SHARP   SERVICE MANUAL

DIGITAL MULTIFUNCTIONAL SYSTEM

MODEL **MX-B427W**

CONTENTS

Parts marked with " ⚠ " are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

[1] PRODUCT OUTLINE (OPTION)

MX-B427W

(For Europe)

☐ Standard
☐ Option
☐ Local Option
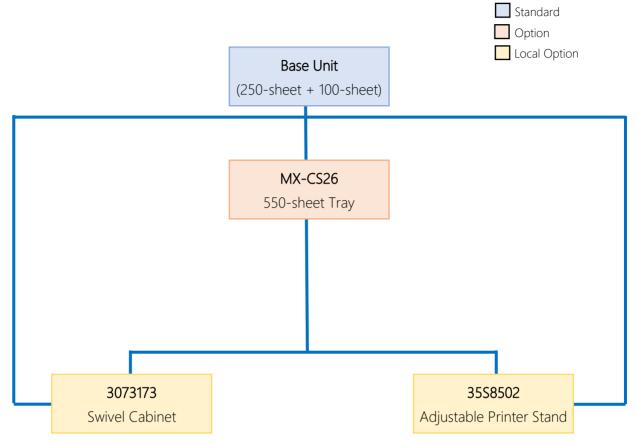
```
                        ┌─────────────────────────┐
                        │       Base Unit         │
                        │  (250-sheet + 100-sheet)│
                        └─────────────────────────┘
                        ┌─────────────────────────┐
                        │        MX-CS26          │
                        │     550-sheet Tray      │
                        └─────────────────────────┘
        ┌─────────────────────────┐   ┌─────────────────────────┐
        │      L203073173         │   │       L2035S8502         │
        │     Swivel Cabinet      │   │  Adjustable Printer Stand│
        └─────────────────────────┘   └─────────────────────────┘
```

* Can not be installed for desktop use.

Product Name	Description	MX-B427W/B427PW
MX-CS26	550 Sheet Tray	●
L203073173	Swivel Cabinet	●
L2035S8502	Adjustable Stand	●
1021294	USB Cable	● (Local Option)
SPD0001	Surge protector – low volt	● (Local Option)
SPD0002	Surge protector – high volt	● (Local Option)

MX-B427W

(Except Europe)

Standard
Option
Local Option

```
                    ┌─────────────────────────┐
                    │       Base Unit         │
                    │  (250-sheet + 100-sheet) │
                    └─────────────────────────┘
                              │
                    ┌─────────────────────────┐
                    │        MX-CS26          │
                    │     550-sheet Tray      │
                    └─────────────────────────┘
                              │
         ┌────────────────────┴────────────────────┐
  ┌─────────────────┐                      ┌────────────────────────┐
  │    3073173      │                      │       35S8502          │
  │  Swivel Cabinet │                      │ Adjustable Printer Stand│
  └─────────────────┘                      └────────────────────────┘
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SPD0002	Surge protector – high volt	● (Local Option)

[2] CONSUMABLE PARTS

MX-B427W

1, Consumable system table

North America, Canada, Mexico/Europe/Middle East, India

Machine model	Content	Return/Regular	Model name
MX-B427W MX-B427PW	Toner Cartridge (Black)_large capacity	Return	MX-B42T
		Regular	MX-B42T-S *2
	Toner Cartridge (Black)	Return	MX-B43T
		Regular	MX-B43T-S *2
	Imaging Unit	20K	MX-B42DU *1

*1 No return and regular type

*2 Not available in Europe

[3] Set up, install, and configure

Selecting a location for the printer

- Leave enough room to open trays, covers, and doors and to install hardware options.
- Set up the printer near an electrical outlet.

  ⚠️ **CAUTION—POTENTIAL INJURY:** To avoid the risk of fire or electrical shock, connect the power cord to an appropriately rated and properly grounded electrical outlet that is near the product and easily accessible.
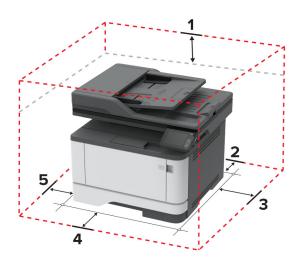
  ⚠️ **CAUTION—SHOCK HAZARD:** To avoid the risk of electrical shock, do not place or use this product near water or wet locations.

- Make sure that airflow in the room meets the latest revision of the ASHRAE 62 standard or the CEN Technical Committee 156 standard.
- Provide a flat, sturdy, and stable surface.
- Keep the printer:
  - Clean, dry, and free of dust
  - Away from stray staples and paper clips
  - Away from the direct airflow of air conditioners, heaters, or ventilators
  - Free from direct sunlight and humidity extremes
- Observe the recommended temperatures and avoid fluctuations.

Ambient temperature	10 to 32.2°C (50 to 90°F)
Storage temperature	-40 to 40°C (-40 to 104°F)

- Allow the following recommended amount of space around the printer for proper ventilation:

1	Top	305 mm (12 in.)
2	Rear	100 mm (3.94 in.)
3	Right side	76.2 mm (3 in.)

4	Front	305 mm (12 in.)
		Note: The minimum space needed in front of the printer is 76 mm (3 in.).
5	Left side	110 mm (4.33 in.)

Attaching cables

⚠️ **CAUTION—SHOCK HAZARD:** To avoid the risk of electrical shock, do not set up this product or make any electrical or cabling connections, such as the power cord, fax feature, or telephone, during a lightning storm.

⚠️ **CAUTION—POTENTIAL INJURY:** To avoid the risk of fire or electrical shock, connect the power cord to an appropriately rated and properly grounded electrical outlet that is near the product and easily accessible.

⚠️ **CAUTION—POTENTIAL INJURY:** To avoid the risk of fire or electrical shock, use only the power cord provided with this product or the manufacturer's authorized replacement.

⚠️ **CAUTION—POTENTIAL INJURY:** To reduce the risk of fire, use only a 26 AWG or larger telecommunications (RJ-11) cord when connecting this product to the public switched telephone network. For users in Australia, the cord must be approved by the Australian Communications and Media Authority.

Warning—Potential Damage: To avoid loss of data or printer malfunction, do not touch the USB cable, any wireless network adapter, or the printer in the areas shown while actively printing.

	Printer port	Function
1	EXT port	Connect more devices (telephone or answering machine) to the printer and the telephone line. Use this port if you do not have a dedicated fax line for the printer and if this connection method is supported in your country or region.
2	LINE port	Connect the printer to an active telephone line through a standard wall jack (RJ-11), DSL filter, or VoIP adapter, or any other adapter that allows you to access the telephone line to send and receive faxes.
3	USB printer port	Connect the printer to a computer.
4	Ethernet port	Connect the printer to a network.

	Printer port	Function
5	Power cord socket	Connect the printer to a properly grounded electrical outlet.

Installing optional trays

⚠️ **CAUTION—SHOCK HAZARD:** To avoid the risk of electrical shock, if you are accessing the controller board or installing optional hardware or memory devices sometime after setting up the printer, then turn the printer off, and unplug the power cord from the electrical outlet before continuing. If you have any other devices attached to the printer, then turn them off as well, and unplug any cables going into the printer.

1 Turn off the printer.

2 Unplug the power cord from the electrical outlet, and then from the printer.

3 Unpack the optional tray, and then remove all packing material.

4 Align the printer with the optional tray, and then lower the printer into place.

⚠️ **CAUTION—POTENTIAL INJURY:** If the printer weight is greater than 20 kg (44 lb), then it may require two or more people to lift it safely.

5 Connect the power cord to the printer, and then to the electrical outlet.

⚠️ **CAUTION—POTENTIAL INJURY:** To avoid the risk of fire or electrical shock, connect the power cord to an appropriately rated and properly grounded electrical outlet that is near the product and easily accessible.

6 Turn on the printer.

Add the tray in the print driver to make it available for print jobs. For more information, see .

Setting up the printer to fax

Setting up the fax function

Notes:

- Some connection methods are applicable only in some countries or regions.
- If the fax function is enabled and not fully set up, then the indicator light may blink red.

- If you do not have a TCP/IP environment, then use the control panel to set up fax.

Warning—Potential Damage: To avoid loss of data or printer malfunction, do not touch cables or the printer in the area shown while actively sending or receiving a fax.

Using the control panel

1 From the home screen, touch:

   Settings > **Device** > **Preferences** > **Run Initial Setup**

2 Turn off the printer, wait for about 10 seconds, and then turn on the printer.

3 On the Fax setup screen, configure the settings.

4 Finish the setup.

Using the Embedded Web Server

1 Open a web browser, and then type the printer IP address in the address field.

   Notes:

   - View the printer IP address on the home screen. The IP address appears as four sets of numbers separated by periods, such as 123.123.123.123.
   - If you are using a proxy server, then temporarily disable it to load the web page correctly.

2 Click **Settings** > **Fax** > **Fax Setup** > **General Fax Settings**.

3 Configure the settings.

4 Apply the changes.

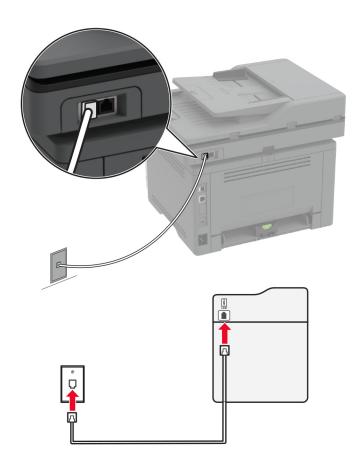# Setting up fax using a standard telephone line

⚠ **CAUTION—SHOCK HAZARD:** To avoid the risk of electrical shock, do not set up this product or make any electrical or cabling connections, such as the power cord, fax feature, or telephone, during a lightning storm.

⚠ **CAUTION—SHOCK HAZARD:** To avoid the risk of electrical shock, do not use the fax feature during a lightning storm.

⚠ **CAUTION—POTENTIAL INJURY:** To reduce the risk of fire, use only a 26 AWG or larger telecommunications (RJ-11) cord when connecting this product to the public switched telephone network. For users in Australia, the cord must be approved by the Australian Communications and Media Authority.

Setup 1: Printer is connected to a dedicated fax line

1 Connect one end of the telephone cable to the line port of the printer.

2 Connect the other end of the cable to an active analog wall jack.
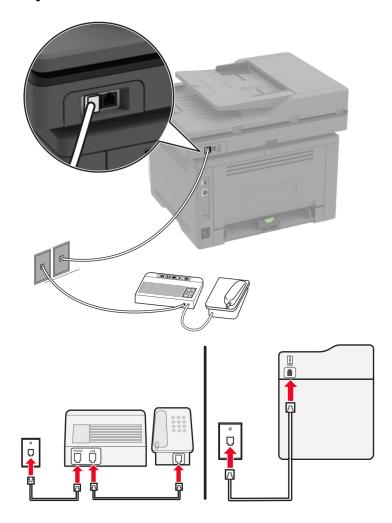
Notes:

- You can set the printer to receive faxes automatically (set Auto Answer to **On**) or manually (set Auto Answer to **Off**).
- If you want to receive faxes automatically, then set the printer to pick up on a specified number of rings.

Setup 2: Printer is sharing the line with an answering machine

Note: If you subscribe to a distinctive ring service, then make sure that you set the correct ring pattern for the printer. Otherwise, the printer does not receive faxes even if you have set it to receive faxes automatically.

Connected to different wall jacks

1 Connect one end of the telephone cable to the line port of the printer.

2 Connect the other end of the cable to an active analog wall jack.

Notes:

- If you have only one telephone number on your line, then set the printer to receive faxes automatically.
- Set the printer to pick up calls two rings after the answering machine. For example, if the answering machine picks up calls after four rings, then set the printer Rings to Answer setting to **6**.

Setting up fax in countries or regions with different telephone wall jacks and plugs

⚠️ **CAUTION—SHOCK HAZARD:** To avoid the risk of electrical shock, do not set up this product or make any electrical or cabling connections, such as the power cord, fax feature, or telephone, during a lightning storm.
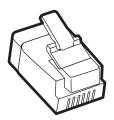
⚠️ **CAUTION—SHOCK HAZARD:** To avoid the risk of electrical shock, do not use the fax feature during a lightning storm.
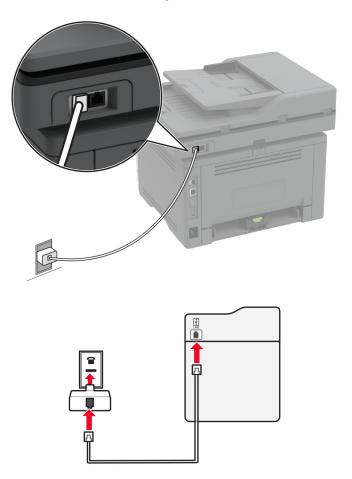
⚠ CAUTION—POTENTIAL INJURY: To reduce the risk of fire, use only a 26 AWG or larger telecommunications (RJ-11) cord when connecting this product to the public switched telephone network. For users in Australia, the cord must be approved by the Australian Communications and Media Authority.

The standard wall jack adopted by most countries or regions is RJ11. If the wall jack or equipment in your facility is not compatible with this type of connection, then use a telephone adapter. An adapter for your country or region may not come with your printer, and you may need to purchase it separately.

There may be an adapter plug installed in the telephone port of the printer. Do not remove the adapter plug from the telephone port of the printer if you are connecting to a serial or cascaded telephone system.
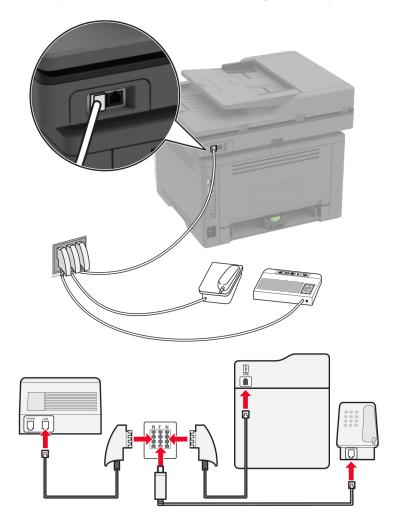

Connecting the printer to a non-RJ11 wall jack

1 Connect one end of the telephone cable to the line port of the printer.

2 Connect the other end of the cable to the RJ11 adapter, and then connect the adapter to the wall jack.

3 If you want to connect another device with a non-RJ11 connector to the same wall jack, then connect it directly to the telephone adapter.

Connecting the printer to a wall jack in Germany

The German wall jack has two kinds of ports. The N ports are for fax machines, modems, and answering machines. The F port is for telephones. Connect the printer to any of the N ports.

1 Connect one end of the telephone cable to the line port of the printer.

2 Connect the other end of the cable to the RJ11 adapter, and then connect the adapter to an N port.

3 If you want to connect a telephone and answering machine to the same wall jack, then connect the devices as shown.

Connecting to a distinctive ring service

A distinctive ring service lets you have multiple telephone numbers on one telephone line. Each telephone number is assigned a different ring pattern.

1 From the home screen, touch **Settings** > **Fax** > **Fax Setup** > **Fax Receive Settings** > **Admin Controls** > **Answer On**.

2 Select a ring pattern.

Setting the fax date and time

1 From the home screen, touch **Settings** > **Device** > **Preferences** > **Date and Time** > **Configure**.

2 Configure the settings.

Configuring daylight saving time

1 From the home screen, touch **Settings** > **Device** > **Preferences** > **Date and Time** > **Configure**.

2 In the Time Zone menu, touch **(UTC+user) Custom**.

3 In the Configure menu, touch **UTC Offset**.

4 Configure the settings.

Configuring the fax speaker settings

1 From the home screen, touch **Settings** > **Fax** > **Fax Setup** > **Speaker Settings**.

2 Do the following:

- Set the Speaker Mode to **Always On**.
- Set the Speaker Volume to **High**.
- Activate the Ringer Volume.

Configuring the e-mail server settings

You can send scanned documents through e-mail after setting up the SMTP server. For more information on SMTP settings, contact your e-mail provider.

Using the control panel

1 From the home screen, touch **Settings** > **E-mail** > **E-mail Setup**.

2 Configure the settings.

Using the Embedded Web Server

1 Open a web browser, and then type the printer IP address in the address field.

Notes:

- View the printer IP address on the printer home screen. The IP address appears as four sets of numbers separated by periods, such as 123.123.123.123.
- If you are using a proxy server, then temporarily disable it to load the web page correctly.

2 Click **Settings** > **E-mail**.

3 From the E-mail Setup section, configure the settings.

4 Click **Save**.

Loading paper and specialty media

Setting the paper size and type

1 From the home screen, navigate to:

Settings > **Paper** > **Tray Configuration** > **Paper Size/Type** > select a paper source

2 Set the paper size and type.

Configuring Universal paper settings

1 From the home screen, touch **Settings** > **Paper** > **Media Configuration** > **Universal Setup**.
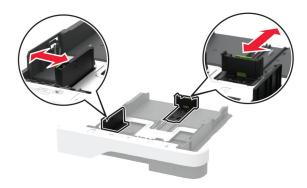
2 Configure the settings.

Loading trays

1 Remove the tray.

Note: To avoid paper jams, do not remove the tray while the printer is busy.

2 Adjust the guides to match the size of the paper that you are loading.

3 Flex, fan, and align the paper edges before loading.

4 Load the paper stack with the printable side facedown, and then make sure that the guides fit snugly against the paper.

Notes:

- Load letterhead facedown with the header toward the front of the tray for one-sided printing.
- Load letterhead faceup with the header toward the back of the tray for two-sided printing.
- Do not slide paper into the tray.
- To avoid paper jams, make sure that the stack height is below the maximum paper fill indicator.
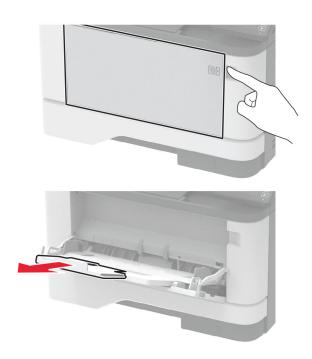

5 Insert the tray.

If necessary, set the paper size and paper type from the control panel to match the paper loaded.

Loading the multipurpose feeder

1 Open the multipurpose feeder.

2 Flex, fan, and align the paper edges before loading.
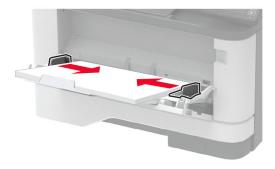

3 Load paper with the printable side faceup.

Notes:

- Load letterhead faceup with the header toward the rear of the printer for one-sided printing.
- Load letterhead facedown with the header toward the front of the printer for two-sided printing.
- Load envelopes with the flap facedown on the left side.

Warning—Potential Damage: Do not use envelopes with stamps, clasps, snaps, windows, coated linings, or self-stick adhesives.

4 Adjust the guide to match the size of the paper that you are loading.

5 From the control panel, set the paper size and paper type to match the paper loaded.

Linking trays

1 From the home screen, touch **Settings** > **Paper** > **Tray Configuration** > select a paper source.

2 Set the same paper size and paper type for the trays that you are linking.

3 From the home screen, touch **Settings** > **Device** > **Maintenance** > **Config Menu** > **Tray Configuration** > **Tray Linking**.

4 Touch **Automatic**.

To unlink trays, make sure that no trays have the same paper size and paper type settings.

Warning—Potential Damage: The temperature of the fuser varies according to the specified paper type. To avoid printing issues, match the paper type setting in the printer with the paper loaded in the tray.

Installing and updating software, drivers, and firmware

Installing the printer software

1 Obtain a copy of the software installer package.

- From our website.
- From the place where you purchased the printer.

2 Run the installer, and then follow the instructions.

3 For Macintosh users, add the printer.

Note: For Macintosh computers with macOS version 10.7 or later, you do not need to install the driver to print on an AirPrint-certified printer.

Updating firmware

Some applications require a minimum device firmware level to operate correctly.

For more information on updating the device firmware, contact your sales representative.

1 Open a web browser, and then type the printer IP address in the address field.

> **Notes:**
>
> - View the printer IP address on the printer home screen. The IP address appears as four sets of numbers separated by periods, such as 123.123.123.123.
> - If you are using a proxy server, then temporarily disable it to load the web page correctly.

2 Click **Settings** > **Device** > **Update Firmware**.

3 Browse to the flash file.

4 Click **Upload**.

Exporting or importing a configuration file

You can export the configuration settings of your printer into a text file, and then import the file to apply the settings to other printers.

1 Open a web browser, and then type the printer IP address in the address field.

> **Notes:**
>
> - View the printer IP address on the printer home screen. The IP address appears as four sets of numbers separated by periods, such as 123.123.123.123.
> - If you are using a proxy server, then temporarily disable it to load the web page correctly.

2 From the Embedded Web Server, click **Export Configuration** or **Import Configuration**.

3 Follow the instructions on the screen.

4 If the printer supports applications, then do the following:

    a Click **Apps** > select the application > **Configure**.

    b Click **Export** or **Import**.

Adding available options in the print driver

For Windows users

1 Open the printers folder.

2 Select the printer you want to update, and then do either of the following:

- For Windows 7 or later, select **Printer properties**.
- For earlier versions, select **Properties**.

3 Navigate to the Configuration tab, and then select **Update Now - Ask Printer**.

4 Apply the changes.

For Macintosh users

1 From System Preferences in the Apple menu, navigate to your printer, and then select **Options & Supplies**.

2 Navigate to the list of hardware options, and then add any installed options.

3 Apply the changes.

Networking

Connecting the printer to a Wi‑Fi network

Make sure that Active Adapter is set to Auto. From the home screen, touch **Settings** > **Network/Ports** > **Network Overview** > **Active Adapter**.

1 From the home screen, touch **Settings** > **Network/Ports** > **Wireless** > **Setup On Printer Panel** > **Choose Network**.

2 Select a Wi‑Fi network, and then type the network password.

Note: For Wi‑Fi‑network‑ready printer models, a prompt for Wi‑Fi network setup appears during initial setup.

Connecting the printer to a wireless network using Wi‑Fi Protected Setup (WPS)

Before you begin, make sure that:

- The access point (wireless router) is WPS‑certified or WPS‑compatible. For more information, see the documentation that came with your access point.
- A wireless network adapter is installed in your printer. For more information, see the instructions that came with the adapter.
- Active Adapter is set to Auto. From the home screen, touch **Settings** > **Network/Ports** > **Network Overview** > **Active Adapter**.

Using the Push Button method

1 From the home screen, touch **Settings** > **Network/Ports** > **Wireless** > **Wi‑Fi Protected Setup** > **Start Push Button Method**.

2 Follow the instructions on the display.

Using the personal identification number (PIN) method

1 From the home screen, touch **Settings** > **Network/Ports** > **Wireless** > **Wi‑Fi Protected Setup** > **Start PIN Method**.

2 Copy the eight‑digit WPS PIN.

3 Open a web browser, and then type the IP address of your access point in the address field.

Notes:

- To know the IP address, see the documentation that came with your access point.
- If you are using a proxy server, then temporarily disable it to load the web page correctly.

4 Access the WPS settings. For more information, see the documentation that came with your access point.

5 Enter the eight‑digit PIN, and then save the changes.

Connecting a mobile device to the printer

Before connecting your mobile device, make sure to do the following:

- Enable Wi‑Fi Direct® in the printer. From the control panel, navigate to: **Settings** > **Network/Ports** > **Wireless** > **Enable Wi‑Fi Direct**.
- Show the preshared key (PSK) on the Network Setup Page. From the control panel, navigate to: **Settings** > **Network/Ports** > **Wi‑Fi Direct** > **Show PSK on Setup Page**.
- Print the Network Setup Page. From the control panel, navigate to: **Settings** > **Reports** > **Network** > **Network Setup Page**.

Connecting using Wi‑Fi Direct

1 From the mobile device, go to the settings menu.

2 Enable Wi‑Fi, and then tap **Wi‑Fi Direct**.

3 Select the printer SSID.

4 Confirm the connection on the printer control panel.

Connecting using Wi‑Fi

1 From the mobile device, go to the settings menu.

2 Tap **Wi‑Fi**, and then select the printer SSID.

   Note: The string `DIRECT-xy` (where `x` and `y` are two random characters) is added before the SSID.

3 Enter the PSK.

   Note: The PSK is the password.

Notes:

- You can change the SSID on the control panel. Navigate to: **Settings** > **Network/Ports** > **Wi‑Fi Direct** > **SSID**.
- You can also change the PSK on the control panel. Navigate to: **Settings** > **Network/Ports** > **Wi‑Fi Direct** > **Set PSK**.

Deactivating the Wi‑Fi network

1 From the home screen, touch **Settings** > **Network/Ports** > **Network Overview** > **Active Adapter** > **Standard Network**.

2 Follow the instructions on the display.

Checking the printer connectivity

1 From the home screen, touch **Settings** > **Reports** > **Network** > **Network Setup Page**.

2 Check the first section of the network setup page, and confirm that the status is connected.

   If the status is not connected, then the LAN drop may be inactive, or the network cable may be malfunctioning. Contact your administrator for assistance.

Printing the Menu Settings Page

From the home screen, touch **Settings** > **Reports** > **Menu Settings Page**.

[4] Maintain the printer

Checking the status of parts and supplies

1 From the home screen, touch **Status/Supplies**.

2 Select the parts or supplies that you want to check.

Note: You can also access this setting by touching the top section of the home screen.

Configuring supply notifications

1 Open a web browser, and then type the printer IP address in the address field.

Notes:

- View the printer IP address on the printer home screen. The IP address appears as four sets of numbers separated by periods, such as 123.123.123.123.
- If you are using a proxy server, then temporarily disable it to load the web page correctly.

2 Click **Settings** > **Device** > **Notifications**.

3 From the Supplies menu, click **Custom Supply Notifications**.

4 Select a notification for each supply item.

5 Apply the changes.

Setting up e-mail alerts

Configure the printer to send e-mail alerts when supplies are low, when paper must be changed or added, or when there is a paper jam.

1 Open a web browser, and then type the printer IP address in the address field.

Notes:

- View the printer IP address on the printer home screen. The IP address appears as four sets of numbers separated by periods, such as 123.123.123.123.
- If you are using a proxy server, then temporarily disable it to load the web page correctly.

2 Click **Settings** > **Device** > **Notifications** > **E-mail Alert Setup**, and then configure the settings.

Note: For more information on SMTP server settings, contact your e-mail provider.

3 Click **Setup E-mail Lists and Alerts**, and then configure the settings.

4 Apply the changes.

Viewing reports

1 From the home screen, touch **Settings** > **Reports**.

2 Select the report that you want to view.

Ordering parts and supplies

To order supplies, contact the place where you purchased the printer.

Note: All life estimates for printer supplies assume printing on letter- or A4-size plain paper.

Warning—Potential Damage: Failure to maintain optimum printer performance, or to replace parts and supplies, may cause damage to your printer.

Ordering a toner cartridge

Notes:

- The estimated cartridge yield is based on the ISO/IEC 19752 standard.
- Extremely low print coverage for extended periods of time may negatively affect actual yield.

To order a toner cartridge, contact the place where you purchased the printer.
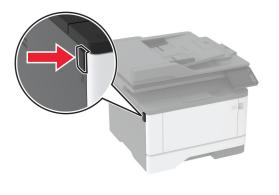
Ordering an imaging unit

To order an imaging unit, contact the place where you purchased the printer.

Replacing parts and supplies

Replacing the toner cartridge

1 Open the front door.

   Warning—Potential Damage: To prevent damage from electrostatic discharge, touch any exposed metal frame of the printer before accessing or touching interior areas of the printer.

2 Remove the imaging unit.

3 Twist the blue latch, and then remove the used toner cartridge from the imaging unit.

Warning—Potential Damage: Do not expose the imaging unit to direct light for more than 10 minutes. Extended exposure to light may cause print quality problems.

Warning—Potential Damage: Do not touch the photoconductor drum. Doing so may affect the quality of future print jobs.
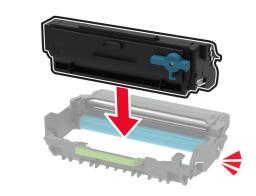
4 Unpack the new toner cartridge.

5 Shake the toner cartridge to redistribute the toner.

6 Insert the new toner cartridge into the imaging unit until it *clicks* into place.

7 Insert the imaging unit.
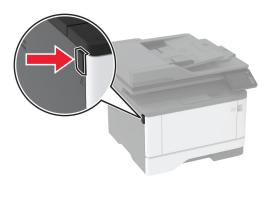
8 Close the door.

Replacing the imaging unit

1 Open the front door.

Warning—Potential Damage: To prevent damage from electrostatic discharge, touch any exposed metal frame of the printer before accessing or touching interior areas of the printer.
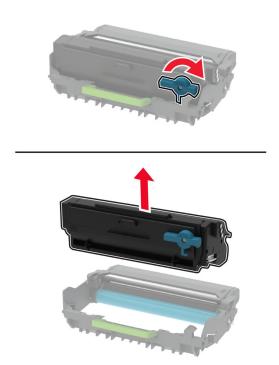
2 Remove the used imaging unit.
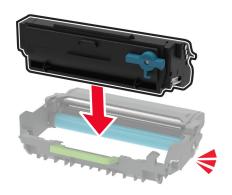
3 Twist the blue latch, and then remove the toner cartridge from the used imaging unit.

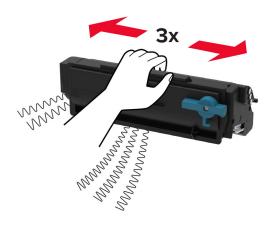**4** Unpack the new imaging unit, and then insert the toner cartridge until it *clicks* into place.

Warning—Potential Damage: Do not expose the imaging unit to direct light for more than 10 minutes. Extended exposure to light may cause print quality problems.

Warning—Potential Damage: Do not touch the photoconductor drum. Doing so may affect the quality of future print jobs.

5 Insert the new imaging unit.

6 Close the door.

Replacing the tray

1 Remove the used tray.
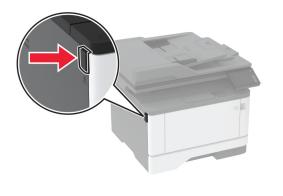
2 Unpack the new tray.

3 Insert the new tray.

Replacing the pick roller assembly

1 Turn off the printer.

2 Unplug the power cord from the electrical outlet, and then from the printer.

3 Open the front door.
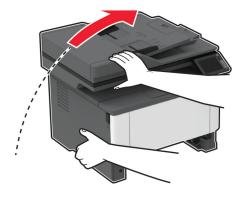
4 Remove the imaging unit.
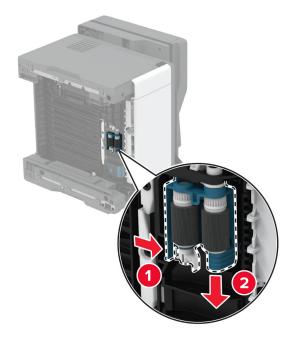
5 Close the front door.

6 Remove the tray.

7 Position the printer on its side.
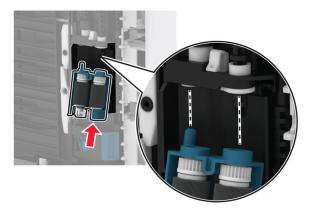
8 Remove the used pick roller assembly.

9 Unpack the new pick roller assembly.

Note: To avoid contamination, make sure that your hands are clean.

10 Insert the new pick roller assembly.
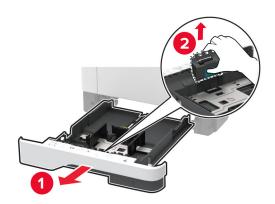
11 Place the printer in its original position, and then insert the tray.

12 Open the front door.

13 Insert the imaging unit.

14 Close the front door.

15 Connect the power cord to the printer, and then to the electrical outlet.

> ⚠ **CAUTION—POTENTIAL INJURY:** To avoid the risk of fire or electrical shock, connect the power cord to an appropriately rated and properly grounded electrical outlet that is near the product and easily accessible.

16 Turn on the printer.

Replacing the tray separator roller
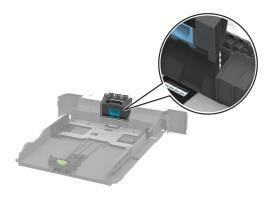
1 Remove the tray, and then remove the used separator roller.

2 Unpack the new separator roller.

Note: To avoid contamination, make sure that your hands are clean.

3 Insert the new separator roller.

4 Insert the tray.
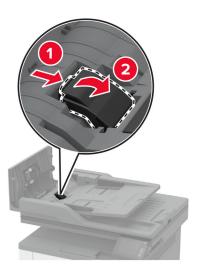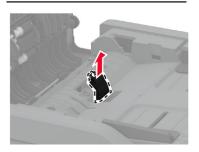
Replacing the ADF separator pad

1 Open the ADF cover.
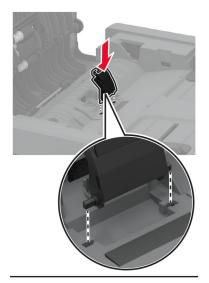
2 Remove the used ADF separator pad.
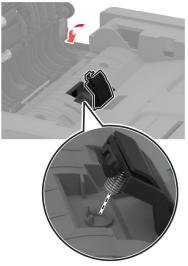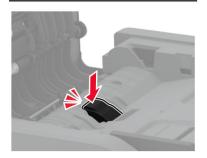
3 Unpack the new ADF separator pad.

4 Insert the new separator pad until it *clicks* into place.

5 Close the ADF cover.

Resetting the supply usage counters

1 From the home screen, touch **Settings** > **Device** > **Maintenance** > **Config Menu** > **Supply Usage And Counters**.

2 Select the counter that you want to reset.

Warning—Potential Damage: Supplies and parts without Return Program agreement terms may be reset and remanufactured. However, the manufacturer's warranty does not cover any damage caused by non-genuine supplies or parts. Resetting counters on the supply or part without proper remanufacturing can cause damage to your printer. After resetting the supply or part counter, your printer may display an error indicating the presence of the reset item.

Cleaning printer parts

Cleaning the printer

⚠ **CAUTION—SHOCK HAZARD:** To avoid the risk of electrical shock when cleaning the exterior of the printer, unplug the power cord from the electrical outlet and disconnect all cables from the printer before proceeding.

Notes:

- Perform this task after every few months.
- Damage to the printer caused by improper handling is not covered by the printer warranty.

1 Turn off the printer, and then unplug the power cord from the electrical outlet.

2 Remove paper from the standard bin and multipurpose feeder.

3 Remove any dust, lint, and pieces of paper around the printer using a soft brush or vacuum.

4 Wipe the outside of the printer with a damp, soft, lint-free cloth.

　　Notes:

- Do not use household cleaners or detergents, as they may damage the finish of the printer.
- Make sure that all areas of the printer are dry after cleaning.

5 Connect the power cord to the electrical outlet, and then turn on the printer.

⚠ **CAUTION—POTENTIAL INJURY:** To avoid the risk of fire or electrical shock, connect the power cord to an appropriately rated and properly grounded electrical outlet that is near the product and easily accessible.

Cleaning the scanner

1 Open the scanner cover.

2 Using a damp, soft, lint-free cloth, wipe the following areas:

- ADF glass pad

    Note: In some printer models, this location has an ADF glass instead of a pad.

- Scanner glass pad

- ADF glass

- Scanner glass

3 Close the scanner cover.

Saving energy and paper

Configuring the power save mode settings

Sleep mode

1 From the home screen, touch **Settings** > **Device** > **Power Management** > **Timeouts** > **Sleep Mode**.

2 Specify the amount of time that the printer stays idle before it enters Sleep Mode.

Hibernate mode

1 From the home screen, touch **Settings** > **Device** > **Power Management** > **Timeouts** > **Hibernate Timeout**.

2 Select the amount of time that the printer stays idle before it enters Hibernate mode.

Notes:

- For Hibernate Timeout to work, set Hibernate Timeout on Connection to Hibernate.
- The Embedded Web Server is disabled when the printer is in Hibernate mode.

Adjusting the brightness of the printer display

1 From the home screen, touch **Settings** > **Device** > **Preferences** > **Screen Brightness**.

2 Adjust the setting.

Conserving supplies

- Print on both sides of the paper.

  Note: Two-sided printing is the default setting in the print driver.
- Print multiple pages on a single sheet of paper.
- Use the preview feature to see how the document looks like before printing it.
- Print one copy of the document to check its content and format for accuracy.

Moving the printer to another location

⚠ **CAUTION—POTENTIAL INJURY:** If the printer weight is greater than 20 kg (44 lb), then it may require two or more people to lift it safely.

⚠ **CAUTION—POTENTIAL INJURY:** To avoid the risk of fire or electrical shock, use only the power cord provided with this product or the manufacturer's authorized replacement.

⚠ **CAUTION—POTENTIAL INJURY:** When moving the printer, follow these guidelines to avoid personal injury or printer damage:

- Make sure that all doors and trays are closed.
- Turn off the printer, and then unplug the power cord from the electrical outlet.
- Disconnect all cords and cables from the printer.
- If the printer has separate floor-standing optional trays or output options attached to it, then disconnect them before moving the printer.
- If the printer has a caster base, then carefully roll it to the new location. Use caution when passing over thresholds and breaks in flooring.
- If the printer does not have a caster base but is configured with optional trays or output options, then remove the output options and lift the printer off the trays. Do not try to lift the printer and any options at the same time.
- Always use the handholds on the printer to lift it.
- Any cart used to move the printer must have a surface able to support the full footprint of the printer.
- Any cart used to move the hardware options must have a surface able to support the dimensions of the options.
- Keep the printer in an upright position.
- Avoid severe jarring movements.
- Make sure that your fingers are not under the printer when you set it down.
- Make sure that there is adequate clearance around the printer.

Note: Damage to the printer caused by improper moving is not covered by the printer warranty.

Shipping the printer

When shipping the printer, use the original packaging or contact the place where you purchased the printer.

[5] PARTS LIST (MX-B427W)

No.	Section No	Name	Asm-index	Sharp parts number	Manufacture parts number	Description
1	Assembly 1	Covers	1	0SP41X2582///	41X2582	Rear door
2	Assembly 1	Covers	2	0SP41X2580///	41X2580	Right cover
3	Assembly 1	Covers	3	0SP50X0751///	50X0751	Front door with MPF pick roller
4	Assembly 1	Covers	4	0SP41X2912///	41X2912	Upper front cover with decals
5	Assembly 1	Covers	5	0SP41X2578///	41X2578	Left front door link
6	Assembly 1	Covers	6	0SP41X2579///	41X2579	Left cover
7	Assembly 2	Control panel	1	0SP41X2595///	41X2595	Control panel assembly
8	Assembly 3	Electronics	1	0SP41X2573///	41X2573	Printhead
9	Assembly 3	Electronics	2	-		
10	Assembly 3	Electronics	2	-		
11	Assembly 3	Electronics	3	0SP41X2977///	41X2977	Controller board
12	Assembly 3	Electronics	4	0SP41X2590///	41X2590	LVPS, 75 W and 120 V
13	Assembly 3	Electronics	4	0SP41X2591///	41X2591	LVPS, 75 W and 230 V
14	Assembly 3	Electronics	5	0SP41X2592///	41X2592	HVPS
15	Assembly 3	Electronics	6	0SP41X2587///	41X2587	Transfer roller, bearing and spring
16	Assembly 3	Electronics	7	0SP41X2636///	41X2636	Main fan
17	Assembly 3	Electronics	8	0SP41X1083///	41X1083	Sensor (input)
18	Assembly 4	Gears	1	0SP41X2391///	41X2391	Pick roller clutch
19	Assembly 4	Gears	2	0SP41X2576///	41X2576	Main drive gears kit
20	Assembly 5	Paper path	1	0SP41X2575///	41X2575	Pick separator roller
21	Assembly 5	Paper path	2	0SP41X2585///	41X2585	250-sheet tray
22	Assembly 5	Paper path	3	-		
23	Assembly 5	Paper path	3	0SP41X2586///	41X2586	Fuser, 115 V
24	Assembly 5	Paper path	3	0SP41X2600///	41X2600	Fuser, 230 V
25	Assembly 5	Paper path	4	0SP41X2712///	41X2712	Duplex guide
26	Assembly 6	550-sheet optional tray	1	-		
27	Assembly 6	550-sheet optional tray	2	0SP41X2614///	41X2614	550-sheet tray pick roller
28	Assembly 6	550-sheet optional tray	3	0SP41X2613///	41X2613	550-sheet tray insert
29	Assembly 7	ADF and scanner	1	-		
30	Assembly 7	ADF and scanner	1	0SP41X2980//	41X2980	Scanner
31	Assembly 7	ADF and scanner	2	0SP41X2510///	41X2510	ADF cover
32	Assembly 7	ADF and scanner	3	0SP41X2511///	41X2511	ADF separator pad
33	Assembly 7	ADF and scanner	4	0SP41X2428///	41X2428	ADF tray
34	Assembly 7	ADF and scanner	5	0SP41X2596///	41X2596	Scanner pivot arm
35	Assembly 8	Miscellaneous	NS	-		
36	Assembly 8	Miscellaneous	NS	-		
37	Assembly 8	Miscellaneous	NS	0SP40X1767///	40X1767	Power cord, Europe
38	Assembly 8	Miscellaneous	NS	-		
39	Assembly 8	Miscellaneous	NS	-		
40	Assembly 8	Miscellaneous	NS	-		
41	Assembly 8	Miscellaneous	NS	-		
42	Assembly 8	Miscellaneous	NS	-		
43	Assembly 8	Miscellaneous	NS	-		
44	Assembly 8	Miscellaneous	NS	-		
45	Assembly 8	Miscellaneous	NS	-		
46	Assembly 8	Miscellaneous	NS	-		

Service Manual Part 2

「**Descriptions in page 2 is not applicable to this model. Therefore, it was deleted.**」

Table of contents

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Notices, conventions, and safety information

Laser notice

The printer is certified in the U.S. to conform to the requirements of DHHS 21 CFR, Chapter I, Subchapter J for Class I (1) laser products, and elsewhere is certified as a Class I laser product conforming to the requirements of IEC 60825-1: 2014.

Class I laser products are not considered to be hazardous. The laser system and printer are designed so thereis never any human access to laser radiation above a Class I level during normal operation, user maintenance,or prescribed service conditions. The printer has a non-serviceable printhead assembly that contains a laser with the following specifications:

Class: IIIb (3b) AlGaInP

Nominal output power (milliwatts): 25

Wavelength (nanometers): 775–800

Avis relatif à l'utilisation du laser

Cette imprimante est certifiée conforme aux exigences de la réglementation des Etats-Unis relative aux produits laser de classe I (1) (DHHS 21 CFR, Chapitre I, Sous-chapitre J). Pour les autres pays, elle est certifiée conformeaux exigences des normes CEI 60825-1:2014 relatives aux produits laser de classe I.

Les produits laser de classe I ne sont pas considérés comme dangereux. Le système laser ainsi que l'imprimante ont été conçus de manière à ce que personne ne soit jamais exposé à des radiations laser dépassant le niveau de classe I dans le cadre d'un fonctionnement normal, de l'entretien par l'utilisateur ou de la maintenance. L'imprimante dispose d'un ensemble de têtes d'impression non réparable contenant un laser doté des caractéristiques suivantes :

Class: IIIb (3b) AlGaInP

Nominal output power (milliwatts): 25

Wavelength (nanometers): 775–800

Aviso de láser

Esta impresora se ha certificado en EE.UU. cumpliendo con los requisitos de DHHS 21 CFR, capítulo I, subcapítulo J para los productos láser de Clase I (1) y en otros países está certificada como un producto láser de Clase I de acuerdo con los requisitos de IEC 60825-1: 2014.

Los productos láser de Clase I no se consideran peligrosos. El sistema láser y la impresora se han diseñado para que el ser humano no acceda nunca a las radiaciones láser por encima del nivel de Clase I durante su uso normal, ni en tareas de mantenimiento o intervenciones de servicio técnico prescritas. El conjunto de cabezal de impresión de la impresora no se puede reparar y contiene un láser con las siguientes especificaciones:

Class: IIIb (3b) AlGaInP

Nominal output power (milliwatts): 25

Wavelength (nanometers): 775–800

Laser-Hinweis

Der Drucker wurde in den USA zertifiziert und entspricht den Anforderungen der Vorschriften DHHS 21 CFR Kapitel I für Laserprodukte der Klasse I (1), andernorts ist er als Laserprodukt der Klasse I zertifiziert, das den Anforderungen von IEC 60825-1 entspricht: 2014.

Laserprodukte der Klasse I werden nicht als gefährlich betrachtet. Das Lasersystem und der Drucker sind so konstruiert, dass unter normalen Betriebsbedingungen, bei der Wartung durch den Benutzer oder bei den vorgeschriebenen Wartungsbedingungen Menschen keiner Laserstrahlung ausgesetzt sind, die die Werte für Klasse I überschreitet. Der Drucker verfügt über eine Druckkopfeinheit, die nicht gewartet werden kann und mit einem Laser mit den folgenden Spezifikationen ausgestattet ist.

Class: IIIb (3b) AlGaInP

Nominal output power (milliwatts): 25

Wavelength (nanometers): 775–800

Conventions

Note: A *note* identifies information that could help you.

Warning: A *warning* identifies something that could damage the product hardware or software.

CAUTION: A *caution* indicates a potentially hazardous situation that could injure

you.Different types of caution statements include:

⚠️ **CAUTION—POTENTIAL INJURY:** Indicates a risk of injury.

⚠️ **CAUTION—SHOCK HAZARD:** Indicates a risk of electrical

⚠️ **CAUTION—HOT SURFACE:** Indicates a risk of burn if

⚠️ **CAUTION—TIPPING HAZARD:** Indicates a crush

⚠️ **CAUTION—PINCH HAZARD:** Indicates a risk of being caught between moving

Conventions

Remarque : Une *Remarque* fournit des informations pouvant vous être utiles.

Avertissement : Un *Avertissement* signale un danger susceptible d'endommager le logiciel ou le matériel.

ATTENTION : La mention *Attention* vous signale un risque de blessure

corporelle.Il existe différentes mises en garde :

⚠️ **ATTENTION—RISQUE DE BLESSURE :** Signale un risque de blessure.

⚠️ **ATTENTION—RISQUE D'ELECTROCUTION :** Signale un risque

⚠️ **ATTENTION—SURFACE CHAUDE :** Signale un risque de brûlure de

⚠️ **ATTENTION—RISQUE DE BASCULEMENT :** Signale un risque

⚠ **ATTENTION : RISQUE DE PINCEMENT :** Signale un risque de pincement entre des pièces

Convenciones

Nota: Las *notas* señalan información que puede serle útil.

Aviso: Las *advertencias* indican algo que podría dañar el software o el hardware del producto.

PRECAUCIÓN: Las *precauciones* indican una situación de posible peligro que puede implicar lesiones para elusuario.

Estos son los tipos de avisos de precaución que existen:

⚠ **PRECAUCIÓN: POSIBLES DAÑOS PERSONALES:** Indica que existe riesgo de lesiones.

⚠ **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** Indica que existe riesgo de descarga eléctrica.

⚠ **PRECAUCIÓN: SUPERFICIE CALIENTE:** Indica que existe riesgo de sufrir quemaduras por

⚠ **PRECAUCIÓN: RIESGO DE CAÍDA:** Indica que existe peligro de

⚠ **PRECAUCIÓN: PELIGRO DE ATRAPAMIENTO:** Existe riesgo de atrapamiento entre las piezas enmovimiento.

Konventionen

Hinweis: Ein *Hinweis* enthält nützliche Informationen.

Warnung: Durch eine *Warnung* werden Sie auf einen Umstand hingewiesen, durch den die Produkthardwareoder -software beschädigt werden könnte.

VORSICHT: *Vorsicht* weist auf eine mögliche gefährliche Situation hin, die ein Verletzungsrisiko birgt.

Verschiedene Vorsichtshinweise:

⚠ **VORSICHT – MÖGLICHE VERLETZUNGSGEFAHR** Weist auf ein Verletzungsrisiko hin.

⚠ **VORSICHT – STROMSCHLAGGEFAHR:** Weist auf das Risiko eines elektrischen Schlags

⚠ **VORSICHT – HEISSE OBERFLÄCHE:** Weist auf das Risiko von Verbrennungen bei Berührung

⚠ **VORSICHT – KIPPGEFAHR:** Weist auf Quetschgefahr

⚠ **VORSICHT – QUETSCHGEFAHR:** Weist auf das Risiko hin, zwischen beweglichen Komponenteneingequetscht zu werden.

Safety

- The safety of this product is based on testing and approvals of the original design and specific components. The manufacturer is not responsible for safety in the event of use of unauthorized replacement parts.
- The maintenance information for this product has been prepared for use by a professional service person and is not intended to be used by others.

- There may be an increased risk of electrical shock and personal injury during disassembly and servicing ofthis product. Professional service personnel should understand this risk and take necessary precautions.

    CAUTION—SHOCK HAZARD: When you see this symbol on the product, there is a danger from hazardous voltage in the area of the product where you are working. Unplug the product before you begin, or use caution if the product must receive power in order to perform the task.

    CAUTION—POTENTIAL INJURY: The lithium battery in this product is not intended to be replaced.There is a danger of explosion if a lithium battery is incorrectly replaced. Do not recharge, disassemble, or incinerate a lithium battery. Discard used lithium batteries according to the manufacturer's instructions and local regulations.

    CAUTION—POTENTIAL INJURY: To avoid the risk of fire or electrical shock, connect the power cordto an appropriately rated and properly grounded electrical outlet that is near the product and easily accessible.

    CAUTION—POTENTIAL INJURY: To avoid the risk of fire or electrical shock, use only the power cordprovided with this product or the manufacturer's authorized replacement.

    CAUTION—POTENTIAL INJURY: Do not use this product with extension cords, multioutlet power strips, multioutlet extenders, or UPS devices. The power capacity of these types of accessories can be easily overloaded by a laser printer and may result in a risk of fire, property damage, or poor printer performance.

    CAUTION—POTENTIAL INJURY: Only a Inline Surge Protector that is properly connected between the printer and the power cord provided with the printer may be used with this product. The use of non-regular surge protection devices may result in a risk of fire, property damage, or poor printer performance.

    CAUTION—POTENTIAL INJURY: If the printer weight is greater than 20 kg (44 lb), then it mayrequire two or more people to lift it safely.

Consignes de sécurité

- La sécurité de ce produit est basée sur des tests et certifications de sa conception d'origine et de ses composants spécifiques. Le fabricant décline toute responsabilité en cas d'utilisation de pièces de rechange non autorisées.
- Les informations de maintenance de ce produit sont destinées à des professionnels qualifiés et ne sont pas conçues pour être utilisées par d'autres personnes.
- Il existe un risque potentiel de choc électrique et de blessures lors du démontage et de la maintenance dece produit. Le personnel professionnel de maintenance doit comprendre les risques et prendre les précautions nécessaires.

    ATTENTION—RISQUE D'ELECTROCUTION : Ce symbole indique un danger lié à des niveaux de tension dangereux dans la zone du produit à manipuler. Débranchez le produit avant de commencer, ou agissez avec prudence si le produit doit être alimenté pour effectuer l'opération.

    ATTENTION—RISQUE DE BLESSURE : La batterie lithium de ce produit n'est pas destinée à être remplacée. Si vous ne respectez pas les instructions de remplacement de la batterie, vous risquez de provoquer une explosion. Ne rechargez pas, ne désassemblez pas et ne brûlez pas la batterie aulithium. Mettez les batteries lithium usagées au rebut selon les instructions du fabricant et les réglementations locales.

    ATTENTION—RISQUE DE BLESSURE : Pour éviter tout risque d'électrocution ou d'incendie, branchez le câble d'alimentation directement à une prise électrique répondant aux exigences requises et correctement mise à la terre, proche du produit et facile d'accès.

⚠️ **ATTENTION—RISQUE DE BLESSURE :** Pour éviter tout risque d'incendie ou d'électrocution, utilisez uniquement le câble d'alimentation fourni avec ce produit ou un câble de remplacement autorisé parle fabricant.

⚠️ **ATTENTION—RISQUE DE BLESSURE :** Ce produit ne doit pas être utilisé avec des rallonges, desbarres multiprises, des rallonges multiprises ou des périphériques UPS. La capacité de ces types d'accessoires peut être facilement dépassée par une imprimante laser, d'où un risque de dégâts matériels, d'incendie ou de performances d'impression amoindries.

⚠️ **ATTENTION—RISQUE DE BLESSURE :** Utilisez uniquement un parasurtenseur correctement raccordé à l'imprimante et au câble d'alimentation fourni avec la machine. L'utilisation de parasurtenseurs non fabriqués par comporte un risque d'incendie et de dégâts matériels, et peut amoindrir les performances de l'imprimante.

⚠️ **ATTENTION—RISQUE DE BLESSURE :** Si votre imprimante pèse plus de 20 kg (44 lb), l'interventiond'au moins deux personnes est nécessaire pour la soulever sans risque.

Información de seguridad

- La seguridad de este producto se basa en las pruebas y comprobaciones del diseño original y los componentes específicos. El fabricante no se hace responsable de la seguridad en caso de uso de piezas de repuesto no autorizadas.

- La información de mantenimiento de este producto se ha preparado para su uso por parte de un profesional de asistencia técnica y no está diseñada para su uso por parte de otros usuarios.

- Es posible que haya un mayor riesgo de descarga eléctrica y daños personales durante el desmontaje y el mantenimiento de este producto. El personal de asistencia profesional debe conocer este riesgo y tomar las precauciones necesarias.

⚠️ **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** Cuando vea este símbolo en el producto,existe peligro de tensiones peligrosas en el área del producto en la que está trabajando. Desconecte el producto antes de empezar o tenga cuidado si el producto debe recibir alimentación a fin de realizar la tarea.

⚠️ **PRECAUCIÓN: POSIBLES DAÑOS PERSONALES:** La batería de litio de este producto no debe reemplazarse. Existe riesgo de explosión si se sustituye incorrectamente una batería de litio. No recargue, desmonte ni incinere una batería de litio. Deseche las baterías de litio usadas según las instrucciones del fabricante y las normativas locales.

⚠️ **PRECAUCIÓN: POSIBLES DAÑOS PERSONALES:** Para evitar el riesgo de incendio o descarga eléctrica, conecte el cable de alimentación a una toma de corriente debidamente conectada a tierra con la potencia adecuada que se encuentre cerca del dispositivo y resulte fácilmente accesible.

⚠️ **PRECAUCIÓN: POSIBLES DAÑOS PERSONALES:** Para evitar el riesgo de incendio o descarga eléctrica, utilice exclusivamente el cable de alimentación que se suministra junto con este producto o el repuesto autorizado por el fabricante.

⚠️ **PRECAUCIÓN: POSIBLES DAÑOS PERSONALES:** No utilice este producto con cables alargadores,regletas de varias tomas, cables alargadores de varias tomas o sistemas de alimentación ininterrumpida. La potencia de este tipo de accesorios puede sobrecargarse fácilmente si se utiliza una impresora láser, lo que puede dar lugar a que el rendimiento de la impresora sea bajo, a daños materiales o a posibles incendios.

⚠️ **PRECAUCIÓN: POSIBLES DAÑOS PERSONALES:** Solo debe usarse con este producto un protector de sobretensión insertable debidamente conectado entre la impresora y el cable de alimentación que con ella se suministra. El uso de protectores de sobretensión de marcas distintas a puede dar lugar a que el rendimiento de la impresora sea bajo, a daños materiales o a posibles incendios.

⚠️ **PRECAUCIÓN: POSIBLES DAÑOS PERSONALES:** si el peso de la impresora es superior a 20 kg (44 lb), pueden ser necesarias dos o más personas para levantarla de forma segura.

Sicherheitshinwei

- Die Sicherheit dieses Produkts basiert auf Tests und Zulassungen des Originaldesigns und der spezifischen Komponenten. Sofern nicht autorisierte Ersatzteile eingesetzt werden, übernimmt der Hersteller keinerlei Verantwortung in Bezug auf die Sicherheit dieses Produkts.

- Die Wartungsinformationen für dieses Produkt wurden für ausgebildete Servicemitarbeiter zusammengestellt und dürfen nicht von anderen verwendet werden.

- Möglicherweise besteht bei der Demontage und Wartung dieses Produkts eine erhöhte Stromschlag- und Verletzungsgefahr. Ausgebildete Servicemitarbeiter sollten sich dieser Gefahr bewusst sein und die notwendigen Vorsichtsmaßnahmen ergreifen.

⚠️ **VORSICHT – STROMSCHLAGGEFAHR:** Wenn Sie dieses Symbol sehen, besteht eine Gefahr durch gefährliche Spannungen in dem Produktbereich, in dem Sie arbeiten. Trennen Sie das Produkt von seiner Stromverbindung, bevor Sie beginnen, oder gehen Sie vorsichtig vor, wenn das Produkt für die Durchführung der Aufgabe mit Strom versorgt werden muss.

⚠️ **VORSICHT – MÖGLICHE VERLETZUNGSGEFAHR** Die Lithiumbatterie in diesem Produkt darf nicht ausgetauscht werden. Wird eine Lithiumbatterie nicht ordnungsgemäß ausgetauscht, besteht Explosionsgefahr. Lithiumbatterien dürfen auf keinen Fall wieder aufgeladen, auseinander genommen oder verbrannt werden. Befolgen Sie zum Entsorgen verbrauchter Lithiumbatterien die Anweisungen des Herstellers und die örtlichen Bestimmungen.

⚠️ **VORSICHT – MÖGLICHE VERLETZUNGSGEFAHR** Um Feuer- und Stromschlaggefahr zu vermeiden,schließen Sie das Netzkabel direkt an eine ordnungsgemäß geerdete Steckdose an, die sich in der Nähe des Geräts befindet und leicht zugänglich ist.

⚠️ **VORSICHT – MÖGLICHE VERLETZUNGSGEFAHR** Um das Risiko eines Feuers oder elektrischen Schlags zu vermeiden, verwenden Sie ausschließlich das diesem Produkt beiliegende Netzkabel bzw. ein durch den Hersteller zugelassenes Ersatzkabel.

⚠️ **VORSICHT – MÖGLICHE VERLETZUNGSGEFAHR** Verwenden Sie das Produkt nicht mit Verlängerungskabeln, Mehrfachsteckdosen, Mehrfachverlängerungen oder Geräten für unterbrechungsfreie Stromversorgung. Die Belastbarkeit solcher Zubehörteile kann durch Laserdrucker schnell überschritten werden, was zu Brandgefahr, Beschädigung von Eigentum oder einer eingeschränkten Druckerleistung führen kann.

⚠️ **VORSICHT – MÖGLICHE VERLETZUNGSGEFAHR** Mit diesem Produkt darf nur ein Inline Surge Protector verwendet werden, der vorschriftsgemäß zwischen dem Drucker und dem mitgelieferten Netzkabel angeschlossen ist. Die Verwendung von nicht von tammenden Überspannungsschutzgeräten kann zu Brandgefahr, Beschädigung von Eigentum oder einer eingeschränkten Druckerleistung führen.

⚠️ **VORSICHT – MÖGLICHE VERLETZUNGSGEFAHR** Wenn der Drucker mehr als 20 kg wiegt, sind zum sicheren Anheben mindestens zwei Personen notwendig.

「Descriptions in page 15 to 18 are not applicable to this model. Therefore, it was deleted. 」

General information

Printer model configurations

The Sharp MX-B427W MFP is small, monochrome, network-capable, laser printers.

Model	Configurations	
MX-B427W	Network-ready monochrome laser four-in-one MFP with 2.8-inch touch screen, 42 ppm, wireless, Gigabit Ethernet, front USB, internal duplex printing, and duplex scanning for small workgroups.	

Supported paper sizes, types, and weights

Supported paper sizes

Paper size	Standard 250-sheet tray	Optional 550-sheet tray	Multipurpose feeder	Two-sided printing	Scanner	ADF
A4 210 x 297 mm (8.27 x 11.7 in.)	✓	✓	✓	✓	✓	✓
A5 Portrait (SEF) 148 x 210 mm (5.83 x 8.27 in.)	✓	✓	✓	X	✓	✓
A5 Landscape (LEF)[1] 210 x 148 mm (8.27 x 5.83 in.)	✓	✓	✓	X	✓	✓
A6 105 x 148 mm (4.13 x 5.83 in.)	✓	✓	✓	X	✓	✓
JIS B5 182 x 257 mm (7.17 x 10.1 in.)	✓	✓	✓	X	✓	✓

Paper size	Standard 250-sheet tray	Optional 550-sheet tray	Multipurpose feeder	Two-sided printing	Scanner	ADF
Oficio (Mexico) 215.9 x 340.4 mm (8.5 x 13.4 in.)	✓	✓	✓	✓	X	✓
Hagaki 100 x 148 mm (3.94 x 5.83 in.)	✓	X	✓	X	✓	X
Statement 139.7 x 215.9 mm (5.5 x 8.5 in.)	✓	✓	✓	X	✓	✓
Executive 184.2 x 266.7 mm (7.25 x 10.5 in.)	✓	✓	✓	X	✓	✓
Letter 215.9 x 279.4 mm (8.5 x 11 in.)	✓	✓	✓	✓	✓	✓
Legal 215.9 x 355.6 mm (8.5 x 14 in.)	✓	✓	✓	✓	X	✓
Folio 215.9 x 330.2 mm (8.5 x 13 in.)	✓	✓	✓	✓	X	✓
Universal[3] 99 x 148 mm to 215.9 x 359.92 mm (3.9 x 5.83 in. to 8.5 x 14.17 in.)	✓	✓	✓	✓[2]	X	✓

Paper size	Standard 250-sheet tray	Optional 550-sheet tray	Multipurpose feeder	Two-sided printing	Scanner	ADF
7 3/4 Envelope 98.4 x 190.5 mm (3.875 x 7.5 in.)	X	X	✓	X	✓	X
9 Envelope 98.4 x 225.4 mm (3.875 x 8.9 in.)	X	X	✓	X	✓	X
10 Envelope 104.8 x 241.3 mm (4.12 x 9.5 in.)	X	X	✓	X	✓	X
DL Envelope 110 x 220 mm (4.33 x 8.66 in.)	X	X	✓	X	✓	X
C5 Envelope 162 x 229 mm (6.38 x 9.01 in.)	X	X	✓	X	✓	X
B5 Envelope 176 x 250 mm (6.93 x 9.84 in.)	X	X	✓	X	✓	X
Other Envelope 98.4 x 162 mm to 176 x 250 mm (3.87 x 6.38 in. to 6.93 x 9.84 in.)	X	X	✓	X	✓	X

[1] The default support is long-edge feed.

[2] Paper must at least be 210 mm (8.27 in.) wide and 279.4 mm (11 in.) long for two-sided printing.

[3] When Universal is selected, the page is formatted for 215.90 x 355.60 mm (8.5 x 14 in.) unless specified by the application.

Supported paper types

Paper type	Standard 250-sheet tray	Optional 550-sheet tray	Multipurpose feeder	Two-sided printing	Automatic document feeder
Plain paper	✓	✓	✓	✓	✓
Card stock	X	X	✓	X	X
Recycled	✓	✓	✓	✓	X
Paper labels*	✓	✓	✓	X	X
Bond	✓	✓	✓	✓	X
Letterhead	✓	✓	✓	✓	X
Preprinted	✓	✓	✓	✓	X
Colored Paper	✓	✓	✓	✓	X
Light Paper	✓	✓	✓	✓	X
Heavy Paper	✓	✓	✓	✓	X
Rough/Cotton	✓	✓	✓	✓	X
Envelope	X	X	✓	X	X
Rough envelope	X	X	✓	X	X

* One-sided paper labels are supported for occasional use of less than 20 pages per month. Vinyl, pharmacy, or two-sided labels are not supported.

Supported paper weights
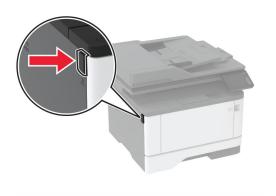
	Standard 250-sheet tray	Optional 550-sheet tray	Multipurpose feeder	Two-sided printing	Automatic document feeder
Paper weight	60–120 g/m^2 (16–32 lb)	60–120 g/m^2 (16–32 lb)	60–217 g/m^2 (16–58 lb)	60–90 g/m^2 (16–24 lb)	60–90 g/m^2 (16–24 lb)

「**Descriptions in page 23 is not applicable to this model. Therefore, it was deleted.**」

Finding the printer serial number

1 Open the front door.

2 Locate the printer serial number behind the front door.

Tools required for service

- Flat-blade screwdrivers, various sizes

- #1 Phillips screwdriver, magnetic

- #2 Phillips screwdriver, magnetic

- #2 Phillips screwdriver, magnetic short-blade

- Torx screwdriver (T20 head)

- Needle-nose pliers

- Diagonal side cutters

- Spring hook

- Feeler gauges

- Analog or digital

- multimeter3-mm ball hex

- wrench Toner vacuum

- Flashlight
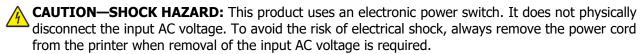
Blank page

Diagnostics and troubleshooting

Troubleshooting precautions

⚠ **CAUTION—SHOCK HAZARD:** When you see this symbol on the product, there is a danger from hazardous voltage in the area of the product where you are working. Unplug the product before you begin, or use caution if the product must receive power in order to perform the task.

⚠ **CAUTION—SHOCK HAZARD:** This product uses an electronic power switch. It does not physically disconnect the input AC voltage. To avoid the risk of electrical shock, always remove the power cord from the printer when removal of the input AC voltage is required.

⚠ **CAUTION—SHOCK HAZARD:** To avoid the risk of electrical shock while troubleshooting with covers removed or doors open, do not touch the exposed wires or circuits while the printer is connected to an electrical outlet.

⚠ **CAUTION—SHOCK HAZARD:** To avoid the risk of electrical shock and to prevent damage to the printer,remove the power cord from the electrical outlet and disconnect all connections to any external devices before you connect or disconnect any cable, electronic board, or assembly.

⚠ **CAUTION—HOT SURFACE:** The inside of the printer might be hot. To reduce the risk of injury from a hot component, allow the surface to cool before touching it.

⚠ **CAUTION—PINCH HAZARD:** To avoid the risk of a pinch injury, use caution in areas marked with thislabel. Pinch injuries may occur around moving parts, such as gears, doors, trays, and covers.

Précautions de dépannage

⚠ **ATTENTION—RISQUE D'ELECTROCUTION :** Ce symbole indique un danger lié à des niveaux de tension dangereux dans la zone du produit à manipuler. Débranchez le produit avant de commencer, ouagissez avec prudence si le produit doit être alimenté pour effectuer l'opération.

⚠ **ATTENTION—RISQUE D'ELECTROCUTION :** Ce produit utilise un commutateur d'alimentation électronique. Il ne déconnecte pas physiquement la tension d'alimentation CA. Pour éviter tout risque d'électrocution, débranchez toujours le cordon d'alimentation de l'imprimante lorsque vous devez déconnecter la tension d'alimentation CA.

⚠ **ATTENTION—RISQUE D'ELECTROCUTION :** Pour éviter tout risque d'électrocution lors du dépannage de l'imprimante avec les capots retirés ou les portes ouvertes, prenez garde de ne pas toucher les fils ou circuits dénudés si l'imprimante est connectée à une prise électrique.

⚠ **ATTENTION—RISQUE D'ELECTROCUTION :** Pour éviter tout risque d'électrocution et éviter d'endommager l'imprimante, débranchez le cordon d'alimentation de la prise électrique et déconnectez toute connexion à tout périphérique externe avant de brancher ou débrancher des câbles ou circuits et assemblages électroniques.

⚠ **ATTENTION—SURFACE CHAUDE :** L'intérieur de l'imprimante risque d'être brûlant. pour réduire le risque de brûlure, laissez la surface ou le composant refroidir avant d'y toucher.

⚠ **ATTENTION : RISQUE DE PINCEMENT :** Pour éviter tout risque de blessure par pincement, agissezavec précaution au niveau des zones signalées par cette étiquette. Les blessures par pincement peuvent se produire autour des pièces mobiles telles que les engrenages, portes, tiroirs et

Precauciones durante la solución de problemas

⚠️ **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** Cuando vea este símbolo en el producto, existe peligro de tensiones peligrosas en el área del producto en la que está trabajando. Desconecte el producto antes de empezar o tenga cuidado si el producto debe recibir alimentación a fin de realizar la tarea.

⚠️ **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** Este producto utiliza un interruptor de corriente electrónico. No desconecta físicamente la entrada de voltaje de CA. Para evitar el riesgo de descarga eléctrica, desenchufe siempre el cable de alimentación de la impresora cuando sea necesario retirar la entrada de voltaje de CA.

⚠️ **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** Para evitar el riesgo de descarga eléctrica alsolucionar problemas sin las cubiertas o con las puertas abiertas, no toque los cables ni los circuitos expuestos mientras la impresora está conectada a una toma de corriente.

⚠️ **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** Para evitar el riesgo de descargas eléctricas ydaños en la impresora, retire el cable de alimentación de la toma eléctrica y desconecte todas las conexiones a dispositivos externos antes de conectar o desconectar cualquier cable, placa electrónica o conjunto.

⚠️ **PRECAUCIÓN: SUPERFICIE CALIENTE:** El interior de la impresora podría estar caliente. Para evitar el riesgo de heridas producidas por el contacto con un componente caliente, deje que la superficie se enfríe antes de tocarlo.

⚠️ **PRECAUCIÓN: PELIGRO DE ATRAPAMIENTO:** Para evitar el riesgo de lesión por atrapamiento, preste atención en las áreas marcadas con esta etiqueta. Las lesiones por atrapamiento se pueden producir en torno a partes móviles, tales como engranajes, puertas, bandejas y cubiertas.

Vorsichtsmaßnahmen bei der Fehlerbehebung

⚠️ **VORSICHT – STROMSCHLAGGEFAHR:** Wenn Sie dieses Symbol sehen, besteht eine Gefahr durch gefährliche Spannungen in dem Produktbereich, in dem Sie arbeiten. Trennen Sie das Produkt von seiner Stromverbindung, bevor Sie beginnen, oder gehen Sie vorsichtig vor, wenn das Produkt für die Durchführung der Aufgabe mit Strom versorgt werden muss.

⚠️ **VORSICHT – STROMSCHLAGGEFAHR:** Dieses Produkt verwendet einen elektronischen Leistungsschalter. Er trennt die Eingangswechselspannung nicht physikalisch. Um das Risiko eines elektrischen Schlags zu vermeiden, ziehen Sie stets das Netzkabel vom Drucker ab, wenn eine Abtrennung der Eingangswechselspannung erforderlich ist.

⚠️ **VORSICHT – STROMSCHLAGGEFAHR:** Um die Gefahr eines Stromschlags während der Fehlerbehebung bei entfernten Abdeckungen oder offenen Klappen zu vermeiden, berühren Sie die freiliegenden Drähte oder Stromkreise nicht, wenn der Drucker an eine Steckdose angeschlossen ist.

⚠️ **VORSICHT – STROMSCHLAGGEFAHR:** Um das Risiko eines elektrischen Schlags und Schäden am Drucker zu vermeiden, ziehen Sie das Netzkabel aus der Steckdose und trennen Sie alle Verbindungen zu jeglichen externen Geräten, bevor Sie Kabel, Elektronikplatinen oder Baugruppen einstecken oder abziehen.

⚠️ **VORSICHT – HEISSE OBERFLÄCHE:** Das Innere des Druckers kann sehr heiß sein. Vermeiden Sie Verletzungen, indem Sie heiße Komponenten stets abkühlen lassen, bevor Sie ihre Oberfläche berühren.

⚠️ **VORSICHT – QUETSCHGEFAHR:** Um das Risiko einer Quetschung zu vermeiden, gehen Sie in Bereichen, die mit diesem Etikett gekennzeichnet sind, mit Vorsicht vor. Quetschungen können imBereich von beweglichen Komponenten auftreten, wie z. B. Zahnrädern, Klappen, Fächern und Abdeckungen.

Troubleshooting overview

Performing the initial troubleshooting

- With the power cord unplugged from the electrical outlet, check if the cord is free from breakage, shortcircuits, disconnected wires, or incorrect connections.

- Make sure that the printer is properly grounded.

- Make sure that the power supply line voltage is within 10% of the rated line voltage.

- Make sure that the printer is securely installed on a level surface in a well-ventilated area.

- Make sure that the temperature and relative humidity are within the specifications.

  See "Temperature information" on page 227.

- Avoid locations that:

  - Generate ammonia gas
  - Are exposed to direct sunlight
  - Are near open flames
  - Are dusty

- Make sure that the recommended paper for this printer is used.

- Do a test print with paper from a newly opened package, and then check the result.

Using Safe Mode

Safe Mode lets the printer continue to operate in a special limited mode in which it attempts to continue offeringas much functionality as possible despite known issues.

Notes:

- When in Safe Mode, the printer only prints in simplex mode from tray 1 at the slowest operating point.
- This setting cannot be used if the sensor (tray present) is damaged.

Warning—Potential Damage: Safe Mode is intended as a short-term workaround and must be used only in the case of a non-critical error when a print job must be completed before service can be arranged to repairthe printer. The printer must be returned to standard operating mode before diagnostics can be run or full-function printing can continue.

Enter Safe Mode from the Configuration menu, and then POR the printer. See **"Config Menu" on page 136**.Return the printer to standard operating mode to service the printer and return to full-function printing.

Fixing print quality issues

Gray background or toner fog check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 29**.

Action	Yes	No
Step 1 **a** Remove any packing material left on the imaging unit. **Note:** You may need a pair of pliers to remove pieces of plastic inside the imaging unit. **b** Make sure that there are no obstructions between the charge roller and photoconductor drum. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Turn off the printer, wait for 10 seconds, and then turn on the printer. **b** Set the toner darkness to a lighter setting. From the control panel, navigate to **Settings** > **Print** > **Quality** > **Toner Darkness**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check if the printer is using a genuine and supported Sharp toner cartridge. **Note:** If the printer is using a third-party cartridge, then refer the users to their cartridge supplier. Is the printer using a genuine and supported Sharp toner cartridge?	Go to step 5.	Go to step 4.
Step 4 Insert a genuine and supported Sharp toner cartridge. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Remove any packing material left on the imaging unit. **Note:** You may need a pair of pliers to remove pieces of plasticinside the imaging unit. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the toner cartridge. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Remove the right cover. See **"Right cover removal" onpage 161**. **b** Make sure that the HVPS1 cable on the controller board andHVPS is properly connected. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the HVPS. See **"HVPS removal" on page 166**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Blank page check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 29**.

Action	Yes	No
Step 1 Verify that the toner cartridge is not empty. Is the toner cartridge empty?	Go to step 2.	Go to step 3.
Step 2 Replace the toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check if the printer is using a genuine and supported Sharp toner cartridge. **Note:** If the printer is using a third-party cartridge, then refer theusers to their cartridge supplier. Is the printer using a genuine and supported Sharp tonercartridge?	Go to step 5.	Go to step 4.
Step 4 Insert a genuine and supported Sharp toner cartridge. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Remove any packing material left on the imaging unit. **Note:** You may need a pair of pliers to remove pieces ofplastic inside the imaging unit. **b** Firmly shake the imaging unit to redistribute the toner, and theninsert it. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Make sure that the transfer roller is properly installed. **b** Check the transfer roller for contamination and damage. Is the transfer roller free of contamination and damage?	Go to step 9.	Go to step 7.
Step 7 Remove, and then install the transfer roller. See **"Transfer rollerremoval" on page 175**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the transfer roller. Does the problem remain?	Go to step 9.	The problem is solved.

Action	Yes	No
Step 9 **a** Remove the right cover. See **"Right cover removal" onpage 161**. **b** Make sure that the HVPS1 cable on the controller board andHVPS is properly connected. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Replace the HVPS. See **"HVPS removal" on page 166**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Replace the printhead. See **"Printhead removal" on page 180**.	Contact the next level of support.	The problem is solved.

Print is too dark check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initialprint quality check. See **"Performing the initial troubleshooting check" on page 29**.

Action	Yes	No
Step 1 Check if the printer is using a genuine and supported Sharp toner cartridge. **Note:** If the printer is using a third-party cartridge, then refer theusers to their cartridge supplier. Is the printer using a genuine and supported Sharp tonercartridge?	Go to step 3.	Go to step 2.
Step 2 Insert a genuine and supported Sharp toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 **a** Remove any packing material left on the imaging unit. **Note:** You may need a pair of pliers to remove pieces ofplastic inside the imaging unit. **b** Make sure that there are no obstructions between the chargeroller and photoconductor drum. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Turn off the printer, wait for 10 seconds, and then turn on theprinter. **b** Set the toner darkness to a lighter setting. From the control panel, navigate to **Settings** > **Print** > **Quality** > **Toner Darkness.** Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the imaging unit. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Remove the right cover. See **"Right cover removal" onpage 161**. **b** Make sure that the HVPS1 cable on the controller board andHVPS is properly connected. Does the problem?	Go to step 7.	The problem is solved.
Step 7 Replace the HVPS. See **"HVPS removal" on page 166**. Does the problem remain?	Contact the next level of support.	The problem is solved.

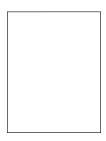# Print is too light check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initialprint quality check. See **"Performing the initial troubleshooting check" on page 29**.

Action	Yes	No
Step 1 Check if the toner cartridge is empty or if it has reached its end of life. Is the toner cartridge empty or has reached its end of life?	Go to step 2.	Go to step 3.
Step 2 Replace the toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check if the printer is using a genuine and supported Sharp toner cartridge. **Note:** If the printer is using a third-party cartridge, then refer theusers to their cartridge supplier. Is the printer using a genuine and supported Sharp tonercartridge?	Go to step 5.	Go to step 4.
Step 4 Insert a genuine and supported Sharp toner cartridge. Does the problem remain?	Go to step 5.	The problem is solved.

Step 5
 	
a Turn off the printer, wait for 10 seconds, and then turn on theprinter.
b Do the following:
  1 Set the toner darkness to a darker setting.
    From the control panel, navigate to **Settings** > **Print** > **Quality** > **Toner Darkness**.
  2 Set the paper type, texture, and weight to match the paperloaded.
    From the control panel, navigate to **Settings** > **Paper** > **Media Configuration** > **Media Types**.
 	
Does the problem remain?
	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 **a** Remove the imaging unit. **b** Push either side of the transfer roller, and then check if it depresses and bounces back into place. **c** If the transfer roller does not depress and bounce back into place, then reinstall the transfer roller. **d** Firmly shake the toner cartridge to redistribute the toner, and then insert it. **e** Turn off the printer, wait for 10 seconds, and then turn on the printer. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Make sure that the transfer roller is properly installed. **b** Check the transfer roller for contamination and damage. Is the transfer roller free of contamination and damage?	Go to step 9.	Go to step 8.
Step 8 Reinstall or replace the transfer roller. See **"Transfer roller removal" on page 175**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the imaging unit. See **"Transfer roller removal" on page 175**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Remove the right cover. See **"Right cover removal" on page 161**. **b** Make sure that the HVPS1 cable on the controller board and HVPS is properly connected. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Replace the HVPS. See **"HVPS removal" on page 166**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Paper curl check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 29**.

Action	Yes	No
Step 1 Check if the printer is using a genuine and supported Sharp toner cartridge. **Note:** If the printer is using a third-party cartridge, then refer the users to their cartridge supplier. Is the printer using a genuine and supported Sharp toner cartridge?	Go to step 3.	Go to step 2.
Step 2 Insert a genuine and supported Sharp toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check if the printer is using a genuine and supported Sharp fuser. Is the printer using a genuine and supported Sharp fuser?	Go to step 5.	Go to step 4.
Step 4 Insert a genuine and supported Sharp fuser. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Make sure that the paper guide setting matches the size of the paper loaded. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 Set the paper type, texture, and weight to match the paper loaded. From the control panel, navigate to **Settings** > **Paper** > **Media Configuration** > **Media Types**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Make sure that the paper loaded is from a fresh package. **Note:** Paper absorbs moisture due to high humidity. Store paper in its original wrapper until you use it. **b** Make sure that the printer supports the paper loaded. Does the problem remain?	Contact the next level of support.	The problem is solved.

Folded or wrinkled paper check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 29**.

Action	Yes	No
Step 1 **a** Check if the printer is using a non-Sharp toner cartridge. **Note:** If the printer is using a third-party cartridge, then refer the users to their cartridge supplier. **b** Make sure that the toner cartridge is compatible with the imaging unit. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Check if the paper loaded is from a fresh package. **Note:** Paper absorbs moisture due to high humidity. Store paper in its original wrapper until you use it. **b** Make sure that the printer supports the paper loaded. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 **a** Check the toner cartridge for leaks. **b** Using an approved toner vacuum, completely remove the stray toner from the printer, toner cartridge, and imaging unit. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Remove the fuser. See **"Fuser removal" on page 180**. **b** Make sure that the fuser entry guide is free of waste toner and dust. **Warning—Potential Damage:** Clean the fuser entry guide with a toner vacuum and cloth. Do not use compressed air. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the fuser. Does the problem remain?	Contact the next level of support.	The problem is solved.

Solid black pages check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 29**.

Action	Yes	No
Step 1 Check if the printer is using a genuine and supported Sharp toner cartridge. **Note:** If the printer is using a third-party cartridge, then refer theusers to their cartridge supplier. Is the printer using a genuine and supported Sharp tonercartridge?	Go to step 3.	Go to step 2.
Step 2 Insert a genuine and supported Sharp toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Remove any packing material left on the imaging unit. **Note:** You may need a pair of pliers to remove pieces ofplastic inside the imaging unit. **b** Check the charge roller contact on the right side of the imagingunit for damage and contamination. Is the charge roller contact free of damage and contamination?	Go to step 6.	Go to step 4.
Step 4 **a** Perform a POR. **b** Perform a print test. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the imaging unit. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 **a** Remove the right cover. See **"Right cover removal" onpage 161**. **b** Make sure that the HVPS1 cable on the controller board andHVPS is properly connected. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Replace the HVPS. See **"HVPS removal" on page 166**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Skewed print check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initialprint quality check. See **"Performing the initial troubleshooting check" on page 29**.

Action	Yes	No
Step 1 Check the guides in the tray where the skewed prints are printed from. **Note:** If the paper source is the MPF, then proceed to **step 6**. Does the position of the guides match the paper loaded?	Go to step 3.	Go to step 2.
Step 2 Adjust the guides to match the paper loaded. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check if the printer supports the paper loaded. Is the paper supported?	Go to step 5.	Go to step 4.

Action	Yes	No
Step 4 Remove the paper, and then load a supported one. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Perform a print test. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the guides in the MPF tray. Does the position of the guides match the paper loaded?	Go to step 8.	Go to step 7.
Step 7 Adjust the guides to match the paper loaded. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Make sure that the printer supports the paper loaded. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the MPF pick roller for excess wear and contamination. Is the MPF pick roller free from excess wear and contamination?	Go to step 11.	Go to step 10.
Step 10 Replace the front door with MPF pick roller. See **"Front doorremoval" on page 174**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Reinstall or replace the transfer roller. See **"Transfer rollerremoval" on page 175**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Replace the imaging unit. Does the problem remain?	Contact the next level of support.	The problem is solved.

Streaked vertical lines appear on prints during a print job check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 29**.

Action	Yes	No
Step 1 **a** Make sure that the printer is not placed in a cold and damp area. **b** Print 15 simplex pages to dry the transfer roller. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check if the printer is using a genuine and supported Sharp toner cartridge. **Note:** If the printer is using a third-party cartridge, then refer the users to their cartridge supplier. Is the printer using a genuine and supported Sharp toner cartridge?	Go to step 4.	Go to step 3.
Step 3 Insert a genuine and supported Sharp toner cartridge. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the status of the imaging unit. Is the imaging unit near its end of life?	Go to step 6.	Go to step 5.
Step 5 Remove, and then insert the imaging unit. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the imaging unit. Does the problem remain?	Contact the next level of support.	The problem is solved.

Streaked vertical lines appear on prints during a copy job check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 29**.

Action	Yes	No
Step 1 **a** Make sure that the printer is not placed in a cold and damp area. **b** Print 15 simplex pages to dry the transfer roller. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Clean the scanner. See **"Cleaning the scanner" on page 203**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Open the scanner cover, and then check if it closes properly. Does the cover close properly?	Go to step 5.	Go to step 4.
Step 4 Make sure that the scanner glass pad is clean and properly installed. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 With the scanner cover open, perform a copy job to check the scanner lamp. **Note:** The scanner lamp must light up and move along the scan area. Is the scanner lamp functional?	Go to step 7.	Go to step 6.

Action	Yes	No
Step 6 **a** Remove the right cover. See **"Right cover removal" onpage 161**. **b** Reseat the scanner cables. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the scanner and its components for damage. • Scanner lamp • Motor (scanner) • Scanner belt • Glass panes • Cables Are the scanner and its components free of damage?	Go to step 9.	Go to step 8.
Step 8 Replace the ADF and scanner. See **"ADF and scanner removal"on page 187**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Check the firmware version. Is the firmware updated to the latest version?	Go to step 11.	Go to step 10.
Step 10 Update the firmware. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Make sure that the controller board is properly installed. **b** Reseat all the cables on the controller board. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 Replace the controller board. See **"Controller board removal" onpage 163**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Horizontal light bands check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 29**.

Action	Yes	No
Step 1 Check if the banding is along the edge of the paper. Is the banding along the edge of the paper?	Go to step 2.	Go to step 3.
Step 2 Replace the fuser. See **"Fuser removal" on page 180**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check if the toner cartridge is empty or if it has reached its end of life. Is the toner cartridge empty or has reached its end of life?	Go to step 4.	Go to step 5
Step 4 Replace the toner cartridge. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check if the printer is using a genuine and supported Sharp toner cartridge. **Note:** If the printer is using a third-party cartridge, then refer the users to their cartridge supplier. Is the printer using a genuine and supported Sharp toner cartridge?	Contact the next level of support.	Go to step 6.
Step 6 Insert a genuine and supported Sharp toner cartridge. Does the problem remain?	Contact the next level of support.	The problem is solved.

Vertical light bands check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 29**.

Action	Yes	No
Step 1 Check if the banding is along the edge of the paper. Is the banding along the edge of the paper?	Go to step 2.	Go to step 3.
Step 2 Replace the fuser. See **"Fuser removal" on page 180**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check if the printer is using a genuine and supported Sharp toner cartridge. **Note:** If the printer is using a third-party cartridge, then refer the users to their cartridge supplier. Is the printer using a genuine and supported Sharp toner cartridge?	Go to step 5.	Go to step 4.
Step 4 Insert a genuine and supported Sharp toner cartridge. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Remove the imaging unit. **b** Clean the printhead laser glass window with a soft cloth. Does the problem remain?	Contact the next level of support.	The problem is solved.

Vertical dark bands check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 29**.

Action	Yes	No
Step 1 Check if the banding is along the edge of the paper. Is the banding along the edge of the paper?	Go to step 2.	Go to step 3.
Step 2 Replace the fuser. See **"Fuser removal" on page 180**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Remove any packing material left on the imaging unit. 　**Note:** You may need a pair of pliers to remove pieces of plastic inside the imaging unit. **b** Make sure that there are no obstructions between the charger roller and photoconductor drum. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check if the printer is using a genuine and supported Sharp toner cartridge. **Note:** If the printer is using a third-party cartridge, then refer the users to their cartridge supplier. Is the printer using a genuine and supported Sharp toner cartridge?	Go to step 6.	Go to step 5.
Step 5 Insert a genuine and supported Sharp toner cartridge. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 Remove, and then insert the imaging unit. Does the problem remain?	Contact the next level of support.	The problem is solved.

Vertical dark streaks with print missing check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 29**.

Action	Yes	No
Step 1 Check if the toner cartridge is empty or if it has reached its end of life. Is the toner cartridge empty or has reached its end of life?	Go to step 2.	Go to step 3.
Step 2 Replace the toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check if the printer is using a genuine and supported Sharp toner cartridge. **Note:** If the printer is using a third-party cartridge, then refer the users to their cartridge supplier. Is the printer using a genuine and supported Sharp toner cartridge?	Go to step 5.	Go to step 4.
Step 4 Insert a genuine and supported Sharp toner cartridge. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 **a** Remove any packing material left on the imaging unit. 　　**Note:** You may need a pair of pliers to remove pieces of plastic inside the imaging unit. **b** Check the charge roller contact on the right side of the imaging unit for damage and contamination. Is the charge roller contact free of damage and contamination?	Contact the next level of support.	Go to step 6.
Step 6 Replace the imaging unit. Does the problem remain?	Contact the next level of support.	The problem is solved.

White streaks and voided areas check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 29**.

Action	Yes	No
Step 1 Check if the printer is using a genuine and supported Sharp toner cartridge. **Note:** If the printer is using a third-party cartridge, then refer theusers to their cartridge supplier. Is the printer using a genuine and supported Sharp tonercartridge?	Go to step 3.	Go to step 2.
Step 2 Insert a genuine and supported Sharp toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Perform a POR. **b** Perform a print test. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the status of the imaging unit. Is the imaging unit near its end of life?	Go to step 5.	Contact the next level of support.
Step 5 Replace the imaging unit. Does the problem remain?	Contact the next level of support.	The problem is solved.

Clipped pages or images check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initialprint quality check. See **"Performing the initial troubleshooting check" on page 29**.

Action	Yes	No
Step 1 **a** Remove any packing material left on the imaging unit. **Note:** You may need a pair of pliers to remove pieces ofplastic inside the imaging unit. **b** Make sure that there are no obstructions between the chargeroller and photoconductor drum. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Remove, and then insert the toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check if the printer is using a genuine and supported Sharp toner cartridge. **Note:** If the printer is using a third-party cartridge, then refer theusers to their cartridge supplier. Is the printer using a genuine and supported Sharp tonercartridge?	Go to step 5.	Go to step 4.
Step 4 Insert a genuine and supported Sharp toner cartridge. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Remove, and then insert the imaging unit. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the imaging unit. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Remove the imaging unit. **b** Clean the printhead laser glass window with a soft cloth. Does the problem remain?	Contact the next level of support.	The problem is solved.

Incorrect margins on prints check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See .

Action	Yes	No
Step 1 Adjust the guides in the tray to match the size of the paper loaded.	Go to step 2.	The problem is solved.
Step 2 Do either of the following: • Set the paper size to match the paper loaded in the tray. Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Printer registration adjustments** • Change the paper loaded in the tray to match the paper size set in the tray. Does the problem remain?	Contact the next level of support.	The problem is solved.

Toner rubs off check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See .

Action	Yes	No
Step 1 Check if the printer is using a genuine and supported Sharp toner cartridge. **Note:** If the printer is using a third-party cartridge, then refer theusers to their cartridge supplier. Is the printer using a genuine and supported Sharp tonercartridge?	Go to step 3.	Go to step 2.
Step 2 Insert a genuine and supported Sharp toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Set the paper type, texture, and weight to match the paper loaded. From the control panel, navigate to **Settings** > **Paper** > **Media Configuration** > **Media Types**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Remove, and then install the fuser. See "Fuser removal" on page 180. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the fuser. Does the problem remain?	Contact the next level of support.	The problem is solved.

Toner specks appear on prints during a print job check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initialprint quality check. See **"Performing the initial troubleshooting check" on page 29**.

Action	Yes	No
Step 1 Check if the printer is using a genuine and supported Sharp toner cartridge. **Note:** If the printer is using a third-party cartridge, then refer theusers to their cartridge supplier. Is the printer using a genuine and supported Sharp tonercartridge?	Go to step 3.	Go to step 2.
Step 2 Insert a genuine and supported Sharp toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** From the control panel, navigate to **Status/Supplies** > **Supplies**. **b** Check the status of the imaging unit. Is the imaging unit near its end of life or showing signs of toner leakage?	Go to step 4.	Go to step 5.
Step 4 Replace the imaging unit. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check if toner specks appear only on the edges or back side of the paper. Do toner specks appear only on the edges or back side of thepaper?	Go to step 6.	Go to step 7.
Step 6 Replace the transfer roller. See **"Transfer roller removal" onpage 175**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the printer for stray toner contamination. Is the printer contaminated with stray toner?	Go to step 8.	Contact the next level of support.
Step 8 Using an approved toner vacuum, completely remove the stray toner from the printer, toner cartridge, and imaging unit. Does the problem remain?	Contact the next level of support.	The problem is solved.

Toner specks appear on prints during a copy job check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See **"Performing the initial troubleshooting check" on page 29**.

Action	Yes	No
Step 1 Clean the scanner. See **"Cleaning the scanner" on page 203**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the firmware version. Is the firmware updated to the latest version?	Go to step 4.	Go to step 3.
Step 3 Update the firmware. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the ADF and scanner. See **"ADF and scanner removal" on page 187**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 **a** Make sure that the controller board is properly installed. **b** Reseat all the cables on the controller board. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the controller board. See **"Controller board removal" on page 163**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Repeating defects check

Note: Before performing this print quality check, print the Print Quality Test Pages. From the control panel, navigate to **Settings** > **Troubleshooting** > **Print Quality Test Pages**, and then perform the initial print quality check. See .

Action	Yes	No
Step 1 Using the Print Quality Test Pages, check if the distance between the repeating defects is equal to any of the following: • 37.7 mm (1.48 in.) • 96 mm (3.78 in.) Does the distance between the repeating defects match any of the measurements?	Go to step 2.	Go to step 3.
Step 2 Replace the imaging unit. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check if the distance between the repeating defects is equal to any of the following: • 37.5 mm (1.48 in.) • 43.5 mm (1.71 in.) Does the distance between the repeating defects match any of the measurements?	Go to step 4.	Go to step 5.
Step 4 Replace the toner cartridge. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check if the distance between the repeating defects is equal to 52 mm (2.05 in.). Does the distance between the repeating defects match the measurement?	Go to step 6.	Go to step 7.

Action	Yes	No
Step 6 Replace the transfer roller. See **"Transfer roller removal" onpage 175**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check if the distance between the repeating defects is equal to any of the following: • 62.5 mm (2.46 in.) • 79.8 mm (3.14 in.) Does the distance between the repeating defects match any of the measurements?	Go to step 8.	Contact the next level of support.
Step 8 Replace the fuser. See **"Fuser removal" on page 180**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Paper jams

200 paper jams

200 paper jam messages

Error	Description	Action
200.02	Paper fed from the MPF was detected earlier than expected at the sensor (input).	See **"Sensor (input): Paper arrived too early jamservice check" on page 59**.
200.04	Paper fed from the MPF cleared the sensor (input) earlier than expected.	See **"Sensor (input): Paper cleared too early jamservice check" on page 60**.
200.05	Paper fed from the MPF never cleared the sensor (input).	See **"Sensor (input): Paper failed to clear jamservice check" on page 63**.
200.06	Paper fed from the MPF was detected later than expected or was never detected at the sensor (input).	See **"Sensor (input): Paper failed to arrive jamservice check" on page 61**.
200.12	Paper fed from tray 1 was detected earlier thanexpected at the sensor (input).	See **"Sensor (input): Paper arrived too early jamservice check" on page 59**.
200.13	Paper fed from tray 1 was detected later than expected or was never detected at the sensor (input).	See **"Sensor (input): Paper failed to arrive jamservice check" on page 61**.
200.14	Paper fed from tray 1 cleared the sensor (input)earlier than expected.	See **"Sensor (input): Paper cleared too early jamservice check" on page 60**.

Error code	Description	Action
20 .15	Paper fed from tray 1 never cleared the sensor(input).	See **"Sensor (input): Paper failed to clear jamservice check" on page 63**.
200.22	Paper fed from tray 2 was detected earlier thanexpected at the sensor (input).	See **"Sensor (input): Paper arrived too early jamservice check" on page 59**.
200.23	Paper fed from tray 2 was detected later than expected or was never detected at the sensor (input).	See **"Sensor (input): Paper failed to arrive jamservice check" on page 61**.
200.24	Paper fed from tray 2 cleared the sensor (input)earlier than expected.	See **"Sensor (input): Paper cleared too early jamservice check" on page 60**.
200.25	Paper fed from tray 2 never cleared the sensor (input).	See **"Sensor (input): Paper failed to clear jamservice check" on page 63**.
200.91	Paper remains detected at the sensor (input) after the printer is turned on.	See **"Sensor (input): Static jam service check" onpage 65**.

Sensor (input): Paper arrived too early jam service check

Action	Yes	No
Step 1 Identify the source tray. Is MPF the source tray?	Go to step 2.	Go to step 4.
Step 2 **a** Make sure that the MPF pick roller is free of contamination. **b** Clean the MPF pick roller. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Replace the front door. See **"Front door removal" on page 174**.	Contact the next level of support.	The problem is solved.
Step 4 Make sure that the paper is properly loaded in the tray. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Make sure that each tray is free of paper fragments and partially fed paper. Does the problem remain?	Go to step 6.	The problem is solved.

Action	Yes	No
Step 6 **a** Make sure that the pick roller and separator roller are free fromcontamination. **b** Clean the pick roller and separator roller. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** **b** Find the sensor (input). **c** Make sure that the sensor actuator freely moves and is notstuck. Does the sensor status change while toggling the sensor?	Go to step 9.	Go to step 8.
Step 8 **a** Remove the right cover. See **"Right cover removal" onpage 161**. **b** Make sure that the JMTR1 sensor cable is properly connectedto the controller board. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Perform a print test. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (input): Paper cleared too early jam service check

Action	Yes	No
Step 1 **a** Remove the tray insert. **b** Make sure that the paper is properly loaded in the tray. **c** From the printer control panel or Printing Preferences or Printdialog, verify the paper size settings. **Note:** The tray has no size sensing mechanism. Manually setthe paper size through the printer control panel or Printing Preferences or Print dialog. Does the paper size match the settings that you want?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 **a** Make sure that the tray is not overfilled. **b** Make sure that the paper guides are not set too tight against the paper. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the tray for crumpled, damaged, or deformed paper. Are there crumpled, damaged, or deformed paper in the tray?	Go to step 5.	Go to step 6.
Step 5 Replace the crumpled, damaged, or deformed paper. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Enter theDiagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** **b** Find the sensor (input). **c** Make sure that the sensor actuator freely moves and is notstuck. Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 7.
Step 7 **a** Remove the right cover. See **"Right cover removal" onpage 161**. **b** Make sure that the JMTR1 sensor cable is properly connectedto the controller board. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Perform a print test. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (input): Paper failed to arrive jam service check

Action	Yes	No
Step 1 **a** Remove the tray insert. **b** Make sure that the paper is properly loaded in the tray. **c** From the printer control panel or Printing Preferences or Printdialog, verify the paper size settings. **Note:** The tray has no size sensing mechanism. Manually setthe paper size through the printer control panel or Printing Preferences or Print dialog. Does the paper size match the settings that you want?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Make sure that the tray is not overfilled. **b** Make sure that the paper guides are not set too tight againstthe paper. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the tray for crumpled, damaged, or deformed paper. Are there crumpled, damaged, or deformed paper in the tray?	Go to step 5.	Go to step 6.
Step 5 Replace the crumpled, damaged, or deformed paper. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Enter theDiagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** **b** Find the sensor (input). **c** Make sure that the sensor actuator freely moves and is notstuck. Does the sensor status change while toggling the sensor?	Go to step 8.	Go to step 7.
Step 7 **a** Remove the right cover. See **"Right cover removal" onpage 161**. **b** Make sure that the JMTR1 sensor cable is properly connectedto the controller board. Does the problem remain?	Go to step 8.	The problem is solved.

Action	Yes	No
Step 8 Perform a print test. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (input): Paper failed to clear jam service check

Action	Yes	No
Step 1 **a** Remove the tray insert. **b** Make sure that the paper is properly loaded in the tray. **c** From the printer control panel or Printing Preferences or Printdialog, verify the paper size settings. **Note:** The tray has no size sensing mechanism. Manually setthe paper size through the printer control panel or Printing Preferences or Print dialog. Does the paper size match the settings that you want?	Go to step 3.	Go to step 2.
Step 2 Change the paper size or adjust the size setting in the tray. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Make sure that the tray is not overfilled. **b** Make sure that the paper guides are not set too tight againstthe paper. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the tray for crumpled, damaged, or deformed paper. Are there crumpled, damaged, or deformed paper in the tray?	Go to step 5.	Go to step 6.
Step 5 Replace the crumpled, damaged, or deformed paper. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Identify the source tray. Is MPF the source tray?	Go to step 7.	Go to step 9.

Action	Yes	No
Step 7 Make sure that the MPF pick roller is free of contamination. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the front door. See **"Front door removal" on page 174**.	Go to step 9.	The problem is solved.
Step 9 Make sure that the pick roller is free of contamination. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Replace the pick roller. **b** Replace the separator roller. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** **b** Find the sensor (input). **c** Make sure that the sensor actuator freely moves and is notstuck. Does the sensor status change while toggling the sensor?	Go to step 13.	Go to step 12.
Step 12 **a** Remove the right cover. See **"Right cover removal" onpage 161**. **b** Make sure that the JMTR1 sensor cable is properly connectedto the controller board. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Perform a print test. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (input): Static jam service check

Action	Yes	No
Step 1 Check the paper path for paper fragments and partially fed paper. Is the paper path free of paper fragments and partially fed paper?	Go to step 3.	Go to step 2.
Step 2 Remove the paper fragments and partially fed paper. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** **b** Find the sensor (input). **c** Make sure that the sensor actuator freely moves and is not stuck. Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 4.
Step 4 **a** Remove the right cover. See **"Right cover removal" on page 161**. **b** Make sure that the JMTR1 sensor cable is properly connected to the controller board. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Perform a print test. Does the problem remain?	Contact the next level of support.	The problem is solved.

202 paper jams

202 paper jam messages

Error code	Description	Action
202.03	Paper fed from the MPF never arrived at the sensor (fuser exit).	See **"Sensor (fuser exit): Paper failed to arrive jam service check" on page 66**.
202.13	Paper fed from tray 1 never arrived at the sensor (fuser exit).	
202.23	Paper fed from tray 2 never arrived at the sensor (fuser exit).	
202.x4	Paper cleared the sensor (fuser exit) too soon.	See **"Sensor (fuser exit): Paper cleared too early jam service check" on page 68**.

Error code	Description	Action
202.05	Paper fed from the MPF never cleared the sensor (fuser exit).	See **"Sensor (fuser exit): Paper failed to clear jamservice check" on page 68**.
202.15	Paper fed from tray 1 never cleared the sensor (fuser exit).	
202.25	Paper fed from tray 2 never cleared the sensor(fuser exit).	
202.91	Paper remains detected at the sensor (fuser exit) after the printer is turned on.	See **"Sensor (fuser exit): Static jam servicecheck" on page 70**.
202.93	The sensor (fuser exit) detected a jam during or after a flush action.	
202.95	Paper fed from an unknown tray never cleared the sensor (fuser exit).	

Sensor (fuser exit): Paper failed to arrive jam service check

Action	Yes	No
Step 1 Check the fuser paper path for paper fragments and partially fedpaper. Is the fuser paper path free of paper fragments and partially fedpaper?	Go to step 3.	Go to step 2.
Step 2 Remove the paper fragments and partially fed paper. **Warning—Potential Damage:** Do not remove any paper or paperfragments from the fuser using tools. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Remove paper in the tray, flip it over, and then reload paper. **b** Resend the print job. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the paper in the tray, and then resend the print job. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** **b** Find the sensor (fuser exit). **c** Make sure that the sensor actuator freely moves and is notstuck. Does the sensor status change while toggling the sensor?	Go to step 7.	Go to step 6.
Step 6 **a** Remove the right cover. See **"Right cover removal" onpage 161**. **b** Make sure that the JEXIT1 sensor cable is properly connectedto the controller board. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Motor tests** **b** Find the main motor (forward). **c** Open the front door, remove the imaging unit, and then closethe front door. **d** Activate the motor test. **e** Open the rear door, and then check if the fuser belt is properlyrotating. Is the fuser belt properly rotating?	Go to step 9.	Go to step 8.
Step 8 **a** Remove the right cover. See **"Right cover removal" onpage 161**. **b** Make sure that the JMTR1 sensor cable is properly connectedto the controller board. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Replace the fuser. See **"Fuser removal" on page 180**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Perform a print job. Does the problem remain?	Go to step 11.	The problem is solved.

Action	Yes	No
Step 11 Replace the main drive gears. See **"Main drive gears removal" onpage 153**. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Make sure that the metal shutter in the printer frame is notstuck. **b** Check the metal shutter for fuser entry. Does the metal shutter freely move?	Contact the next level of support.	The problem is solved.

Sensor (fuser exit): Paper cleared too early jam service check

Action	Yes	No
Step 1 Remove all paper from the bin. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the fuser exit area, rear door, and redrive area for jammedpaper or paper fragments. Are there jammed paper or paper fragments?	Go to step 3.	Contact the next level of support.
Step 3 Remove the jammed paper or paper fragments. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (fuser exit): Paper failed to clear jam service check

Action	Yes	No
Step 1 **a** Make sure that the fuser exit area, rear door, and redrive areaare free of jammed paper or paper fragments **b** Make sure that the rear door can properly close. **c** Check the rear door for damage. Is the rear door functional and free of damage?	Go to step 3.	Go to step 2.

Action	Yes	No
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** **b** Find the sensor (fuser exit). **c** Make sure that the sensor actuator freely moves and is notstuck. Does the sensor status change while toggling the sensor?	Go to step 5.	Go to step 3.
Step 3 **a** Remove the right cover. See **"Right cover removal" onpage 161**. **b** Make sure that the JEXIT1 sensor cable is properly connectedto the controller board. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the rear door. See **"Rear door removal" on page 179**. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the fuser. See **"Fuser removal" on page 180**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the redrive for damage. Is the redrive free of damage?	Go to step 8.	Go to step 7.
Step 7 Replace the redrive. See **"Redrive removal" on page 182**. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Perform a print test. Does the problem remain?	Contact the next level of support.	The problem is solved.

Sensor (fuser exit): Static jam service check

Action	Yes	No
Step 1 Remove paper fragments and partially fed paper. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** **b** Find the sensor (fuser exit). **c** Make sure that the sensor actuator freely moves and is not stuck. Does the sensor status change while toggling the sensor?	Go to step 4.	Go to step 3.
Step 3 **a** Remove the right cover. See **"Right cover removal" onpage 161**. **b** Make sure that the JEXIT1 sensor cable is properly connected to the controller board. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Perform a print test. Does the problem remain?	Contact the next level of support.	The problem is solved.

232 paper jams

232 paper jam messages

Error code	Description	Action
232.03	Paper fed from MPF was detected later than expected or was never detected at the sensor (input) during a duplex print job.	See **"Sensor (input): Paper (duplex job) failed toarrive jam service check" on page 71**.
232.13	Paper fed from tray 1 was detected later than expected or was never detected at the sensor (input) during a duplex print job.	
232.23	Paper fed from tray 2 was detected later than expected or was never detected at the sensor (input) during a duplex print job.	
232.05	Paper fed from the MPF never cleared the sensor (input) during a duplex print job.	
232.15	Paper fed from tray 1 never cleared the sensor (input) during a duplex print job.	
232.25	Paper fed from tray 2 never cleared the sensor(input) during a duplex print job.	
232.93	Paper fed from an unknown tray was detected later than expected or was never detected at the sensor (input) during a duplex print job.	
232.95	Paper fed from an unknown tray never cleared the sensor (input) during a duplex print job.	

Sensor (input): Paper (duplex job) failed to arrive jam service check

Action	Yes	No
Step 1 Remove all paper from the bin, and then resend the print job. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the fuser access area for jammed paper and obstructions. Is the fuser access area free of jammed paper and obstructions?	Go to step 4.	Go to step 3.
Step 3 Remove the jammed paper and obstructions. Does the problem remain?	Go to step 4.	The problem is solved.

Action	Yes	No
Step 4 Check the duplex path area for jammed paper and obstructions. Is the duplex path area free of jammed paper and obstructions?	Go to step 6.	Go to step 5.
Step 5 Remove the jammed paper and obstructions. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the duplex guide for proper installation. Is the duplex guide properly installed?	Go to step 8.	Go to step 7.
Step 7 Reseat the duplex guide, and then make sure that it is properly closed. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the duplex guide for damage. Is the duplex guide free of damage?	Go to step 10.	Go to step 9.
Step 9 Replace the duplex guide. See **"Duplex guide removal" onpage 185**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 **a** Enter the Diagnostics menu, and then navigate to: **Printer diagnostics & adjustments** > **Sensor tests** **b** Find the sensor (input). **c** Make sure that the sensor actuator freely moves and is notstuck. Does the sensor status change while toggling the sensor?	Go to step 12.	Go to step 11.
Step 11 **a** Remove the right cover. See **"Right cover removal" onpage 161**. **b** Make sure that the JMTR1 sensor cable is properly connectedto the controller board. Does the problem remain?	Go to step 12.	The problem is solved.

Action	Yes	No
Step 12 Perform a print test. Does the problem remain?	Contact the next level of support.	The problem is solved.

242 paper jams

242 paper jam messages

Error code	Description	Action
242.26	Paper fed from tray 2 was picked but it never reached the sensor (input).	See **"Optional tray pick drive failure service check" on page 91**.
242.80	Paper jam caused by the motor (tray 2) not turning on.	
242.81	Paper jam caused by the motor (tray 2) not turning off.	
242.82	Paper jam caused by the motor (tray 2) speed not ramping up to the required level.	
242.83	Paper jam caused by the motor (tray 2) stalling.	
242.84	Paper jam caused by the motor (tray 2) running too slow.	
242.85	Paper jam caused by the motor (tray 2) running too fast.	
242.86	Paper jam caused by the motor (tray 2) running too long.	

280–295 paper jams

280–295 paper jam messages

Error code	Description	Action
280.11	Paper remains detected at the sensor (ADF scan) after the printer is turned on.	See **"ADF jam service check" on page 74**.
280.13	Paper never arrived at the sensor (ADF scan).	
280.15	Paper never cleared the sensor (ADF scan).	
295.01	An imagepipe error occurred. Gap between scanned pages is too small.	

ADF jam service check

Action	Yes	No
Step 1 Check the ADF paper path for paper fragments, partially fed paper, and obstructions. • Under the ADF cover • Under the ADF • ADF bin Is the paper path free of paper fragments, partially fed paper, and obstructions?	Go to step 3.	Go to step 2.
Step 2 Remove the paper fragments, partially fed paper, and obstructions.	Go to step 3.	The problem is solved.
Step 3 **a** Open the ADF cover, and then check if it closes properly. **b** Check the cover for improper installation. Is the ADF cover functional and properly installed?	Go to step 5.	Go to step 4.
Step 4 **a** Reinstall the ADF cover. **b** Check the ADF cover for damage. Is the ADF cover free of damage?	Go to step 5.	Go to step 6.
Step 5 **a** Check the ADF cover pick mechanism for improper operation. **b** Check the ADF pick roller and feed roller for wear, damage, and contamination. Are the pick components functional and free of wear, damage, and contamination?	Go to step 7.	Go to step 6.
Step 6 Clean the affected components or replace the ADF cover. See **"ADF cover removal" on page 186**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** Check the ADF separator pad for improper installation. **b** Check the separator pad for wear, damage, and contamination. Is the ADF separator pad properly installed and free of wear, damage, and contamination?	Go to step 9.	Go to step 8.

Action	Yes	No
Step 8 Reinstall, clean, or replace the ADF separator pad. See **"ADFseparator pad removal" on page 187**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **a** Enter the Diagnostics menu, and then navigate to: **Scanner diagnostics** > **Motor tests** **b** Select **ADF transport**, and then start the test. Does the motor run?	Go to step 11.	Go to step 10.
Step 10 **a** Make sure that the ADF is properly installed. Lift the ADF, andthen check if it closes properly. **b** Check the ADF for damage. Is the ADF free of damage?	Go to step 11.	Go to step 16.

Step 11
a Enter the Diagnostics menu, and then navigate to:
Scanner diagnostics > **Sensor tests**
b Run the test on the following sensors:
  • ADF paper present
  • ADF scan
 	
Do the status of the sensors change while toggling the sensors?
	Go to step 13.	Go to step 12.

Step 12 Check the affected sensor and its flag for damage. Is the sensor free of damage?	Go to step 13.	Go to step 16.
Step 13 **a** Enter the Diagnostics menu, and then navigate to: **Scanner diagnostics** > **Motor tests** **b** Select **Scanner**, and then start the test. Does the motor run?	Go to step 17.	Go to step 14.

Action	Yes	No
Step 14 **a** Remove the right cover. See **"Right cover removal" onpage 161**. **b** Reseat the following cables on the controller board: • JADFM1 • JFBM1 • JSCANSNS1 • scanner ground cable Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 Check the scanner and its components for damage. • Belt • Cables Is the scanner free of damage?	Go to step 17.	Go to step 16.
Step 16 Replace the ADF and scanner. See **"ADF and scanner removal"on page 187**. Does the problem remain?	Go to step 17.	The problem is solved.
Step 17 Make sure that the controller board is properly installed. Reseat all the cables on the controller board. Does the problem remain?	Go to step 18.	The problem is solved.
Step 18 Check the controller board and its connector pins for damage. Are the controller board and its connectors free of damage?	Contact the next level of support.	Go to step 19.
Step 19 Replace the controller board. See **"Controller board removal" onpage 163**. Does the problem remain?	Contact the next level of support.	The problem is solved.

User attendance messages

User attendance messages

Error code	Description	Action
29.xx	Packing material present on supplies.	Remove the packing material from the supplies.
31.40	The toner cartridge is missing or unresponsive.	See **"Unsupported or unresponsive toner cartridge service check" on page 78**.
31.60	The imaging unit is missing or unresponsive.	See **"Unsupported or unresponsive imaging unit service check" on page 79**.
32.40	The toner cartridge is unsupported.	See **"Unsupported or unresponsive toner cartridge service check" on**
32.60	The imaging unit is unsupported.	See **"Unsupported or unresponsive imaging unit service check" on page 79**.
33.40	A non-Sharp black toner cartridge was detected.	See **"Unsupported or unresponsive toner cartridge service check" on page 78**.
33.60		
41.60	The imaging unit and toner cartridge are mismatched or incompatible.	See **"Mismatched supplies error service check" on page 80**.
42.xx	The toner cartridge is incompatible due to printer region mismatch.	Install the correct toner cartridge for the region.
43.40	A toner cartridge sensor error was detected.	
71.01	The fax station name is not set up.	See **"Fax station error service check" on page 81**.
71.02	The fax station number is not set up.	
71.03	The analog line is not detected.	See **"Fax failure service check" on page 82**.
71.04	The analog line is connected to the wrong jack.	
71.05	Invalid FoIP license.	
71.06	The fax server is not set up.	
71.12	The printer cannot print faxes because the fax memory is full.	
71.13	The printer cannot send faxes because the fax memory is full.	
71.20	The fax partition is inoperative.	

Error code	Description	Action
80.0x	The remaining life of the fuser, pick roller, ortransfer roller are nearly low.	See **"Supplies low service check" on page 81**.
80.1x	The remaining life of the fuser, pick roller, ortransfer roller are low.	
80.2x	The remaining life of the fuser, pick roller, ortransfer roller are very low.	
80.3x	The life of the fuser, pick roller, or transfer roller has ended.	
84.0x	The remaining life of the imaging unit is nearly	
84.1x	The remaining life of the imaging unit is low.	
84.2x	The remaining life of the imaging unit is very	
84.3x	The imaging unit life has ended.	
84.4x	The imaging unit life has ended. The printer forcesa hard stop on the imaging unit.	
88.0x	The remaining life of the toner cartridge is nearlylow.	
88.1x	The remaining life of the toner cartridge is low.	
88.2x	The remaining life of the toner cartridge is very low.	
88.3x	The toner cartridge life has ended.	
88.4x	The toner cartridge life has ended. The printer forces a hard stop on the toner cartridge.	

Unsupported or unresponsive toner cartridge service check

Action	Yes	No
Step 1 Check whether the toner cartridge installed is genuine. Is the cartridge a genuine and supported Sharp unit?	Go to step 3.	Go to step 2.
Step 2 Install a genuine and supported Sharp toner cartridge. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Check the toner cartridge contacts for contamination. **b** Check the toner cartridge for leaks and damage. Are the toner cartridge and its contacts free of contamination anddamage?	Go to step 5.	Go to step 4.

Action	Yes	No
Step 4 Clean or replace the toner cartridge. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Check the toner cartridge smart chip contacts for contamination. Are the contacts free of contamination?	Go to step 7.	Go to step 6.
Step 6 Clean the smart chip contact. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Reseat the smart chip contact cable on the controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Unsupported or unresponsive imaging unit service check

Action	Yes	No
Step 1 Check whether the imaging unit installed is genuine and supported by the printer model. Is the imaging unit a genuine and supported Sharp unit?	Go to step 3.	Go to step 2.
Step 2 Install a genuine and supported Sharp imaging unit. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 a Check the imaging unit contacts for contamination. b Check the imaging unit for leaks and damage. Are the imaging unit and its contacts free of contamination and damage?	Go to step 5.	Go to step 4.
Step 4 Clean or replace the imaging unit. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 **a** Check the imaging unit smart chip contacts for contamination. **b** Check if the contacts are bent or damaged. Are the contacts free of contamination and damage?	Go to step 7.	Go to step 6.
Step 6 Clean or repair the smart chip contact. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Reseat the smart chip contact cable on the controller board. Does the problem remain?	Contact the next level of support.	The problem is solved.

Mismatched supplies error service check

Action	Yes	No
Step 1 Check whether the supplies installed are genuine and supported by the printer model. Are the supplies genuine and supported Sharp units?	Go to step 3.	Go to step 2.
Step 2 Install genuine and supported Sharp units. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Replace the affected supply with the correct unit. Does the problem remain?	Contact the next level of support.	The problem is solved.

Supplies low service check

Action	Yes	No
Step 1 Perform a print test on paper from a fresh package, and then check the result. Are there print quality defects on the test page?	Go to step 2.	Go to step 3.
Step 2 Identify, and then resolve the print quality defects. See **"Fixing print quality issues" on page 30**. **Note:** If a supply was replaced, then make sure that the maintenance kit counter is reset. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Perform a feed test to check if the printer has paper feed problems. 	Go to step 4.	Go to step 5.
Step 4 Resolve the feed problem. **Note:** If a transfer roller was replaced, then make sure that the maintenance kit counter is reset. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the affected part with a new one. • Fuser • Pick roller • Transfer roller Does the problem remain?	Contact the next level of support.	The problem is solved.

Fax station error service check

Note: These instructions apply only to printers that support analog fax.

Action	Yes	No
Step 1 Turn off the printer, wait for about 10 seconds, and then turn on theprinter. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** From the control panel, navigate to: **Settings** > **Fax** > **Analog Fax Setup** > **General Fax Settings** **b** Set the fax name and fax number. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the firmware version. Is the firmware updated to the latest version?	Go to step 5.	Go to step 4.
Step 4 Update the firmware. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Make sure that the controller board is properly installed. Reseat all the cables on the controller board. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Check the controller board and its connector pins for damage. Are the controller board and its connectors free of damage?	Contact the next level of support.	Go to step 7.
Step 7 Replace the controller board. See **"Controller board removal" onpage 163**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Fax failure service check

Note: These instructions apply only to printers that support analog fax.

Action	Yes	No
Step 1 Turn off the printer, wait for about 10 seconds, and then turn on theprinter. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Make sure that the telephone cable is properly connected to the line port of the printer. **b** Make sure that the other end of the cable is connected to anactive analog wall jack. Contact the analog phone service provider if necessary. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the line port connector pins of the fax card for corrosion and damage. **Note:** The telephone cable must properly fit with the line port. Is the fax card connector free of damage?	Go to step 4.	The problem is solved.
Step 4 Check the firmware version. Is the firmware updated to the latest version?	Go to step 6.	Go to step 5.
Step 5 Update the firmware. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Make sure that the controller board is properly installed. Reseat all the cables on the controller board. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the controller board and its connector pins for damage. Are the controller board and its connectors free of damage?	Contact the next level of support.	Go to step 8.
Step 8 Replace the controller board. See **"Controller board removal" onpage 163**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Printer hardware errors

111 errors

111 error messages

Error code	Description	Action
111.20	Printhead error (mirror motor lock) was detected before the motor was turned on.	See **"Printhead service check" on page 84**.
111.21	No printhead power (+5 V) when the laser servo started.	
111.30	The printhead failed during power-on tests.	
111.31	Printhead error (no first HSYNC) was detected.	
111.32	Printhead error (lost HSYNC) was detected.	
111.33	Printhead error (lost HSYNC) was detected during servo.	
111.34	Printhead error (mirror motor lost lock) was detected.	
111.35	Printhead error (mirror motor never got first lock) was detected.	
111.36	Printhead error (mirror motor lock never stabilized) was detected.	
111.37	Paper reached the sensor but the mirror motor was not locked.	
111.38	Paper reached the sensor (input) but the printhead startup was not complete.	
111.40	The wrong printhead is installed.	
111.91	Printhead error (bad facet time reading).	

Printhead service check

Action	Yes	No
Step 1 Perform a POR. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Make sure that the JVD01 and JMIR1 cables are properly connected on the controller board. **b** Check the cables for damage. Are the cables properly connected and free of damage?	Go to step 4.	Go to step 3.

Action	Yes	No
Step 3 Replace the printhead. See "Printhead removal" on page 180. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Perform a POR. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Replace the controller board. See **"Controller board removal" onpage 163**. Does the problem remain?	Contact the next level of support.	The problem is solved.

121 errors

121 errors messages

Error code	Description	Action
121.00	Fuser did not reach the required temperature.	See **"Fuser service check" on page 87**.
121.02	Fuser went over the required temperature during EWC/line voltage detection.	
121.04	During an attempt to heat up, the fuser relay was open and the micro-controller was not reporting an error.	
121.05	During an attempt to heat up, the fuser relay was open and the micro-controller was reporting an error.	
121.10	Fuser did not reach the required temperature during the start of EWC/line voltage detection.	
121.11	Fuser reached the required temperature too late during the final EWC/line voltage detection.	
121.12	Fuser did not reach the required temperature during the final EWC/line voltage detection.	
121.13	Fuser reached the required temperature too fast during the final EWC/line voltage detection.	
121.14	Fuser is heating too fast.	
121.20	Fuser did not reach the required temperature during steady state control. This can occur during printing or in standby mode.	
121.22	Open fuser relay was detected.	
121.23	Fuser relay was turned off, but the feedback to the engine code indicated that it was still open.	
121.24	Fuser did not reach the required temperature during the final EWC/line voltage detection.	
121.28	Fuser did not reach the required temperature during EP warm-up.	
121.32	Fuser did not reach the required temperature at 100% power.	
121.33	Fuser did not reach the required temperature whilepage is in the fuser).	
121.34	Fuser did not reach the required temperature during steady state control.	
121.50	Fuser went over the required temperature during global over-temp check.	
121.52	Main thermistor temperature is out of range.	
121.53	Main thermistor temperature change rate is out of range.	
121.71	Open fuser main heater thermistor was detected.	

Fuser service check

Action	Yes	No
Step 1 Make sure that the fuser is properly installed. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check whether the fuser installed is genuine and supported by theprinter model. Is the fuser a genuine and supported Sharp unit?	Go to step 3.	Go to step 5.
Step 3 Check if the fuser type is compatible with the printer model. Are the fuser and printer compatible?	Go to step 4.	Go to step 5.
Step 4 Check the fuser life. Has the fuser reached its end of life?	Go to step 5.	Go to step 6.
Step 5 Replace the fuser. See **"Fuser removal" on page 180**. **Note:** Make sure that the new fuser is supported by the printer model. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Make sure that the voltage output of the electrical outlet matchesthe voltage rating of the printer. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Make sure that the JFUSER1 and JEXIT1 cables are properly connected on the controller board. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Make sure that the high voltage cable is properly connected to the LVPS. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 Perform a POR. Does the problem remain?	Go to step 10.	The problem is solved.

Action	Yes	No
Step 10 Replace the LVPS. See **"LVPS removal" on page 165**. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Replace the fuser. See **"Fuser removal" on page 180**. Does the problem remain?	Contact the next level of support.	The problem is solved.

126 errors

126 error messages

Error code	Description	Action
126.01	Line frequency has gone outside the operating range.	See **"LVPS service check" on page 88**.
126.02	No line frequency was detected.	
126.05	The LVPS power dropped but the printer was not in sleep mode.	
126.06	LVPS 25 V line error was detected.	
126.07	LVPS 5 V rail was down during power-on.	
126.10	No line frequency was detected.	
126.11	Line frequency exceeded the operating range.	
126.14	LVPS relay is stuck or closed.	

LVPS service check

Action	Yes	No
Step 1 Make sure that the printer is directly plugged into the electrical outlet. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Make sure that the voltage output of the electrical outlet matches the voltage rating of the printer. Does the problem remain?	Go to step 3.	The problem is solved.

Action	Yes	No
Step 3 **a** Make sure that the PCN1 cable on the LVPS is properlyconnected. **b** Make sure that the JLVPS1 cable on the controller board isproperly connected. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Make sure that the voltage output of the electrical outlet matchesthe voltage rating of the LVPS. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Perform a POR. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the LVPS. See **"LVPS removal" on page 165**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Perform a POR. Does the problem remain?	Contact the next level of support.	The problem is solved.

140 errors

140 error messages

Error code	Description	Action
140.80	Motor (main drive) does not turn on.	See **"Motor (main drive) service check" onpage 90**.
140.81	Motor (main drive) does not turn off.	
140.82	Motor (main drive) speed did not ramp up to the required level.	
140.83	Motor (main drive) stalled.	
140.85	Motor (main drive) ran too fast.	
140.86	Motor (main drive) ran too long.	

Motor (main drive) service check

Action	Yes	No
Step 1 **a** Remove the imaging unit. **b** Manually turn the photoconductor gear, and then check thecleaning blade for damage or failure. Does the photoconductor drum rotate?	Go to step 3.	Go to step 2.
Step 2 Replace the imaging unit. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Make sure that the JMTR1 cable is properly connected to thecontroller board. **b** Check the cable for damage. Is the cable free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the JMTR1 cable. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Perform a POR. Does the problem remain?	Contact the next level of support.	The problem is solved.

162 errors

162 error messages

Error code	Description	Action
162.80	The motor (tray 2 pick) does not turn on.	See **"Optional tray pick drive failure servicecheck" on page 91**.
162.81	The motor (tray 2 pick) does not turn off.	
162.82	The motor (tray 2 pick) speed did not ramp up tothe required level.	
162.83	The motor (tray 2 pick) stalled.	
162.84	The motor (tray 2 pick) ran too slow.	
162.85	The motor (tray 2 pick) ran too fast.	
162.86	The motor (tray 2 pick) ran too long.	

Optional tray pick drive failure service check

Action	Yes	No
Step 1 Check if the optional tray motor (pick) runs. Does the motor run?	Go to step 3.	Go to step 2.
Step 2 Reseat the motor cable, and then reseat the cable on the optionaltray controller board. Does the problem remain?	Go to step 3.	The problem is solved.

Step 3
  a Remove the optional tray.
  b Under the printer, check the interconnect cable for damage.
 	
Is the cable free of damage?
	Go to step 5.	Go to step 4.

Step 4 Insert the optional tray. **Note:** Make sure that the interconnect cable properly fits with thesocket on the optional tray. Does the problem remain?	Go to step 5.	The problem is solved.

Step 5
  a Remove the tray insert from the optional tray.
  b Check if the lift plate moves properly.
  c Check the lift plate gears for damage.
 	
Is the tray insert functional and free of damage?
	Contact the next level of support.	Go to step 6.

Step 6 Replace the tray insert. Does the problem remain?	Contact the next level of support.	The problem is solved.

6yy errors

600-680 error messages

Error code	Description	Action
600.01	Toner tally from the RIP was not received.	Resend the print job. If the problem remains, then contact the next level of support.
600.02	Video did not start.	
600.04	Duplex page was not picked.	
600.05	Invalid PH NVRAM Type error was detected.	
600.06	Paper port driver is unresponsive.	
600.07	Page is at image point before EP is ready.	
600.09	EP update error was detected.	
600.10	EP late run-in error was detected.	
600.11	Packing material was detected by the sensor (toner density).	Remove the imaging unit and toner cartridge, and then make sure that all packing material are properly removed.
600.95	RIP intentionally declared a jam error, usually toprevent a kiosk user from printing free	Resend the print job. If the problem remains, then contact the next level of support.
602.29	Tray 2 was not ready for picking.	See **"Optional tray pick drive failure servicecheck" on page 91**.
611.02	An Input ISR error occurred and the printhead wasnot ready.	See **"Printhead service check" on page 84**.
611.32	Lost Hsync errors were detected. Laser safety interlock system may be the cause.	
611.33	Lost Hsync errors were detected during servo.	
611.34	A mirror motor lock error was detected.	
611.35	Mirror motor never got first lock.	
611.36	Mirror motor lock never stabilized.	
611.37	Paper reached the sensor (input) but the mirror motor was not locked.	
611.38	Paper reached the sensor (input) but the printheadstartup was not complete.	
621.01	Fuser heater was too cold when paper entered the fuser nip.	Resend the print job. If the problem remains, then contact the next level of support.
640.84	The motor (main drive) stalled or ran too slow.	See **"Motor (main drive) service check" onpage 90**.

Error code	Description	Action
662.23	The tray 2 lift plate failed to lift.	See **"Optional tray pick drive failure service check" on page 91**.
662.80	Jam detection caused by motor (tray 2) not turning on.	
662.81	Jam detection caused by motor (tray 2) not turning off.	
662.82	Jam detection caused by motor (tray 2) speed not ramping up to the required level.	
662.83	Jam detection caused by motor (tray 2) stalling.	
662.84	Jam detection caused by motor (tray 2) running too slow.	
662.85	Jam detection caused by motor (tray 2) running too fast.	
662.86	Jam detection caused by motor (tray 2) running too long.	
680.20	During an ADF job, there was no paper detected on the ADF tray.	See **"ADF failure service check" on page 94**.
680.40	During a scan job, a communication error occurred.	See **"Scanner communication error service check" on page 95**.

Fuser overheated service check

Action	Yes	No
Step 1 **a** Allow fuser to cool for three minutes. **b** Resend the print job. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Replace the fuser. See **"Fuser removal" on page 180**. Does the problem remain?	Contact the next level of support.	The problem is solved.

ADF failure service check

Action	Yes	No
Step 1 Check the ADF paper path for paper fragments, partially fed paper, and obstructions. • Under the ADF cover • Under the ADF • ADF bin Is the paper path free of paper fragments, partially fed paper, andobstructions?	Go to step 3.	Go to step 2.
Step 2 Remove the paper fragments, partially fed paper, and obstructions. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Enter the Diagnostics menu, and then navigate to: **Scanner diagnostics** > **Motor tests** **b** Select **ADF transport**, and then start the test. Does the motor run?	Go to step 5.	Go to step 4.
Step 4 **a** Make sure that the ADF is properly installed. Lift the ADF, andthen check if it closes properly. **b** Check the ADF for damage. Is the ADF free of damage?	Go to step 5.	Go to step 9.
Step 5 **a** Enter the Diagnostics menu, and then navigate to: **Scanner diagnostics** > **Sensor tests** **b** Run the test on the following sensors: • ADF paper present • ADF scan Does the sensor status change while toggling the sensors?	Go to step 10.	Go to step 6.
Step 6 Check the affected sensor and its flag for damage. Is the sensor free of damage?	Go to step 7.	Go to step 9.

Action	Yes	No
Step 7 **a** Remove the right cover. See **"Right cover removal" onpage 161**. **b** Reseat the scanner cables. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the cable for damage. Is the cable free of damage?	Go to step 10.	Go to step 9.
Step 9 Replace the ADF and scanner. See **"ADF and scanner removal"on page 187**. Does the problem remain?	Go to step 10.	The problem is solved.
Step 10 Make sure that the controller board is properly installed. Reseat all the cables on the controller board. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check the controller board and its connector pins for damage. Are the controller board and its connectors free of damage?	Contact the next level of support.	Go to step 12.
Step 12 Replace the controller board. See **"Controller board removal" onpage 163**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Scanner communication error service check

Action	Yes	No

Step 1
a Remove the right cover. See **"Right cover removal" onpage 161**.
b Reseat the following cables on the controller board:
  • JADFM1
  • JFBM1
  • JSCANSNS1
  • scanner ground cable
 	
Does the problem remain?
	Go to step 2.	The problem is solved.

Action	Yes	No
Step 2 Make sure that the scanner ground cable is properly connected to the controller board. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Replace the ADF and scanner. See **"ADF and scanner removal"on page 187**. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Replace the controller board. See **"Controller board removal" onpage 163**. Does the problem remain?	Contact the next level of support.	The problem is solved.

84y errors

840–845 error messages

Error code	Description	Action
840.01	The scanner was manually disabled by the user.	See **"Scanner communication failure servicecheck" on page 97**.
840.02	The scanner was automatically disabled by the printer after two consecutive hardware failures.	
842.00	A scanner communication error (no response) was detected.	
842.01	A scanner communication error (HW protocol) wasdetected.	
842.02	A scanner communication error (logical protocol) was detected.	
843.00	The scanner CIS failed to reach its home position.	See **"Scanner noise service check" on page 99**.
845.03	A back side scan error occurred.	See **"Duplex scan error service check" on page 100**.

Scanner communication failure service check

Action	Yes	No
Step 1 Check the ADF paper path for paper fragments, partially fed paper, and obstructions. • Under the ADF cover • Under the ADF • ADF bin Is the paper path free of paper fragments, partially fed paper, and obstructions?	Go to step 3.	Go to step 2.
Step 2 Remove the paper fragments, partially fed paper, and obstructions. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Remove the right cover. See **"Right cover removal" on page 161**. **b** Reseat the scanner cables on the controller board. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check the cables for damage. Is the cable free of damage?	Go to step 5.	Go to step 12.
Step 5 **a** From the control panel, navigate to: **Settings** > **Device** > **Maintenance** > **Config Menu** > **ScannerConfiguration** > **Disable Scanner** **b** Select **Enable**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** Enter the Diagnostics menu, and then navigate to: **Scanner diagnostics** > **Motor tests** **b** Select **ADF transport**, and then start the test. Does the motor run?	Go to step 8.	Go to step 7.
Step 7 **a** Make sure that the ADF is properly installed. Lift the ADF, and then check if it closes properly. **b** Check the ADF for damage. Is the ADF free of damage?	Go to step 8.	Go to step 13.

Action	Yes	No

Step 8
a Enter the Diagnostics menu, and then navigate to:
Scanner diagnostics > **Sensor tests**
b Run the test on the following sensors:
  • ADF paper present
  • ADF scan
 	
Does the sensor status change while toggling the sensors?
	Go to step 10.	Go to step 9.

Step 9 Check the affected sensor and its flag for damage. Is the sensor free of damage?	Go to step 10.	Go to step 13.
Step 10 **a** Enter the Diagnostics menu, and then navigate to: **Scanner diagnostics** > **Motor tests** **b** Select **Scanner**, and then start the test. Does the motor run?	Go to step 14.	Go to step 11.
Step 11 **a** Remove the right cover. See **"Right cover removal" on page 161.** **b** Reseat the scanner cables. Does the problem remain?	Go to step 12.	The problem is solved.

Step 12
Check the scanner and its components for damage.
  • CIS
  • Belt
  • Cables
 	
Is the scanner free of damage?
	Go to step 14.	Go to step 13.

Step 13 Replace the ADF and scanner. See **"ADF and scanner removal"on page 187**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 Make sure that the controller board is properly installed. Reseat all the cables on the controller board. Does the problem remain?	Go to step 15.	The problem is solved.

Action	Yes	No
Step 15 Check the controller board and its connector pins for damage. Are the controller board and its connectors free of damage?	Contact the next level of support.	Go to step 16.
Step 16 Replace the controller board. See **"Controller board removal" onpage 163**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Scanner noise service check

Action	Yes	No
Step 1 With the scanner cover open, do a copy job to check the scanner lamp. **Note:** The scanner lamp must light up and move along the scan area. Is the scanner lamp functional?	Go to step 3.	Go to step 2.
Step 2 **a** Remove the right cover. See **"Right cover removal" onpage 161**. **b** Reseat the scanner cables on the controller board. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the scanner and its components for damage. • Scanner lamp • Motor (scanner) • Scanner belt • Glass panes • Cables Are the scanner and its components free of damage?	Go to step 5.	Go to step 4.
Step 4 Replace the ADF and scanner. See **"ADF and scanner removal"on page 187**. Does the problem remain?	Go to step 5.	The problem is solved.

Action	Yes	No
Step 5 Check the firmware version. Is the firmware updated to the latest version?	Go to step 7.	Go to step 6.
Step 6 Update the firmware. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Make sure that the controller board is properly installed. Reseat all the cables on the controller board. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Replace the controller board. See **"Controller board removal" onpage 163**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Duplex scan error service check

Action	Yes	No
Step 1 Check the ADF paper path for paper fragments, partially fed paper, and obstructions. • Under the ADF cover • Under the ADF • ADF bin Is the paper path free of paper fragments, partially fed paper, andobstructions?	Go to step 3.	Go to step 2.
Step 2 Remove the paper fragments, partially fed paper, and obstructions. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 **a** Enter the Diagnostics menu, and then navigate to: **Scanner diagnostics** > **Motor tests** **b** Select **ADF transport**, and then start the test. Does the motor run?	Go to step 5.	Go to step 4.

Action	Yes	No
Step 4 **a** Make sure that the ADF is properly installed. Lift the ADF, andthen check if it closes properly. **b** Check the ADF for damage. Is the ADF free of damage?	Go to step 5.	Go to step 7.

Step 5
a Enter the Diagnostics menu, and then navigate to:
Scanner diagnostics > **Sensor tests**
b Run the test on the following sensors:
   • ADF paper present
   • ADF scan
 	
Does the sensor status change while toggling the sensors?
	Go to step 8.	Go to step 6.

Step 6 Check the affected sensor and its flag for damage. Is the sensor free of damage?	Go to step 8.	Go to step 7.
Step 7 **a** Remove the right cover. See **"Right cover removal" onpage 161**. **b** Reseat the scanner cables on the controller board. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check the cable for damage. Is the cable free of damage?	Go to step 9.	Go to step 10.
Step 9 With the scanner cover open, do a duplex copy job to check the ADF scanner lamp. **Note:** The scanner lamp must light up. Is the scanner lamp functional?	Contact the next level of support.	Go to step 10.
Step 10 Replace the ADF and scanner. See **"ADF and scanner removal"on page 187**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Procedure before starting the 9yy service checks

Retrieve certain information that helps your next level of support in diagnosing the problem before replacing the controller board.

Warning—Potential Damage: Do not replace the controller board unless instructed by your next level of support.

1 Collect the history information and firmware logs (Fwdebug and logs.tar.gz) from the SE

2 menu.Collect the settings from the Menu Settings Page.

3 Collect information from the user.

   Note: Not all of the items are retrievable from the printer that you are working on.

A. Collecting the history information from the SE menu

Note: Make sure that your printer is connected to a network or to a print

1 Open a web browser, type `http://printer_IP_address/se`, and then press

   Enter.**Notes:**

   • `printer_IP_address` is the TCP/IP address of the printer.
   • `se` is required to access the printer diagnostic information.

2 Click **History Information**, copy all information, and then save it as a text file.

3 E-mail the text file to your next level of support.

B. Collecting the firmware logs (Fwdebug and logs.tar.gz) from the SE menu

Notes:

   • Make sure that your printer is connected to a network or to a print server.
   • Some printers are designed to restart automatically after a 9yy error. On these printers, you can retrieve the secondary crash code information using the SE menu.

1 Open a web browser, type `http://printer_IP_address/se`, and then press **Enter**.

2 Click **Logs Gzip Compressed**.

   Note: A logs.tar.gz file is saved to the Downloads folder. The file may take several minutes to save. Youmay rename the file if a logs.tar.gz already exists in the Downloads folder.

3 E-mail the logs to your next level of support.

   Note: To download the FWdebug log to a flash drive, see .

C. Collecting the settings from the Menu Settings Page

Note: The Menu Settings Page is different for each printer. For more information, see the printer *User'sGuide*. Your next level of support will tell you which page they want to see.

Copying the Menu Settings Page from the Embedded Web Server (EWS)

1 Open a web browser, type `http://printer_IP_address`, and then press **Enter**.

2 Click Settings, and then select one of the settings pages from the links shown on the page.

3 Copy all the information, and then save it as a text file.

4 E-mail the text file to your next level of support.

Printing the Menu Settings Page

1 From the home screen, navigate to:

   Settings > **Reports** > **Menu Settings Page**

2 E-mail the report to your next level of support.

D. Collecting information from the user

- Print job being run
- Operating system being used
- Print driver being used
- Other information on what was happening when the 9yy error

900 errors

900 error messages

Error code	Description	Action
900.xx	Unrecoverable RIP software error/illegal trap.	See **"900 error service check" on page 103**.

900 error service messages

Action	Yes	No
Step 1 **a** Perform a POR. **b** Check if a 900.xx error code appears on the display. Does a 900.xx error code appear?	Go to step 4.	Go to step 2.
Step 2 Check if another type of error code appears instead of the 900.xx error code. Does a different error code appear?	Go to step 3.	Go to step 4.

Action	Yes	No
Step 3 See the error code and its service instructions in the printer *Service Manual*. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 **a** Turn off the printer. **b** At the rear of the printer, disconnect the network cable, USBcable, and fax line. **c** Turn on the printer. Does the problem remain?	Go to step 12.	Go to step 5.
Step 5 **a** From the control panel, navigate to the **Reports** menu. **b** Select **Device Statistics** and **Device Settings**. Does the problem remain?	Go to step 12.	Go to step 6.
Step 6 Check if the printer has a scanner. Does the printer have a scanner?	Go to step 7.	Go to step 8.
Step 7 Using the scanner, perform a one-page copy job in color. Does the problem remain?	Go to step 12.	Go to step 8.
Step 8 **a** Turn off the printer. **b** At the rear of the printer, connect the network cable, USB cable,and fax line. **c** Turn on the printer. Does the problem remain?	Go to step 9.	Go to step 10.
Step 9 **a** Start the printer in **Invalid engine mode**. See **"Entering invalidengine mode" on page 141**. **b** Check if an `Invalid Engine Code` message appears. Does an `Invalid Engine Code` message appear?	Go to step 10.	Contact the next level of support.

Action	Yes	No
Step 10 Using the Device Settings report that is printed in step 5, check if the firmware level is older than the latest available version. Is the firmware version older, and does the customer agree to update the firmware?	Go to step 11.	Contact the next level of support.
Step 11 Update the firmware to the latest version. Does the problem remain?	Go to step 12.	The problem is solved.
Step 12 **a** Turn off the printer. **b** Reseat all FFC type cables on the controller board, and thenmake sure that the cables are properly connected. **c** Make sure that all the cables on the controller board andscanner are properly connected. **d** Turn on the printer. **e** From the control panel, navigate to the **Reports** menu, and thenselect **Device Statistics** and **Device Settings**. **f** For MFPs, perform a one-page copy and scan job in color. Does the problem remain?	Go to step 13.	The problem is solved.
Step 13 Check if a hard disk is installed. Is a hard disk installed?	Go to step 14.	Go to step 17.
Step 14 **a** Check for buffered print jobs, and then delete them. **b** Perform a POR. Does the problem remain?	Go to step 15.	The problem is solved.
Step 15 **a** Turn off the printer. **b** Uninstall the hard disk. **c** Perform a POR. Does the problem remain?	Go to step 17.	Go to step 16.
Step 16 Replace the hard disk. Does the problem remain?	Go to step 17.	The problem is solved.

Action	Yes	No
Step 17 Check if the printer has any of the following components installed: • Memory options • Fax card • Modem • Wireless and network option cards Is any of the components installed?	Go to step 18.	Go to step 21.
Step 18 **a** Turn off the printer. **b** Remove all the installed components. **c** Turn on the printer. Does the problem remain?	Go to step 21.	Go to step 19.

Step 19
a Turn off the printer.
b Install the following components one at a time:
  • Memory options
  • Fax card
  • Modem
  • Wireless and network option cards
  Note: Make sure to perform a POR after installing each component.
 	
Does the problem remain?
	Go to step 20.	The problem is solved.

Step 20 **a** Turn off the printer. **b** Replace the components that caused the error. **c** Turn on the printer. Does the problem remain?	Go to step 21.	The problem is solved.
Step 21 Replace the controller board. See **"Controller board removal" onpage 163**. Does the problem remain?	Contact the next level of support.	The problem is solved.

912 errors

912 error messages

Error code	Description	Action
912.01	An engine error occurred.	Resend the print job. If the problem remains, then contact the next level of support.
912.02	An engine error occurred.	
912.04	An engine error occurred.	
912.05	An engine error occurred.	
912.06	An engine error occurred.	
912.07	An engine error occurred.	See **"Optional tray communication error service check" on page 109**.
912.08	An engine error occurred.	Resend the print job. If the problem remains, then contact the next level of support.
912.09	An engine error occurred.	
912.10	An engine error occurred.	
912.13	An engine error occurred.	
912.14	An engine error occurred.	
912.15	An engine error occurred.	
912.16	An engine error occurred.	
912.17	An engine error occurred.	
912.18	An engine error occurred.	
912.19	An engine error occurred.	
912.20	An engine error occurred.	
912.21	An engine error occurred.	
912.28	An engine error occurred.	
912.30	An engine error occurred.	
912.31	An engine error occurred.	
912.32	An engine error occurred.	
912.33	An engine error occurred.	
912.34	An engine error occurred.	
912.35	An engine error occurred.	
912.36	An engine error occurred.	
912.38	An engine error occurred.	See **"Optional tray communication error service check" on page 109**.

Error code	Description	Action
912.39	An engine error occurred.	Resend the print job. If the problem remains, then contact the next level of support.
912.40	An engine error occurred.	
912.42	An engine error occurred.	
912.43	An engine error occurred.	
912.44	An engine error occurred.	
912.45	An engine error occurred.	
912.46	An engine error occurred.	
912.48	An engine error occurred.	
912.49	An engine error occurred.	
912.51	An engine error occurred.	
912.52	An engine error occurred.	
912.53	An engine error occurred.	
912.54	An engine error occurred.	
912.55	An engine error occurred.	
912.56	An engine error occurred.	
912.57	An engine error occurred.	
912.58	An engine error occurred.	
912.60	An engine error occurred.	
912.61	An engine error occurred.	
912.64	An engine error occurred.	
912.65	An engine error occurred.	
912.66	An engine error occurred.	
912.69	An engine error occurred.	
912.70	An engine error occurred.	
912.72	An engine error occurred.	
912.73	An engine error occurred.	
912.74	An engine error occurred.	
912.75	An engine error occurred.	
912.77	An engine error occurred.	
912.86	An engine error occurred.	

Optional tray communication error service check

Action	Yes	No
Step 1 Check the paper path and trays for paper fragments and partially fed paper. Is the paper path free of paper fragments and partially fed	Go to step 3.	Go to step 2.
Step 2 Remove the paper fragments and partially fed paper. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Make sure that all the trays and tray inserts are properly inserted. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Enter the Diagnostics menu, and then select **Input tray quick print**. Perform a print test on the optional tray. Does the error occur in the optional tray?	Go to step 5.	Contact the next level of support.

Step 5
  a Remove the optional tray.
  b Make sure that the interconnect cable of the tray is properly installed.
  c Check the interconnect cable and its connector pins for damage.
  d Make sure that the tray controller board is properly installed.
  e Reseat all the cables on the tray controller board.
  f Check the optional tray controller board and its connector pins for damage.
 	
Are the tray interconnect cable and controller board free of damage?
	Contact the next level of support.	Go to step 6.

Step 6 Replace the optional tray. Does the problem remain?	Contact the next level of support.	The problem is solved.

938–992 errors

938–992 error messages

Error code	Description	Action
938.yy	Supplies security is not enabled.	Restart the printer. If the problem remains, thencontact the next level of support.
950.10	Non-Generic FRU installed. Mismatch between system NVRAM part and mirror NVRAM part. **Note:** `.xx` points to the setting that does not match.	See **"NVRAM mismatch failure service check"on page 110**.
953.99	NVRAM chip failure with mirror part.	
980.yy	An option communication error occurred.	See **"Optional tray communication error service check" on page 109**.
981.yy	An invalid paper port protocol error occurred.	
982.yy	A paper port error occurred.	
983.yy	An unsupported paper port command erroroccurred.	
984.yy	An invalid paper port parameter error occurred.	
992.yy	An option device software error occurred.	

NVRAM mismatch failure service check

Warning—Potential Damage: To avoid NVRAM mismatch issues, replace only one of the followingcomponents at a time:

- Control panel
- Controller board

To replace a component and to test whether the problem is resolved:

1 Replace the affected component.

> **Warning—Potential Damage:** Do not perform a Power-On Reset (POR) until the problem is resolved. If aPOR is performed at this point, then the replacement part can no longer be used in another printer and must be returned to the manufacturer.

2 Enter the Diagnostics menu. The Diagnostics menu allows you to use temporarily the replacement part.

> **Warning—Potential Damage:** Some printers perform automatically a POR if the Diagnostics menu is not opened within five seconds. If a POR is performed at this point, then the replacement part can no longer be used in another printer and must be returned to the manufacturer.

3 Use the Diagnostics menu to test the replacement part. Perform a feed test to check if the problem is resolved.
  - If the problem is not resolved—Turn off the printer, and then install the old part.
  - If the problem is resolved—Perform a POR.

Action	Yes	No
Step 1 Check if the control panel was recently replaced. Was the control panel recently replaced?	Go to step 2.	Go to step 4.
Step 2 Replace the current control panel with the original control panel. See **"Control panel removal" on page 172**. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Replace the original control panel with a new control panel. **Note:** Make sure that the new control panel is not previously installed from another printer. Does the problem remain?	Contact the next level of support.	The problem is solved.
Step 4 Check if the controller board was recently replaced. Was the controller board recently replaced?	Go to step 5.	Contact the next level of support.
Step 5 Replace the current controller board with the original controller board. See **"Controller board removal" on page 163**. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the original controller board with a new controller board. **Note:** Make sure that the new controller board is not previously installed from another printer. Does the problem remain?	Contact the next level of support.	The problem is solved.

Other symptoms

Base printer symptoms

Base printer symptoms

Symptom	Action
A false tray paper low message appears.	See **"Tray near empty service check" on page 112**.
A false bin full message appears	See **"False bin full error service check" on page 113**.

Tray near empty service check

Action	Yes	No
Step 1 Check the actuator in the tray insert for damage. Is the actuator free of damage?	Go to step 3.	Go to step 2.
Step 2 Replace the tray insert. Does the problem remain?	Go to step 3.	The problem is solved.

Step 3
  a Make sure that the sensor (tray near empty) is properlyinstalled.
  b Check the sensor for damage.
 	
Is the sensor free of damage?
	Go to step 5.	Go to step 4.

Step 4 Replace the sensor (tray near empty) assembly. Does the problem remain?	Go to step 5.	The problem is solved.

Step 5
  a Make sure that the sensor cable is properly connected to thecontroller board.
  b Check the sensor cable for damage.
 	
Is the sensor cable free of damage?
	Go to step 7.	Go to step 6.

Step 6 Replace the sensor cable. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Perform a POR. Does the problem remain?	Contact the next level of support.	The problem is solved.

False bin full error service check

Action	Yes	No
Step 1 Remove, and then install the bin full sensor actuator. See **"Bin fullsensor actuator removal" on page 183**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check the bin full sensor actuator for damage, and replace if necessary Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check the sensor (bin full) for damage, and replace if necessary. Does the problem remain?	Contact the next level of support.	The problem is solved.

Fax symptoms

Fax symptoms

Symptom	Action
No dial tone.	See **"Modem/fax card service check" on page 117**.
The printer does not transmit faxes.	See **"Fax transmission service check" on page 120**.
The printer does not receive faxes.	See **"Fax reception service check" on page 122**.
Cannot set up etherFAX.	See **"Cannot set up etherFAX" on page 118**.
Cannot send or receive faxes using Etherfax.	See **"Cannot send or receive faxes using etherFAX" on page 119**.
A `Lost connection to HTTPS Fax Server` error message appears.	See **"Lost connection to HTTPS fax server when using etherFAXservice check" on page 125**.

Fax error log codes

Error code	Description	Action
000	No error occurred during a faxtransmission.	No action is needed.
200	An error occurred when transmitting training.	• Check the line quality. • Select a lower Max Speed value under the Fax Send settings. • Adjust the transmit level.

Error code	Description	Action
3XX	An error occurred when receiving an image data.	• Check the line quality. • Adjust the Receive Threshold. • Select a lower Max Speed value unde the r Fax Receive settings
4XX	An error occurred when sending an image data.	• Check the line quality. • Adjust the Transmit Level. • Select a lower Max Speed value under the Fax Receive settings.
5XX	An unknown response is received from a remote fax device.	No action is needed. The issue is with the other device.
6XX	An error occurred when receiving a frame.	• Check the line quality. • Adjust the Receive Threshold.
7XX	An error occurred when sending a frame.	• Check the line quality. • Adjust the Transmit Level. • Select a lower Max Speed value under the Fax Send settings.
800	An EOT was unexpectedly received from the modem in V34 mode.	If the error persists, then disable the V34 modulation scheme.
802	Too many time-outs occurred during ECM reception.	If the error persists, then disable the ECM mode.
803	Fax cancelled by the user.	No action is needed.
804	Unexpectedly received a disconnect command from the remote end.	• Check the line quality. • Adjust the Transmit Level or Receive Threshold setting. • The remote device could be requesting an unsupported feature.
805	The remote fax device failed to respond to the DCS command.	• Adjust the Transmit Level or Receive Threshold setting. • The remote device could be malfunctioning.
808	T1 timeout occurred when trying to establish a connection with a remote fax device.	Adjust the Transmit Level or Receive Threshold setting.
809	T2 Timeout occurred due to loss of command/response synchronization.	Adjust the Transmit Level or Receive Threshold setting.
80A	T5 Timeout occurred when transmitting image data to remote fax device.	• Check line quality. • Adjust the Transmit Level setting • Decrease the Max Speed setting under Fax Send settings.

Error code	Description	Action
80B	Too many errors when transmitting in ECM mode.	• Check line quality. • Adjust the Transmit Level setting • Select a lower 'Max Speed' value under Fax Send settings.
80C	Remote device failed to respond to the CTC command.	• Decrease the Max Speed setting under Fax Send settings. • Adjust the Transmit Level setting
80D	Received too many requests from remote end to repeat the previous command sent.	• Check line quality. • Adjust the Transmit Level setting • Check if line conditions on remote end will facilitate a good connection.
80E	Functional limitation-Remote fax devicedoes not support G3 receive	No action needed. Issue with the remote device.
811	Failed to detect a fax device at the remote end.	• Verify MFD is answering to fax calland not a voice call. • Decrease the Rings To Answer setting.
812	No more data rates available in V34modulation scheme.	Decrease the modulation scheme.
813	Timeout occurred after waiting too long toreceive a good frame.	Adjust the Receive Threshold setting.
814	Tried too many times at selected speedusing V34 modulation scheme.	• Adjust the Transmit Level setting. • Decrease the modulation scheme.
815	Fax transmission was interrupted due to power failure.	Troubleshoot MFP if error persists. See **"Modem/fax card service check" on page 117**.
818	Fax transmission failed due to insufficient memory to store scanned image.	Adjust the Memory Use setting to allocate more memory for send jobs.
819	Fax transmission failed due to insufficient memory to store received image.	Adjust the Memory Use setting to allocate more memory for receive jobs.
81A	A timeout occurred during transmission ofa page in ECM mode.	Decrease the Max Speed setting under Fax Send settings.
880	Failure to transmit training successfully in V17, V29, V27 terminal modulation schemes.	• Decrease the Max Speed setting under Fax Send settings. • Adjust the Transmit Level setting. • Check line quality.
881	Failure to transmit training successfully in V33, V29, V27 terminal modulation schemes.	• Decrease the Max Speed setting under Fax Send settings. • Adjust the Transmit Level setting. • Check line quality.

Error code	Description	Action
882	Failure to transmit training successfully in V17, V29 terminal modulation schemes.	• Decrease the Max Speed setting under Fax Send settings. • Adjust the Transmit Level setting. • Check line quality.
883	Failure to transmit training successfully in V17, V27 terminal modulation schemes.	• Decrease the Max Speed setting under Fax Send settings. • Adjust the Transmit Level setting. • Check line quality.
884	Failure to transmit training successfully in V29, V27 terminal modulation schemes.	• Decrease the Max Speed setting under Fax Send settings. • Adjust the Transmit Level setting. • Check line quality.
885	Failure to transmit training successfully in V17 terminal modulation scheme.	• Decrease the Max Speed setting under Fax Send settings. • Adjust the Transmit Level setting. • Check line quality.
886	Failure to transmit training successfully in V29 terminal modulation scheme.	• Decrease the Max Speed setting under Fax Send settings. • Adjust the Transmit Level setting. • Check line quality.
887	Failure to transmit training successfully in V27 terminal modulation scheme.	• Decrease the Max Speed setting under Fax Send settings. • Adjust the Transmit Level setting. • Check line quality.
888	Failure to transmit training successfully at 2400 bps in V27 terminal modulation scheme.	• Adjust the Transmit Level setting. • Check line quality.
889	Failed to connect at the minimum speed supported by the MFP.	• Adjust the Transmit Level setting. • Incompatible connection.
88A	Failed to connect using V.34 modulation scheme.	• Check line quality. • Decrease the modulation scheme. • Adjust the Transmit Level or ReceiveThreshold settings.
901	No fax tones detected from remote end.	• Verify destination phone number. • Verify that the remote fax isauthorized to receive
902	No dial tone detected.	• Check by enabling Behind a PABX setting. • Check phone line. • Check MFD modem hardware.

Error code	Description	Action
903	Busy tone detected.	Check with remote end if successive attempts fail.
904	Hardware error detected.	See **"Modem/fax card service check"on page 117**.
905	A timeout occurred after dialing the number and waiting for a response.	Check with remote end if successive attempts fail.
906	Fax cancelled by user.	No action needed.
907	Modem detected a digital line connection.	Verify that the MFP is connected to an analog line. See **"Fax transmission service check" on page 120**
908	Phone line was disconnected	Restore phone line connection.
A00	Received request for unsupported function from remote fax device.	No action needed.
A01	Received request for unsupported image width from remote fax device.	No action needed.
A02	Received request for unsupported image resolution from remote fax device.	No action needed.
A03	Received request for unsupported compression type from remote fax device.	No action needed.
A04	Received request for unsupported image length from remote fax device.	No action needed.
F00	Unknown error occurred.	No action needed.

Modem/fax card service check

Action	Yes	No
Step 1 Check if the telephone cable is properly connected to the modem card and electrical outlet. Is the cable properly connected to the modem card and electrical outlet?	Go to step 2.	Go to step 3.
Step 2 Connect the telephone cable to the modem card and electrical outlet. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check if the telephone cable can make and receive calls. Is the phone line properly working?	Go to step 5.	Go to step 4.

Action	Yes	No
Step 4 Connect the printer to a properly functioning telephone jack. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Make sure that the modem cable is properly connected to the modem card and to the JFAX2 connector on the controller board. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 Replace the fax card. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 Check the voltages values of the following pins on the JFAX1 connector on the controller board: • Pin 5: +5 V dc • Pin 7: Ground • Pin 9: Ground • Pin 11: Ground • Pin 13: Ground Are the voltage values approximately the same?	Contact the next level of support.	Go to step 8.
Step 8 Replace the controller board. See **"Controller board removal" onpage 163**. Does the problem remain?	Contact the next level of support.	The problem is solved.

Cannot set up etherFAX

Action	Yes	No
Step 1 Check the printer connectivity. **a** Print the Network Setup Page. From the home screen, touch **Settings** > **Reports** > **Network** > **Network Setup Page**. **b** Check the network status. Is the printer connected to the network?	Go to step 3.	Go to step 2.

Action	Yes	No
Step 2 Make sure that the printer is connected to a network and that thenetwork is connected to the Internet. Can you set up etherFAX?	The problem is solved.	Go to step 3.
Step 3 Make sure that etherFAX is set up correctly. For more information, see the printer *User's Guide*. Can you set up etherFAX?	The problem is solved.	Contact the next level of support.

Cannot send or receive faxes using etherFAX

Action	Yes	No
Step 1 Make sure that the printer is connected to a network and that thenetwork is connected to the Internet. Can you send or receive faxes using etherFAX?	The problem is solved.	Go to step 2.
Step 2 **a** From the home screen, touch **Settings** > **Fax** > **Fax Setup** > **General Fax Settings**. **b** Make sure that you have the correct fax number. **c** Make sure that Fax Transport is set to etherFAX.	The problem is solved.	Go to step 3.
Step 3 Split large documents into smaller file sizes. Can you send or receive faxes using etherFAX?	The problem is solved.	Contact the next level of support.

Fax transmission service check

Note: These instructions apply only to printers that support analog fax.

Actions	Yes	No
Step 1 Reseat the telephone cable on the LINE port of the printer and onthe wall jack. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check for a dial tone. Is there a dial tone?	Go to step 3.	Go to step 5.
Step 3 Check if the telephone line can send and receives calls. Is the phone line properly working?	Go to step 6.	Go to step 4.
Step 4 Check if the telephone line is free of static or external noise. Is the line free of static or external noise?	Go to step 6.	Go to step 5.
Step 5 Connect the telephone cable to a working wall jack. Does the problem remain?	Go to step 6.	The problem is solved.
Step 6 **a** From the home screen, navigate to **Settings** > **Fax** > **Analog Fax Setup** > **Fax Receive Settings** > **Admin Controls** > **EnableFax Receive**. **b** Select **On**. Does the problem remain?	Go to step 7.	The problem is solved.
Step 7 **a** From the home screen, navigate to **Settings** > **Fax** > **Analog Fax Setup** > **Fax Receive Settings** > **Admin Controls** > **Answeron**. **b** Select a ring pattern. Does the problem remain?	Go to step 8.	The problem is solved.
Step 8 Check if the telephone line is analog. Is the line analog?	Go to step 11.	Go to step 9.

Actions	Yes	No
Step 9 Check if the telephone line is a VOIP line. Is the line VOIP?	Go to step 11.	Go to step 10.
Step 10 Ask the system administrator to check if the VOIP server is configured to receive faxes. Is the server configured to receive faxes?	Go to step 11.	Contact the next level of support.
Step 11 Check if the printer receives a fax from one specific remote device. Does the printer receive a fax from one specific remote device?	Go to step 13.	Go to step 12.
Step 12 Check if a different device can send a fax. Can the device send a fax?	Contact the next level of support.	Go to step 13.
Step 13 **a** From the home screen, navigate to **Settings** > **Fax** > **Analog Fax Setup** > **Fax Receive Settings** > **Admin Controls** > **BlockNo Name Fax**. **b** Select **Off**. Does the problem remain?	Go to step 14.	The problem is solved.
Step 14 **a** From the home screen, navigate to **Settings** > **Fax** > **Analog Fax Setup** > **Fax Receive Settings** > **Admin Controls** > **BannedFax List**. **b** Check if the remote device number is on the list. Is the number on the list?	Go to step 15.	Go to step 16.
Step 15 Remove the remote device number from the list. Does the problem remain?	Go to step 16.	The problem is solved.
Step 16 **a** Enter the Service Engineer menu, and then navigate to: **Fax SE** > **Modem Settings** > **Receive Thresh** **b** Adjust the setting in steps of 2 dB. **Note:** The recommended adjustment range is between -33dB and -48 dB. Does the problem remain?	Go to step 17.	The problem is solved.
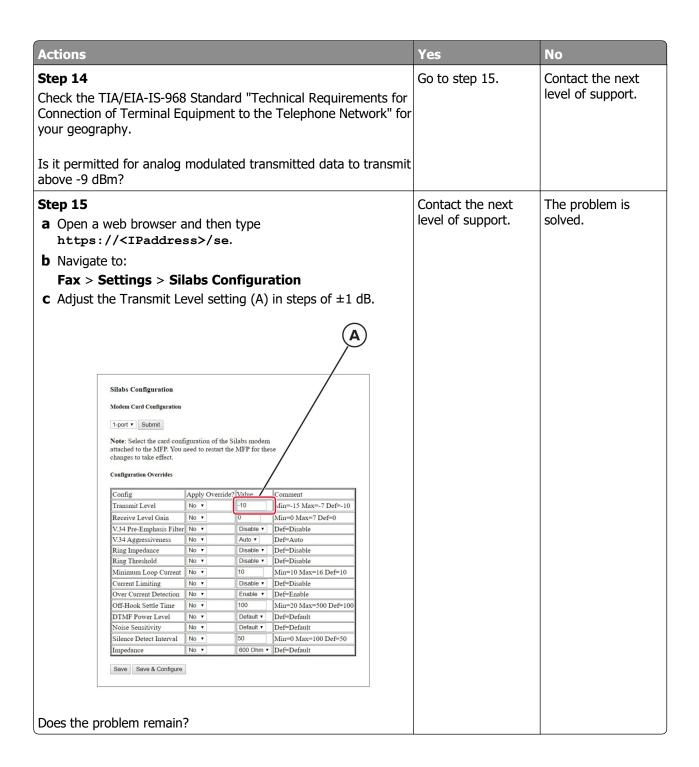
Actions	Yes	No
Step 17 **a** Enter the Service Engineer menu, and then navigate to: **Fax SE** > **Fax Settings** > **AutoPrint T30 Logs** **b** Check the reported error code. See **"Fax error log codes" onpage 113**. **c** Perform the action suggested for the error. Does the problem remain?	Contact the next level of support.	The problem is solved.

Fax reception service check

Note: These instructions apply only to printers that support analog fax.

Actions	Yes	No
Step 1 Reseat the telephone cable on the LINE port of the printer and onthe wall jack. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 Check if the telephone line can send and receive calls. Is the phone line properly working?	Go to step 4.	Go to step 3.
Step 3 Connect the telephone cable to a working wall jack. Does the problem remain?	Go to step 4.	The problem is solved.
Step 4 Check if the telephone line is analog. Is the telephone line analog?	Go to step 7.	Go to step 5.
Step 5 Check if the telephone line is a VOIP line. Is the line VOIP?	Go to step 6.	Go to step 7.
Step 6 Ask the system administrator to verify if the VOIP server is configured to receive faxes. Is the server configured to receive faxes?	Go to step 7.	Contact the next level of support.

Actions	Yes	No
Step 7 Check if the printer is on a PABX. Is the printer on a PABX?	Go to step 9.	Go to step 8.
Step 8 **a** From the home screen, navigate to **Settings** > **Fax** > **AnalogFax Setup** > **Fax Send Settings** > **Behind a PABX**. **b** Select **Yes**. Does the problem remain?	Go to step 9.	The problem is solved.
Step 9 **a** From the home screen, navigate to **Settings** > **Fax** > **AnalogFax Setup** > **Fax Send Settings** > **Behind a PABX**. **b** Select **No**. **c** Check if access to an outside line needs a dial prefix. Does access to an outside line need a dial prefix?	Go to step 10.	Go to step 11.
Step 10 Send a fax using a dial prefix. Does the problem remain?	Go to step 11.	The problem is solved.
Step 11 Check if the printer sends a fax to one specific destination. Does the printer send a fax to one specific destination?	Go to step 13.	Go to step 12.
Step 12 Check if the device that does not receive a fax can send a fax. Can the device send a fax?	Go to step 13.	Contact the next level of support.
Step 13 **a** Enter the Service Engineer menu, and then navigate to: **Fax SE** > **Fax Settings** > **AutoPrint T30 Logs** **b** Check the reported error code. See **"Fax error log codes" onpage 113**. **c** Perform the action suggested for the error. Does the problem remain?	Go to step 14.	The problem is solved.

Actions	Yes	No
Step 14 Check the TIA/EIA-IS-968 Standard "Technical Requirements for Connection of Terminal Equipment to the Telephone Network" for your geography. Is it permitted for analog modulated transmitted data to transmit above -9 dBm?	Go to step 15.	Contact the next level of support.
Step 15 **a** Open a web browser and then type `https://<IPaddress>/se.` **b** Navigate to: **Fax** > **Settings** > **Silabs Configuration** **c** Adjust the Transmit Level setting (A) in steps of ±1 dB. Does the problem remain?	Contact the next level of support.	The problem is solved.

Lost connection to HTTPS fax server when using etherFAX service check

Action	Yes	No
Step 1 **a** Enter the Service Engineer (SE) menu, and then navigate to: **Fax SE Menu** > **Fax Settings** **b** Make sure that the Fax Transport option is set to **etherFAX**. Does the problem remain?	Go to step 2.	The problem is solved.
Step 2 **a** Make sure that the printer is connected to a stable network. **b** Perform a POR. Does the problem remain?	Go to step 3.	The problem is solved.
Step 3 Check if the printer controller board was previously replaced. Was the printer controller board previously replaced?	Go to step 4.	Go to step 5.
Step 4 **a** Go to your etherFAX portal account, and then remove theprinter from the etherFAX registry. **b** Perform a POR. Does the problem remain?	Go to step 5.	The problem is solved.
Step 5 Make sure that the printer serial number is properly added in youretherFAX portal account. Does the problem remain?	Contact the next level of support.	The problem is solved.

Blank page.

Service menus

Understanding the printer control panel

Using the control panel

	Control panel	Function
1	Display	• View printer messages and supply status. • Set up and operate the printer.
2	Power button	Turn on or turn off the printer. **Note:** To turn off the printer, press and hold the power button for five
3	Home button	Go to the home screen.
4	Back button	Return to the previous screen.
5	Start button	Start a job, depending on which mode is selected.
6	Indicator light	Check the status of the printer.

Understanding the status of the indicator light
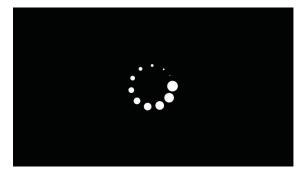
Indicator light	Printer status
Off	The printer is off or in Hibernate mode.
Blue	The printer is ready or processing data.
Blinking red	The printer requires user intervention.
Solid amber	The printer is in Sleep mode.

Diagnostics menu

Entering the Diagnostics Menu

The Diagnostics Menu contains tests that are used to help isolate printer issues.

- To access the menu from POST, do the following:

    1 Unplug the power cord from the electrical outlet.

    2 Open tray 1.

    3 Connect the power cord to the electrical outlet. When the
    display shows the following icon, close tray 1.

    4 From the menu that appears on the display, select **Diagnostics_Mode**, and then select **Boot.**

- To access the Diagnostics Menu from the home screen, on the control panel, press the following
  buttonsin this sequence: **Back**, **Back**, **Start**, **Start**

Reports

Device Settings

This report lists all the current printer settings. Enter the Diagnostics menu, and then navigate to:

Reports > Device > Device Settings

For non-touch-screen printer models, press OK to navigate through the settings.

Installed Licenses

This setting lists all the installed licenses and their feature

data.Enter the Diagnostics menu, and then navigate to:

Reports > **Licenses** > **Installed Licenses**

For non-touch-screen printer models, press OK to navigate through the settings.

Advanced Print Quality Samples

This setting prints the Print Quality Test Pages.

Enter the Diagnostics menu, and then select **Advanced Print Quality Samples.**

Format Fax Storage

This setting allows formatting of non-volatile fax

storage.Enter the Diagnostics menu, and then navigate

to: **Format Fax Storage** > **Format Fax Storage**

Event Log

Display Log

This setting shows a history of printer events.

Enter the Diagnostics menu, and then navigate

to:**Event Log** > **Display Log**

For non-touch-screen printer models, press `OK` to navigate through the settings.

Print Log

This setting shows additional information about the printer

events. Enter the Diagnostics menu, and then navigate to:

Event Log > **Print Log**

For non-touch-screen printer models, press `OK` to navigate through the settings.

Note: The events that appear in the report vary depending on the operational history of the printer.

Print Log Summary

This setting lists a brief summary of the various printer

events.Enter the Diagnostics menu, and then navigate to:

Event Log > **Print Log Summary**

For non-touch-screen printer models, press `OK` to navigate through the settings.

Note: The events that appear in the report vary depending on the operational history of the printer.

Mark Log

This setting allows you to create a service, maintenance, or custom log entry. Each log entry is added in the printer event log.

1 Enter the Diagnostics menu, and then navigate to:

Event Log > **Mark Log**

For non-touch-screen printer models, press `OK` to navigate through the settings.

2 Select a log that you want to create.

Input tray quick print

This setting lets you print a single or continuous Quick Test page in either duplex or simplex mode.

1 Enter the Diagnostics menu, and then select **Input tray quick print**.

2 Select a paper source.

3 Select whether to print a single or continuous test page.

Output bin quick feed

This setting lets you feed a single or continuous page from the standard bin.

1 Enter the Diagnostics menu, and then navigate to:
Output bin quick feed > Standard bin

For non-touch-screen printer models, press `OK` to navigate through the settings.

2 Select whether to print a single or continuous test

Printer setup

Printed page count (mono)

This setting displays the amount of pages printed in mono.

1 Enter the Diagnostics menu, and then navigate to:

Printer Setup > **Printed page count (mono)**

2 View the permanent page count.

Permanent page count

This setting displays the total number of pages printed. After all the print tests are completed, this value resetsto zero.

1 Enter the Diagnostics menu, and then navigate to:

Printer Setup > **Permanent page count**

2 View the permanent page count.

Enable edge-to-edge (printing)

This setting allows print jobs to include the edges of the page.

1 Enter the Diagnostics menu, and then navigate to:

Printer Setup > **Enable edge-to-edge (printing)**

2 Select a setting.

Enable edge-to-edge (copy)

This setting allows copy jobs to include the edges of the page.

1 Enter the Diagnostics menu, and then navigate to:

Printer Setup > **Enable edge-to-edge (copy)**

2 Select a setting.

Processor ID

This setting indicates the ID of the processor on the controller board.

1 Enter the Diagnostics menu, and then navigate to:

Printer Setup > **Processor ID**

2 View the processor ID.

Serial number

This setting shows the printer serial number.

1 Enter the Diagnostics menu, and then navigate to:
Printer Setup >Serial number

For non-touch-screen printer models, press `OK` to navigate through the settings.

2 View the serial number.

Model name

This setting shows the model name of the printer.

1 Enter the Diagnostics menu, and then navigate to:
Printer Setup >Model name

For non-touch-screen printer models, press `OK` to navigate through the settings.

2 View the model name.

Engine setting [x]

Warning—Potential Damage: Do not change this setting without specific instructions from the next level of support.

This setting allows you to select a printer engine setting. Possible values are 0–255. 0 is the default.

For non-touch-screen printer models, press `OK` to navigate through the settings.

1 Enter the Diagnostics menu, and then navigate to:

   Printer Setup > **Engine setting [x]**

2 Select a setting, and then enter a value.

EP setup

Warning—Potential Damage: Do not change this setting without specific instructions from the next level of support.

This setting allows you to adjust the EP setup of the printer.

For non-touch-screen printer models, press `OK` to navigate through the settings.

1 Enter the Diagnostics menu, and then navigate to:

   Printer Setup > **EP setup**

2 Select a setting, and then enter a value.

Printer diagnostics & adjustments

Sensor tests

1 Enter the Diagnostics menu, and then select **Printer diagnostics & adjustments**.
   A list of sensor tests appears.
2 Find, and then manually toggle the sensor.

   Notes:

   - The sensor status on the screen toggles between **1** and **0** when the sensor is properly working.
   - If a sensor test fails, the test failure may not indicate a failed sensor. Further troubleshooting may be required. Check the boards and cables for possible issues.
   - For the fuser exit sensor actuator, toggle it toward the rear door.

List of sensor tests

MPF media present
Tray1 present
Input
Output bin/Narrow media
Fuser exit
Front door interlock

Motor tests

1 Enter the Diagnostics menu, and then navigate to:
Printer diagnostics & adjustments > Motor tests

For non-touch-screen printer models, press `OK` to navigate through the settings.

2 Select a motor.

Notes:

- If the motor is activated, then it is properly working.
- Some motors require automatic deactivation to avoid secondary issues such as possible damage and contamination.
- Some tests require a special action to activate a motor such as removing a major component.
- If the motor fails, the test failure may not indicate a failed motor. Further troubleshooting may be required. Check the boards and cables for possible issues.
- To stop a running motor in non-touch-screen printer models ,press `OK` .

List of motor tests

Main Motor
MPF Pick Solenoid
Media Pick Clutch
Fan (main)

Registration adjust

This setting lets you adjust the skew and margins or print a Quick Test page.

For non-touch-screen printer models, press `OK` to navigate through the settings.

1 Enter the Diagnostics menu, and then navigate to:
Printer diagnostics and adjustments > **Registration adjust**

2 Select a setting to adjust.

Margin Offset

This setting allows you to adjust the margin offset and to print or reset the default settings.

For non-touch-screen printer models, press `OK` to navigate through the settings.

1 Enter the Diagnostics menu, and then navigate to:
Printer diagnostics & adjustments > **Margin Offset**

2 Select a setting to adjust.

Universal Override

This setting allows the user to load custom paper sizes into a paper source.

For non-touch-screen printer models, press `OK` to navigate through the settings.

1 Enter the Diagnostics menu, and then navigate to:

Printer diagnostics and adjustments > **Universal Override**

2 Select a setting to adjust.

Scanner Diagnostics

Motor Tests

1 Enter the Diagnostics menu, and then navigate to:
Scanner Diagnostics > Motor Tests

For non-touch-screen printer models, press `OK` to navigate through the settings.

2 Select a motor.

Notes:

- If the motor is activated, then it is properly working.
- Some motors require automatic deactivation to avoid secondary issues such as possible damage and contamination.
- Some tests require a special action to activate a motor such as removing a major component.
- If the motor fails, the test failure may not indicate a failed motor. Further troubleshooting may be required. Check the boards and cables for possible issues.

List of motor tests

Scanner
ADF transport

Sensor Test

This test verifies the status of the scanner sensors.

1 Enter the Diagnostics menu, and then navigate to:

Scanner diagnostics > **Sensor test**

A list of sensor tests appears.

2 Find, and then manually toggle the sensor.

Notes:

- The sensor status on the screen toggles between **1** and **0** when the sensor is properly working.
- If a sensor test fails, the test failure may not indicate a failed sensor. Further troubleshooting may berequired. Check the boards and cables for possible issues.

List of sensor tests

ADF paper present
ADF scan

Feed Test

This test allows for a continuous feed from the ADF or flatbed.

1 Enter the Diagnostics menu, and then navigate to:

Scanner Diagnostics > **Feed Test**

Note: Set the paper size to match the paper loaded in the ADF tray if necessary.

2 Touch Feed Test.

Scanner Calibration Reset

Before starting the test, clean the scanner. For more information, see
"Cleaning the scanner" on page 203.

1 Enter the Diagnostics menu, and then select **Scanner Diagnostics**.

2 Touch **Scanner Calibration Reset.**

To verify the result, do the following:

Note: The following procedure only applies to models with ADF.

1 Load the ADF with a document containing light and dark content.

2 Print a two-sided copy of the document.

Notes:

- If the back side of the copy has vertical streaks, then clean the scanner glass and scanner glass pad,and then print another copy.
- If the streaks still appear, then repeat the cleaning and verification procedure or replace the scanner cover.

Controller Calibration

This test must be done when the scanner controller or flatbed scanner is changed.

1 Enter the Diagnostics menu, and then navigate to:

Scanner Diagnostics > **Controller Calibration**

2 Touch **Start.**

Config Menu

Entering the Config Menu

The Config menu consists of menus, settings, and operations that are used to configure the printer.

To access the Config menu, press and hold **Right arrow** and **OK** on the control panel, and then turn on theprinter.

Config Menu

Menu item	Description
USB Configuration USB PnP 1* 2	Change the USB driver mode of the printer to improve its compatibility with a personal computer.
USB Configuration USB Scan to Local On* Off	Set whether the USB device driver enumerates as a USB Simple device (single interface) or as a USB Composite device(multiple interfaces).
USB Configuration USB Speed Full Auto*	Set the USB port to run at full speed and disable its high-speed capabilities.
Tray Configuration Tray Linking Automatic *Off	Set the printer to link the trays that have the same paper typeand paper size settings.
Tray Configuration Show Tray Insert MessageOff Only for unknown sizes*Always	Display a message to select paper size and type after inserting the tray.
Tray Configuration A5 Loading Short Edge Long	Specify the page orientation when loading A5 paper size.
Tray Configuration Paper Prompts Auto* MP Feeder Manual Paper	Set the paper source that the user fills when a prompt to load paper appears.
Tray Configuration Envelope Prompts Auto* MP Feeder Manual Envelope	Set the paper source that the user fills when a prompt to load envelope appears.
Tray Configuration Action for Prompts Prompt user* Continue Use current	Set the printer to resolve paper- or envelope-related change prompts.
Note: An asterisk (*) next to a value indicates the factory default setting.	

Menu item	Description
Reports Menu Settings Page Event Log Event Log Summary	Print reports about printer menu settings, status, and event logs.
Supply Usage And Counters Clear Supply Usage History Reset Black Cartridge Counter Reset Black Imaging Unit CounterReset Maintenance	Reset the supply page counter or view the total printed pages.
Printer Emulations PS Emulation Off On*	Set the printer to recognize and use the PS data stream.
Printer Emulations Emulator SecurityPage Timeout0–60	Set the page timeout during emulation.
Printer Emulations Emulator Security Reset Emulator After Job (Off*)	Reset the emulator after a print job.
Printer Emulations Emulator Security Disable Printer Message Access (On*)	Disable access to the printer message during emulation.
Fax Configuration Fax Low Power Support Disable Sleep Permit Sleep Auto*	Set fax to enter Sleep mode whenever the printer determines that it must. **Note:** This menu item is available only in some printer models.
Print Configuration Font Sharpening 0–150 (24*)	Set a text point-size value below which the high-frequencyscreens are used when printing font data.
Print Configuration Print Density Disabled 1–5 (3*) Copy Density Disabled	Adjust the toner density when printing or copying documents.
Note: An asterisk (*) next to a value indicates the factory default setting.	

Menu item	Description
Device Operations Quiet Mode On Off*	Set the printer to reduce the amount of noise that it makes when printing. **Note:** Enabling this setting slows down the overall performance of the printer.
Device Operations Panel Menus Enable* Disable	Set the printer to show the control panel menus. **Note:** This menu item appears only in the Embedded Web Server.
Device Operations Safe Mode Off* On	Set the printer to operate in a special mode, in which it attempts to continue offering as much functionality as possible, despite known issues. For example, when set to On, and the duplex motor is nonfunctional, the printer performs one-sided printing of the documents even if the job is two-sided printing. **Note:** This setting cannot be used when the tray is not fully inserted or the tray sensor is damaged.
Device Operations Clear Custom Status	Erase all custom messages.
Device Operations Clear all remotely-installed messages	Erase all remotely-installed messages.
Device Operations Automatically Display Error Screens On* Off	Show existing error messages on the display after the printer remains inactive on the home screen for a length of time equal to the Screen Timeout setting.
Scanner Configuration Scanner Manual Registration Print Quick Test	Print a Quick Test target page. **Note:** Make sure that the margin spacing on the target page is uniform all the way around the target. If it is not, then the printer margins must be reset.
Scanner Configuration Scanner Manual Registration Front ADF Registration Flatbed Registration	Manually register the flatbed and ADF after replacing the ADF, scanner glass, or controller board.
Scanner Configuration Edge Erase Flatbed Edge Erase (3*)ADF Edge Erase	Set the size, in millimeters, of the no-print area around an ADF or flatbed scan job.
Scanner Configuration Disable Scanner Enabled* Disabled ADF Disabled	Disable the scanner if it is not working properly.
Note: An asterisk (*) next to a value indicates the factory default setting.	

Menu item	Description

Scanner Configuration
  Tiff Byte Order
    CPU Endianness*
    Little Endian
    Big Endian
	Set the byte order of a TIFF-formatted scan output.

Scanner Configuration
  Exact Tiff Rows Per
    StripOn*
    Off
	Set the RowsPerStrip tag value of a TIFF-formatted scan output.

Note: An asterisk (*) next to a value indicates the factory default setting.	

Service Engineer (SE) menu

Entering the SE Menu

To access the menu from the home screen, on the control panel, press the following buttons in this sequence:

Back, Back, Home, Home

General SE

- Capture Logs to USB Drive

  Note: This setting allows you to save a log file to a USB drive.

- Code Versions
- Debug Level

Network SE Menu

Enter the SE menu, and then select **Network SE Menu**.

Note: Use these settings as directed by the next level of support.

Top-level menu	Intermediate menu
HISTORY	- Print History - Mark History
MAC	- Set Card Speed - LAA - Keep Alive
NPAP	Print Alerts

Top-level menu	Intermediate menu
TCP/IP	• DHCP Request Options • netstat • arp • Allow SNMP Set • MTU • Meditech Mode • RAW LPR Mode • Garp Interval
Wireless Settings	• Wireless Performance Enhancement • Unset Wireless Region
Ping Test	• Ping Address • Attempts • Packet Size • Ping
Other Actions	• ifconfig • IPtables [Firewall Dump] • IP6tables [Firewall Dump] • IPsec Dump
Enable DHCPCD Debugging	N/A
Enable wpa-supplicant Debugging	N/A
Enable Ethernet Gigabit	N/A

Scanner SE Menu

Enter this setting to view the calibration

Fax SE Menu

Use this menu to help resolve fax transmission and reception issues.

Enter the SE menu, and then touch **Fax SE Menu**.

Note: Use these settings as directed by the next level of support.

Note: For printers with firmware version FW7.1 and up, adjust the Transmit Level setting via EWS SE. See

Top-level menu	Intermediate menu
Agency Test Menu	• Go Off Hook • Ring Detect • Generate Tones • Modulations

Top-level menu	Intermediate menu
Fax Settings	• Fax Modulations • FOIP Settings • Miscellaneous Settings • Reset Fax Settings
Modem Settings	• Caller ID Pattern **Note:** Changing the value of this setting also changes the value of the Caller ID setting in the Fax Settings. • Pulse Dial Type • Disable Sending CRP
Fax logs	• Print all T30 Logs • Print CallerID Log • Print Call Log • Print Fax Settings • Print Job Log • Print All T30 Log Errors • Print All Auto Captured Logs On • Print T38 Trace Log • Clear T38 Trace Log
Reboot System	N/A

EWS SE Menu

Enter this setting to help resolve customer communication related printing issues.

To access the Silabs configuration:

1 Open a web browser and then type `https://<IP address>/se` .

2 Navigate to:
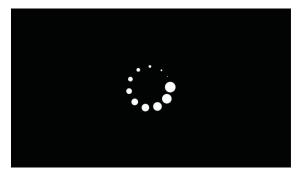
   Fax > **Settings** > **Silabs Configuration**

Entering invalid engine mode

This mode allows the printer to load the correct firmware

1 Unplug the power cord from the electrical

2 outlet.Open tray 1.

3 Connect the power cord to the electrical outlet.

When the display shows the following icon, close tray 1.

4 From the menu that appears on the display, select **->**, and then select

    ENGINE_FLASH.

Entering Recovery mode

This mode allows the printer to boot from a secondary set of instructions and flash firmware code. While in this mode, you can only flash firmware code through a USB cable directly connected to a PC.
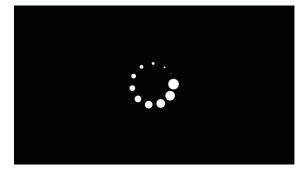
Depending on your printer model, do any of the following:

For LED

1 Turn off the printer.

2 Open the front

3 door.

4 Press and hold the **Stop** button.

5 Turn on the printer.

For 2-line

1 Turn off the printer.
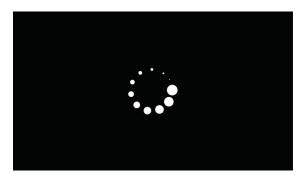
2 Press and hold the **OK** and **Back** buttons.

3 Turn on the printer.

4 When the display shows the following icon, release the buttons.
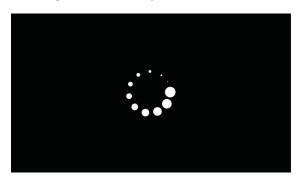
For 2.4-, 4.3-, 7-, and 10-inch

1 Turn off the printer.

2 Press and hold the **2**, **7**, and **8**

3 buttons.Turn on the printer.

4 When the display shows the following icon, release the buttons.

For 2.8-inch

1 Turn off the printer.

2 Open tray 1.

3 Make sure that paper is loaded in tray 1.

4 Turn on the printer.

5 When the display shows the following icon, close tray 1.

Note: If tray 1 is not closed, then the printer will boot normally.

6 A screen with red selection items appears.
Touch **->** to navigate to Recovery

7 Touch Boot or RECOVERY.

Blank page.

Parts removal

Data security notice

- **Volatile memory**—The printer uses standard random access memory (RAM) to buffer user data temporarily during simple print and copy jobs.
- **Nonvolatile memory**—The printer may use two forms of nonvolatile memory: EEPROM and NAND (flash memory). Both types are used to store the operating system, printer settings, network information, scanner and bookmark settings, and embedded solutions.
- **Hard disk memory**—Some printers have a hard disk drive installed. The hard disk is designed for printer- specific functionality and cannot be used for long-term storage of data that is not print-related.

  The hard disk does not let users extract information, create folders, create disk or network file shares, or transfer FTP information directly from a client device. The hard disk can retain buffered user data from complex print jobs, form data, and font data.

The following parts can store memory:
- Printer control panel
- User interface controller card (UICC)
- Controller board
- Optional hard disks

Note: The printer control panel and controller board contain NVRAM.

Erasing printer memory

To erase volatile memory or buffered data, turn off the printer.

To erase non-volatile memory or individual settings, device and network settings, security settings, and embedded solutions, do the following:

1 From the control panel, navigate to:

> **Settings** > **Device** > **Maintenance** > **Out of Service Erase** > **Sanitize all information on nonvolatile memory**
> > **Yes**

2 Select either Start initial setup or Leave printer offline.

Removal precautions

⚠ **CAUTION—SHOCK HAZARD:** The low-voltage power supply (LVPS) and the high-voltage power supply (HVPS) may have residual voltage present. To avoid the risk of electrical shock, do not touch their circuit components or the solder side of the board. Only handle them by their outer edges or metal housing.

⚠ **CAUTION—SHOCK HAZARD:** This product uses an electronic power switch. It does not physically disconnect the input AC voltage. To avoid the risk of electrical shock, always remove the power cord from the printer when removal of the input AC voltage is required.

⚠️ **CAUTION—SHOCK HAZARD:** To avoid the risk of electrical shock and to prevent damage to the printer, remove the power cord from the electrical outlet and disconnect all connections to any external devices before you connect or disconnect any cable, electronic board, or assembly.

⚠️ **CAUTION—HOT SURFACE:** The inside of the printer might be hot. To reduce the risk of injury from a hot component, allow the surface to cool before touching it.

⚠️ **CAUTION—PINCH HAZARD:** To avoid the risk of a pinch injury, use caution in areas marked with thislabel. Pinch injuries may occur around moving parts, such as gears, doors, trays, and covers.

Précautions de retrait

⚠️ **ATTENTION—RISQUE D'ELECTROCUTION :** Une tension résiduelle peut être présente dans le bloc d'alimentation basse tension (LVPS) et le bloc d'alimentation haute tension (HVPS). Pour éviter tout risque d'électrocution, ne touchez pas les composants du circuit ou le côté soudure de la carte. Tenez-les uniquement par leurs extrémités ou le boîtier en métal.

⚠️ **ATTENTION—RISQUE D'ELECTROCUTION :** Ce produit utilise un commutateur d'alimentation électronique. Il ne déconnecte pas physiquement la tension d'alimentation CA. Pour éviter tout risque d'électrocution, débranchez toujours le cordon d'alimentation de l'imprimante lorsque vous devez déconnecter la tension d'alimentation CA.

⚠️ **ATTENTION—RISQUE D'ELECTROCUTION :** Pour éviter tout risque d'électrocution et éviter d'endommager l'imprimante, débranchez le cordon d'alimentation de la prise électrique et déconnectez toute connexion à tout périphérique externe avant de brancher ou débrancher des câbles ou circuits et assemblages électroniques.

⚠️ **ATTENTION—SURFACE CHAUDE :** L'intérieur de l'imprimante risque d'être brûlant. pour réduire le risque de brûlure, laissez la surface ou le composant refroidir avant d'y toucher.

⚠️ **ATTENTION : RISQUE DE PINCEMENT :** Pour éviter tout risque de blessure par pincement, agissezavec précaution au niveau des zones signalées par cette étiquette. Les blessures par pincement peuvent se produire autour des pièces mobiles telles que les engrenages, portes, tiroirs et capots.

Precauciones durante la extracción

⚠️ **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** La fuente de alimentación de bajo voltaje (LVPS) y la fuente de alimentación de alto voltaje (HVPS) pueden presentar voltaje residual. Para evitar el riesgo de descarga eléctrica, no toque los componentes del circuito ni el lateral soldado de la placa.Manipule solo los bordes exteriores o la carcasa metálica.

⚠️ **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** Este producto utiliza un interruptor de corriente electrónico. No desconecta físicamente la entrada de voltaje de CA. Para evitar el riesgo de descarga eléctrica, desenchufe siempre el cable de alimentación de la impresora cuando sea necesario retirar la entrada de voltaje de CA.

⚠️ **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** Para evitar el riesgo de descargas eléctricas ydaños en la impresora, retire el cable de alimentación de la toma eléctrica y desconecte todas las conexiones a dispositivos externos antes de conectar o desconectar cualquier cable, placa electrónica o conjunto.

⚠️ **PRECAUCIÓN: SUPERFICIE CALIENTE:** El interior de la impresora podría estar caliente. Para evitar el riesgo de heridas producidas por el contacto con un componente caliente, deje que la superficie se enfríe antes de tocarlo.

⚠️ **PRECAUCIÓN: PELIGRO DE ATRAPAMIENTO:** Para evitar el riesgo de lesión por atrapamiento, preste atención en las áreas marcadas con esta etiqueta. Las lesiones por atrapamiento se pueden producir en torno a partes móviles, tales como engranajes, puertas, bandejas y cubiertas.

Vorsichtsmaßnahmen bei der Demontage

⚠️ **VORSICHT – STROMSCHLAGGEFAHR:** Im Niederspannungsnetzteil (LVPS) und Hochspannungsnetzteil (HVPS) liegt unter Umständen Restspannung vor. Um das Risiko eines elektrischen Schlags zu vermeiden, berühren Sie keine umliegenden Bauteile oder die Lötseite der Platine. Fassen Sie sie nur an den Außenkanten oder am Metallgehäuse an.

⚠️ **VORSICHT – STROMSCHLAGGEFAHR:** Dieses Produkt verwendet einen elektronischen Leistungsschalter. Er trennt die Eingangswechselspannung nicht physikalisch. Um das Risiko eines elektrischen Schlags zu vermeiden, ziehen Sie stets das Netzkabel vom Drucker ab, wenn eine Abtrennung der Eingangswechselspannung erforderlich ist.

⚠️ **VORSICHT – STROMSCHLAGGEFAHR:** Um das Risiko eines elektrischen Schlags und Schäden am Drucker zu vermeiden, ziehen Sie das Netzkabel aus der Steckdose und trennen Sie alle Verbindungen zu jeglichen externen Geräten, bevor Sie Kabel, Elektronikplatinen oder Baugruppen einstecken oder abziehen.

⚠️ **VORSICHT – HEISSE OBERFLÄCHE:** Das Innere des Druckers kann sehr heiß sein. Vermeiden Sie Verletzungen, indem Sie heiße Komponenten stets abkühlen lassen, bevor Sie ihre Oberfläche berühren.

⚠️ **VORSICHT – QUETSCHGEFAHR:** Um das Risiko einer Quetschung zu vermeiden, gehen Sie in Bereichen, die mit diesem Etikett gekennzeichnet sind, mit Vorsicht vor. Quetschungen können im Bereich von beweglichen Komponenten auftreten, wie z. B. Zahnrädern, Klappen, Fächern und Abdeckungen.

Handling ESD-sensitive parts

Many electronic products use parts that are known to be sensitive to electrostatic discharge (ESD). To preventdamage to ESD-sensitive parts, do the following:

- Turn off the printer before removing logic boards.
- Keep the parts in their original packing material until you are ready to install them into the printer.
- Make the least possible movements with your body to prevent an increase of static electricity from clothingfibers, carpets, and furniture.
- Put the ESD wrist strap on your wrist. Connect the wrist band to the system ground point. This action discharges any static electricity in your body to the printer.
- Hold the parts by their edge connector shroud. Do not touch its pins. If you are removing a pluggable module, then use the correct tool.
- If possible, keep all parts in a grounded metal cabinet.
- Do not place the parts on the printer cover or on a metal table. If you need to put down the parts, then put them into their packing material.
- Prevent parts from being accidentally touched by other personnel. Cover the printer when you are not working on it.
- Be careful while working with the parts when cold-weather heating is used. Low humidity increases staticelectricity.

Critical information for controller board or control panel replacement

⚠️ **CAUTION—POTENTIAL INJURY:** The lithium battery in this product is not intended to be replaced. There is a danger of explosion if a lithium battery is incorrectly replaced. Do not recharge, disassemble, or incinerate a lithium battery. Discard used lithium batteries according to the manufacturer's instructions and local regulations.

⚠️ **ATTENTION—RISQUE DE BLESSURE :** La batterie lithium de ce produit n'est pas destinée à être remplacée. Il existe un risque d'explosion si une batterie lithium est placée de façon incorrecte. Ne rechargez pas, ne démontez pas et n'incinérez pas une batterie lithium. Mettez les batteries lithium usagées au rebut selon les instructions du fabricant et les réglementations locales.

⚠️ **PRECAUCIÓN: POSIBLES DAÑOS PERSONALES:** La batería de litio de este producto no debe reemplazarse. Existe riesgo de explosión si se sustituye incorrectamente una batería de litio. No recargue, desmonte ni incinere una batería de litio. Deseche las baterías de litio según las instrucciones del fabricante y las normativas locales.

⚠️ **VORSICHT – MÖGLICHE VERLETZUNGSGEFAHR** Die Lithiumbatterie in diesem Produkt darf nicht ausgetauscht werden. Wird eine Lithiumbatterie nicht ordnungsgemäß ausgetauscht, besteht Explosionsgefahr. Lithiumbatterien dürfen auf keinen Fall wieder aufgeladen, auseinander genommen oder verbrannt werden. Befolgen Sie zum Entsorgen verbrauchter Lithiumbatterien die Anweisungen des Herstellers und die örtlichen Bestimmungen.

Warning—Potential Damage: Observe all precautions when handling ESD sensitive parts. See .

Warning—Potential Damage: Carefully remove cables and connectors. Make sure they are not damaged.

Warning—Potential Damage: To avoid damaging the part or experience NVRAM mismatch issues, replaceonly one of the following components at a time:

- Control panel
- Controller board
  To replace a component and to test whether the problem is resolved:

1 Replace the affected component.

> **Warning—Potential Damage:** Do not perform a Power-On Reset (POR) until the problem is resolved. If aPOR is performed at this point, then the replacement part can no longer be used in another printer and must be returned to the manufacturer.

2 Enter the Diagnostics menu. The menu allows you to temporarily use the replacement part.

> **Warning—Potential Damage:** Some printers perform a POR automatically if the Diagnostics menu is not opened within five seconds. If a POR is performed at this point, then the replacement part can no longer be used in another printer and must be returned to the manufacturer.

3 Use the Diagnostics menu to test the replacement part. Do a feed test to check if the problem is

- If the problem is not resolved—Turn off the printer, and then install the old
- part.If the problem is resolved—Perform a POR.
- If NVRAM error occurs during the replacement, then see .

Updating the printer firmware

Warning—Potential Damage: Before updating the printer firmware, ask the next level of support for thecorrect code. Using an incorrect code level may damage the printer.

Using a flash drive

Note: The printer must be in ready state to update the firmware.

This option is available only in printer models with front USB port.

1 Insert the flash drive into the USB port.

2 Depending on the printer model, do any of the following:

  • From the control panel, navigate to **USB Menu: Print from USB** > **Accept** or **OK**, and then select the filethat you need to flash.
  • Select the firmware file.

Using a network computer

Using the File Transfer Protocol (FTP)

Note: The printer must be in ready state to update the firmware.

1 Turn on the printer.

2 Obtain the IP address from the home screen.

3 From the command prompt of a network computer, open an FTP session to the printer IP address.

4 Use a PUT command to place the firmware file on the printer.

The printer performs a POR sequence and terminates the FTP session.

Using the Embedded Web Server

Note: The printer must be in ready state to update the firmware.

1 Open a web browser, and then type the printer IP address.

2 Click **Settings** > **Device** > **Update Firmware**.

3 Select the file to use.

The printer performs a POR sequence and terminates the EWS session.

「Descriptions in page 150 is not applicable to this model.
  Therefore, it was deleted. 」

Removal procedures

Keep the following tips in mind as you replace parts:

- Some removal procedures require removing cable ties. You must replace cable ties during reassembly to avoid pinching wires, obstructing the paper path, or restricting mechanical movement.
- Remove the toner cartridges, imaging unit, and trays before removing other printer parts. The imaging kit must be carefully set on a clean, smooth, and flat surface. It must also be protected from light while out of the printer.
- Disconnect all external cables from the printer to prevent possible damage during service.
- Unless otherwise stated, install the parts in reverse order of removal.
- When installing a part held with several screws, start all screws before the final tightening.
- For printers that have an electronic power switch, make sure to unplug the power cord after powering off.

Left side
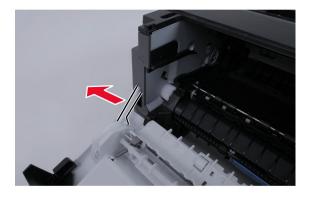
Left cover

1 Remove the screw at the front, and then remove the screw at the rear of the cover.

2 Open the front door, and then release the left front door link.

3 Place the printer on its right side.

4 Release the three latches (A) at the bottom of the cover, and then remove the cover.
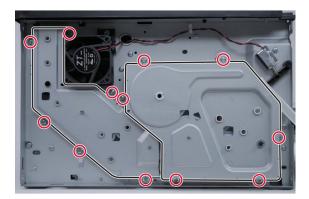
Main drive gears removal
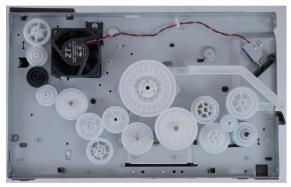
Note: For a video demonstration, see **Main drive gears removal**.

1 Remove the left cover. See **"Left cover removal" on page 152**.

2 Place the printer on its right side.

> **Warning—Potential Damage:** If the printer is not placed on its right side, then the gears fall out of placewhen the gear plates are removed.

3 Remove the 12 screws, remove the gear covers, and then remove the gears.
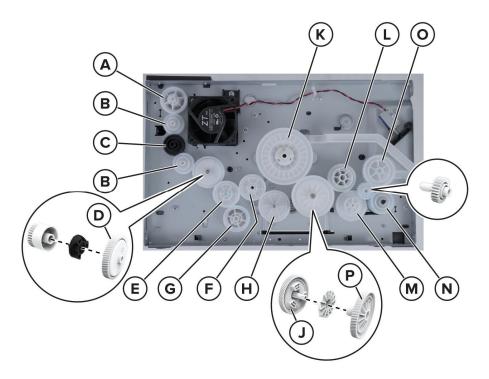
Installation

- Pay attention to the position of the gears.
- Most gears have a molded letter for identification.
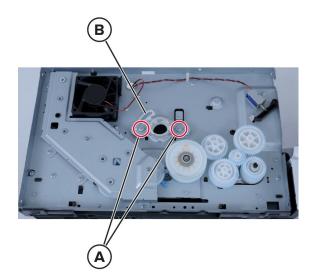
- Note the letter or number on the gears, and then use the following illustration to match their properlocation and position in the printer.
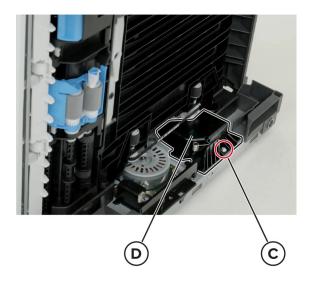
- Some locations have multiple gears stacked on top of each other.

4 Remove the left front door link. See **"Left front door link removal" on page 159**.

5 Remove the two screws (A), and then remove the coupling (B).

6 Place the printer on its left side, remove the screw (C), and then remove the duplex swing arm assembly(D).

Installation

a Make sure that the gears assembly is properly installed in the housing.
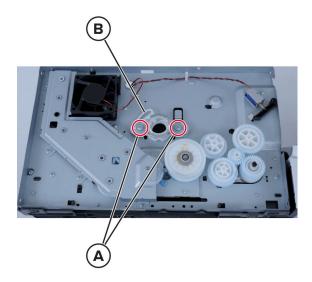
b Align the tab on the housing to the notch in the frame, and then install the duplex swing arm assembly.
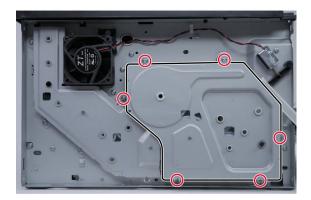
Imaging unit coupling

1 Remove the left cover. See **"Left cover removal" on page 152**.

2 Remove the left front door link. See **"Left front door link removal" on page 159**.

3 Remove the two screws (A), and then remove the imaging unit coupling (B).
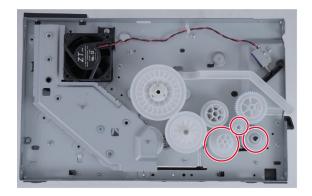
Pick roller clutch

1 Remove the left cover. See .

2 Remove the six screws, and then remove the gear cover.
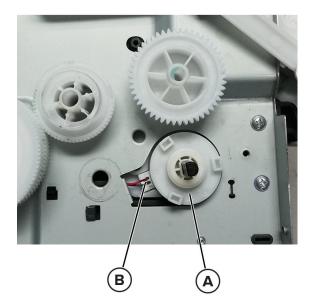
3 Remove the three gears.
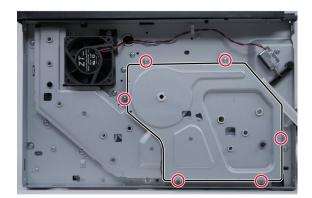
Installation note: Pay attention to the position of the gears.

4 Remove the clutch (A), and then disconnect the cable (B).

Left front door link

1 Remove the left cover. See **"Left cover removal" on page 152**.

2 Remove the six screws, and then remove the gear cover.
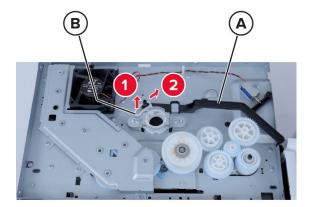
3 Remove the gear.

Parts removal

4 Release the left front door link (A) from the retainer (B), and then remove the left front door link.

Right side

Right cover
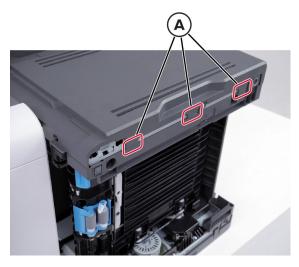
1 Remove the screw at the front, and then remove the screw at the rear of the cover.
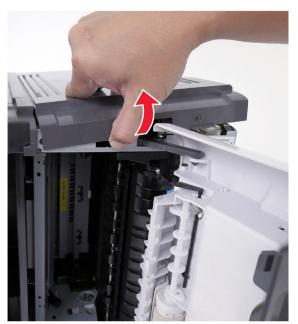
2 Open the front door, and then place the printer on its left side.

3 Release the three latches at the bottom (A).

4 Release the latch at the front, and then remove the cover.
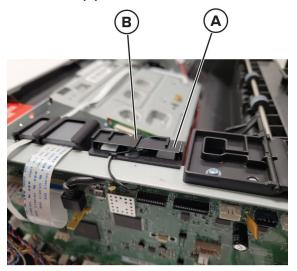
「Descriptions in page 163 is not applicable to this model.
Therefore it was deleted.」

Controller board removal
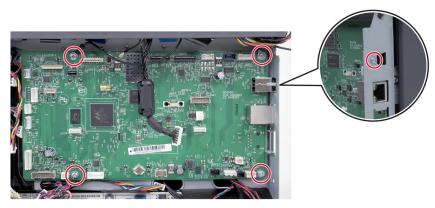
1 Remove the right cover. See **"Right cover removal" on page 161.**

2 On printer models equipped with an antenna, perform the following:

    a Remove the left cover. See **"Left cover removal" on page 152.**

    b Remove the control panel. See **"Control panel removal" on page 172.**

    c Remove the ADF and scanner. See **"ADF and scanner removal" on page 187.**

    d Release the antenna (A) from the latch (B).

3 Disconnect all the cables from the controller board.

4 Remove the five screws, and then remove the controller board.
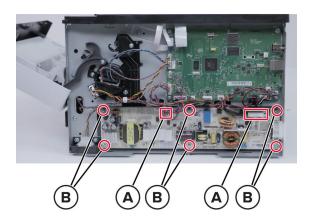
Parts removal

LVPS removal

Note: For a video demonstration, see **LVPS removal.**

1 Remove the right cover. See **"Right cover removal" on page 161**.

2 Disconnect the two cables (A), remove the six screws (B), and then remove the LVPS.

⚠️ **CAUTION—SHOCK HAZARD:** To avoid the risk of electrical shock, do not remove the shield from the back of the LVPS.

⚠️ **ATTENTION—RISQUE D'ELECTROCUTION :** Pour éviter tout risque d'électrocution, ne retirez pas la protection de l'arrière du bloc d'alimentation basse tension (LVPS).

⚠️ **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** Para evitar el riesgo de descarga eléctrica, no retire la protección de la parte trasera de la fuente de alimentación de bajo voltaje (LVPS).
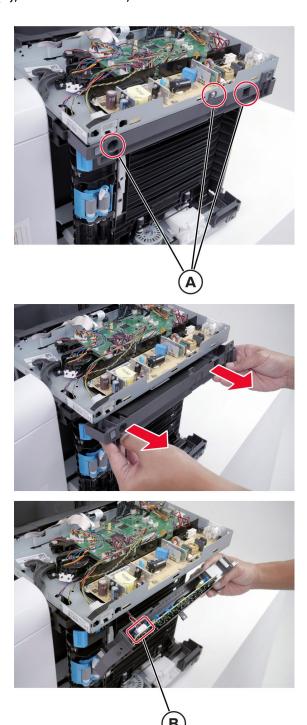
⚠️ **VORSICHT – STROMSCHLAGGEFAHR:** Um die Gefahr eines elektrischen Schlags zu vermeiden, entfernen Sie die Abdeckung nicht von der Rückseite des Niederspannungsnetzteils.

HVPS removal
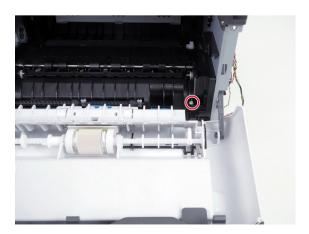
1 Remove the left cover. See **"Left cover removal" on page 152.**

2 Remove the right cover. See **"Right cover removal" on page 161.**

3 Remove the rear door. See **"Rear door removal" on page 179.**

4 Place the printer on its left side.

5 Remove the three screws (A), release the HVPS, and then disconnect the cable (B).
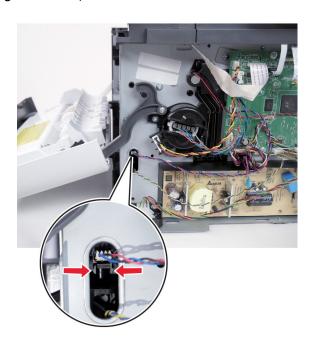
Sensor (MPF paper present) removal

1 Remove the right cover. See **"Right cover removal" on page 161**.

2 Open the front door, and then remove the screw.

3 Release the latches securing the sensor, and then disconnect the sensor cable.

Right front door link

1 Remove the right cover. See **"Right cover removal" on page 161**.

2 Remove the screw, and then remove the link from the front door.
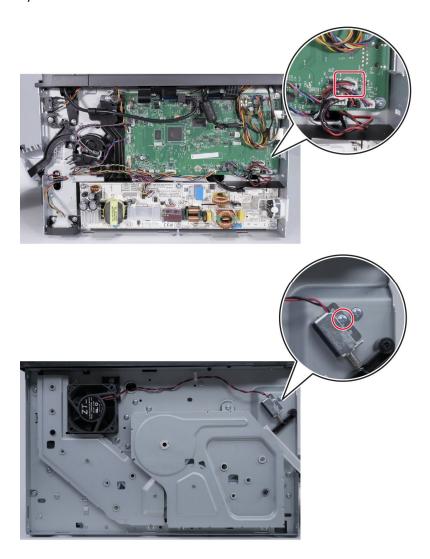
MPF solenoid cable removal

1 Remove the left cover. See **"Left cover removal" on page 152**.

2 Remove the right cover. See **"Right cover removal" on page 161**.

3 Remove the ADF and scanner. See **"ADF and scanner removal" on page 187**.
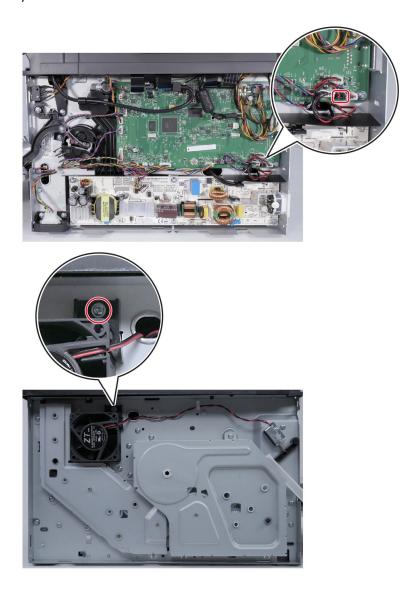
4 Disconnect the cable, and then remove the screw to remove the solenoid cable.

Main fan removal
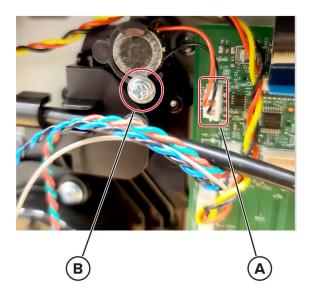
1 Remove the left cover. See **"Left cover removal" on page 152**.

2 Remove the right cover. See **"Right cover removal" on page 161**.

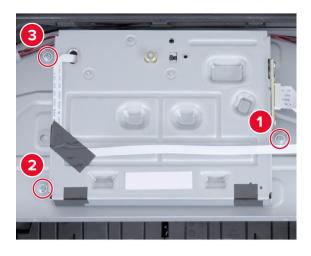**3** Remove the ADF and scanner. See **"ADF and scanner removal" on page 187**.

4 Disconnect the cable, and then remove the screw to remove the fan.

Speaker

1 Remove the right cover. See **"Right cover removal" on page 161**.

2 Disconnect the cable (A), remove the screw (B), and then remove the speaker.

Front

Control panel

1 Remove the right cover. See **"Right cover removal" on page 161**.

2 Disconnect the two cables.

3 Remove the ADF and scanner. See **"ADF and scanner removal" on page 187**.

4 Remove the control panel cables from the top right frame of the printer.
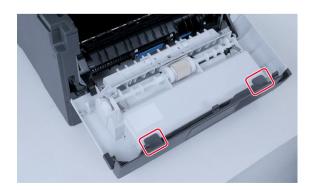
5 Remove the screw, and then remove the control panel.

Upper front cover removal

1 Open the front door.

2 Release the two latches.
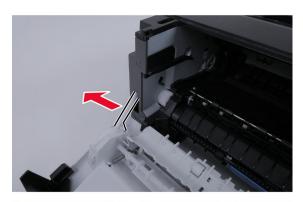
3 Remove the cover.

Front door removal

1 Remove the right cover. See **"Right cover removal" on page 161**.

2 Remove the right front door link. See **"Right front door link removal" on page 169**.

3 Release the left front door link, and then remove the front door.

Transfer roller removal

1 Open the front door.

2 Release the two latches, and then remove the transfer roller.
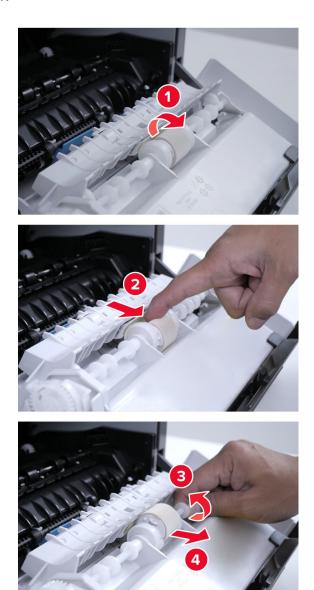
Installation
- Do not touch the foam on the roller.
- The shaft has grease. To avoid contaminating the roller, do not touch the shaft.
- Make sure that the spring is properly installed on the left side of the roller.
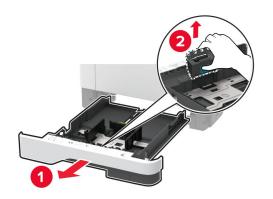
MPF pick roller

1 Open the front door.

2 Remove the MPF pick roller.
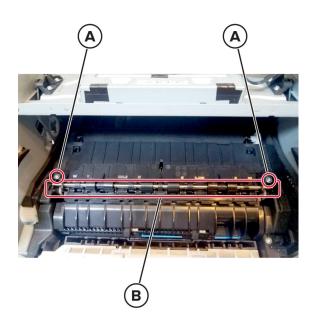
Pick separator roller removal

1 Remove the tray insert.

2 Remove the pick separator roller.
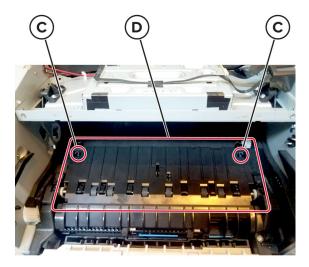
Sensor (input) removal
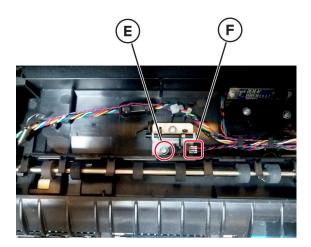
1 Open the front door. Remove the

2 imaging unit.

3 Remove the two screws (A), and then remove the roller assembly (B).

4 Release the two latches (C), and then remove the paper guide (D).

5 Remove the screw (E), and then disconnect the cable (F) from the sensor.

Rear removals

Rear door

1 Remove the left cover. See **"Left cover removal" on page 152**.

2 Remove the screw, and then remove the rear door.
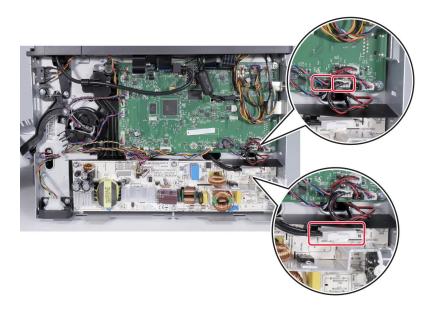
Note: Pay attention to the position of the locating feature on the right side before removing the door.

Fuser removal

1 Remove the right cover. See **"Right cover removal" on page 161**.

2 Disconnect the three cables.

3 Open the rear door, remove the four screws, and then remove the fuser.

Top
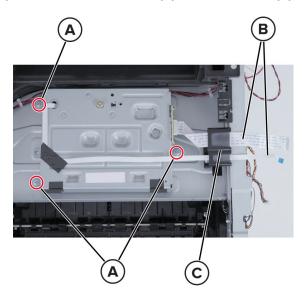
Printhead removal

1 Remove the right cover. See **"Right cover removal" on page 161**.

2 Remove the left cover. See **"Left cover removal" on page 152**.

3 Remove the ADF and scanner. See **"ADF and scanner removal" on page 187**.

4 Disconnect the two cables.

5 Remove the three screws (A), remove the two cables (B) from the toroid (C), and then remove the printhead.

Installation note: When installing the printhead, tighten the screws in the following the order:

Redrive removal

1 Remove the right cover. See **"Right cover removal" on page 161**.

2 Remove the left cover. See **"Left cover removal" on page 152**.

3 Remove the ADF and scanner. See **"ADF and scanner removal" on page 187**.

4 Remove the four screws.

5 Lift the redrive, and then disconnect the cable from the redrive.

Bin full sensor actuator

1 Remove the ADF and scanner. See **"ADF and scanner removal" on page 187**.

2 Firmly pull the bin full actuator to the left until it is disengaged from the printer frame.
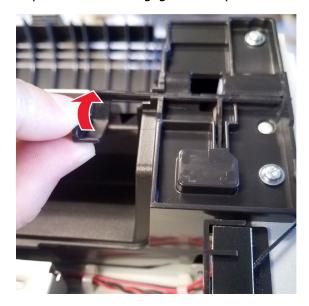
3 Remove the actuator.

Installation notes:

a Make sure that the actuator is properly positioned as shown.

b Carefully rotate the actuator upward until it is engaged to the printer frame.
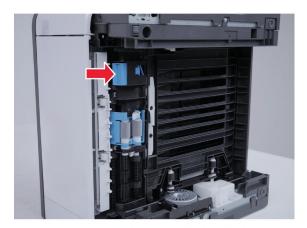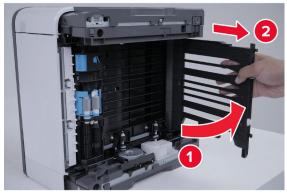
c Make sure that the actuator is properly installed and freely rotates without binding.

Bottom removals
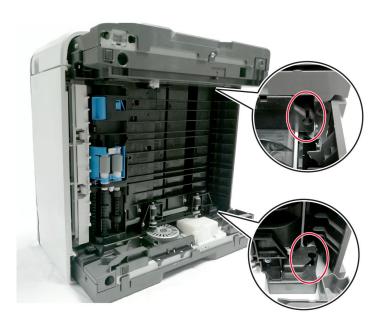
Duplex guide removal

1 Place the printer on its left side.

2 Remove the duplex guide.

Installation note: Make sure that the duplex guide is properly inserted into the locating features insidethe printer.

ADF and scanner removals

ADF cover removal

1 Open the ADF cover.

2 Remove the ADF cover.

ADF tray removal

1 Open the ADF cover.

2 Remove the ADF tray.

ADF separator pad removal

1 Open the ADF cover.

2 Release the latch to remove the ADF separator pad.
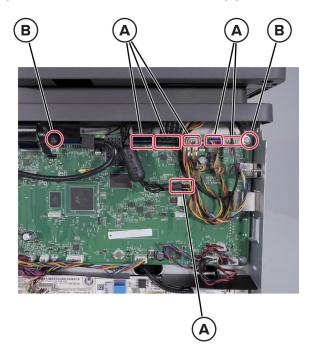
Installation note: Do not lose the spring under the ADF separator pad.
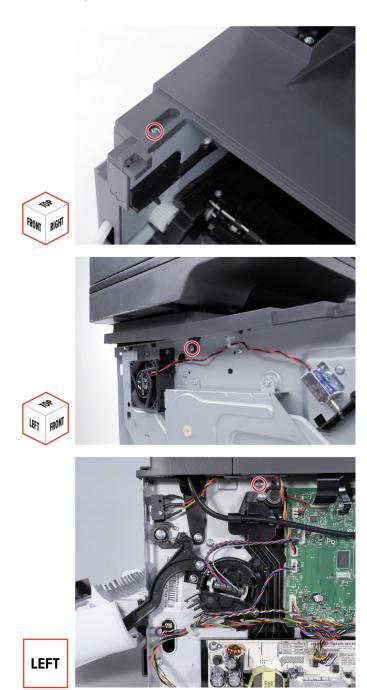
Blank page.

ADF and scanner removal
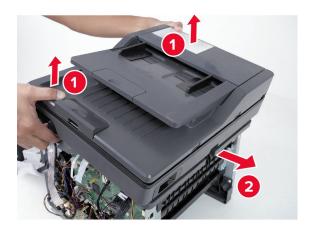
1 Remove the right cover. See **"Right cover removal" on page 161**.

2 Remove the left cover. See **"Left cover removal" on page 152**.

3 Remove the control panel. See **"Control panel removal" on page 172**.

4 Disconnect the six cables (A), and then remove the two screws (B).

5 Remove the three screws from the printer frame.

6 Remove the ADF and scanner.

Installation note: Make sure to perform the ADF scanner calibration after replacing the ADF and scanner.

To perform the ADF scanner calibration:

1 Load the calibration sheet into the ADF tray.

  Note: Adjust the guides to match the size of the calibration sheet.

2 Enter the Diagnostics menu, and then select **Scanner Diagnostics**.

3 Touch **Scanner Calibration Reset**.

4 Wait for about 45 seconds for the calibration to finish.

  Note: A `Test Completed` message appears on the display when the calibration is finished.

Scanner pivot arm

1 Slightly raise the ADF and scanner assembly.

2 While pulling on the scanner pivot arm latch, completely raise the ADF and scanner assembly to release the latch.

3 Remove the two screws, and then remove the scanner pivot arm.

Fax card removal

1 Remove the right cover. See **"Right cover removal" on page 161**.

2 Remove the left cover. See **"Left cover removal" on page 152**.

3 Remove the ADF and scanner. See **"ADF and scanner removal" on page 187**.

4 Release the scanner pivot arm latch.
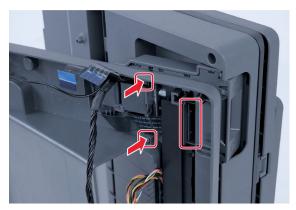
5 Place the ADF and scanner assembly on its left side.

6 Remove the toroid from the fax card cable.

7 Release the three latches, and then remove the fax card.

Component locations

1	Automatic document feeder (ADF)
2	ADF tray
3	ADF bin
4	Control panel
5	Standard bin
6	Multipurpose feeder
7	Standard 250-sheet tray
8	Optional 550-sheet tray

Controller board

Connector	Connects to	Pin numbe	Signal
JSCANSNS1	Sensor (ADF paper present)	1	SNS_ADF_DOC
		2	SNS_ADF_DOC_LED
		3	GND
		4	SNS_ADF_SCAN
		5	PWR_ADF_SCAN_LED
		6	GND

Connector	Connects to	Pin numbe	Signal
JFBM1	Motor (scanner fatbed)	1	FBM_BOUT1
		2	FBM_BOUT2
		3	FBM_AOUT2
		4	FBM_AOUT1
JADFM1	Motor (ADF scanner)	1	ADFM_BOUT1
		2	ADFM_BOUT2
		3	ADFM_AOUT2
		4	ADFM_AOUT1
JACIS1	Scanner flatbed analog CIS bar	1	OS1_AFE
		2	GND
		3	OS2_AFE
		4	GND
		5	OS3_AFE
		6	GND
		7	+3.3 V_FB_C
		8	AFE_REV_ID1
		9	AFE_REV_ID2
		10	A_SOL
		11	GND
		12	A_CIS_PCLK
		13	+5 V_AWAKE
		14	SCAN_LEDB
		15	SCAN_LEDG
		16	SCAN_LEDR

Connector	Connects to	Pin numbe	Signal
JDCIS1	Scanner ADF digital CIS bar	1	GND
		2	SCAN_RXIN_P(0)
		3	SCAN_RXIN_N(0)
		4	GND
		5	SCAN_RXCLK_P
		6	SCAN_RXCLK_N
		7	GND
		8	D_SOL
		9	D_AFE_SEN
		10	D_AFE_SDIO
		11	D_AFE_SCK
		12	GND
		13	D_CIS_PCLK
		14	+3.3 V_ADF
JWIFI1	Wi-Fi antenna	1	WIFI_ANT
		2	GND
J3	USB front port cable	1	+5 V_FUSB
		2	USB_N
		3	USB_P
		4	NC
		5	GND

Connector	Connects to	Pin numbe	Signal
JVDO1	Printhead video	1	VDO_HSYNC-
		2	GND
		3	VDO_K1+
		4	VDO_K1-
		5	GND
		6	VDO_LPOW_K
		7	VDO_LADJ_K1
		8	VDO_BOOST_K
		9	+3.3 V_PHRAIL_SW
		10	GND
		11	VDO_LEN_K-
		12	+3.3 V_PHRAIL_SW
		13	VDO_K0+
		14	VDO_K0-
		15	GND
		16	VDO_LADJ_K0
JMIR1	Motor (printhead mirror)	1	+25 V_SW
		2	GND
		3	MM_START
		4	MM_LOCK
		5	MM_REFCLK

Connector	Connects to	Pin numbe	Signal
JUICC28	2.8-in. control panel LCD	1	LED_DRIVE
		2	+5 V_CONT
		3	MIR_TXD
		4	MIR_CS-
		5	POWER_BUTTON
		6	LCD_RS
		7	LCD_TE
		8	MIR_RXD
		9	GND
		10	MIR_CLK
		11	GND
		12	I2C_DAT
		13	I2C_CLK
		14	+5 V_UI
		15	RESET-
		16	IRQ-
		17	GND
		18	LCD_WR
		19	LCD_RD
		20	+5 V_UI
		21	D0
		22	D1
		23	GND
		24	D2
		25	D3
		26	+5 V_UI
		27	D4
		28	D5
		29	GND
		30	D6
		31	D7
		32	+5 V_UI
JSPKR1	Speaker	1	Speaker+
		2	Speaker -

Component locations

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Connector	Connects to	Pin numbe	Signal
JSCHIP1	Toner cartridge and imaging unit smartchip	1	I2C_DAT
		2	+3.3 V_SCHIP
		3	I2C_CLK
		4	GND
		5	TONER_EMPTY
JCVR1	Front door laser safety switch	1	+3.3 V_PHRAIL
		2	+3.3 V
		3	GND
JMPSNS1	Sensor (MPF paper present)	1	SNS_MPS
		2	GND
		3	PWR_MPF
JHVPS1	HVPS	1	+25 V_SW
		2	DEV_PWM
		3	ADC_HV_SERVO
		4	XFER_EN
		5	TX_PWM
		6	GND
		7	CHG_PWM

Connector	Connects to	Pin numbe	Signal
JMTR1	Motor (main drive)	1	+25 V_SW
		2	GND
		3	BRAKE
		4	PWM
		5	DIR
		6	FG
		7	+25 V_SW
		8	GND
	Sensor (toner density)	9	LED_PWM_TDS
		10	THERM_TDS
		11	SNS_TDS
		12	GND
		13	PWR_TDS
	Pick clutch	14	+25 V_SW
		15	CLUTCH_SINK
	Sensor (input)	16	SNS_INPUT
		17	GND
		18	PWR_INPUT
JTRAY1	Tray present switch	1	PWR_TRAY
		2	TRAY_DETECT
JOPT1	Paper handling option	1	+25 V_SW
		2	TXD_OPT
		3	TRAY_PULLED_N
		4	RXD_OPT
		5	GND
		6	5 V_OPT
JLVPS1	LVPS	1	RELAY_ON
		2	HEAT_ON
		3	ZERO_CROSS
		4	+25 V_SW_ON
		5	+25 V_CONT_RAIL
		6	GND
		7	+25 V_SW_RAIL
		8	GND

Component locations

Connector	Connects to	Pin numbe	Signal
JEXIT1	Sensor (fuser exit)	1	SNS_EXIT
		2	GND
		3	PWR_EXIT
JFUSER1	Fuser thermistor	1	THERM_FUSER
		2	GND
		3	AC_RELAY_ON_TCO
		4	AC_RELAY_ON
JFAN1	Fan	1	+25 V_SW
		2	FAN_SINK
JBIN1	Sensor (bin full)	1	SNS_BF
		2	GND
		3	PWR_BF
JSOL1	MPF pick solenoid	1	+25 V_SW
		2	SOL_SINK
JFAX1	Fax	1	TONE
		2	FAX_PWR
		3	FAX_PWR
		4	RES
		5	+5V
		6	IRQ
		7	GND
		8	SCK
		9	GND
		10	MOSI
		11	GND
		12	MISO
		13	GND
		14	CS

Maintenance

Cleaning printer

Cleaning the printer

⚠️ **CAUTION—SHOCK HAZARD:** To avoid the risk of electrical shock when cleaning the exterior of the printer, unplug the power cord from the electrical outlet and disconnect all cables from the printer before proceeding.

⚠️ **ATTENTION—RISQUE D'ELECTROCUTION :** pour éviter tout risque d'électrocution lors du nettoyagede l'extérieur de l'imprimante, débranchez le cordon d'alimentation électrique de la prise et déconnectez tous les câbles de l'imprimante avant de continuer.

⚠️ **PRECAUCIÓN: PELIGRO DE DESCARGAS ELÉCTRICAS:** Para evitar el riesgo de descarga eléctrica allimpiar el exterior de la impresora, desconecte el cable de alimentación de la toma eléctrica y desconecte todos los cables de la impresora antes de realizar la operación.

⚠️ **VORSICHT – STROMSCHLAGGEFAHR:** Um das Risiko eines elektrischen Schlags beim Reinigen des Druckergehäuses zu vermeiden, ziehen Sie das Netzkabel aus der Steckdose, und ziehen Sie alle Kabel vom Drucker ab, bevor Sie fortfahren.

Notes:

- Perform this task after every few months.
- Damage to the printer caused by improper handling is not covered by the printer warranty.

1 Turn off the printer, and then unplug the power cord from the electrical outlet.Remove

2 paper from the standard bin and multipurpose feeder.

3 Remove any dust, lint, and pieces of paper around the printer using a soft brush or vacuum.

4 Wipe the outside of the printer with a damp, soft, lint-free cloth.

   Notes:

   - Do not use household cleaners or detergents, as they may damage the finish of the printer.
   - Make sure that all areas of the printer are dry after cleaning.

5 Connect the power cord to the electrical outlet, and then turn on the printer.

Cleaning the scanner

1 Open the scanner cover.

2 Using a damp, soft, lint-free cloth, wipe the following

- ADF glass pad

  Note: In some printer models, this location has an ADF glass instead of a pad.

- Scanner glass pad

- ADF glass

- Scanner glass

3 Close the scanner cover.

Parts catalog

Legend
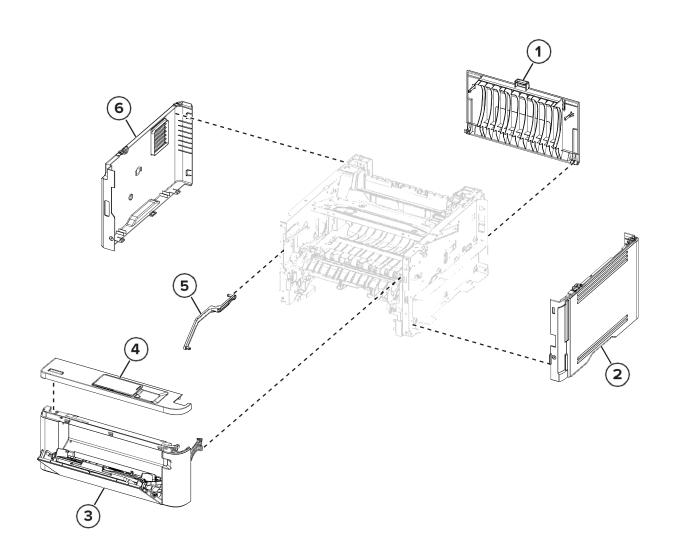
The following column headings are used in the parts

- **Asm-index**—Identifies the item in the illustration.
- **Part number**—Identifies the unique number that correlates with the part.
- **Units/mach**—Refers to the number of units actually used in the base machine or product.
- **Units/FRU**—Refers to the number of units in a particular FRU.
- **Description**—Describes the part.

The following abbreviations are used in the parts

- **NS** (not shown) in the Asm-index column indicates that the part is procurable but is not pictured in the illustration.
- **PP** (parts packet) in the Description column indicates that the part is contained in a parts packet.
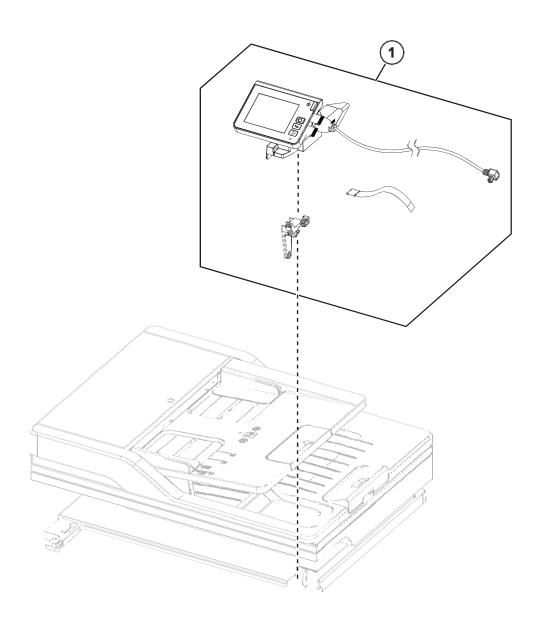
Assembly 1:

Assembly 1:

Asm-index	Manufacture P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X2582	1	1	Rear door	"Rear door removal" on page 179
2	41X2580	1	1	Right cover	"Right cover removal" on page 161
3	50X0751	1	1	Front door with MPF pick roller	"Front door removal" on page 174
4	41X2912	1	12	Upper front cover with decals	"Upper front cover removal" on page 173
5	41X2578	1	1	Left front door link	"Left front door link removal" on page 159
6	41X2579	1	1	Left cover	"Left cover removal" on page 152
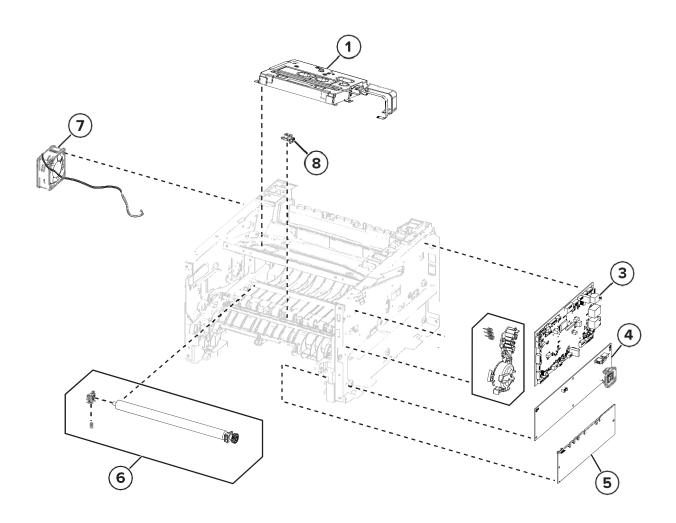
Assembly 2: Control panel

Assembly 2: Control panel

Asm-index	Manufacture P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X2595	1	1	Control panel assembly	"Control panel removal" on page 172

Assembly 3: Electronics
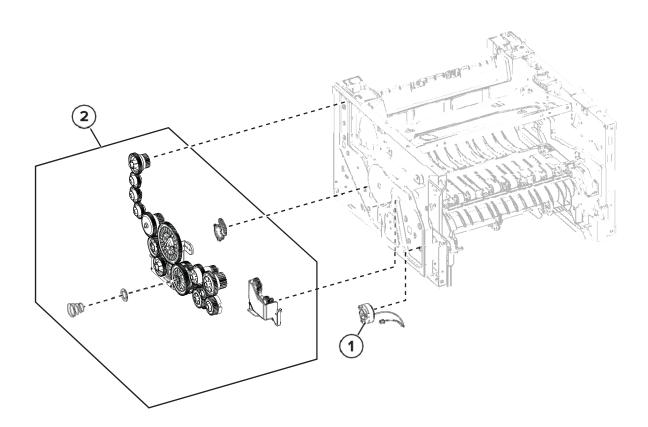
Assembly 3: Electronics

Asm-index	Manufacture P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X2573	1	1	Printhead	"Printhead removal" on page 180

Asm-index	Manufacture P/N	Units/mach	Units/FRU	Description	Removal procedure
3	41X2977	1	1	Controller board • This part is compatible for new printers that have 1 or greater as the eighth character of the printer serial number. • Make sure to upgrade the firmware to FW 074.038 version or later.	"Controller board removal" on page 163
4	41X2590	1	1	LVPS, 75 W and 120 V	"LVPS removal" on page 165
4	41X2591	1	1	LVPS, 75 W and 230 V	"LVPS removal" on page 165
5	41X2592	1	1	HVPS	"HVPS removal" on page 166
6	41X2587	1	3	Transfer roller, bearing and spring	"Transfer roller, bearing and spring removal" on page 165
7	41X2636	1	1	Main fan	"Main fan removal" on page 170
8	41X1083	1	1	Sensor (input)	"Sensor (input) removal" on page 177

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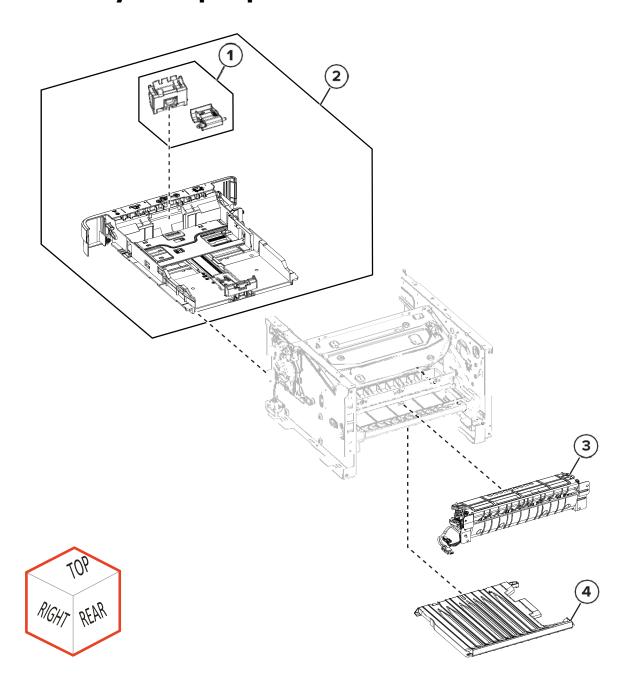
Assembly 4: Gears

Assembly 4: Gears

Asm-index	Manufacture P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X2391	1	1	Pick roller clutch	"Pick roller clutch removal" on page 158
2	41X2576	1	24	Main drive gears kit	"Main drive gears kit removal" on page 153
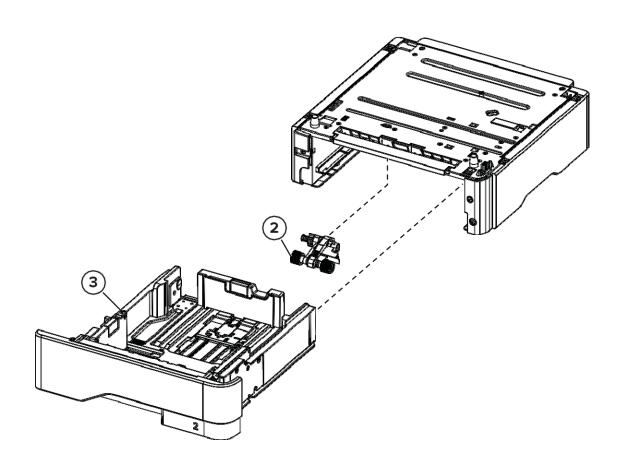
Assembly 5: Paper path

Assembly 5: Paper path

Asm-index	Manufacture P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X2575	1	1	Pick separator roller	"Pick separator roller removal" on page 177
2	41X2585	1	1	250-sheet tray	--
3	41X2586	1	1	Fuser, 115 V	"Fuser removal" on page 180
3	41X2600	1	1	Fuser, 230 V	"Fuser removal" on page 180
4	41X2712	1	1	Duplex guide	"Duplex guide removal" on page 185
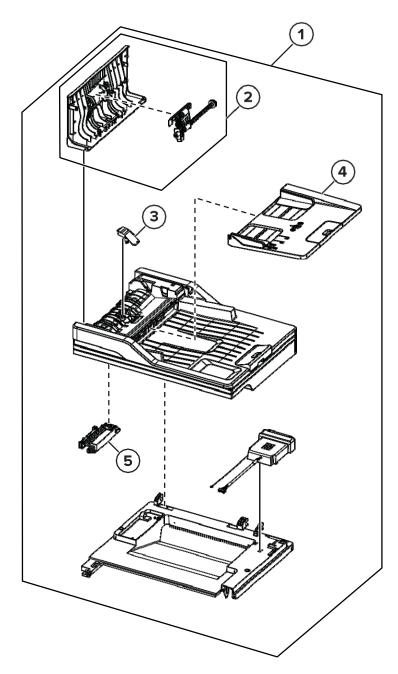
Assembly 6: 550-sheet optional tray

Assembly 6: 550-sheet optional tray

Asm-index	Manufacture P/N	Units/mach	Units/FRU	Description	Removal procedure
2	41X2614	1	1	550-sheet tray pick roller	--
3	41X2613	1	1	550-sheet tray insert	--

Assembly 7: ADF and scanner

Assembly 7: ADF and scanner

Asm-index	Manufacture P/N	Units/mach	Units/FRU	Description	Removal procedure
1	41X2980	1	1	Scanner with fax card	"ADF and Scanner with fax card removal" on page 187
2	41X2510	1	1	ADF cover	"ADF cover removal" on page 186
3	41X2511	1	1	ADF separator pad	"ADF separator pad removal" on page 187
4	41X2428	1	1	ADF tray	"ADF tray removal" on page 187
5	41X2596	1	1	Scanner pivot arm	"Scanner pivot arm removal" on page 192

Assembly 8: Miscellaneous

Asm-index	Manufacture P/N	Units/mach	Units/FRU	Description	Removal
NS	40X1767	1	1	Power cord, Europe	

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Printer specifications

Power consumption

Product power consumption

The following table documents the power consumption characteristics of the product.

Note: Some modes may not apply to your product.

Mode	Description	Power consumption (Watts)
Printing	The product is generating hard-copy output from electronic inputs.	One-sided: 580 Two-sided: 330
Copy	The product is generating hard-copy output from hard-copy original documents.	600
Scan	The product is scanning hard-copy documents.	14
Ready	The product is waiting for a print job.	7.5
Sleep Mode	The product is in a high-level energy-saving mode.	1.1
Hibernate	The product is in a low-level energy-saving mode.	0.1
Off	The product is plugged into an electrical outlet, but the power switch is turned off.	0.1

The power consumption levels listed in the previous table represent time-averaged measurements. Instantaneous power draws may be substantially higher than the average.

Values are subject to change without notice.

Sleep Mode

This product is designed with an energy-saving mode called *Sleep Mode*. The Sleep Mode saves energy by lowering power consumption during extended periods of inactivity. The Sleep Mode is automatically engaged after this product is not used for a specified period of time, called the *Sleep Mode Timeout*.

Factory default Sleep Mode Timeout for this product (in minutes):	15

By using the configuration menus, the Sleep Mode Timeout can be modified between 1 minute and 120 minutes. If the print speed is less than or equal to 30 pages per minute, then you can set the timeout only up to 60 minutes. Setting the Sleep Mode Timeout to a low value reduces energy consumption, but may increase the response time of the product. Setting the Sleep Mode Timeout to a high value maintains a fast response, but uses more energy.

Hibernate Mode

This product is designed with an ultra-low power operating mode called *Hibernate mode*. When operating in Hibernate Mode, all other systems and devices are powered down safely.

The Hibernate mode can be entered in any of the following methods:

- Using the Hibernate Timeout
- Using the Schedule Power modes

Factory default Hibernate Timeout for this product in all countries or regions	3 days

The amount of time the printer waits after a job is printed before it enters Hibernate mode can be modified between one hour and one month.

Off mode

If this product has an off mode which still consumes a small amount of power, then to completely stop product power consumption, disconnect the power supply cord from the electrical outlet.

Total energy usage

It is sometimes helpful to estimate the total product energy usage. Since power consumption claims are provided in power units of Watts, the power consumption should be multiplied by the time the product spends in each mode in order to calculate energy usage. The total product energy usage is the sum of each mode's energy usage.

Applicability of Regulation (EU) 2019/2015 and (EU) 2019/2020

Per Commission Regulation (EU) 2019/2015 and (EU) 2019/2020, the light source contained within this product or its component is intended to be used for Image Capture or Image Projection only, and is not intended for use in other applications.
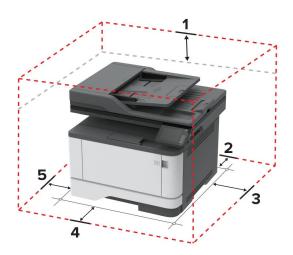
Selecting a location for the printer

- Leave enough room to open trays, covers, and doors and to install hardware options.
- Set up the printer near an electrical outlet.
- Make sure that airflow in the room meets the latest revision of the ASHRAE 62 standard or the CEN Technical Committee 156 standard.
- Provide a flat, sturdy, and stable surface.
- Keep the printer:
  - Clean, dry, and free of dust
  - Away from stray staples and paper clips
  - Away from the direct airflow of air conditioners, heaters, or ventilators
  - Free from direct sunlight and humidity extremes
- Observe the recommended temperatures and avoid fluctuations.

Ambient temperature	10 to 32.2°C (50 to
Storage temperature	-40 to 40°C (-40 to

- Allow the following recommended amount of space around the printer for proper ventilation:

1	Top	305 mm (12 in.)
2	Rear	100 mm (3.94 in.)
3	Right side	76.2 mm (3 in.)
4	Front	305 mm (12 in.) **Note:** The minimum space needed in front of the printer is 76 mm (3 in.).
5	Left side	110 mm (4.33 in.)

Noise emission levels

The following measurements were made in accordance with ISO 7779 and reported in conformance with ISO9296.

Note: Some modes may not apply to your product.

1-meter average sound pressure, dBA	
Printing	One-sided: 53; Two-sided: 50
Ready	14

Values are subject to change without notice.

Temperature information

Ambient operating temperature	10 to 32.2°C (50 to 90°F)
Shipping temperature	-40 to 40°C (-40 to 104°F)
Storage temperature and relative humidity	-40 to 40°C (-40 to 104°F) 8 to 80% RH

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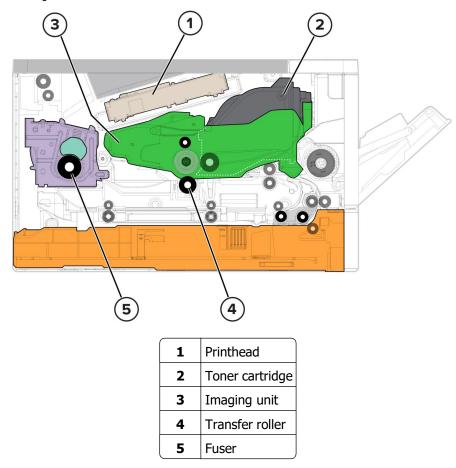
Theory of operation

POR sequence

As the printer is turned on, the engine code goes through a series of tests to verify hardware integrity. If a hardware failure is detected, then it is reported to the printer. If the POR sequence cannot be completed successfully, then the printer may post an error message. The message states that service may needed.
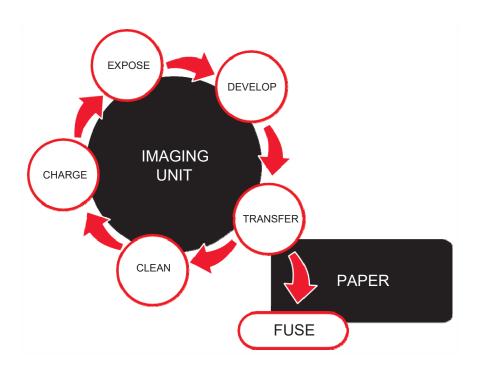
Print cycle operation

Print engine layout

1	Printhead
2	Toner cartridge
3	Imaging unit
4	Transfer roller
5	Fuser
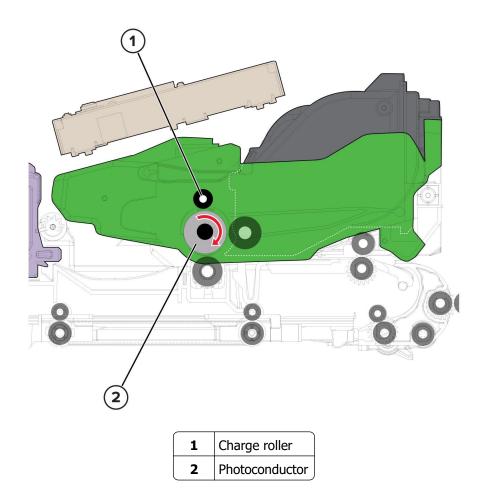
Print cycle

Flowchart

Charge

1	Charge roller
2	Photoconductor
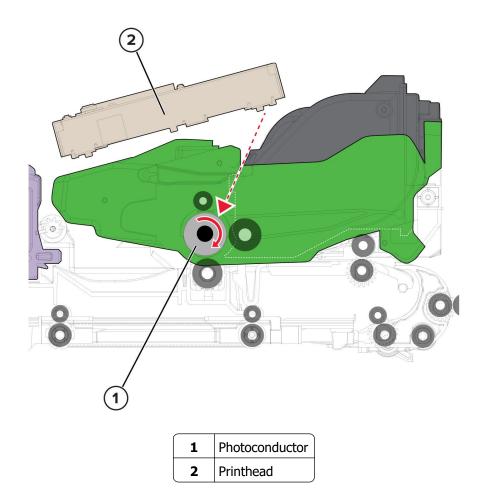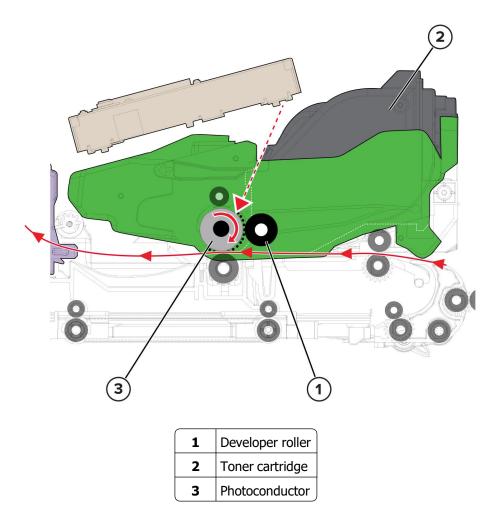
The charge roller applies a uniform negative electrical charge to the surface of the photoconductor. The insulative properties of the photoconductor allow it to hold a charge and its photoconductive properties allow it to discharge when exposed to light.

Expose

1	Photoconductor
2	Printhead
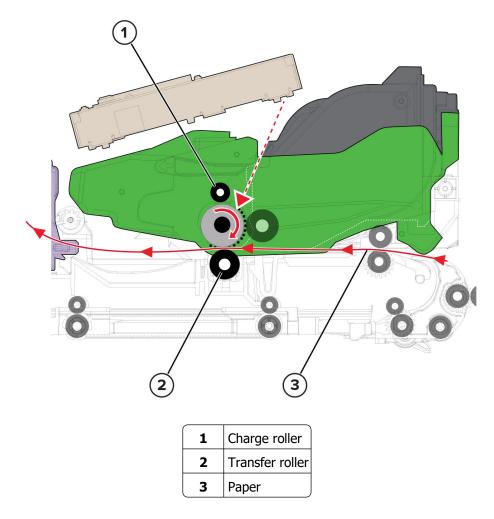
The printhead emits a laser that exposes the surface of the photoconductor. The laser pulses coincide with the digital latent image. The exposed areas of the photoconductor surface are discharged, resulting in a photoconductor surface potential that is less negative than the non-exposed areas.

Develop

1	Developer roller
2	Toner cartridge
3	Photoconductor

The developer roller applies the toner from the toner cartridge to the photoconductor during the development process. The difference in surface potential creates an electric field that causes the toner particles to move to the photoconductor according to the pattern of the latent image.

Transfer

1	Charge roller
2	Transfer roller
3	Paper
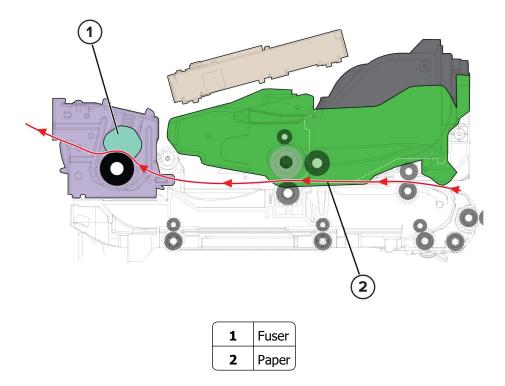
A positive potential relative to the toned image formed on the photoconductor is applied to the transfer roller. This allows the transfer roller to move the developed toner from the surface of the photoconductor to the paper as the paper is passed between the transfer roller and photoconductor.

Clean

The cleaning blade removes the residual toner from the photoconductor after the transfer. After cleaning, the process moves again to the charge process and repeats each cycle until the entire image is transferred to a side of the paper.

Fuse

1	Fuser
2	Paper
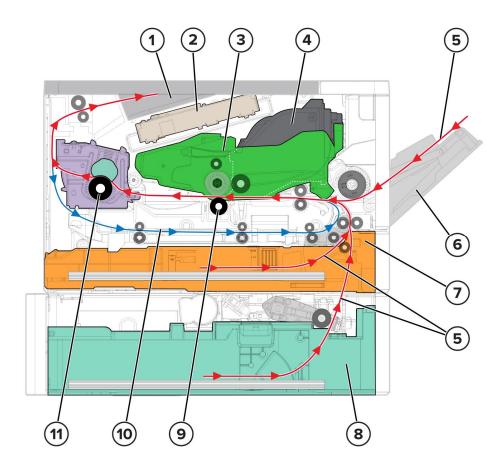
After the toner image is transferred to the paper, the toner particles are not yet permanently bonded to the paper. For the final step in the print process, paper is transported to the fuser where heat and pressure are applied to it. As a result, the toner particles melt and are permanently fused to the paper, completing the printprocess. The print cycle repeats for the succeeding pages.

Printer operation

Printer sections
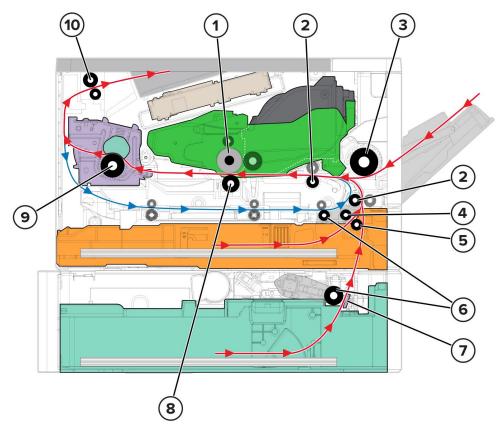
1	Output bin
2	Printhead
3	Imaging unit
4	Toner cartridge
5	Simplex paper path
6	MPF
7	Standard tray
8	Optional tray
9	Transfer roller
10	Duplex paper path
11	Fuser

Printer paper path

Simplex print job
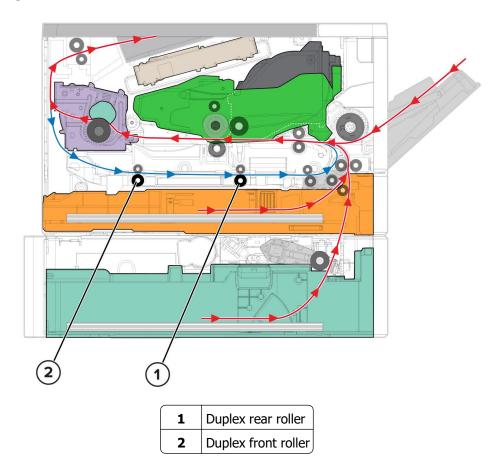
1	Photoconductor
2	Transport roller
3	MPF pick roller
4	Feed roller
5	Separator roller
6	Pick roller
7	Separator pad
8	Transfer roller
9	Fuser
10	Paper exit roller

The pick roller picks and the feed roller feeds the paper to the separator roller or separator pad. The feed roller feeds the paper to the transport roller. For MPF print jobs, the MPF pick roller picks and feeds the paper to the transport roller.

The transport rollers feed the paper to the transfer roller. At the transfer roller, the photoconductor transfers the developed image to the paper to create the printed image.

Theory of operation

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As the paper passes the fuser, heat and pressure are applied to permanently bond the toner to the paper. After printing, the paper exit roller ejects the paper to the output bin.

Duplex print job

1	Duplex rear roller
2	Duplex front roller
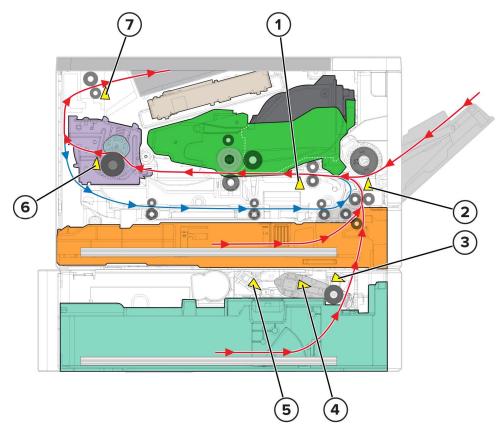
After the first side is printed, the paper stops at the output bin while still in the paper exit roller. The paper isfed again into the duplex paper path to have the opposite side printed.
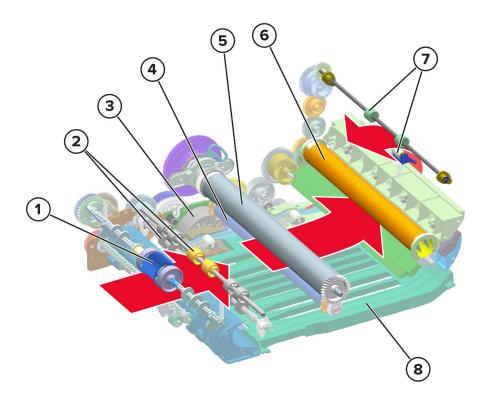
The paper travels along the duplex path until it enters again the transport roller. From there, the paper continuesits path until the print job is done.

Printer paper path sensors

#	Sensor	Function
1	Sensor (input)	Detects paper that is traveling from the transport roller
2	Sensor (MPF paper present)	Detects paper presence in the MPF
3	Sensor (trailing edge)	Detects the trailing edge of the paper that is fed from the optional tray
4	Sensor (index)	Detects if the pick roller is at the correct height to pick paper from the optionaltray
5	Sensor (paper present)	Detects paper presence in the optional tray
6	Sensor (fuser exit)	Detects paper that is exiting the fuser
7	Sensor (narrow media/bin full)	• Detects if paper is narrow • Detects if the bin is full

Main drive

1	MPF pick roller
2	Transport roller
3	Motor (main drive)
4	Transfer roller
5	Photoconductor
6	Fuser
7	Paper exit roller
8	Duplex

The motor (main drive) provides mechanical power to the printer.
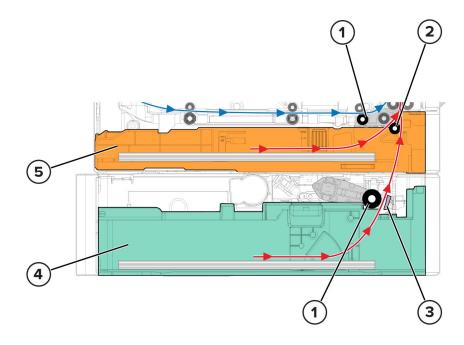
The motor transfers power through several gears to the following parts:

- MPF pick roller
- Transport roller
- Transfer roller
- Photoconductor

- Fuser
- Paper exit roller
- Duplex

Tray drive

1	Pick roller
2	Separator roller
3	Separator pad
4	Optional tray
5	Standard tray
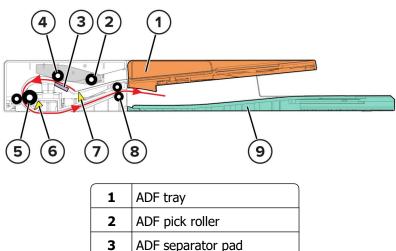
The motor (main drive) in the printer drives the standard tray. The lift plate in the tray is spring loaded and isnot driven by a motor. The spring raises the lift plate until the paper is in contact with the pick roller.

The motor inside the optional tray drives the optional tray. The motor drives the lift plate to a specified heightin the tray.

To prepare for feeding, the lift plate raises to push the paper against the pick roller. The lift plate stops pushing at the point where the pick roller is at the proper height for picking. After the pick roller is in position, it feeds the topmost paper. The separator roller and separator pad ensures that only one sheet is fed at a time.
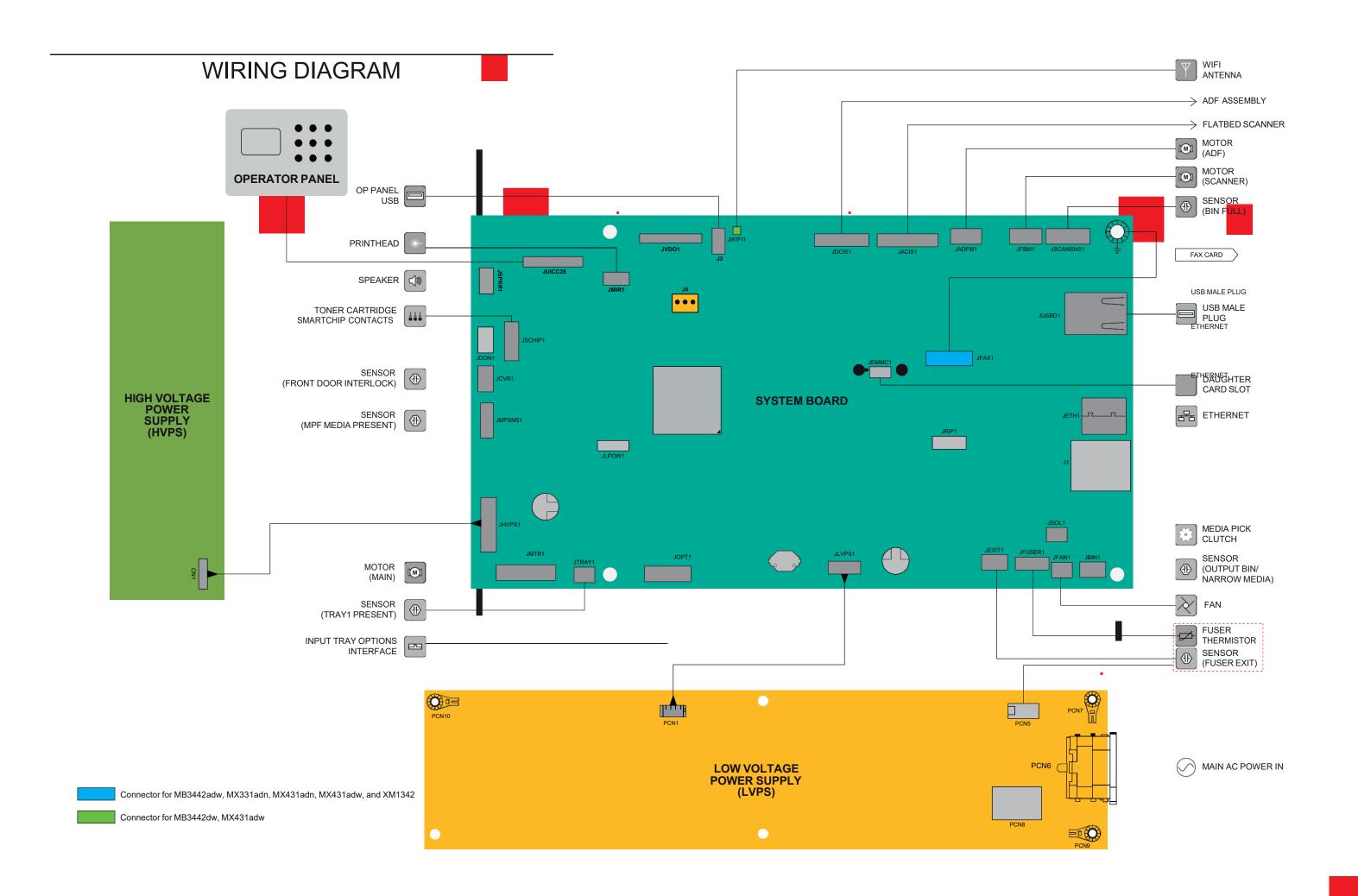
ADF theory

ADF paper path

1	ADF tray
2	ADF pick roller
3	ADF separator pad
4	ADF feed roller
5	ADF scan roller
6	Sensor (ADF scan)
7	Sensor (ADF paper present)
8	ADF exit roller
9	ADF bin

Paper from the ADF tray enters the ADF through the ADF pick roller, ADF feed roller, and ADF separator pad. On the ADF tray, the sensor (ADF paper present) detects if paper is loaded.

After the paper is fed, it travels to the ADF scan roller for scanning. As the paper passes the sensor (ADF scan),the scanner under the ADF obtains the image from the sheet. If equipped, a CIS unit obtains the image from the other side of the sheet in a duplex scan job.

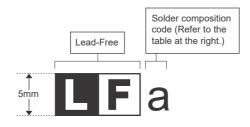After the paper is scanned, the ADF exit roller ejects the paper to the ADF bin.

「**Descriptions in page 243 (to 250) are not applicable to this model. Therefore, it was deleted.** 」

WIRING DIAGRAM

OPERATOR PANEL

OP PANEL USB

PRINTHEAD

SPEAKER

TONER CARTRIDGE SMARTCHIP CONTACTS

SENSOR (FRONT DOOR INTERLOCK)

SENSOR (MPF MEDIA PRESENT)

HIGH VOLTAGE POWER SUPPLY (HVPS)

CN1

MOTOR (MAIN)

SENSOR (TRAY1 PRESENT)

INPUT TRAY OPTIONS INTERFACE

WIFI ANTENNA

ADF ASSEMBLY

FLATBED SCANNER

MOTOR (ADF)

MOTOR (SCANNER)

SENSOR (BIN FULL)

FAX CARD

USB MALE PLUG

USB MALE PLUG

ETHERNET

ETHERNET DAUGHTER CARD SLOT

ETHERNET

MEDIA PICK CLUTCH

SENSOR (OUTPUT BIN/ NARROW MEDIA)

FAN

FUSER THERMISTOR

SENSOR (FUSER EXIT)

MAIN AC POWER IN

SYSTEM BOARD

JVDO1
JWIFI1
J3
JDCIS1
JACIS1
JADFM1
JFBM1
JSCANSNS1
JUICC28
JMIR1
J4
JSPKR1
JSCHIP1
JDON1
JCVR1
JMPSNS1
JUSBD1
JFAX1
JEMMC1
JRIP1
JETH1
JLPOW1
J1
JHVPS1
JSOL1
JMTR1
JTRAY1
JOPT1
JLVPS1
JEXIT1
JFUSER1
JFAN1
JBIN1

LOW VOLTAGE POWER SUPPLY (LVPS)

PCN10
PCN1
PCN5
PCN7
PCN6
PCN8
PCN9

Connector for MB3442adw, MX331adn, MX431adn, MX431adw, and XM1342

Connector for MB3442dw, MX431adw

LEAD-FREE SOLDER

The PWB's of this model employs lead-free solder. The "LF" marks indicated on the PWB's and the Service Manual mean "Lead-Free" solder. The alphabet following the LF mark shows the kind of lead-free solder.

Example:

Lead-Free

Solder composition code (Refer to the table at the right.)

5mm

L F a

\<Solder composition code of lead-free solder\>

Solder composition	Solder composition code
Sn-<u>Ag</u>-Cu	a
Sn-Ag-<u>B</u>i Sn-Ag-<u>B</u>i-Cu	b
Sn-<u>Z</u>n-Bi	z
Sn-<u>I</u>n-Ag-Bi	i
Sn-Cu-<u>N</u>i	n
Sn-Ag-<u>S</u>b	s
Bi-Sn-Ag-<u>P</u> Bi-Sn-Ag	p

(1) NOTE FOR THE USE OF LEAD-FREE SOLDER THREAD

When repairing a lead-free solder PWB, use lead-free solder thread.

Never use conventional lead solder thread, which may cause a breakdown or an accident.

Since the melting-point of lead-free solder thread is about 40°C higher than that of conventional lead solder thread, the use of the exclusive-use soldering iron is recommended.

(2) NOTE FOR SOLDERING WORK

Since the melting-point of lead-free solder is about 220°C, which is about 40°C higher than that of conventional lead solder, and its soldering capacity is inferior to conventional one, it is apt to keep the soldering iron in contact with the PWB for longer time. This may cause land separation or may exceed the heat-resistive temperature of components. Use enough care to separate the soldering iron from the PWB when completion of soldering is confirmed.

Since lead-free solder includes a greater quantity of tin, the iron tip may corrode easily. Turn ON/OFF the soldering iron power frequently.

If different-kind solder remains on the soldering iron tip, it is melted together with lead-free solder. To avoid this, clean the soldering iron tip after completion of soldering work.

If the soldering iron tip is discolored black during soldering work, clean and file the tip with steel wool or a fine filer.

CAUTION FOR BATTERY REPLACEMENT

(Danish)   ADVARSEL !
Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English)   Caution !
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the manufacturer.
Dispose of used batteries according to manufacturer's instructions.

(Finnish)   VAROITUS
Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.

(French)   ATTENTION
Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type équivalent recommandé par
le constructeur.
Mettre au rebut les batteries usagées conformément aux
instructions du fabricant.

(Swedish)   VARNING
Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

(German)   Achtung
Explosionsgefahr bei Verwendung inkorrekter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

CAUTION FOR BATTERY DISPOSAL

(For USA, CANADA)
"BATTERY DISPOSAL"
THIS PRODUCT CONTAINS A LITHIUM PRIMARY
(MANGANESS DIOXIDE) MEMORY BACK-UP BATTERY
THAT MUST BE DISPOSED OF PROPERLY. REMOVE THE
BATTERY FROM THE PRODUCT AND CONTACT YOUR
LOCAL ENVIRONMENTAL AGENCIES FOR INFORMATION
ON RECYCLING AND DISPOSAL OPTIONS.

"TRAITEMENT DES PILES USAGÉES"
CE PRODUIT CONTIENT UNE PILE DE SAUVEGARDE DE
MÉMOIRE LITHIUM PRIMAIRE (DIOXYDE DE MANGANÈSE)
QUI DOIT ÊTRE TRAITÉE CORRECTEMENT. ENLEVEZ LA
PILE DU PRODUIT ET PRENEZ CONTACT AVEC VOTRE
AGENCE ENVIRONNEMENTALE LOCALE POUR DES
INFORMATIONS SUR LES MÉTHODES DE RECYCLAGE ET
DE TRAITEMENT.

SHARP