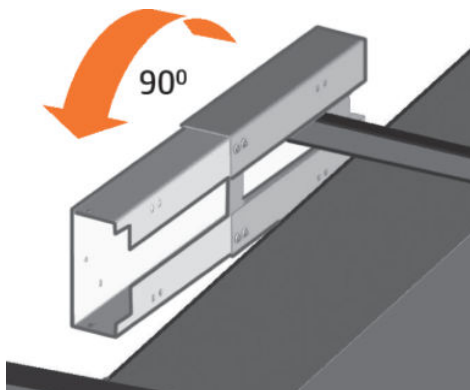
5. Place the bottom crossbar on top of the box.



6. Place the legs horizontally on the crossbar.

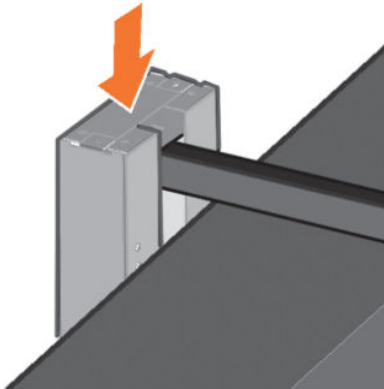


7. Rotate the legs by 90°.

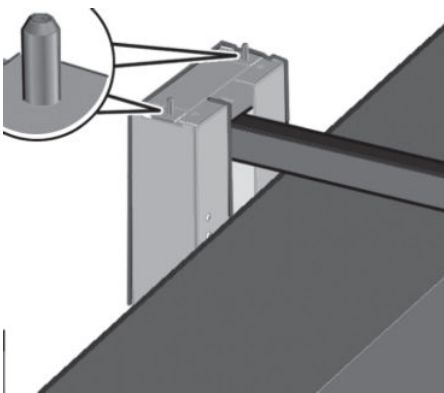


For HP-authorized personnel only

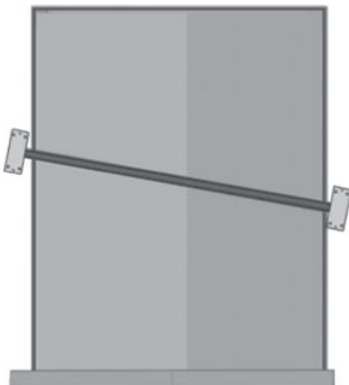
8. Push both legs down to check that they are located correctly. Do not tighten the screws yet.



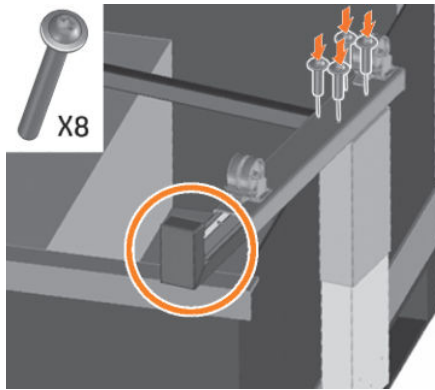
9. Check that the pins protrude.



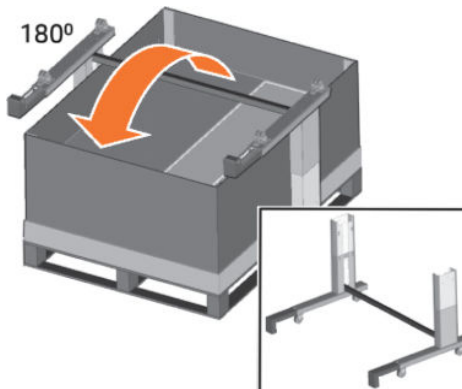
10. Place the legs as shown below.



11. Support the feet on the box corners, and fix both wheel supports to the legs using four screws on each side.

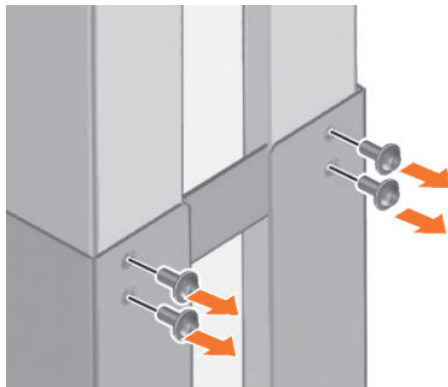


12. Remove the corner and rotate the stand base into the upright position.



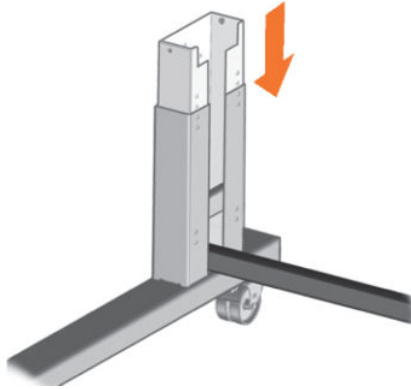
13. 5000 series only: Adjust the stand height for a two-drawer printer.

- a. Remove the four screws from the inside part of each leg, and keep them to use later.

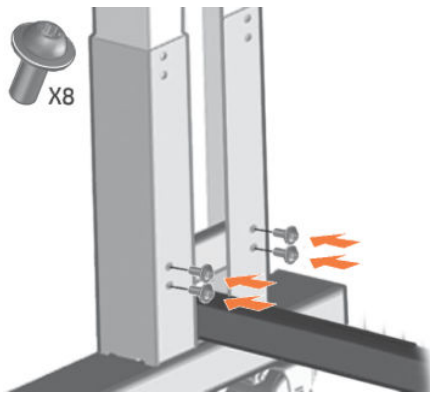


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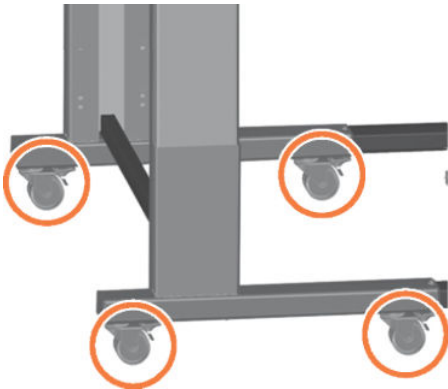
- b. Push the legs down until the holes match.



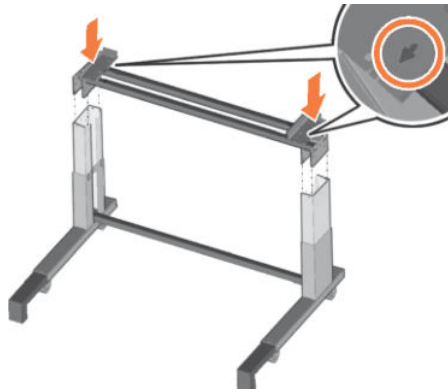
- c. Replace the screws that you have just removed into the holes on both sides.



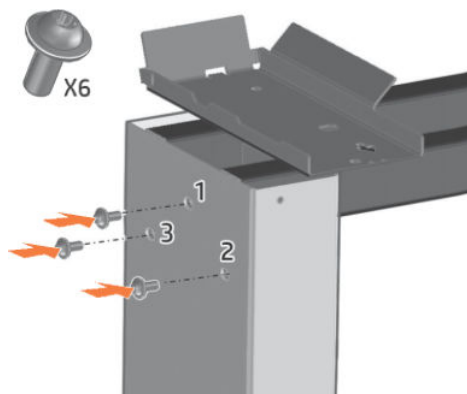
- 14. Lock all four wheels.



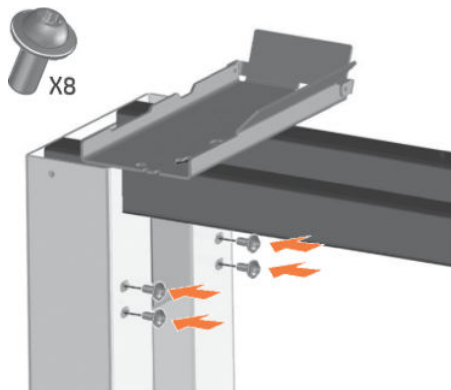
15. Place the crossbar onto the top of the stand base, making sure both arrows are as indicated; the arrows should point towards the long part of the leg.



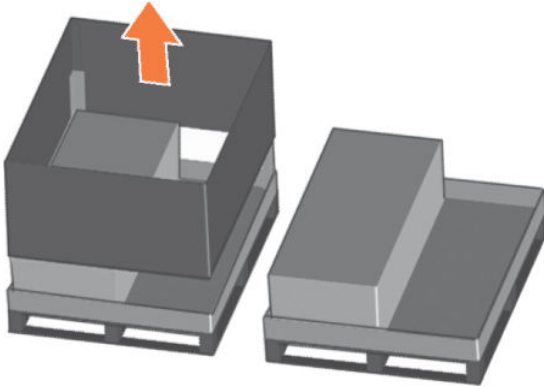
16. Attach the top crossbar to the stand base in the order shown below (1–3), with three screws on the external part of each side.



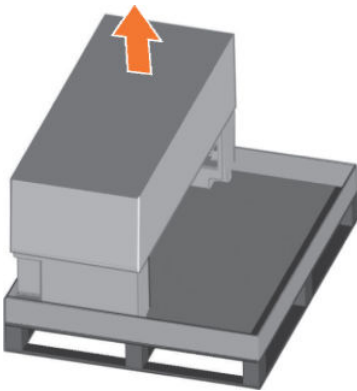
17. Attach the top crossbar with four screws to the inner part of each side.



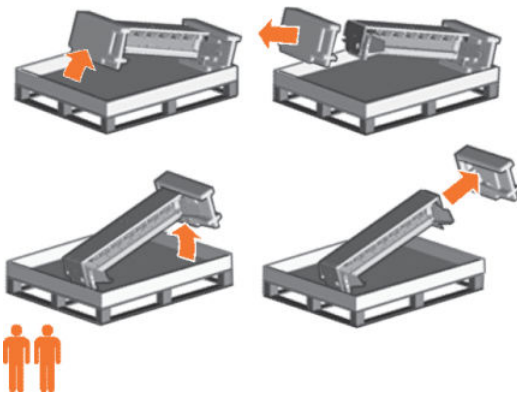
18. Remove the outer sleeve and the stand box.



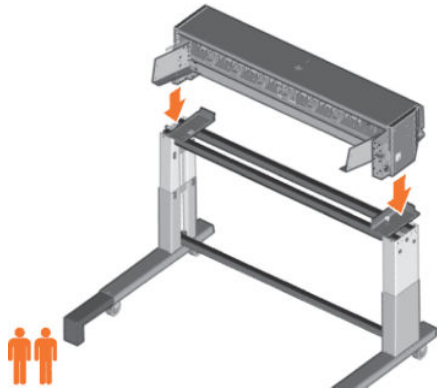
19. Remove the chassis box by lifting it upwards.



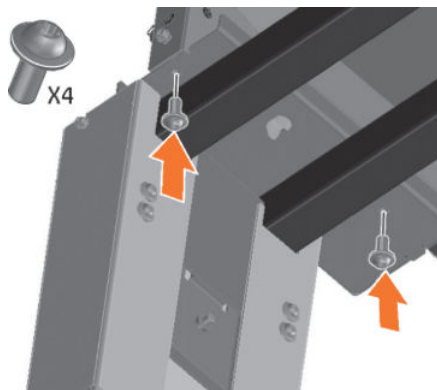
20. Remove the end caps, plastic film, and desiccant bag from the chassis.



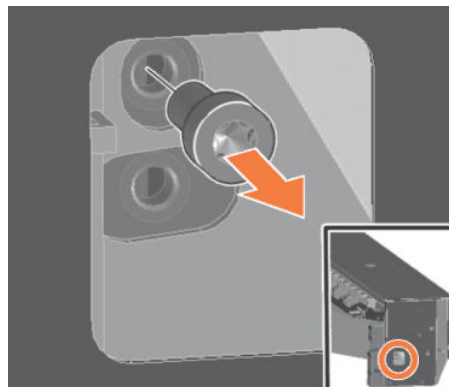
21. Place the chassis onto the stand.



22. Attach the chassis to the stand with two screws on each side.

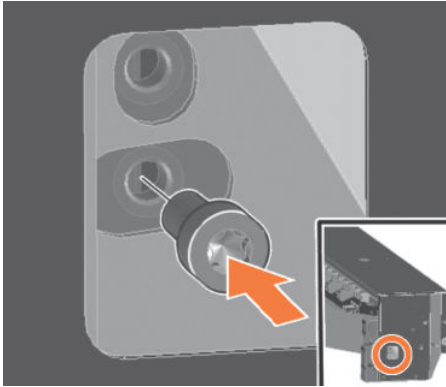


23. Remove the top screw from each side of the chassis, for use in the next step.

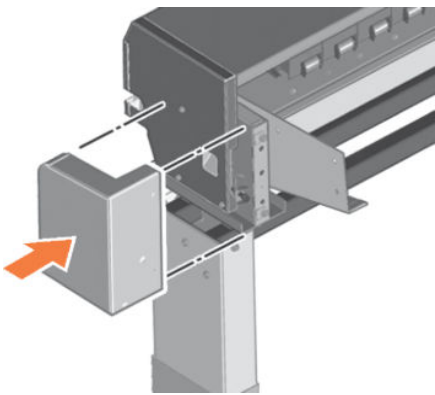


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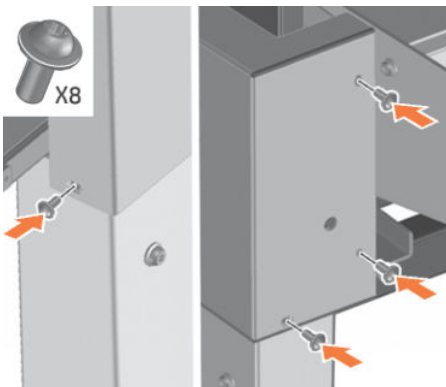
24. Insert the screws from the previous step into the lower holes.



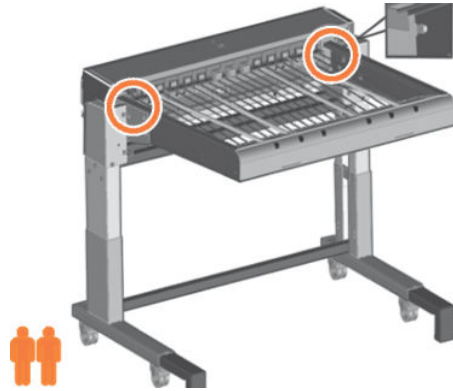
25. Place one lateral cover on each side.



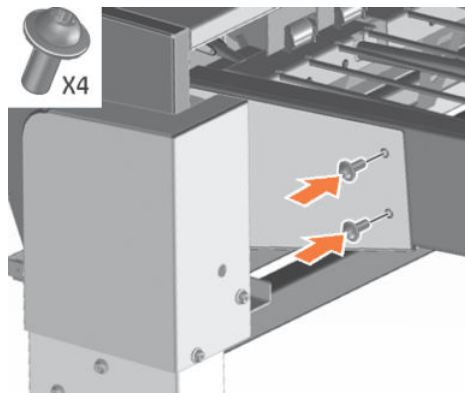
26. Attach the lateral covers with four screws on each side.



27. Insert the tray into the stand.

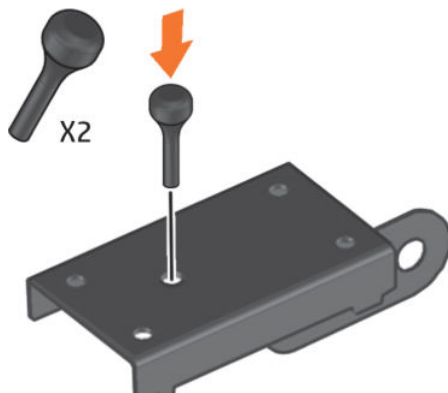


28. Attach the tray with two screws on each side.

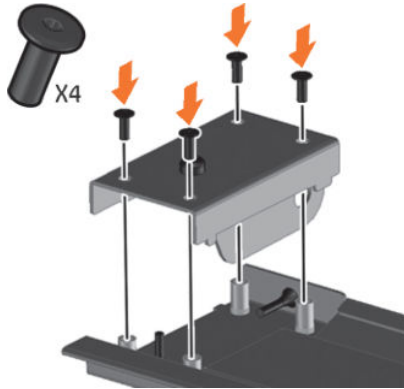


29. Take the Accessory Roof box from the pallet and unpack all components inside.

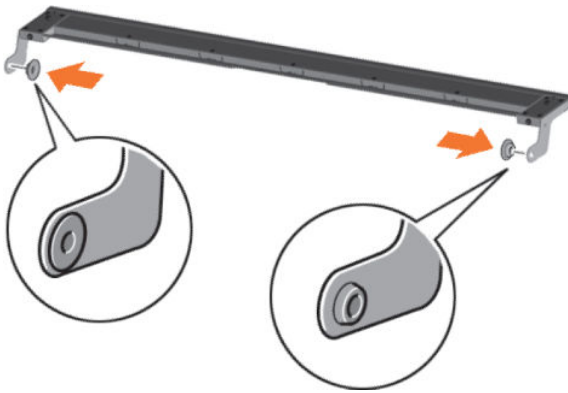
30. Insert one bumper into each of the left and right supports.



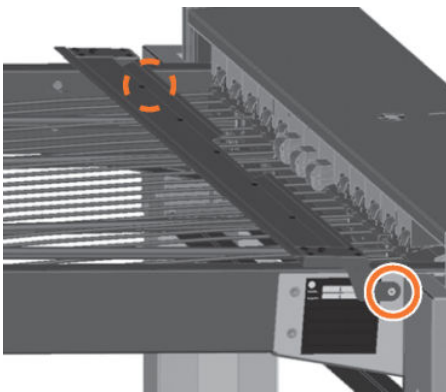
31. Attach the two supports (one on each side) to the main accessory.



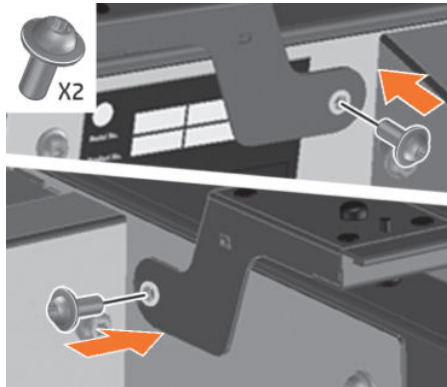
32. Insert the two AC bearings into the accessory roof holes.



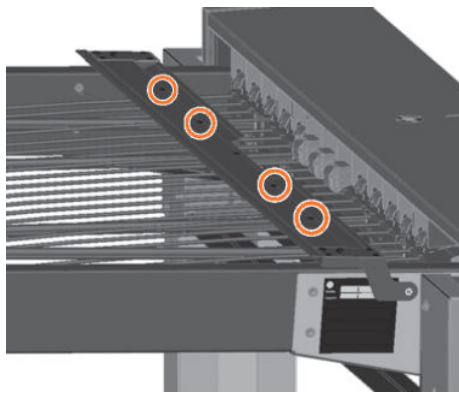
33. Place the accessory roof on top of the stacker and align the bushing holes (both sides) with the screw holes.



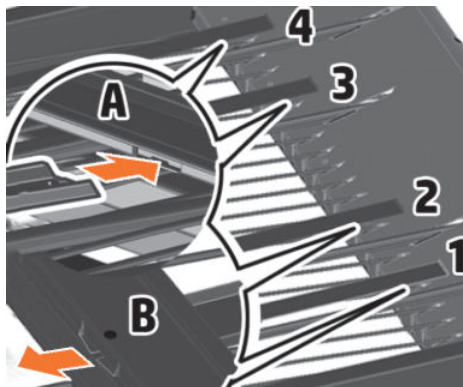
34. Attach the accessory roof with one screw on each side.



35. Partially loosen the four T20 screws in the accessory roof to allow the insertion of the deflectors.

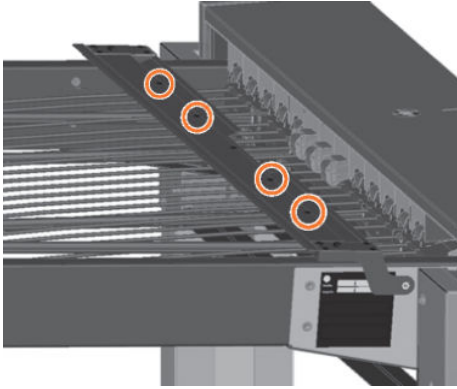


36. Insert the four deflectors into position.



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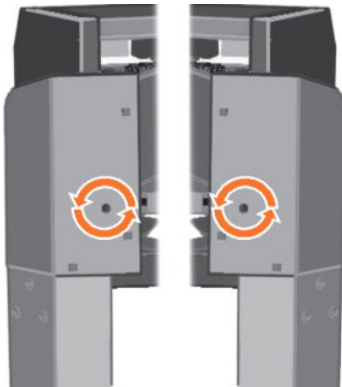
37. Tighten the four T20 screws.



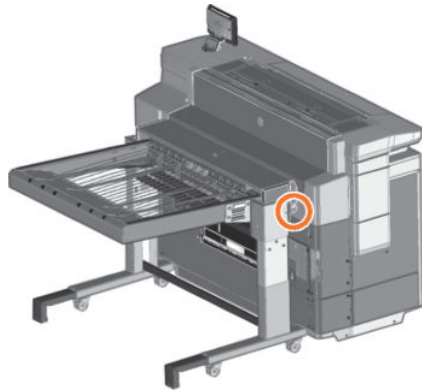
38. If a basket is attached to the printer, rotate it downwards.



39. Loosen a screw on each side until the chassis reaches the lower position.

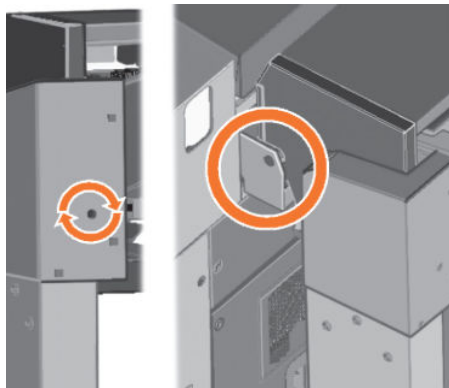


40. Ensure that the front lateral stacker latches face the printer, using the top central marks found on both for reference.

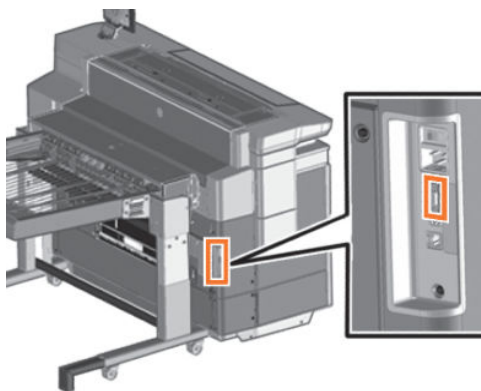


41. Ensure that the latches click on both sides, then tighten the adjustment screws until they just touch the side plate.

 **IMPORTANT:** Do not force or over-tighten the screws.



42. Connect the stacker cable from the back of the tray to the printer.



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43. The printer recognizes and installs the high-capacity stacker. If you wish, select it as the default output destination, and press **Continue**.

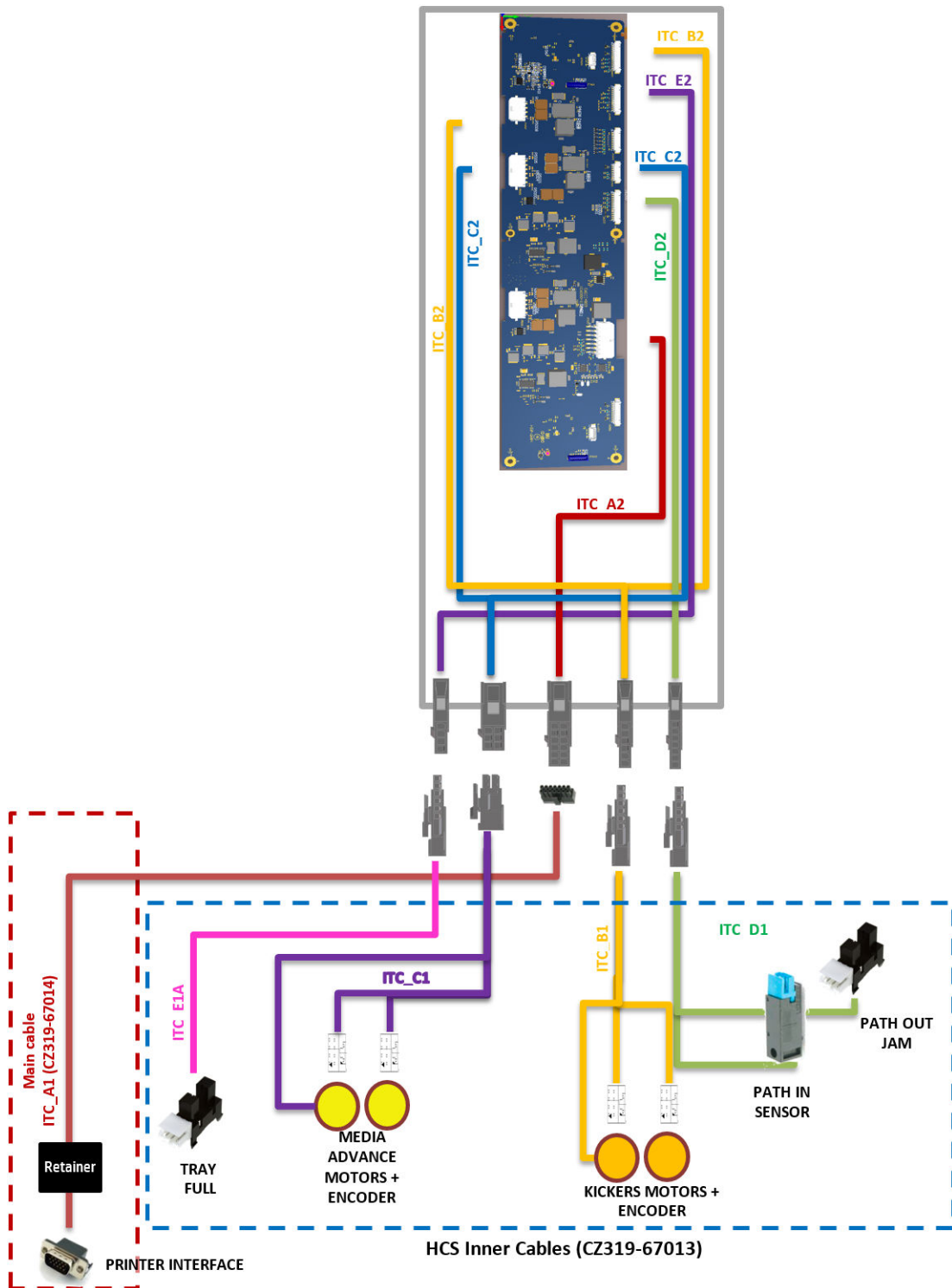
High-capacity stacker configuration	
Default output destination	
<input type="radio"/>	High-capacity stacker
<input type="radio"/>	Basket
Skip	Continue

Stacker service kits

Service parts

Service kit	HP part number	Original part number	Units per stacker	Units in service kit
Mech gears	CZ319-67002	119172416RR	3	1
Kickers shaft	CZ319-67003	119172417RR	1	1
Kickers bracket	CZ319-67004	119172418RR	14	2
Handoff wheel	CZ319-67005	119172419RR	6	2
D wheel handoff	CZ319-67011	119172420RR	7	2
Roof-full sensor	CZ319-67012	119172421RR	1	1
Full-tray sensor	CZ319-67006	119172422RR	1	1
Motor kickers	CZ319-67007	119172423RR	1	1
Motor-MA	CZ319-67008	119172424RR	1	1
HCS inner cables	CZ319-67013	119172425RR	1	1
Main cable	CZ319-67014	119172426RR	1	1
Eebox assembly	CZ319-67009	119172427RR	1	1
Roof pinch assembly	CZ319-67010	119172428RR	13	1
Paper detector	CZ319-67015	119172429RR	1	1
HCS tray	CZ319-67017	119172458RR	1	1
Wheel assembly	CZ319-67016	119172535RR	2	1
HCS stand	CZ319-67018	119172334RR	1	1
Entry platen	CZ319-67019	119172536RR	1	1
Inner antistatic bush	CZ319-67020	119172537RR	13	13
Left outer cover	CZ319-67021	119172538RR	1	1
Right outer cover	CZ319-67022	119172539RR	1	1
Left mech cover	CZ319-67023	119172540RR	1	1
Right mech cover	CZ319-67024	119172541RR	1	1
Roof cover	CZ319-67025	119172542RR	1	1
Accessory roof	CZ319-67026	119172609RR	1	1
Accessory roof deflectors	CZ319-67027	112106180RR	4	4
Mercury grease kit 3 cl syringe	CR357-67090	N/A	0	1

Stacker Ee-box diagram (CZ319-67009)



	HP part number	Description
1	CZ319-67009	Ee-box assembly service kit

	HP part number	Description
2	CZ319-67013	High-capacity stacker inner cables: ITC_B1 (kicker motors), ITC_C1 (paper advance), ITC_D1 (roof sensors), ITC_E1A (tray full)
3	CZ319-67014	Main cable (ITC_A1)

Printer information

How to find the firmware version

From the front panel's home screen, select the paper app and then the **Paper output** tab.

Firmware update

The firmware is updated with the printer's updates.

Product number

CZ319A

Serial number

CCYMDVLXXX in barcode and readable serial number.

CC = "US" or "SG" or "JP" or "MY" or "ES", indicating the manufacturing country (ES = Spain).

Y = year of the decade, i.e. '3' for 1993.

M= nth month, base 36 (alphanumeric).

D = nth day, base 36.

V = version number of the model, base 36 (default is 1). It changes when there is a big change in the product, not backwards compatible that seriously affects Support Org. We start with V=1.

L = top level line number, base 30. There is a single manufacturing line for HCS, so L=1.

X = base 30 character.

The XXX number would be reset to 001 only at midnight. The number would not reset during changing of models.

Base 36 includes alphanumeric (0-9) and (A-Z).

Base 30 is same as base 36, EXCEPT A, E, I, O, U, and L.

So, ESOCK..., the K corresponds to a 20th (base36). C corresponds to December.

Sample:

	CC
ES11M1101K	ES
COUNTRY	ES
YEAR	2001
MONTH	1
DAY	22
VERSION NUMBER	1

	CC
LINE	1
XXX	47

EXPLODED					
Y	M	D	V	L	XXX
1	1	M	1	1	01K

PMK

Paper advance assembly

PMK A1

- **Name:** SRV-MOTOR-GEARS-HCSTACKER-MEDIA-PATH-MOVEMENT-LENGTH
- **Life value:** 900000 linear km × A0
- **Resettable:** Yes
- **Description:** Total distance made by rollers; to replace motor and transmission (PM kit)
- **Comments:** Motor and idle gears may be affected. Parts are designed to last for life.

PMK A1

- **Name:** SRV-MOTOR-GEARS-HC-STACKER-MEDIA-PATH-NUMBER-OF-ACTIVATIONS
- **Life value:** 900000 paper cycles
- **Resettable:** Yes
- **Description:** Total start-ups made by rollers; to replace motor and transmission (PM kit)
- **Comments:** Motor and idle gears may be affected. Parts are designed to last for life.

Kickers assembly

PMK B

- **Name:** SRV-MOTOR-GEARS-HC-STACKER-KICKERS-NUMBER-OF-ACTIVATIONS
- **Life value:** 900000 paper cycles
- **Resettable:** Yes
- **Description:** Total kickers activations in high-capacity stacker; to replace motor and transmission (PM kit)
- **Comments:** Kickers assembly, shaft, and kickers motor may be affected. Parts are designed to last for life.

Counters

The purpose of this service utility is to reset the internal life counters.

There are two submenus that allow you to:

- Reset all the counters related to a Preventive Maintenance Kit (PMK)
- Reset only the counters related to a specific replaced part

 **NOTE:** When a PMK is changed, you must reset the counter.

Run the Reset Life Counters utility as follows:

1. In the Service utilities submenu, select Reset life counters.
2. Enter the 4-digit second-level access code 5 4 9 4 and press **OK**.
3. Select **Reset maintenance kit usage** to reset the life counter for all parts included in a PMK.

Counter A

- **Name:** HC-STACKER-NUMBER-OF-PAGES-TOTAL-ACCESSORY
- **Resettable:** No
- **Description:** Number of pages processed by the high-capacity stacker

Counter B

- **Name:** HC-STACKER-NUMBER-OF-FULL
- **Resettable:** No
- **Description:** Number of times that the high-capacity stacker has been filled



Counter C

- **Name:** HC-STACKER-NUMBER-OF-MEDIA-JAMS-DETECTED
- **Resettable:** No
- **Description:** Number of jams that have occurred in the high-capacity stacker

Diagnostics and system errors

How to run a diagnostic test

To activate the sequence:

1. Power key
2.  icon turned on
3. Press  icon for a while
4. All icons turned on

5. Press the right boot sequence
6. Icons twinkle to confirm that a particular boot mode has been selected

Diagnostic menu access is activated through the icons at the sides of the front panel, using the following sequences, plus the power key:

- hp-service-1: , , 
- hp-service-1: , , 

Service diagnostic tools

The service menu on the front panel provides the following tools to troubleshoot the high-capacity stacker:

- STACKER_DIAGNOSTIC_SENSORS: Display on the front panel the output of each sensor.
 - Tray-full sensor
 - Roof-full sensor
 - Path-in sensor
- STACKER_DIAGNOSTIC_MOVE_FEEDING_ROLLERS: Move rollers at a different speeds.
- STACKER_DIAGNOSTIC_MOVE_KICKERS: Move kickers at different printing speeds.
 - Kickers out
 - Kickers in
 - Move kickers in/out
- STACKER_DIAGNOSTIC_SIMULATE_PRINTING: Allows manual feeding of a sheet of paper into the stacker and simulates the process on the stacker activating sensors, rollers, and kickers.

System error codes

1005-0000-0008 Generic – Jam in stacker

Call agent:

1. Check that there is no paper jammed or any other agent in the paper path.
2. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
3. Detach and unplug the HC Stacker and print using another output destination.

Service engineer:

1. Check that the paper-presence sensors are properly placed, unbroken, and undamaged.
2. Replace the paper-presence sensors.

1005-0000-0090 Generic – Accessory not supported by SKU

Call agent:

1. Check if the printer SKU (part no.) supports the HC Stacker accessory.
2. Ensure that the high capacity stacker cable is properly connected to the printer.
3. If, after rebooting, the issue persists, your support representative is needed to repair the printer on site.
4. Detach and unplug the HC Stacker and print using another output destination.

Service engineer:

1. Reconnect and check the high-capacity stacker's printer interface cable, and replace it if necessary.
2. Check that your printer supports this accessory.

1005-0001-0003 High-capacity stacker – Firmware/hardware mismatch

Call agent:

1. Ensure that the high capacity stacker cable is properly connected to the printer.
2. Check that the printer has the latest firmware; if not, update it. See [USB upgrade on page 225](#).
3. If the issue persists after restarting, your support representative must repair the stacker on site.
4. Detach and unplug the HC Stacker and print using another output destination.

Service engineer:

1. Check that the high-capacity stacker PCA isn't broken or damaged and properly connected.
2. Update firmware to the latest version.
3. Replace the HCS PCA.

1005-0001-0011 High-Capacity Stacker PCA – Voltage too high

Call agent:

1. Ensure that the high-capacity stacker cable is properly connected to the printer.
2. If the issue persists after restarting, your support representative must repair the printer on site.
3. Detach and unplug the HC Stacker and print using another output destination.

Service engineer:

1. Check whether the voltage at the customer's site is too high.
2. Check the voltage in the High-Capacity Stacker PCA.
3. Check that the AC cable is unbroken, undamaged, and properly connected; replace it if necessary.
4. Replace the High-Capacity Stacker PCA.

1005-0001-0012 High-Capacity Stacker PCA – Voltage too low

Call agent:

1. Ensure that the high-capacity stacker cable is properly connected to the printer.
2. If the issue persists after restarting, your support representative must repair the printer on site.
3. Detach and unplug the HC Stacker and print using another output destination.

Service engineer:

1. Check whether the voltage at the customer's site is too low.
2. Check the voltage in the High-Capacity Stacker PCA.
3. Check that the AC cable is unbroken, undamaged, and properly connected; replace it if necessary.
4. Replace the High-Capacity Stacker PCA.

1005-0001-0043 High-capacity stacker – Memory fail

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Detach and unplug the HC Stacker and print using another output destination.

Service engineer:

- ▲ Replace the High-Capacity Stacker PCA.

1005-0002-0059 Roller motor – Servo shutdown

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Run the diagnostic test [1005-06 Move feed rollers on page 519](#).
3. Detach and unplug the HC Stacker and print using another output destination.

Service engineer:

1. Empty the tray and check that the rollers assembly (rollers, gears, motors) is not blocked by a paper jam or anything else preventing its movement.
2. Use the high-capacity stacker diagnostic to move the feeding rollers.
3. Replace the paper-advance motor assembly if necessary.
4. Replace the idle gears if necessary.

1005-0002-0060 Roller motor – Direction test

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Detach and unplug the HC Stacker and print using another output destination.

Service engineer:

1. Check that movement is not blocked.
2. Check that the encoder cable is plugged in.
3. Replace the motor assembly if necessary.
4. Replace the paper-advance motor cable if necessary.
5. Replace the High-Capacity Stacker PCA if necessary.

1005-0002-0061 Roller motor – Electrical fault

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Detach and unplug the HC Stacker and print using another output destination.

Service engineer:

1. Empty the tray and check that the rollers assembly (rollers, gears, motors) is not blocked by a paper jam or anything else preventing its movement.
2. Check that the encoder and motor cables are plugged in.
3. Use the high-capacity stacker diagnostic to move the feeding rollers.
4. Replace the paper-advance motor assembly if necessary.
5. Replace the idle gears if necessary.

1005-0002-0063 Roller motor – Driver fault

Call agent:

1. If the issue persists after restarting, your support representative must repair the printer on site.
2. Detach and unplug the HC Stacker and print using another output destination.

Service engineer:

1. Empty the tray and check that the rollers assembly (rollers, gears, motors) is not blocked by a paper jam or anything else preventing its movement.
2. Use the high-capacity stacker diagnostic to move the feeding rollers.
3. Replace the High-Capacity Stacker PCA if necessary.

1005-0003-0047 Kickers motor – Homing issue

Call agent:

1. Check that the kickers are able to complete the movement kickers out/kickers in, during the initialization of the high-capacity stacker.
2. If the issue persists after restarting, your support representative must repair the stacker on site.
3. Detach and unplug the HC Stacker and print using another output destination.

Service engineer:

1. Use the high-capacity stacker diagnostic to move the kickers.
2. Empty the tray and check that the kickers assembly is not blocked by a paper jam or anything else preventing its movement.
3. Check that all kicker tips are aligned.
4. Check that all kickers move in and out at the same time. Check that there are no obstacles the movement of the kickers.
5. Replace the kickers assembly if one kicker does not move with the others.
6. Replace the kickers motor assembly if necessary.
7. Replace the kicker shaft if necessary.

1005-0003-0059 Kickers motor – Servo shutdown

Call agent:

1. Check that the kickers are able to complete the movement kickers out/kickers in, during the initialization of the high-capacity stacker.
2. If the issue persists after restarting, your support representative must repair the printer on site.
3. Detach and unplug the HC Stacker and print using another output destination.

Service engineer:

1. Empty the tray and check that the kickers assembly is not blocked by a paper jam or anything else preventing its movement.
2. Run the diagnostic test [1005-07 Move kickers on page 520](#).
3. Check that all kicker tips are aligned.
4. Check that all kickers move in and out at the same time. Check that there are no obstacles the movement of the kickers.
5. Replace the kickers assembly if one kicker does not move with the others.
6. Replace the kickers motor assembly if necessary.
7. Replace the kicker shaft if necessary.

1005-0003-0060 Kickers motor – Direction test

Call agent:

1. Check that the kickers are able to complete the movement kickers out/kickers in, during the initialization of the high-capacity stacker.
2. If the issue persists after restarting, your support representative must repair the printer on site.
3. Detach and unplug the HC Stacker and print using another output destination.

Service engineer:

1. Empty the tray and check that the kickers assembly is not blocked by a paper jam or anything else preventing its movement.
2. Check that the encoder is plugged in. If so, replace the kickers motor or the kickers cable.
3. Use the high-capacity stacker diagnostic to move the kickers.

1005-0003-0061 Kickers motor – Electrical fault

Call agent:

1. Check that the kickers are able to complete the movement kickers out/kickers in, during the initialization of the high-capacity stacker.
2. If the issue persists after restarting, your support representative must repair the stacker on site.
3. Detach and unplug the HC Stacker and print using another output destination.

Service engineer:

1. Empty the tray and check that the kickers assembly is not blocked by a paper jam or anything else preventing its movement.
2. Check that the encoder and motor cables are plugged in.
3. Use the high-capacity stacker diagnostic to move the kickers.
4. Replace the kickers motor assembly if necessary.
5. Replace the kickers cable if necessary.
6. Replace the High-Capacity Stacker PCA if necessary.

1005-0003-0063 Kickers motor – Driver fault

Call agent:

1. If the issue persists after restarting, your support representative must repair the stacker on site.
2. Detach and unplug the HC Stacker and print using another output destination.

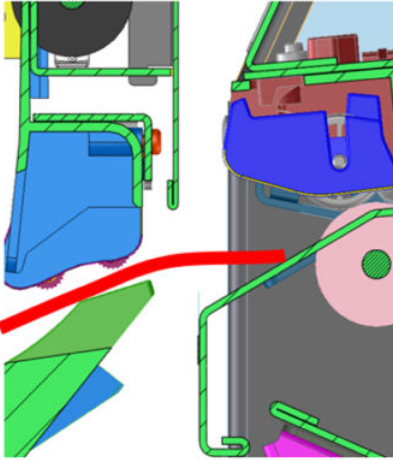
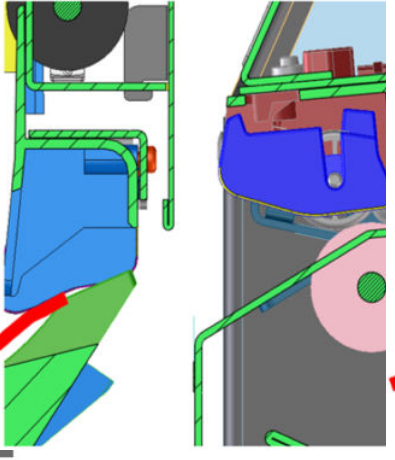
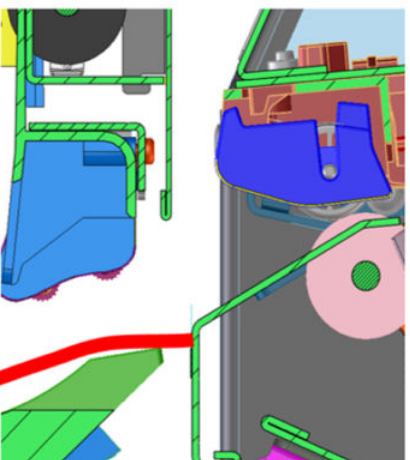
Service engineer:

1. Empty the tray and check that the kickers assembly is not blocked by a paper jam or anything else preventing its movement.
2. Use the high-capacity stacker diagnostic to move the kickers.
3. Replace the High-Capacity Stacker PCA if necessary.

Troubleshooting

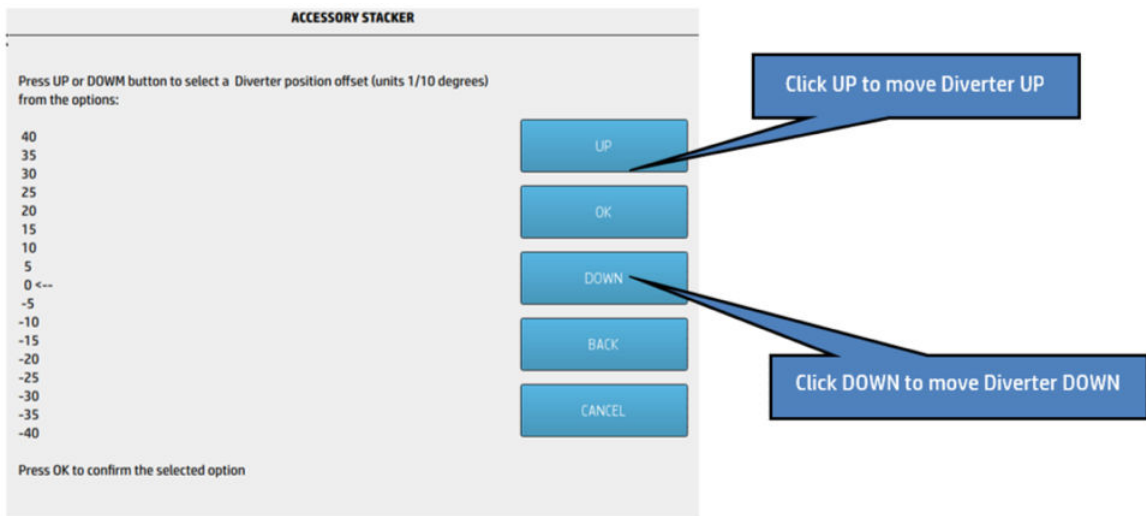
Issue	Recommendations
Paper leading-edge jams between stacker and printer (paper-advance rollers are moving)	<p>Readjust the high-capacity stacker height; try to lower it as far as possible.</p> <p>Check the straightness of the stand. Disassemble the stacker tray, loosen and tighten all stand screws with the stand in the straight position.</p> <p>Adjust Diverter Valve position on Service Menu. See Diverter Valve adjustment below.</p>
The printer does not detect the high-capacity stacker.	<p>Check that the high-capacity stacker is correctly latched to the printer.</p> <p>Readjust the high-capacity stacker height; try to lower it as far as possible.</p> <p>Check the straightness of the stand. Disassemble the stacker tray, loosen and tighten all stand screws with the stand in the straight position.</p>
The high-capacity stacker reports itself full after the tray has been completely emptied.	Check the roof-full and tray-full sensors.
The roof-full sensor is activated when the tray is empty.	Check the roof-full sensor in the sensor diagnostics.
The tray-full sensor is activated when the tray is empty.	Check the tray-full sensor in the sensor diagnostics.
The high-capacity stacker detects a paper jam after the paper path has been completely cleared.	Check the path-in sensor in the sensor diagnostics.
Bulldozing (more than 100 mm) occurs in the tray with plain paper.	<p>Check whether the kickers press the paper while stacking.</p> <p>Check the tray height adjustment and increase pre-load using the tray adjustment process.</p>
Bulldozing (more than 100 mm) occurs in the tray with photo paper.	This can be due to static in low-humidity conditions; try using a humidifier to increase the humidity in the room.
Brush marks can be seen on prints.	Change the antistatic brush brackets on the roof.
Paper jams occur as the paper lands on the tray.	Avoid dense area fills on the leading edge of the paper, especially at corners.
Paper trailing-edge is not properly ejected from the output rollers and does not fall cleanly into the tray.	Raise the accessory roof to the vertical position.
Paper curls on the tray: the leading-edge slows down and the paper rolls over itself.	Lower the accessory roof to the horizontal position.
Jam in Kickers area. Paper trailing edge is hit and wrinkled by kickers.	Raise the accessory roof to the vertical position.

Diverter Valve adjustment to High Capacity Stacker

DV Optimal Position	DV Too High	DV Too Low
		
Smooth transfer	Paper channel closed, interference with starwheels – jams or marks	Plot's leading edge hits lower HCS entrance and creates jams
Do nothing	Adjust Diverter Valve DOWN	Adjust Diverter Valve UP

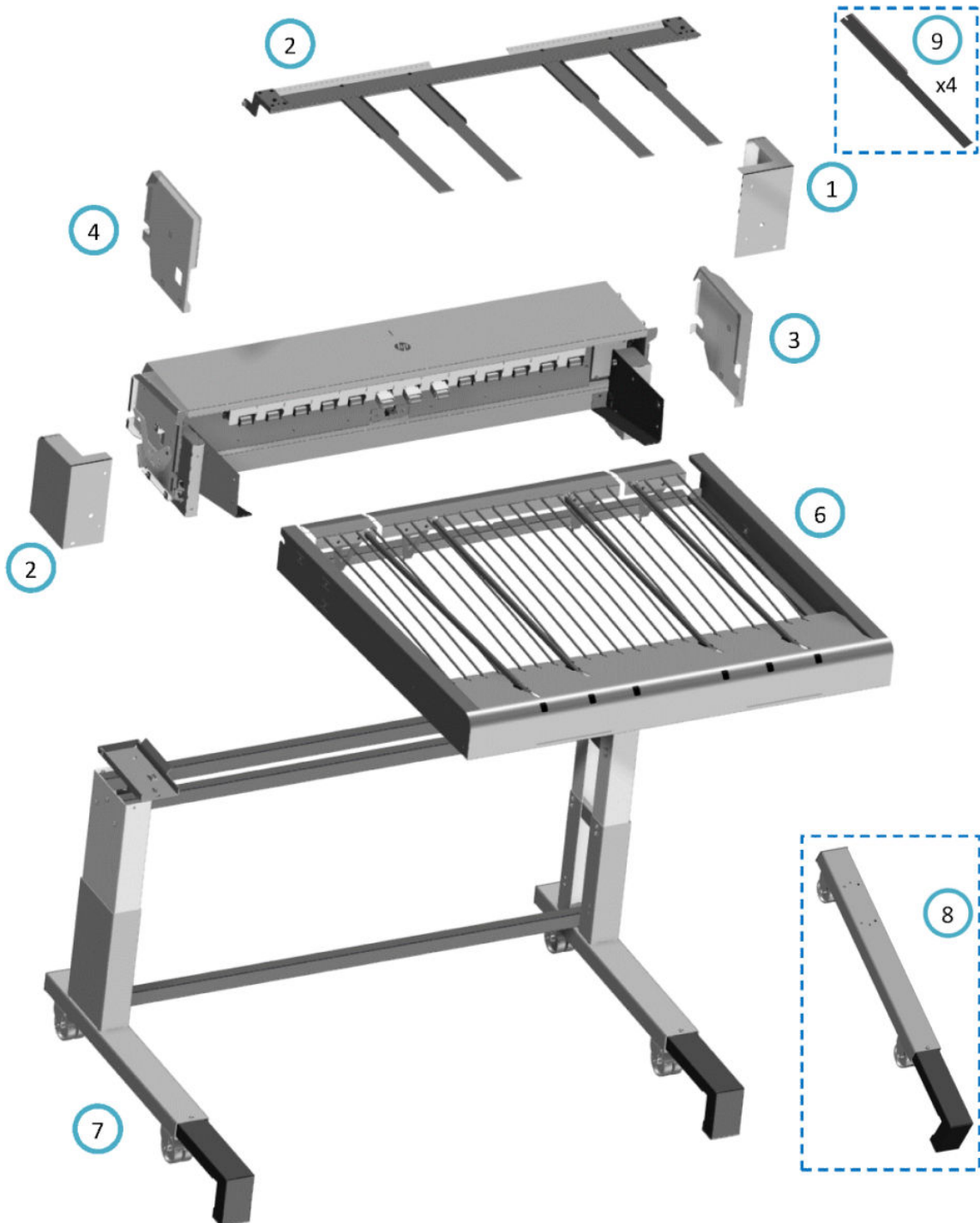
Diverter Valve position adjustment can be done through Front Panel on the Service Menu:

→ Settings/Service menu/ Accessory Utilities/HC Stacker Utilities/Utilities/Calibrate Diverter Position.



Stacker parts and diagrams

Covers, stand, tray, and accessory roof

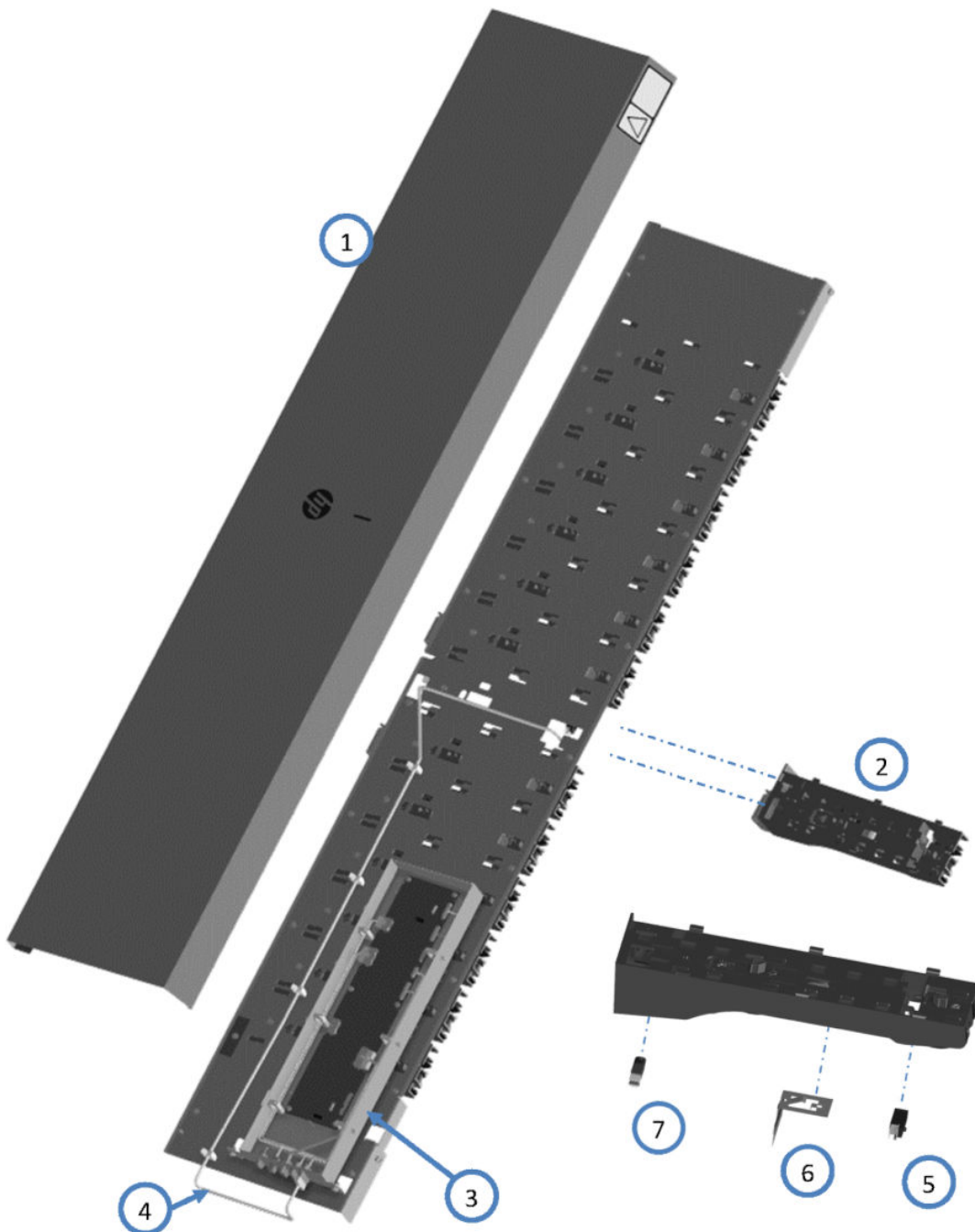


	HP part number	Description
1	CZ319-67021	Left outer cover
2	CZ319-67022	Right outer cover

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	HP part number	Description
3	CZ319-67023	Left chassis cover
4	CZ319-67024	Right chassis cover
5	CZ319-67026	Accessory roof
6	CZ319-67017	Tray
7	CZ319-67018	Stand
8	CZ319-67016	Wheel assembly

Roof

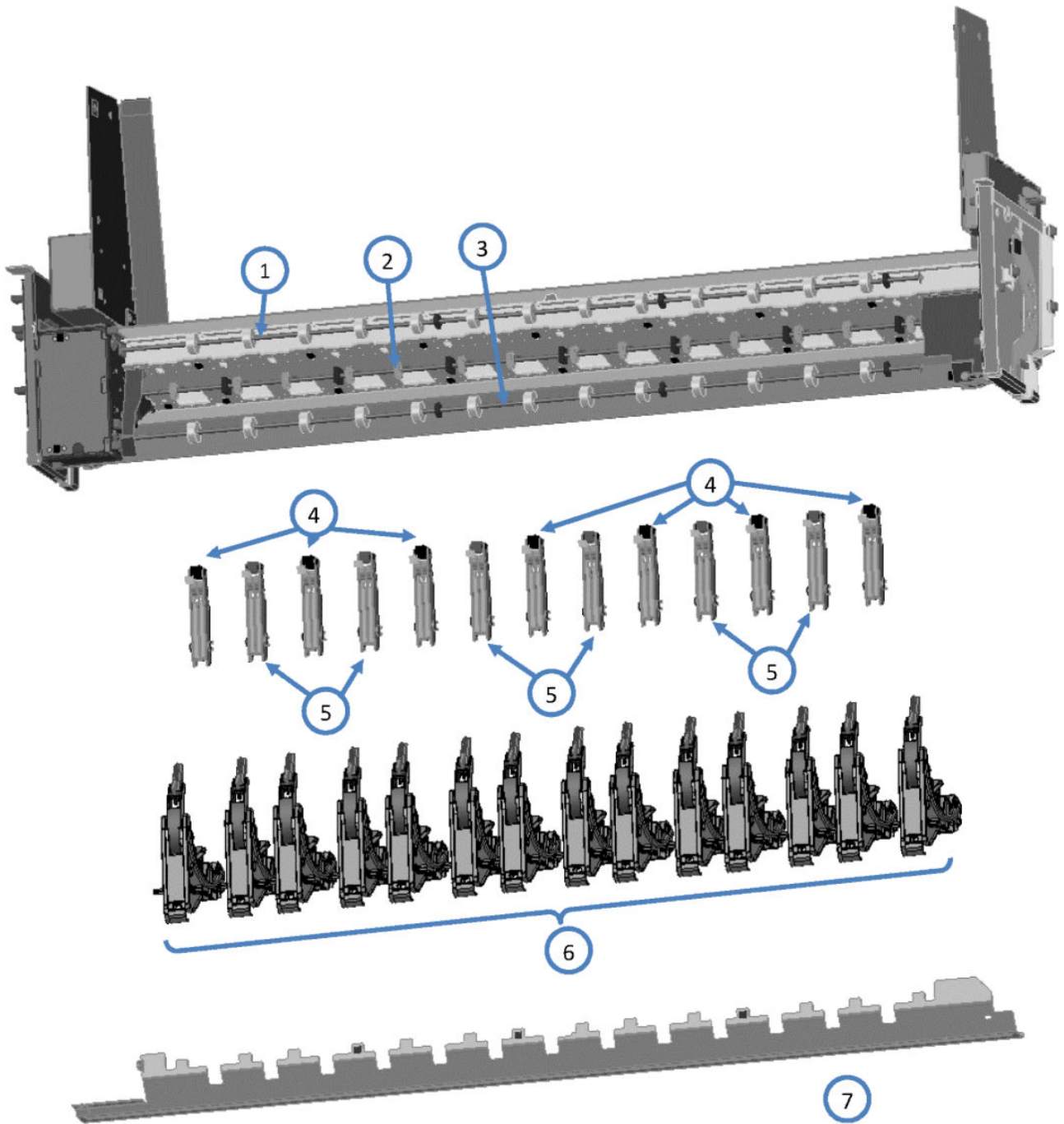


HP part number	Description
1 CZ319-67025	Roof cover
2 CZ319-67010	Roof pinch assembly
3 CZ319-67009	Ee-box
4 CZ319-67013	Roof sensor cable (HCS Inner Cables service kit)
5 CZ319-67015	Paper detector

For HP-authorized personnel only

	HP part number	Description
6	CZ319-67020	Inner antistatic brush
7	CZ319-67012	Roof-full sensor

Chassis

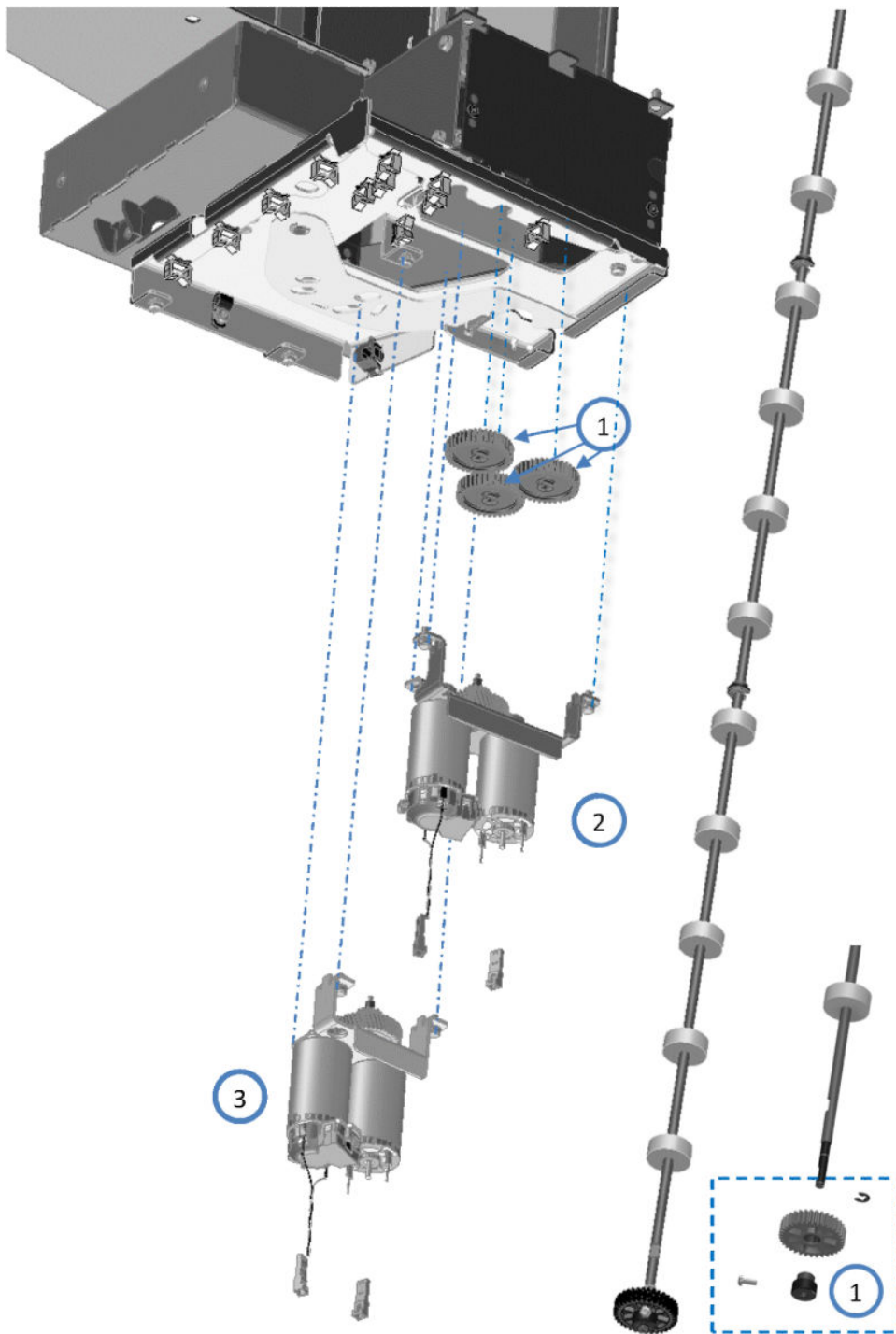


HP part number	Description
1	– Output roller
2	CZ319-67003 Kicker shaft
3	– Input roller
4	CZ319-67011 D wheel handoff
5	CZ319-67005 Handoff wheel

For HP-authorized personnel only

	HP part number	Description
6	CZ319-67004	Kicker bracket
7	CZ319-67019	Entry platen

Motors area



HP part number	Description
1 CZ319-67002	Mech gears: Gearwheel #1, gearwheel #2, insert, M3 screw, circlip d4
2 CZ319-67008	Paper-advance motor
3 CZ319-67007	Kicker motor

Removal and installation

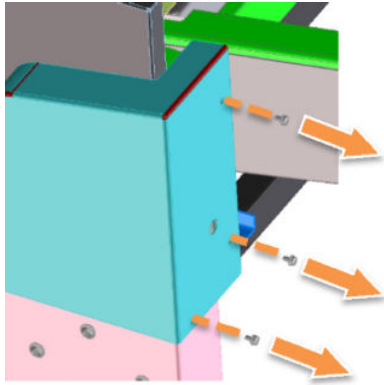
- [Outer covers \(CZ319-67021, CZ319-67022\)](#)
- [Accessory roof \(CZ319-67026\)](#)
- [Accessory roof deflectors \(CZ319-67027\)](#)
- [Tray \(CZ319-67017\)](#)
- [Incline the chassis for servicing \(service position\)](#)
- [Right and left chassis covers \(CZ319-67023, CZ319-67024\)](#)
- [Roof](#)
- [Roof cover \(CZ319-67025\)](#)
- [Roof pinch assembly \(CZ319-67010\)](#)
- [Roof antistatic brush \(CZ319-67020\)](#)
- [Roof sensors](#)
- [Tray-full sensor \(CZ319-67006\)](#)
- [Ee-box \(CZ319-67009\)](#)
- [Inner cables and main cable \(CZ319-67013, CZ319-67014\)](#)
- [Paper-advance motor \(CZ319-67008\)](#)
- [Kicker motor \(CZ319-67007\)](#)
- [Entry platen \(CZ319-67019\)](#)
- [Handoff wheels \(CZ319-67005, CZ319-67011\)](#)
- [Input rollers](#)
- [Output rollers](#)
- [Kicker brackets \(CZ319-67004\)](#)
- [Kickers shaft \(CZ319-67003\)](#)
- [Gears \(CZ319-67002\)](#)
- [Chassis](#)
- [Stand \(CZ319-67018\)](#)
- [Wheel assy \(CZ319-67016\)](#)

Outer covers (CZ319-67021, CZ319-67022)

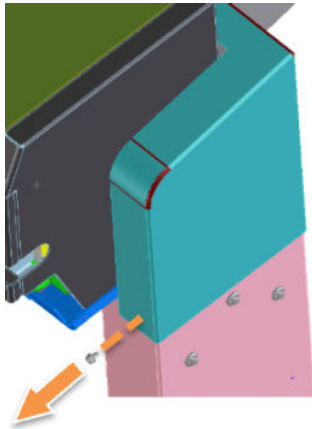
Remove the outer covers (left CZ319-67021, right CZ319-67022) located on both sides of the stacker by removing the four T30 screws.

Removal (same for left and right)

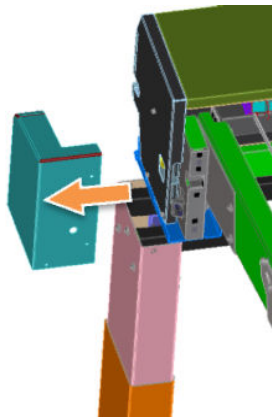
1. Remove the three T30 screws at the rear.



2. Remove the T30 screw at the front.



3. Remove the outer cover.



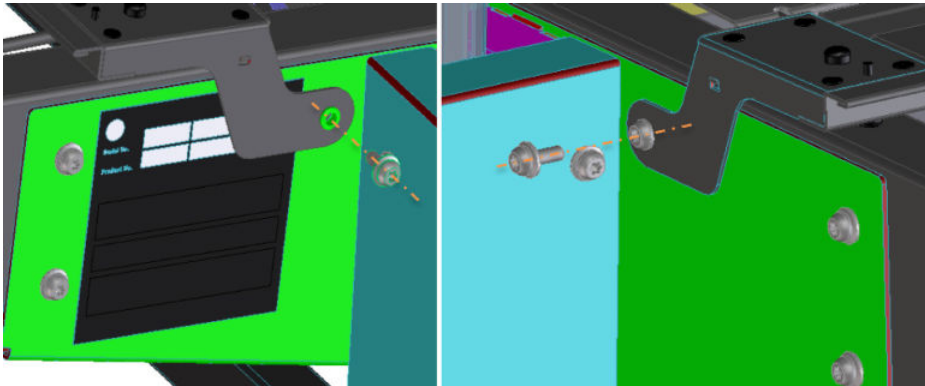
Installation

- ▲ To install, perform the removal operation in reverse.

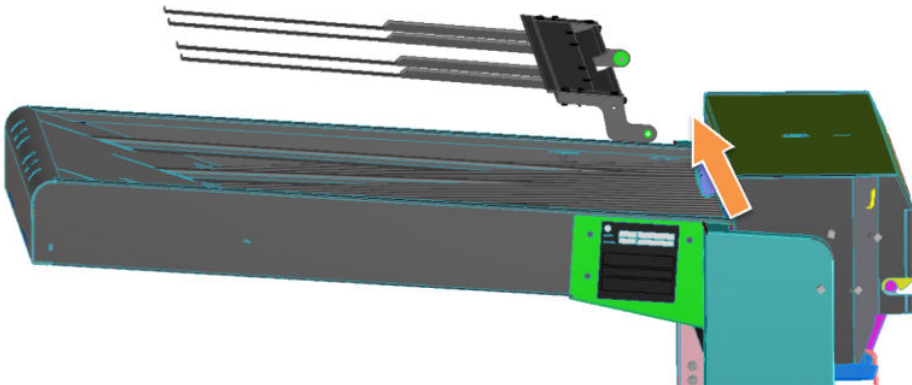
Accessory roof (CZ319-67026)

Removal

1. Remove the two screws that attach the accessory roof to the stacker (one on each side).



2. Lift off the accessory roof.

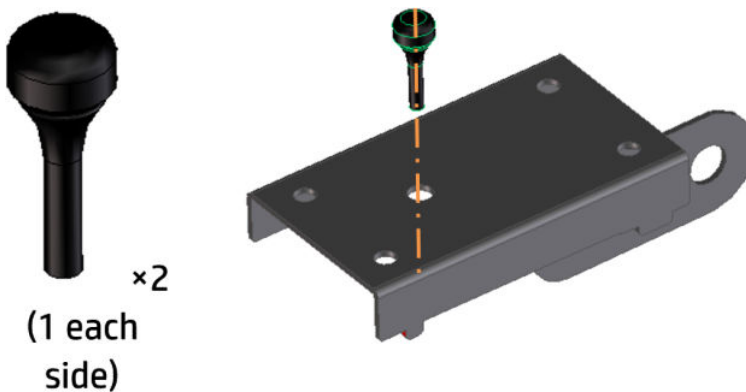


 **NOTE:** To avoid losing the washers it is recommended to remove them before lifting the roof.

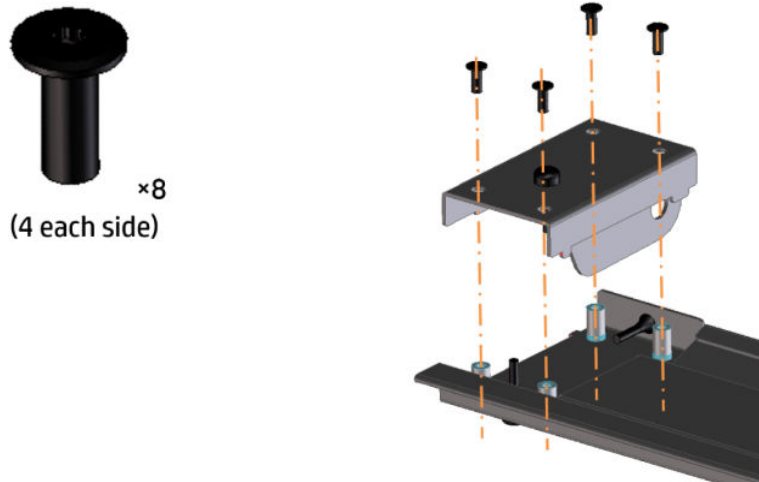
Installation

A new accessory roof comes disassembled.

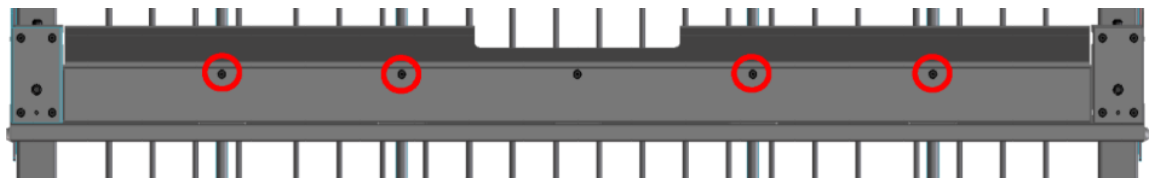
1. Insert the two rubber bumpers (one on each side) into the lateral supports.



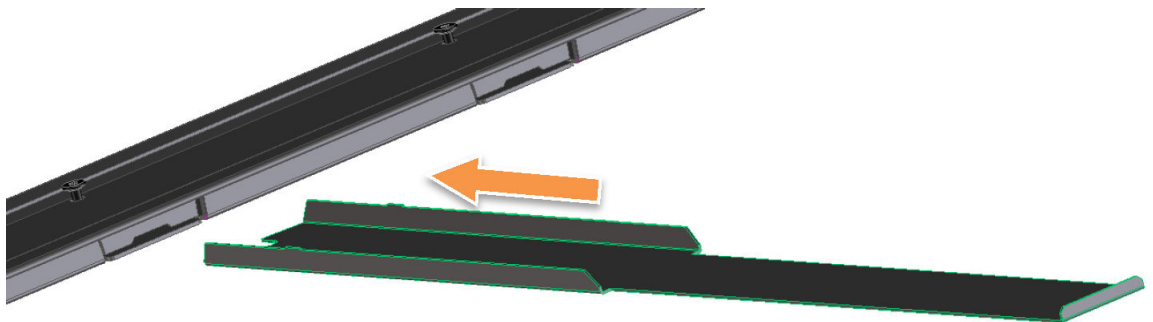
2. Attach the lateral supports to the accessory roof, using four screws on each side.



3. Loosen the four top-cover screws in order to insert the deflectors.




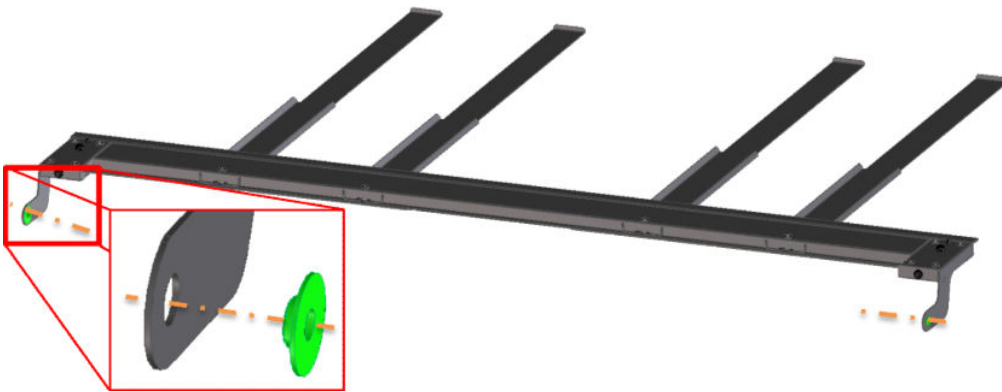
4. Insert the four deflectors and ensure that they slide to the end.



5. Retighten the four top-cover screws.

- When placing the accessory roof on the stacker, ensure that the bushings are in place before inserting the two screws (one on each side) that attach it to the stacker.

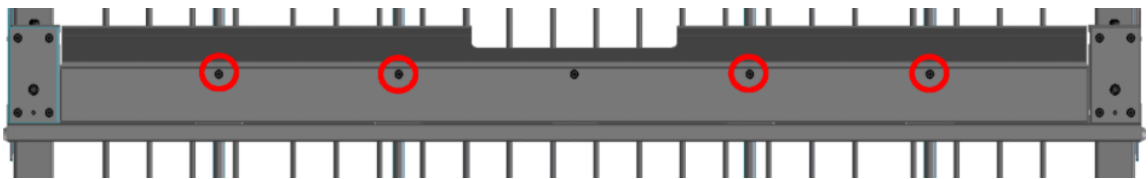
 **NOTE:** The friction washer must be between the accessory roof and the plate.



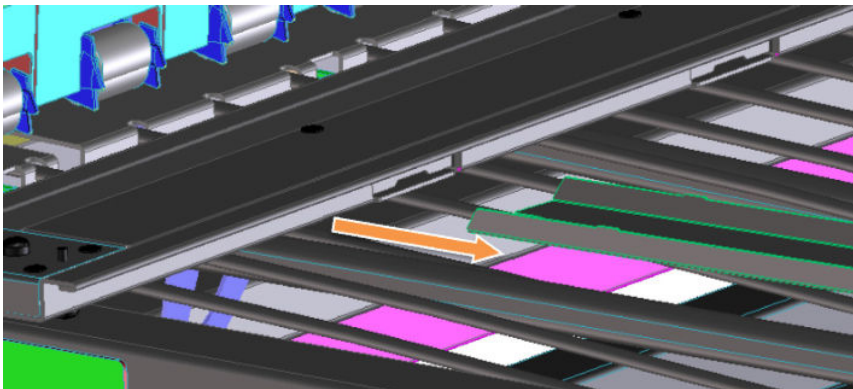
Accessory roof deflectors (CZ319-67027)

Removal

- Loosen the four screws that fasten the deflectors.

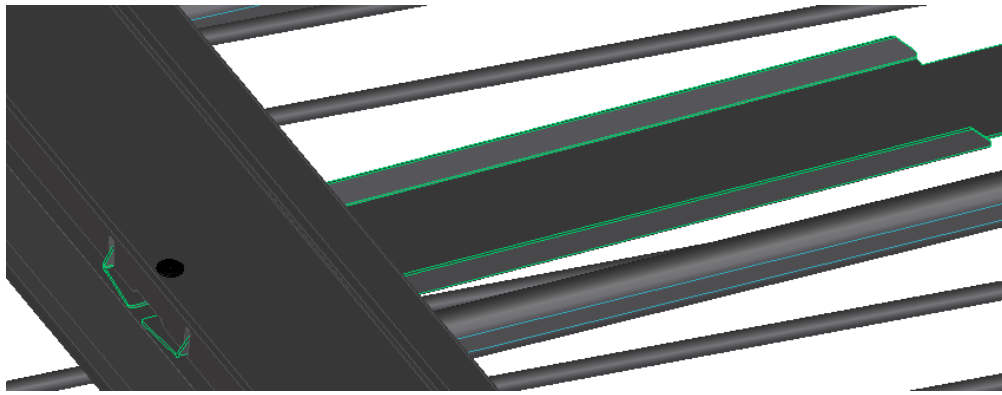


- Slide out the deflectors.



Installation

- To install, perform the removal operation in reverse. Ensure that the deflector is completely inside the accessory roof.



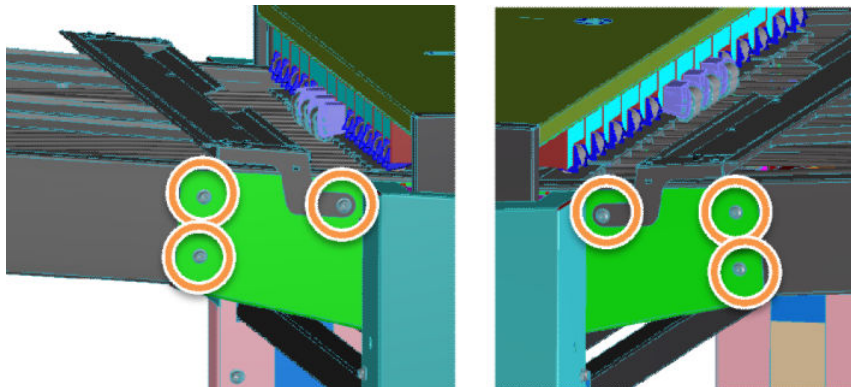
Tray (CZ319-67017)

Removal



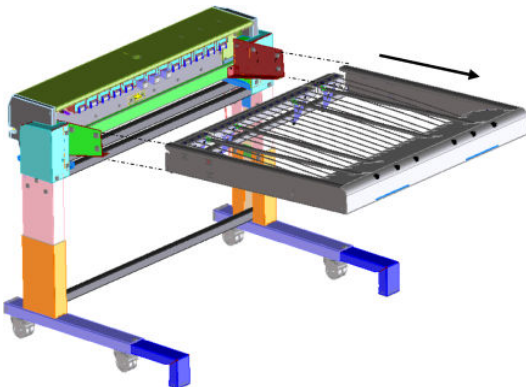
Two people are required for this procedure.


1. Remove three T30 screws from each side.

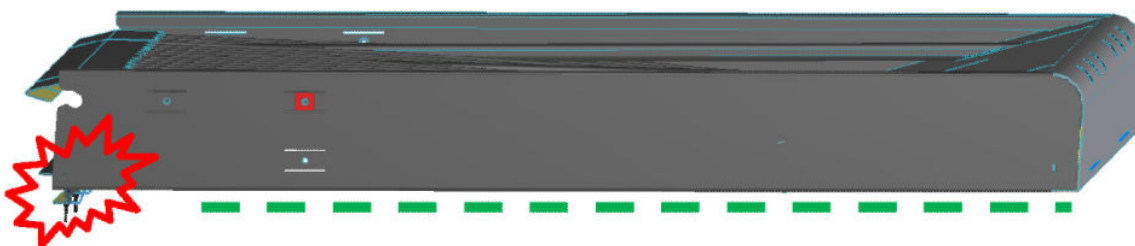


2. Remove the [Accessory roof \(CZ319-67026\)](#) on page 1994.

3. Remove the tray.



 **IMPORTANT:** When putting down the detached tray, be careful not to bend the front area in any way. You are recommended to rest it on the remaining part of the tray, indicated below in green.

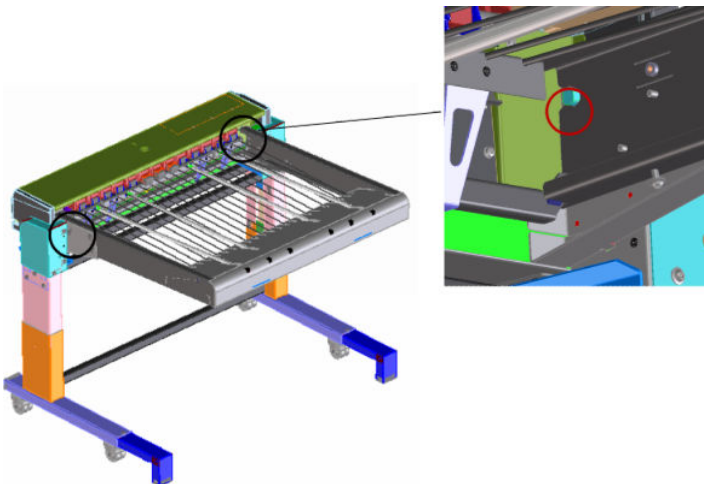


Installation



Two people are required for this procedure.

1. Remount the tray onto the pins shown below (one on each side).

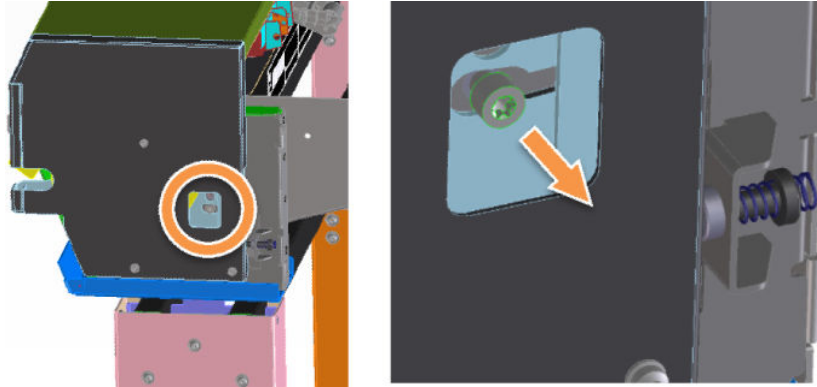


2. Perform the removal operation in reverse.

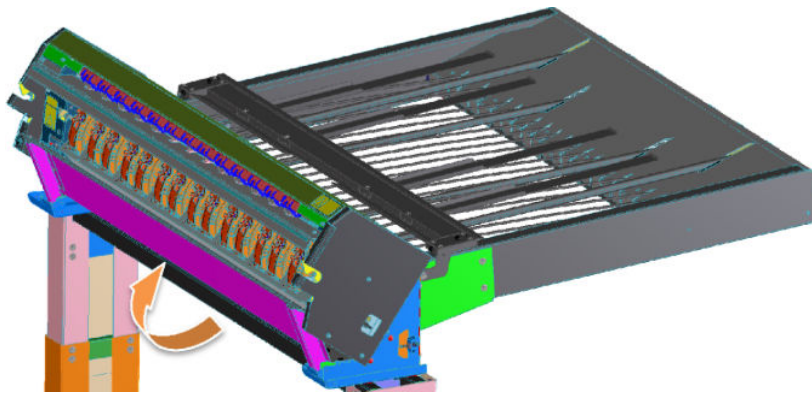
Incline the chassis for servicing (service position)

To access some of the stacker subsystems, you must put the stacker into the service position.

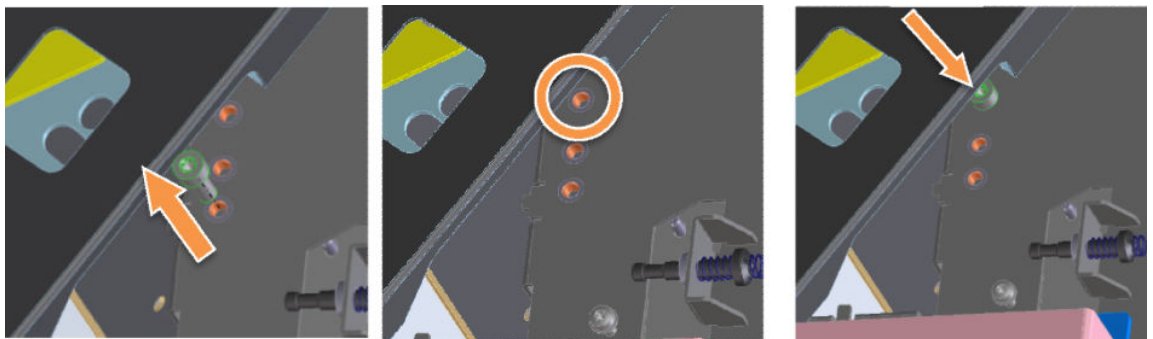
1. Remove the [Outer covers \(CZ319-67021, CZ319-67022\) on page 1992](#).
2. On both sides of the chassis, loosen the screw shown on the right, unscrewing it by about 5 mm.



3. Rotate the chassis upwards, and hold it in position.



4. On each side of the stacker, remove the indicated screw and insert it in the top hole.



To restore the chassis to its original position, take out the screw to lower the inclination of the chassis, and put the T30 screw back into the lower slot.

⚠ CAUTION: Take care not to trap your fingers while lowering the chassis.

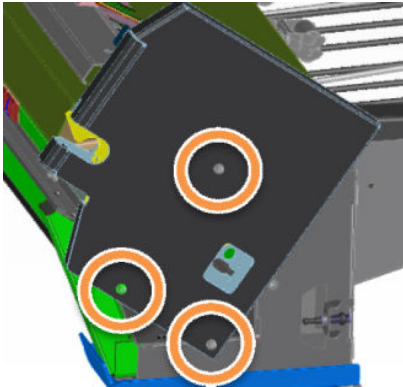
The stacker must match the height of the printer. Whenever it has been restored to normal from the service position, you may need to readjust its height; see [3](#).

Right and left chassis covers (CZ319-67023, CZ319-67024)

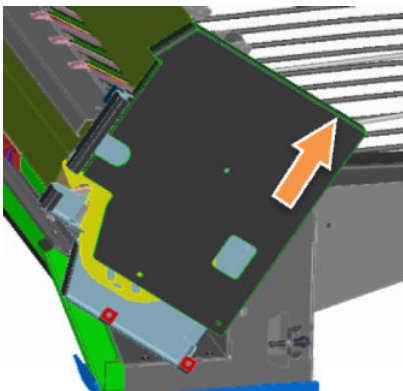
Removal

The covers can be removed with the chassis in normal or service position.

1. Remove the [Outer covers \(CZ319-67021, CZ319-67022\) on page 1992](#).
2. Remove three T20 screws on each side.



3. Pull the chassis covers and lift them off the chassis.



Installation

- ▲ To install, perform the removal operation in reverse. Ensure that no cable is pinched.

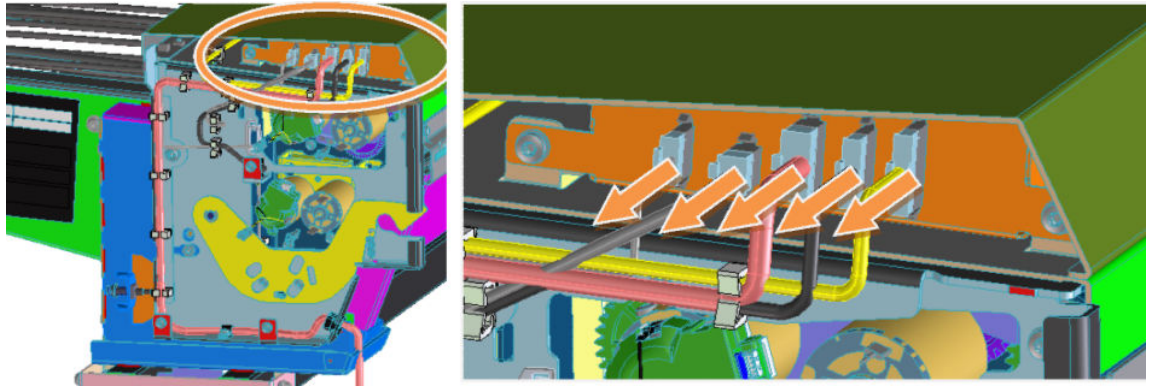
Roof

Removal

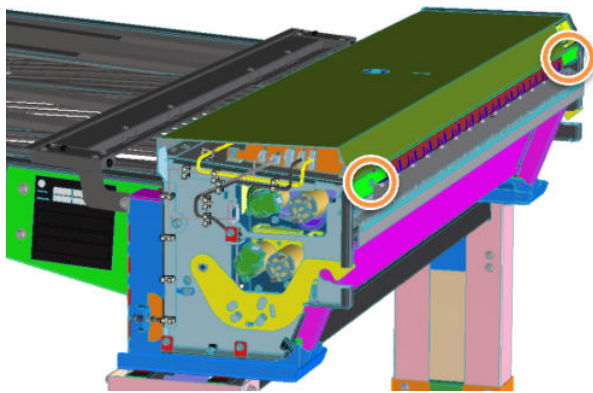
The roof can be removed with the chassis in normal or service position.

1. Remove the left outer cover; see [Outer covers \(CZ319-67021, CZ319-67022\) on page 1992](#).
2. Remove the left chassis cover; see [Right and left chassis covers \(CZ319-67023, CZ319-67024\) on page 2000](#).

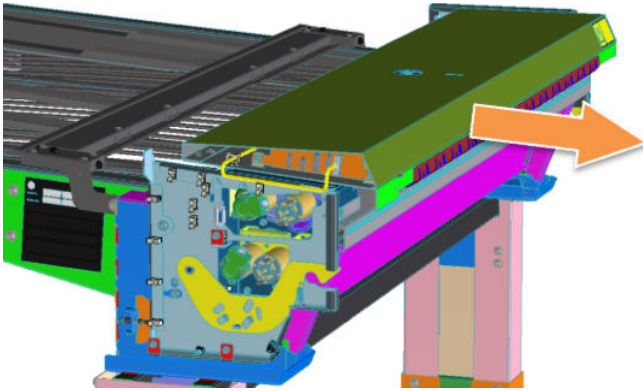
3. Disconnect all cables from the e-box.



4. Remove two T20 screws.



5. Remove the roof from the chassis by sliding it to the front.

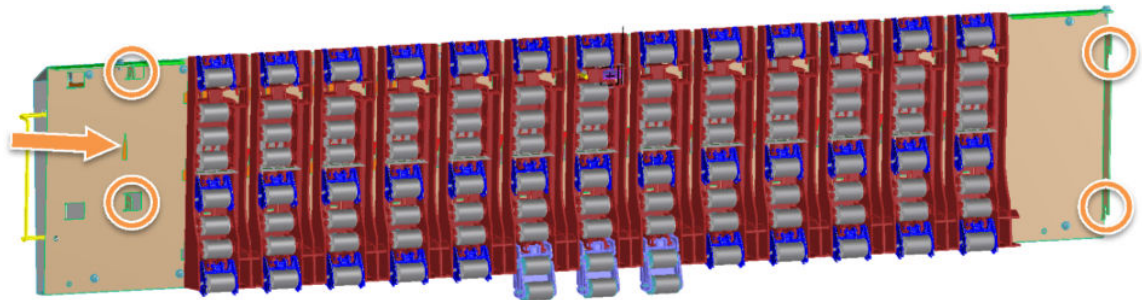


⚠ CAUTION: When moving the roof, be careful of the left lateral cable.



Installation

- ▲ To install, perform the removal operation in reverse. Ensure that no cable is pinched. The roof has hooks and a lateral reference on its lower side to help in positioning it on top of the chassis.



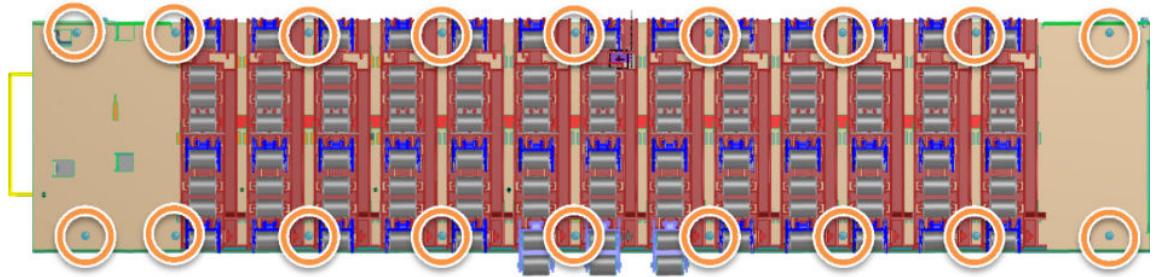
Roof cover (CZ319-67025)

Removal

The roof cover can be removed with the chassis in normal or service position.

1. Remove the [Roof on page 2000](#).

2. Remove the eighteen T20 screws.

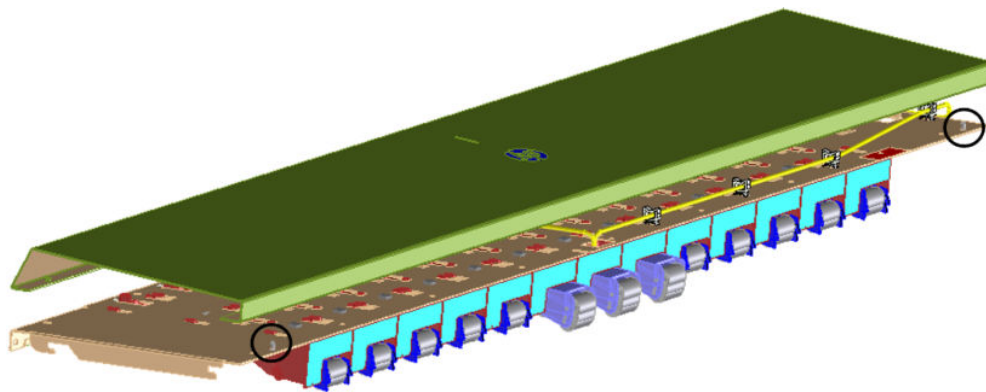


3. Lift off the roof cover.

Installation

- ▲ To install, perform the removal operation in reverse.

The cover has two slots that match two pins on the roof base to help with positioning (see below).

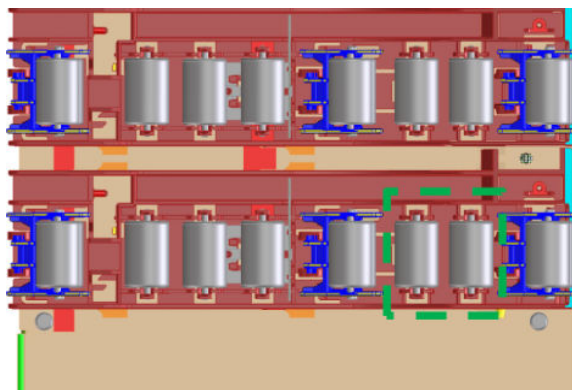


⚠ CAUTION: While placing the roof cover, take care not to pinch or damage the sensor cable.

Roof pinch assembly (CZ319-67010)

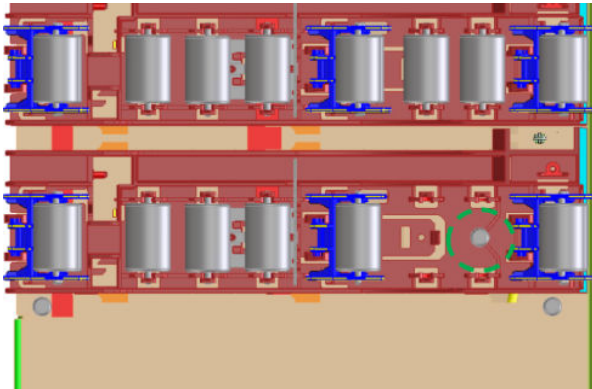
Removal

1. Remove the [Roof on page 2000](#).
2. Remove the two rollers indicated below.

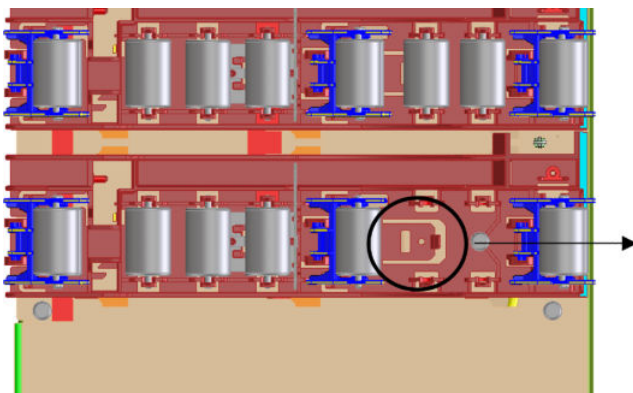


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3. Loosen the T20 screw.



4. Pull up the lever, slide the bracket to the right while pulling, and remove it.



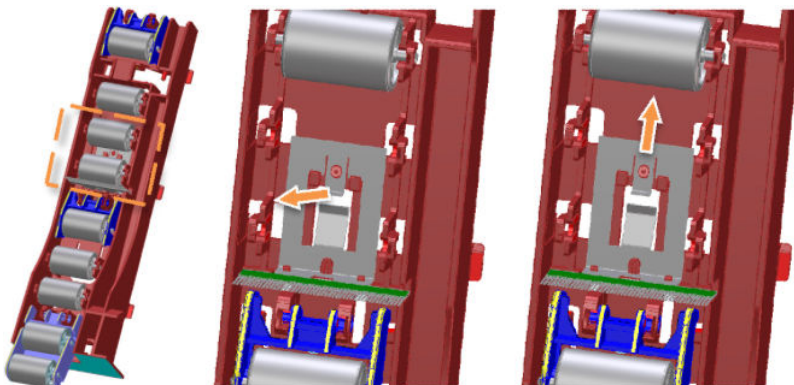
Installation

- ▲ To install, perform the removal operation in reverse. First slide in the bracket until the lever engages, then put back the screw and the rollers.

Roof antistatic brush (CZ319-67020)

Removal

1. Remove the [Roof on page 2000](#).
2. Remove two rollers, pull up the lever to unclip the bracket, and slide to release.

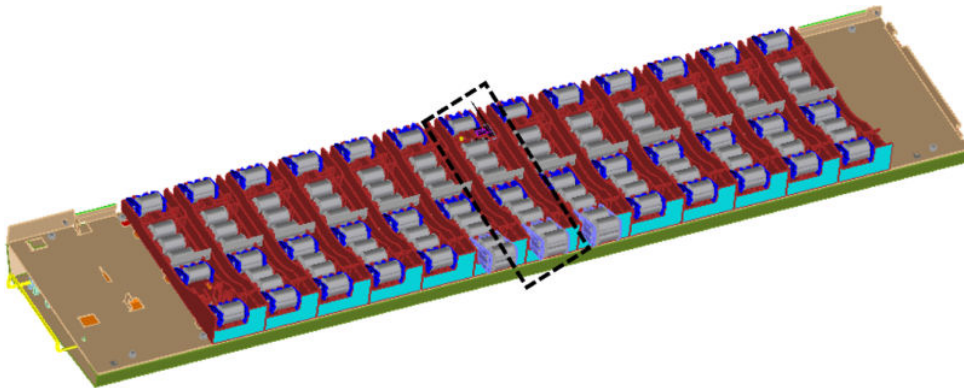


Installation

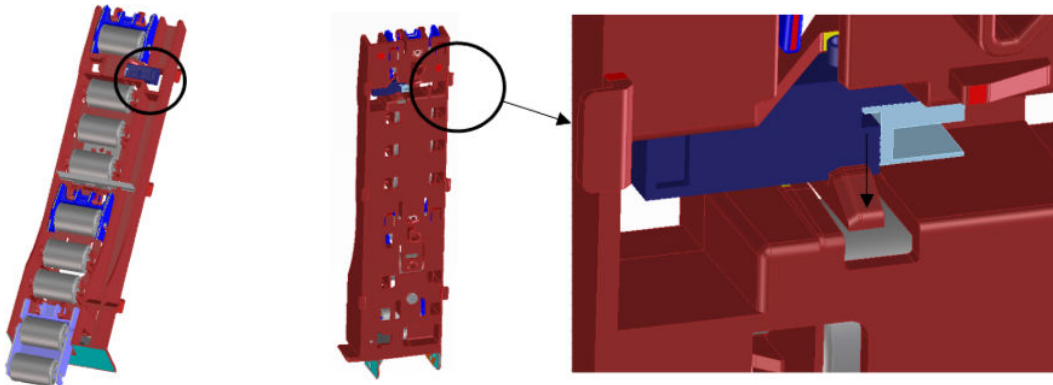
- ▲ To install, perform the removal operation in reverse. Put the antistatic brush on the roof pinch assembly and slide it in until the lever clips into place, then insert the rollers.

Roof sensors

To replace the roof sensors, remove the roof, then remove the indicated central bracket; see [Roof pinch assembly \(CZ319-67010\) on page 2003](#).



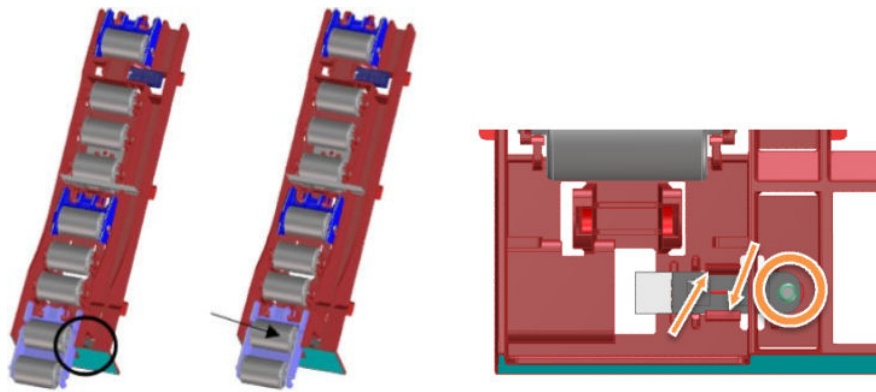
Paper sensor (CZ319-67015): To remove the sensor, with the help of a screwdriver, push the clip from the lower side of the bracket, rotate the sensor 90° around the pin and slide it along the pin. Disconnect the sensor from the cable when it is removed from the bracket, holding the cable with one hand to prevent it from falling inside the roof structure.



To remount the sensor, clip it into position and reconnect the cable.

Roof full sensor (CZ319-67012): There are two types of sensors for the same function. They can easily be told apart since one is fixed with a screw and one with clips.

- If the HCS has a sensor with screws (discontinued by manufacturer): Remove the roller support indicated by the arrow, unscrew the T6 screw, then pull out the sensor by pushing the clips. Disconnect the cable, making sure that it does not fall inside the roof.
- If the HCS has a sensor with clips: Remove the roller support indicated by the arrow, unclip the sensor, disconnect the cable, making sure it does not fall inside the roof.

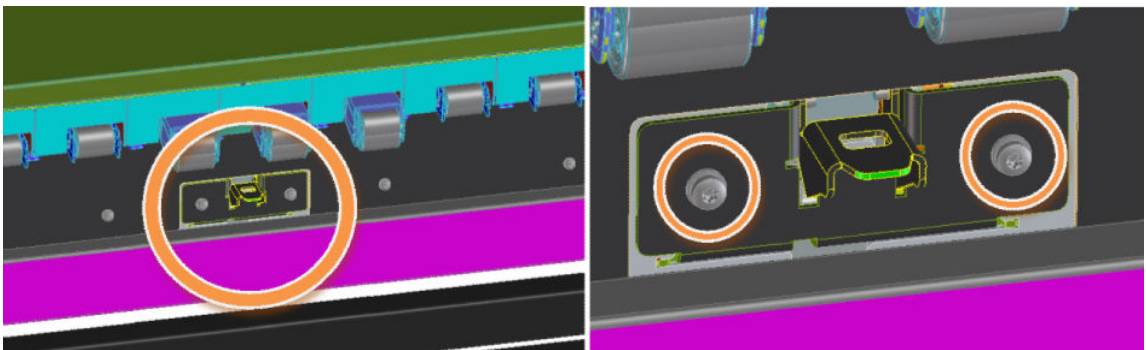


To restore, remount the sensor, then the roller.

Tray-full sensor (CZ319-67006)

Removal

1. Remove the [Tray \(CZ319-67017\)](#) on page 1997.
2. Remove two T20 screws.



3. Remove the sensor and disconnect the sensor cable.

Installation

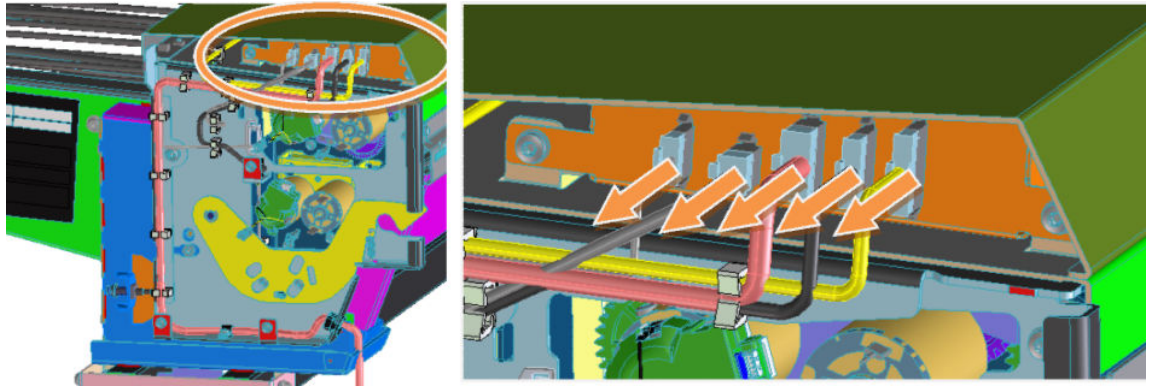
1. To install, perform the removal operation in reverse.
2. After installation, connect the stacker to the printer and check that the sensor is working correctly, using the Service menu in the front panel.

Ee-box (CZ319-67009)

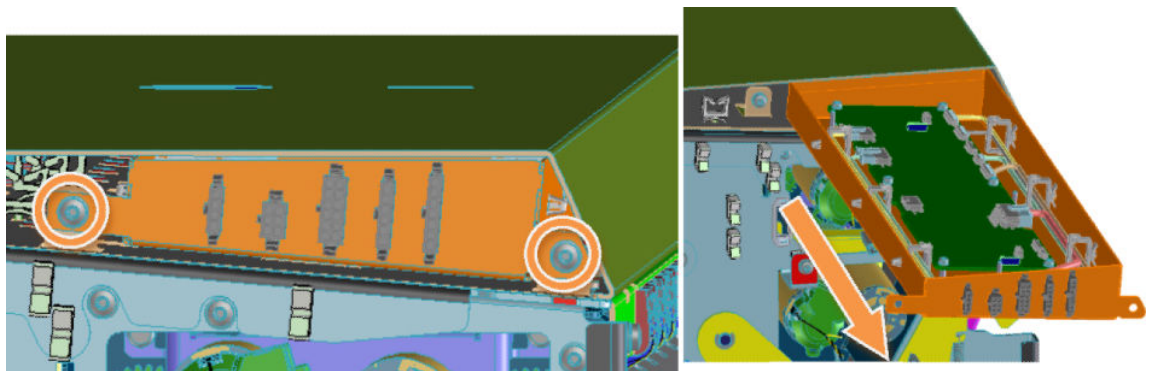
Removal

1. Remove the left outer cover; see [Outer covers \(CZ319-67021, CZ319-67022\)](#) on page 1992.
2. Remove the left chassis cover; see [Right and left chassis covers \(CZ319-67023, CZ319-67024\)](#) on page 2000.

3. Disconnect all cables from the Ee-box.



4. Remove two T20 screws and pull out the Ee-box.



Installation

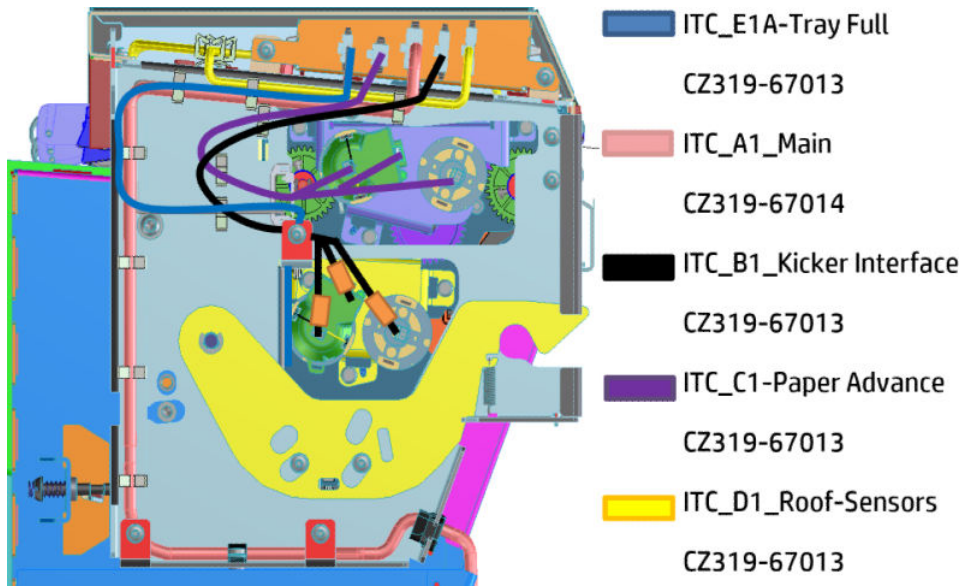
- ▲ To install, perform the removal operation in reverse.


Inner cables and main cable (CZ319-67013, CZ319-67014)

To access the cables, remove the left outer cover (see [Outer covers \(CZ319-67021, CZ319-67022\) on page 1992](#)) and the left chassis cover (see [Right and left chassis covers \(CZ319-67023, CZ319-67024\) on page 2000](#)). Remove the cables by disconnecting and releasing them from the clamps. Replace the cables following the same routing as shown below.

ITC_A1-Main cable, ITC_B1-Kicker Interface, and ITC_C1-Paper advance

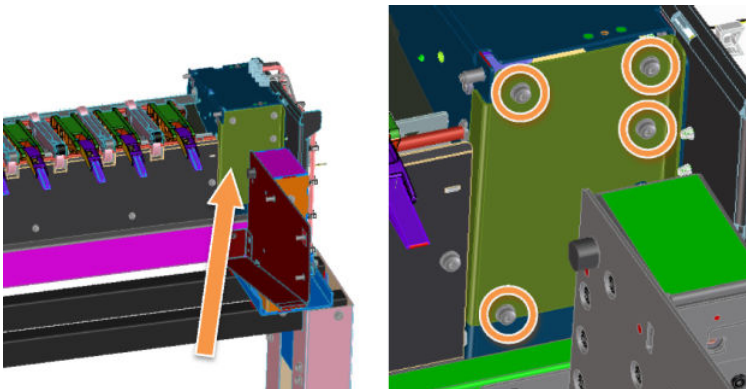
- ▲ Follow the routing below.



 **NOTE:** The kicker-interface and paper-advance cables share the same connectors to the motors.
The kicker-interface cables have orange tape on both connectors to identify them.

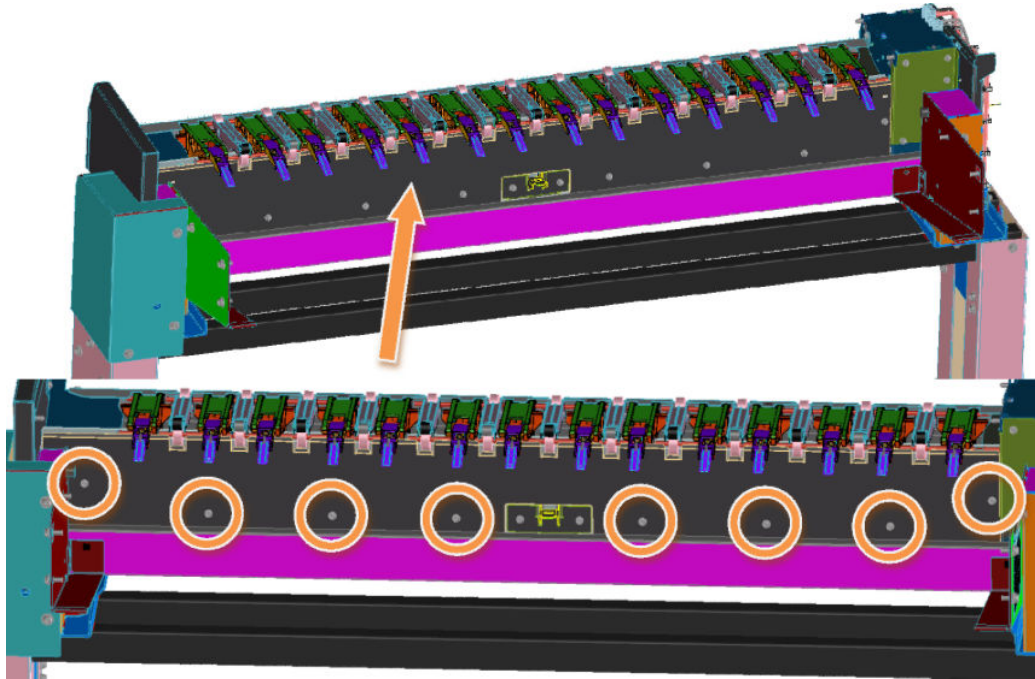
ITC_E1A-Tray Full (CZ319-67013) removal

1. Remove the [Tray \(CZ319-67017\) on page 1997](#).
2. Remove both [Outer covers \(CZ319-67021, CZ319-67022\) on page 1992](#).
3. Remove the left chassis cover; see [Right and left chassis covers \(CZ319-67023, CZ319-67024\) on page 2000](#).
4. Remove the [Tray-full sensor \(CZ319-67006\) on page 2006](#).
5. Remove the gear guard after removing its four screws.

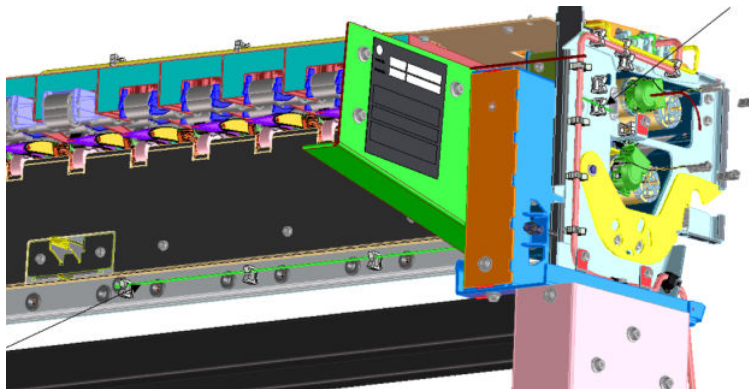


6. Put the stacker in service position; see [Incline the chassis for servicing \(service position\) on page 1999](#).

7. Remove the stacking wall after removing its eight T20 screws.



8. Replace the cable.



Installation

1. To install, perform the removal operation in reverse.

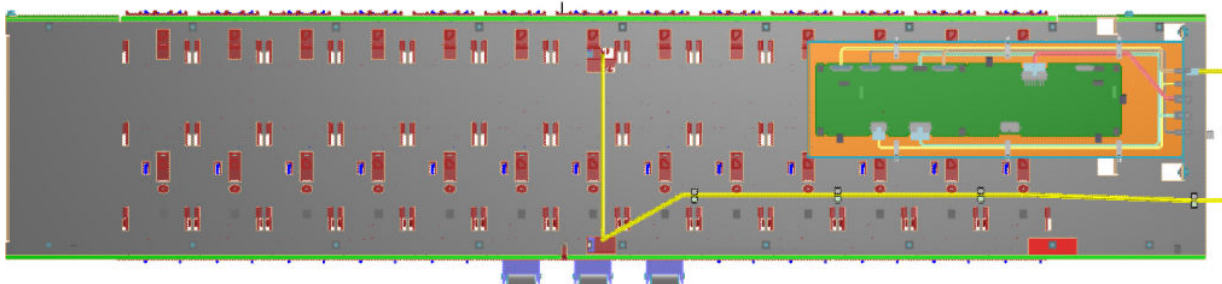
Follow the same routing from e-box side to sensor, fixing the cable on the clamps and connecting it to the sensor and e-box.

CAUTION: Take care that cables are not pinched when replacing components.

2. Connect the stacker to the printer, and check from the Service menu in the printer's front panel that the sensors are working correctly.

ITC_D1-Roof sensors (CZ319-67013) removal

1. Remove the [Roof cover \(CZ319-67025\) on page 2002](#).
2. Disconnect the cables from the sensors. You may need to remove the [Roof pinch assembly \(CZ319-67010\) on page 2003](#).
3. Remove the cables.



Installation

1. To install, perform the removal operation in reverse.
Route the cable within the roof as shown above, fix the cable with the clamps, and connect it to both Full and Path In sensors.

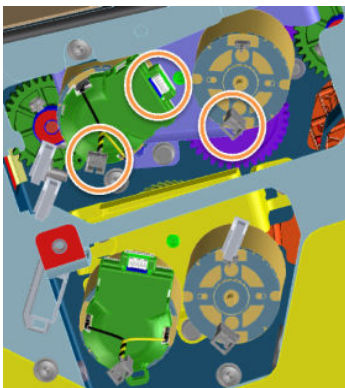
⚠ CAUTION: Take care that cables are not pinched by the roof cover.

2. Connect the stacker to the printer, and check from the Service menu in the printer's front panel that the sensors are working correctly.


Paper-advance motor (CZ319-67008)

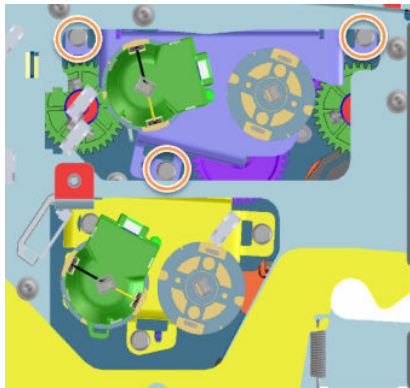
Removal

1. Remove the left outer cover; see [Outer covers \(CZ319-67021, CZ319-67022\) on page 1992](#).
2. Remove the left chassis cover; see [Right and left chassis covers \(CZ319-67023, CZ319-67024\) on page 2000](#).
3. Disconnect the three motor cables: two power cables, one encoder cable.



- Remove three T20 screws and extract the motor assembly from the chassis.

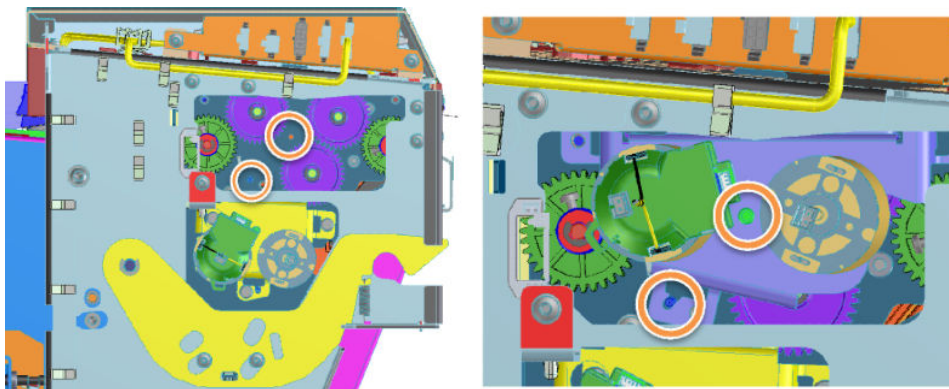
 **IMPORTANT:** Remove the three screws carefully, as there are captive washers that may fall down during the process.



Installation

- ▲ To install, perform the removal operation in reverse.

To remount the motor, position the bracket with the help of the pin. Then put back the screws and reconnect the cables.



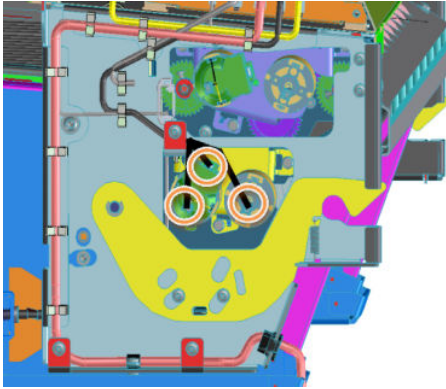
 **IMPORTANT:** The motor gears should be greased before assembly. Use service kit CR357-67090.

Kicker motor (CZ319-67007)


Removal

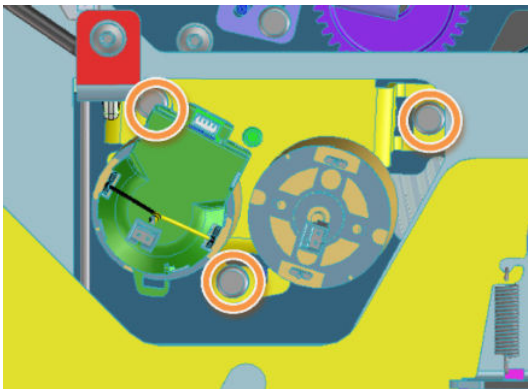
- Remove the left outer cover; see [Outer covers \(CZ319-67021, CZ319-67022\) on page 1992](#).
- Remove the left chassis cover; see [Right and left chassis covers \(CZ319-67023, CZ319-67024\) on page 2000](#).

3. Disconnect the three cables that go to the motor.



4. Remove three T20 screws and extract the motor assembly from the chassis.

 **IMPORTANT:** Remove the three screws carefully, as there are captive washers that may fall down during the process.




Installation

- ▲ To install, perform the removal operation in reverse.

To remount the motor, use the positioning pins to locate the appropriate position. Then put back the screws and reconnect the cables.



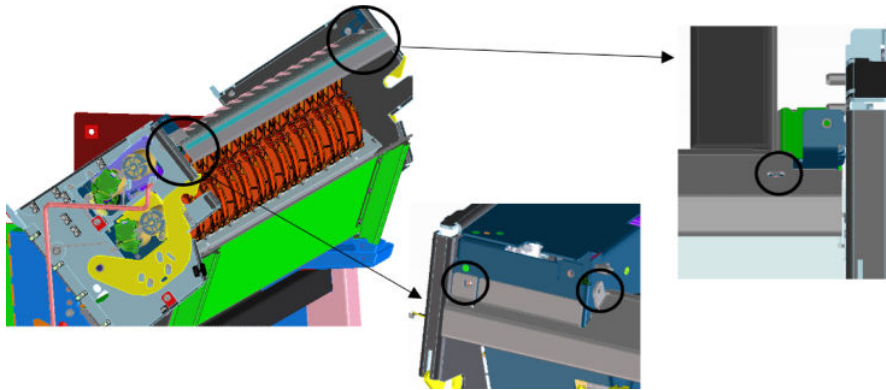
 **IMPORTANT:** Make sure that the cables you are connecting have the orange identification tape.

IMPORTANT: The motor gears should be greased before assembly. Use service kit CR357-67090.

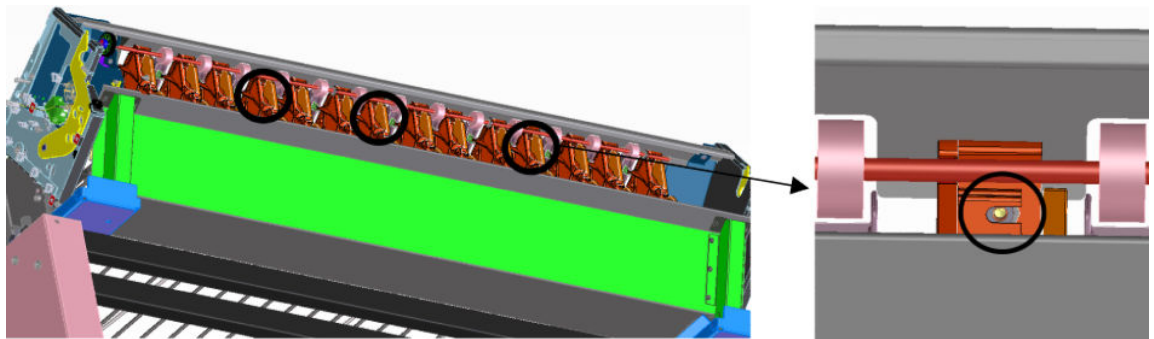
Entry platen (CZ319-67019)

Removal

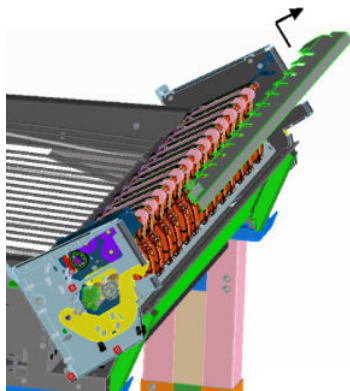
1. Remove the [Outer covers \(CZ319-67021, CZ319-67022\) on page 1992](#).
2. Remove the [Roof on page 2000](#).
3. Put the stacker in service position; see [Incline the chassis for servicing \(service position\) on page 1999](#).
4. Remove three T20 screws from the top of the entry platen.



5. Remove three T20 screws from the bottom of the entry platen.



6. Remove the entry platen by pulling it upwards.



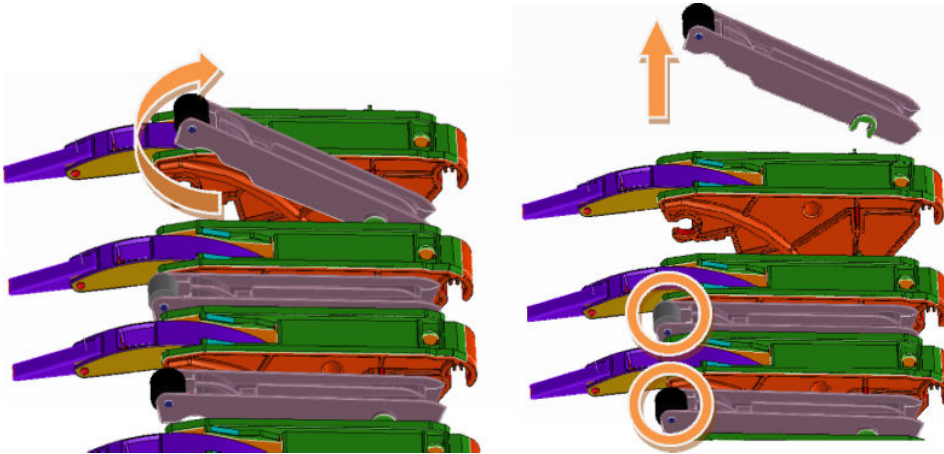
Installation

- ▲ To install, perform the removal operation in reverse.

Handoff wheels (CZ319-67005, CZ319-67011)

Removal

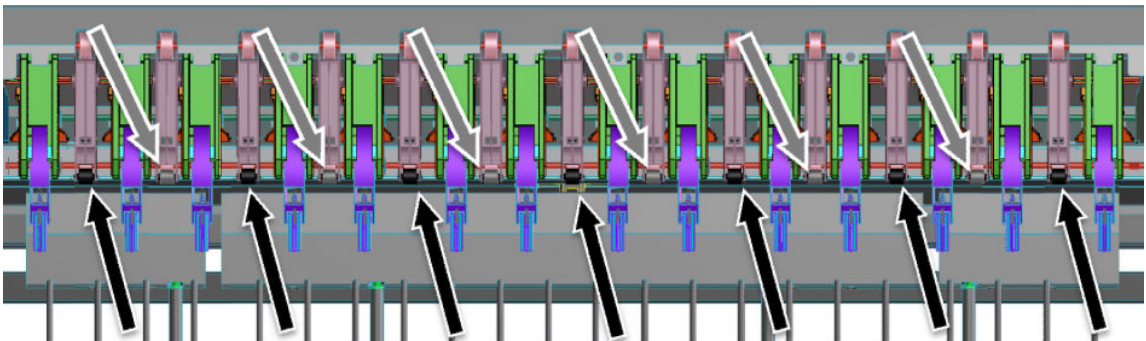
1. Remove the [Roof on page 2000](#).
2. Rotate the handoff wheels upwards and pull them out.



Installation

- ▲ To install, perform the removal operation in reverse.

When putting back the handoff wheels, they should be alternated. There are two types of handoff wheels, according to the color of the rollers: one in gray (CZ319-67005) and one in black (CZ319-67011). The first wheel at each end of the stacker is the one with the larger diameter, which is the one with the black rubber roller.

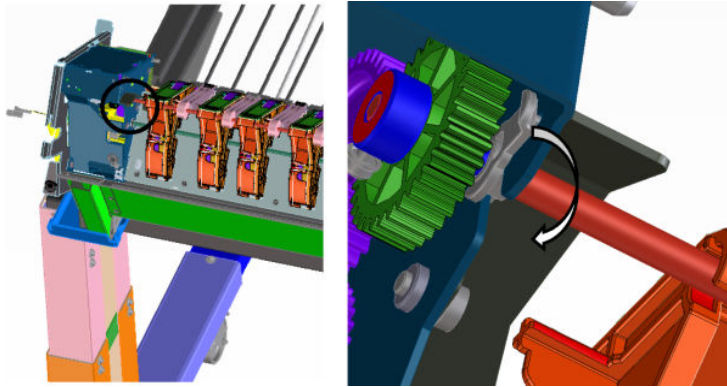


Input rollers

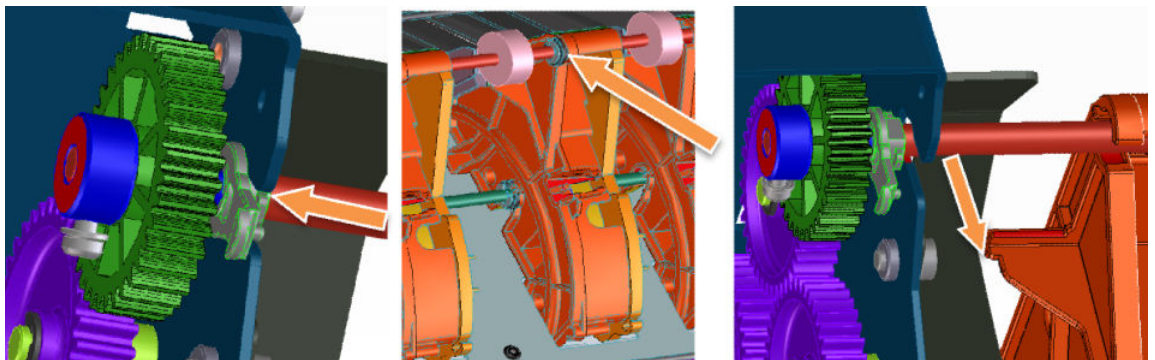
Removal

1. Remove the [Entry platen \(CZ319-67019\) on page 2013](#).
2. Remove the [Handoff wheels \(CZ319-67005, CZ319-67011\) on page 2014](#).

3. With the help of a screwdriver, turn the latch downwards.



4. Move the roller shaft 5 mm to the left in order to release all bushings from the kickers, then take it out.



Installation

- ▲ To install, perform the removal operation in reverse.

To remount the shaft, make sure that the bushings are in contact with the circlips. Put the shaft back in the slot, and move it 5 mm to the right. Make sure all bushings are in position. Then raise the latch with the help of a screwdriver.

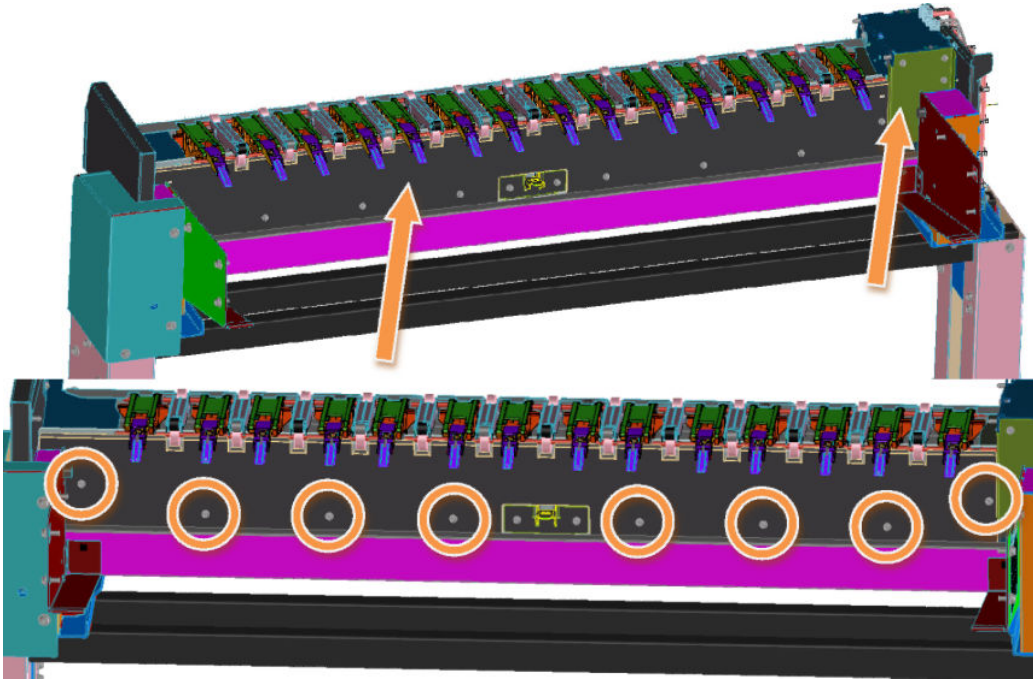
 **IMPORTANT:** Remember that the handoff wheels should be alternated, black-grey-black; see [Handoff wheels \(CZ319-67005, CZ319-67011\) on page 2014](#).

Output rollers

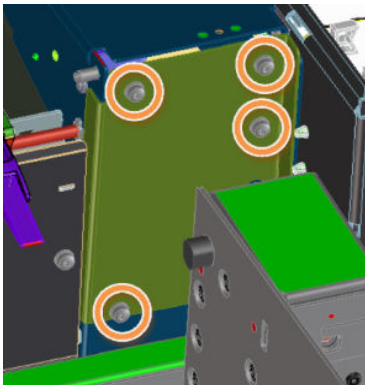
Removal

1. Remove the [Tray \(CZ319-67017\) on page 1997](#).
2. Remove the [Handoff wheels \(CZ319-67005, CZ319-67011\) on page 2014](#).

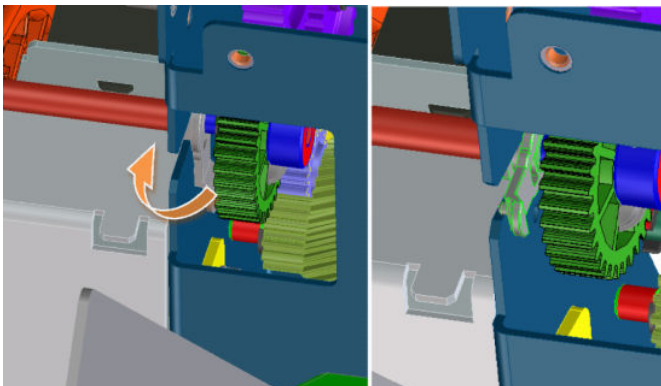
3. Remove eight T20 screws from the stacking wall and separate it from the rollers.



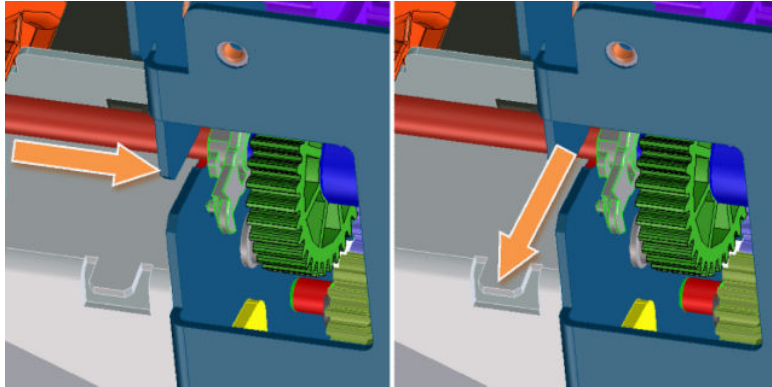
4. Remove four T20 screws from the gear guard.



5. With the help of a screwdriver, turn the latch upwards.



6. Move the shaft 5 mm to the left in order to release the bushings, then take it out.



Installation

- ▲ To install, perform the removal operation in reverse.

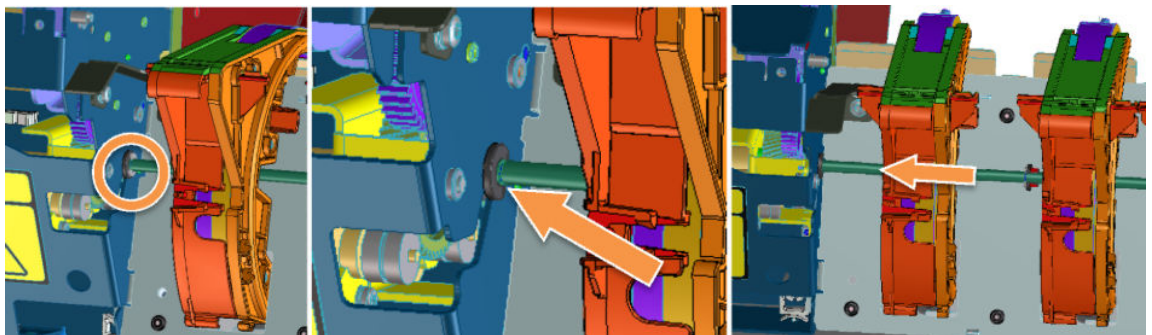
To remount the shaft, make sure that the bushings are in contact with the circlips. Put the shaft back in the slot, and move it 5 mm to the left. Make sure all bushings are in position. Then raise the latch with the help of a screwdriver.

 **IMPORTANT:** Remember that the handoff wheels should be alternated, black-grey-black; see [Handoff wheels \(CZ319-67005, CZ319-67011\) on page 2014](#).

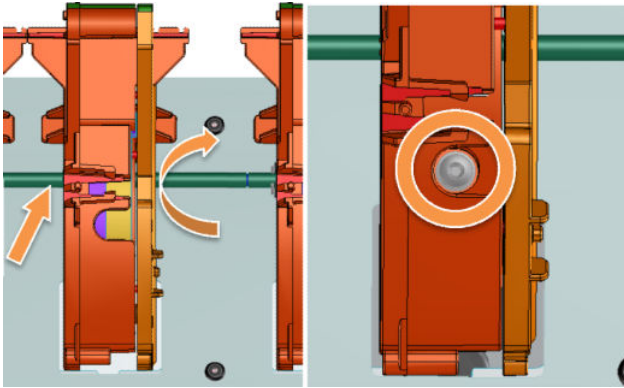
Kicker brackets (CZ319-67004)

Removal

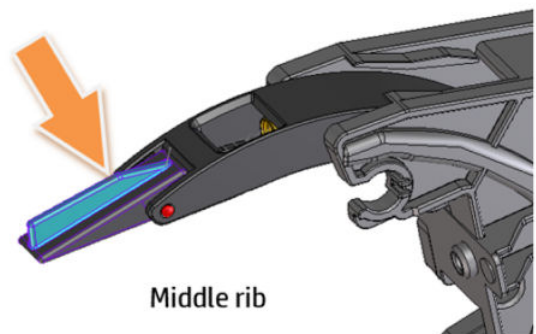
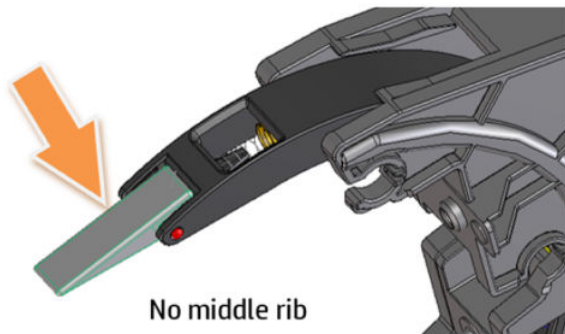
1. Remove the [Output rollers on page 2015](#).
2. Remove the [Input rollers on page 2014](#).
3. Remove the [Kicker motor \(CZ319-67007\) on page 2011](#).
4. Remove the kicker shaft circlip and move the kicker shaft to the left to release the bushings from the kicker assembly.



5. Move the kicker outwards by rotating the kicker shaft to show the screw. Then remove the T20 screw and release the kicker bracket assembly.

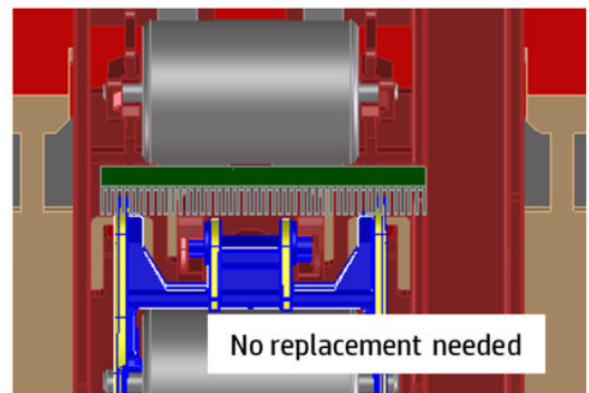
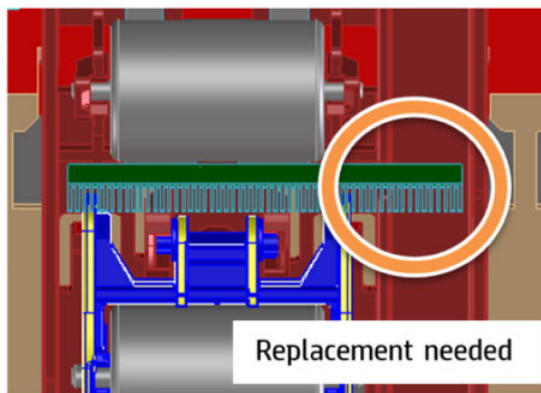


Identify if kicker bracket has middle rib or not.




If original kicker bracket has NO middle rib, roof antistatic brush may need to be replaced to avoid interferences.

To identify if roof antistatic brush needs to be replaced compare antistatic brush against the images below:

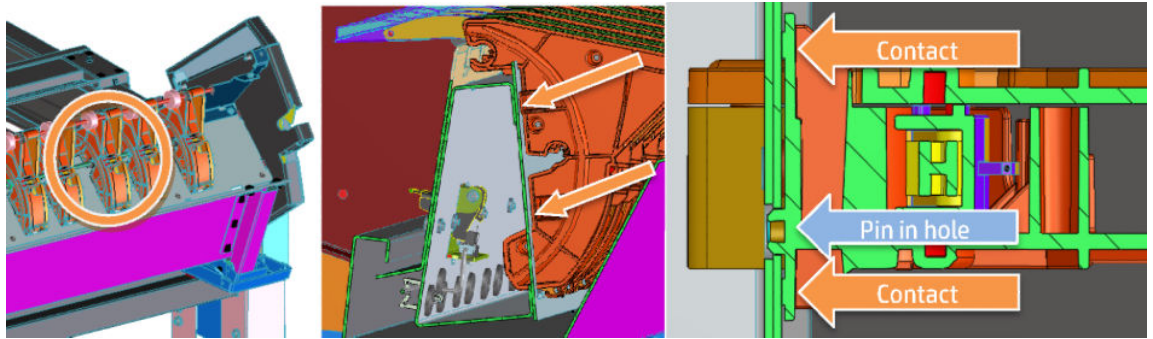


If antistatic brush is the long type, replace **all** anti-static brushes.

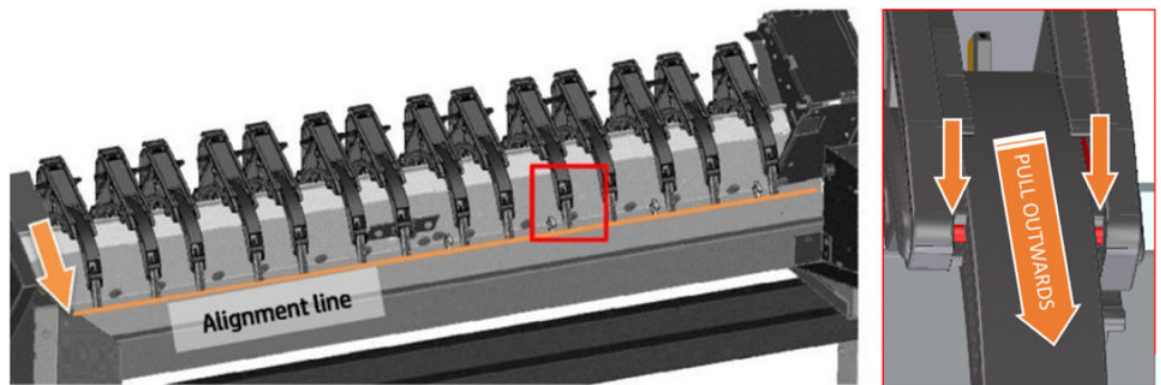
 **IMPORTANT:** Order replacement brush CZ319-67020, qty 1, if High Capacity Stacker Serial Number is between CN57111001 and CN58M11006 (both included).


To replace anti-static brush, follow the procedure in [Roof antistatic brush \(CZ319-67020\) on page 2004](#).

6. Replace the kicker bracket. Do not insert the screw yet. Ensure that there is no gap between the kicker bracket and the support wall, and that the positioning pins are correctly inserted into the corresponding holes (see below).

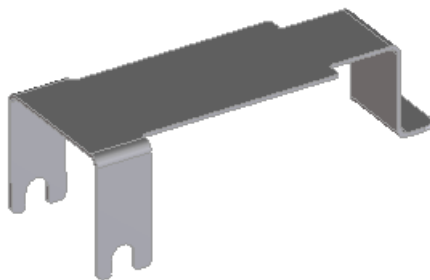


7. Place all kickers with the tip fully extended outwards so that all of them are in the same position. Check that the kicker pin is in the outmost position (red axis in the detailed image below). Any discrepancy in the position may be a symptom that the kickers are not correctly placed.



 **NOTE:** Ensure that all kicker tips are aligned and fully extended before attaching the replaced kicker with a screw. If any of the 14 kickers is not correctly aligned, paper will not be correctly stacked, and jams will become more likely.

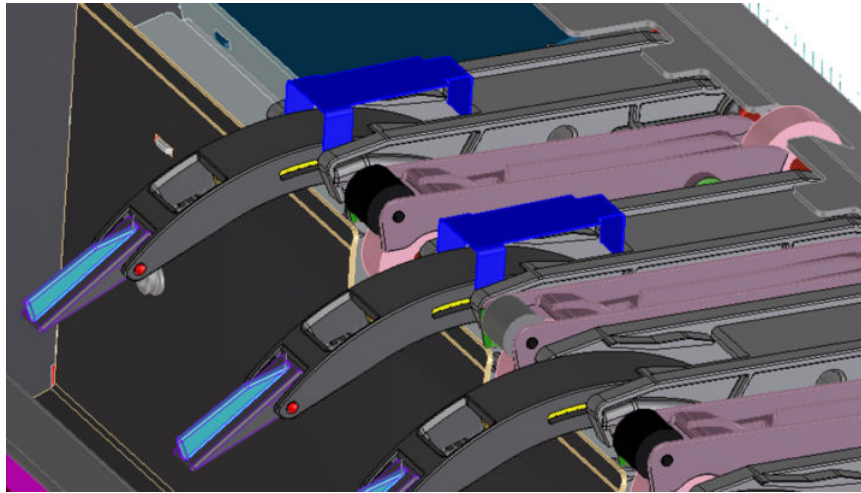
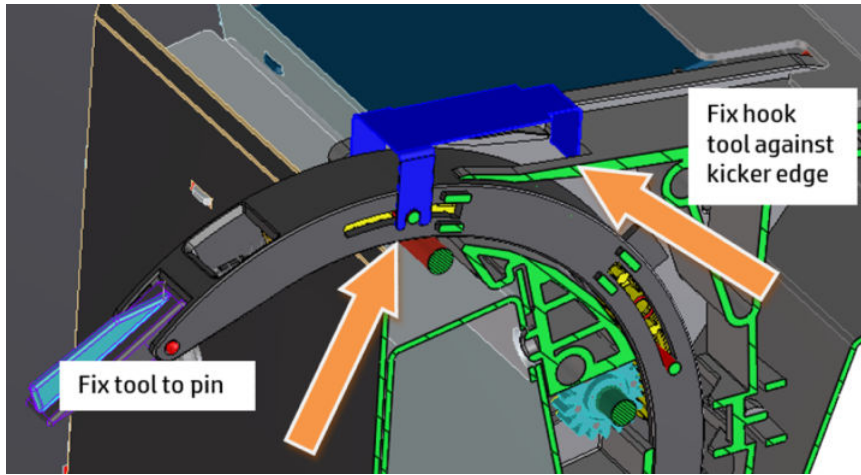
8. If SVS kit comes with 2 metal tools (image below), follow procedure below to ensure the correct alignment of the kickers:



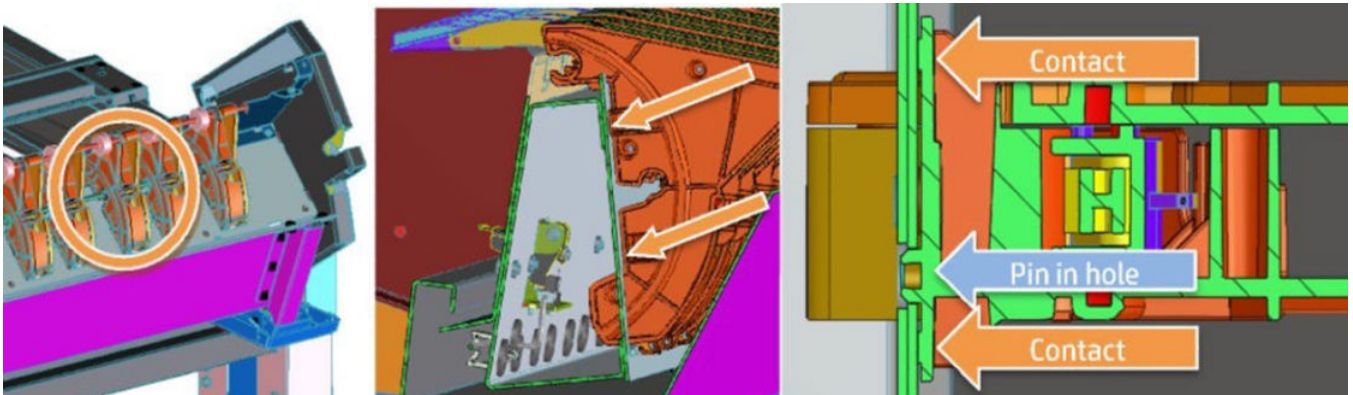
- a. Manually align all kickers as described in step 8.


- b. Starting from the **LEFT** side of the stacker (motors side), use the kicker adjustment tool on the first kicker assembly.

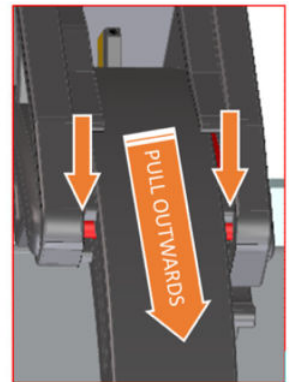
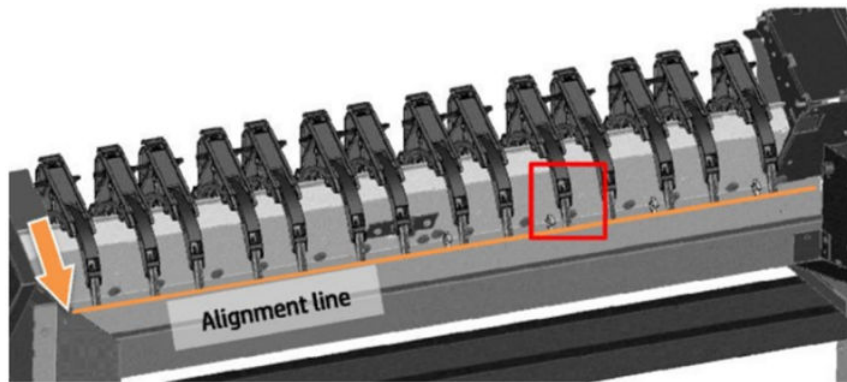
Tool is fixed on the kicker guiding pins close to the tip. To do so, kicker body needs to be slightly pushed backwards to gain access to the pins.



- c. Do the same with the next kicker. It may be necessary to partially remove the kicker from its position, to provide some freedom of movement and to be able to fix this second kicker with the assembly tool keeping the correct contact between the kicker and the structure. Kicker contact and pin position needs to be ensured.



- d. Once the first pair of kickers are aligned, screw the 1st and 2nd kicker to the structure.
 - e. Move the 1st kicker SVS tool to the 3rd kicker, adjust as described before and screw on the 3rd kicker.
-
-  **NOTE:** The 1st tool is to ensure alignment is kept along all the fixed kickers and the second one is helps to ensure the new kicker has the same position.
-
- f. Keep advancing the SVS tool and screwing the corresponding kicker until the last one.
9. If service kit comes without adjustment tool. Make sure all kickers have the same position as described in step 8, insert and tighten the T20 screws to attach all the kickers.

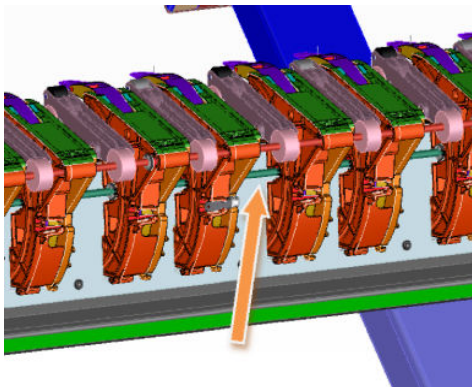


10. Insert and tighten the T20 screws to attach all the kickers.

Installation

- ▲ To install, perform the removal operation in reverse.

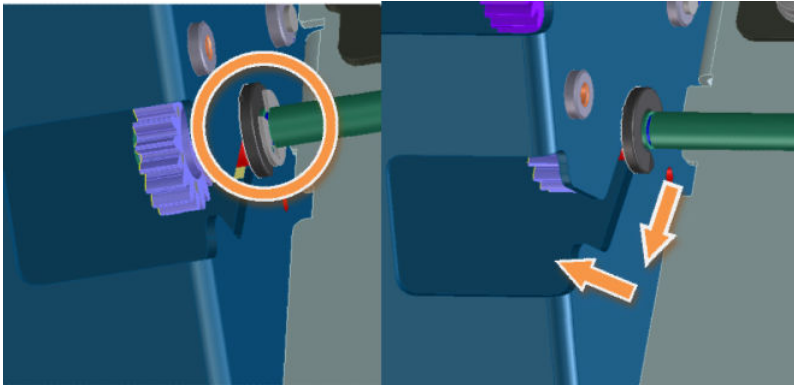
Kickers shaft (CZ319-67003)



Removal

1. Remove the 14 [Kicker brackets \(CZ319-67004\)](#) on page 2017.

2. Remove the circlip, separate the bushing, and slide the shaft downwards to release it.



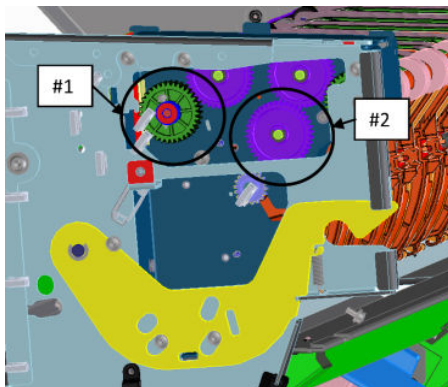
Installation

- ▲ To install, perform the removal operation in reverse.

Gears (CZ319-67002)

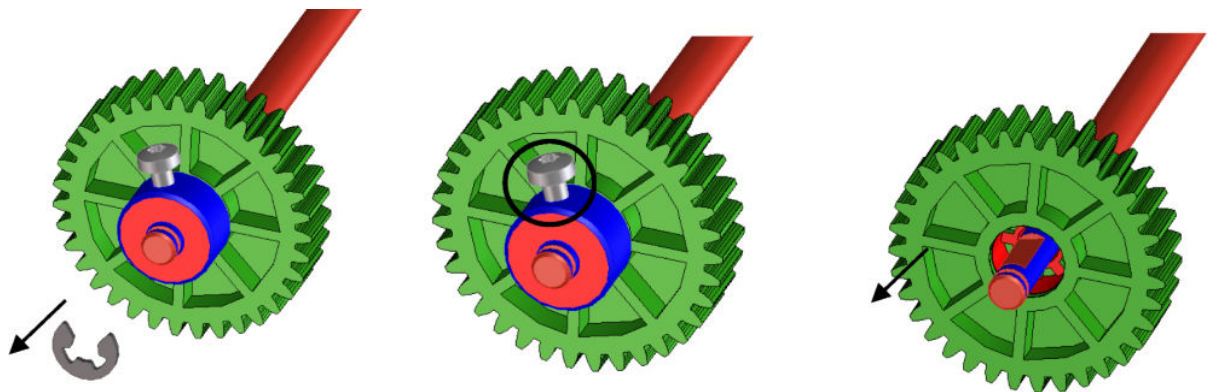
To access the gears, you must first remove the [Paper-advance motor \(CZ319-67008\) on page 2010](#).

There are two types of gears, as shown below:

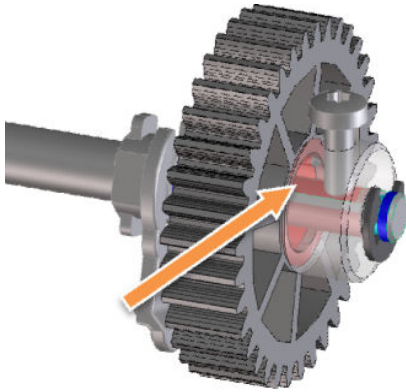


Gear Type #1: To remove the gear, first remove the corresponding roller (input or output). See [Input rollers on page 2014](#) or [Output rollers on page 2015](#).

With the roller outside the chassis, remove the circlip and the insert by loosening the T10 screw as shown below:

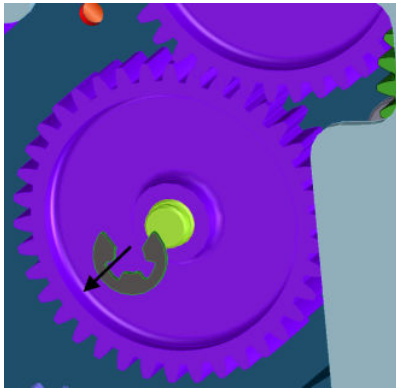


Install a new gear by adding the insert with the T10 screw and the circlip. Ensure that the screw is fixed to the flattened plane on the shaft to avoid rotation and escapement.



 **IMPORTANT:** Gears should be greased before assembly. Use service kit CR357-67090.

Gear Type #2: To remove gear #2, place the stacker in service position; see [Incline the chassis for servicing \(service position\) on page 1999](#). Then remove the circlip and take off the gear.



After installing a new gear, restore the circlip.

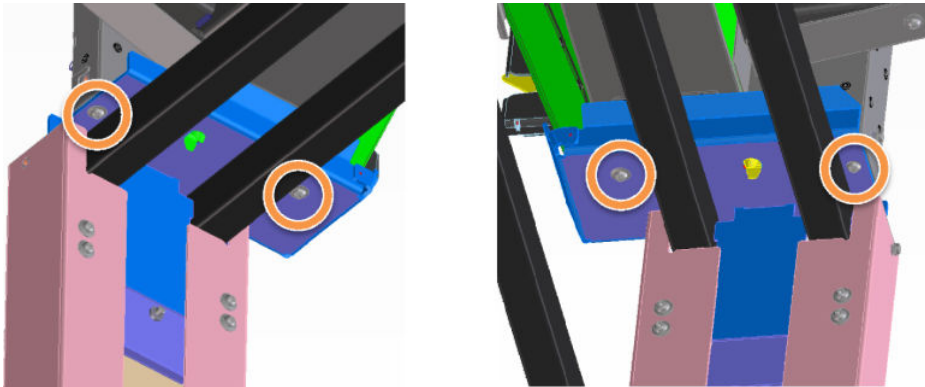
 **IMPORTANT:** Gears should be greased before assembly. Use service kit CR357-67090.

Chassis

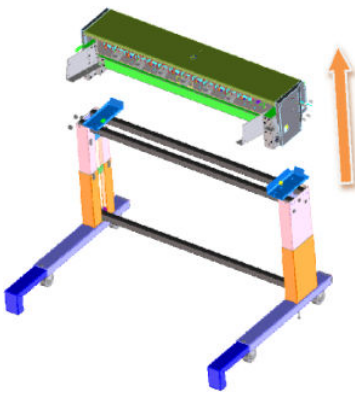
Removal

1. Remove the [Outer covers \(CZ319-67021, CZ319-67022\) on page 1992](#).

2. Remove the four T30 screws that join the chassis to the top beam.



3. Lift the chassis off the stand.



Installation

- ▲ To install, perform the removal operation in reverse.

Stand (CZ319-67018)

Removal

1. Remove the [Tray \(CZ319-67017\) on page 1997](#).
2. Remove the [Chassis on page 2023](#).

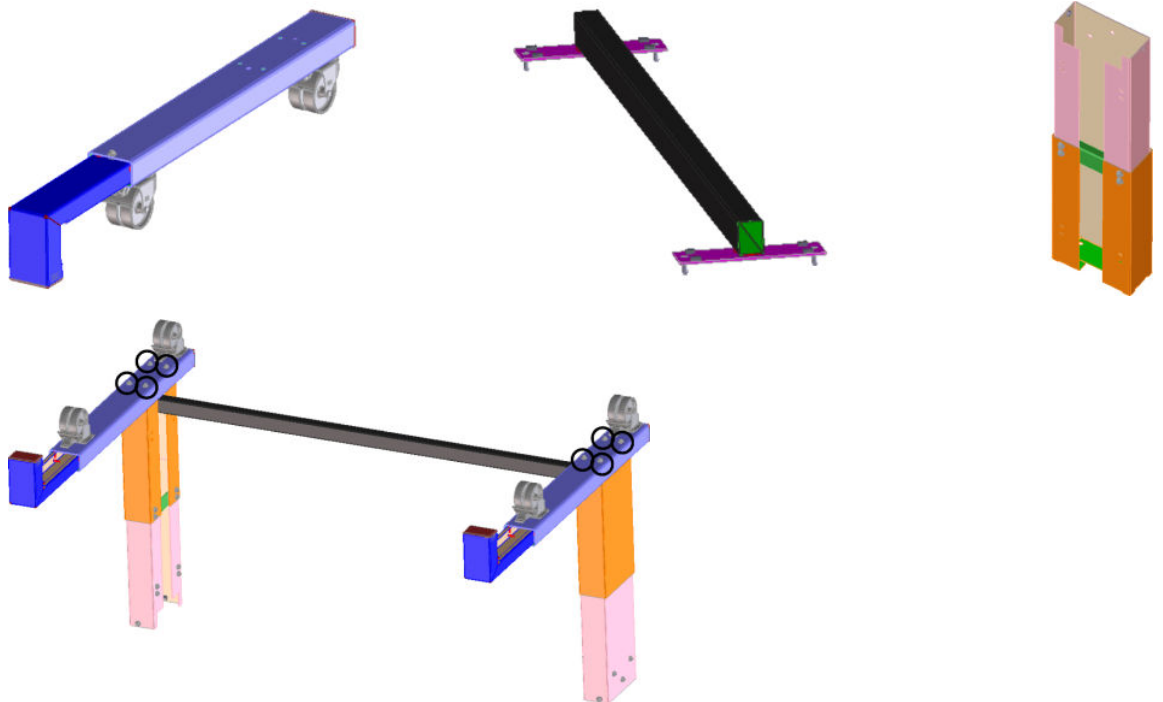
 **IMPORTANT:** Leave the chassis on a flat surface, in the same position in which it sits on the stand.

Installation



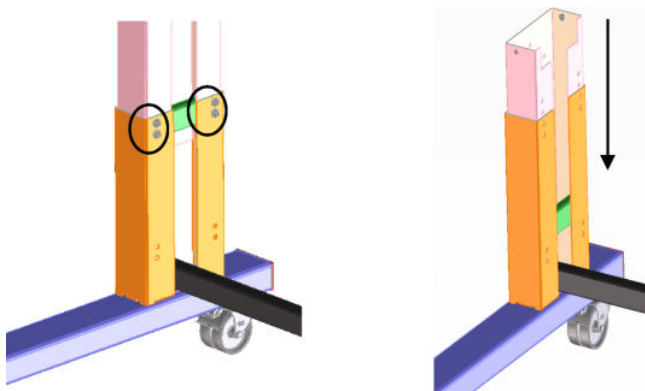
Two people are required for this procedure.

1. Attach together the feet, the bottom beam, and the legs with eight T30 screws.



2. For 5000 series printers only: Once the stand is resting on the floor, slide the legs down. To lower the legs, remove the four T30 screws from each leg and move the leg downwards until the screw holes match.

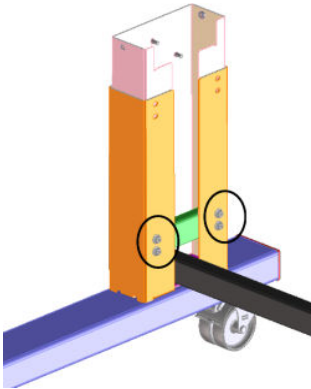
CAUTION: Hold the leg while removing the screws, and lower it slowly: do not let it drop.



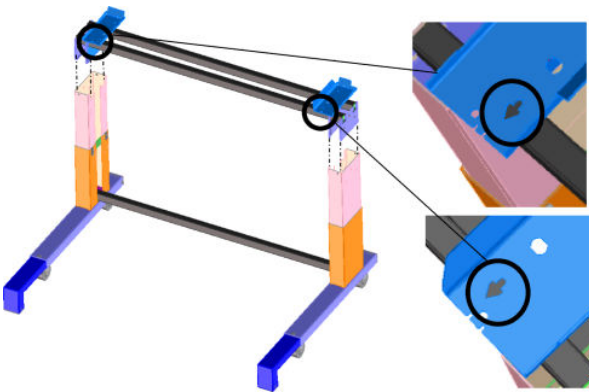
IMPORTANT: After changing the stand height, you should readjust the chassis height using the adjustment procedure described in [3](#).

3. Tighten the four T30 screws in the new position, on both sides.

 **IMPORTANT:** Tighten the screws with a torque of 12 N·m.

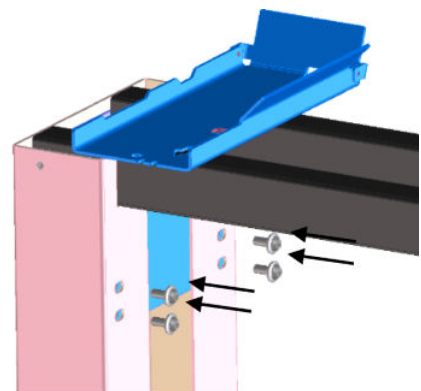
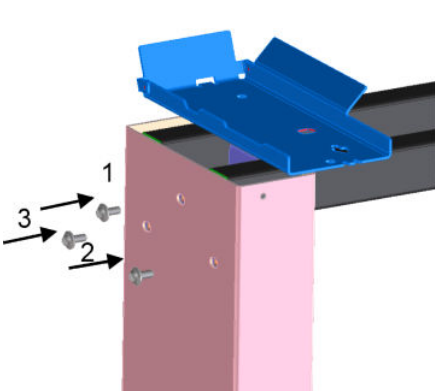


4. Mount the top beam. The arrows should point to the long end of each foot.

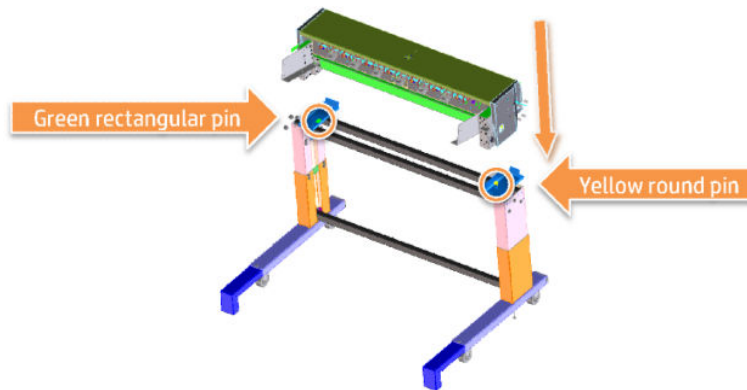


5. Tighten seven T30 screws following the order in the pictures below (on both sides of the beam):

 **IMPORTANT:** Tighten the screws with a torque of 12 N·m.



- When refitting the chassis to the stand, the yellow circle and green rectangle features of the stand must match the corresponding holes on the chassis.



IMPORTANT: Ensure that the chassis is properly placed on top of the stand and is sitting flat against its supports.

- Fasten the chassis to the stand using four T30 screws from below, and continue following the removal procedure in reverse order.

Wheel assy (CZ319-67016)

Removal

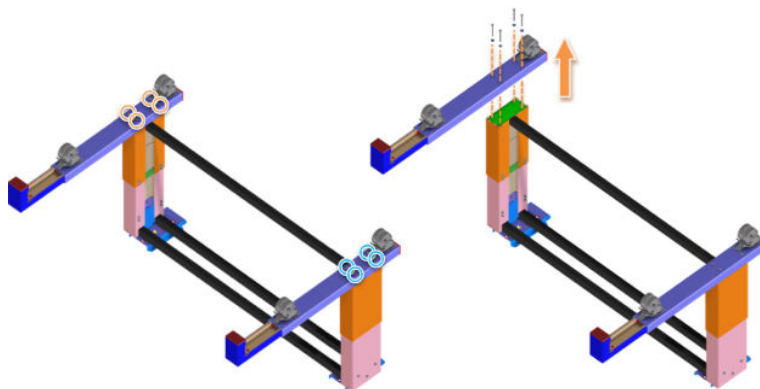


Two people are required for this procedure.

- Remove the [Stand \(CZ319-67018\) on page 2024](#).
- Turn the stand upside down and unscrew the four long T30 screws that hold the wheel assembly to be removed. These screws also hold together the leg and the bottom crossbar; hold these parts in place by hand or using a support.

CAUTION: Large and heavy metal parts of the stand will be loose during this procedure; hold them by hand or using a support. You are recommended to hang the stand from the bottom crossbar, joining the feet.

IMPORTANT: Keep the conical washers that go with the long T30 screws. When reassembling the stand, make sure the washers are installed correctly: outer edge against foot, inner edge against screw head.




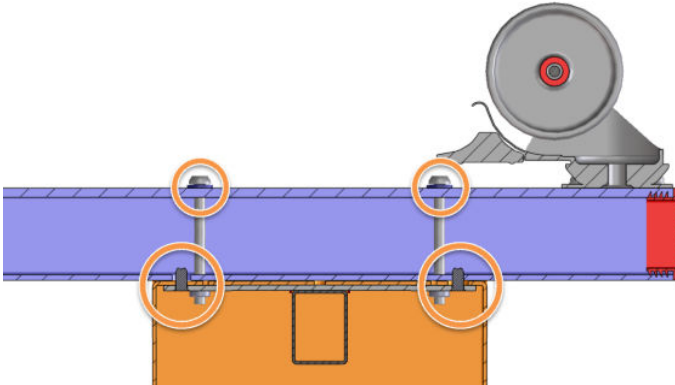
Installation



Two people are required for this procedure.

- ▲ To install, perform the removal operation in reverse.

 **IMPORTANT:** Ensure that the pins on the bottom crossbar are properly inserted into the leg and wheel assembly before fastening all three parts together with the long T30 screws; and that the four conical washers are properly installed.



Calibration

Tray adjustments (preload)

The tray comes adjusted from the factory to deflect under the weight of the stacked paper. This adjustment should be changed only if the tray has lost its adjustment (for example, after being mistreated), or if there is a need to increase the preload (even past the factory specification) to avoid some problem.

 **NOTE:** The preload should be adjusted only if the existing tray adjustment is wrong, or if adjustment is advised during troubleshooting.

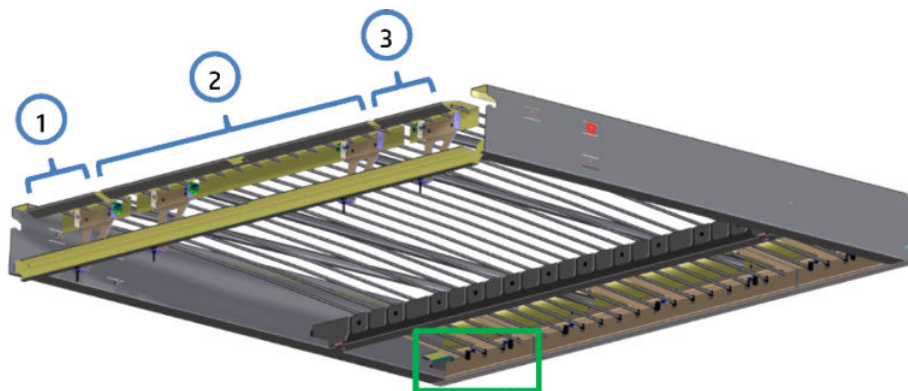
Tools needed

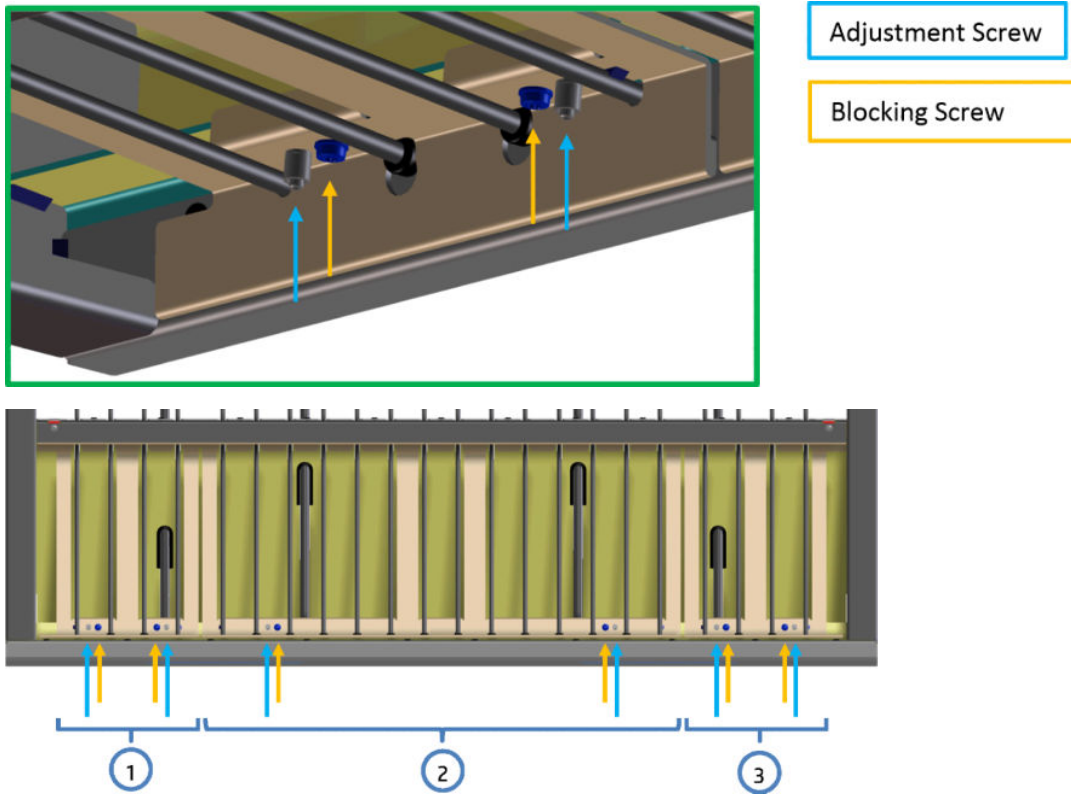
- Support for the tray (if necessary)
 - Tray laterals in horizontal position
 - Leave 100 mm of free space below the free ends of the tray rods (to prevent blocking their movement during the adjustment process); 120 mm if the rubber stoppers need to be released
 - Allow space to access the adjustment screws
 - Proposal: narrow table
- 2 mm hexagonal key for the adjustment screws
- Torx 20 key for the blocking screws

Description

The flexible parts of the tray work as a beam with an adjustable support. The height is adjusted through a threaded stud which abuts on the tray's chassis. Another screw blocks the system to avoid the threaded stud getting separated from the chassis and loosened.

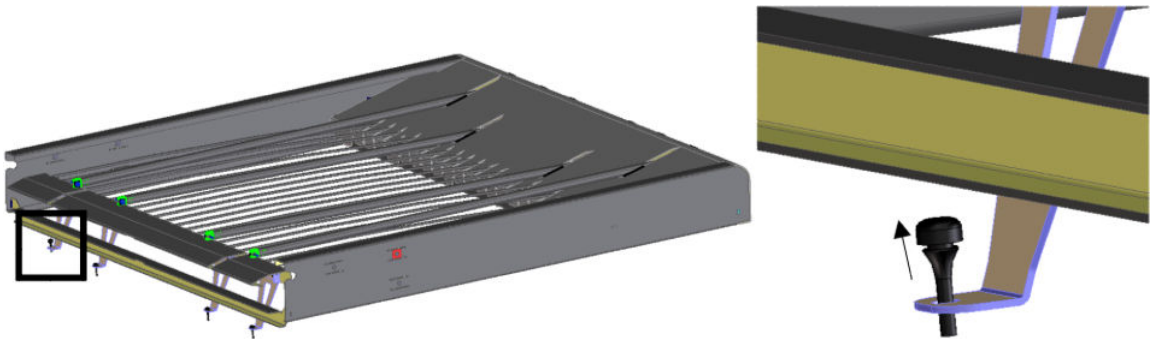
There are three flexible sections of the tray: one central (2) and two lateral (1 and 3). The height of each section can be adjusted on two points along the X axis.



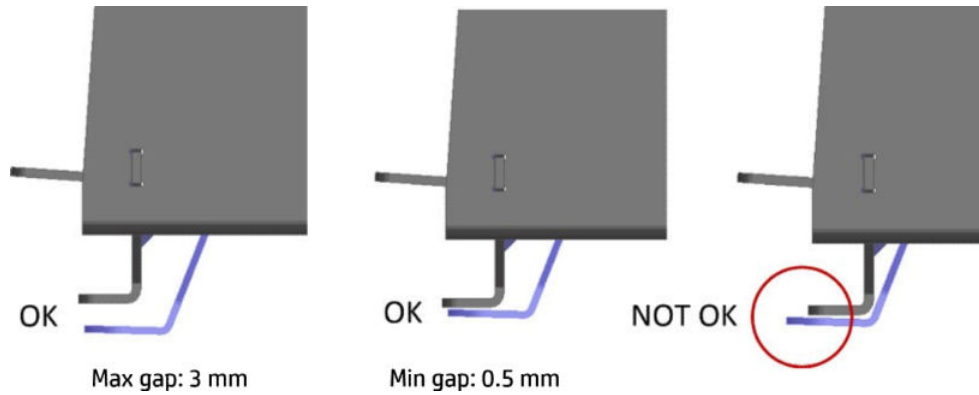


Preparation

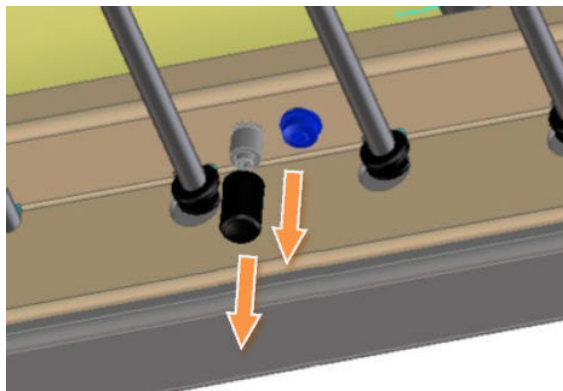
1. Place the tray on its support: the complete tray with all sections installed.
2. Remove the four rubber stoppers from the released edge.



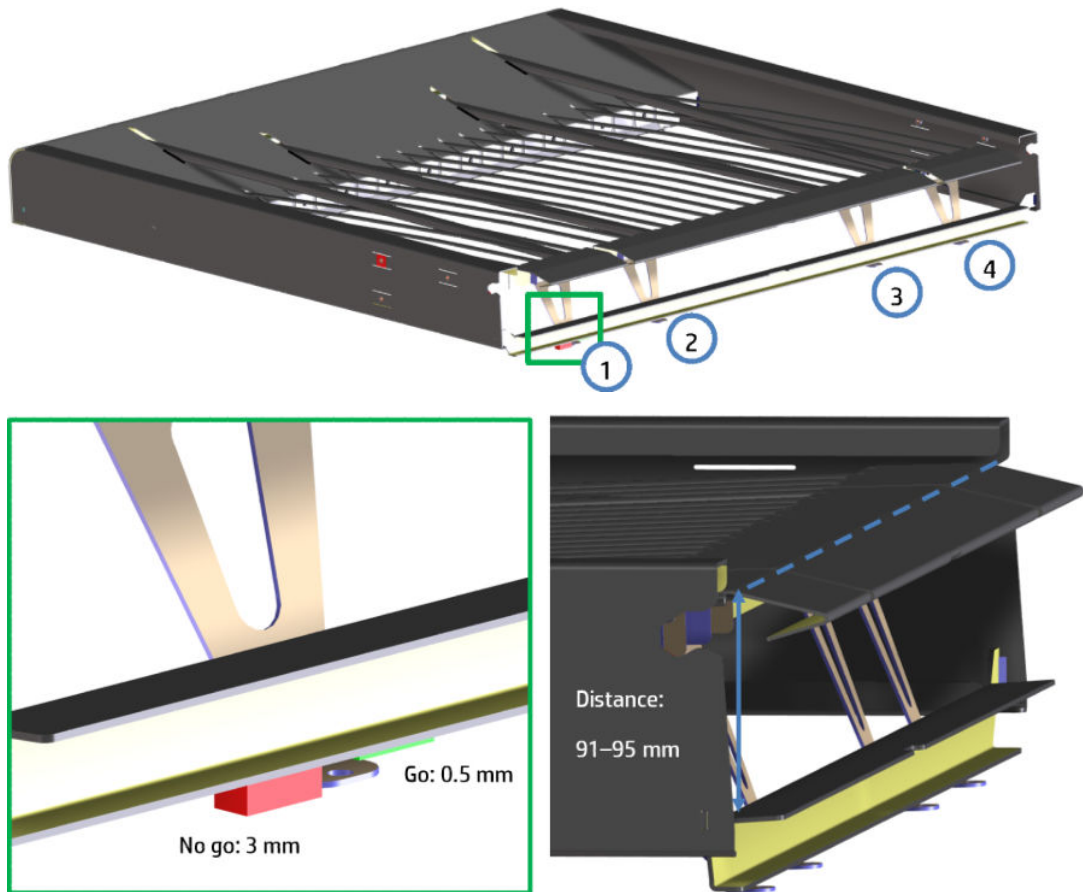
3. Check the position and geometry of the bracket on which the stoppers are mounted: they must not protrude beyond the beam, even if they are lifted up to the higher stop. If they do, carefully bend the bracket by hand until it is slightly recessed with respect to the beam.



4. Check distance between bracket and beam. Nominally there should be a gap of 0.5 mm to 3 mm.
5. Remove the T20 blocking screws.
6. Remove the flexible caps that protect the adjustment screws.



7. Check the position of the brackets with a gauge. Adjust the screws until the desired position is achieved: tighten to increase preload, loosen to increase it.



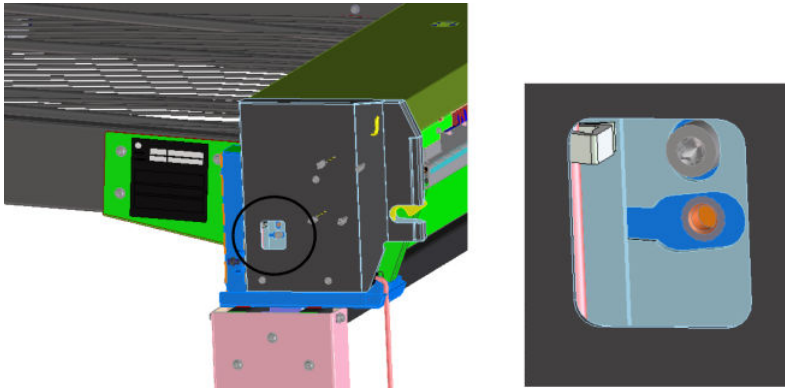
8. Retighten the six blocking screws with 1.2 N·m torque.
9. Put back the six rubber caps and the six rubber stoppers.

Moving and reshipping the stacker

Move the stacker to a new site

The stacker tray should be removed and shipped separately, using its original packaging and locks.

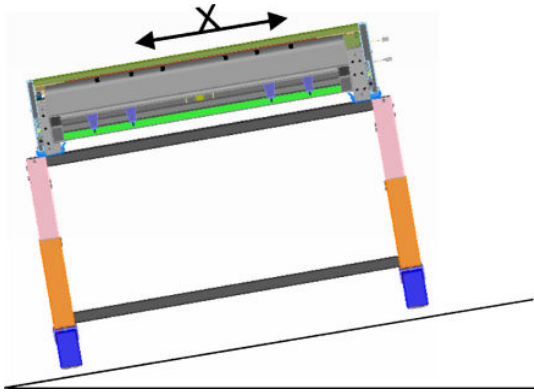
The stand (CZ319-67018) and chassis can be shipped together without disassembling, or shipped separately using their original packaging. In either case, the locking screws should be moved to the shipping position on both sides of the chassis.



Move the stacker within the same site (with ramps or steps)

First disconnect the power cable.

If you need to move the stacker up or down ramps or steps, the maximum slope should be 8°, and you should move it as shown below:

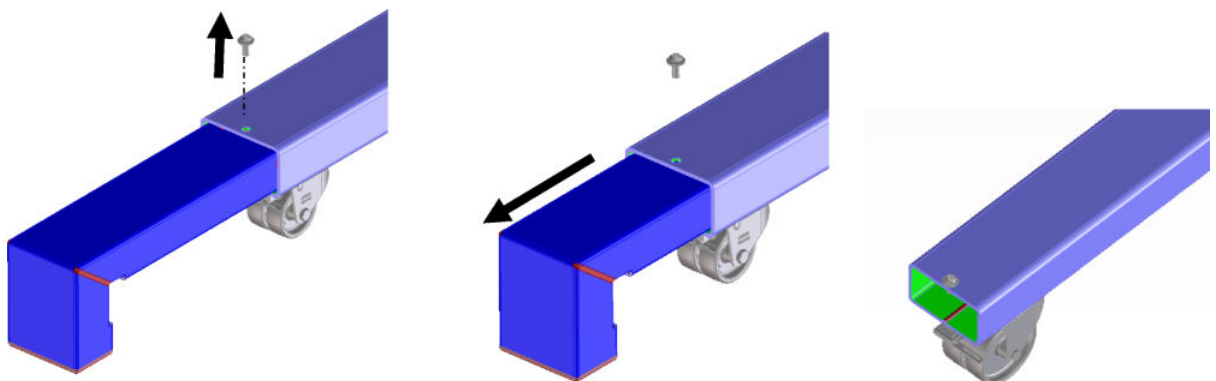


To go up or down steps, remove the [Tray \(CZ319-67017\)](#) on page 1997 and the [Chassis](#) on page 2023 from the stand.

A minimum door or corridor width of 130 cm is normally required. For narrower corridors, remove the [Tray \(CZ319-67017\)](#) on page 1997.

⚠ CAUTION: For doors or corridors narrower than 100 cm, remove the T30 screw on top of each foot, then remove the foot extensions.

Remember to reinstall them once the stacker is in its new location.



Move the stacker to another printer of the same height

If the stacker is moved to another printer of the same height (both 5000 series, or both 8000 series), you need only to repeat the height adjustment procedure described in [3](#).

 **IMPORTANT:** Omitting this adjustment can cause the stacker to malfunction.

Move the stacker to another printer of a different height

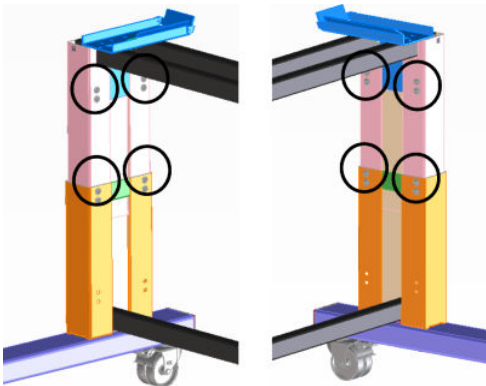
If the stacker is moved to another printer of a different height (5000 to 8000 series, or the reverse), the height of the stand legs must be changed accordingly.

The following procedure explains how to reduce the stand height; follow it in reverse order to increase the height.

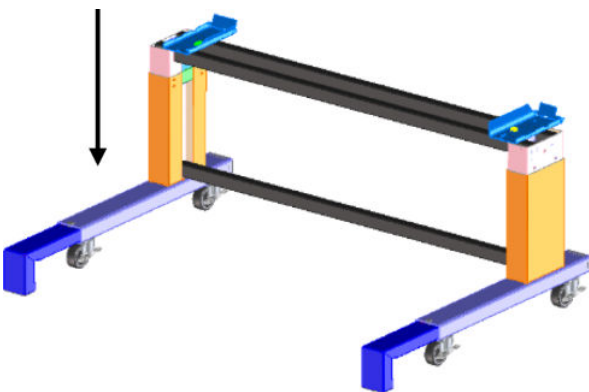
Reduce stand height

1. Remove the [Tray \(CZ319-67017\) on page 1997](#) if necessary.
2. Remove the [Chassis on page 2023](#) if necessary.
3. Remove the eight screws from the inside of each leg (sixteen screws in total).

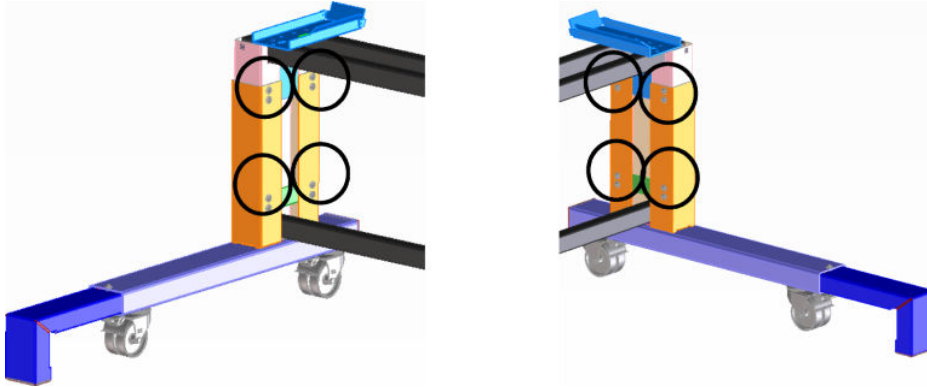
 **CAUTION:** The upper part of the stand will be free to collapse; hold it and lower it gently on both sides.



4. Lower the beam.




- Put back the sixteen screws.



 **IMPORTANT:** Tighten these screws with a torque of 12 N·m.

- Reinstall the rest of the stacker components.

 **IMPORTANT:** After changing the stand height, remember to follow the more precise height adjustment procedure described in [3](#).

16 Upgrade Kit Assembly Instructions



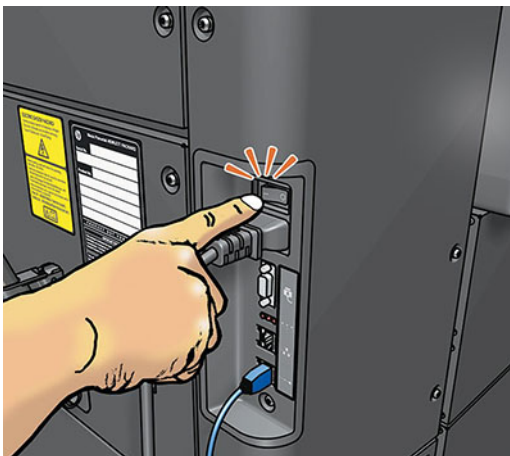
Two people are required to perform certain tasks.



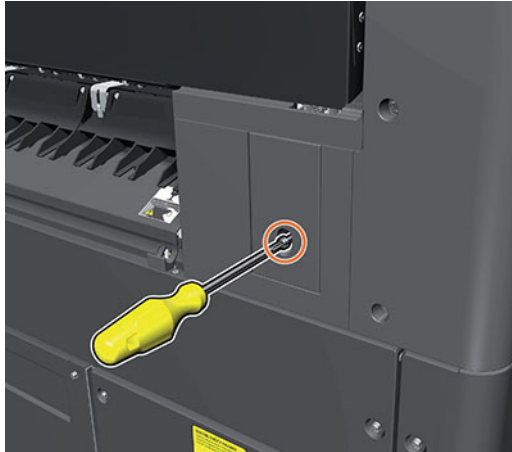
The time required for assembly is approximately 70 minutes.

Remove Top stacker

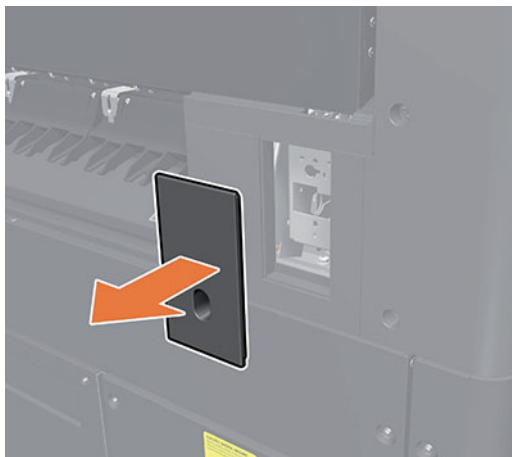
1. Switch off the printer.



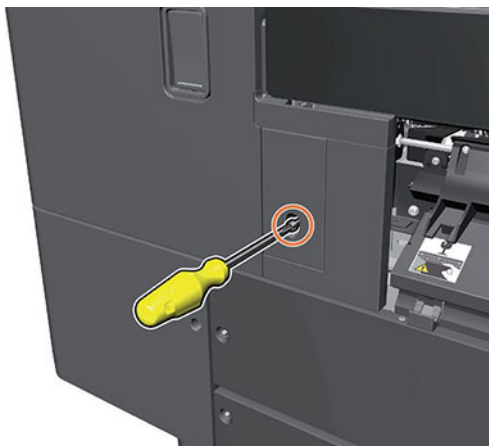
2. Remove screw.



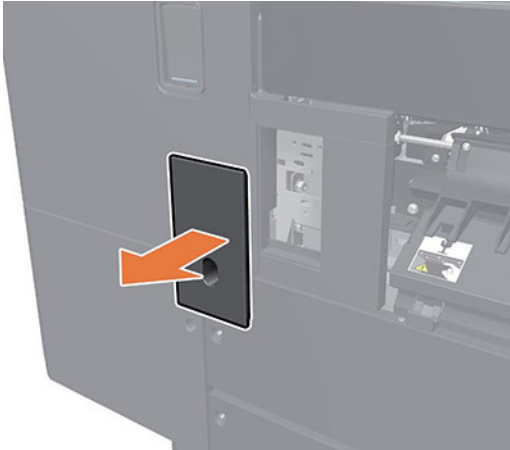
3. Remove the Left Accessory cover.



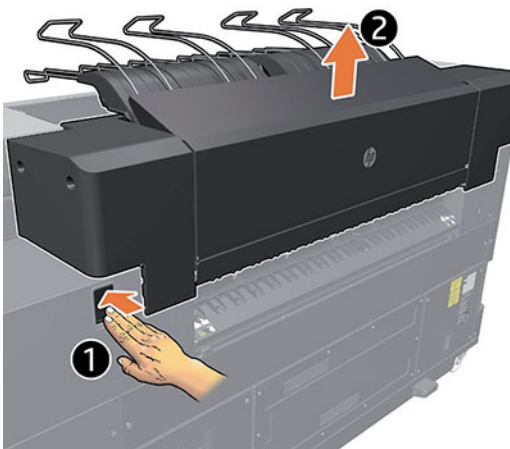
4. Remove screw.



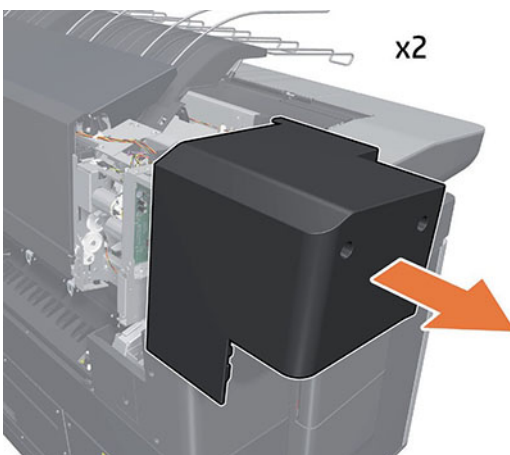
5. Remove the Right Accessory cover.



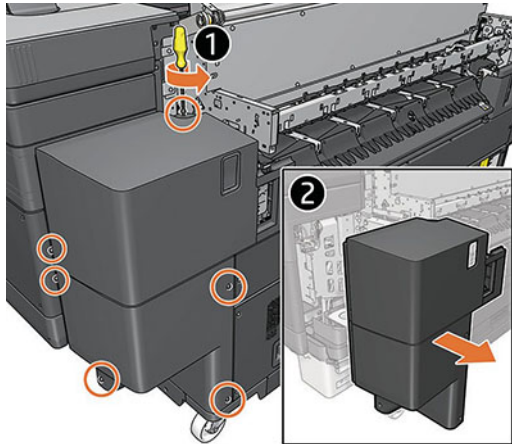
6. Open the Paper output module at the back.



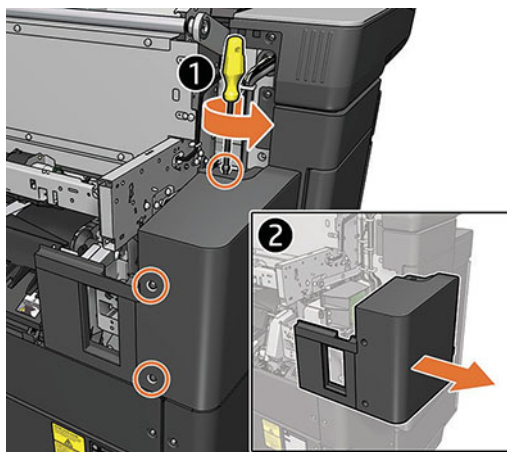
7. Remove the Paper output stacker covers, one from each side.



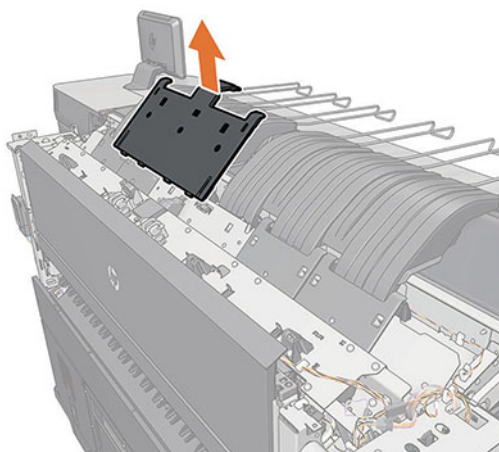
8. Remove six screws and the Lateral cover at the Front Panel side.



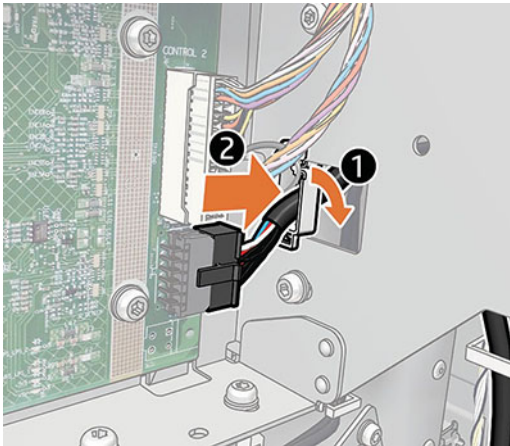
9. Remove three screws and the Lateral Cover at the other side.



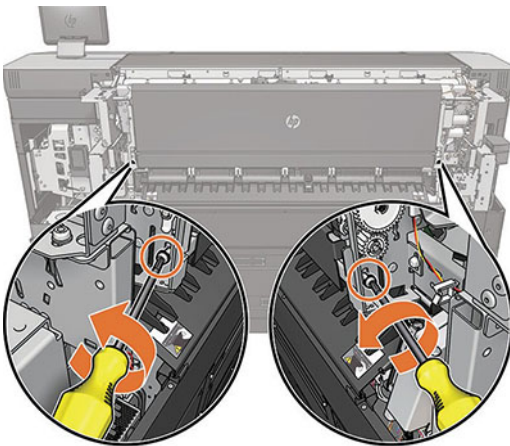
10. Remove the Central plate.



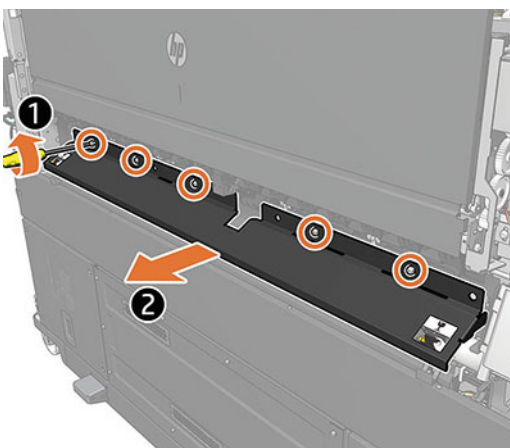
11. Unplug the Connector cable.



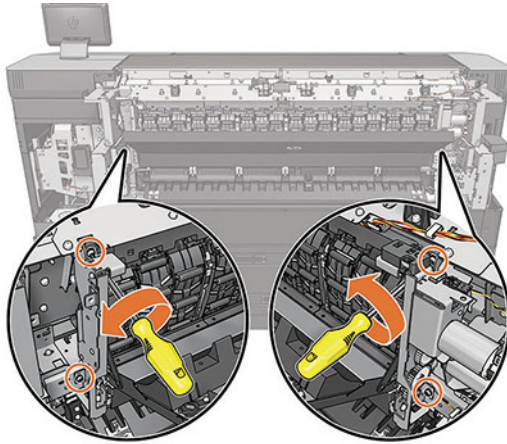
12. Loosen one screw at each side of the Diverter valve interface.



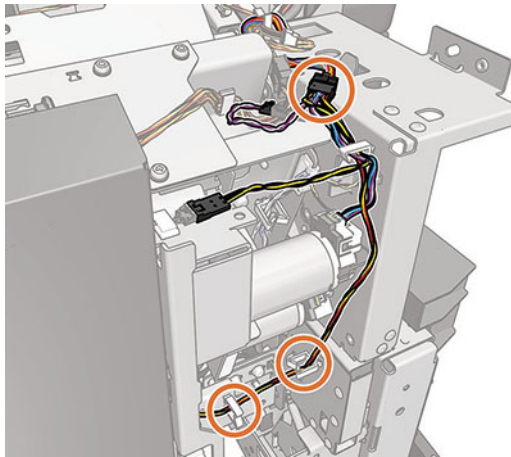
13. Remove the Diverter valve cover.



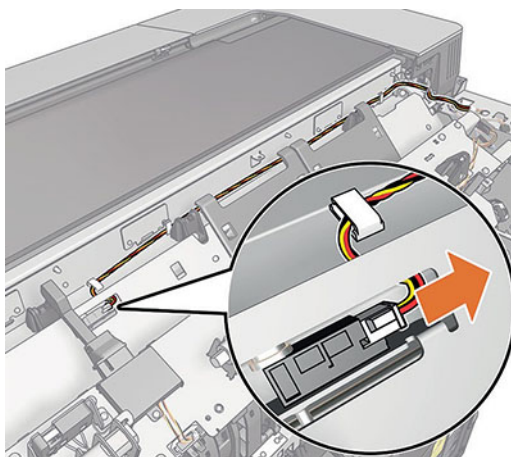
14. Unscrew two M4 x 8 mm screws (four in total) at each side and remove the Module.



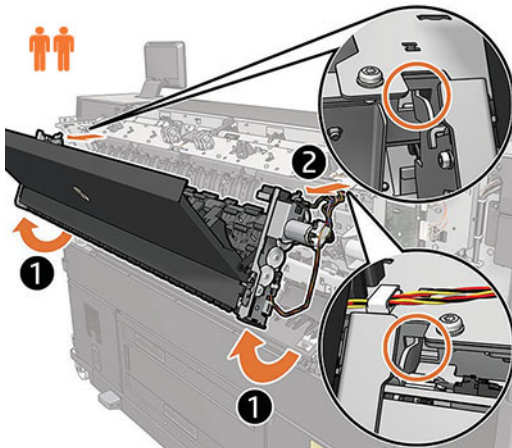
15. Unplug cable.



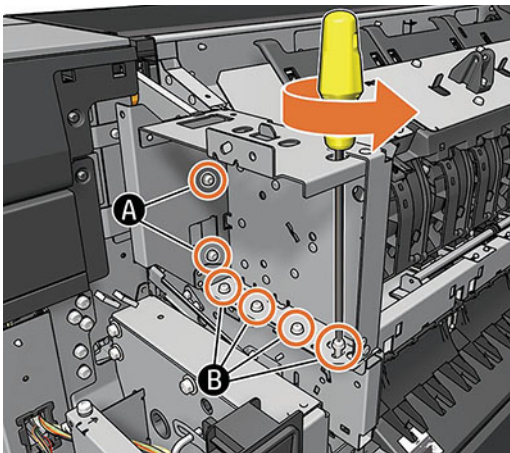
16. Unplug cable.



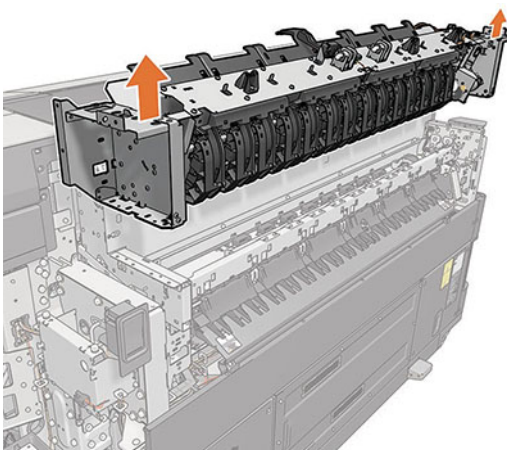
17. With the door open, extract the Top hooks and remove Module.



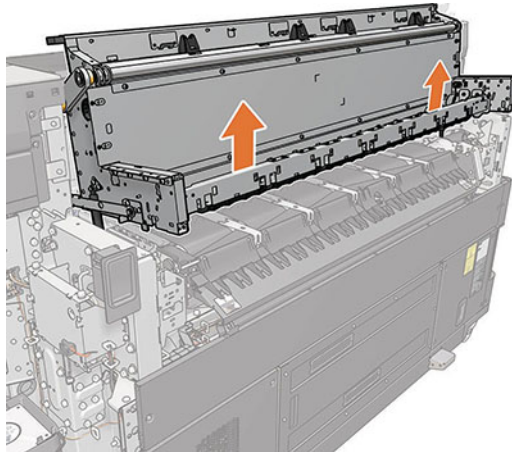
18. Loosen six M4 x 8mm screws at each side (twelve in total).



19. Remove Structure.

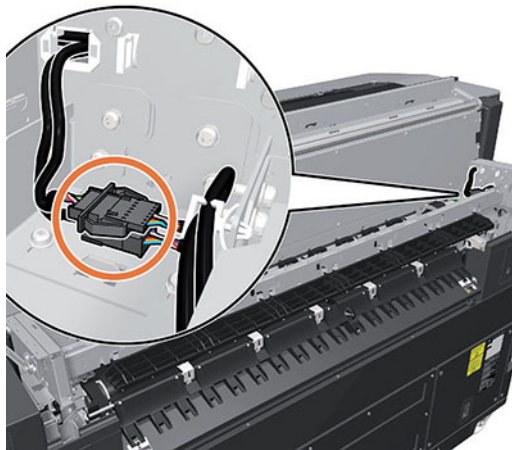


20. Open the Paper output module.

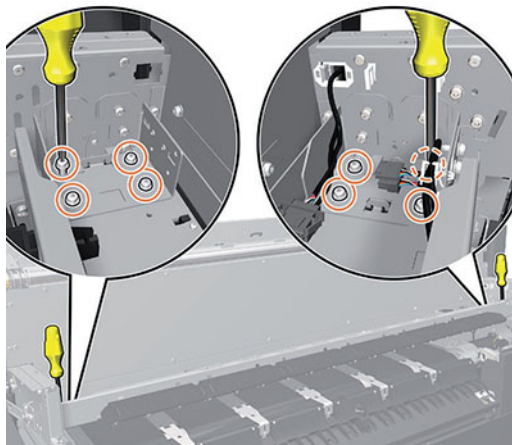


Replace Pinches Beam

1. Unplug two cables.

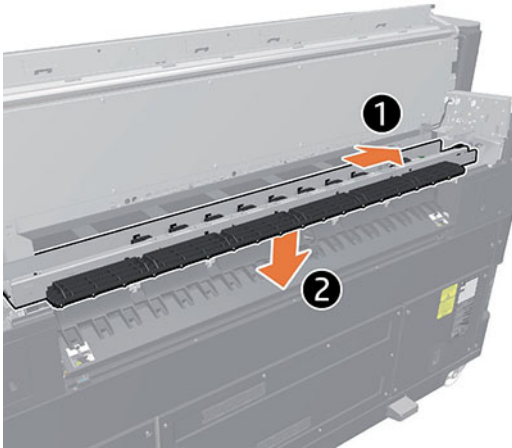


2. Unscrew four screws from each side (eight in total).



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3. Remove the Paper output pinch system.

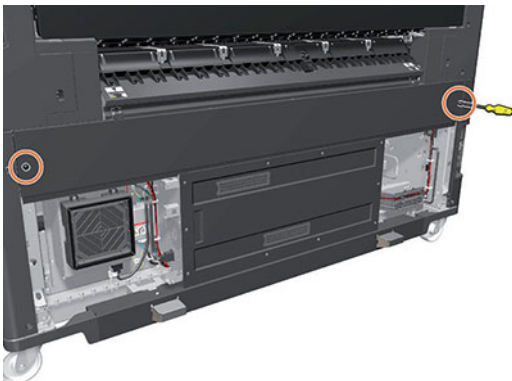


4. Perform the removal process in reverse to install the new Paper output pinch beam.

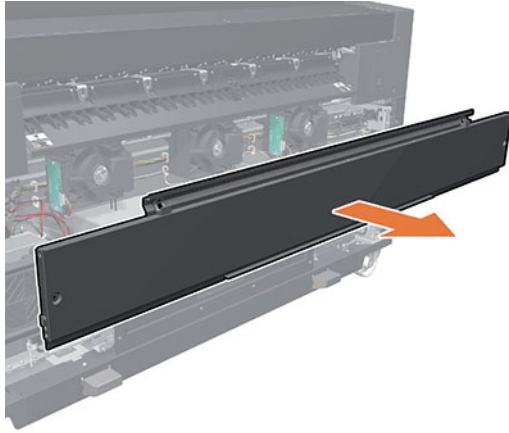


Remove Diverter

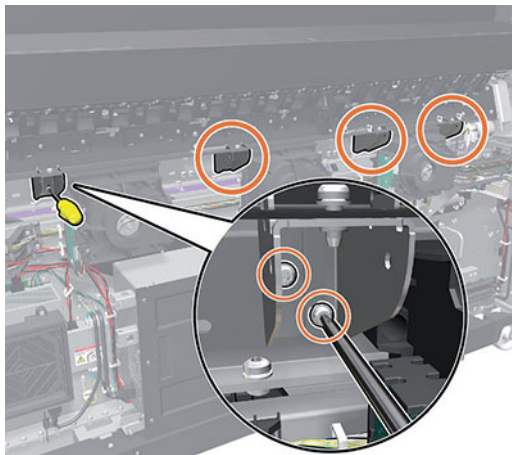
1. Remove two screws.



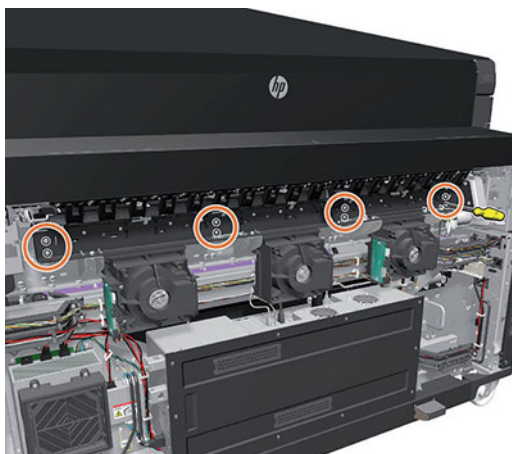
2. Remove the E-box Top cover.



3. Remove eight gusset screws.

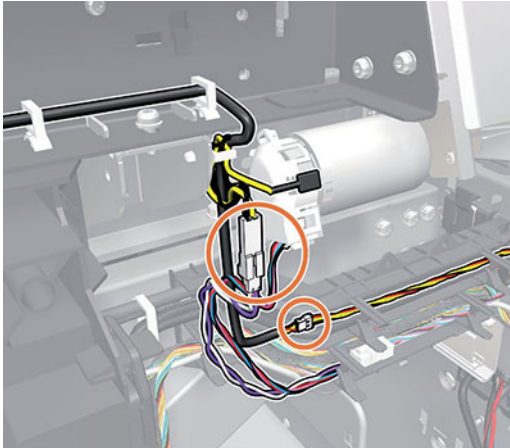


4. Remove eight Diverter valve cover screws.

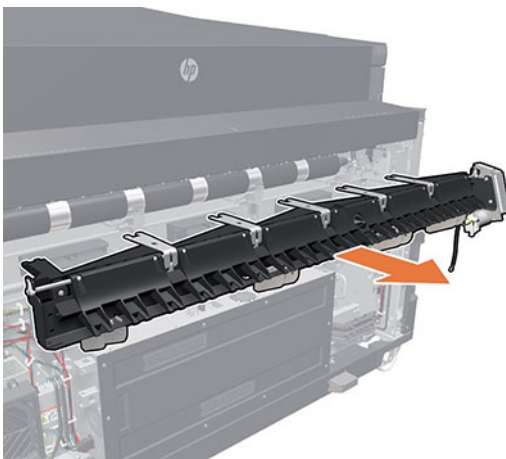


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5. Disconnect three cables.

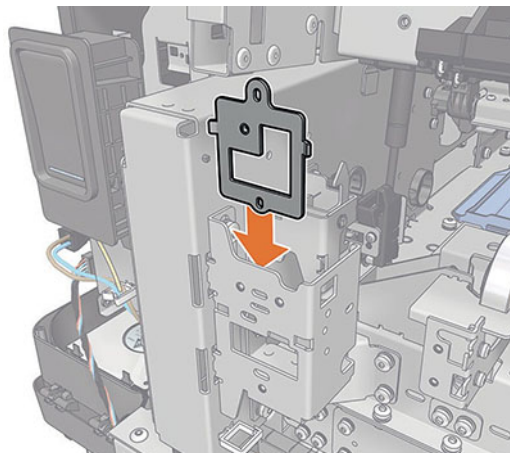


6. Remove Diverter valve.

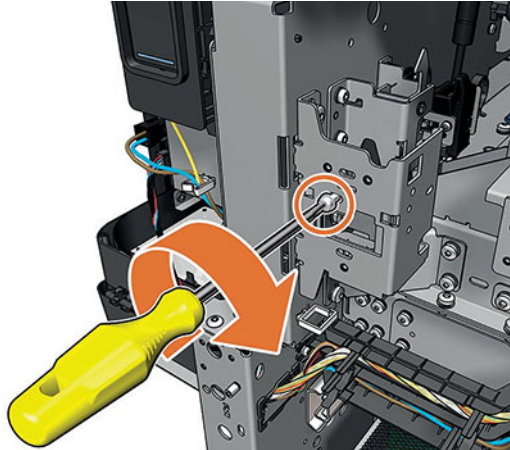


Integrate Adjustment plate

1. Slot the X-Adjustment plate into the Right assembly.

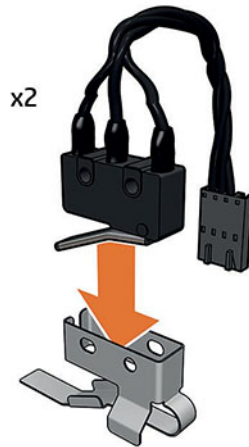


2. Fix the X-Adjustment plate with an M4 screw in the middle of the slot.

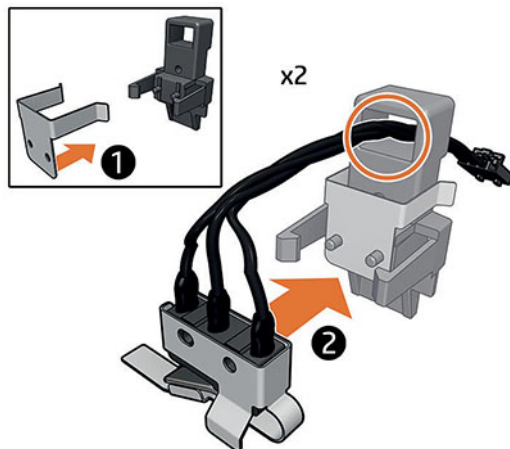


Assemble Accessory sensors

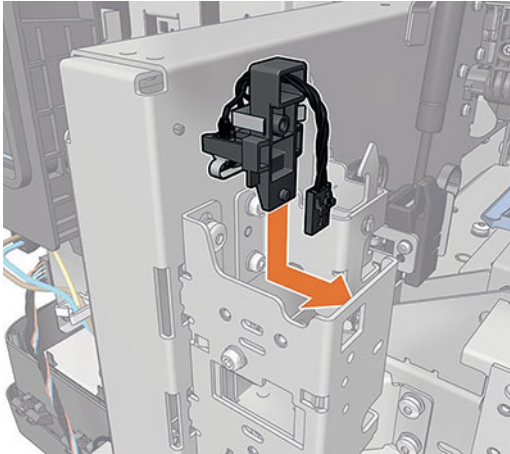
1. Slot the two Sensor safety assemblies into the Spring-Grounding Microswitches.



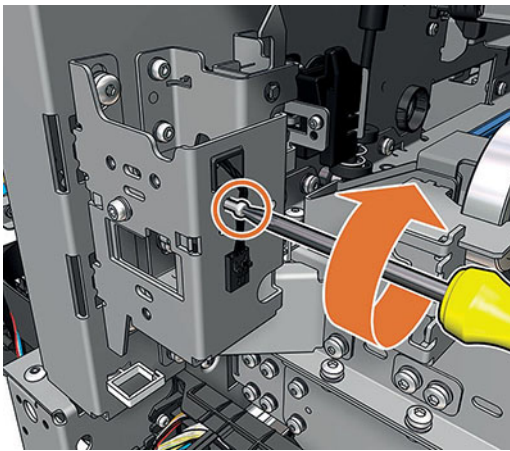
2. Attach previous assemblies with ACC Switch holder, then assemble the Sensor grounding.



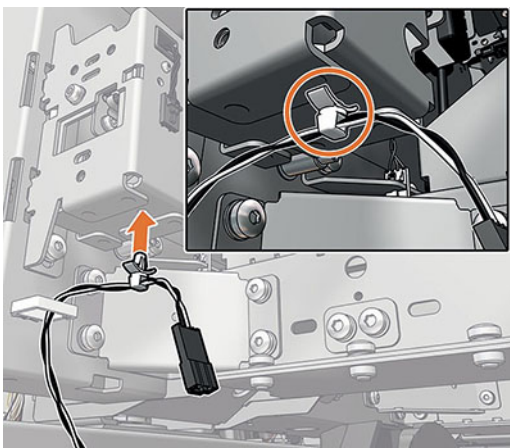
3. Attach previous assembly into the right side of the Printer structure.



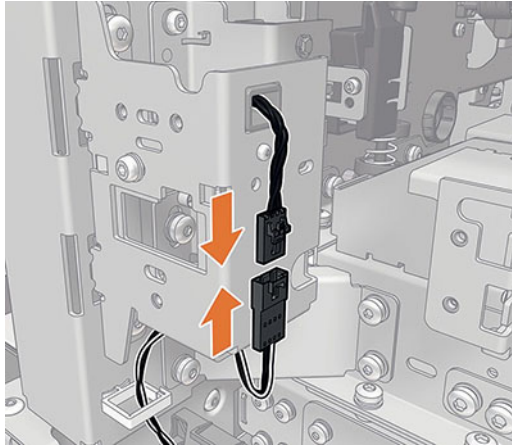
4. Attach the Sensor grounding to ACC Switch holder, then install the previous assembly.



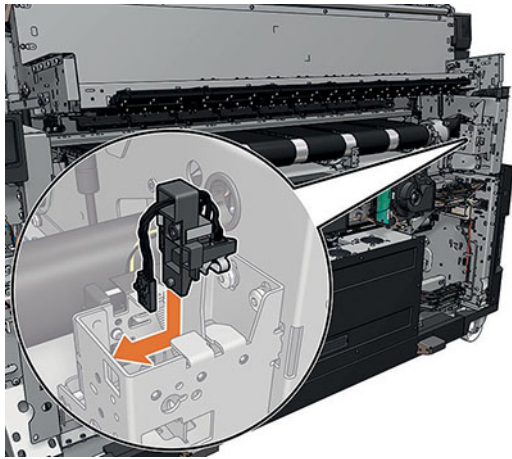
5. Push the Cable clamp into place.



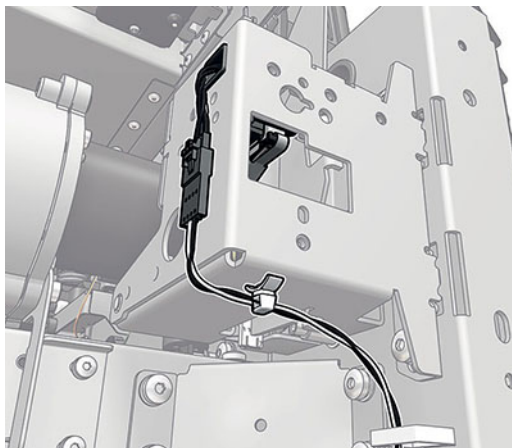
6. Connect cable.



7. Attach other assembly into the left side of the Printer structure.



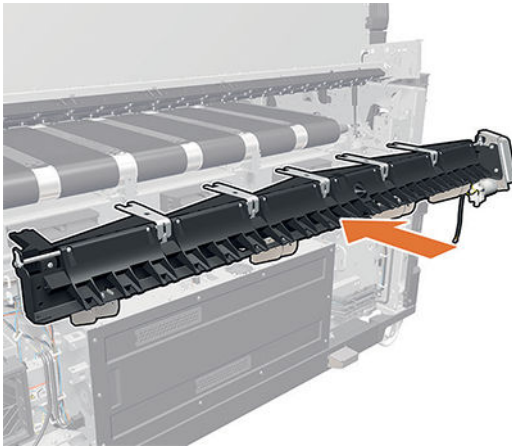
8. Push the Cable clamp into place and connect cable.



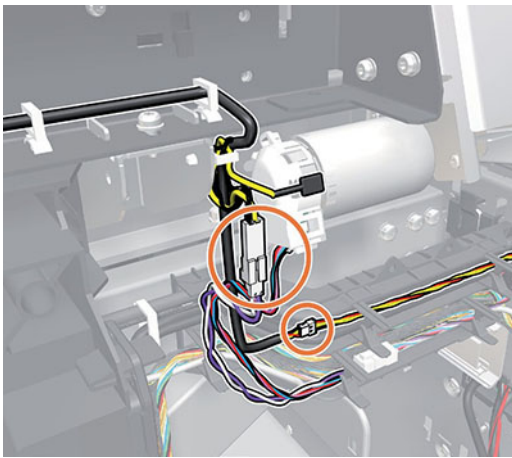
Assemble Diverter

1. Locate the Diverter valve.

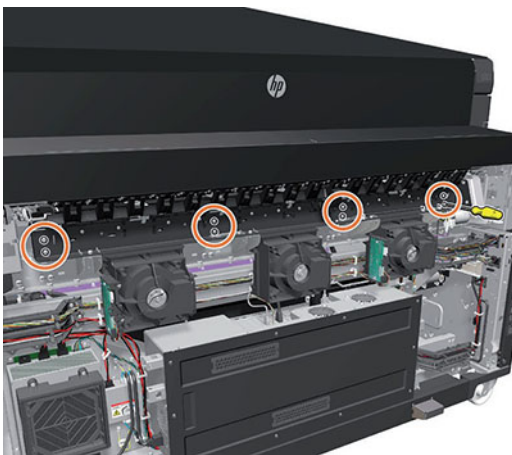
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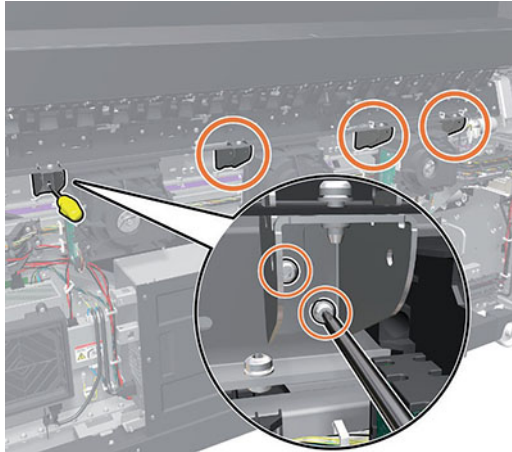
2. Connect three cables.



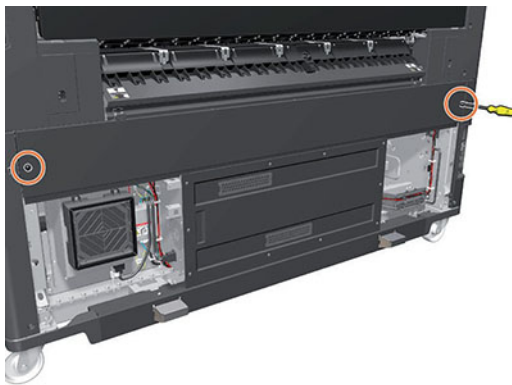
3. Tighten the eight Diverter valve cover screws.



4. Attach eight gusset screws.

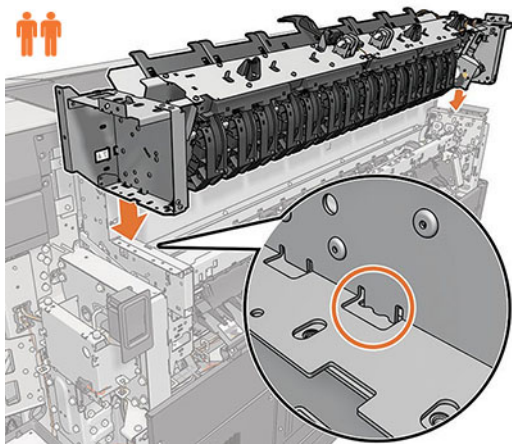


5. Attach the Top E-box cover and fix it with two screws.

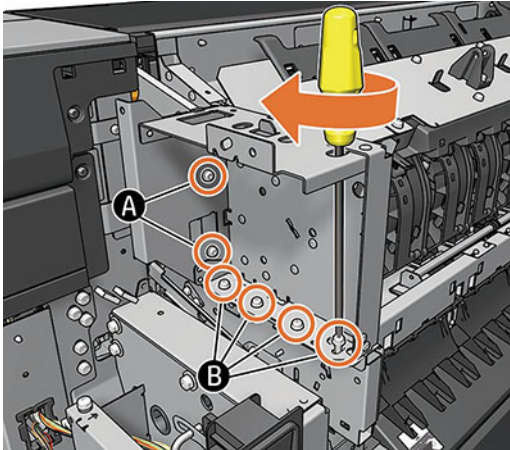


Assemble Top stacker

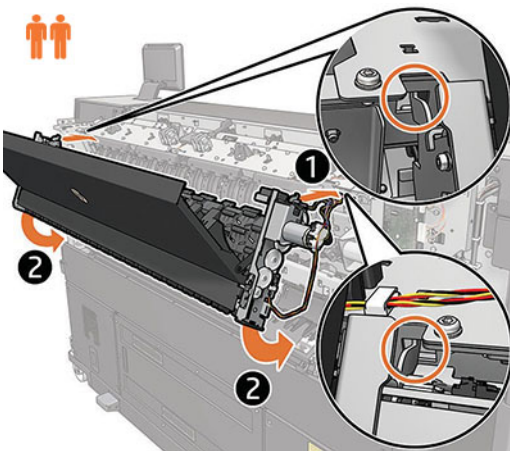
1. Install structure, making sure that the pin matches on the Front Panel side.



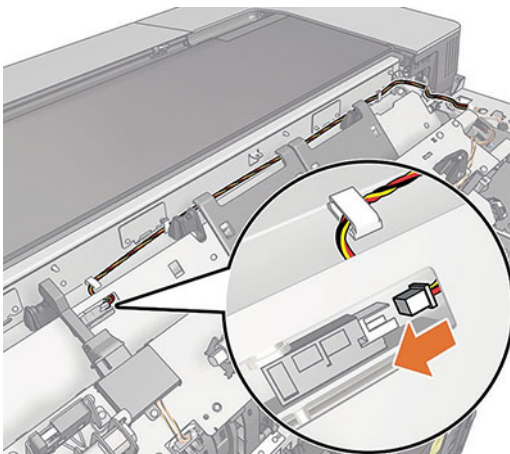
2. Tighten six M4 x 8mm screws at each side (twelve in total).



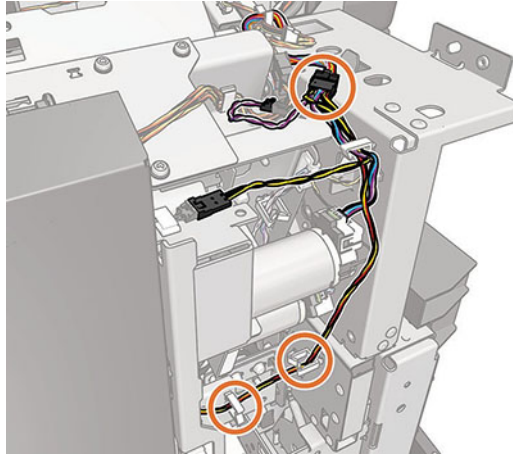
3. With the door open, insert the Top hooks and install the Module.



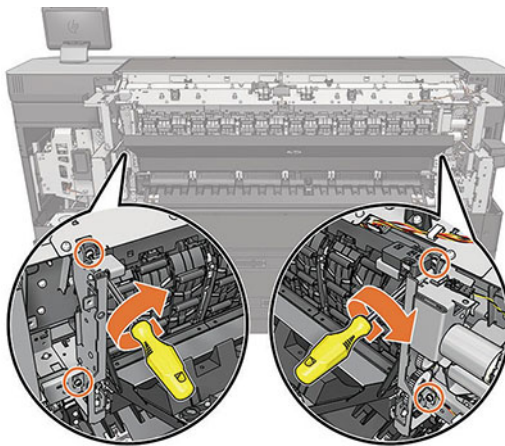
4. Plug in the Sensor connector.



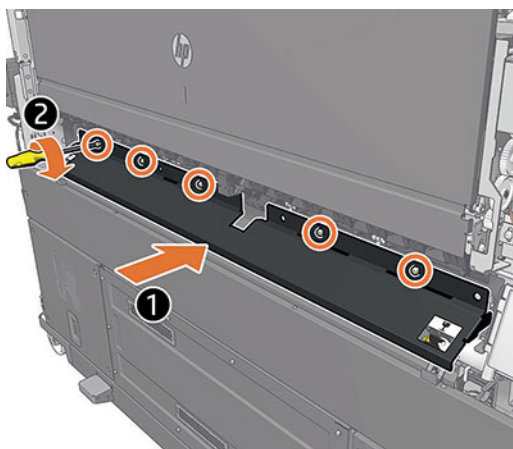
5. Plug in cable.



6. Attach module and fi with two M4 x 8 mm screws (four in total) at each side.

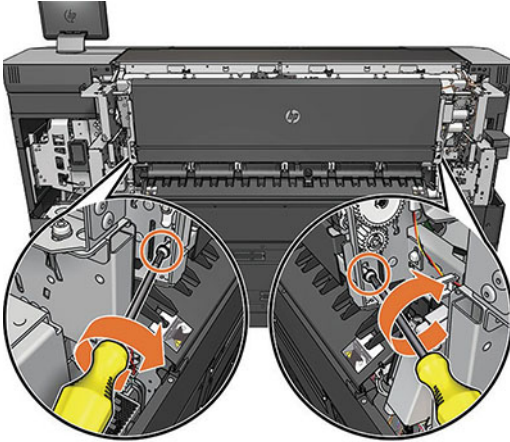


7. Insert the Diverter valve cover.

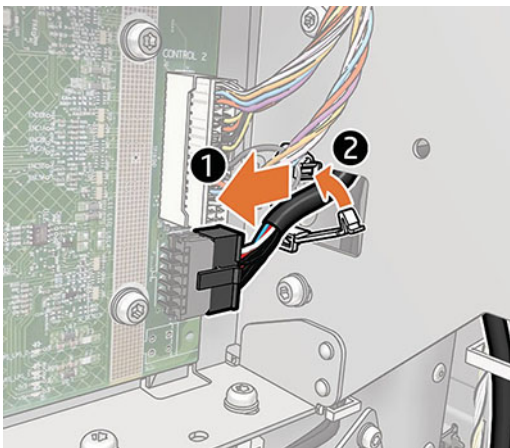


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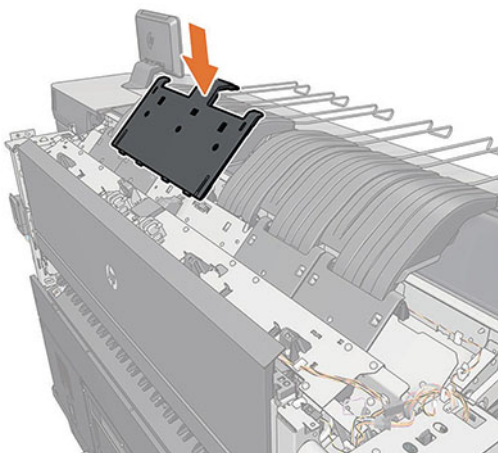
8. Tighten one screw at each side of the Diverter valve interface.



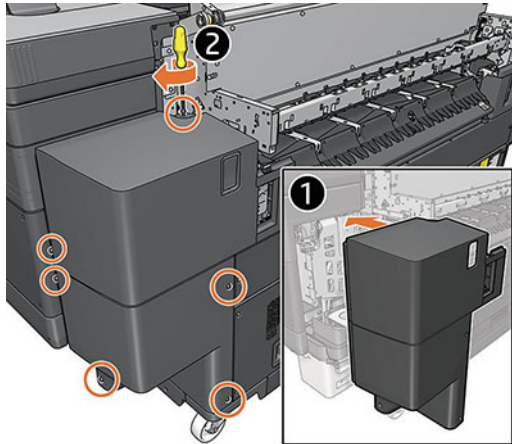
9. Plug in the Connector cable.



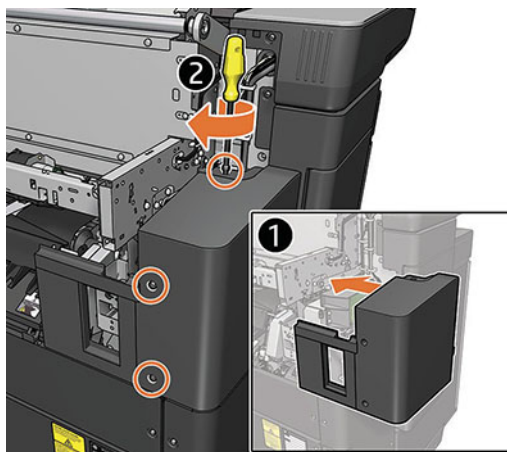
10. Insert the Central cover.



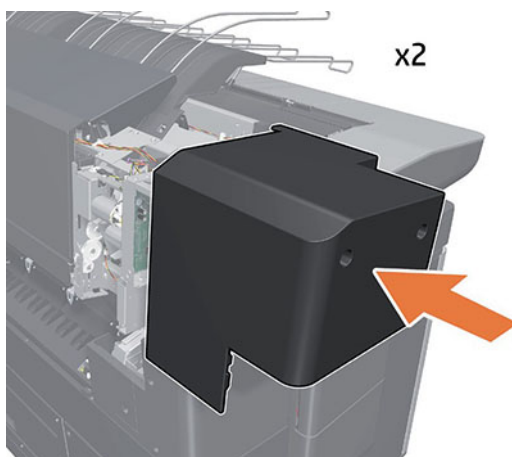
11. Attach six screws and the Lateral cover from the Front Panel side.



12. Attach three screws and the Lateral cover from the other side.

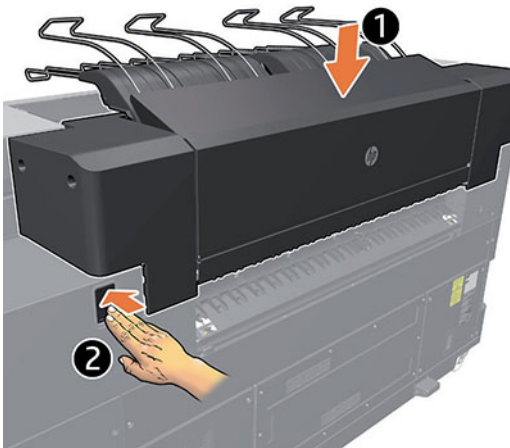


13. Attach the Paper output stacker covers, one on each side.



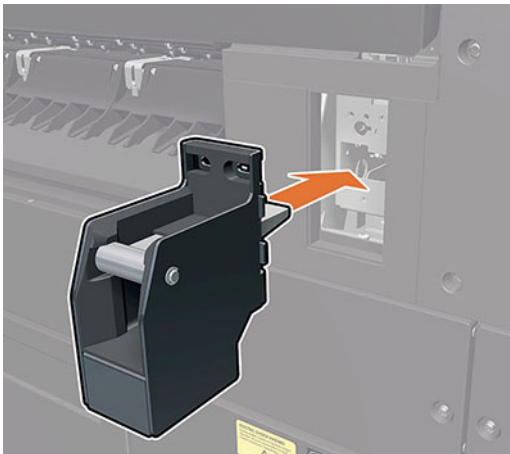
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14. Close the Paper output module at the back.

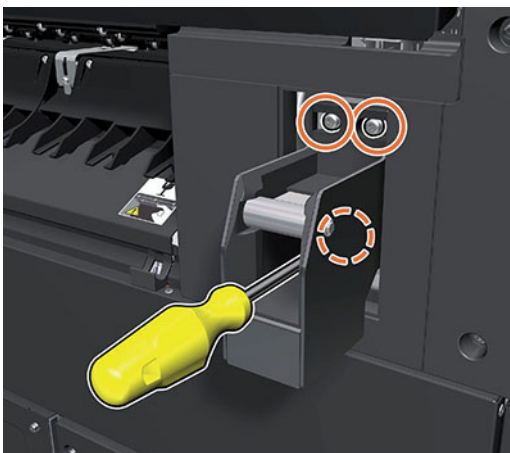


Install Accessory interface

1. Install the Accessory hooks.



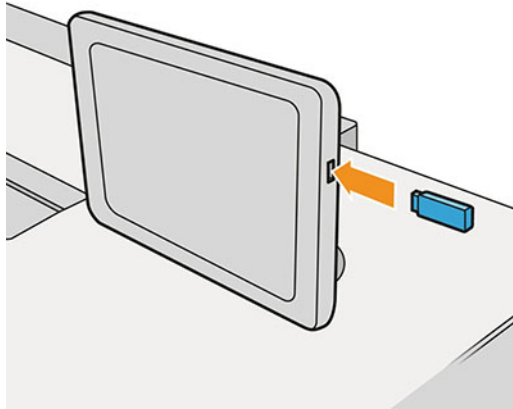
2. Attach the Accessory hooks with three screws.



3. Switch printer on.

Activate Accessory kit

1. Insert the Service-key into the USB port. From the Service menu, activate the Pinch Output function. Select the following path: Service / Service Menu / Printer Accessories / Enterprise UPG Kit, and choose the SET PRESENT option..



2. Install the HP PageWide XL 3900/4000/4100/4500/4600 Accessory Upgrade Kit Licence. Insert the USB dongle into the USB port.



A Obtaining the printer log and the diagnostics package

Printers keep an internal log of their own actions. When a system error occurs, the diagnostic package may help to find the cause and the solution. By default, whenever it restarts, the printer deletes the current log and starts a new one, in order to avoid using a lot of hard disk space.

There are three types of diagnostic package:


- Diagnostic package (reduced level)
- Extended diagnostic package (medium level)
- Extended diagnostic package from USB (verbose level)


There are two ways of retrieving the information:

- From the front panel with a USB flash drive (all levels)
- From the Embedded Web Server (reduced or medium level)

 **NOTE:** If the extended diagnostic package is available, it will be visible from the Embedded Web Server.

When the information has been obtained, it should be attached to the customer case.

 **NOTE:** The extended diagnostic package enabled from USB is always preferred as it includes extra level logging.

 **NOTE:** Once the case is solved, the extended diagnostic package must be disabled in order to preserve disk space.

Front panel USB method

This method works only with a standard USB flash drive (without a flash drive, use the Embedded Web Server method). The USB method has the advantage of working with very minimal printer functionality: just the printer OS and the USB connection. It can work without connectivity and the front panel. The level of logging is more detailed than the extended package that can be enabled from the Embedded Web Server. It is recommended to use the USB method whenever possible.

1. Take a standard USB flash drive, formatted as FAT32.
2. Create an empty file in the USB flash drive (right-click, **New > Text Document**) and name it **pdipu_enable<action code>.log**. You can also find these files attached to this document.

Empty file to load in the USB	Actions
pdipu_enable_eolog.log pdipu_enable_scanner_eolog.log	Enable verbose logging. Printer needs to restart to take effect. The file with "scanner" permits enabling logs for the scanning subsystem.
pdipu_enable_eolog_sessionsNN.log	Enable verbose logging. You can add the last NN number of sessions to the package (number NN counted after the 2 nd reboot).

There are more flags available, that you can add. For further reference, please see the FLAGS_READ.me file text that is generated when extracting the diagnostic package.

- The printer gives audio messaging detailing the progress. The audio messages available are:
 - “Generating diagnostic package, please wait.”
 - “Diagnostic package successfully complete”
 - “Error. Diagnostic package failed”
 - “You can now detach the USB pen drive”
 - “Traces are now enabled. You must reboot the printer”
 - “Generating package without printer.log”
 - “Encrypting package”

Embedded Web Server method

- ▲ Access the Embedded Web Server by typing the IP address of the printer in a Web browser. In the **Support** tab, click **Service support** to display the following page.

If the problem persists and is difficult to debug, try the extended diagnostics package. To enable the extended diagnostics package, click **Enable the extended diagnostics package**. The printer needs to be restarted after enabling or disabling the extended diagnostics package.

At any time after enabling the extended diagnostics package, you can download the package and the printer logs by clicking **Download the extended diagnostics package**.

When you have finishing using the extended diagnostics package, remember to disable it; otherwise it could affect printer performance or cause undesirable side-effects.

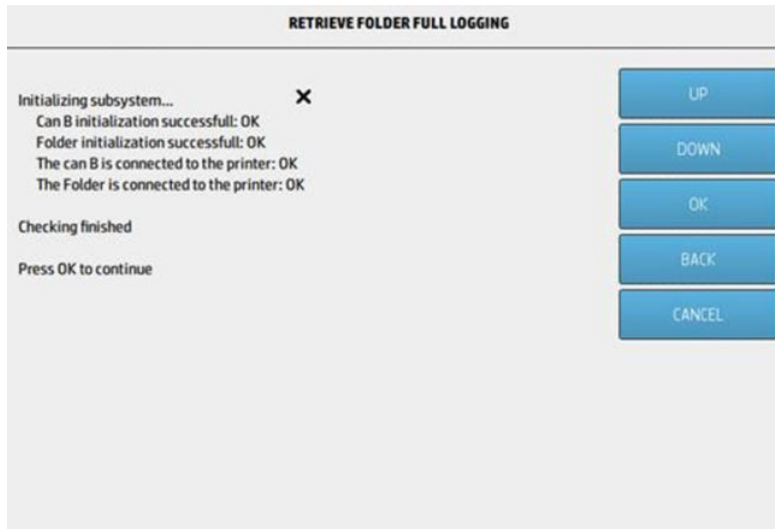
How to retrieve full Folder logging

Each time the Folder traces need to be extracted from the Folder, please follow these instructions:

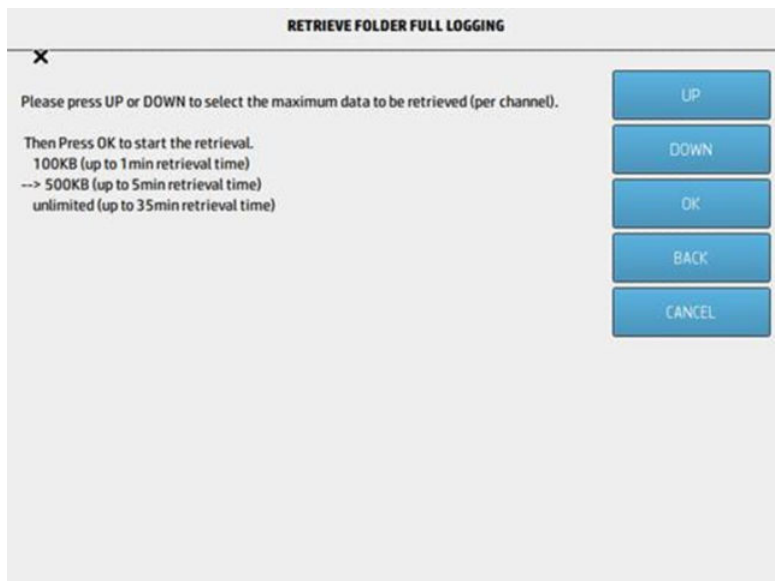
- Once an issue is generated, go to **Settings > Service Menu/ Accessory Utilities > Folder utilities > Retrieve Folder Full Logging**.

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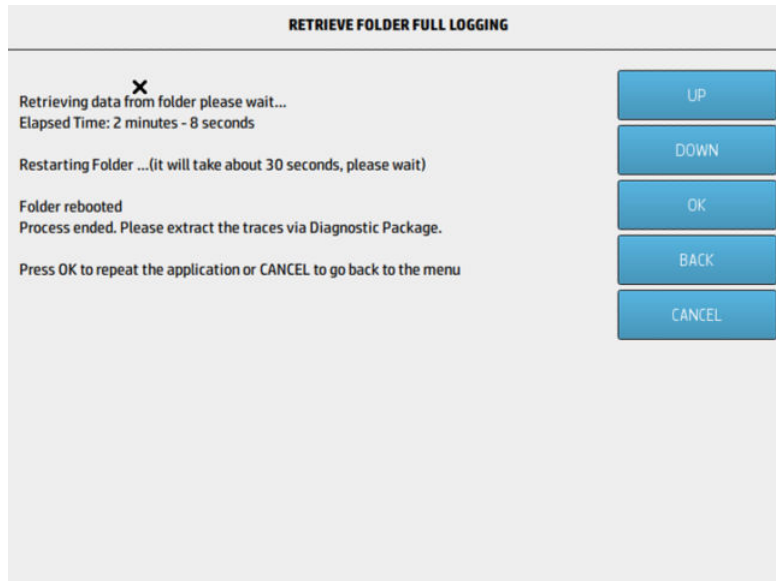
- Follow the instructions. Always press **OK** to continue the process.



- 500KB is always the recommended option.



- Continue with the process. Wait for the process to finish, then press **Cancel** to exit.



- Extract the Folder log via the Diagnostic package. All information (printer + Folder) will be extracted at the same time.

B Cable identification

 **IMPORTANT:** See [Cables on page 618](#) for more details on cable naming.

The main purpose of this appendix is to be able to identify any cable within the printer, for troubleshooting or cable replacement.

Most of the cables are not visibly identified, because the sockets have been designed to prevent misconnection (“poka-yoke”). In a few cases, cables are labeled when there is some risk of a mistake (swapping two cables).

- **Cable number:** The same number as used in the [Electronics block diagram on page 12](#).
- **HPPN:** The part number/reference of the cable. For most cables, this reference is not marked on the cable itself. But, for the support part, there is a specific support part number that includes most of the printer’s cables. In this case, each cable will have the part number marked on it, and from the table, you will be able to find the two parts connected by this cable.
- **FROM/TO:** Specific information about each side of the connection:
 - The name of the PCA to which the cable is connected, or “Aerial” followed by a cable number if it is connected to another cable.
 - The name of the PCA connector to which the cable is connected.
 - The text of a label attached to the cable.

CZ309-50001

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_01	CZ309-50001	Engine PCA (Panacea)	J10, COPPER PB		Print Bar Hub PCA (Menorca)	J9, PRINTBAR DATA	

CZ309-50005

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_02	CZ309-50005	Data Distribution PCA (Magonis)	8: J8, J19	8	Printhead PCA (Coral)	On each printhead PCA: J1 J1B	

CZ309-50006

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_03	CZ309-50006	Data Distribution PCA (Magonis)	7: J7,J17	7	Printhead PCA (Coral)	On each printhead PCA: J1 J1B	

CZ309-50007

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_04	CZ309-50007	Data Distribution PCA (Magonis)	6: J6,J14	6	Printhead PCA (Coral)	On each printhead PCA: J1 J1B	

CZ309-50008

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_05	CZ309-50008	Data Distribution PCA (Magonis)	5: J5,J13	5	Printhead PCA (Coral)	On each printhead PCA: J1 J1B	

CZ309-50009

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_06	CZ309-50009	Data Distribution PCA (Magonis)	4: J4,J20	4	Printhead PCA (Coral)	On each printhead PCA: J1 J1B	

CZ309-50010

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_07	CZ309-50010	Data Distribution PCA (Magonis)	3: J3, J18	3	Printhead PCA (Coral)	On each printhead PCA: J1 J1B	

CZ309-50011

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_08	CZ309-50011	Data Distribution PCA (Magonis)	2: J2,J16	2	Printhead PCA (Coral)	On each printhead PCA: J1 J1B	

CZ309-50012

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_09	CZ309-50012	Data Distribution PCA (Magonis)	1: J1,J11	1	Printhead PCA (Coral)	On each printhead PCA: J1 J1B	

CZ309-50014

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_16	CZ309-50014	Aerial NL_19			Printhead PCA (Coral)	On each printhead PCA: J6	

CZ309-50015

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_17	CZ309-50015	Aerial NL_19			Aerial NL_39	on PRINTBAR MECH: J1, POWER INPUT on PRINTBAR DISTRIBUTION: J10, VPS INPUT and last connector to other cable #19	

CZ309-50016

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_19	CZ309-50016	Aerial NI_17			Aerial NI_16 (for each PH)		

CZ309-50017

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_10	CZ309-50017	Print Bar Hub PCA (Menorca)	J3, MONTJOI INTERFACE		Print Bar Mechatronics PCA (Montjoi)	J4, MENORCA PCA INTERFACE	

CZ309-50020

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_31	CZ309-50020	Print Bar Mechatronics PCA (Montjoi)	J6, RIGHT SIDE ENCODERS AND SENSORS		Aerial NI_34 and NI_32		

CZ309-50021

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_32	CZ309-50021	Aerial NI_38 and NI_31			Aerial Right print-bar lift motor, lift brake, service carriage motor, spittoon motor, and capping motor		

CZ309-50022

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_34	CZ309-50022	Aerial NI_31			Aerial, Right print-bar switches spittoon beam and carriage bump		CARRIAGE-SENSOR SPIT_RIGHT

CZ309-50023

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_36	CZ309-50023	Print Bar Mechatronics PCA (Montjoi)	J3, LEFT SIDE SENSOR		Aerial, Left print-bar upper lift sensors, Capping sensor and NI_45		

CZ309-50028

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_73	CZ309-50028	Power Distributor (Kappa)		POWER DISTRIBUTOR	Dryer PCA (Petrie)	J5	

CZ309-50029

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_33	CZ309-50029	Print Bar Mechatronics PCA (Montjoi)	J5, LEFT SIDE MOTORS AND ENCODERS		Aerial, NI_45 and left print-bar spittoon and lift encoder		

CZ309-50030

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_54	CZ309-50030	Carriage Sensor PCA (RedStar)	J5		Tetris		

CZ309-50033

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_52	CZ309-50033	Carriage Sensor PCA (RedStar)	J6 or J7 (pokayoke)		Drop Detector PCA (RedBeam)	NA, embedded within DD assy	

CZ309-50035

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_56	CZ309-50035	Carriage Sensor PCA (RedStar)	J1		Aerial, printhead cleaning motor		

CZ309-50039

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_90	CZ309-50039	Central Distribution PCA (Marbella)	J11, SERVICE STATION	INTERCONNECT PCA	Air Control PCA (Clara)	J2, BULLI	ISS PCA

CZ309-50040

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_91	CZ309-50040	Air Control PCA (Clara)	J12, ISS LINK		Ink Supply PCA (Zeppelin)	J2, BULLI	

CZ309-50041

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_92	CZ309-50041	Ink Supply PCA (Zeppelin)	J1, LED PCA		I-LED PCA	J1, LED IF	

CZ309-50049

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_150	CZ309-50049	Bottom Mechatronics PCA (Merlin)	J2, BELT LOOP FEED		Aerial, Feed motor and belt encoder		FEED (label on power cable, not on encoder reader) BELTS (label on power cable, not on encoder reader)

CZ309-50050

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_162	CZ309-50050	Bottom Mechatronics PCA (Merlin)	J7, AEROSOL 1-2-3-4		Aerial, NI_163		AEROSOL FANS

CZ309-50053

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_153	CZ309-50053	Bottom Mechatronics PCA (Merlin)	J5, RIBS		Aerial, NI_154		RIBS MOTOR + ENCODER

CZ309-50057

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_157	CZ309-50057	Bottom Mechatronics PCA (Merlin)	J8, PAPER SENSORS		Aerial, NI_158 and NI_159		3 connectors with 3 labels: POST PB JAM SNS ML TOF SENSOR ML FEED AND D-FLAG SNS

CZ309-50058

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_158	CZ309-50058	Aerial, NI_157			Aerial, Loop control and Feed sensor		

CZ309-50063

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_159	CZ309-50063	Aerial, NI_157			Aerial, TOF sensor		

CZ309-50066

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_152	CZ309-50066	Bottom Mechatronics PCA (Merlin)	J3, BELT ANA ENC		Aerial, Belt Analog Enc		

CZ309-50071

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_38	CZ309-50071	Print Bar Mechatronics PCA (Montjoi)			Aerial, NI_32	J7, RIGHT SIDE MOTORS	

CZ309-50072

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_53	CZ309-50072	Carriage Sensor PCA (RedStar)	J6 or J7 (poyayoke)		Drop Detector PCA (RedBeam)	Embedded within DD Assy	

CZ309-50089

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_97	CZ309-50089	Air Control PCA (Clara)	J4, J6, J8, J10 (side CIS VALVE 1-4)		Aerial, CID valve sensor		

CZ309-50090

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_74	CZ309-50090	Central Distribution PCA (Marbella)	J16, DRYER		Dryer PCA (Petrie)	J19	

CZ309-50091

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_147	CZ309-50091	Power Distribution (Kappa)			ATX PSU (Picolit)		

CZ309-50092

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_146	CZ309-50092	Aerial, inlet power			Power Distribution (Kappa)		

CZ309-50094

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_143	CZ309-50094	Formatter PCA (Antarctica)			Connection Panel PCA (Cricket)		

CZ309-50097

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_142	CZ309-50097	Aerial, grounding cables			Aerial, grounding cables		

CZ309-50098

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_102	CZ309-50098	Formatter PCA (Antarctica)	CON_JDI	FORMATTER	Jester JDI PCA	J18	JDI

CZ309-50099

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_163	CZ309-50099	Aerial, NI_162			Aerial, to each aerosol FAN		

CZ309-50100

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_98	CZ309-50100	Air Control PCA (Clara)	J3, J5, J7, J9 (side CIS VALVE 1-4)		Aerial, CID valve motors		

CZ309-50101

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_113	CZ309-50101	Mechatronics PSU (MU VPS PSU)			Central Distribution PCA (Marbella)	J6, POWER SUPPLY CONTROL	

CZ309-50103

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_99	CZ309-50103	Air Control PCA (Clara)	J17, WASTE	CLARA PCA	Waste Management PCA (Terol)	J1	Waste PCA

CZ309-50108

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_124_8000	CZ309-50108	Central Distribution PCA (Marbella)	J29, PAPER IN	CENTRAL INT	Drawer PCA (Benji)		MI DRAWER 1 MI DRAWER 2 MI DRAWER 3

CZ309-50109

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_115	CZ309-50109	Central Distribution PCA (Marbella)	J12, PAPER OUTPUT		Top Stacker PCA (Morgana)	J7 > J2, DATA	

CZ309-50111

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_114	CZ309-50111	Central Distribution PCA (Marbella)	J31, VACUUM FANS		Vacuum FAN driver PCA (EOLA)		Y cable: when looking from front: shorter going to left FAN longer going to right (and then controlling middle FAN) POKAYOKE

CZ309-50112

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_112	CZ309-50112	Mechatronics PSU (MU VPS PSU)			Central Distribution PCA (Marbella)	J2, POWER IN	

CZ309-50113

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_161	CZ309-50113	Bottom Mechatronics PCA (Merlin)	J9, VACCUM SENSORS		Vacuum SNS PCA		

CZ309-50120

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_45	CZ309-50120	Aerial, NI_36 and NI_33			Aerial, left print-bar spittoon beam sensor and spittoon beam motor		

CZ309-50122

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_125	CZ309-50122	Vacuum FAN driver PCA (EOLA)	<no marking, but no risk of mistake>		Aerial, to right and middle vacuum FAN		EOLA FAN

CZ309-50134

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_172	CZ309-50134	Aerial, NI_169			Aerial, MO jam sensor		POST PRINT SNS

CZ309-50135

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_167	CZ309-50135	Bottom Mechatronics PCA (Merlin)	J44, LO MO SENSORS		Aerial, NI_168		DIVERTER LOOP SNS

CZ309-50136

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_168	CZ309-50136	Aerial, NI_167			Aerial, MO_Loop_Sensors		

CZ309-50139

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_165	CZ309-50139	Bottom Mechatronics PCA (Merlin)	J40, MO DIVER VALVE		Aerial, NI_166		DIVERTER

CZ309-50140

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_166	CZ309-50140	Aerial, NL_165			Aerial, diverter motor and encoder		DIV ENC. DIV MOT.

CZ309-50141

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_169	CZ309-50141	Bottom Mechatronics PCA (Merlin)	J42, HI MO SENSORS J41, MO PINCH ROLLER		Aerial, NL_170 and NL_172		

CZ309-50142

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_170	CZ309-50142	Aerial, NL_169			Aerial, pinch motor and encoder		

CZ309-50148

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_101	CZ309-50148	Engine PCA (Panacea)	J2, MARBELLA#1 J3 MARBELLA#2 NOT CONNECTED (the one most in the middle of PCA is connected)		Central Distribution PCA (Marbella)	J1, MAIN	

CZ309-50153

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_116	CZ309-50153	Central Distribution PCA (Marbella)	J4, ACCESSORY		Connection Panel PCA (Cricket)	J1, INTERCONNECT	

CZ309-50154

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_117	CZ309-50154	Central Distribution PCA (Marbella)	J7, JAM SENSOR	CENTRAL INT.	U_Turn scanner jam sensor		U-TURN

CZ309-50155

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_118	CZ309-50155	Central Distribution PCA (Marbella)	J3, RFID		RFID PCA (Voljin)		

CZ309-50156

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_119	CZ309-50156	Central Distribution PCA (Marbella)	J19, SEMAPHORE	CI	Front panel (van Gogh)		SEMAPHORE

CZ309-50157

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_120	CZ309-50157	Central Distribution PCA (Marbella)	J33, PRINTBAR MONTJOI	CI to Pb Mech2 Power	Print Bar Mechatronics PCA (Montjoi)	J2, SECONDARY POWER INPUT	CI to Pb Mech2 Power

CZ309-50158

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_121	CZ309-50158	Central Distribution PCA (Marbella)	J10, SWITCHES	INTERCONNECT	Aerial, different cover/door and MO accessory sensors		PENS COVER FRONT BOT COVER BACK COVER SERVICE COVER ACCESS PRES 1 ACCESS PRES 2

CZ309-50159

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_122	CZ309-50159	Central Distribution PCA (Marbella)	J17, SWITCHES		Aerial, different right cover (rear, top and front) sensors (safety switch)		BACK COVER 2 PENS COV 2 FRONT COVER

CZ309-50160

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_126	CZ309-50160	Vacuum FAN driver PCA (EOLA)	<no marking, but no risk of mistake>		Aerial, to left vacuum FAN		

CZ309-50162

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_89	CZ309-50162	Waste Management PCA (Terol)	J4		Waste Management PCA (Terol)		

CZ309-50163

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_154	CZ309-50163	Aerial, NI_153			Aerial, RIBs motor+enc		

CZ309-50164

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_88	CZ309-50164	Waste Management PCA (Terol)	J5		Aerial, to Pipe detection, filter door and container presence sensors.		WASTE1 SWITCH1 SWITCH2 SWITCH3

CZ309-50165

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_104	CZ309-50165	Formatter PCA (Antarctica)	CON_RT	FORMATTER	Jester JPE PCA	J18	JPE

CZ309-50168

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_105	CZ309-50168	Formatter PCA (Antarctica)	CON_LED_LAN_D EBUG1	FORMATTER LED LAN	Central Distribution PCA (Marbella)	J14, FORMATTER	MARBELLA LED LAN

CZ309-50169

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_201	CZ309-50169	Aerial, NL_206		NL_206	Aerial, to MO_kickers and hands off motor & encoder and stacker full & stacker paper in MID C sensors		MO_KICKER_MOTOR OR MO_KICKER_ENCODER

CZ309-50170

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_202	CZ309-50170	Aerial, NL_205		NL_205	Aerial, Stacker arms open, interm path paper out 1&2&3 and NL_207		INTERMEDIATE PATH OUT#1 D- FLAG Arms Open

CZ309-50171

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_203	CZ309-50171	Aerial, NL_205			Aerial, mobile tray open and stack paper presence sensors		

CZ309-50172

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NL_204	CZ309-50172	Aerial, NL_206			Aerial, Intermed roller motor&enc, , interm path paper 1&2&3 and cleanout right & left sensors		

CZ309-50173

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_205	CZ309-50173	Top Stacker PCA (Morgana)	CONTROL 1		Aerial, NI_203 and NI_202		

CZ309-50174

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_206	CZ309-50174	Top Stacker PCA (Morgana)	CONTROL 2		Aerial, NI_204 and NI_201		

CZ309-50176

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_145	CZ309-50176	Jester JDI PCA			Connection Panel PCA (Cricket)		

CZ309-50180

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_110	CZ309-50180	Central Distribution PCA (Marbella)	J37, PAPER INPUT POWER		Bottom Mechatronics PCA (Merlin)	J1, POWER	

CZ309-50181

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_111	CZ309-50181	Central Distribution PCA (Marbella)	J22, PAPER INPUT		Bottom Mechatronics PCA (Merlin)	J10, DATA	

CZ309-50182

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_87	CZ309-50182	Ink Supply PCA (Zeppelin)	J1 SUPPLY0, J2 SUPPLY1, J3 SUPPLY2, J4 SUPPLY3		Aerial, to PIP sensor		

CZ309-50186

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_106	CZ309-50186	ATX PSU (Picolit)			Central Distribution PCA (Marbella)	J21, ATX	

CZ309-50187

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_107	CZ309-50187	ATX PSU (Picolit)			Formatter PCA (Antarctica)	PCN1	

CZ309-50190

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_128	CZ309-50190	Formatter PCA (Antarctica)	IO_EXP_CONN1		Front panel (van Gogh)		

CZ309-50192

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_100	CZ309-50192	Formatter PCA (Antarctica)	SATA1		HDD	Connection to which HDDS SATA	

CZ309-50193

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_86	CZ309-50193	Ink Supply PCA (ZEPPELIN)	NA		chassis		

CZ309-50194

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_100B_8000	CZ309-50194	Formatter PCA (Antarctica)	SATA2	N/A	HDD	Connection to which HDD SSD	

CZ309-60675

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_50	CZ309-60675	Print Bar Mechatronics PCA (Montjoi)	J8, RED STAR POWER J9, RED STAR DATA (DATA: higher pinch, with clip)		Carriage Sensor PCA (RedStar)	J4 (for POWER) <no name, between J4 and J2 for data>	

CZ310-50001

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_124_5000_4x00	CZ310-50001	Central Distribution PCA (Marbella)	J29, PAPER IN	CENTRAL INT	Drawer PCA (Benji)		MI DRAWER 1 MI DRAWER 2

CZ312-50001

		FROM			TO		
Cable number	HPPN	PCA or Aerial	Name of PCA connector	Label	PCA or Aerial	Name of PCA connector	Label
NI_93	CZ312-50001	Air Control PCA (Clara)	J12, ISS LINK		Ink Supply PCA (Zeppelin)	J2, BULLI	

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