

**Model CH-C1
Machine Code:
D135/D136/D137/D138
Field Service Manual**

23 May, 2014

Revision History

Version	Revision Date	Revision History
V1.00	2013.05.13	-
V2.00	2014.03.20	See page 1 "Revision History (V2.00)" .
V3.00	2014.05.23	See page 4 "Revision History (V3.00)" .

Revision History (V2.00)

Chapter	Items
2. Installation	Main machine (Pro)
	Main machine (Office)
	Finisher SR4090 (D703) /Booklet Finisher SR4100 (D704)
	Finisher SR4110 (D707)
	Punch Unit PU5000 (B831)
	Copy Tray Type M2 (D744)
	Decurl Unit DU5020 (D727)
	Buffer Pass Unit Type 5020 (D751)
	Multi-Folding Unit FD4000 (D615)
	Cover Interposer Tray CI4010 (D711)
	LCIT RT4030 (D710)
A3/11"x17" Tray Unit Type M2 (D749)	
3. Preventive Maintenance	PM Parts Settings
	Toner Shield Glass Cleaning
4. Replacement and adjustment	PCDU
	BCU replacement procedure
	NVRAM Replacement Procedure

Chapter	Items
5. Troubleshooting	Adjustments Required for Improved Glossiness (Pro C5110S/C5100S Only)
	Adjustments Required for Improved Glossiness (MP C8002SP/MP C6502SP)
	Margin adjustment
	Image Quality_Definitions of abnormal images
	Color spots (189mm/40mm pitch)
	White spots
	White spots with toner cores
	White, fish-shape stains
	Vertical streaks caused by contact with the toner adhering to the guide plate
	Roller marks
	Banding Caused by the PCDU (Pro C5110S/Pro C5100S)
	Vertical band of halftone images
	Uneven density in the area 85mm from the trailing edge
	Density unevenness and dust when using AC transfer (Pro C5110S/C5100S Only)
	Uneven glossiness when feeding large size paper after small size paper
	Unevenness in indefinite shape on sides of paper
	Random Pitch Banding Caused by Lubricant Falling from the Drum Cleaning Unit
3mm-Pitch Banding on Paper with Paper Thickness 6 (Pro C5110S/C5100S Only)	

Chapter	Items
5. Troubleshooting	Stains in the area 76mm from the trailing edge
	Stains on the side edges of paper
	Blocking on the Paper Output Tray
	Streaks made by Paper Edges
	Grainy image
	Uneven image density on textured paper(Pro C5110S/C5100S Only)
	Small granular toner fixation (Pro C5110S/C5100S Only)
	Too Much Weight/Abnormal Noise on Pulling Out/Pushing In the Drawer Unit
	Correspondence Table for Adjustment Settings for Operators and SP Mode (Pro C5110S/C5100S Only)
	SC516 after repeated J097
	SC570-00 (Pro C5110S/C5100S Only)
	SC515-01
	SC515-02
	Curls
	Envelopes Are Wrinkled
	Feed Direction Limitations Applied on Certain Types of Envelopes
	Twining Jams in the Lower Part of the Fusing Unit Caused by Insufficient Margins
Fan Noise is Large	

Chapter	Items
5. Troubleshooting	Proof tray detected to be full too soon
	Envelopes are not fed
	Toner rubbing off along the fold line
	SR4090/SR4100: Corner stapling: stapling failure/stack failure/large misalignment
	SR4090/SR4100: 1st sheet of stapled stack misaligned
	SR4090/SR4100: Paper jam caused by the shift tray unexpectedly staying up or down
	SR4090/SR4100: Problem with paper stacked on the shift tray
	SR4100: How to improve center-folding accuracy
	SR4090/SR4100: SP Settings list for adjusting Shift Tray Jogger
	How to improve center-folding accuracy
	Corner stapling: stapling failure/stack failure/large misalignment
	SR4090/SR4100: 1st sheet of stapled stack misaligned
	SP Settings for adjusting Shift Tray Jogger/Corner Stapling/Booklet Stapling for SR4090/SR4100
	Problem with paper stacked on the shift tray
	Paper jam caused by the shift tray unexpectedly staying up or down
Creases and Jam in stapler unit	
Appendices	Preventive Maintenance Tables

Revision History (V3.00)

Chapter	Items
2. Installation	Main Machine Installation
	Cooling Fan Unit Type M2 (D770)

Chapter	Items
3. Preventive Maintenance	PM Parts Settings
	PM Counter Display: All PM Parts list: Main Menu
4. Replacement and adjustment	Toner Supply Unit: Sub Hopper Unit replacement / adjustment procedure
	Scanner Unit: Important Notice for Scanner Heater Installation
	PCDU: Important notice of the newly replaced drum
	Image Transfer Belt Unit: Lubrication after replacement
	ITB Cleaning Unit: Brush when applying the lubricant powder or yellow toner
	PCDU: Brush when applying the lubricant powder or yellow toner
	Fusing Unit: Paper feed sensor
	Tandem Tray: Left tandem tray / Right tandem tray
	Paper feed unit for tray 1
	Duplex Unit: Roller HP sensor 2 / Sensor shift HP switch
	Motors and Sensors: Drum motor (KCMY) / Drum encoder sensor (KCMY)

Chapter	Items
5. Troubleshooting	Self-Diagnostic Mode
	Service Call 101-195: SC187 table
	Jam Detection (Sensor locations)
	Troubleshooting for 2~3mm pitch banding
	Troubleshooting for White spots appear in Winter environment
	Troubleshooting for scratch mark
	Troubleshooting streaks caused by damaged fusing belt
	Troubleshooting fuzzy line in originating in cyan drum
	Troubleshooting "Shock-jitter" in B/W mode
	Original size misdetection
	Improper message when set the tandem tray
	Skew in sub-scan direction
	Service Call 202-286: SC202-286 tables
	Service Call 300-398: SC381,382 tables
	Service Call 400-498: SC460 table
	Service Call 400-498: SC401 table
	Service Call 501-595: SC540 table
	Service Call 816-899: SC819 table
SR4090/SR4100: Staple misalignment troubleshooting	

Important Safety Notices

Prevention of Physical Injury

1. Before disassembling or assembling parts of the copier and peripherals, make sure that the copier power cord is unplugged.
2. The wall outlet should be near the copier and easily accessible.
3. If any adjustment or operation check has to be made with exterior covers off or open while the main switch is turned on, keep hands away from electrified or mechanically driven components.
4. The copier drives some of its components when it completes the warm-up period. Be careful to keep hands away from the mechanical and electrical components as the copier starts operation.
5. The inside and the metal parts of the fusing unit become extremely hot while the copier is operating. Be careful to avoid touching those components with your bare hands.

Health Safety Conditions

1. Toner and developer are non-toxic, but if you get either of them in your eyes by accident, it may cause temporary eye discomfort. Immediately wash eyes with plenty of water. If unsuccessful, get medical attention.
2. The copier, which use high voltage power source, can generate ozone gas. High ozone density is harmful to human health. Therefore, the machine must be installed in a well-ventilated room.

Observance of Electrical Safety Standards

The copier and its peripherals must be serviced by a customer service representative who has completed the training course on those models.

WARNING

- Keep the machine away from flammable liquids, gases, and aerosols. A fire or an explosion might occur.

CAUTION

- The Controller board on this machine contains a lithium battery. The danger of explosion exists if a battery of this type is incorrectly replaced. Replace only with the same or an equivalent type recommended by the manufacturer. Discard batteries in accordance with the manufacturer's instructions and local regulations.
- The optional fax and memory expansion units contain lithium batteries, which can explode if replaced incorrectly. Replace only with the same or an equivalent type recommended by the

manufacturer. Do not recharge or burn the batteries. Used batteries must be handled in accordance with local regulations.

Safety and Ecological Notes for Disposal

1. Do not incinerate toner bottles or used toner. Toner dust may ignite suddenly when exposed to an open flame.
2. Dispose of used toner, the maintenance unit which includes developer or the organic photoconductor in accordance with local regulations. (These are non-toxic supplies.)
3. Dispose of replaced parts in accordance with local regulations.
4. When keeping used lithium batteries in order to dispose of them later, do not put more than 100 batteries per sealed box. Storing larger numbers or not sealing them apart may lead to chemical reactions and heat build-up.

Laser Safety

The Center for Devices and Radiological Health (CDRH) prohibits the repair of laser-based optical units in the field. The optical housing unit can only be repaired in a factory or at a location with the requisite equipment. The laser subsystem is replaceable in the field by a qualified Customer Engineer. The laser chassis is not repairable in the field. Customer engineers are therefore directed to return all chassis and laser subsystems to the factory or service depot when replacement of the optical subsystem is required.

WARNING

- Use of controls, or adjustment, or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

WARNING

- Turn off the main switch before attempting any of the procedures in the Laser Optics Housing Unit section. Laser beams can seriously damage your eyes.

CAUTION MARKING:



d1352002

Warnings, Cautions, Notes

In this manual, the following important symbols and notations are used.

WARNING

- A Warning indicates a potentially hazardous situation. Failure to obey a Warning could result in death or serious injury.

CAUTION

- A Caution indicates a potentially hazardous situation. Failure to obey a Caution could result in minor or moderate injury or damage to the machine or other property.

Important







- Obey these guidelines to avoid problems such as misfeeds, damage to originals, loss of valuable data and to prevent damage to the machine.

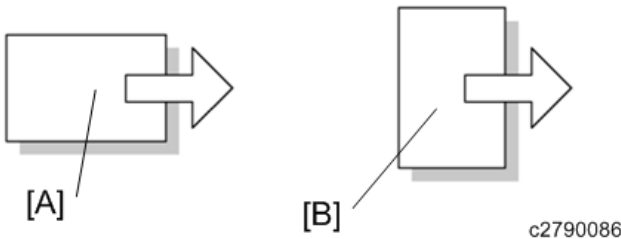
Note

- This information provides tips and advice about how to best service the machine.

Symbols, Abbreviations and Trademarks

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

	See or Refer to
	Clip ring
	Screw
	Connector
	Clamp
	E-ring
SEF	Short Edge Feed
LEF	Long Edge Feed



[A] Short Edge Feed (SEF)

[B] Long Edge Feed (LEF)

Trademarks

Microsoft[®], Windows[®], and MS-DOS[®] are registered trademarks of Microsoft Corporation in the United States and /or other countries.

PostScript[®] is a registered trademark of Adobe Systems, Incorporated.

PCL[®] is a registered trademark of Hewlett-Packard Company.

Ethernet[®] is a registered trademark of Xerox Corporation.

PowerPC[®] is a registered trademark of International Business Machines Corporation.

Other product names used herein are for identification purposes only and may be trademarks of their respective companies. We disclaim any and all rights involved with those marks.

TABLE OF CONTENTS

- Revision History..... 1
 - Revision History (V2.00)..... 1
 - Revision History (V3.00)..... 4
- Important Safety Notices..... 7
 - Prevention of Physical Injury..... 7
 - Health Safety Conditions..... 7
 - Observance of Electrical Safety Standards..... 7
 - Safety and Ecological Notes for Disposal..... 8
 - Laser Safety..... 8
 - Warnings, Cautions, Notes..... 9
- Symbols, Abbreviations and Trademarks..... 10
 - Trademarks..... 10

1. Product Information

- Product Overview..... 43
 - Component Layout..... 43
 - Paper Path..... 44
 - Drive Layout..... 45
- Machine Codes and Peripherals Configuration..... 48
- Specifications..... 54
- Guidance for Those Who are Familiar with Predecessor Products..... 55
 - New features of D137/D138 and D135/D136..... 55
 - Developed Image Quality..... 55
 - Improvement of Banding Issues..... 55
 - Improvement of the Scratch Mark Issue..... 56
 - Improvement of the Toner Dusting Issue..... 56
 - Developed Printing Quality of Textured Paper..... 57
 - Developed User Appliance..... 57
 - Controller features..... 58

2. Installation

- Installation Requirements..... 59
 - Environment..... 59
 - Minimum Space Requirements..... 60
 - Installation space..... 60

Dimensions.....	61
D137/D138.....	61
D135/D136.....	62
Power Requirements.....	62
Input voltage level (D137/D138).....	62
Input voltage level (D135/D136).....	63
Main Machine Installation.....	64
Special Tools and Lubricants.....	64
D137/D138.....	64
D135/D136.....	65
Installation Flow Chart.....	66
Accessory Check.....	67
D137/D138.....	67
D135/D136.....	69
Installation Procedure (D137/D138).....	72
Removing the Retainers of the Charge Roller Units (C, M, K).....	74
Attaching the ITB Separation Lever.....	82
Operation Panel Attachment.....	87
Operator Call Light Attachment.....	93
Attaching the Service Pocket.....	94
Storing the Supply Port Caps for the Developer.....	96
Storing the Factory SP Sheet.....	97
Attaching the decals.....	97
Machine Level Adjustment.....	99
Installing the Securing Bracket to Prevent the Power Cord from Falling Off.....	101
How to Set the Toner Cartridge.....	102
Executing DEMS.....	104
ACC (Automatic Color Calibration) Adjustment.....	104
Checking the copy image with color chart.....	105
Paper Tray Settings.....	105
Paper Library Data Installation.....	105
Installation Procedure (D135/D136).....	107
Removing the Retainers of the Charge Roller Units (C, M, K).....	110

Attaching the ITB Separation Lever.....	118
Attaching the Service Pocket.....	123
Storing the Supply Port Cap of the Developer.....	125
Storing the Factory SP Sheet.....	125
Attaching the decals.....	125
Machine Level Adjustment.....	127
Installing the Securing Bracket to Prevent the Power Cord from Falling Off.....	129
How to Set the Toner Cartridge.....	130
ACC (Automatic Color Calibration) Adjustment.....	131
Checking the copy image with the color chart.....	132
Paper Tray Settings.....	132
Security Function Installation.....	132
Moving the Machine.....	141
D137/D138.....	141
D135/D136.....	143
Finisher SR4090 (D703) /Booklet Finisher SR4100 (D704).....	145
Accessory Check.....	145
Installation Procedure.....	146
Auxiliary Trays.....	153
Output Jogger Unit Type M2 (D705).....	156
Component Check.....	156
Installation.....	156
Punch Unit PU3060 (D706).....	161
Accessory Check.....	161
Installation Procedure.....	162
Finisher SR4110 (D707).....	185
Accessories.....	185
Installation Procedure.....	186
Docking the Finisher D707.....	188
Connecting the Finisher D707.....	190
How to Use the Spacer to Correct Paper Skew.....	191
SP Setting.....	194
Punch Unit PU5000 (B831).....	195

Component Check.....	195
Installation Procedure.....	196
Cooling Fan Unit Type M2 (D770).....	202
Component Check.....	202
Common Installation Procedure for Finisher SR4090 / Booklet Finisher SR4100 and Finisher SR4110	203
Installation Procedure for Finisher SR4090/ Booklet FinisherSR4100.....	212
Installation Procedure for Finisher SR4110.....	218
Information for Cooling Fan Unit Type M2.....	231
Copy Tray Type M2 (D744).....	233
Component Check.....	233
Installation Procedure.....	234
Decurl Unit DU5020 (D727) (D137/D138 Only).....	249
Accessories.....	249
Installation Procedure.....	250
Connect the Downstream Peripheral Device.....	258
Paper curl adjustment when Decurl Unit DU5020 connects with Finisher SR4090 or Booklet Finisher SR4100.....	261
Buffer Pass Unit Type 5020 (D751) (D137/D138 Only).....	262
Accessory Check.....	262
Installation.....	263
#01: When connecting the Buffer Pass Unit with the mainframe.....	266
#02: When connecting the Buffer Pass Unit with the Decurl Unit DU5020 (D727).....	271
Common Procedure.....	276
Multi-Folding Unit FD4000 (D615).....	282
Accessories.....	282
Installation.....	283
Tapes.....	283
Paper Guide, Sponge Strip.....	284
Ground Plate.....	286
Docking.....	286
Power Cord.....	288
Height Adjustment.....	289
Removing Parts for the Cover Interposer Tray CI4020 (D712).....	290

Proof Tray Auxiliary Plate.....	291
Detecting Paper Skew.....	291
Correcting Skew.....	292
Checking Side-to-Side Registration.....	294
Correcting Side-to-Side Registration.....	294
Mail Box CS4010 (D708) (D135/D136 Only).....	296
Accessories.....	296
Installation Procedure.....	296
Cover Interposer Tray CI4010 (D711).....	302
Accessories.....	302
Installation Procedure.....	303
Cover Interposer Tray CI4020 (D712).....	320
Accessories.....	320
Installation Procedure.....	321
Setting up the Unit and Docking to the Copier.....	321
Docking the Next Peripheral Device.....	324
Mounting the Tray Unit.....	324
LCIT RT4020 (D709).....	328
Accessories.....	328
Installation Procedure.....	328
Adjustment for the Rubber Foot Positions on the Rail.....	336
LCIT (D709) Tray Heater.....	338
Accessories.....	338
Installation.....	339
Image Adjustments: Side-to-side registration.....	352
8 1/2" x 14" Paper Size Tray Type M2 (D745).....	354
Component List.....	354
Installation Procedure.....	355
LCIT RT4030 (D710).....	363
Accessory Check.....	363
Installation Procedure.....	363
How to disconnect the LCIT from the main machine.....	374
LCIT (D710) Tray Heater.....	376

Accessories.....	376
Installation.....	377
Image Adjustments: Side-to-side registration.....	383
A3/11"x17" Tray Unit Type M2 (D749).....	384
Component List.....	384
Installation.....	385
Copy Connector Type 3260 (B328).....	392
Accessory Check.....	392
Preparation.....	392
Installation.....	393
Tab Sheet Holder Type M2 (D750).....	399
Accessories.....	399
Installation.....	399
IEEE802.11a/g/n Unit Type M2 (D164).....	403
Component List.....	403
Installation Procedure.....	403
User Tool Settings for IEEE 802.11a/g/n.....	406
SP Mode Settings for IEEE 802.11 Wireless LAN.....	408
Bluetooth Interface Unit Type D (D566).....	409
Accessories.....	409
Installation Procedure.....	409
IEEE1284 Interface Board Type A (B679).....	411
Component List.....	411
Installation Procedure.....	411
File Format Converter Type E (D377).....	413
Component List.....	413
Installation Procedure.....	413
SD card for NetWare printing Type M2 (D719).....	415
Component List.....	415
Installation Procedure.....	415
OCR Unit Type M2 (D166).....	417
Accessories.....	417
Details About Searchable PDF.....	417

Installation Procedure.....	418
Restoration Procedure.....	420
Postscript3 Unit Type M2 (D719).....	421
Accessories.....	421
Installation Procedure.....	421
IPDS Unit Type M2 (D719).....	423
Accessories.....	423
Installation Procedure.....	423
Browser Unit Type M2 (D719).....	425
Accessories.....	425
Installation Procedure.....	425
Do the following steps if the customer is using the Ricoh JavaScript connected to a Web application developed by Operius/RiDP.....	427
Optional Counter Interface Unit Type A (B870).....	428
Component Check.....	428
Installation Procedure.....	428
Smart Card Reader Built-in Unit Type M2 (D739) (D135/D136 Only).....	432
Component Check.....	432
Installation Procedure.....	433
DataOverwriteSecurity Unit Type H (B869) (D135/D136 Only).....	441
Overview.....	441
Component List.....	441
Installation Procedure.....	441
Copy Data Security Unit Type G (D640).....	443
Component Check List.....	443
Installation.....	443
User Tool Setting.....	444
Check All Connections.....	445
SD Card Appli Move.....	446
Overview.....	446
Move Exec.....	446
Undo Exec.....	447
Caution.....	448

3. Preventive Maintenance

Preventive Maintenance Tables.....	451
Image Quality Standards.....	452
Resolution.....	452
Color shift.....	452
Magnification ratio error margin.....	453
Magnification ratio error margin deviation.....	453
Pitch error margin.....	453
Perpendicularity.....	454
Linearity.....	454
Parallelism.....	454
Missing Image Area (D135/D136).....	455
Missing Image Area (D137/D138).....	456
Margin position.....	459
1st Side/2nd Side Positional Precision (Shift Length of 2nd Side Compared to 1st Side).....	459
Paper Transfer Quality Standards.....	460
Registration.....	460
Exposure glass.....	460
ADF.....	460
Skew.....	461
Exposure glass.....	461
ADF.....	461
PM Parts Settings.....	463
PM Parts Replacement Procedure.....	463
Preparation before Operation Check.....	465
Operation Check.....	465
PM Counter Display.....	466
Note concerning Running Distance Data.....	466
Opening the PM Counter.....	467
PM Parts Screen Details.....	468
All PM Parts list: Main Menu.....	468
Number Button Submenu.....	469
Parts List for PM Yield Indicator.....	469

Estimated Usage Rate/Estimated Remaining Days.....	470
Commissioning Status Report Print.....	471
Initial Adjustment SP Lists.....	472
D137/D138.....	472
D135/D136.....	476
Cleaning Points.....	479
Scanner.....	479
Exposure Glass, ADF Exposure Glass, Reflective Plate, 1st Mirror, 2nd Mirror, 3rd Mirror, Original Size Sensors.....	479
Laser Unit.....	481
Toner shield glass.....	481
Developer.....	482
Development Unit.....	482
Toner Supply.....	483
Toner Supply Unit.....	483
ITB Unit.....	484
Rollers	485
ID Sensor.....	485
Fusing.....	486
Stripper Plate (Fusing / Pressure)	486
Fusing Entrance Guide.....	487
Thermistor (Fusing Belt).....	487
Thermistor (Hot Roller Shaft) (ProC5100S/5110S Only).....	488
Thermopile.....	488
Other.....	489
Development Intake Dust Filter.....	489
Pressure Roller Dust Filter (D137/D138 only).....	489
Paper Feed.....	490
1st to 4th Transport Roller (Drive/Idle).....	490
Registration Roller (Drive/Idle).....	491
Relay Roller (Drive/Idle).....	492
Bypass Relay Roller (Drive/Idle).....	493
Registration Sensor.....	494

Relay Sensor.....	494
Paper Dust Collection Unit.....	495
Duplex.....	497
Heat Pipe Roller.....	497
Heat Pipe Drive Roller.....	497
Paper Exit Roller (Drive/Idle).....	498
Inverter Feed Out Roller (Drive/Idle).....	500
Inverter Exit Roller (Drive/Idle).....	501
Paper Exit Relay Roller (Drive/Idle).....	502
Inverter Feed In Roller (Drive/Idle).....	504
Exit Transport Guide Plate (Upper/Middle/Left).....	505
Duplex Unit Roller 1st to 4th (Drive/Idle).....	507
Duplex Exit Roller (Drive/Idle).....	509
Transport Guide Plate (Upper/Lower).....	510
Purge Guide Plate (Lower).....	512
Lubrication Points.....	514
Fusing.....	514
Bearing (Hot Roller/Pressure Roller) Lubrication.....	514
Fusing Gear Lubrication.....	514

4. Replacement and Adjustment

Notes on the Main Power Switch.....	517
Push Switch	517
Characteristics of the Push Switch (DC Switch).....	517
Shutdown Method.....	518
Forced Shutdown	519
Special Tools and Lubricants.....	520
D137/D138.....	520
D135/D136.....	520
Outer Covers.....	522
Right Cover.....	522
Right Middle Front Cover (D137/D138).....	522
Right Middle Front Cover (D135/D136).....	524
Right Middle Upper Cover (D137/D138).....	525

Right Middle Upper Cover (D135/D136).....	527
Right Middle Rear Cover (D137/D138).....	528
Right Middle Rear Cover (D135/D136).....	529
Right Lower Cover.....	530
Left Cover.....	532
Left Middle Cover.....	532
Left Lower Cover.....	535
Rear Cover.....	537
Rear middle cover.....	537
Rear Lower Cover.....	538
Upper Cover.....	539
Upper Front Cover (D137/D138).....	539
Upper Front Cover (D135/D136).....	540
Upper Rear Cover (Small).....	542
Upper Left Cover/ Upper Right Cover.....	542
Operation Panel (D137/D138).....	545
Operation Panel.....	545
LDCD Board.....	546
OPU Board / OPR Board.....	547
LCD Board (Touch Panel Unit).....	549
Operation Panel (D135/D136).....	551
Operation Panel.....	551
Touch Panel Calibration.....	552
LDCD Board.....	555
OPU Board / OPR Board.....	556
LCD Board (Touch Panel Unit).....	557
ADF.....	558
ADF Removal.....	558
Adjustment after Replacing the ADF.....	560
CIS RGB Adjustment	560
Checking the vertical registration.....	560
Checking the horizontal registration.....	561
Checking the skew.....	561

Checking the magnification.....	562
Platen Adjustment.....	562
ADF Cover.....	563
ADF Front Cover.....	563
ADF Rear Cover.....	565
Feed Cover.....	566
Original Feed Unit.....	566
Pick-up Roller / Transport Belt.....	567
ADF Separation Roller.....	570
Original Registration Sensor.....	571
Original Exit Sensor.....	572
ADF Control Board.....	574
Separation Sensor / Skew Correction Sensor.....	575
Original Width Sensor / Interval Sensor.....	576
B5 Width Sensor / A4 Width Sensor / LG Width Sensor.....	577
APS Feeler.....	578
ADF Lift-Up Interlock SW / Lift-Up Sensor.....	579
Original Set Sensor.....	580
A4 LEF/LT LEF Sensor.....	581
Bottom Plate HP Sensor.....	581
Bottom Plate Position Sensor.....	582
ADF Feed Cover Interlock SW / Pick-up Roller HP Sensor.....	583
ADF Entrance Motor.....	584
ADF Scanning Motor.....	585
ADF Exit Motor.....	585
ADF Bottom Plate Lift Motor.....	586
ADF Pick-up Roller Lift Motor / ADF Transport Motor.....	587
ADF Feed Motor.....	589
CIS Unit.....	590
Drawer Unit.....	592
Layout (Motors).....	592
Drawer Unit (Front).....	592
Drawer Unit (Rear).....	593

Layout (Boards).....	593
Drawer Unit Cover.....	594
If the Drawer is Locked.....	595
DUB (Drawer Unit Board).....	600
Paper Separation AC Power Pack.....	600
Fusing Web Control Board-Drawer (D137/D138 only).....	601
Curled Cord.....	602
Drawer Unit Connector.....	604
Drawer Unit Set Sensor.....	606
Drawer Unit Lock Sensor.....	606
Drawer Unit Handle Sensor.....	608
Drawer Unit Lock Motor.....	609
Registration Motor.....	611
Exit Motor.....	612
Duplex Inverter Entrance Motor.....	612
Exit Inverter Motor.....	613
Duplex Transport Motor.....	614
Duplex Exit Motor.....	615
Cleaning Web Motor (D137/D138 only).....	616
Cleaning Web Contact Motor (D137/D138 only).....	617
Fusing Heat Pipe Cooling Fan.....	618
IH Coil Cooling Fan.....	620
Fusing Pressure Roller Intake Fan (D137/D138 only).....	621
Toner Supply Unit.....	624
Toner Supply Unit Front Cover.....	624
Toner Supply Unit.....	624
ID Chip Connector Board (KCMY).....	627
Toner Supply Unit Inner Cover.....	628
Sub Hopper Unit (KCMY).....	629
Adjustment after Sub Hopper Unit (KCMY) replacement.....	631
Toner End Sensor (KCMY).....	632
Sub Hopper Motor (KCMY).....	632
Toner Supply Board (TSB).....	632

Toner Cartridge Guide.....	633
Toner Supply Motor (KCMY).....	636
Scanner Unit.....	638
Exposure Glass.....	638
ADF Exposure Glass / Gap Sheet (D135/D136).....	639
How to Remove the ADF Exposure Glass/Gap Sheet.....	639
How to Attach the ADF Exposure Glass/Gap Sheet.....	640
Modification Procedure for Original Transport.....	642
Replacing Parts of the ADF.....	642
Removing the Scanner Parts.....	644
Lens Block / Original Size Sensor.....	644
Adjustment after Replacing the Lens Block.....	646
Exposure Lamp (LED).....	646
Scanner Drive Motor.....	648
Scanner HP Sensor.....	650
DF Position Sensor.....	651
SIO Board.....	653
Scanner Unit.....	655
Scanner Wire.....	660
Preparation for Replacing a Scanner Wire.....	660
Replacing the Scanner Wire.....	661
Preparation for Reassembling the Scanner Wire.....	663
Reassembling the Scanner Wire.....	664
Installing the Scanner Heater.....	665
Accessories.....	665
Installation.....	666
Magnification and Registration Adjustment.....	669
Sub Scan Magnification Adjustment.....	669
Sub Scan Registration Adjustment.....	669
Main Scan Registration Adjustment.....	670
Laser Unit.....	671
Before You Begin.....	671
Caution Decals.....	671

Laser Unit.....	672
Before Replacement.....	672
Replacement.....	672
How to Distinguish between the CK Laser Unit and YM Laser Unit.....	674
Notes on Installation of a New Laser Unit.....	676
Adjustment after Laser Unit Replacement.....	676
Laser Unit Cooling Fan (Left / Right).....	677
PCDU.....	680
Faceplate.....	680
PCDU.....	681
Charge Roller Unit.....	683
Drum Cleaning Unit Removal.....	684
Notes on Replacing the Drum Cleaning Unit and Drum Cleaning Blade.....	688
OPC Drum.....	689
Attaching the New OPC Drum.....	689
Drum Cleaning Unit Internal Components.....	692
Separation of the Lubrication Unit and Cleaning Unit.....	692
Lubrication Unit.....	694
Cleaning Unit.....	698
Assembling the Cleaning Unit and Lubrication Unit with New Seals.....	699
Development Unit.....	702
Development Unit.....	702
Development Filter.....	704
Removing Old Developer.....	705
General.....	705
PART 1: Preparations for Developer Removal.....	705
PART 2: Developer Removal Procedure.....	707
Adding New Developer.....	710
Adding New Developer (Summary).....	711
Adding New Developer and Adjustment.....	711
Image Transfer Belt Unit.....	718
ITB Unit Removal.....	718
ITB Replacement.....	719

Lubrication after replacement.....	724
ID/MUSIC Sensors.....	725
ITB HP Sensor.....	726
PTR Separation Sensor.....	726
ITB Lift (YMC) Sensor.....	727
Image Transfer Roller (K).....	728
Image Transfer Roller (YMC).....	729
ITB Bias Roller.....	731
Transfer Power Pack/Separation Power Pack.....	736
TDRB (Transfer Drive Relay Board).....	737
Anti-condensation Heater.....	738
PTR Separation Motor.....	739
AC Transfer Power Pack (D137/D138 Only).....	740
ITB Motor.....	741
ITB Drive Shaft Gear / Encoder Sensor.....	741
ITB Driven Shaft Encoder Sensor.....	744
ITB Cleaning Unit.....	746
ITB Cleaning Unit.....	746
ITB Cleaning Blade.....	747
ITB Lubricant Brush.....	748
ITB Lubricant Bar.....	750
ITB Lubricant Blade.....	751
ITB Cleaning Unit Set Sensor.....	751
ITB Paper Dust Cleaning Brush Roller.....	752
Lubrication after Replacement.....	755
Paper Transfer Roller Unit.....	757
Paper Transfer Roller Unit.....	757
Paper Discharge Plate.....	760
Paper Transfer Roller.....	760
Fusing Unit.....	762
Screw List.....	762
Removing the Fusing Unit.....	764
Fusing Heat Pipe.....	767

Fusing Unit Cover.....	768
Fusing Front / Rear Cover.....	768
Entrance Drawer Cover.....	768
Exit Drawer Cover.....	769
Fusing Upper Cover.....	770
Separation Unit.....	770
Fusing Unit Plate.....	772
IH Coil Unit.....	775
Fusing Cleaning Web Unit (D137/D138 Only).....	777
Fusing Cleaning Web (D137/D138 Only).....	779
Fusing Belt Smoothing Roller (D137/D138 Only).....	783
Fusing Belt Smoothing Roller Contact Sensor (Pro C5100S/Pro C5110S).....	785
Separating the Fusing Unit.....	785
Heating Roller, Fusing Roller, Fusing Belt.....	787
Pressure Roller Stripper Plate.....	794
Fusing Lamp.....	796
Pressure Roller.....	798
Thermistor (Fusing Belt).....	801
Thermistor (Hot Roller Shaft).....	802
Heating Roller Rotation Sensor.....	803
Pressure Roller Sensor (Rear).....	804
Pressure Roller Sensor (Front).....	805
Hot Roller NC Sensor.....	806
Thermopile (Pressure Roller).....	807
Thermostat (Pressure Roller).....	809
Fusing Paper Feed Sensor.....	810
Adjustment after replacing the fusing paper feed sensor.....	811
Cleaning Web Set Sensor.....	812
Cleaning Web End Sensor.....	812
Cleaning Web Contact Sensor.....	813
Paper Transport Belt Unit.....	814
Paper Transport Belt Unit.....	814
Paper Transport Belt.....	815

PTB Fans.....	815
PTB Sensor.....	816
PTB Unit Set Sensor.....	817
Tandem Tray.....	818
Left Tandem Tray / Right Tandem Tray.....	818
Feed Roller, Pick-up Roller and Separation Roller.....	820
Paper Feed Unit for Tray 1.....	821
Rear Fence Home Position Sensor / Left Tray Paper Sensor.....	825
Rear Fence Return Sensor.....	826
Paper Height Sensors 1, 2, 3 / Tray Down Sensor / Right Tray Set Sensor.....	828
Rear End Fence Closed Sensor.....	831
End Fence Rear Solenoid.....	834
Left Tray Lock Solenoid.....	836
Rear Fence Drive Motor.....	837
1st Tray Lift Motor.....	837
Paper Feed Section (Tray 2-3 / Vertical Transport).....	839
Paper Tray.....	839
Feed Roller, Pick-up Roller and Separation Roller.....	839
Paper Feed Unit.....	840
Pick-up Solenoid.....	842
Transport Sensor.....	842
Paper Feed Sensor.....	843
Paper Tray Upper Limit Sensor / Paper End Sensor.....	843
Vertical Transport LED.....	844
Paper Size Sensors.....	846
Paper Tray Set Sensors.....	846
Paper Tray Lift Motor.....	847
Tray Heater.....	848
Upper Tray Heater.....	848
Lower Tray Heater.....	850
Tray Heater Setting.....	851
By-pass Tray Unit (D137/D138).....	853
By-pass Tray Unit Removal.....	853

By-pass Tray Unit Separation.....	855
By-pass Pick-up Roller / By-pass Feed Roller / By-pass Separation Roller.....	856
By-pass Tray Paper End Sensor.....	857
By-pass Paper Width Sensor.....	858
By-pass Paper Length Sensor.....	859
By-pass Tray Lower Limit Sensor.....	860
By-pass Tray Lift Motor.....	860
By-pass Tray Upper Limit Sensor / By-pass Paper Feed Sensor.....	863
By-pass Pick-up Solenoid.....	865
By-pass Tray Set Sensor.....	866
By-pass Tray LED Connector (Red).....	866
By-pass Tray Unit (D135/D136).....	868
By-pass Tray Unit Removal.....	868
By-pass Tray Unit Separation.....	870
By-pass Pick-up Roller / By-pass Feed Roller / By-pass Separation Roller.....	872
By-pass Tray Paper End Sensor.....	873
By-pass Paper Width Sensor.....	874
By-pass Paper Length Sensor.....	875
By-pass Paper Feed Sensor.....	876
By-pass Pick-up Solenoid.....	879
By-pass Tray LED Connector (Red).....	880
Paper Relay and Registration Section.....	882
Registration Unit.....	882
Relay Unit.....	884
Registration Sensor.....	886
Paper Type Sensor.....	888
Relay Sensor.....	889
By-pass Tray Paper Type Sensor.....	889
Paper Exit and Duplex Unit.....	892
Paper Exit Unit.....	892
Paper Exit Sensor.....	894
Paper Exit Relay Sensor.....	895
Inverter Exit Sensor.....	896

Inverter Feed-in Sensor.....	897
Inverter Feed-out Sensor.....	899
Inverter Junction Gate Home Position Sensor.....	900
Inverter Junction Gate Motor.....	900
Duplex Inverter Solenoid.....	901
Paper Exit Left Guide Plate Sensor.....	902
Paper Exit Upper Guide Plate Sensor.....	903
Duplex Unit.....	904
Purge Relay Sensor / Duplex Invert Sensor.....	904
Duplex Invert Solenoid.....	905
Duplex Unit Entrance Sensor.....	906
Duplex Unit Sensor 1.....	907
Duplex Unit Sensor 2.....	907
Duplex Unit Sensor 3.....	908
Duplex Unit Sensor 4.....	908
Duplex Exit Sensor.....	909
Horizontal Feed Guide Plate Open Sensor.....	909
Roller HP Sensor 1.....	910
Roller HP Sensor 2.....	911
Sensor Shift Motor.....	911
Edge Detection Unit.....	913
Edge Detection Sensor.....	914
Sensor Shift HP Switch.....	914
Roller Shift Motor 1 / Roller Shift Motor 2.....	915
Paper Purge Unit.....	917
Paper Purge Unit.....	917
PCB: LSB.....	919
Push Switch.....	920
Duplex Inverter Motor.....	921
Purged Paper Sensor.....	922
LED: Connector: Red.....	923
Upper guide plate LED / Purge door LED.....	924
Lower guide plate LED.....	924

Main Boards / HDD Unit.....	926
Layout.....	926
Controller Board.....	927
When installing the New Controller Board.....	929
HDD Unit.....	930
After Installing the New HDD Unit.....	931
Disposal of HDD Unit.....	931
Reinstallation.....	931
BCU.....	932
NVRAM Replacement Procedure.....	933
NVRAM on the Controller Board.....	933
NVRAM (EEPROM) on the BCU.....	937
IPU.....	938
IOB.....	939
When removing the motors that are behind the IOB.....	940
PFB.....	940
When removing the motors that are behind the PFB.....	941
IH Inverter.....	941
AC Drive Board.....	942
Notes on Replacing the AC Drive Board.....	942
PSU1 / PSU2.....	943
When removing the motors and sensors that are behind the PSU1/PSU2.....	944
Potential Sensor Board.....	946
Combined High-Voltage Power Supply Board (Charge / Development) (KCMY).....	947
Combined High-Voltage Power Supply Board (KC).....	947
Combined High-Voltage Power Supply Board (MY).....	948
Fusing Web Control Board-Main Machine (D137/D138 only).....	949
AC Drive Board Relay (D137/D138 only).....	949
Motors and Sensors.....	950
Layout (Motor).....	950
Rear of the Machine (Top).....	950
Rear of the Machine (Middle).....	951
Rear of the Machine (Bottom).....	952

Drawer Unit (Front).....	953
Drawer Unit (Rear).....	954
Drum Motor (KCMY) / Drum Encoder Sensor (KCMY).....	954
Removing the Drive Exhaust Fan and the Potential Sensor Board.....	958
Drum HP Sensor (D137/D138 only).....	960
Drum Cleaning Motor (KCMY).....	960
Removing the Drive Exhaust Fan and the Potential Sensor Board.....	962
Development Motor (KCMY).....	963
Removing the Drive Exhaust Fan and the Potential Sensor Board.....	965
Development Roller HP Sensor (KCMY).....	966
By-pass Feed Motor/Relay Motor.....	966
PTR Motor / PTR Encoder Sensor.....	968
Paper Feed Motor/Transport Motor.....	970
1st Paper Feed Motor/1st Transport Motor.....	970
Vertical Transport Motor.....	971
2nd Paper Feed Motor/2nd Transport Motor, 3rd Paper Feed Motor/3rd Transport Motor.....	973
Fusing Drive Motor.....	974
Waste Toner Collection Motor.....	976
Removing the Waste Toner Collection Motor.....	976
Removing the Fusing Belt Smoothing Roller Drive Motor and the Bracket.....	979
Waste Toner Lock Sensor.....	980
Fusing Release Motor.....	981
Removing the Fusing Belt Smoothing Roller Drive Motor and the Bracket.....	983
Fusing Belt Smoothing Roller Drive Motor (D137/D138 only).....	984
Fusing Belt Smoothing Roller Contact Motor (D137/D138 only).....	986
Fans and Filters.....	988
Layout (Fans).....	988
Layout (Filters).....	992
Controller Exhaust Fan.....	992
Controller Intake Fan.....	993
Development Exhaust Fans (Right / Left).....	994
Development Intake Fans (KCMY).....	996
Drive Exhaust Fan.....	998

Fusing Exit Exhaust Fan.....	998
Fusing Pressure Roller Exhaust Fan (D137/D138 only).....	998
Heat Pipe Panel Exhaust Fan.....	1000
Heat Pipe Panel Intake Fan.....	1001
PTR Fusing Exhaust Fan.....	1003
ITB Motor Cooling Fan.....	1004
Ozone Exhaust Fan.....	1005
Duplex Exhaust Fans (Front / Middle / Rear).....	1006
IH Coil Power Cooling Fan.....	1007
ITB Cleaning Intake Fan.....	1008
ID Sensor Cleaning Fan.....	1009
PSU Fans (Right / Left).....	1010
Deodorizing Filters (Large / Small).....	1011
Dust Filters (Large / Small).....	1012
Ozone Filters (Large / Small).....	1013
Waste Toner Collection.....	1015
Waste Toner Bottle.....	1015
Waste Toner Bottle Unit.....	1016
Installing the Relay Duct.....	1018
Waste Toner Bottle Motor Sensor.....	1019
Waste Toner Full Sensor.....	1020
Waste Toner Bottle Set Sensor.....	1021
Waste Toner Transport Motor.....	1021
Waste Toner Upper Transport.....	1021
Waste Toner Vertical Transport.....	1022
Waste Toner Lower Transport.....	1024
Adjustment after Replacement.....	1025

5. Troubleshooting

Service Call 101-195.....	1027
SC100 (Engine: Scanning).....	1027
Service Call 202-286.....	1039
SC200 (Engine: Image Writing).....	1039
Service Call 300-398.....	1052

SC300 (Engine: Charge, Development).....	1052
SC300 (Engine: Development).....	1062
Service Call 400-498.....	1075
SC400 (Engine: Around the Drum).....	1075
SC300/400 (Engine: Transfer/Separation, Cleaning etc.).....	1080
Service Call 501-595.....	1107
SC500 (Engine: Paper transport 1: Paper Feed, Duplex, Transport).....	1107
SC500 (Engine: Paper Transport 2: Fusing, etc.).....	1132
SC500 (Engine: Paper Transport 3: Feed, Duplex, Transport, Fusing).....	1156
SC500 (Engine: Others).....	1163
Service Call 620-689.....	1164
SC600 (Engine: Communication and Others).....	1164
SC600 (Controller).....	1184
Service Call 700-780.....	1197
SC700 (Engine: Peripherals).....	1197
Service Call 816-899.....	1251
SC800 (Controller).....	1251
Service Call 900-998.....	1313
SC900 (Engine: Others).....	1313
SC900 (Controller).....	1315
Jam Detection.....	1322
Jam Displays.....	1322
Removing Jammed Paper.....	1323
Printer Engine Jam History.....	1323
How to check.....	1323
Display.....	1324
Jam Codes and Position Codes.....	1324
ADF.....	1325
Main Machine.....	1325
LCIT RT4020 (D709).....	1328
LCIT RT4030 (D710).....	1329
Finisher SR4090 (D703).....	1329
Booklet Finisher SR4100 (D704).....	1331

Finisher SR4110 (D707).....	1333
Multi Folding Unit FD4000 (D615):.....	1334
Mail Box CS4010 (D708).....	1336
Cover Interposer Tray CI4010 (D711).....	1337
Cover Interposer Tray CI4020 (D712).....	1337
Decurl Unit DU5020.....	1338
Buffer Pass Unit Type 5020 (D751).....	1339
Plockmatic Bookletmaker.....	1340
GBC Stream Punch.....	1340
Sensor Locations.....	1341
Paper Size Codes.....	1341
Fan Defect Detection.....	1343
Fan Locations and Fan SC.....	1343
Adjustment.....	1347
Adjustment 001: ACC (Automatic Color Calibration).....	1347
Overview.....	1347
Procedure.....	1347
Adjustment 002: Manual Gamma Adjustment.....	1348
Overview	1348
Printer Mode Adjustment.....	1348
Copier Mode Adjustment.....	1352
Adjustment 003: Scanner Registration.....	1355
Overview.....	1355
Adjustment Procedure.....	1355
Adjustment 004: ADF Registration.....	1355
Overview.....	1355
Adjustment Procedure.....	1356
Adjustment 005: Registration.....	1356
Overview.....	1356
Cause.....	1356
Contents.....	1356
Adjustment 006: Fusing Nip Width Adjustment for Envelopes.....	1364
Overview.....	1364

Adjustment Procedure.....	1364
Adjustment 007: Adjustments Required for Improved Glossiness.....	1365
Overview.....	1365
Adjustments Required for Improved Glossiness (Pro C5110S /Pro C5100S).....	1365
Adjustments Required for Improved Glossiness (MP C8002SP/MP C6502SP).....	1366
Adjustment 008: Margin Adjustment.....	1366
Overview.....	1366
Margin adjustment.....	1367
Adjustment 009: Staple misalignment (3 mm or more) occurs.....	1368
Symptom.....	1368
Cause.....	1369
Solution.....	1369
Image Quality.....	1373
Definitions of Abnormal Images.....	1373
Large classification: Points.....	1373
Large classification: Lines.....	1374
Large classification: Plane.....	1377
Image Quality 001: Spots.....	1383
Overview.....	1383
Troubleshooting for Color spots (189mm/40mm pitch).....	1384
Troubleshooting for White Spots in Low-Temperature, Low-Humidity Environment.....	1385
Troubleshooting for White spots Appear in Winter Environment (Pro C5110S/Pro C5100S).....	1386
Troubleshooting for White spots.....	1387
Troubleshooting for White spots with toner cores.....	1389
Troubleshooting for White, fish-shape stains.....	1390
Troubleshooting for Small granular toner fixation (Pro C5110S /Pro C5100S).....	1391
Image Quality 002: Streaks.....	1393
Overview.....	1393
Troubleshooting for Vertical streaks caused by contact with the toner adhering to the guide plate.....	1394
Troubleshooting for Streaks made by Paper Edges.....	1398
Troubleshooting for Horizontal White Streaks in Small Solid Black Areas.....	1407
Image Quality 003: Bands.....	1408

Troubleshooting for Blurred Image in 189mm Pitch (OPC Drum Circumference).....	1408
Troubleshooting fuzzy line in originating in cyan drum (Pro C5110S/Pro C5100S).....	1409
Troubleshooting Roller marks.....	1411
Troubleshooting for 2-3mm pitch banding.....	1416
Troubleshooting for Banding Caused by the PCDU (Pro C5110S/Pro C5100S).....	1418
Troubleshooting for “shock-jitter” in B/W mode (Pro C5110S/Pro C5100S).....	1423
Image Quality 004: Non-Reproduction.....	1432
Troubleshooting for Halo image.....	1432
Image Quality 005: Unevenness.....	1433
Overview.....	1433
Troubleshooting for Density Difference between Left and Right.....	1433
Troubleshooting for Vertical band of halftone images.....	1437
Troubleshooting for Uneven Density in the Area 85mm from the Trailing Edge.....	1439
Troubleshooting for Uneven density in the area 85mm from the trailing edge in low-temperature, low-humidity environment.....	1441
Troubleshooting for Grainy image.....	1442
Troubleshooting for Density unevenness and dust when using AC transfer (Pro C5110S /Pro C5100S).....	1443
Troubleshooting for Uneven glossiness when feeding large size paper after small size paper.....	1449
Troubleshooting blurred image on front and rear sides toward the Trailing Edge.....	1451
Troubleshooting for Random Pitch Banding Caused by Lubricant Falling from the Drum Cleaning Unit.....	1454
Troubleshooting for 3mm-Pitch Banding on Paper with Paper Thickness 6 (Pro C5110S/ C5100S).....	1455
Image Quality 006: Stains.....	1457
Overview.....	1457
Troubleshooting for Stains in the area 76mm from the trailing edge.....	1457
Troubleshooting for Stains on the side edges of paper.....	1459
Image Quality 007: Toner Flaking Off.....	1459
Troubleshooting for Blocking on the Paper Output Tray.....	1459
Paper Transport.....	1463
Paper Transport 001: Curls.....	1463
Paper Transport 002: Envelopes.....	1466

Troubleshooting for Envelopes Are Wrinkled.....	1466
Troubleshooting for Feed Direction Limitations Applied on Certain Types of Envelopes.....	1466
Paper Transport 003: Twining Jams.....	1467
Troubleshooting for Twining Jams in the Lower Part of the Fusing Unit Caused by Insufficient Margins.....	1467
Other Problems.....	1470
Other 001: Drawer Unit.....	1470
Drawer Unit Lock Motor Emergency.....	1470
Troubleshooting for Too Much Weight/Abnormal Noise on Pulling Out/Pushing In the Drawer Unit.....	1472
Other 002: Correspondance Table for Adjustment Settings.....	1474
Correspondence Table for Adjustment Settings for Operators and SP Mode.....	1474
Correspondance Table for Adjustment Setting and SP Mode (D137/D138 Only).....	1476
Other 003: Correspondance Table for IMSS Settings.....	1479
Correspondence Table for IMSS Settings and SP Mode (D137/D138 Only).....	1479
Other 004: SC.....	1485
Troubleshooting for SC516 after Repeated J097.....	1485
Troubleshooting SC 570-00 (fusing belt smoothing roller error).....	1486
Troubleshooting SC515-01.....	1489
Troubleshooting SC515-02.....	1491
Other 005: HDD Troubleshooting.....	1494
Symptom.....	1494
Cause.....	1494
Solution.....	1494
Other 006: Original Size Misdetection.....	1496
Symptom.....	1496
Cause.....	1499
Solution.....	1499
Other 007: Improper Message When Setting the Tandem Tray.....	1500
Symptom.....	1500
Cause.....	1501
Solution.....	1501
Other 008: Skew in sub-scan direction.....	1502
Symptom.....	1503

Cause.....	1503
Solution.....	1503
Procedure.....	1503
Problems Related to Peripheral Devices.....	1507
Peripherals 001: Buffer Pass Unit Type 5020.....	1507
Troubleshooting for Fan Noise Is Large.....	1507
Peripherals 002: Finisher SR4090/SR4100.....	1507
Troubleshooting for Proof Tray Detected to Be Full Too Soon.....	1507
Troubleshooting for Envelopes Are Not Fed.....	1508
Troubleshooting for toner rubbing off along the fold line.....	1509
Troubleshooting Creases and Jam in Stapler Unit (SR4100).....	1509
Corner Stapling Failure/Stack Failure/Large Misalignment.....	1512
1st Sheet of Stapled Stack Misaligned.....	1516
Staple Misalignment Troubleshooting.....	1518
Shift Tray Stalls Causing Paper Jam.....	1522
Poor Stacking on Shift Tray.....	1525
How to improve center-folding accuracy (SR4100).....	1529
SP Settings for adjusting Shift Tray Jogger/Corner Stapling/Booklet Stapling.....	1533
Blown Fuse Conditions.....	1537
IDB (D1365492).....	1537
AC Control Board (D0165460).....	1537
PSU.....	1538
PSU1 (AZ240226).....	1538
PSU2 (AX240230).....	1539
DUB (D1365121).....	1541
Potential Sensor Board (D1365450 [100V], D1365455 [200V]).....	1542
TSB (D1365425).....	1542
IPU (D1365724).....	1543
IOB (D1385110).....	1544
Controller (D1365700/D1365705).....	1547
Operation Panel.....	1547
Pro OP-R (D1387395).....	1547
Office OP-L (D1491478).....	1548

Option Board.....	1548
IEEE1284 (B5955710).....	1548
Copy connector (B5815710).....	1549
Wireless Lan: 11n (D1645230).....	1550
Giga-Ethernet Board (D7306036).....	1550

6. Energy Saving

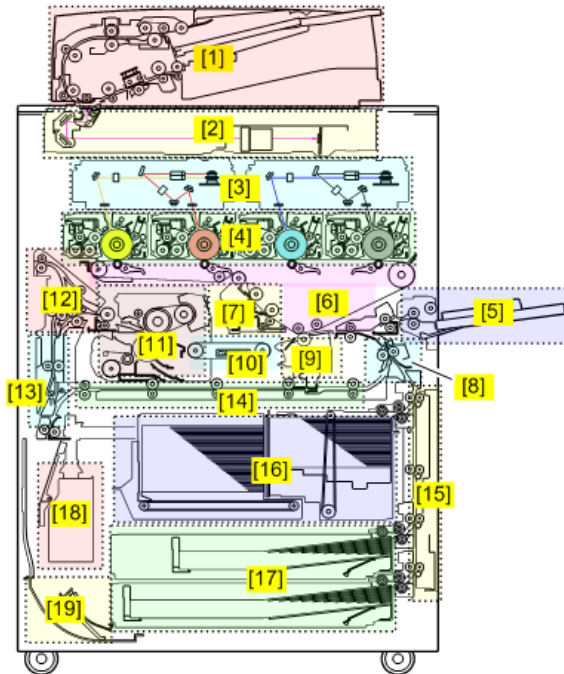
Energy Saving.....	1553
Energy Save.....	1553
If the Energy Saver button is pressed during machine operation.....	1553
Energy Saver Timer.....	1555
Paper Save.....	1556
Effectiveness of Duplex/Combine Function.....	1556
Paper Savings and Counter.....	1557



1. Product Information

Product Overview

Component Layout

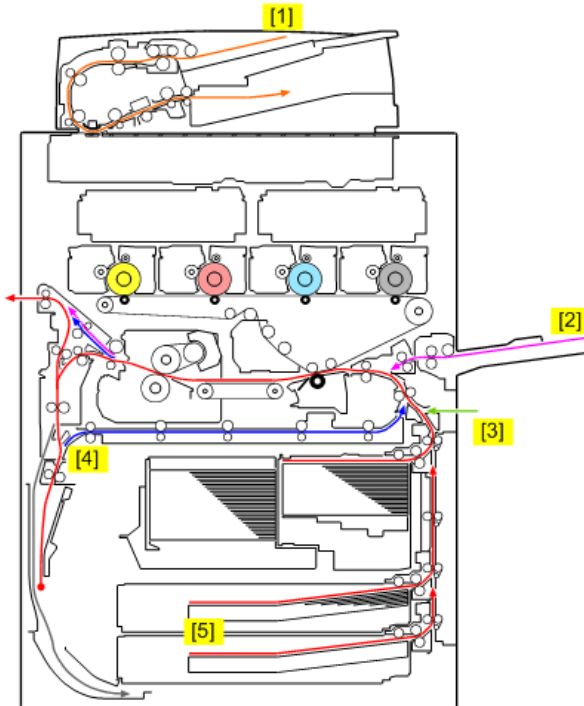


d1359911a

1. ADF	11. Fusing Unit
2. Scanner Unit	12. Exit Transport
3. Laser Unit	13. Exit Inverter Transport
4. PCDU	14. Duplex Transport
5. Bypass Unit	15. Vertical Transport
6. ITB Unit	16. Tray 1 (Tandem Tray)
7. Belt Cleaning Unit	17. Tray 2, Tray 3 (Universal Tray)
8. Relay Transport	18. Used Toner Collection Bottle

9. PTR Unit	19. Purge Tray
10. PTB Unit	

Paper Path

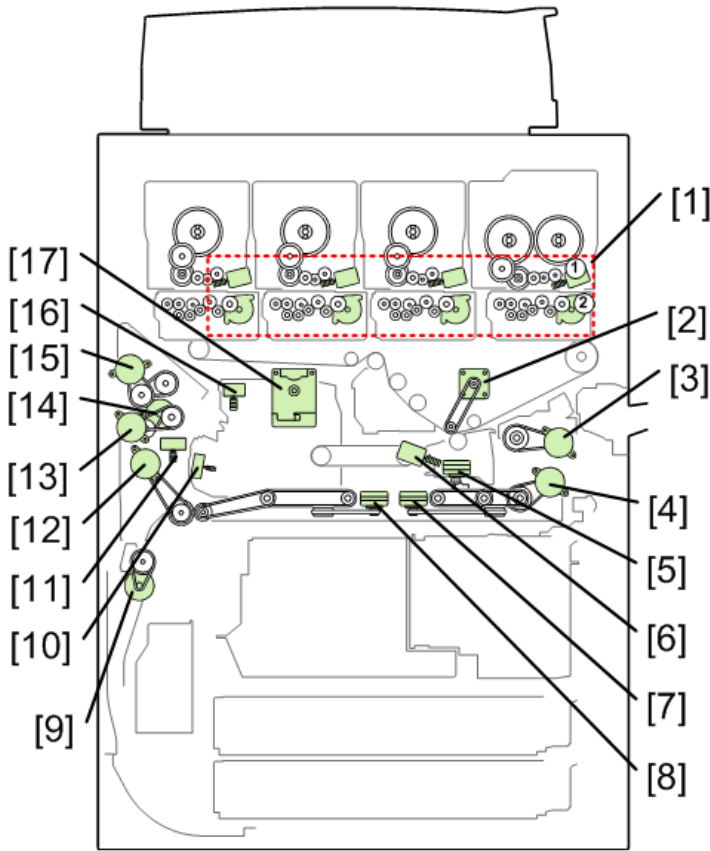


d1359913

1. ADF Transport
2. Bypass Transport
3. LCIT Transport
4. Duplex Transport
5. Simplex Transport

Drive Layout

Front View

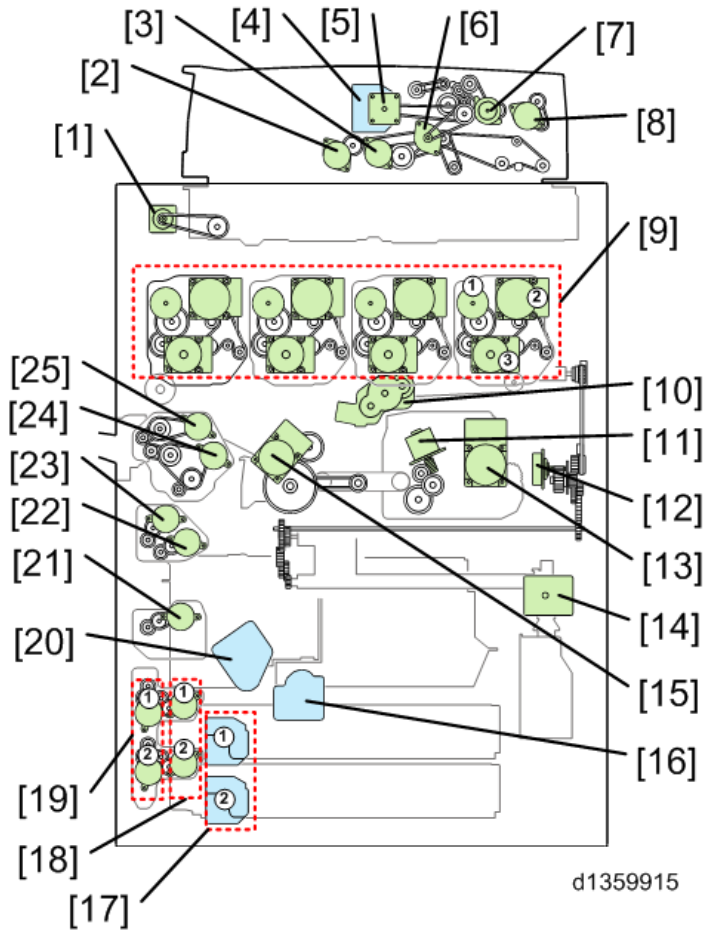


d1359916

1. ①: Cartridge Drive Motor ②: Toner Supply Transport Coil Motor	10. Cleaning Web Drive Motor
2. PTR Lift Motor	11. Cleaning Web Contact Motor
3. Registration Motor	12. Duplex Transport Motor
4. Duplex Exit Motor	13. Inverter Entrance Motor
5. Sensor Shift Motor	14. Inverter Entrance Junction
6. Drawer Lock Motor	15. Exit Motor

7. Roller Shift Motor 2	16. Belt Smoothing Roller Contact Motor
8. Roller Shift Motor 1	17. Fusing Motor
9. Duplex Inverter Motor	

Rear View

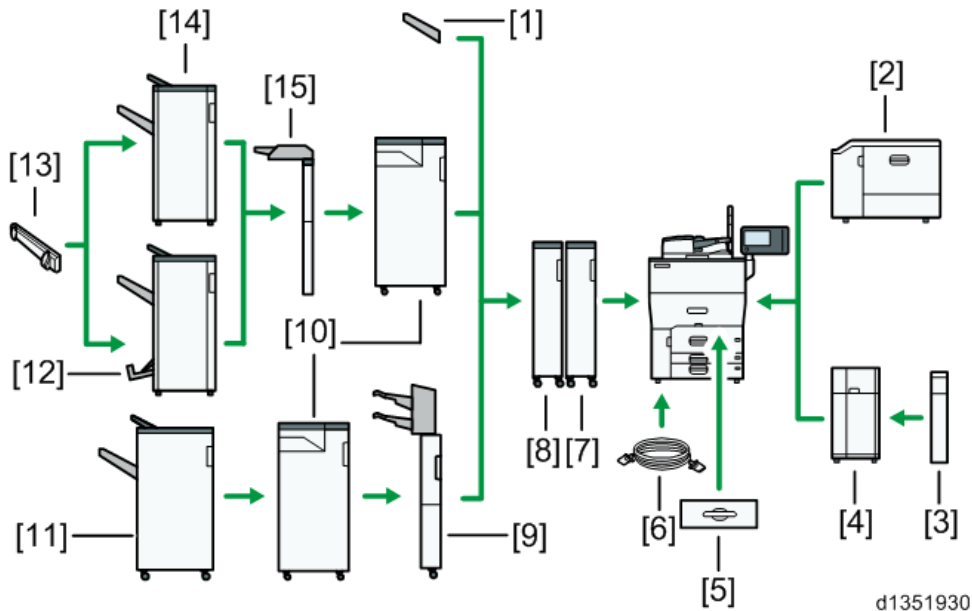


1. Scanner Carriage Motor	14. Used Toner Bottle Collection Motor
2. Exit Motor (ADF)	15. PTR Drive Motor
3. Transport Motor (ADF)	16. Rear Fence Drive Motor

4. Tray Lift Motor (ADF)	17. Bottom Plate Lift Motor ①: For Tray 2 ②: For Tray 3
5. Feed Motor (ADF)	18. Feed Motor ①: For Tray 2 ②: For Tray 3
6. Entrance Motor (ADF)	19. Transport Motor ①: For Tray 2 ②: For Tray 3
7. Pick-up Lift Motor (ADF)	20. Tandem Tray Lift Motor
8. Relay Motor (ADF)	21. Relay Transport Motor
9. ①: Drum Cleaning Motor ②: Development Motor ③: Drum Motor	22. Feed Motor (For Tray 1)
10. Image Transfer Roller Lift Motor (Gear Box)	23. Transport Motor (For tray 1)
11. Fusing Contact Motor	24. Bypass/Relay Transport Motor
12. Used Toner Collection Motor	25. Bypass Feed Motor
13. Fusing Drive Motor	

Machine Codes and Peripherals Configuration

D137/D138 (Pro Models)



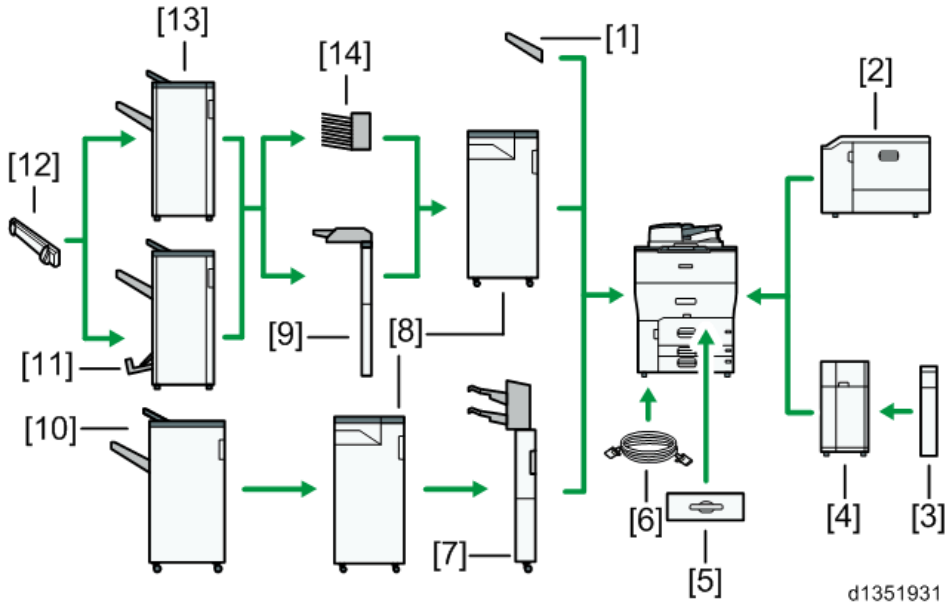
d1351930

Item	Machine Code	Call out
Finisher SR4090	D703-17 (NA/EU/AP) D703-21(CHN)	[14]
Booklet Finisher SR4100	D704-17 (NA/EU/AP) D704-21 (CHN)	[12]
Output Jogger Unit Type M2	D705-01	[13]
Punch Unit PU3060 NA	D706-00	-
Punch Unit PU3060 EU	D706-01	-
Punch Unit PU3060 SC	D706-02	-
Finisher SR4110	D707-17	[11]
Punch Unit PU5000 NA	B831-01	-
Punch Unit PU5000 EU	B831-02	-
Punch Unit PU5000 SC	B831-03	-

Item	Machine Code	Call out
Copy Tray Type M2	D744-01	[1]
LCIT RT4020	D709-17 (NA/TWN) D709-27 (EU/AP/CHN)	[4]
8 1/2" x 14" Paper Size Tray Type M2	D745-17	[3]
LCIT RT4030	D710-17	[2]
Cover Interposer Tray CI4010	D711-17	[15]
Cover Interposer Tray CI4020	D712-17	[9]
A3/11"x17" Tray Unit Type M2	D749-01	[5]
Tab Sheet Holder Type M2	D750-01	-
Decurl Unit DU5020	D727-17	[7]
Buffer Pass Unit Type 5020	D751-17 (NA) D751-27 (EU/AP/CHN)	[8]
Multi-Folding Unit FD4000	D615-17 (NA/TWN) D615-27 (EU/AP/CHN)	[10]
Waste Toner Bottle MP C8002	D859-01 (NA/EU/AP/CHN) D859-17 (TWN)	-
Optional Counter Interface Unit Type A	B870-11	-
Card Reader Tray Type 1075	B498-01	-
Postscript3 Unit Type M2	D719-10 (NA) D719-11 (EU) D719-12 (AP/CHN)	-
IPDS Unit Type M2	D719-15 (NA) D719-16 (EU) D719-17 (AP/CHN)	-
Unicode Font Package for SAP® 1 License	B869-01	-
Unicode Font Package for SAP® 10 License	B869-02	-

Item	Machine Code	Call out
Unicode Font Package for SAP® 100 License	B869-03	-
SD Card for Fonts Type D	D641-54	-
Copy Data Security Unit Type G	D640-41	-
File Format Converter Type E	D377-04	-
IEEE1284 Interface Board Type A	B679-17	-
IEEE802.11a/g/n Unit Type M2	D164-01	-
Bluetooth Interface Unit Type D	D566-01	-
SD card for NetWare printing Type M2	D719-46	-
Browser Unit Type M2	D719-41 (NA) D719-42 (EU) D719-43 (AP/CHN)	-
OCR Unit Type M2	D166-25 (NA) D166-26 (EU) D166-24 (AP/CHN)	-
Copy Connector Type 3260	B328-11	[6]
Color Controller E-42B	D728-02	-
Color Controller E-22B	D729-01(NA) D729-02 (EU/AP/CHN)	-
Fiery Impose	D728-05	-
Fiery Compose	D525-15	-
Fiery Impose-Compose	D729-04	-

D135/D136 (Office Models)



Item	Machine Code	Call out
Finisher SR4090	D703-17 (NA/EU/AP) D703-21 (CHN)	[13]
Booklet Finisher SR4100	D704-17 (NA/EU/AP) D704-21 (CHN)	[11]
Output Jogger Unit Type M2	D705-01	[12]
Punch Unit PU3060 NA	D706-00	-
Punch Unit PU3060 EU	D706-01 (EU/AP) D706-03 (CHN)	-
Punch Unit PU3060 SC	D706-02	-
Finisher SR4110	D707-17	[10]
Punch Unit PU5000 NA	B831-01	-
Punch Unit PU5000 EU	B831-02	-
Punch Unit PU5000 SC	B831-03	-
Mail Box CS4010	D708-17	[14]

Item	Machine Code	Call out
Copy Tray Type M2	D744-01	[1]
LCIT RT4020	D709-17 (EU) D709-27 (NA/AP/CHN)	[4]
8 1/2" x 14" Paper Size Tray Type M2	D745-17	[3]
LCIT RT4030	D710-17	[2]
Cover Interposer Tray CI4010	D711-17	[9]
Cover Interposer Tray CI4020	D712-17	[7]
A3/11"x17" Tray Unit Type M2	D749-01	[5]
Tab Sheet Holder Type M2	D750-01	-
Multi-Folding Unit FD4000	D615-17 (NA) D615-27 (EU/AP/CHN)	[8]
Optional Counter Interface Unit Type A	B870-11	-
Smart Card Reader Built-in Unit Type M2	D739-06	-
Waste Toner Bottle MP C8002	D859-01	
Fax Option Type M2	D718-01 (NA) D718-02 (EU) D718-03 (AP) D718-05 (CHN)	-
G3 Interface Unit Type M2	D718-11 (NA) D718-12 (EU/AP)	-
Memory Unit Type B 32MB	G578-17	-
Fax Connection Unit Type M2	D719-21 (NA) D719-22 (EU) D719-23 (AP/CHN)	-
OCR Unit Type M2	D166-25 (NA) D166-26 (EU) D166-24 (AP/CHN)	-

Item	Machine Code	Call out
Postscript3 Unit Type M2	D719-10 (NA) D719-11 (EU) D719-12 (AP)	-
IPDS Unit Type M2	D719-15 (NA) D719-16 (EU) D719-17 (AP)	-
Unicode Font Package for SAP® 1 License	B869-01	-
Unicode Font Package for SAP® 10 License	B869-02	-
Unicode Font Package for SAP® 100 License	B869-03	-
SD Card for Fonts Type D	D641-54	-
Copy Data Security Unit Type G	D640-41	-
Data Overwrite Security Unit Type H	D377-06	-
File Format Converter Type E	D377-04	-
IEEE1284 Interface Board Type A	B679-17	-
IEEE 802.11a/g/n Interface Unit Type M2	D164-01	-
Bluetooth Interface Unit Type D	D566-01	-
SD card for NetWare printing Type M2	D719-46	-
Browser Unit Type M2	D719-41 (NA) D719-42 (EU) D719-43 (AP/CHN)	-
Copy Connector Type 3260	B328-11	[6]
Color Controller E-22B	D729-01(NA) D729-02 (EU/AP/CHN)	-

Specifications

1

See "Appendices" for the following information:

- General Specifications
- Supported Paper Sizes
- Software Accessories
- Optional Equipment

Guidance for Those Who are Familiar with Predecessor Products

New features of D137/D138 and D135/D136

Developed Image Quality

Items	Description	D137/D138	D135/D136
New Chemical Toner	The CH-C1 series adopts new chemical toner in order to enhance image quality and meet the demand of higher image quality in commercial printers.	Yes	Yes
VCSEL	The CH-C1 series realizes a high image quality of 1200x4800dpi at a low price compared to Taurus-C1 by the advanced 40 channel VCSEL.	Yes	Yes

Improvement of Banding Issues

Items	Description	D137/D138	D135/D136
PPG Drive (1*)	CH-C1 has new OPC drive technology called PPG-Drive. The combination of PPG-Drive and highly precise drive control can keep OPC rotation stable.	Yes	Yes
CVEC (2*)	CVEC is a technology to keep ITB speed variation stable and reduce color inconsistency. The decentering of the driven shaft can be adjusted by monitoring the differences in outputs from the drive shaft encoder and the driven shaft encoder in the ITB unit.	Yes	Yes

Items	Description	D137/D138	D135/D136
DEMS (3*)	CH-C1 Pro supports DEMS in order to adjust the toner adhesion and banding. When the gap between development roller and OPC drum changes, color inconsistency will occur due to changes in toner adhesion. CH-C1 Pro supports DEMS in order to adjust the toner adhesion.	Yes	No

(1*): Precision Planetary Gear-Drive

(2*): Compensation function of belt speed Variation of Encoder roller Cycle

(3*): Development Electric-field Modulation System

Improvement of the Scratch Mark Issue

Items	Description	D137/D138	D135/D136
Fusing Belt Smoothing Roller	CH-C1 Pro has a new fusing belt smoothing roller to improve the scratch mark issue. This roller gives pressure and rubs against the belt surface to smoothen the rough parts caused by the paper edges.	Yes	No

Improvement of the Toner Dusting Issue

Items	Description	D137/D138	D135/D136
Intake air duct	An intake air duct at the development unit's trough area, which prevents toner from dropping onto the paper	Yes	Yes

Developed Printing Quality of Textured Paper

Items	Description	D137/D138	D135/D136
AC transfer	In order to improve printing quality on textured media, CH-C1 Pro uses AC transfer. This can increase toner transfer to the media by generating better adherence between toner and ITB.	Yes	No
Elastic fusing belt	The elastic fusing belt has a thicker elastic layer to reach the toner on the bottom of textured media and realizes better fusing by providing stable pressure and heat on the media surface.	Yes	No
Solid fusing roller	To keep image quality and performance on heavy coated media, CH-C1 Pro supports solid fusing rollers (same as Pro C751EX series).	Yes	No

1

Developed User Appliance

Items	Description	D137/D138	D135/D136
Easy Jam Fix	The front cover of the CH-C1 series is like a drawer and operators can directly access the inner unit. LED lights and jam animations appear when the user opens the drawer to fix paper jam.	Yes	Yes
Active Tray Indicator	Each tray has an indicator that will light up when it is feeding paper.	Yes	No
Paper Library	Same as the Pro C901 series and Pro C751EX series, the CH-C1 Pro also has a Paper Library to offer customers easy and simple paper settings on the operation panel.	Yes	No
TCRU	CH-C1 Pro is designed with a TCRU/ORU concept.	Yes	No

Items	Description	D137/D138	D135/D136
Toner Replacement	Toner cartridge replacement during machine operation	Yes	Yes

Controller features

Items	Description	D137/D138	D135/D136
Capturing log	Capture of part of the controller and engine log contents onto an SD card (operation possible from the LCD)	Yes	Yes

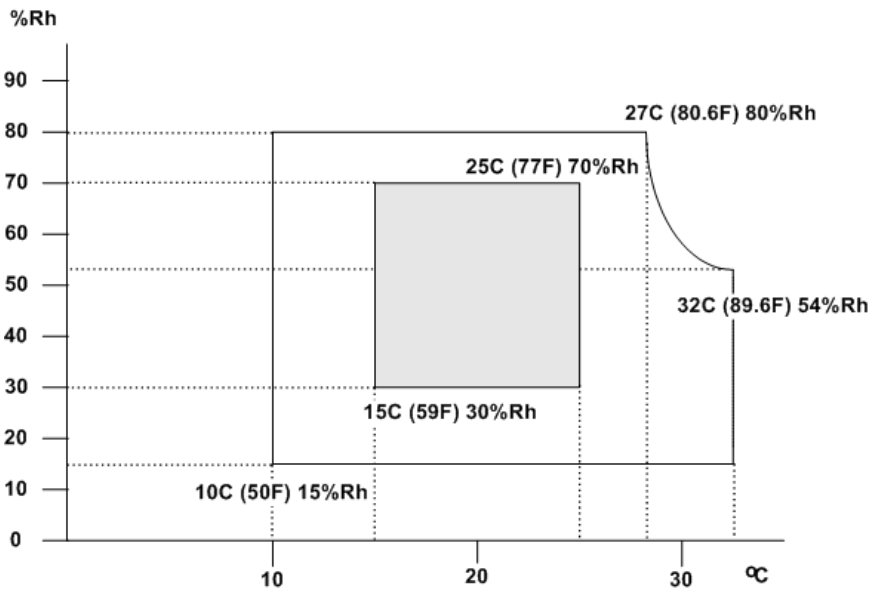
2. Installation

Installation Requirements

★ Important

- Install the machine in a safe place to maintain security.
- Make sure that the operation instructions are kept at the customer's hand.

Environment



Temperature Range:	10°C to 32°C (50°F to 90°F)
Humidity Range:	15% to 80% RH
Ambient Illumination:	Less than 1,500 lux (do not expose to direct sunlight.)
Ventilation:	Room air should turn over at least 30 m ³ /hr/person
Ambient Dust:	Less than 0.10 mg/m ³ (2.7 x 10 ⁻⁶ oz/yd ³)

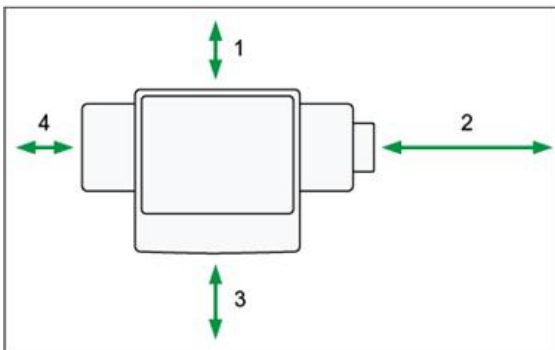
1. Avoid areas exposed to sudden temperature changes:
 - 1) Areas directly exposed to cool air from an air conditioner.
 - 2) Areas directly exposed to heat from a heater.
2. Do not place the machine where it will be exposed to corrosive gases.
3. Do not install the machine at any location over 2,000 m (6,500 ft.) above sea level. (D135/D136/D137/D138 for NA can be installed only up to 2,500m (8,200 ft.))
4. Place the main machine on a strong and level base. Inclination on any side should be no more than 5 mm (0.2").
5. Do not place the machine where it may be subjected to strong vibrations.

Minimum Space Requirements

Place the main machine near the power source, providing clearance as shown:

Installation space

The following space is required for the user to use the machine. If you cannot secure this space, then you will not be able to ensure the machine's usability. Make this space to avoid causing damage.

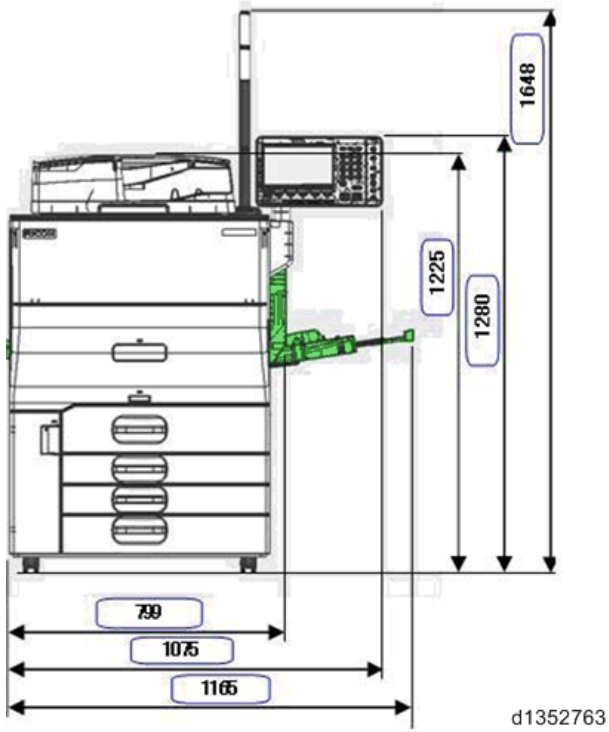


d1352761

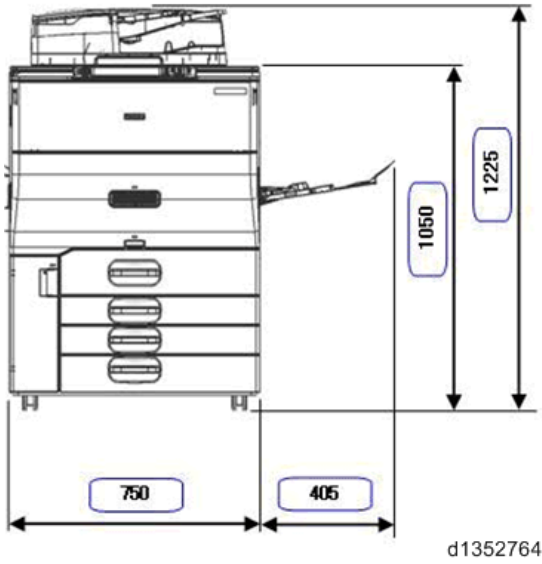
1 Rear	100mm (4")
2 Right	900mm (35.5")
3 Front	400mm (15.7")
4 Left	100mm (4")

Dimensions

D137/D138



D135/D136



Power Requirements

⚠ CAUTION

- Make sure that the wall outlet is near the main machine and easily accessible. Make sure the plug is firmly inserted in the outlet.
- Avoid multi-wiring.
- Be sure to ground the machine.
- Never set anything on the power cord.

Input voltage level (D137/D138)

Destination	Model	Power supply voltage	Rated current consumption
NA	D137	208 to 240V	12A
	D138	208 to 240V	12A
EU	D137	220 to 240V	12 to 10A
	D138	220 to 240V	12 to 10A

Destination	Model	Power supply voltage	Rated current consumption
AP	D137	220 to 240V	12 to 10A
	D138	220 to 240V	12 to 10A
CHN	D137	220 to 240V	12 to 10A
	D138	220 to 240V	12 to 10A

Input voltage level (D135/D136)

Destination	Model	Power supply voltage	Rated current consumption
NA	D135	120 to 127V	16A
	D136	208 to 240V	12A
EU	D135	220 to 240V	12 to 10A
	D136	220 to 240V	12 to 10A
AP	D135	220 to 240V	12 to 10A
	D136	220 to 240V	12 to 10A
CHN	D135	220 to 240V	12 to 10A
	D136	220 to 240V	12 to 10A

Main Machine Installation

Special Tools and Lubricants

2

D137/D138

The following special tools should be prepared for maintenance of this model in the field:

Unique or Common:

U: Unique for this model

C: Common with listed

Item	Part Number	Description	Q'ty	Unique or Common
1	D0159501	ZINC STEARATE	1	C (*1)
2	D0159500	G104 YELLOW TONER	1	C (*1)
3	VSSG9002	FLUOTRIBO MG GREASE: 100G	1	C (*2)
4	B6455020	SD Card	1	C(General)
5	B6456705	PCMCIA Card Adapter	1	C (General)
6	G0219350	Loop-back Connector – Parallel	1	C (General)
7	C4019503	20X Magnification Scope	1	C (General)
8	A0929503	C4 Color Test Chart (3 pcs/set)	1	C (General)
9	B6795100	Plug - IEEE1284 Type C	1	C (General)

↓ Note

- These items are common with the following models.
(*1): Common with Venus-C2/Venus-C3
(*2): Common with Taurus-C1
- Loop-back Connector [Parallel (item 6)] requires Plug [IEEE1284 Type C (item 9)].
- A PC (Personal Computer) is required for creating the Encryption key file on an SD card when replacing the controller board in which HDD encryption has been enabled.

D135/D136

The following special tools should be prepared for maintenance of this model in the field:

Unique or Common:

U: Unique for this model

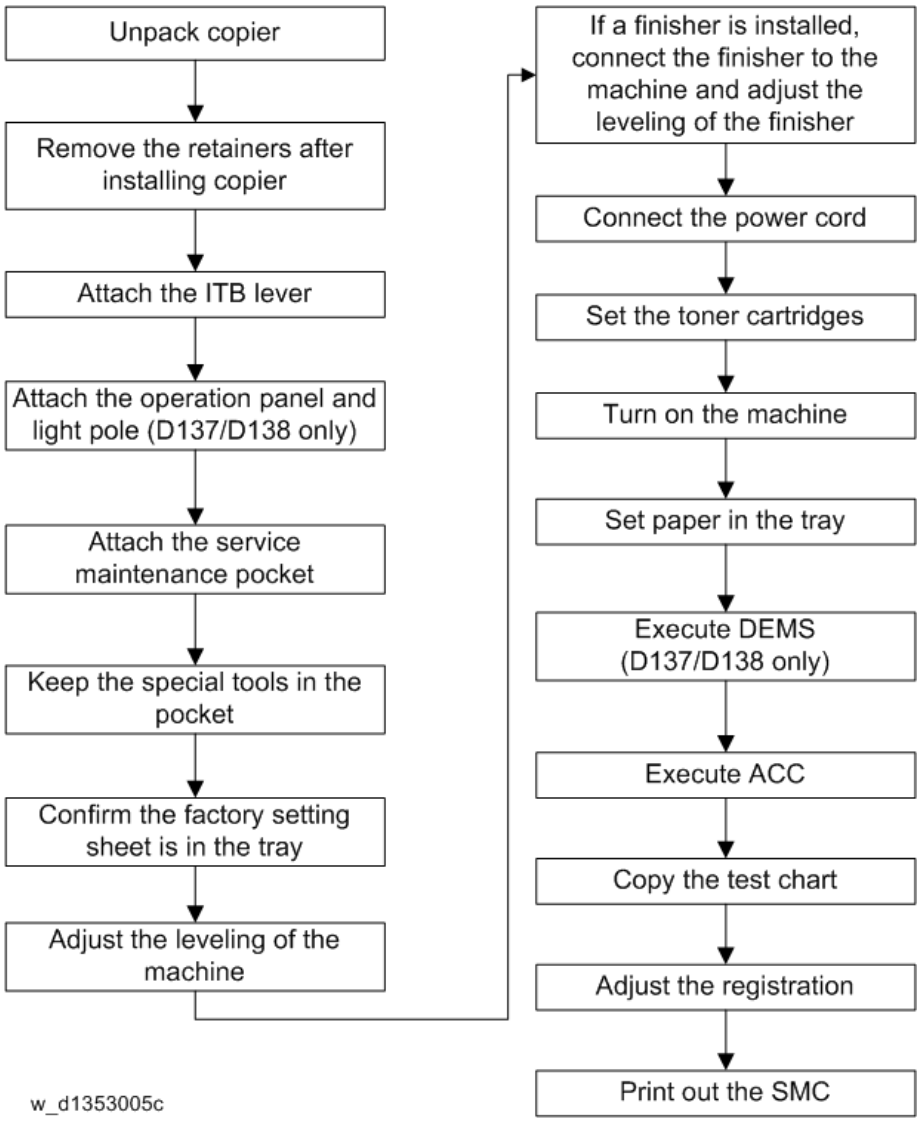
C: Common with listed

Item	Part Number	Description	Q'ty	Unique or Common
1	D0159501	ZINC STEARATE	1	C (*1)
2	D0159500	G104 YELLOW TONER	1	C (*1)
3	VSSG9002	FLUOTRIBO MG GREASE : 100G	1	C (*2)
4	B6455020	SD Card	1	C (*4)
5	C4019503	20X Magnification Scope	1	C (*4)
6	A0929503	C4 Color Test Chart (3 pcs/set)	1	C (*4)
7	A2579300	Grease Barrierta – S552R	1	C (*1)
8	A1849501	OPTICS ADJUSTMENT TOOL	2	C (*3)
9	D0747690	BRUSH:BLOWER	1	C (*2)
10	A2579300	GREASE-BARRIERTA S552R	1	C (*4)
11	D0149800	GREASE-KS660B	1	C (*1)
12	A2579100	SILICONE OIL TYPE SS	1	C (*4)
13	VSSA9001	LAUNA OIL 40N	1	C (*4)

↓ Note

- These items are common with the following models.
 (*1): Common with Venus-C2/Venus-C3
 (*2): Common with Taurus-C1
 (*3): Common with Apollon-C2.5/Athena-C2.5
 (*4): General (common with multiple models)
- A PC (Personal Computer) is required for creating the Encryption key file on an SD card when replacing the controller board in which HDD encryption has been enabled.

Installation Flow Chart



Accessory Check

D137/D138

No	Description	Q'ty	
		D137	D138
1	PCU Pocket	1	1
2	Developer Funnel	1	1
3	Tube Type Lamp	1	1
4	Operation Panel Arm Upper Cover	1	1
5	Operation Panel Arm Cover	1	1
6	Operation Panel Rear Cover	1	1
7	Operation Panel Arm	1	1
8	Screw Cover	5	5
9	Tapping Screw - 3 x 6	24	24
10	Printing Sample	1	1
11	Paper (White, 100 sheets)	1	1
12	Decal - ADF Paper Set	1	1
13	Leveling Shoes	4	4
14	Decal - Paper Set Direction	3	3
15	Cloth Holder	1	1
16	Cloth - DF Exposure Glass	1	1
17	Rivet - Dia5	2	2
18	Development Cap	1	1
19	Logotype Plate (NA Only)	1	1
20	Decal - Function : Multi Language	1	1

No	Description	Q'ty	
		D137	D138
21	Sheet - Logo (NA Only)	1	1
22	Decal - Caution: ADF Paper Set	1	1
-	Sheet - Exposure Glass	1	1
-	Power Supply Cord	1	1
-	Sheet - Application : Multi Language	1	1
-	Sheet - Pro	1	1
-	Sheet - Scanner Protection	1	1
-	Sheet - Safety (EU Only)	1	1
-	Decal - EMC Address (EU Only)	1	1
-	Sheet - TEL Name (CHN Only)	1	1
-	Guarantee (CHN Only)	1	1
-	CD-ROM-Driver	2	2
-	CD-ROM-OI (NA/ AP/TWN Only)	2	2
-	CD-ROM-OI (EU Only)	4	4
-	Sheet - EULA: 20 languages	1	1
-	Seal - Caution: 20 languages	1	1
-	Operation Instructions	4	4
-	Sheet - Security Password	1	1
-	SMC Report	1	1



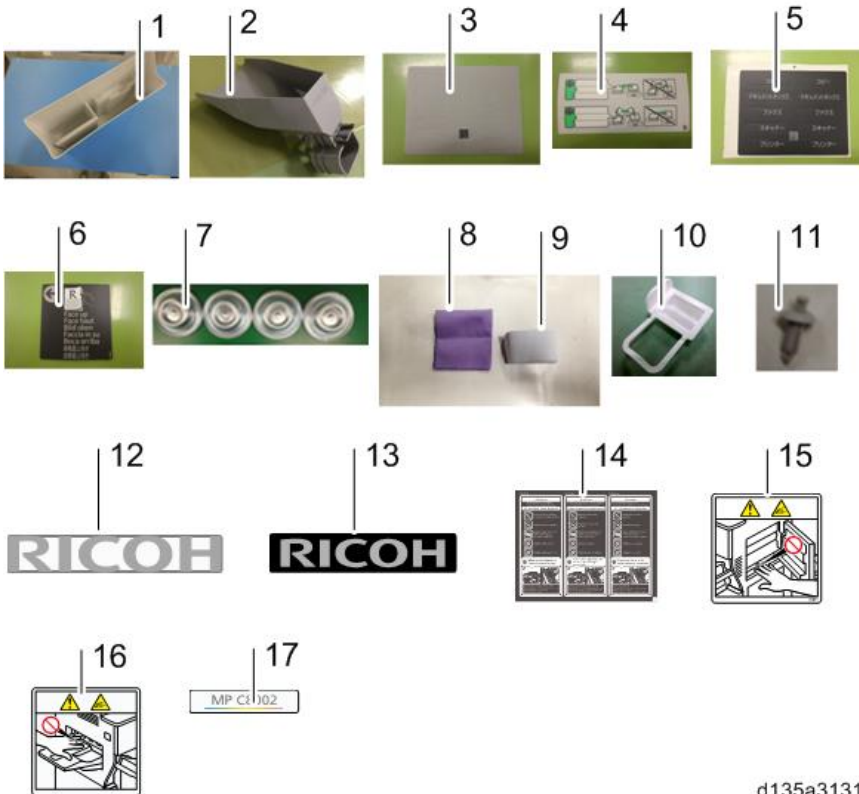
d135a3130

D135/D136

	Description	Q'ty	
		D135	D136
1	PCU Pocket	1	1
2	Developer Funnel	1	1
3	Decal - Paper Size	1	1

	Description	Q'ty	
		D135	D136
4	Decal - Paper Set Direction	3	3
5	Decal - Function : Multi Language	1	1
6	Decal - ADF Paper Set	1	1
7	Leveling Shoes	4	4
8	Cloth - DF Exposure Glass	1	1
9	Cloth Holder	1	1
10	Development Cap	1	1
11	Rivet - Dia5	2	2
12	Logotype Plate (NA/EU/AP/TWN Only)	1	1
13	Sheet - Logo (NA/EU/AP/TWN Only)	1	1
14	Decal - Caution: ADF Paper Set	1	1
15	Decal - Paper Feed (NA/CHN Only)	-	1
16	Decal - Paper Exit (NA/CHN Only)	-	1
17	Decal - Model Name Plate (NA Only)	-	1
-	Power Supply Cord	1	1
-	Sheet - Exposure Glass	1	1
-	Sheet - Application : Multi Language	1	1
-	Decal - Power Supply Cord (NA/CHN Only)	-	1
-	Sheet - Safety (EU Only)	1	1
-	Decal - EMC Address (EU Only)	1	1
-	Sheet - TEL Name (CHN Only)	1	1
-	Guarantee (CHN Only)	1	1
-	SMC Report	1	1
-	Sheet - Scanner Protection	1	1

	Description	Q'ty	
		D135	D136
-	CD-ROM-Driver	2	2
-	CD-ROM-OI (NA/AP/TWN Only)	2	2
-	CD-ROM-OI (EU Only)	4	4
-	Sheet - EULA Sheet: 20 languages	1	1
-	Seal - Caution: 20 languages	1	1
-	Operation Instructions	4	4
-	Sheet - Security Password	1	1



d135a3131

Installation Procedure (D137/D138)

1. Unpack the machine and remove all the wrapping.
2. Place the machine at the installation site.
3. Remove all filament tape from the machine.

2



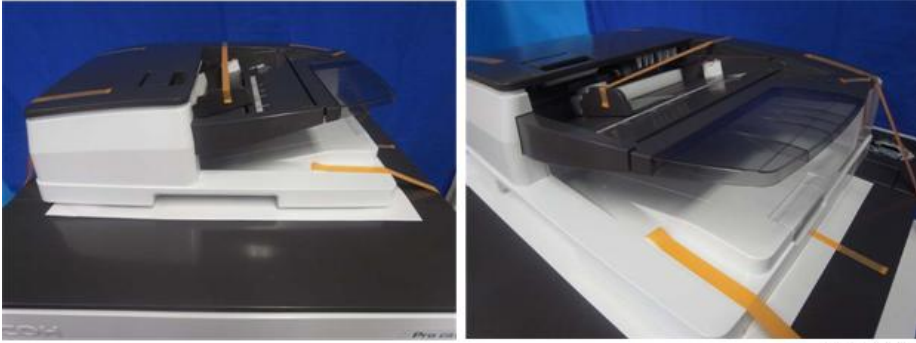
d1350001

4. Open the tandem tray [A] and remove the filament tape at the duplex unit [B].



d1350002

5. Remove the filament tape and the cushion at the ADF.



d1350003

6. Open the ADF [A] and release the lever to open the white board. Then remove the protection sheet.



d1350004

7. Remove the power cable from paper tray 2.



d1353046

8. Remove the operation panel from paper tray 3.



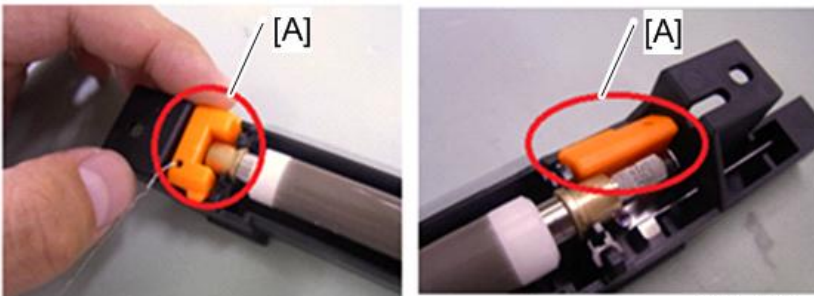
d1350005

Removing the Retainers of the Charge Roller Units (C, M, K)

The shipping retainers [A] must be removed from the charge roller units (C, M, K).

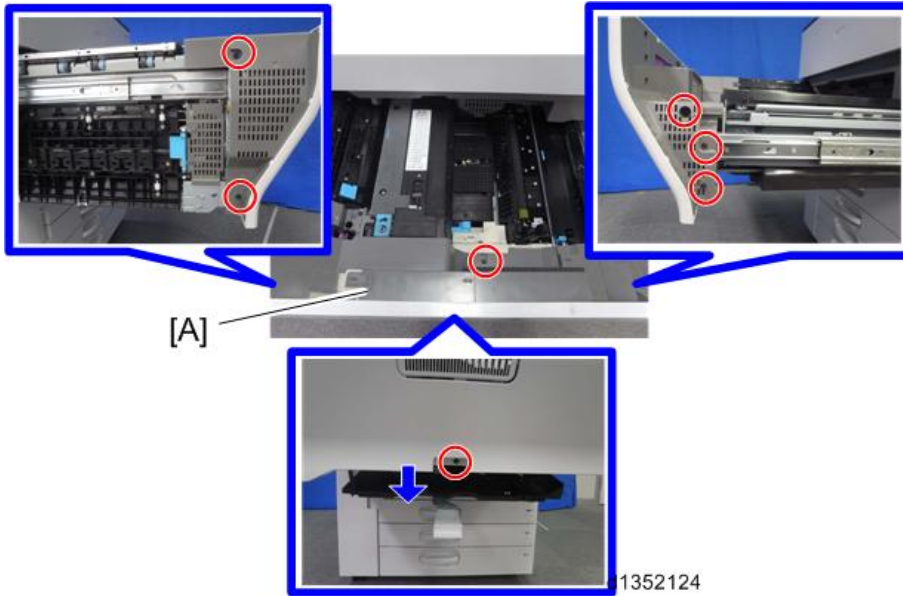
Note

- These retainers is not included in the Yellow (Y) charge roller unit.



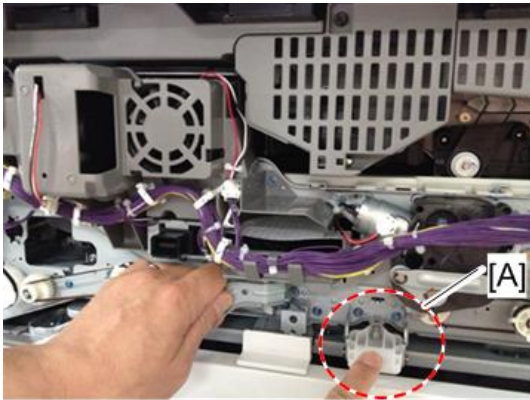
d135a0092

1. Pull out the drawer unit and remove its cover [A]. (⚙️x7)



★ Important

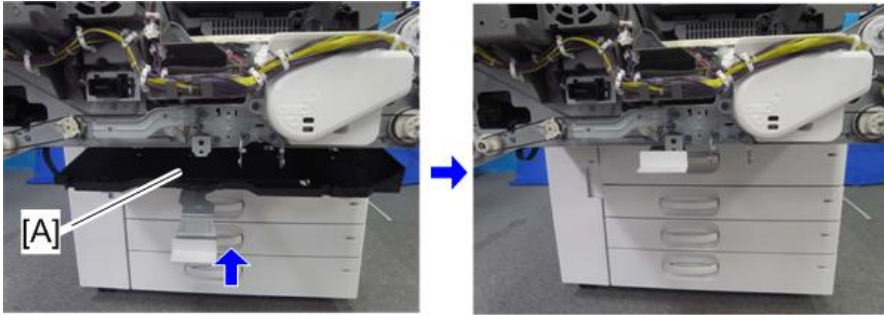
- Make sure to hold down the lock lever ([A] in the photo below) when you pull out the unit. (The unit is locked in place by this lever).



2. Close the drawer unit.

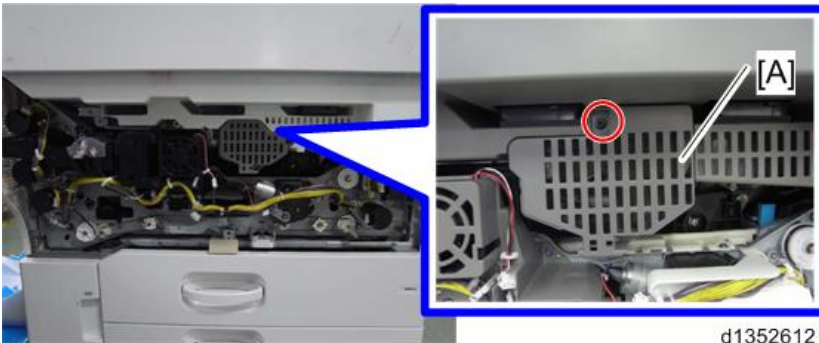
↓ Note

- When you push the unit back in to the machine, you can close the guide plate [A] of the paper exit and duplex unit.



d1352313

3. Remove the ITB cleaning intake fan [A] together with the duct (⚙️ x 1).



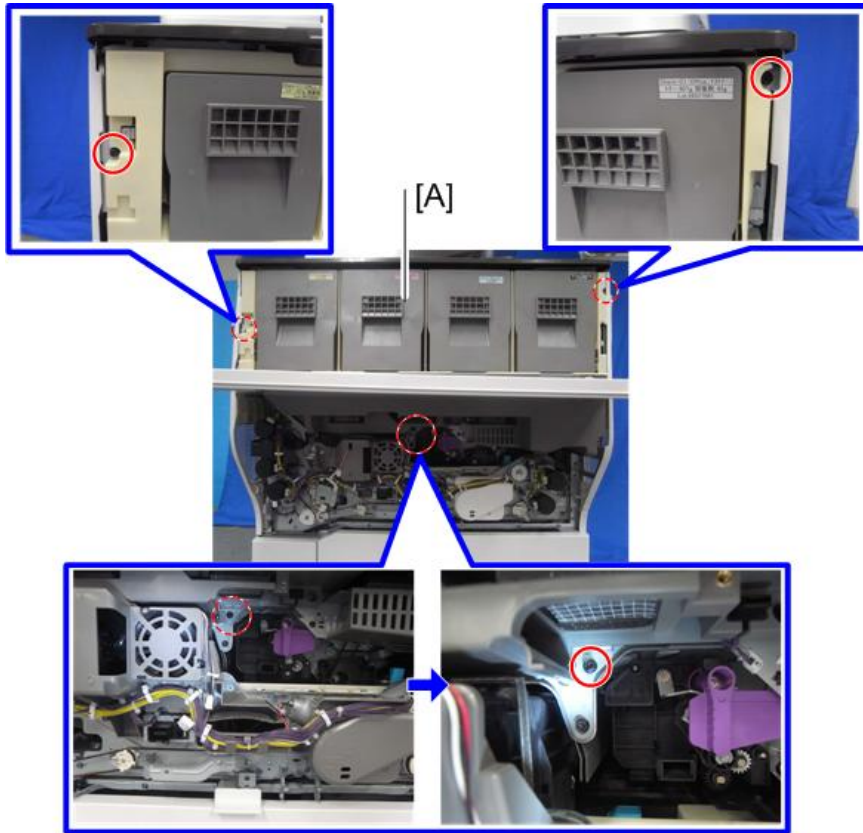
d1352612

4. Open the front cover of the toner supply unit [A].



d1350039

5. Remove the fixing screws of the toner supply unit [A] (⚙️ x 3).



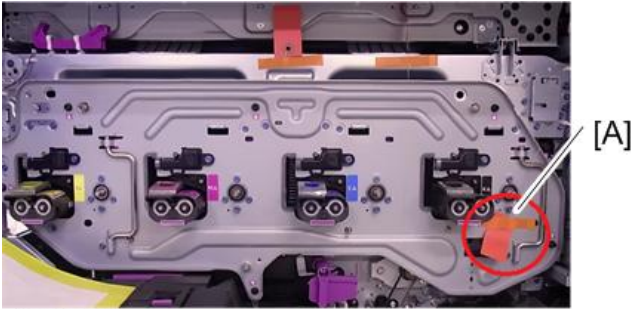
d1350027

6. Pull out the toner supply unit [A].



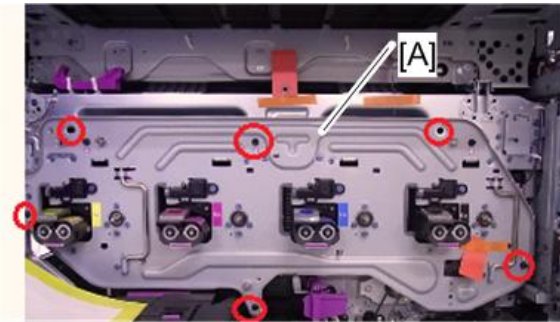
d1350028

7. Remove the toner supply unit [A]. (⚙️ x2)
 8. Remove the filament tape [A] from the faceplate.



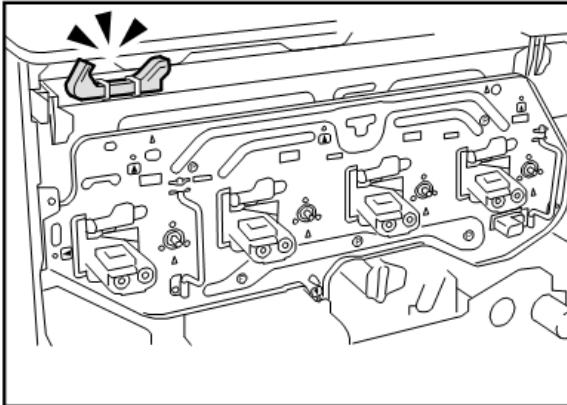
d135a0093

9. Remove the screws fixing the face plate (⚙ x6).



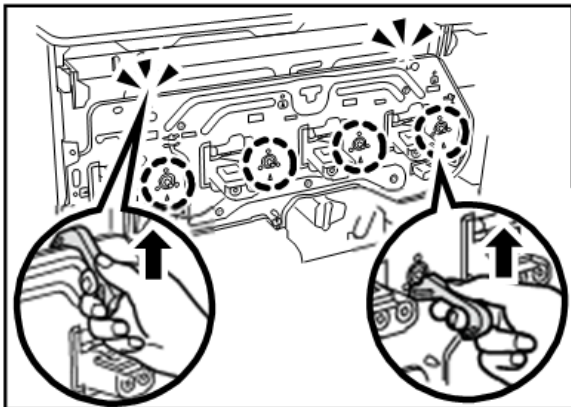
d135a0094

10. Remove the handles.



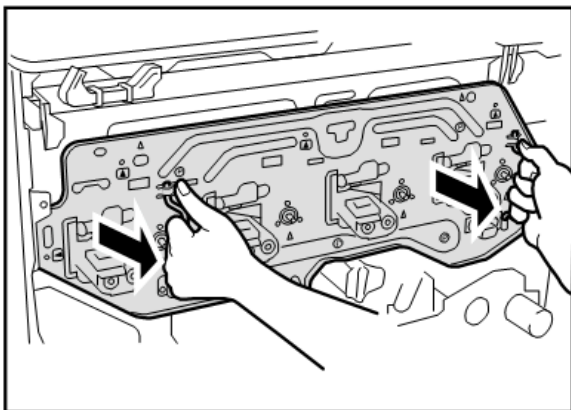
d1352794

11. Attach the handles and pull out the units slowly and evenly.



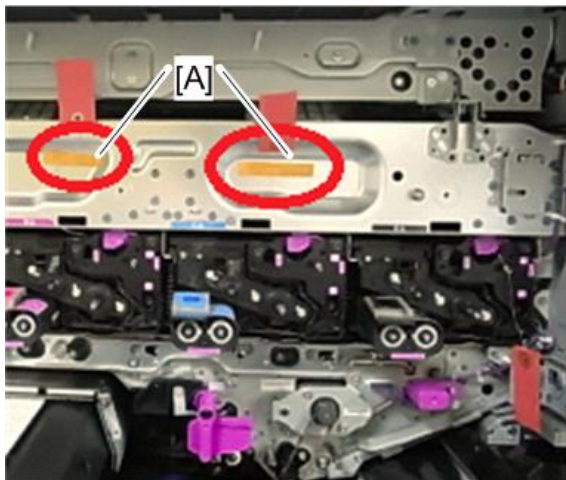
d1352795

12. Hold the grips and remove the face plate.



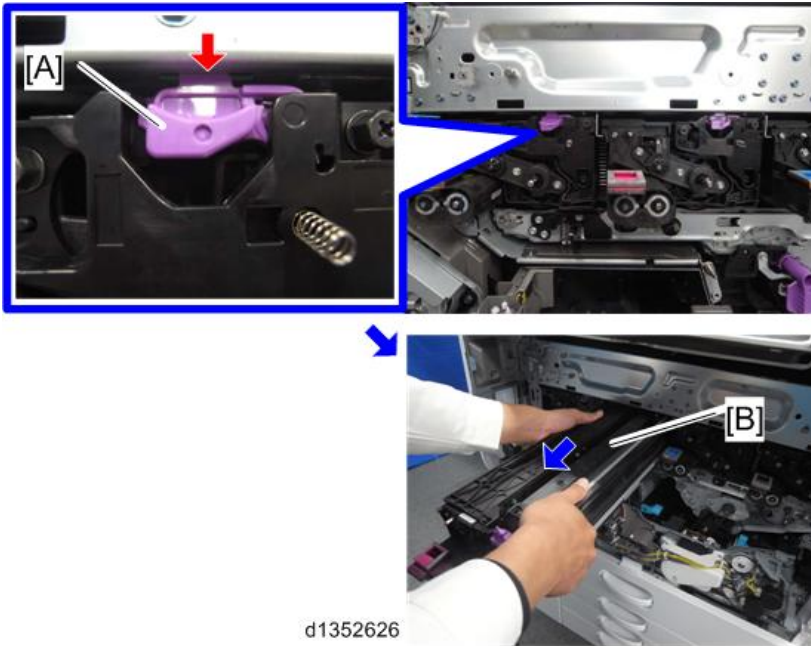
d1352796

13. Remove all filament tapes [A] of Magenta and Cyan units.

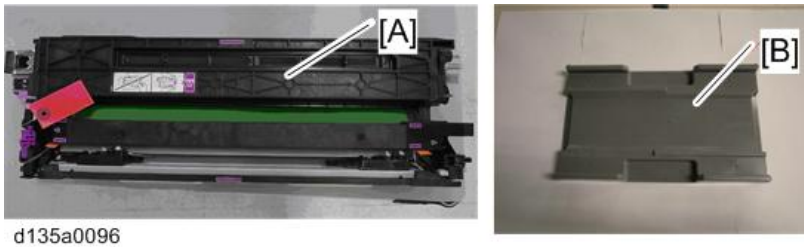


d135a0095

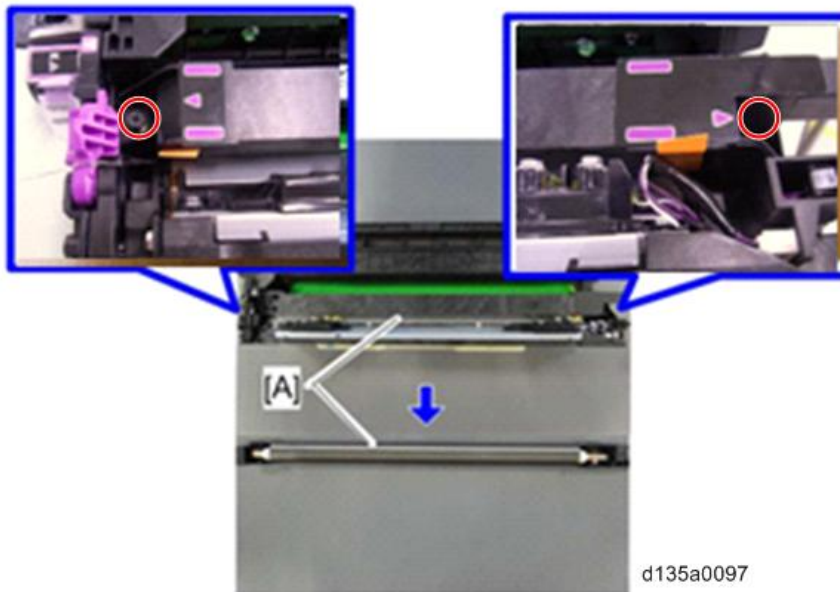
14. Unlock the lever [A] and pull out the PCDU [B] from the machine.



15. Place the PCDU [A] on the PCU stand [B].



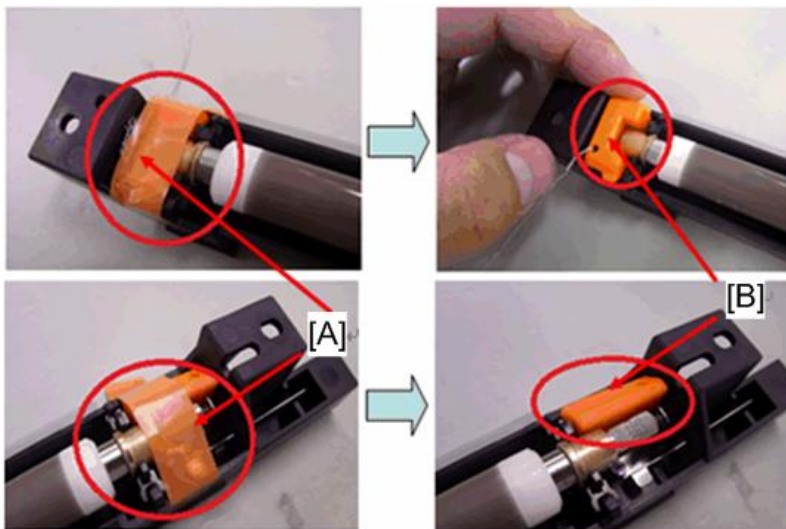
16. Remove the charge roller unit and place it on a clean, flat, and level surface with the roller facing up (⚙️ x2).



★ Important

- Make sure that the surface is flat and level.

17. Remove the filament tape [A] and retainers [B] from both ends of the charge roller unit.



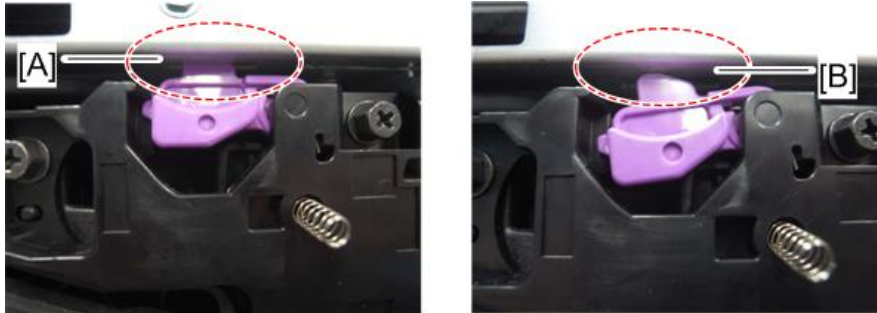
18. Reattach the charger roller unit and PCDU, and then attach the face plate.

★ Important

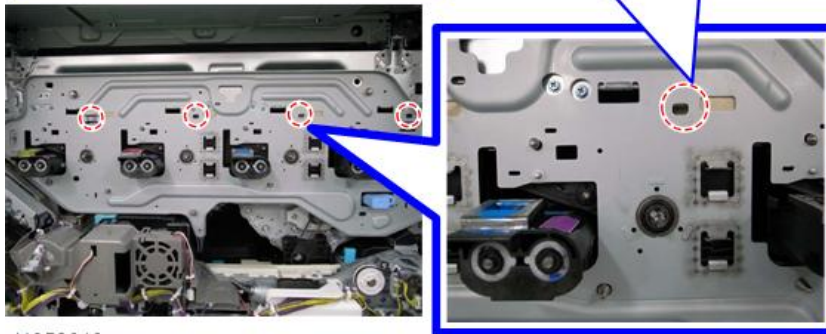
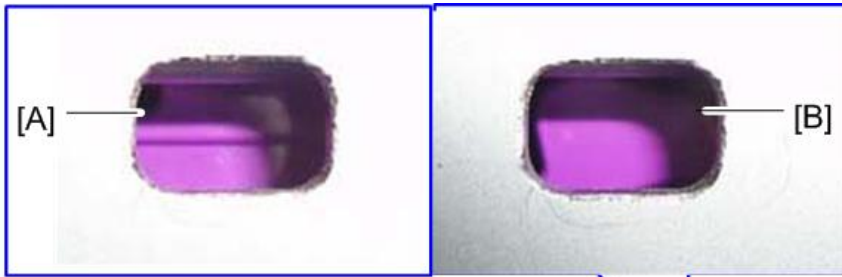
- After attaching the face plate, check the status of the locking levers again by looking through the holes as shown.

[A]: The locking lever is properly fit into the hole in the machine frame.

[B]: The locking lever is **not** properly fit into the hole in the machine frame.



d1352628



d1352640

Attaching the ITB Separation Lever

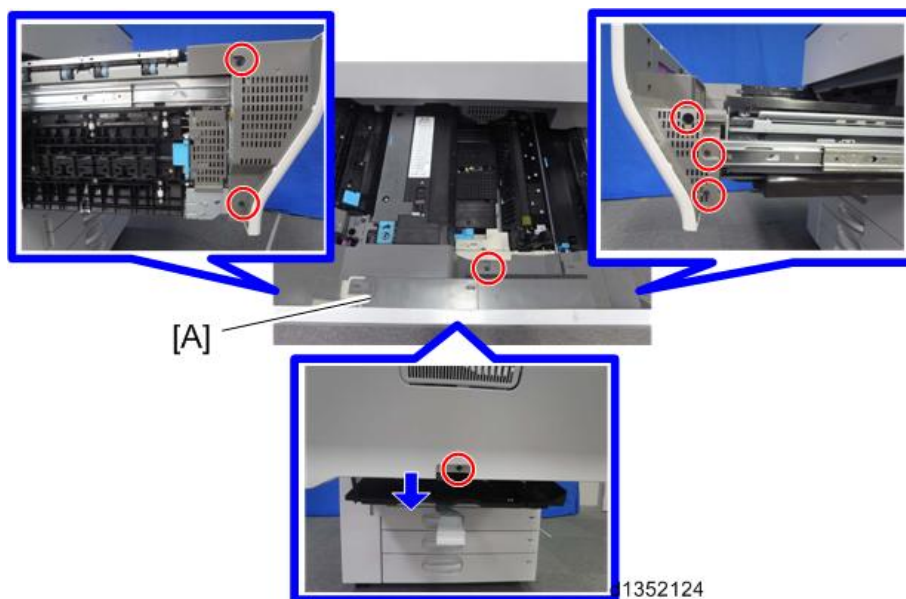
When unpacking the machine, the ITB separation lever is not yet attached to the correct location. During machine installation, you must install the lever.

1. Open the drawer unit [A], and remove the ITB separation lever [B].



2

2. Drawer unit cover [A] (⌀ x 7*)

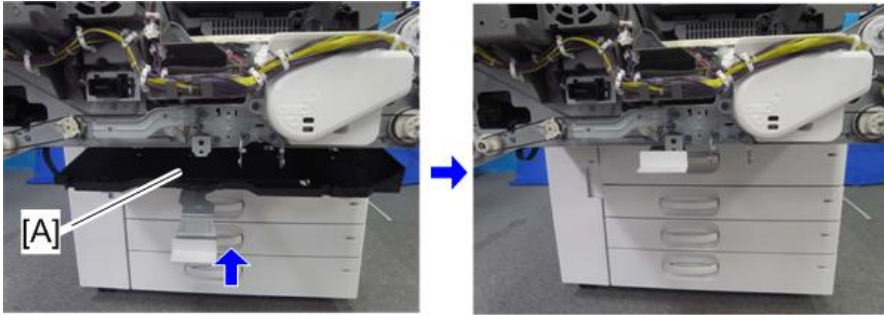


* D137/D138 use TCRU screws

3. Close the drawer unit

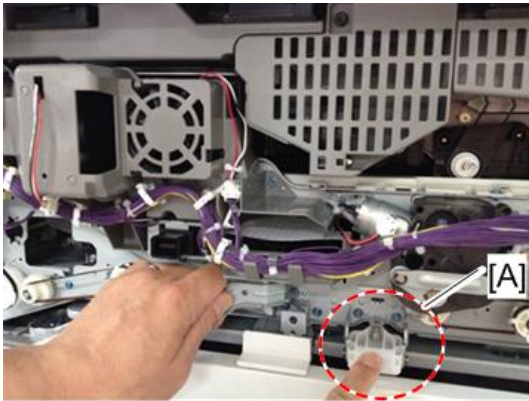
Note

- After removing the drawer unit cover, when the drawer unit is returned to the machine, you can close the guide plate [A] of the paper exit and duplex unit.



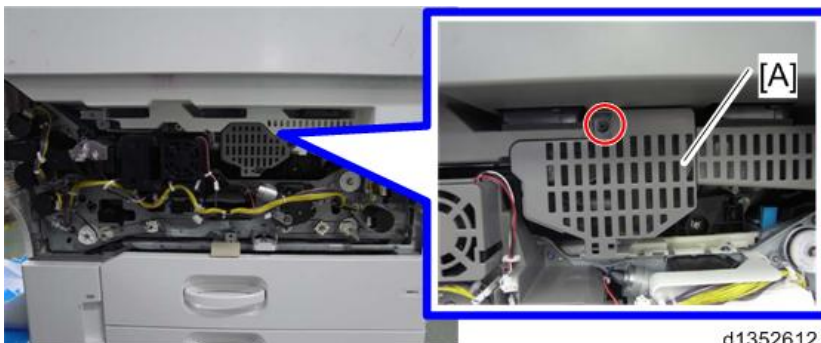
d1352313

- When the drawer unit is pushed back into the machine, it is locked in place by the lock lever [A]. (Make sure to hold down this lever whenever pulling out the unit).



d1352862

4. ITB cleaning intake fan [A] along with the duct (⌀ x 1 *).



d1352612

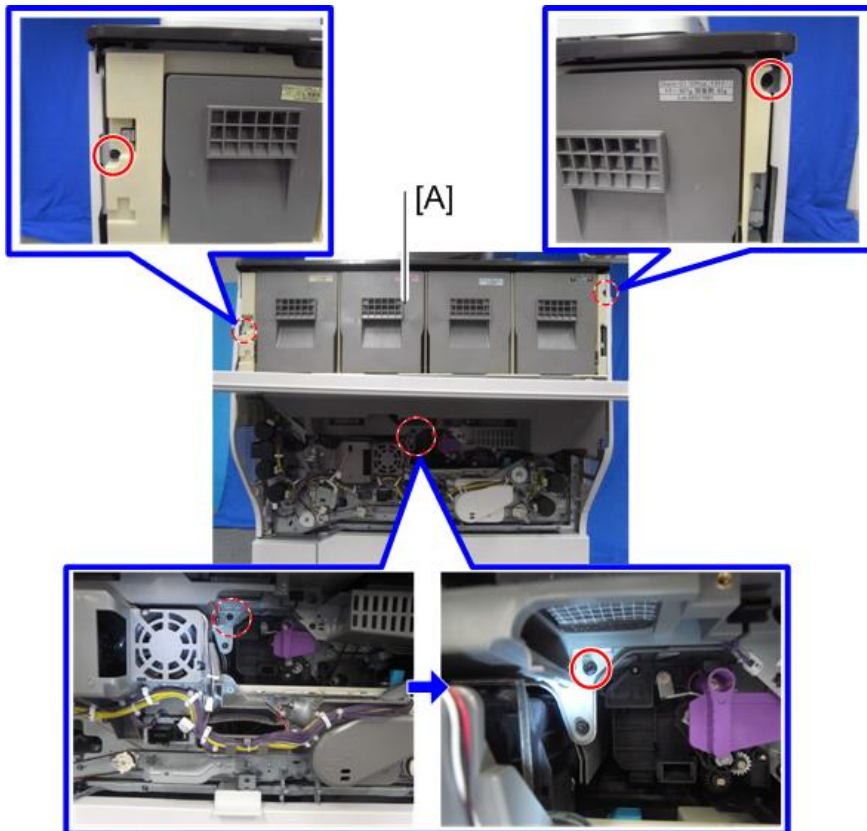
* D137/D138 use TCRU screws

5. Open the toner supply unit front cover [A].



d1350026

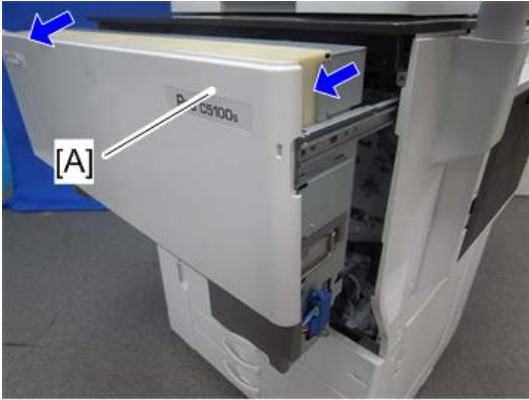
6. Remove the fixing screws of the toner supply unit [A] (⚙️ x 3*).



d1350027

* D137/D138 use TCRU screws

7. Slide the toner supply unit [A] to the front.

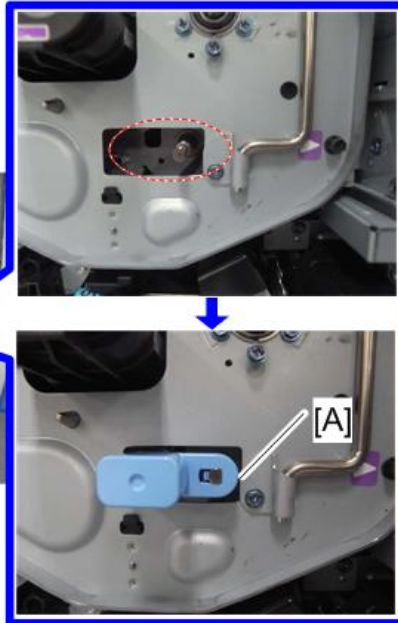


d1350028

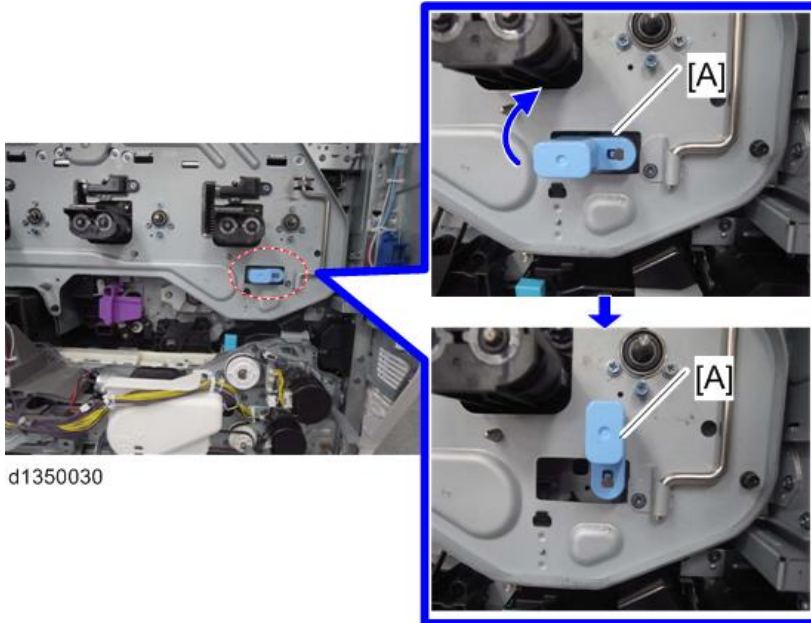
8. Attach the ITB separation lever [A] horizontally from the right side of the machine.



d1350029



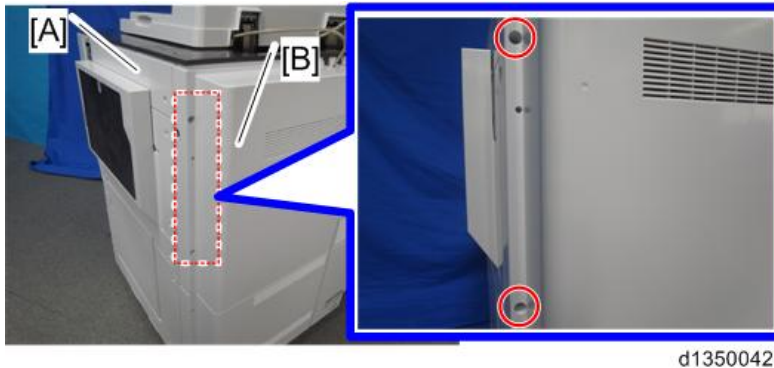
9. Turn the ITB separation lever [A] clockwise until it is vertical.



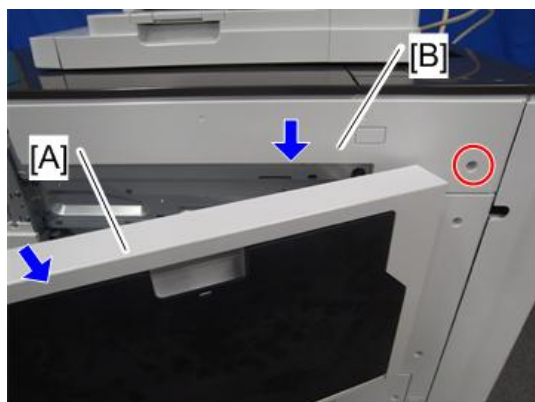
10. Return the toner supply unit to the machine and secure it with the screws.
11. Attach the ITB cleaning intake fan and drawer unit cover

Operation Panel Attachment

1. In order to easily remove the right middle upper cover [A], remove the fixing screws on the left side of the rear middle cover [B] (⚙ x 2).



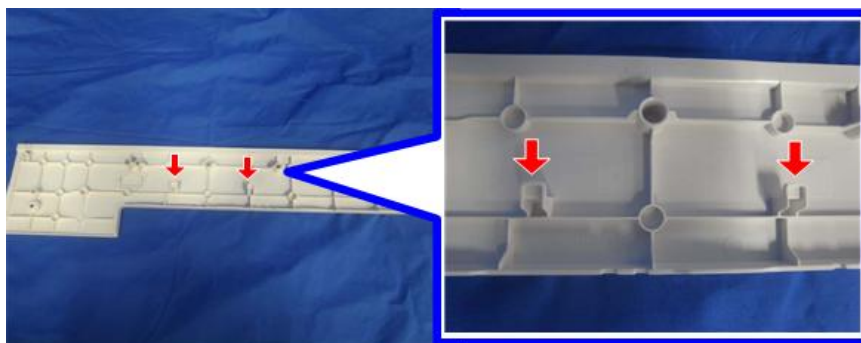
2. Open the by-pass tray unit [A]. Remove the right middle upper cover [B], moving it downward (⚙ x 1).



d1350043

Note

- Check the position of the hooks in the photo below before removing.

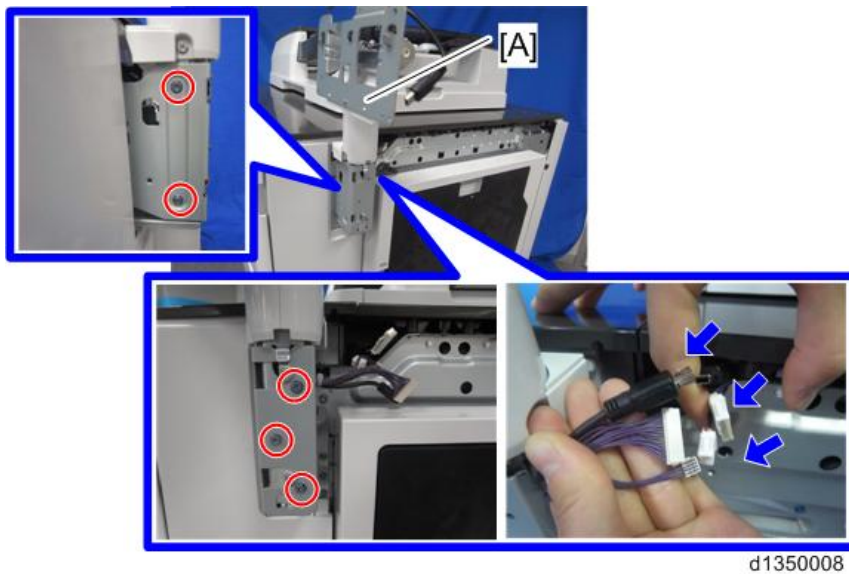


d1352279

3. Attach the arm stay [A] for the operation panel (⚙ x 5).

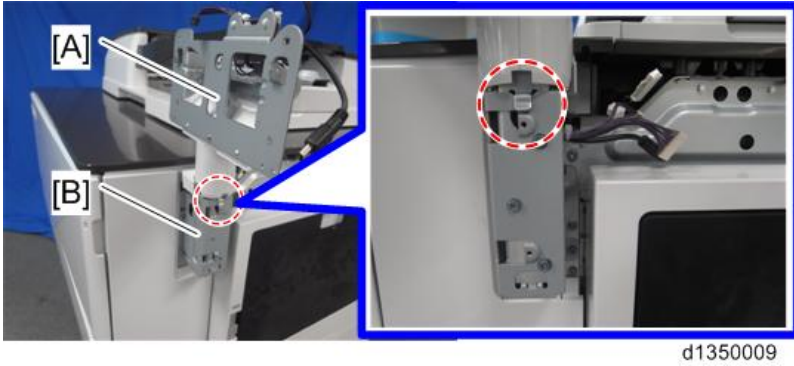


4. Attach the operation panel arm (🔩 x 5, 📌 x 3).

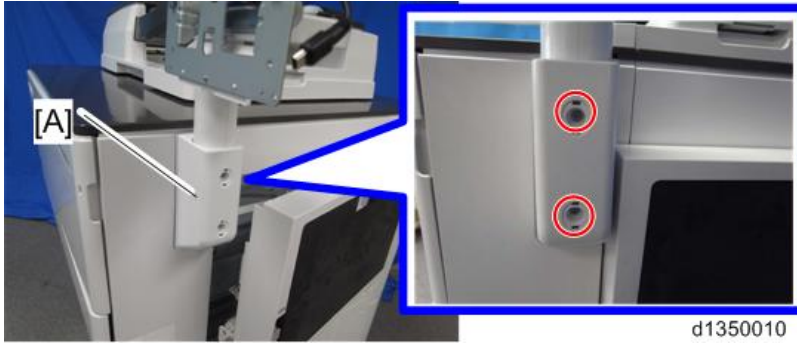


⬇️ **Note**

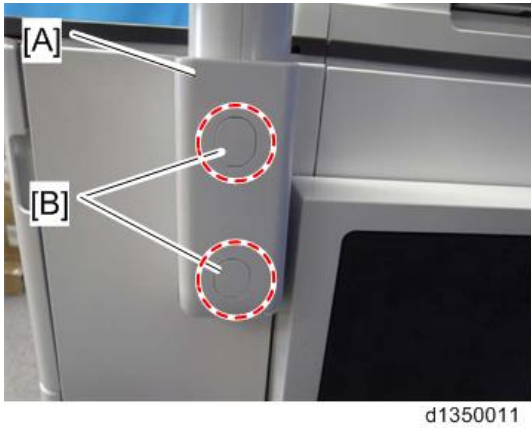
- Position the hook of the operation panel arm [A] over the arm stay [B].



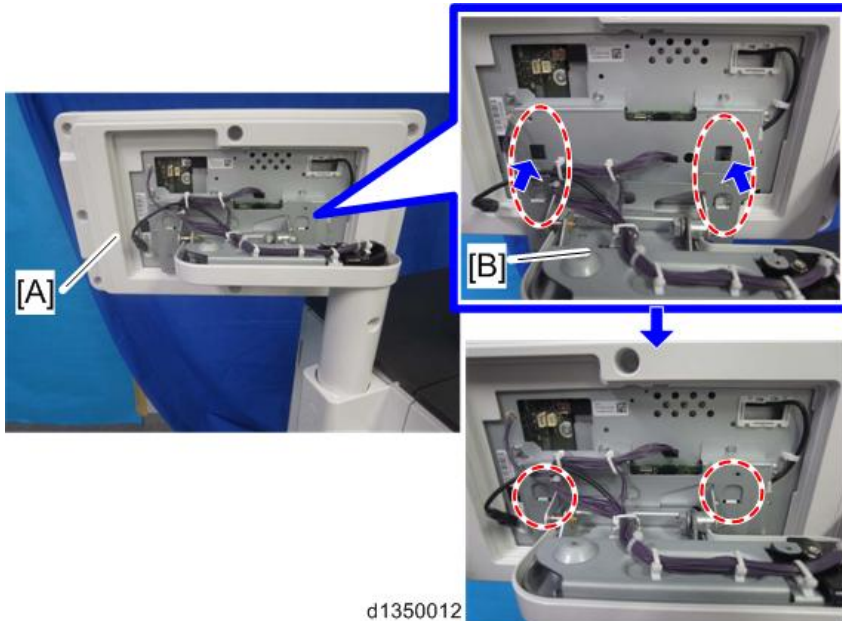
5. Open the by-pass tray unit and attach the arm cover [A] (2 x 2).



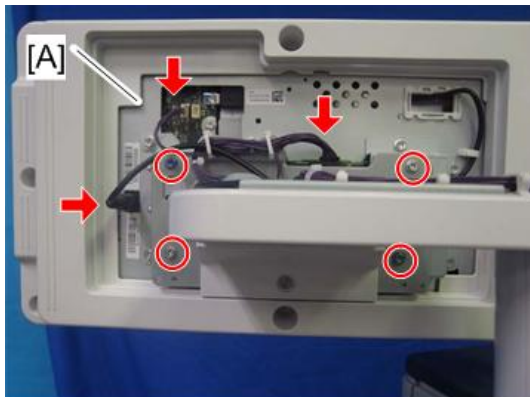
6. Attach the screw covers [B] on the arm cover [A].



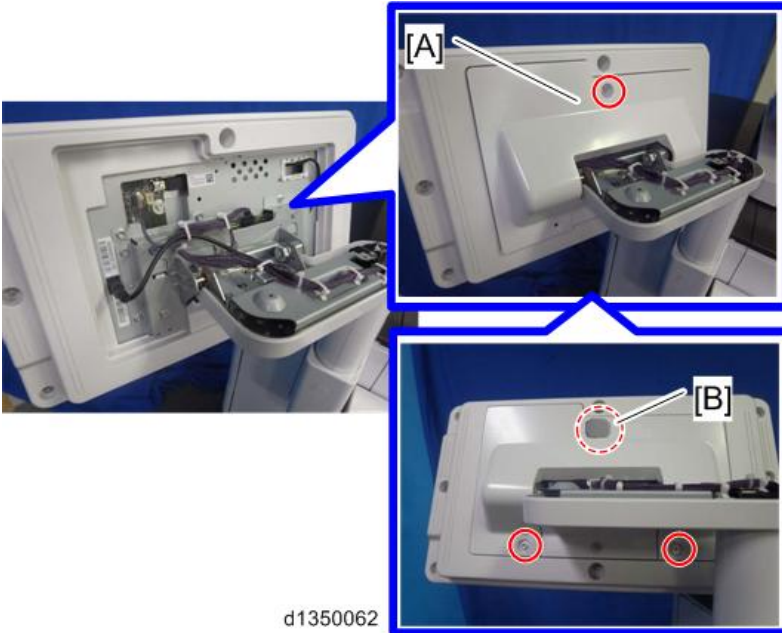
7. Attach the operation panel [A] to fit the hook of the operation panel arm [B].



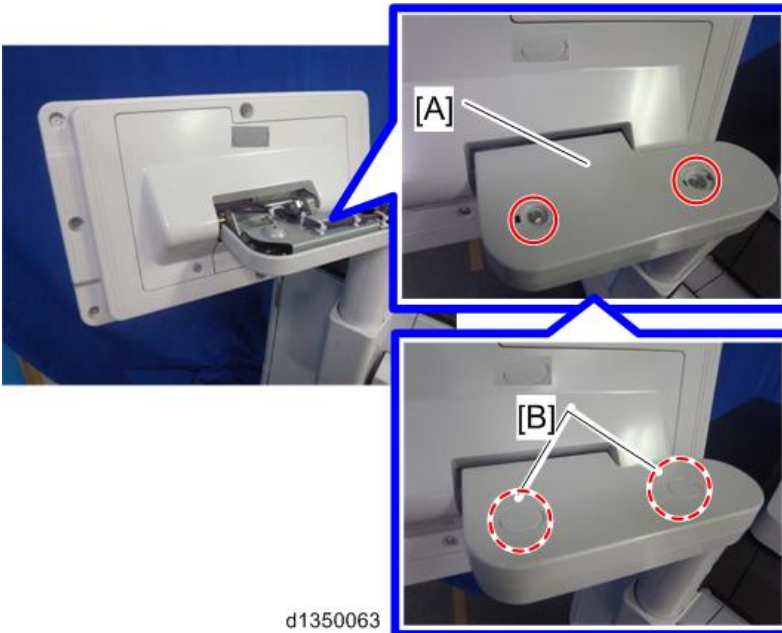
8. Secure the operation panel [A] (⚙️ x 4, 📏 x 3).



9. Attach the rear cover [A] (⚙️ x 3) and the screw cover [B].



10. Attach the arm upper cover [A] (⚙ x 2) and the screw covers [B].



11. Remove the protection sheet [A].



d1350015

Operator Call Light Attachment

1. Connect the machine and operation call light [A] (☐ x 1).



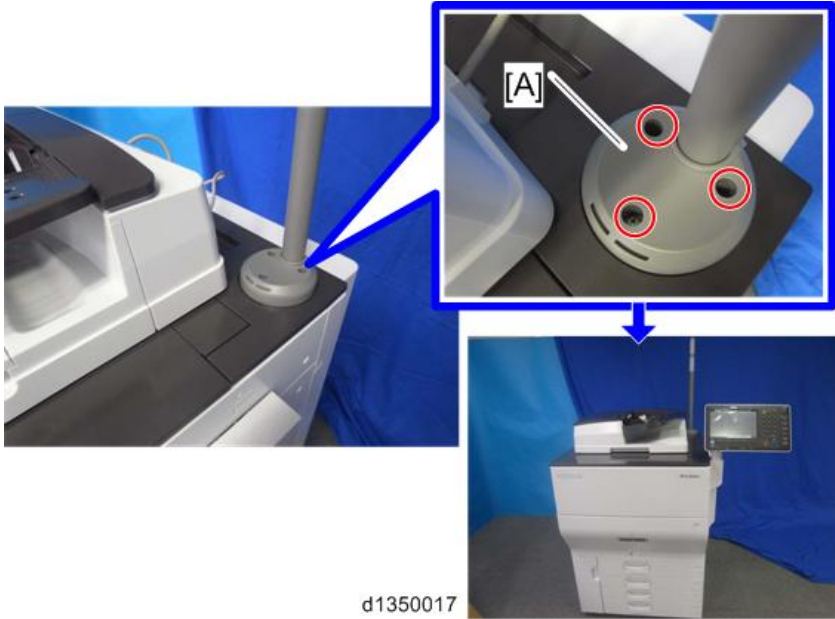
d1350016

2. Fold back the harness [A] and clamp it.



d1350059

3. Attach the operation call light [A] (☐ x 3).



d1350017

Note

- When attaching the operator call light, be careful not to pinch the harness. Fix the light after it was confirmed visually from the front and back.

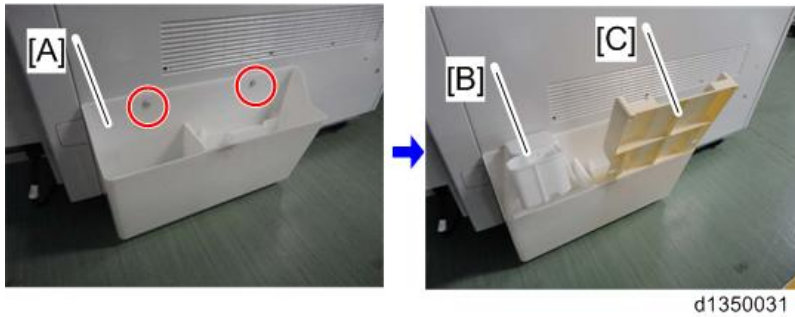


d1350060

Attaching the Service Pocket

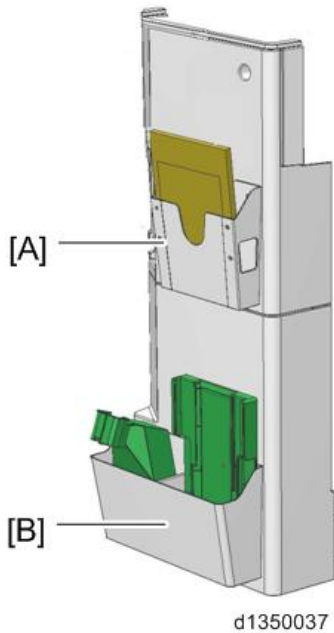
When Attaching to the Machine

1. Attach the service pocket [A] for the funnel/PCU holder to the left lower (rear) (rivet x 2). Put the funnel [B], PCU holder [C] and Development roller/Drum rotation tools into the service pocket.

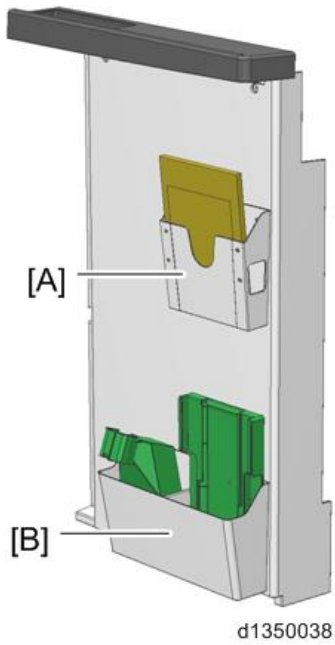


When Attaching to the Finisher

- Finisher SR4090/ Booklet Finisher SR4100: Attach to the following locations.
Rear side (upper): Operating instructions [A]
Rear side (lower): Funnel/ PCU holder [B]



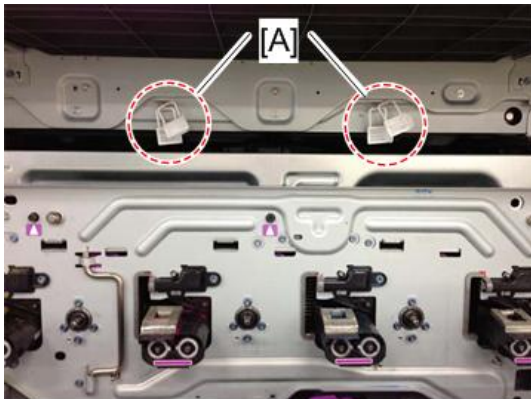
- Finisher SR4110: Attach to the following locations.
Rear side (upper): Operating instructions [A]
Rear side (lower): Funnel/ PCU holder [B]



Storing the Supply Port Caps for the Developer

TCRU/ORU Contracts

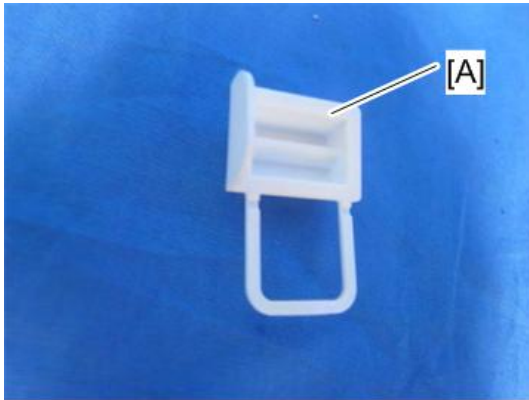
When a TCRU/ORU user removes the PCDU from the machine, they must use the caps (x 4) to prevent developer spill. When installing the machine, attach the caps [A] to the clamping position shown below.



d1353058

Not TCRU/ORU Contracts

Store the caps [A] (x 4) in the service pocket for the operating instructions. Use them during maintenance if needed.



d1350056

Storing the Factory SP Sheet

On a newly delivered machine, the factory SP sheet is located on the exposure glass.

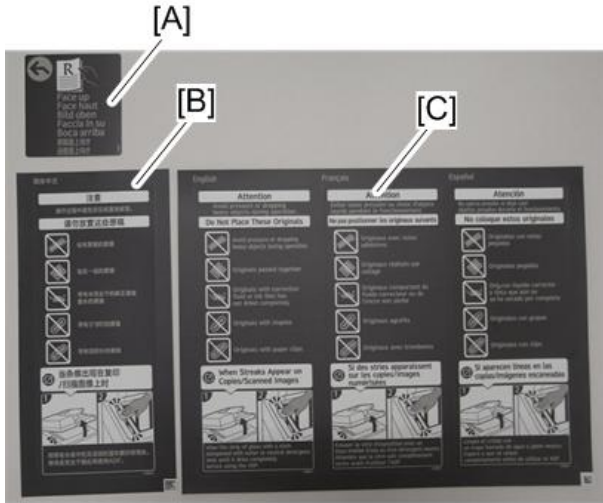
Open the tandem tray [A], and remove the paper cassette decal [B]. Confirm that the factory SP sheet [C] is stored inside.



d1350033

Attaching the decals

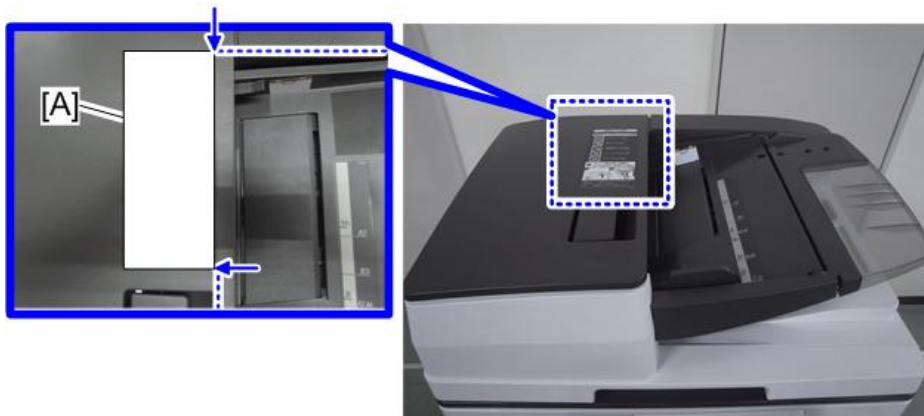
1. Prepare the ADF paper set decal [A] and ADF caution decal ([B] or [C]).



d1351935

- [B]: ADF caution decal for CHN
- [C]: ADF caution decal for other countries

2. Attach the ADF caution decal to the position [A] on the ADF.



d1351933

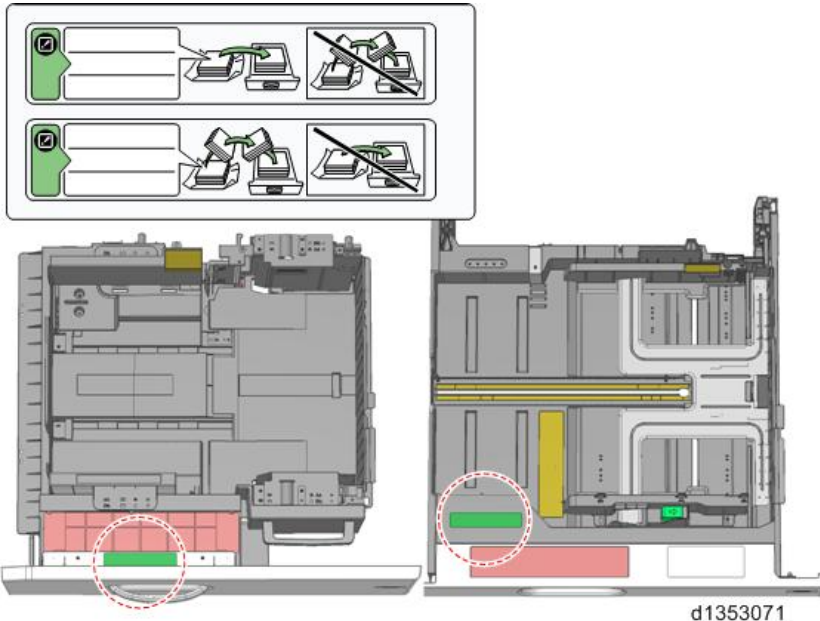
3. Attach the ADF paper set decal [A] in the indentation in the ADF.



d1351934

4. According to the paper that will be used by the customer, select and attach the following decals to the 1st tray, 2nd tray and 3rd tray.

RTB 155
Attach a
protective sheet to
the tandem tray.



d1353071

Note

- Paper type, brand, etc can be written on the blank space.

Machine Level Adjustment

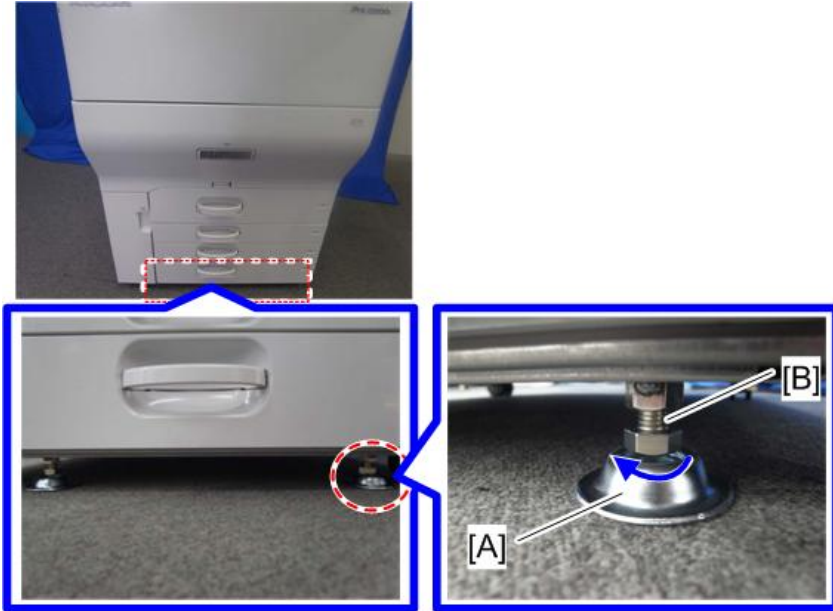
When installing the main machine, make the machine level.

★ Important

- If the machine is not leveled, the tilt of the machine reduces the accuracy in side-to-side registration.
- The front and rear side of the machine must be less than 5 mm (0.2") away from level.

1. Place the four shoes [A] below the bolts [B] under each corner of the machine.
2. Turn the nuts [B] to lower the bolt until the bolts reach the leveling shoes [A].

Example below: Front side

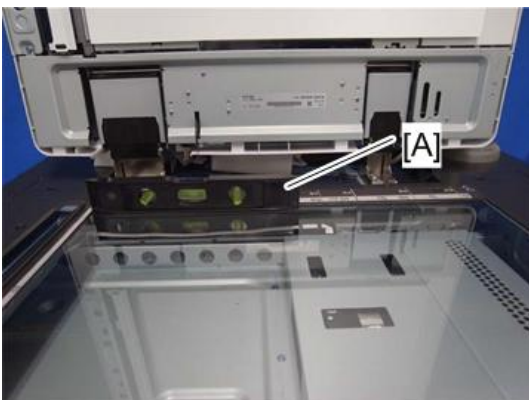


d1350034

Note

- Use a wrench to raise or lower the nuts.

3. Open the ADF, and then place a level [A] on the exposure glass.

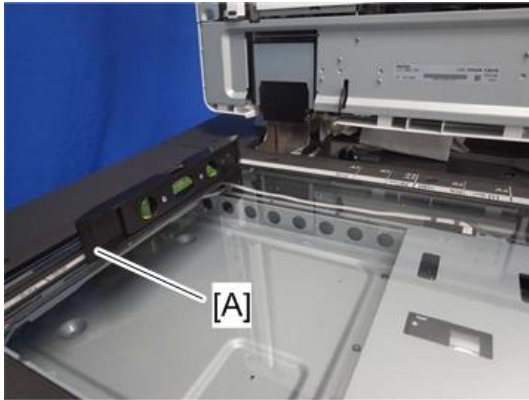


d1350035

4. Adjust the machine level until the machine is less than 5mm from level (measure from left-to-right).
 - When the right side of the machine is lower: Lower the nuts of the right side of the machine (front and rear) to lift the right side of the machine.

- When the left side of the machine is lower: Lower the nuts of the left side of the machine (front and rear) to lift the left side of the machine.

5. Open the ADF, and then place the level [A] along the side.



d1350036

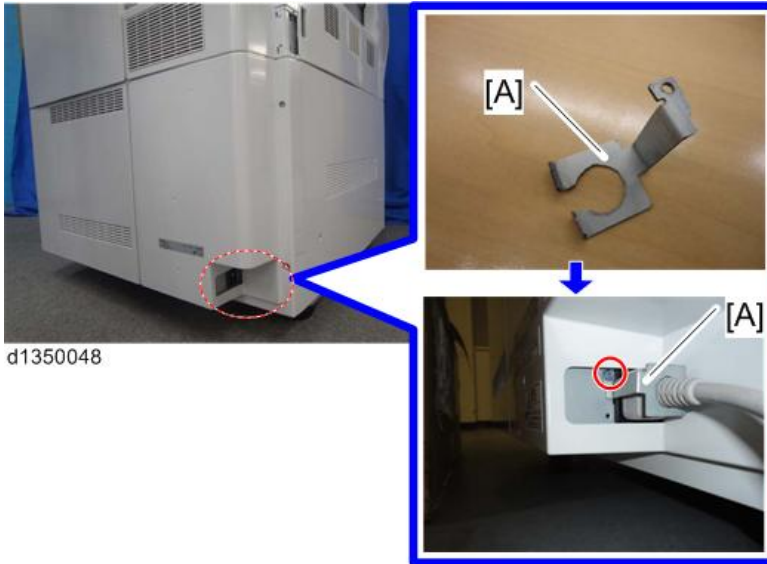
6. Adjust the machine level until the machine is less than 5mm from level (measure from front-to-rear).

- When the front side of the machine is lower: Lower the nuts of the front side of the machine (left and right) to lift the front of the machine.
- When the rear side of the machine is lower: Lower the nuts of the rear side of the machine (left and right) to lift the rear of the machine.

Installing the Securing Bracket to Prevent the Power Cord from Falling Off

1. Install the securing bracket [A] to prevent the power cord from falling off. (🔩 x1)

Example below: D137/D138



Note

- D137/D138 machines have two power cords. Install a securing bracket for each power cord.

How to Set the Toner Cartridge

★ Important

- Be careful when setting the toner cartridges because the toner cartridges have different shapes, and the cartridge may be damaged if you try to force a cartridge into the wrong place. The position of the toner cartridges is Y, M, C, K from the left.

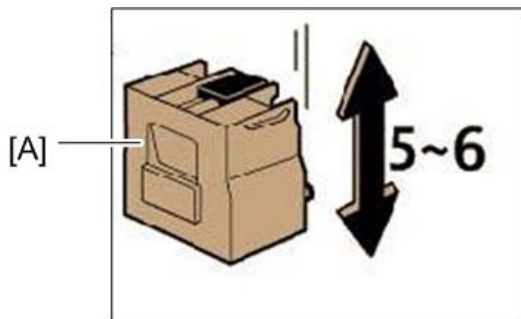


1. Open the toner supply unit front cover [A].



d1350053

2. Unpack the new toner cartridge.
3. Reverse the toner cartridge and shake 5-6 times while grasping both ends.

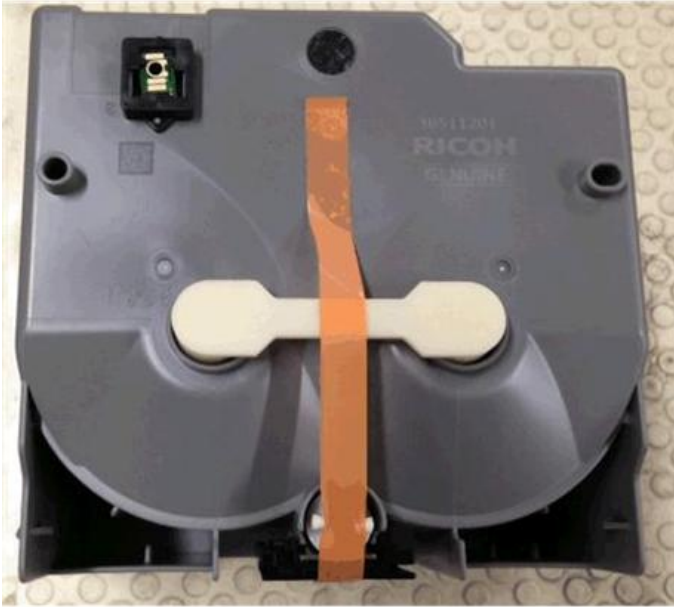


d1350049

4. Set each color toner cartridge. Push the toner cartridge until it locks into place.

Note

- Make sure to remove the retainer before installing the K toner cartridge.



d135f0002

Executing DEMS

Execute DEMS (SP3-040-001) to correct uneven image density.

ACC (Automatic Color Calibration) Adjustment

1. Check that there are no clamps or other parts that you forgot to remove. Then, plug the power cord into the power source.
2. Turn the main power switch ON.
3. Tap [User Tools].
4. To print a color pattern, select: Maintenance > Auto Color Calibration.
5. Tap [Start] for the Copier function.
6. Tap [Start Printing].
7. Put the color test pattern face-down with the arrow pointing to the rear left corner of the exposure glass.
8. Tap [Start Scanning]. The machine scans the pattern once.
9. Do Steps 6-8 for the Printer function.

Checking the copy image with color chart

If you want to install any options, install them using the installation procedure before doing the procedure below.

1. Switch the machine to copier mode.
2. Make sure that there is A3 or DLT paper in one of the trays.
3. Put a "Color Chart C-4" on the exposure glass.
4. Select full color mode and print one copy of the chart.
5. Check the results of the copy with the customer.

Paper Tray Settings

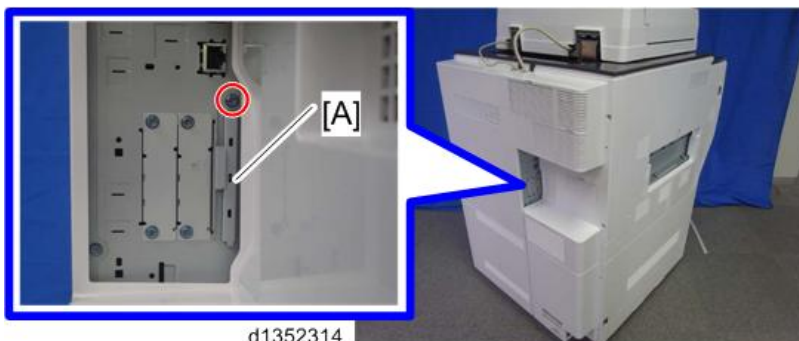
Adjust the side-to-side registration for each paper tray as necessary.

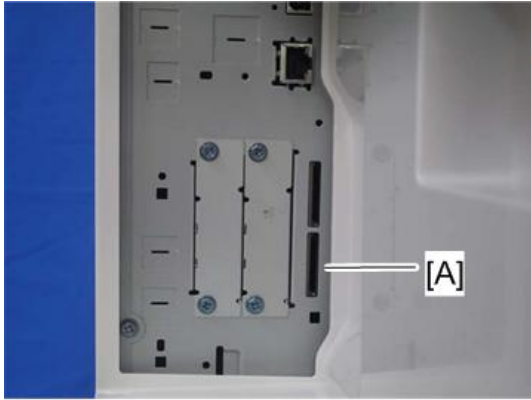
- SP1-003-001 (Side-to-Side Reg: Tray1)
- SP1-003-002 (Side-to-Side Reg: Tray2)
- SP1-003-003 (Side-to-Side Reg: Tray3)
- SP1-003-004 (Side-to-Side Reg: Tray4)

Paper Library Data Installation

Follow this procedure to install the Paper Library data.

1. Create a folder in the root directory of an SD card and name the folder "mqp".
2. Copy the paper database file into the "mqp" folder, and then rename the copied file "library.mqp".
3. Make sure that the machine is OFF.
4. Insert the SD card containing the "library.mqp" file into SD card Slot 2 (lower slot) on the rear side of the machine.





d1352316

5. Turn the machine main power ON.
6. Make sure that the data version of the SD card is newer than the data version of the flash ROM on the controller. If it is not, store the latest data version of the Paper Library onto an SD card.
 - The version of the data on the SD card can be checked with SP5711-202.
 - The version of the data in the flash ROM on the controller can be checked with SP5711-201.
7. Access SP5-711-001 and tap [EXECUTE].
8. Tap [EXECUTE] again.
9. When the machine displays "Completed" and prompts you to re-boot, tap [Exit] to exit SP mode.
10. Turn the machine main power OFF and remove the SD card from Slot 2.
11. Turn the machine main power ON.
12. Check the Paper Library data version in SP5-711-201 (Flash ROM) to confirm that the Paper Library data has been updated.

★ Important

- Note the following 2 types of MQP data:
 - MediaLib XX ProC5100 A(AB) : For ProC5100S only
 - MediaLib XX ProC5110 A(AB) : For ProC5110S only

Backing up and restoring paper library data

This table describes the methods for backing up and restoring Paper Library data.

		Adjustment Setting for Skilled Operators	SP mode	SD slot
MQP data	Install	No	Yes: SP5-711-001	Lower slot

		Adjustment Setting for Skilled Operators	SP mode	SD slot
Custom paper Library	Back up	Yes	No	Slot on operation panel
	Restore	Yes	No	Slot on operation panel
Saved paper Library	Back up	Yes	No	Upper slot
	Restore	No	Yes: SP5-711-002	Lower slot

How to back up and restore Custom paper library/Saved paper library in Adjustment Settings for Skilled Operators

1. Insert the SD card into the SD card slot on the operation panel.
2. Tap [User Tools], and then tap [Adjustment Settings for Skilled Operators].
3. Tap [05: Machine Maintenance].
4. Tap [0703: Backup / Restore Custom Paper Data].
5. Tap [Back Up Saved Paper Library], [Back Up Custom Paper Settings], or [Restore Custom Paper Settings].

Installation Procedure (D135/D136)

1. Unpack the machine and remove all the wrapping.
2. Place the machine at the installation site.
3. Remove all filament tape from the machine.



d1350018

4. Open the tandem tray [A] and remove the filament tape at the duplex unit [B].



d1350002

5. Remove the filament tape and the cushion at the ADF.



- 6. Open the ADF [A] and release the lever to open the white board. Then remove the protection sheet.



- 7. Remove the power cable from paper tray 2.



d135a3132

8. Remove the protection sheet



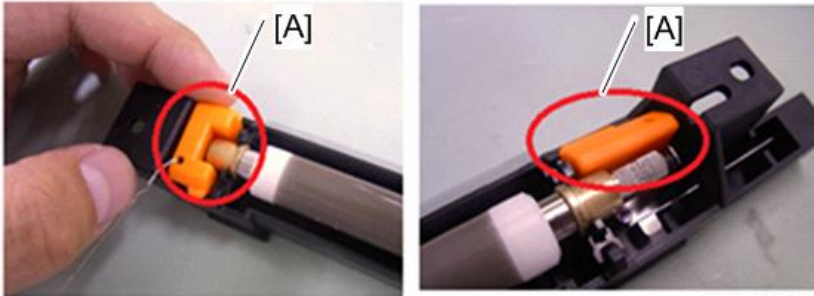
d1350022

Removing the Retainers of the Charge Roller Units (C, M, K)

The shipping retainers [A] must be removed from the charge roller units (C, M, K).

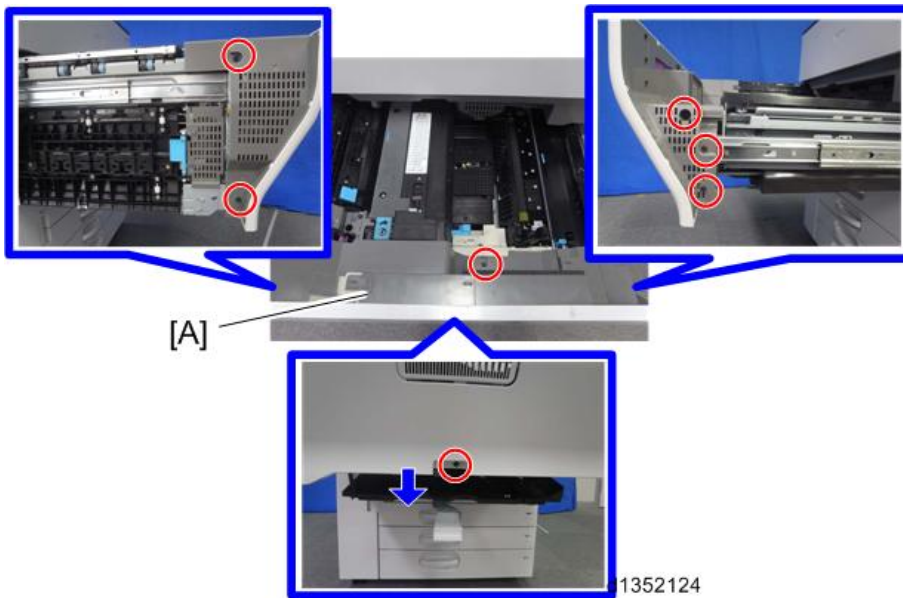
Note

- These retainers is not included in the charge roller unit Y.



d135a0092

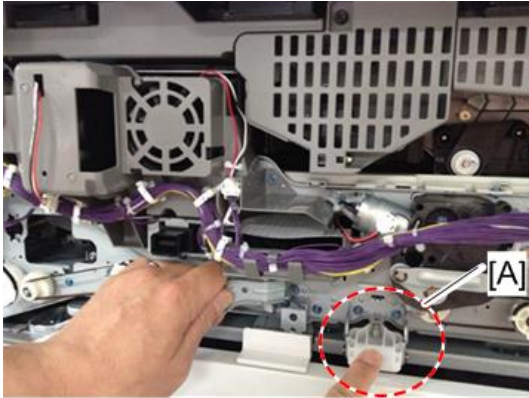
1. Pull out the drawer unit and remove its cover [A] (⌀x7).



1352124

★ Important

- Make sure to hold down the lock lever ([A] in the photo below) when you pull out the unit. (The unit is locked in place by this lever).

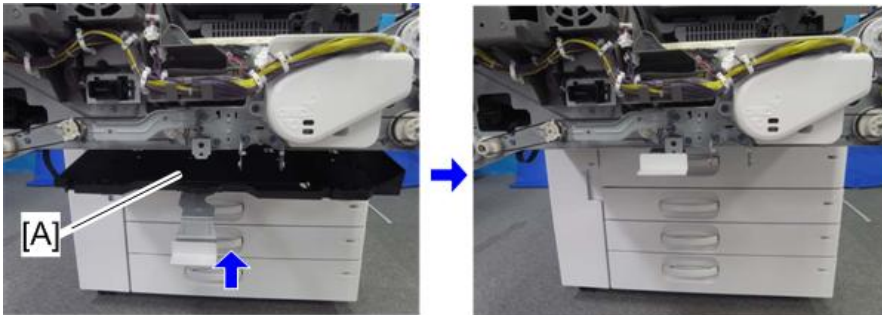


d1352862

2. Close the drawer unit.

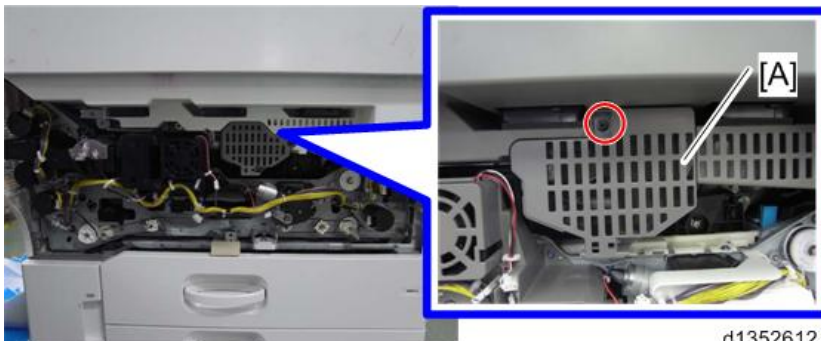
Note

- When you push the unit back in to the machine, you can close the guide plate [A] of the paper exit and duplex unit.



d1352313

3. Remove the ITB cleaning intake fan [A] together with the duct (⚙ x 1).



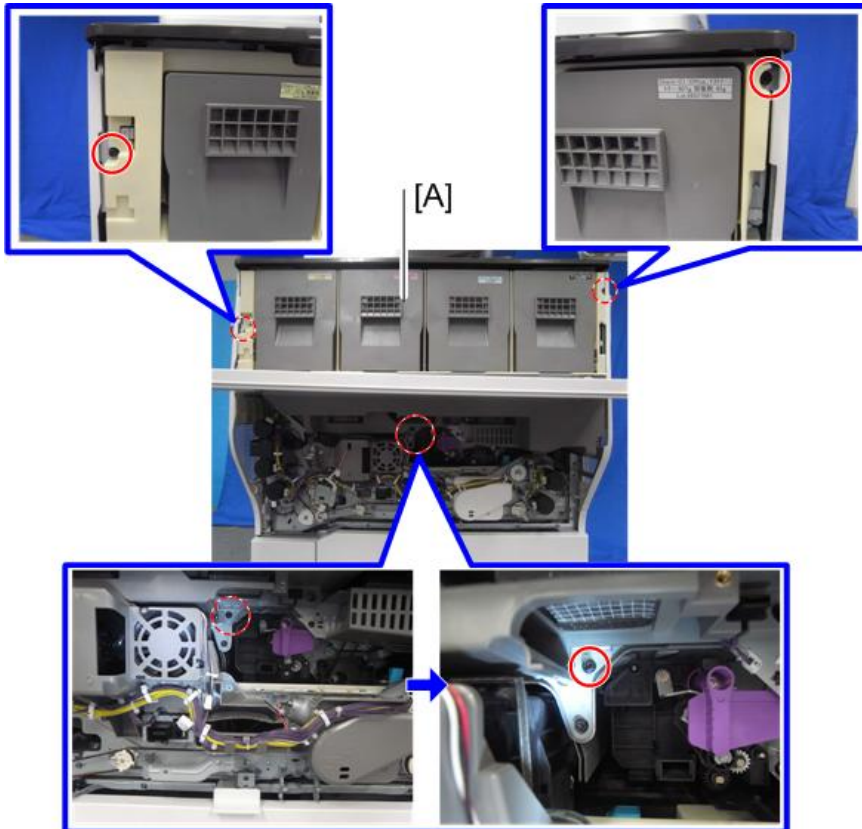
d1352612

4. Open the front cover of the toner supply unit [A].



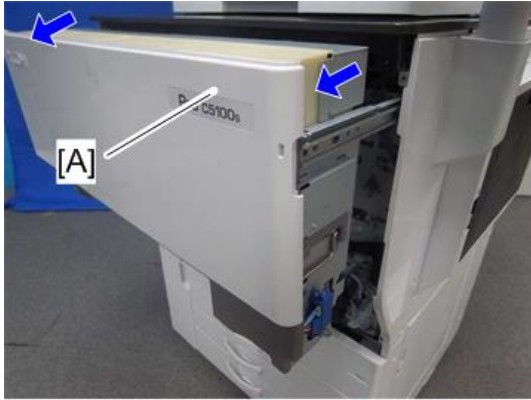
d1350039

5. Remove the fixing screws of the toner supply unit [A] (⚙️ x 3).



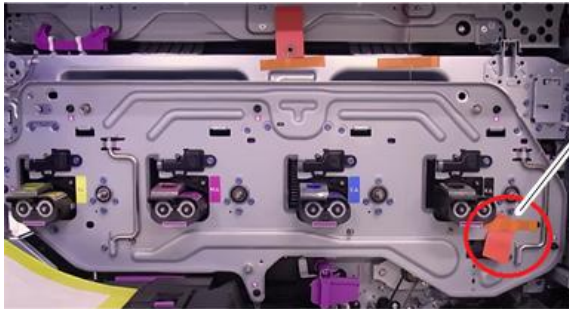
d1350027

6. Pull out the toner supply unit [A].



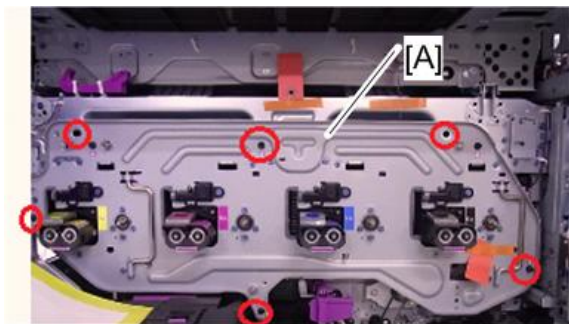
d1350028

7. Remove the toner supply unit [A]. (🔧 x2)
8. Remove the filament tape [A] from the faceplate.



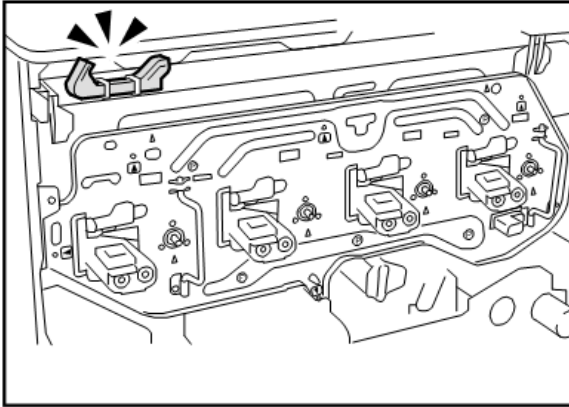
d135a0093

9. Remove the screws fixing the face plate. (🔧 x6)



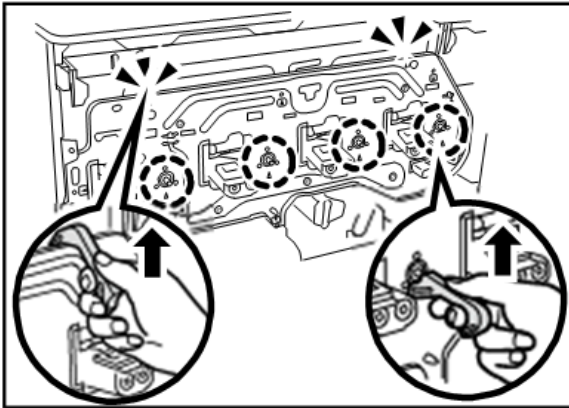
d135a0094

10. Remove the handles.



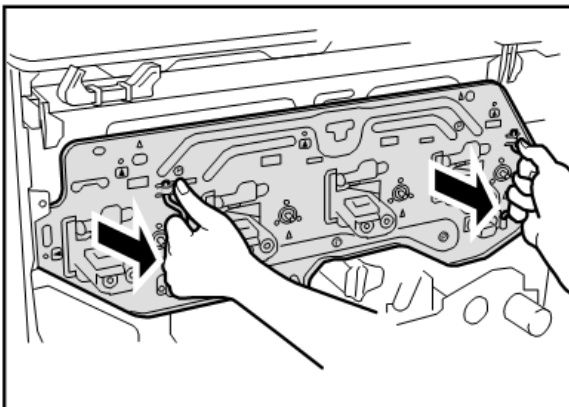
d1352794

11. Attach the handles and pull out the units slowly and evenly.



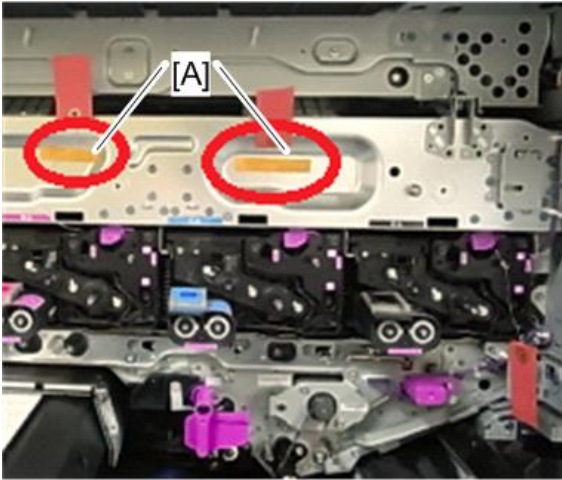
d1352795

12. Hold the grips and remove the face plate.



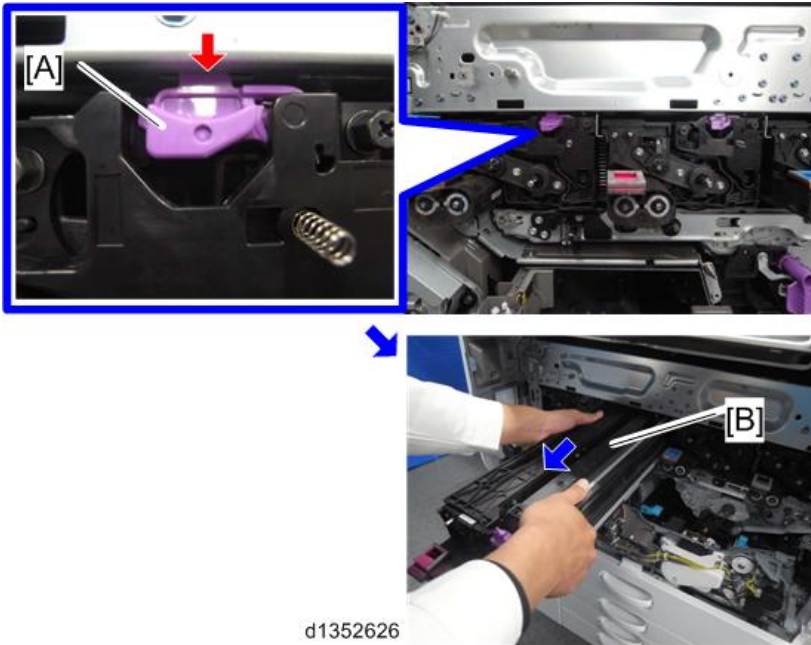
d1352796

13. Remove all filament tape [A] of Magenta and Cyan units.



d135a0095

14. Unlock the lever [A] and pull out the PCDU [B] from the machine.

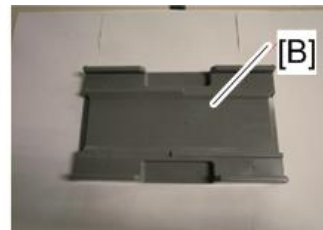


d1352626

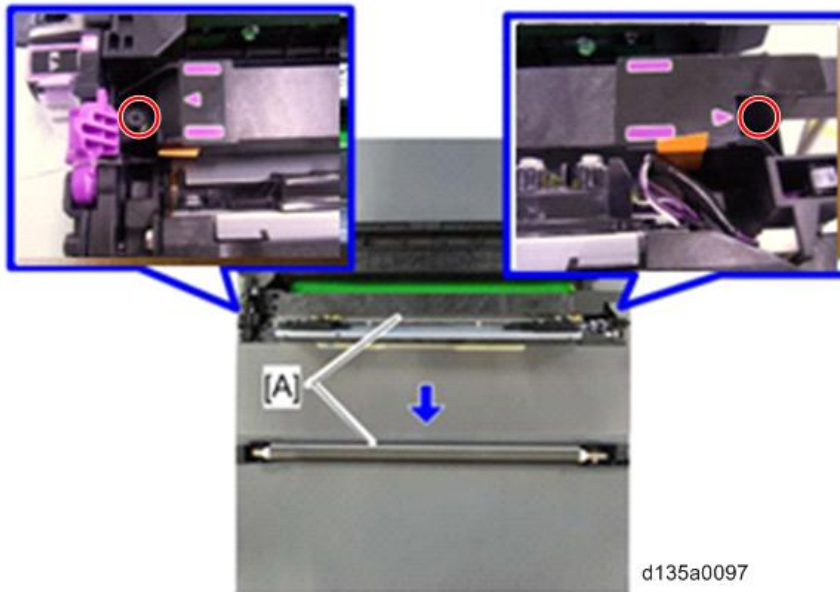
15. Place the PCDU [A] on the PCU stand [B].



d135a0096



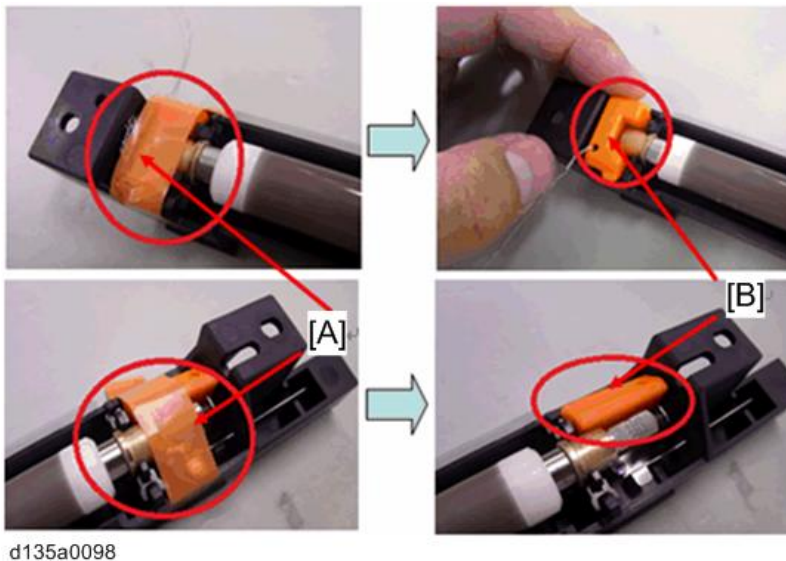
16. Remove the charge roller unit and place it on a clean, flat surface with the roller facing up (⚠️x2).



★ Important

- Make sure that the surface is flat and level.

17. Remove the filament tapes [A] and retainers [B] from both ends of the charge roller unit.



18. Reattach the charger roller unit and PCDU, and then attach the face plate.

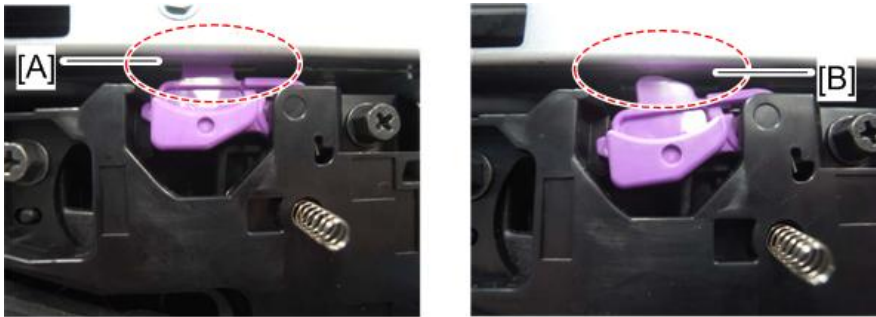
★ Important

- After attaching the face plate, check the status of the locking levers again by looking through the holes as shown.

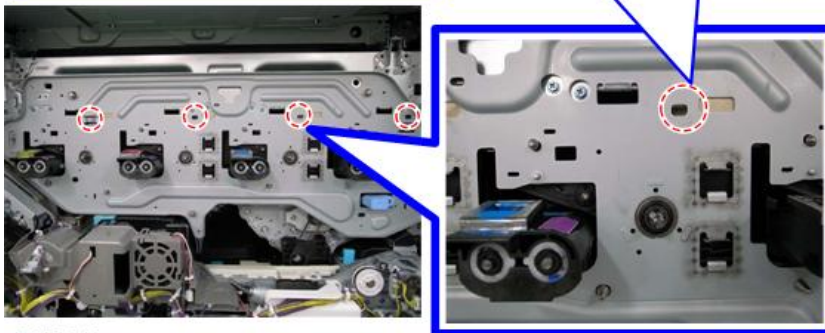
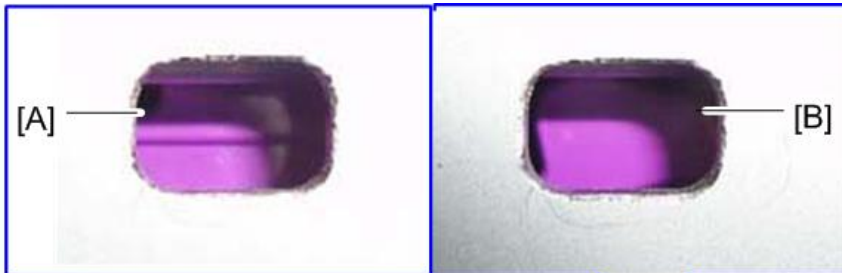
[A]: The locking lever is properly fit in the hole in the machine frame.

[B]: The locking lever is **not** properly fit in the hole in the machine frame.

2



d1352628



d1352640

Attaching the ITB Separation Lever

When unpacking the machine, the ITB separation lever is not yet attached to the correct location. During machine installation, you must install the lever.

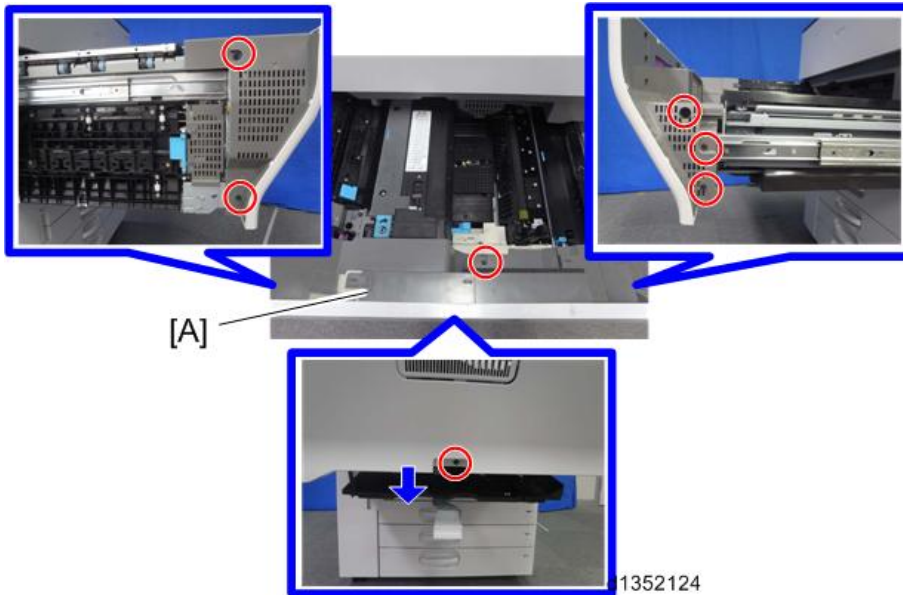
1. Open the drawer unit [A], and remove the ITB separation lever [B].



d1350025

2

2. Drawer unit cover [A] (⌀ x 7)

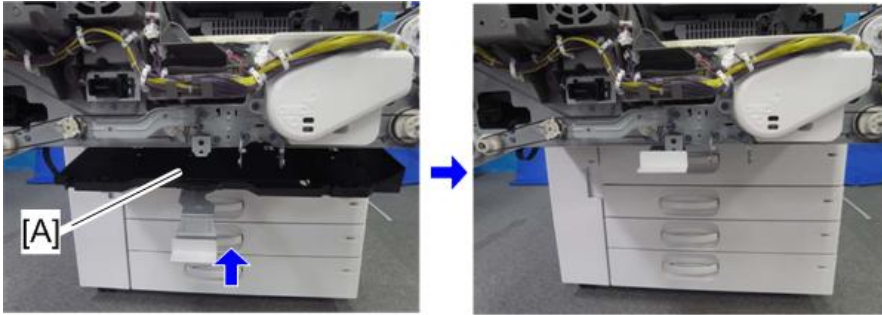


1352124

3. Close the drawer unit

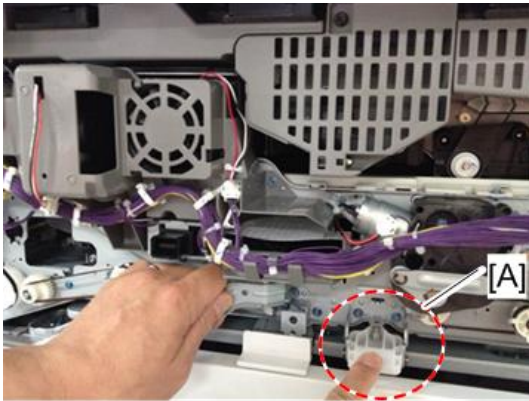
ⓘ Note

- After removing the drawer unit cover, when the drawer unit is returned to the machine, you can close the guide plate [A] of the paper exit and duplex unit.



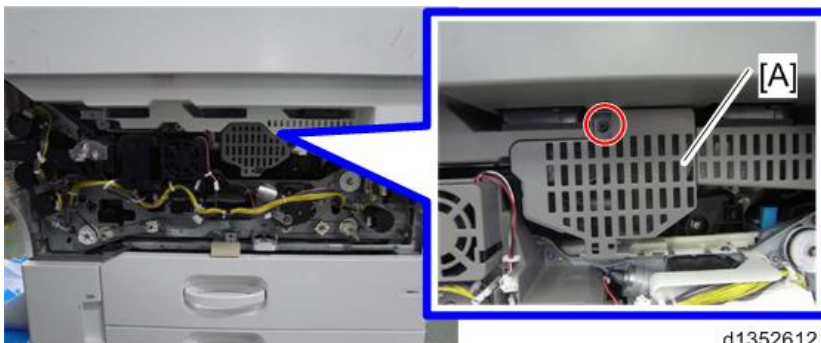
d1352313

- When the drawer unit is pushed back into the machine, it is locked in place by the lock lever [A]. (Make sure to hold down this lever whenever pulling out the unit).



d1352862

4. ITB cleaning intake fan [A] along with the duct (⚙ x 1).



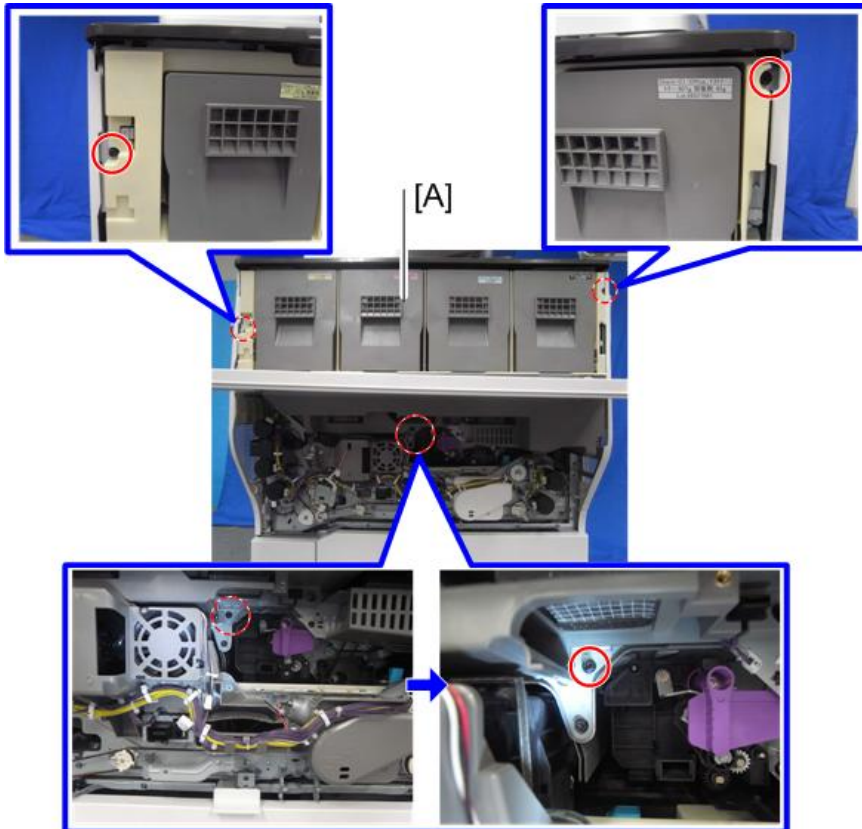
d1352612

5. Open the toner supply unit front cover [A].



d1350039

6. Remove the fixing screws of the toner supply unit [A] (⚙ x 3).



d1350027

7. Slide the toner supply unit [A] to the front.

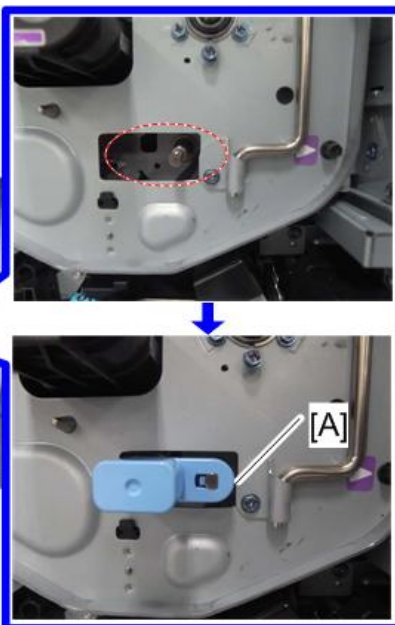


d1350040

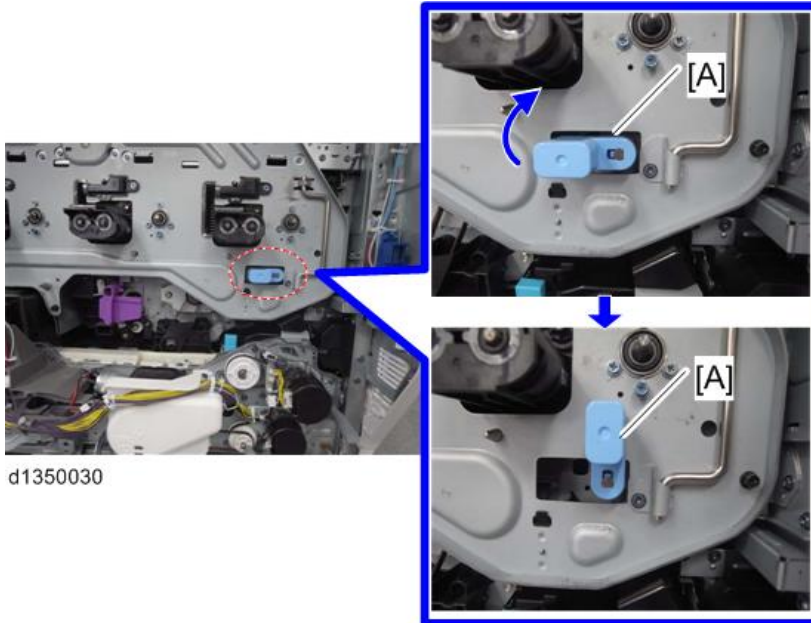
8. Attach the ITB separation lever [A] horizontally from the right side of the machine.



d1350029



9. Turn the ITB separation lever [A] clockwise until it is vertical.

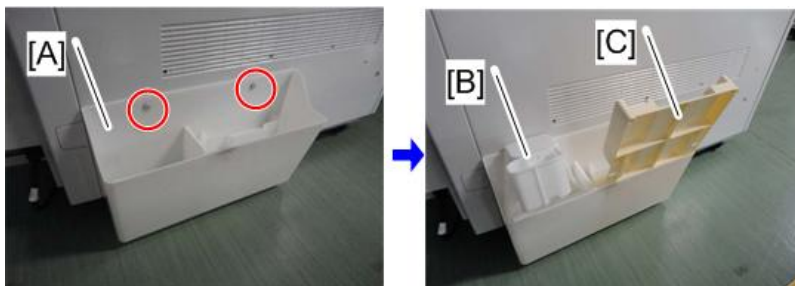


10. Return the toner supply unit to the machine and secure it with the screws.
11. Attach the ITB cleaning intake fan and drawer unit cover

Attaching the Service Pocket

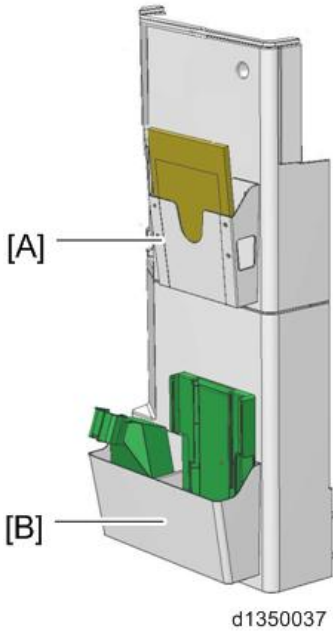
When Attaching to the Machine

1. Attach the service pocket [A] for the funnel/PCU holder to the left lower (rear) (rivet x 2). Put the funnel [B], PCU holder [C], Development roller/Drum rotation tools and development caps into the service pocket.

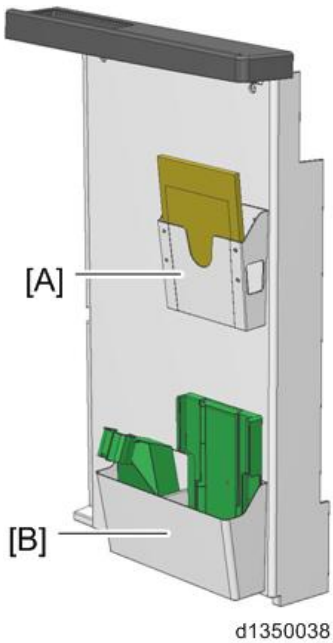


When Attaching to the Finisher

- Finisher SR4090/ Booklet Finisher SR4100: Attach to the following locations.
Rear side (upper): Operating instructions [A]
Rear side (lower): Funnel/ PCU holder [B]

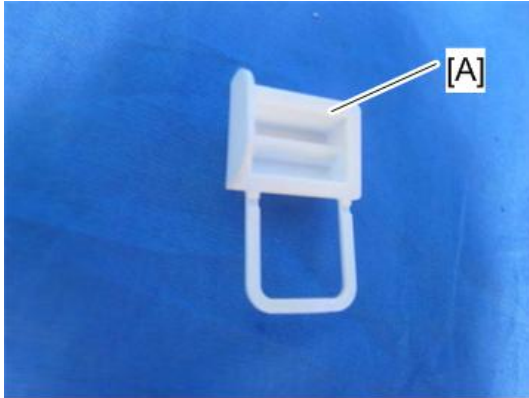


- Finisher SR4110: Attach to the following locations.
Rear side (upper): Operating instructions [A]
Rear side (lower): Funnel/ PCU holder [B]



Storing the Supply Port Cap of the Developer

Store the caps [A] (x 4) in the service pocket for the operating instructions. Use them during maintenance if needed.



d1350056

Storing the Factory SP Sheet

On a newly delivered machine, the factory SP sheet is located on the exposure glass.

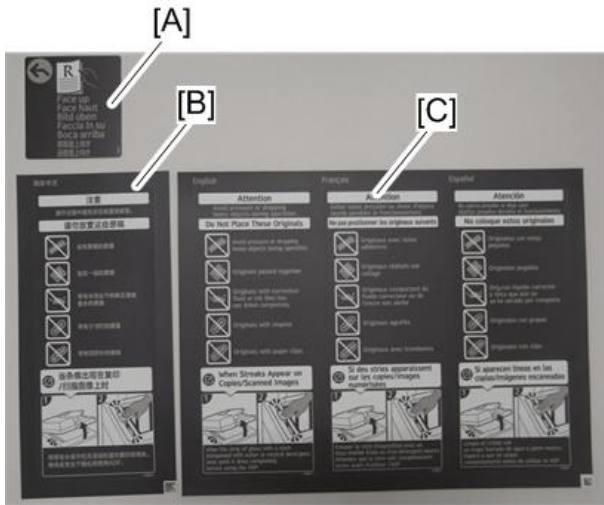
Open the tandem tray [A], and remove the paper cassette decal [B]. Confirm that the factory SP sheet [C] is stored inside.



d1350033

Attaching the decals

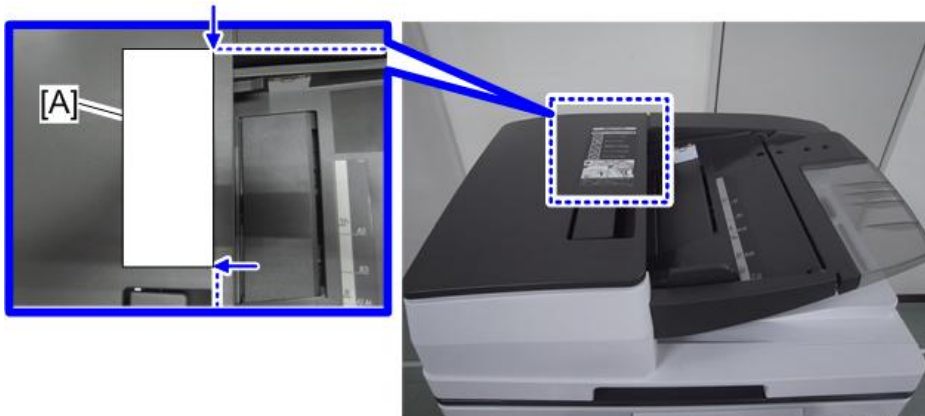
1. Prepare the ADF paper set decal [A] and ADF caution decal ([B] or [C]).



d1351935

- [B]: ADF caution decal for CHN
- [C]: ADF caution decal for other countries

2. Attach the ADF caution decal to the position [A] on the ADF.



d1351933

3. Attach the ADF paper set decal [A] in the indentation in the ADF.

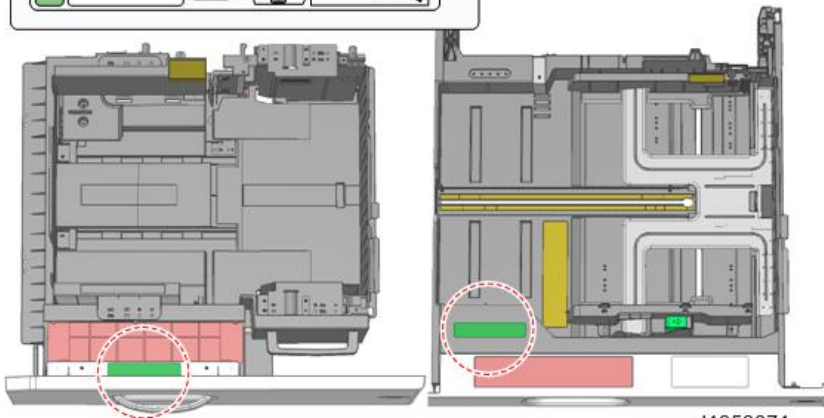
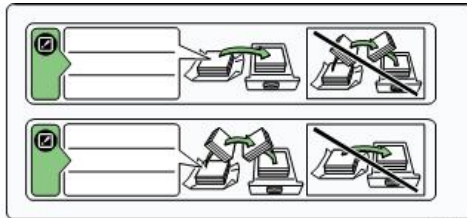


d1351934

2

4. According to the paper set by customer, select and attach the following decals to the 1st tray, 2nd tray and 3rd tray.

RTB 155
Attach a
protective sheet
to the tandem
tray.



d1353071

Note

- Paper brand can be written on the blank space.

Machine Level Adjustment

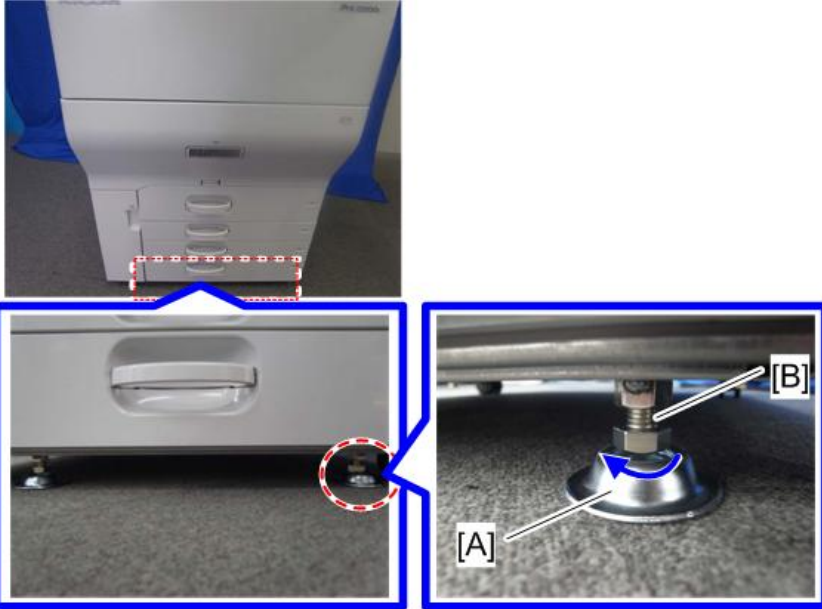
When installing the main machine, make the machine level.

★ Important

- If the machine is not leveled, the tilt of the machine reduces the accuracy in side-to-side registration.
- The front and rear side of the machine must be less than 5 mm (0.2") away from level.

1. Place the four shoes [A] below the bolts [B] under each corner of the machine.
2. Turn the nuts [B] to lower the bolt until the bolts reaches to the leveling shoes [A].

Example below: Front side

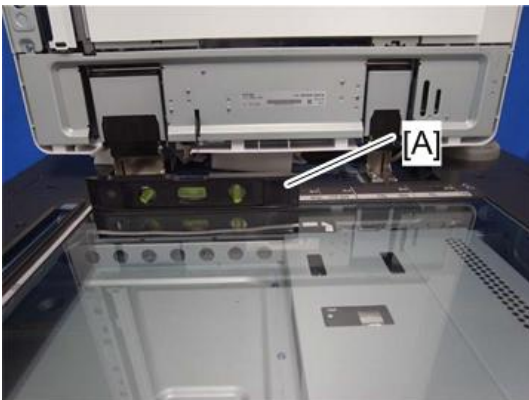


d1350034

Note

- Use a wrench to raise or lower the nuts.

3. Open the ADF, and then place a level [A] on the exposure glass.

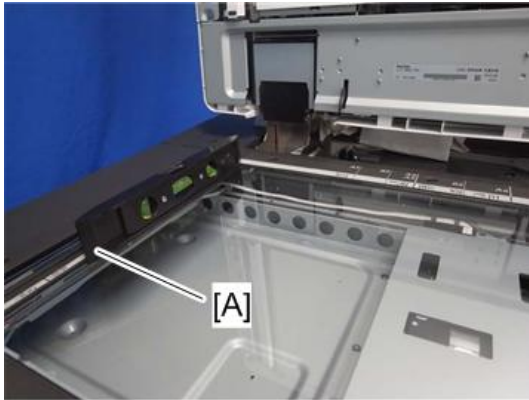


d1350035

4. Adjust the machine level until the machine is less than 5mm from level (measure from left-to-right).
 - When the right side of the machine is lower: Lower the nuts of the right side of the machine (front and rear) to lift the right side of the machine.

- When the left side of the machine is lower: Lower the nuts of the left side of the machine (front and rear) to lift the left side of the machine.

5. Open the ADF, and then place the level [A] along the side.



d1350036

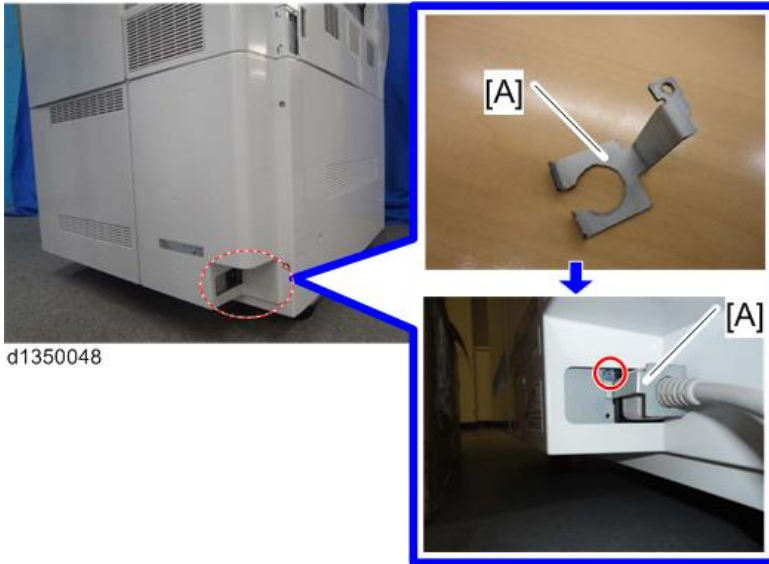
6. Adjust the machine level until the machine is less than 5mm from level (measure from front-to-rear).

- When the front side of the machine is lower: Lower the nuts of the front side of the machine (left and right) to lift the front of the machine.
- When the rear side of the machine is lower: Lower the nuts of the rear side of the machine (left and right) to lift the rear of the machine.

Installing the Securing Bracket to Prevent the Power Cord from Falling Off

1. Install the securing bracket [A] to prevent the power cord from falling off. (🔩 x1)

Example below: D135/D136



Note

- D135/D136 machines have two power cords. Install a securing bracket for each power cord.

How to Set the Toner Cartridge

Important

- Be careful when setting the toner cartridges because the toner cartridges have different shapes, and the cartridge may be damaged if you try to force a cartridge into the wrong place. The position of the toner cartridges is Y, M, C, K from the left.



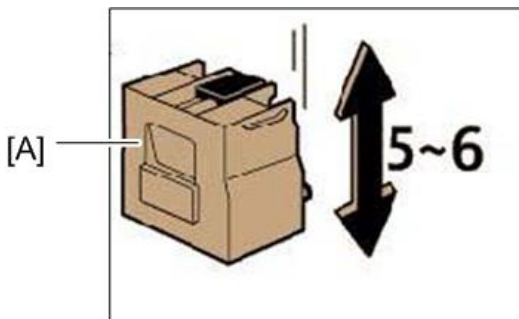
d1350050

1. Open the toner supply unit front cover [A].



d1352239

2. Unpack the new toner cartridge.
3. Reverse the toner cartridge and shake 5-6 times while grasping both ends.



d1350049

4. Set each color toner cartridge. Push the toner cartridge until it locks into place.

ACC (Automatic Color Calibration) Adjustment

1. Check that there are no clamps etc. that you forgot to remove, and plug the power cord into its power source.
2. Turn the main power switch ON.
3. Tap [User Tools].
4. To print a color pattern, select: Maintenance > Auto Color Calibration.
5. Tap [Start] for the Copier function.
6. Tap [Start Printing].
7. Put the color test pattern face-down with the arrow pointing to the rear left corner of the exposure glass.
8. Tap [Start Scanning]. The machine scans the pattern once.
9. Do Steps 6-8 for the Printer function.

Checking the copy image with the color chart

If you want to install any options, install them using the installation procedure before doing the procedure below.

1. Switch the machine to copier mode.
2. Make sure that there is A3 or DLT paper in one of the trays.
3. Put a "Color Chart C-4" on the exposure glass.
4. Select full color mode and print one copy of the chart.
5. Check the results of the copy with the customer.

Paper Tray Settings

Adjust the side-to-side registration for each paper tray as necessary.

- SP1-003-001 (Side-to-Side Reg: Tray1)
- SP1-003-002 (Side-to-Side Reg: Tray2)
- SP1-003-003 (Side-to-Side Reg: Tray3)
- SP1-003-004 (Side-to-Side Reg: Tray4)

Security Function Installation

The machine contains the Security functions (Data Overwrite Security and HDD Encryption unit) built into the controller board.

If you are installing a new machine, it is recommended to activate the Data Overwrite Security and HDD Encryption unit by selecting "Format All Data" from "System Settings" on the operation panel.

Note

- This method is recommended because there is no user data on the hard drive yet (Address Book data, image data, etc.).

If the customer wishes to activate the Data Overwrite Security and HDD Encryption unit on a machine that is already running, it is recommended to activate the unit by selecting "All Data" from "System Settings" on the operation panel.

Important

- **Selecting "All Data" will preserve the data that has already been saved to the hard drive. (If "Format All Data" is selected, all user data saved to the hard drive up to that point will be erased).**

Immediately after encryption is enabled, the encryption setting process will take several minutes to complete before you can begin using the machine.

↓ Note

- If encryption is enabled after data has been stored on the disk, or of the encryption key is changed, this process can take up to three and a half hours or more.

The machine cannot be operated while data is being encrypted.

Once the encryption process begins, it cannot be stopped.

Make sure that the machine's main power is not turned off while the encryption process is in progress.

If the machine's main power is turned off while the encryption process is in progress, the hard disk will be damaged and all data on it will be unusable.

Print the encryption key and keep the encryption key (which is printed as a paper sheet).

Keep the encryption key in a safe place. If the encryption key is lost and is needed, the controller board, hard disk and NVRAM must all be replaced at the same time.

↓ Note

- "NVRAM" mentioned in here means the NVRAM on the Controller Board.
- "NVRAM" or EEPROM on the BCU has nothing to do with this.

Please use the following procedure when the Data Overwrite Security and HDD Encryption is reinstalled.

Data Overwrite Security

Before You Begin the Procedure

1. Make sure that the following settings (1) to (3) are not at their factory default values.

(1) Supervisor login password

(2) Administrator login name

(3) Administrator login password

If any of these settings is at a factory default value, tell the customer these settings must be changed before you do the installation procedure.

2. Make sure that "Admin. Authentication" is on.

[System Settings] -> [Administrator Tools] -> [Administrator Authentication Management] -> [Admin. Authentication]

If this setting is off, tell the customer this setting must be on before you do the installation procedure.

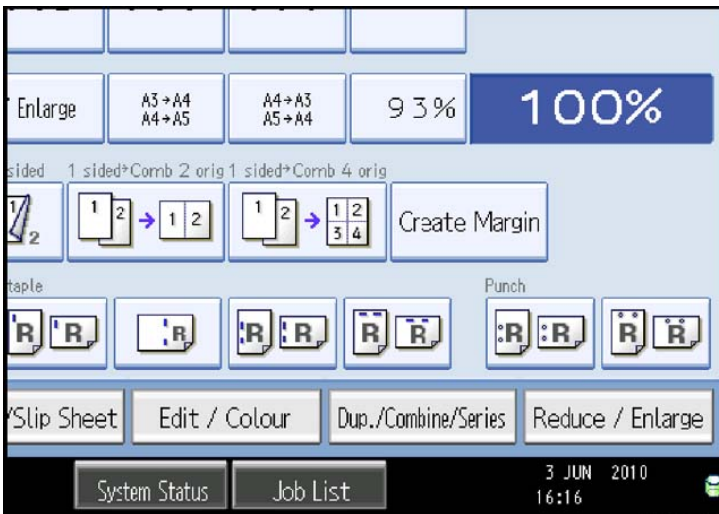
3. Make sure that "Administrator Tools" is enabled (selected).

[System Settings] -> [Administrator Tools] -> [Administrator Authentication Management] -> [Available Settings]

If this setting is disabled (not selected), tell the customer this setting must be enabled (selected) before you do the installation procedure.

Installation Procedure

1. Connect the network cable if it needs to be connected.
2. Turn on the main power switch.
3. Go into the SP mode and push "EXECUTE" in SP5-878-001.
4. Exit the SP mode and turn off the operation switch. Then turn off the main power switch.
5. Turn on the machine power.
6. Do SP5-990-005 (SP print mode Diagnostic Report).
7. Go into the User Tools mode, and select [System Settings] → [Administrator Tools] → [Auto Erase Memory Setting] → [On].
8. Exit the User Tools mode.



d1420091

	<p>Icon [1]</p>	<p>This icon is lit when there is temporary data to be overwritten, and blinks during overwriting.</p>
	<p>Icon [2]</p>	<p>This icon is lit when there is no temporary data to be overwritten.</p>

9. Check the display and make sure that the overwrite erase icon appears.
10. Check the overwrite erase icon.

The icon [1] is lit when there is temporary data to be overwritten, and blinks during overwriting.

The icon [2] is lit when there is no temporary data to be overwritten.

HDD Encryption

Before You Begin the Procedure:

1. Make sure that the following settings (1) to (3) are not at the factory default settings.
 - (1) Supervisor login password
 - (2) Administrator login name
 - (3) Administrator login password

These settings must be set up by the customer before the HDD Encryption unit can be installed.

2. Confirm that "Admin. Authentication" is on: [User tools/Counter] key -> [System Settings] -> [Administrator Tools] -> [Administrator Authentication Management] -> [Admin. Authentication] -> [On]

If this setting is off, tell the customer that this setting must be on before you can do the installation procedure.

3. Confirm that "Administrator Tools" is selected and enabled.

[User tools/Counter] key -> [System Settings] -> [Administrator Tools] -> [Administrator Authentication Management] -> [Available Settings]

"Available Settings" is not displayed until step 2 is done.

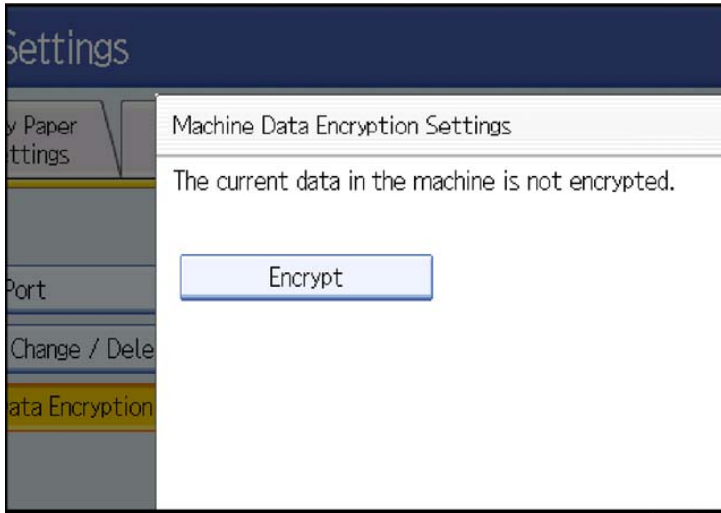
If this setting is not selected, tell the customer that this setting must be selected before you can do the installation procedure.

Installation Procedure:

1. Turn on the main power switch, and then enter the SP mode.
2. Select SP5878-002, and then press "Execute" on the LCD.
3. Exit the SP mode after "Completed" is displayed on the LCD.
4. Turn off the main power switch.

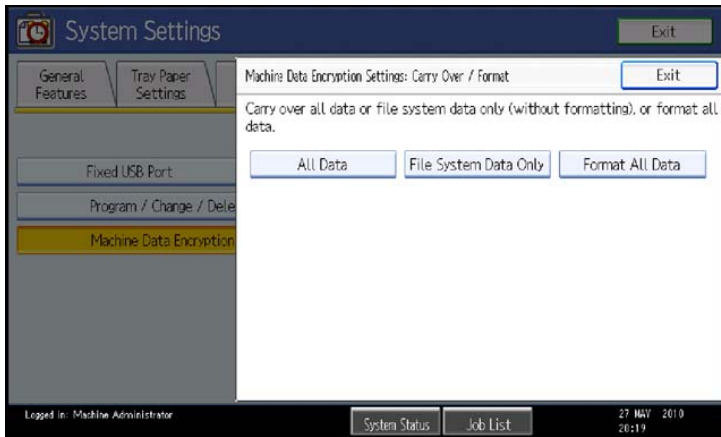
Enable Encryption Setting:

1. Press the [User tools/Counter] key.
2. Press [System Settings].
3. Press [Administrator Tools].
4. Press [Machine Data Encryption Settings]. If this item is not visible, press [Next] to display more settings.
5. Press [Encrypt].



d1420092

6. Select the data to be carried over to the hard disk and not be reset.
To carry all of the data over to the hard disk, select [All Data].
To carry over only the machine settings data, select [File System Data Only].
To reset all of the data, select [Format All Data].

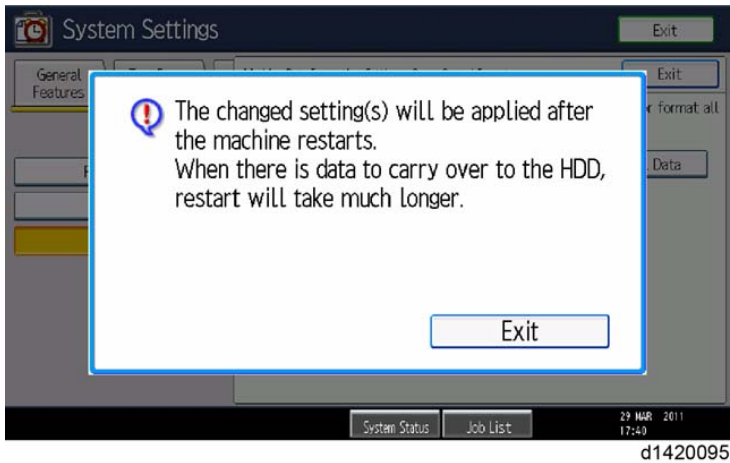


d1420093

7. The following message will be displayed. Press the [Start] key to print the encryption key for safe keeping.



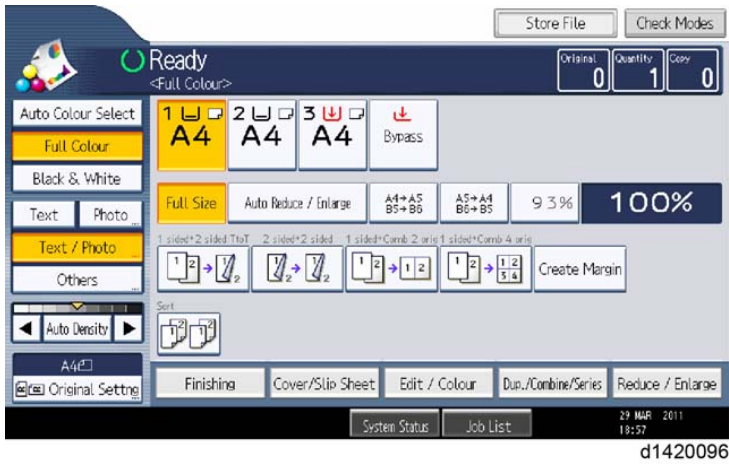
8. Press [Exit] to remove the following message.



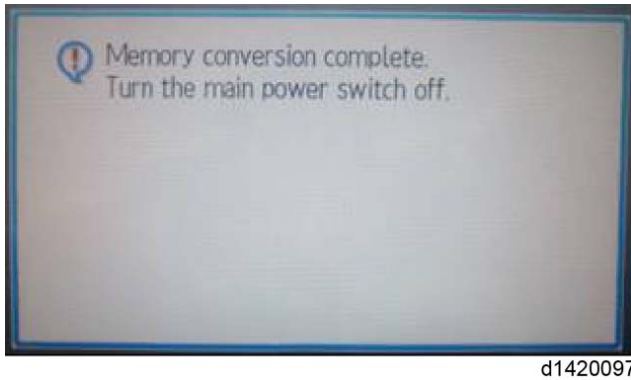
9. Press [Exit] again.
 10. Press the [User Tools/Counter] key.

★ Important

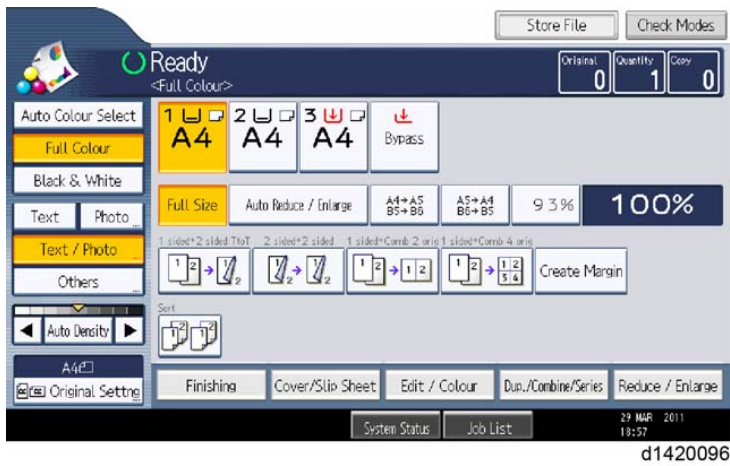
- After step 10, the initial operation display appears as below. However, HDD data encryption has not been completed at this moment. Step 11 and step 12 should be performed in order to encrypt the HDD data.



11. Turn the main power switch off and on.
12. "Memory Conversion complete. Turn the man power switch off" is displayed as below. Then turn the main power switch off and on.



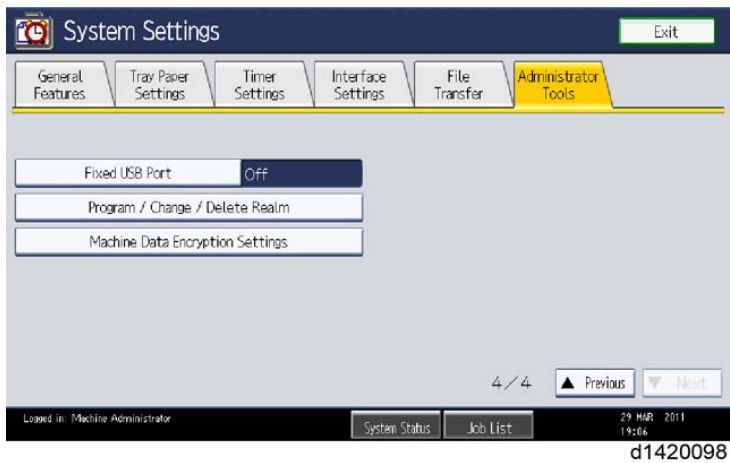
13. Then initial operation display appears again. After this step, HDD data encryption has already been completed.



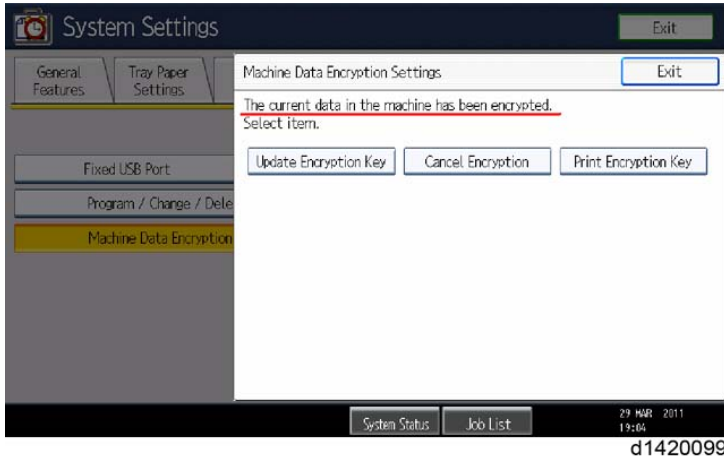
2

Check the Encryption Settings

1. Press the [User tools/Counter] key.
2. Press [System Settings].
3. Press [Administrator Tools].



4. Press [Machine Data Encryption Settings].



5. Please confirm whether the encryption has been completed or not on this display.

Print the encryption key

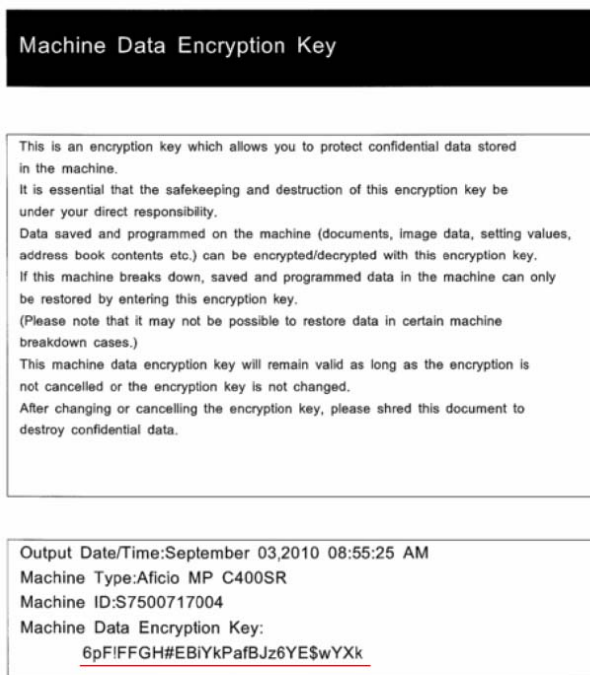
Use the following procedure to print the key again if it has been lost or misplaced.

1. Press the [User tools/Counter] key.
2. Press [System Settings].
3. Press [Administrator Tools].
4. Press [Machine Data Encryption Settings].

If this item is not visible, press [Next] to display more settings.

1. Press [Print Encryption Key].

Encryption key sample



d1420100

The encryption key is printed out as a sheet of paper like the example shown above.

Please instruct the customer to keep it in a safe place.

Moving the Machine

D137/D138

1. Turn off the main power switch, and then unplug the power cable from the main machine.
2. Close all the doors and trays that are openable and closable, and then secure them in place with shipping tape.
3. Make sure to follow all the precautions listed below when moving the machine. This is to prevent the machine from being damaged and the drawer unit from coming out.
 - Do not put a load on the ADF
 - When moving the machine, push the machine instead of pulling the machine. Pulling the machine may cause damage to the covers.
 - When pushing the machine, push the upper side of the machine in the areas marked with red rectangles below. If you move the machine over an uneven surface, insert your hands under

the machine at the places marked with red rectangles below, and then lift the machine slightly to get over the uneven surface.

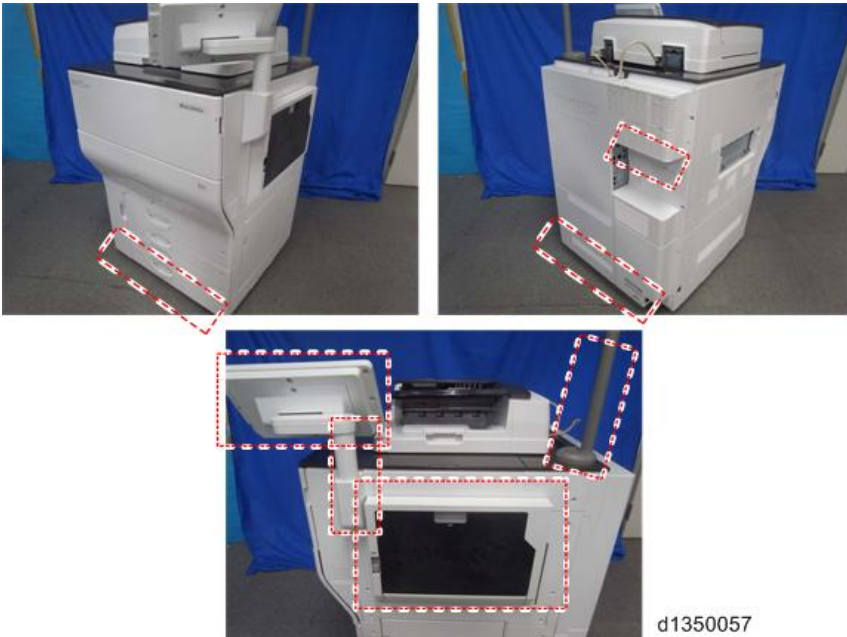
- When you move the machine, face the **left or right side** of the machine toward the direction of movement. Then, push the machine forward at a slow walking speed. Go slower if there are any uneven areas on the floor.
- However, if you cannot face the left or right side forward, move the machine with the **front side** facing forward (in the direction you are moving).
- Do not face the rear side of machine toward the direction of movement. This is because if the floor is inclined upward, the trays and drawer unit may come out.



d1350044

Note

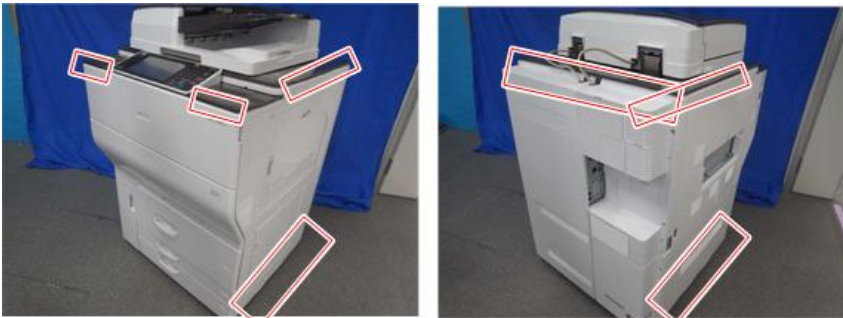
- Do not push or lift the locations marked with red rectangles below. You may damage the machine.



d1350057

D135/D136

1. Turn off the main power switch, and then unplug the power cable from the main machine.
2. Close all the doors and trays that are openable and closable, and then secure them in place with shipping tape.
3. Make sure to follow all the precautions listed below when moving the machine. This is to prevent the machine from being damaged and the drawer unit from coming out.
 - Do not put a load on the ADF
 - When moving the machine, push the machine instead of pulling the machine. Pulling the machine may cause damage of the covers.
 - When pushing the machine, push the upper side of the machine in the areas marked with red rectangles below. If you move the machine over an uneven surface, insert your hands under the machine at the places marked with red rectangles below, and then lift the machine slightly to get over the uneven surface.
 - When you move the machine, face the **left or right side** of the machine toward the direction of movement. Then, push the machine forward at a slow walking speed. Go slower if there are any uneven areas on the floor.
 - However, if you cannot face the left or right side forward, move the machine with the **front side** facing forward (in the direction you are moving).
 - Do not face the rear side of machine toward the direction of movement. This is because if the floor is inclined upward, the trays and drawer unit may come out.



d1350046

⬇ Note

- Do not push or lift the location marked with red rectangles below. You may damage the machine.

2



d1350058

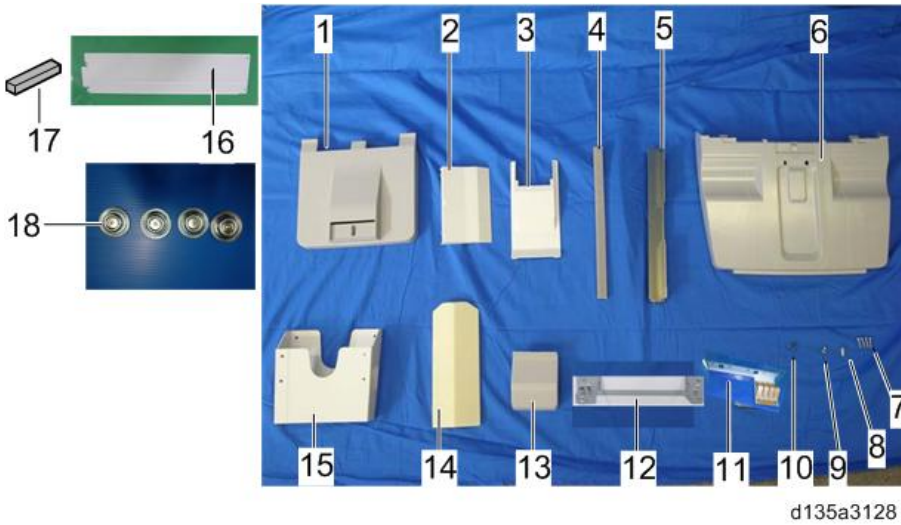
Finisher SR4090 (D703) /Booklet Finisher SR4100 (D704)

Accessory Check

2

Check the quantity and condition of the accessories against the following list.

No	Description	Q'ty	
		SR4090	SR4100
1	Lower output tray	-	1
2	Shift Auxiliary Tray (use only when the Multi-Folding Unit FD4000 is installed.)	1	1
3	Proof Auxiliary Tray	1	1
4	Cushion (with double-sided tape)	1	1
5	Docking Bracket	1	1
6	Upper output tray	1	1
7	Tapping screws – M3 x 6	6	6
8	Screw (Plastic)	2	2
9	Screws– M4 x 20	4	4
10	Tapping screws – M3 x 8	1	1
11	Grounding Plate	1	1
12	Joint Bracket	1	1
13	End Fence for lower output tray	-	1
14	Proof Support Tray	1	1
15	Tray Holder	-	1
16	Cover: Right Upper	1	1
17	Seal: Coupling	1	1
18	Holder: Stand	4	4



d135a3128

Installation Procedure

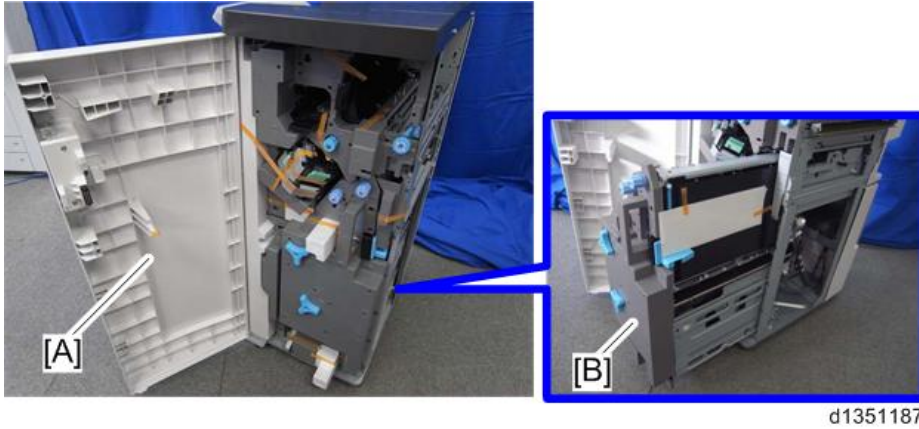
⚠ CAUTION

- Always switch the machine off and unplug the machine before doing the following procedure.
1. Unpack the finisher and remove all tapes and packing materials from the finisher.

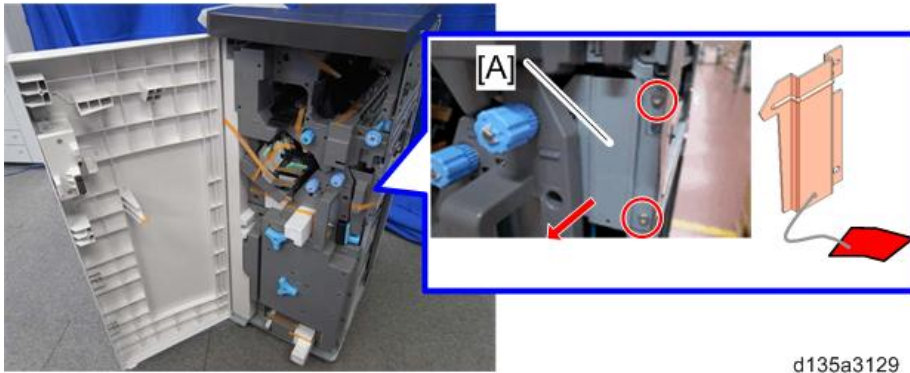


d1351186

2. Open the front door [A], and then remove all tapes and packing materials from the inside of the finisher.
3. Pull out the jogger unit [B], and then remove all tapes and retainers.



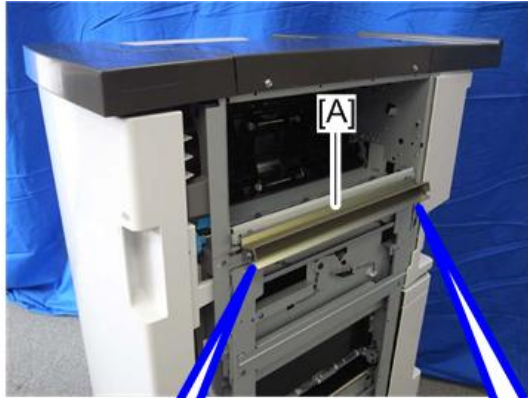
4. Remove the upper bracket with the red tag attached [A] (🔩 x 2).



5. Remove the lower bracket with the red tag attached [A] (🔩 x 2).

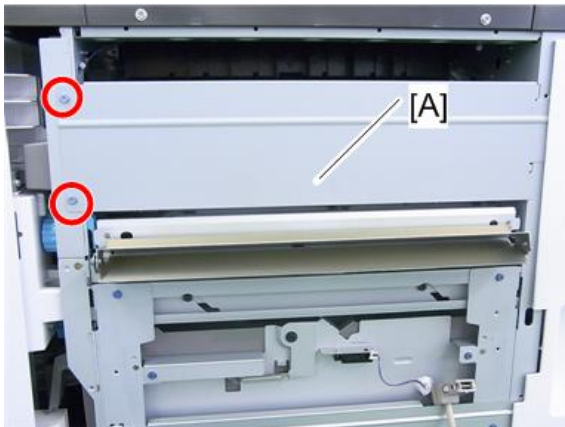


6. Install the docking bracket [A] on the finisher. (🔩 x 2; M3 x 6)



d1351188

7. Attach the Cover: Right Upper [A] to the finisher. (🔩 x 2)



d1359952a

Note

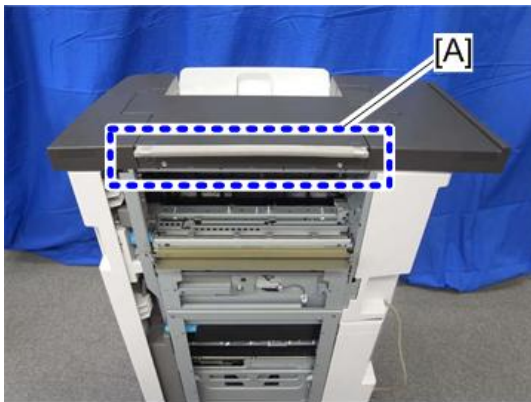
- If the Cover Interposer Tray CI4010 (D711) is to be installed, DO NOT attach the Cover: Right Upper.

8. Install the ground plate [B] on the finisher. (🔩 x 2; M3 x 6)



d1351189

9. Attach the cushion [A] to the finisher.

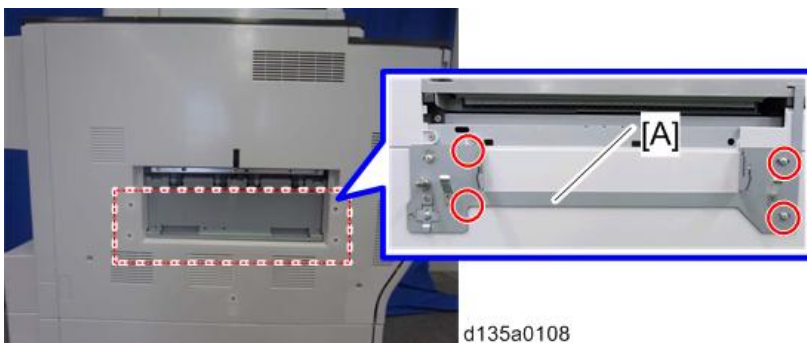


d1351190

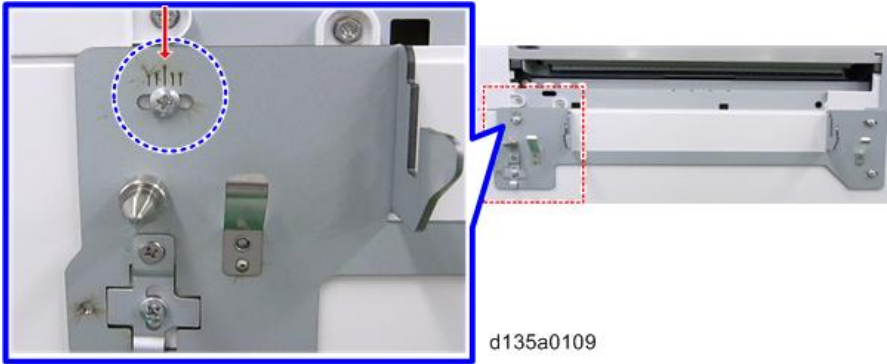
Note

- Make sure that the cushion is placed within 0 to 1 mm from the edge of the cover.

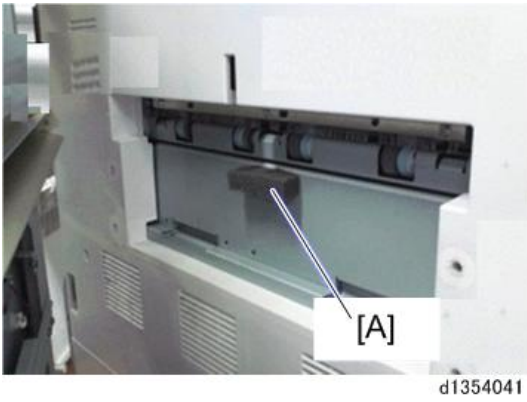
10. Secure the docking bracket [A] with the screws in the **center** of each elliptical screw hole (⌀ x 4; M4x20).



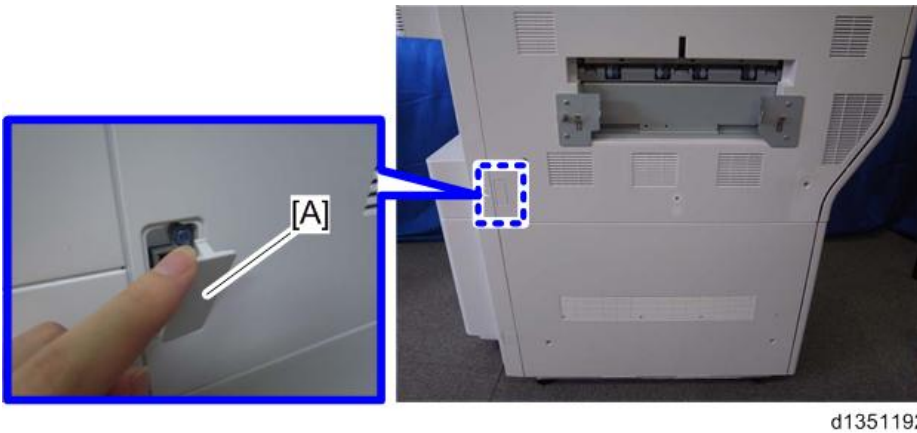
d135a0108



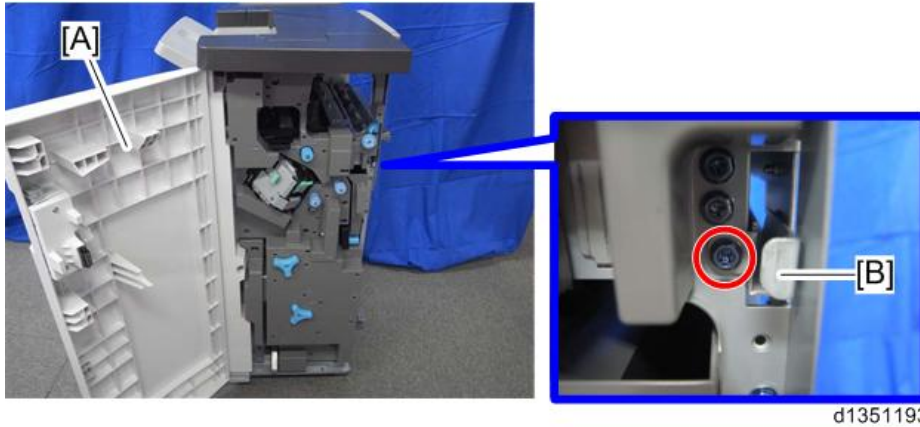
11. Attach the Seal Coupling [A] to the left side of the copier.



12. Remove the connector cover [A] from the main machine.



13. Open the front door [A] of the finisher, and pull the lock lever [B]. (🔑 x 1)



14. Slowly push the finisher against the left side of the machine, keeping its front door open until the brackets go into their slots.



15. Push the lock lever [A], and then secure it (🔩 x 1).

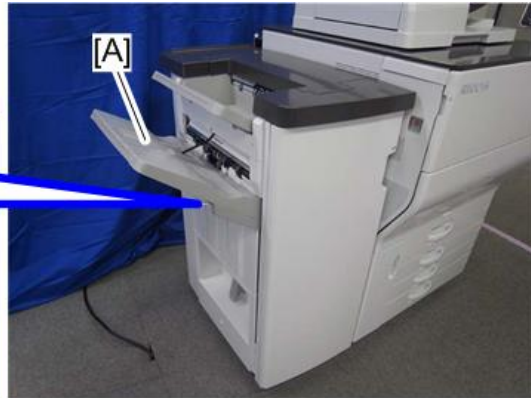


16. Connect the finisher connector [A] to the machine.



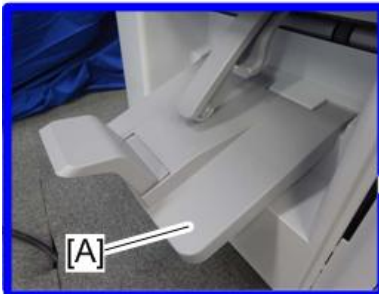
d1351196

- 17. Close the front door of the finisher.
- 18. Install the upper output tray [A] (⚙ x 1; M3 x 8).



d1351197

- 19. Only for D704, install the lower output tray [A].



d1351198

- 20. Turn on the main power switch of the machine.

21. Check the finisher operation.
22. Print out five A3 or DLT sheets to the proof tray and check the side-to-side registration as follows:

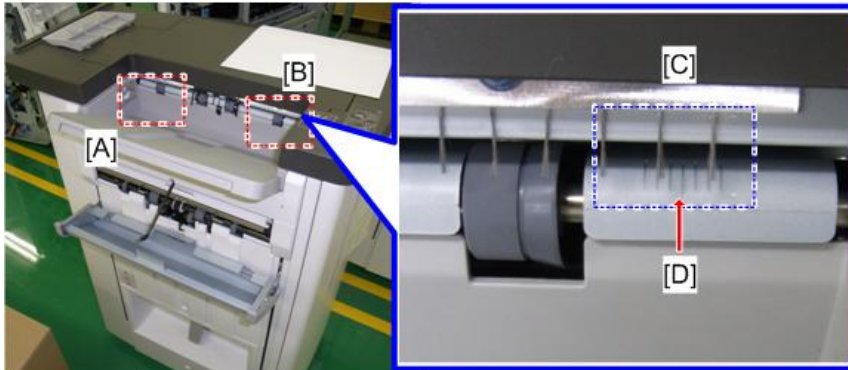
A3 sheets: Use the scale marks on the FRONT exit roller [B].

- If the paper edge lines up with the **center** marking [D], the paper is aligned correctly.
- If the paper edge is aligned with marks to the **right** of center, the paper is shifted toward the **front** (operator) side.
- If the paper edge is aligned with marks to the left of center, the paper is shifted toward the **rear** (non-operator) side.

DLT sheets: Use the scale marks on the REAR exit roller [A].

Check the side-to-side registration in the same way, using the rear rollers.

23. If side-to-side registration is shifted, see page 1368 "Adjustment 009: Staple misalignment (3 mm or more) occurs" and correct the shift.



d135a3121

[A]: Scale marks for DLT

[B]: Scale marks for A3

[C]: 7 scale marks in 2mm intervals

[D]: Center mark

24. Print out some sheets with center-folding and make sure that the folding line is not misaligned or shifted.

Note

- If the folding line is misaligned or shifted, see the Troubleshooting section and make adjustments. (See page 1529 "How to improve center-folding accuracy (SR4100)")

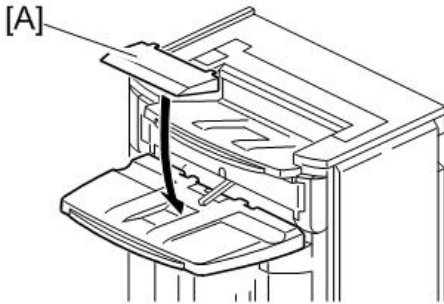
Auxiliary Trays

Make sure that the customer understands the following points about these auxiliary trays:

- The trailing edges of excessively curled or Z-folded paper can activate the tray full sensors before the tray is actually full.
- Once the "Exit Tray Full" message displays, the job cannot continue until some sheets are removed from the tray which is only partially full. The trays are designed to prevent this problem.

Shift Auxiliary Tray

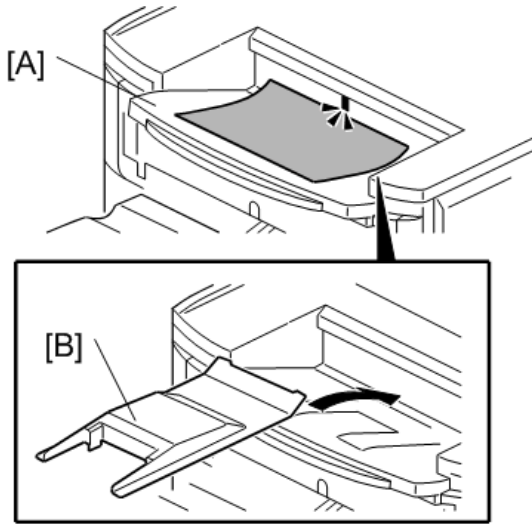
Install the shift auxiliary tray [A] ONLY when the "Multi-Folding Unit FD4000 (D615)" is included in the configuration. Note that the Shift Auxiliary Tray [A] may generate unexpected side effects, for example, paper jams caused by displaced paper height detection feeler [B].



d135a3122

Proof Auxiliary Tray

Install the proof auxiliary tray [B] on the proof tray [A] when using the Z-fold function.



d1351650

Proof Support Tray

Install the proof support tray [A] on the proof tray when the trailing edges of paper are excessively curled.



d1351199

Output Jogger Unit Type M2 (D705)

This option is for the Finisher SR4090 (D703) /Booklet Finisher SR4100 (D704) only.

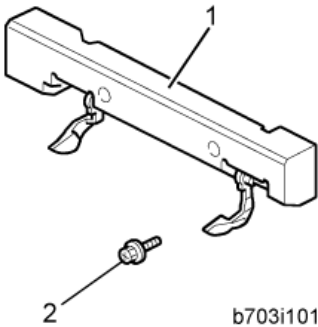
It jogs the sheets delivered to the finisher shift tray.

2

Component Check

Check the quantity and condition of the accessories against the following list.

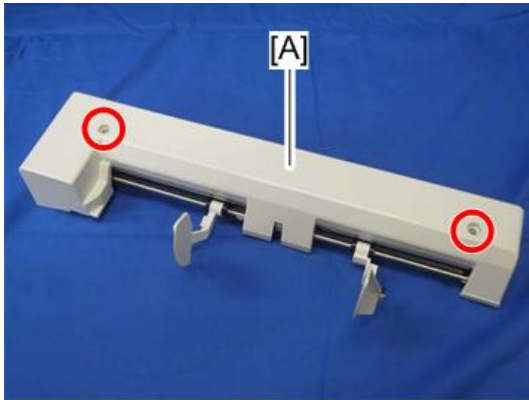
No	Description	Qty
1	Jogger Unit	1
2	Tapping Screws M3 x 6	2



Installation

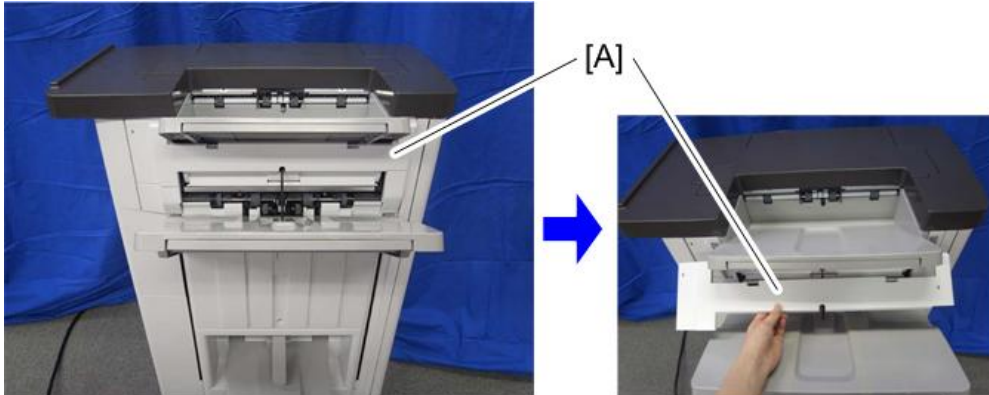
⚠ CAUTION

- Always switch the machine off and unplug the machine before doing the following procedure.
1. Disconnect the finisher from the main frame.
 2. Remove the cover plate [A]. (🔩 x 2). Keep the screws.



d1351200

3. Use the flat head of a screwdriver to remove the left upper cover [A]. (hook x 3)



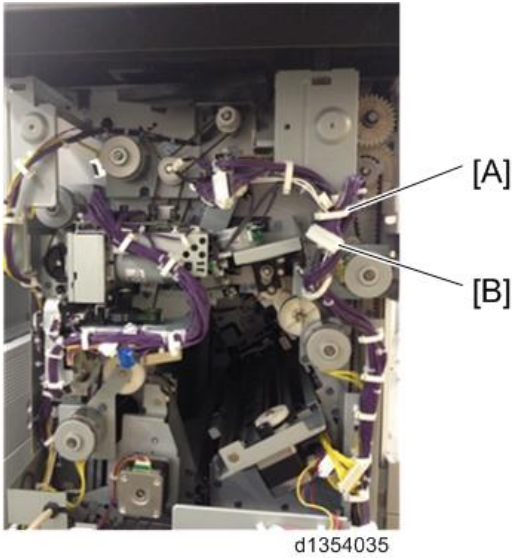
d1351201

4. Rear cover [A] (⚙️ x 2)

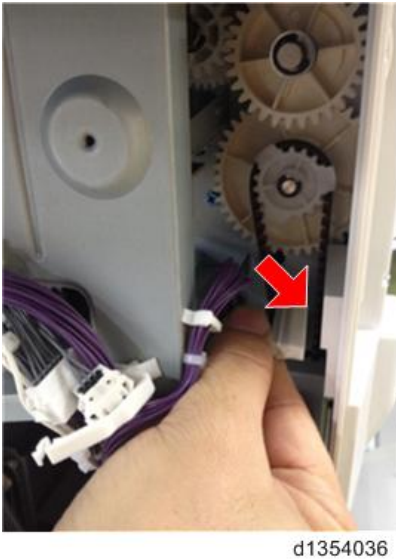


d1354034

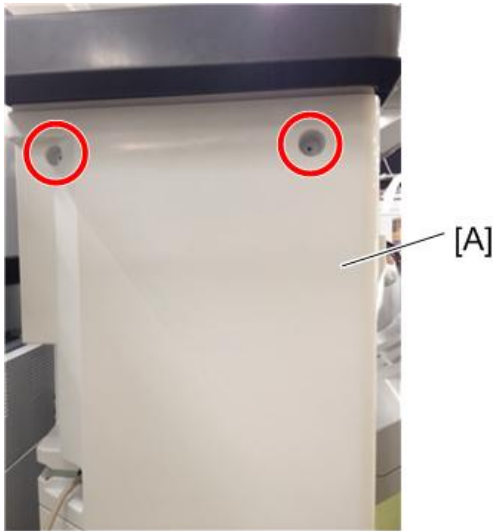
5. Open the clamp [A] to release the connector [B].



6. Connect the connector to the upper left cover and close the clamp..

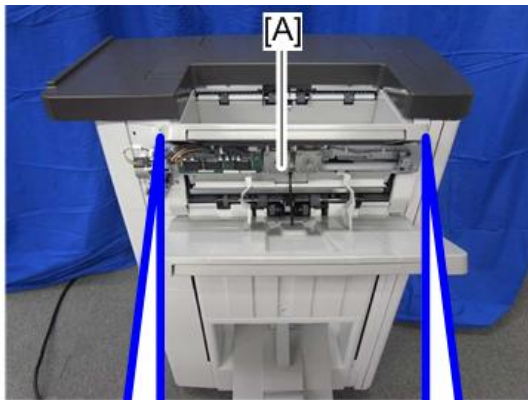


7. Attach the rear cover [A] (🔩 x 2)



d1354034

8. Attach the jogger unit [A] to the finisher. (⚙️ x 2)

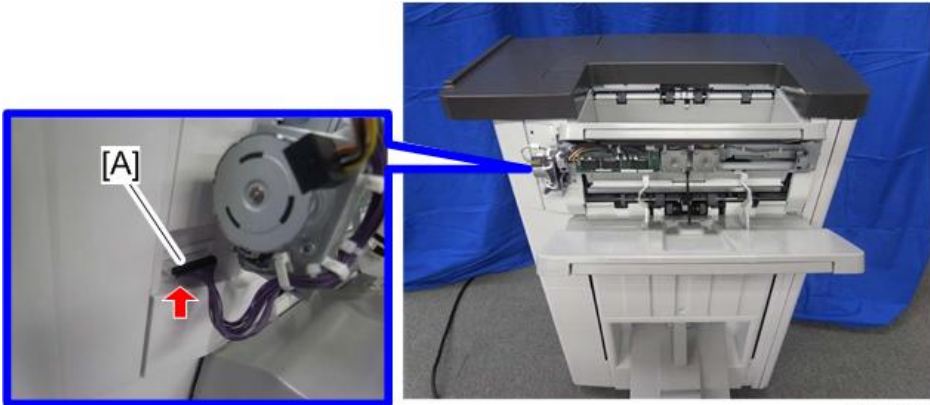


d1351202

↓ **Note**

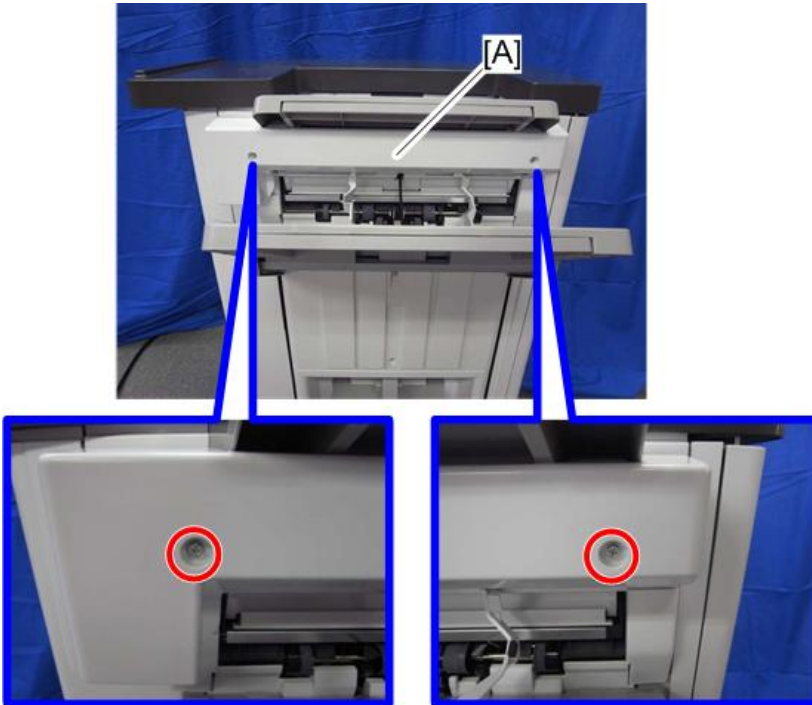
- When you install the jogger unit, put the hooks of the frame of the jogger unit into the holes in the left and right sides of the finisher frame.

9. Fasten the connector [A] of the jogger unit to the socket. (🔌 x 1)



d1351203

10. Reattach the jogger unit cover [A] to the jogger unit (2 x 2).



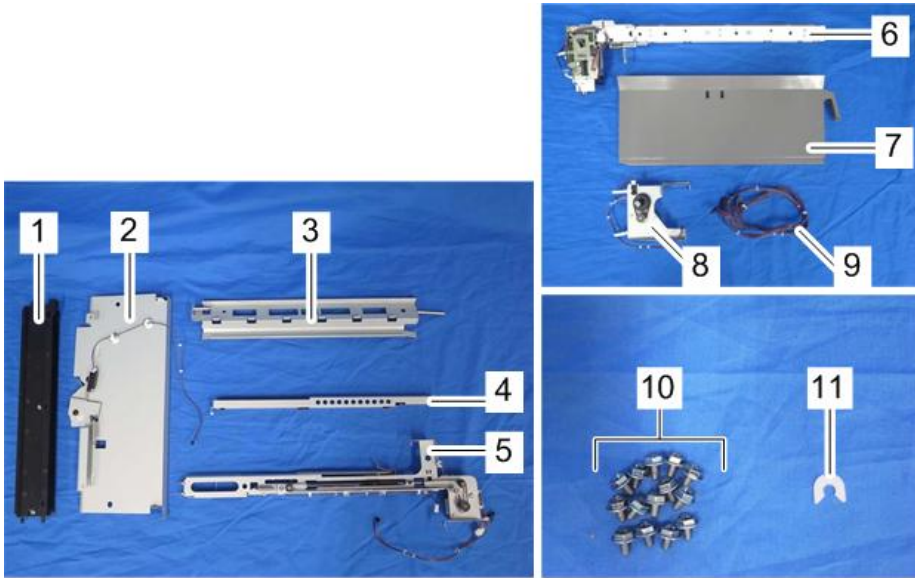
d1351204

Punch Unit PU3060 (D706)

Accessory Check

Check the quantity and condition of the accessories against the following list.

No	Description	Qty
1	Paper Chip Guide	1
2	Hopper Bracket	1
3	Punch Unit Slide Stay	1
4	Registration Guide Plate	1
5	Registration Sensor Bracket	1
6	Punch Unit	1
7	Punch Waste Hopper	1
8	Stepper Motor Bracket	1
9	Harness Connector Cable-PCB	1
10	Tapping Screw (M3 x 6)	14
11	E-ring	1

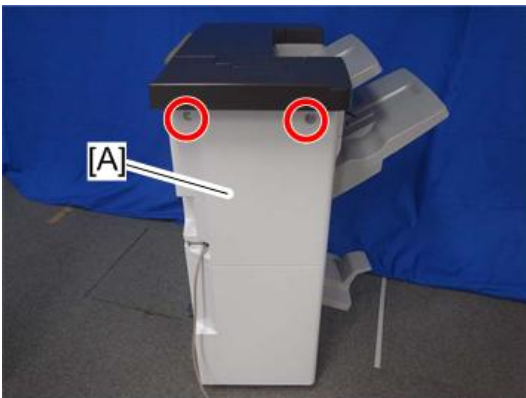


d1351675

Installation Procedure

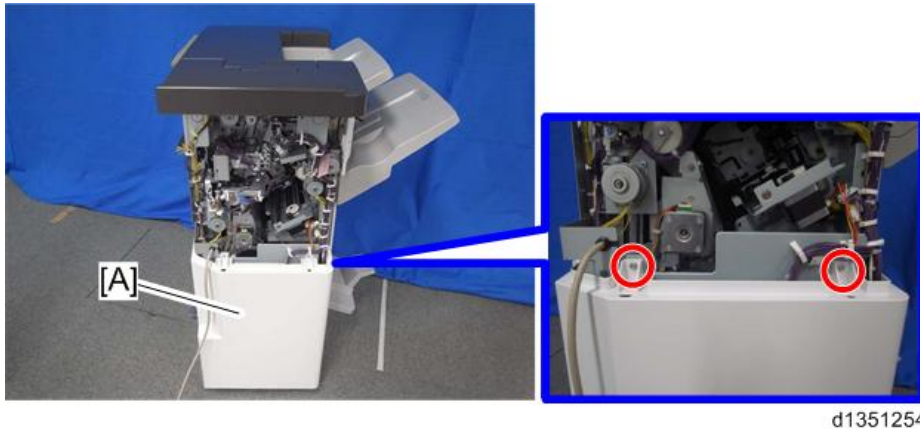
⚠ CAUTION

- Always switch the machine off and unplug the machine before doing the following procedure.
1. If the finisher is connected to the machine, disconnect it.
 2. If the finisher is installed on the machine, remove it.
 3. Remove the rear upper cover [A] of the finisher. (🔧 x 2)

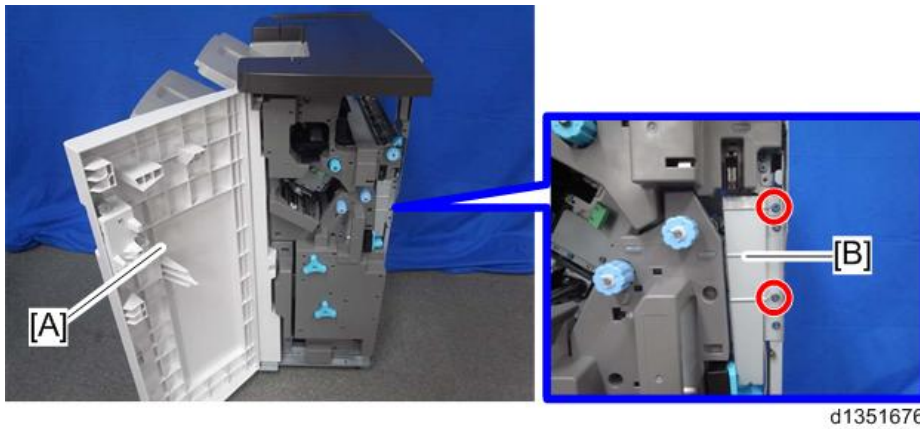


d1351253

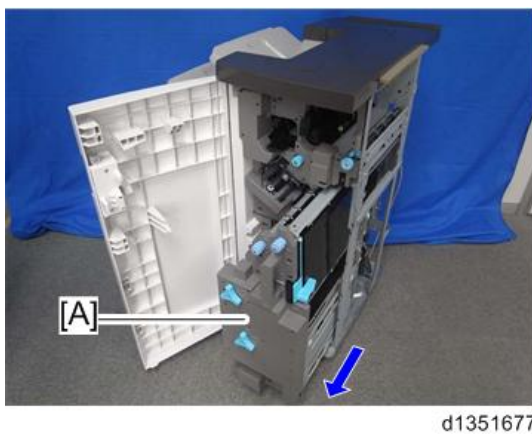
4. Remove the rear lower cover [A] of the finisher. (🔧 x 2)



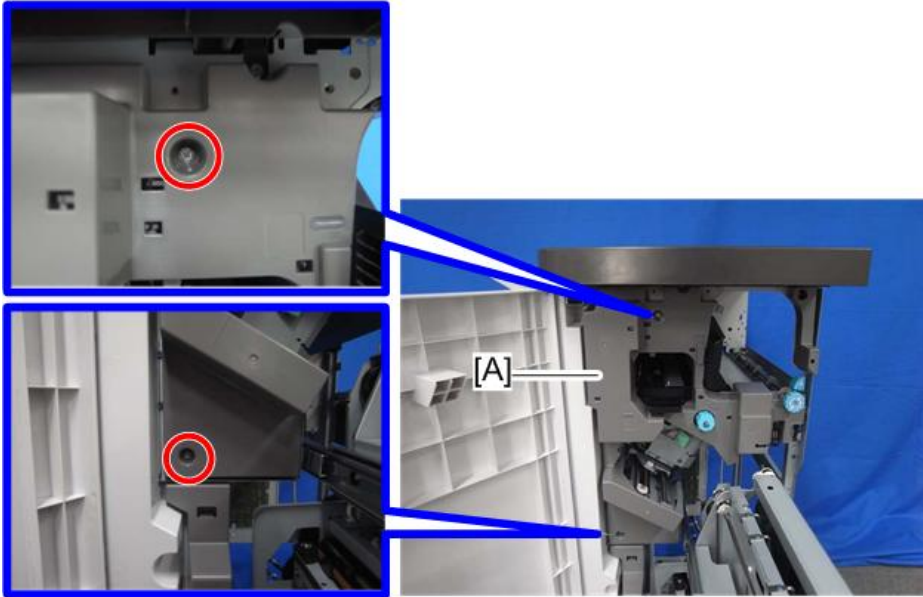
5. Open the front door [A], and then remove the punch hopper bracket [B]. (⚙️ x 2)



6. Pull out the stapling unit [A]. (Booklet Finisher SR4100 (D704) only)



7. Remove the inner upper cover [A] from the front side of the finisher. (⚙️ x 2)



d1351678

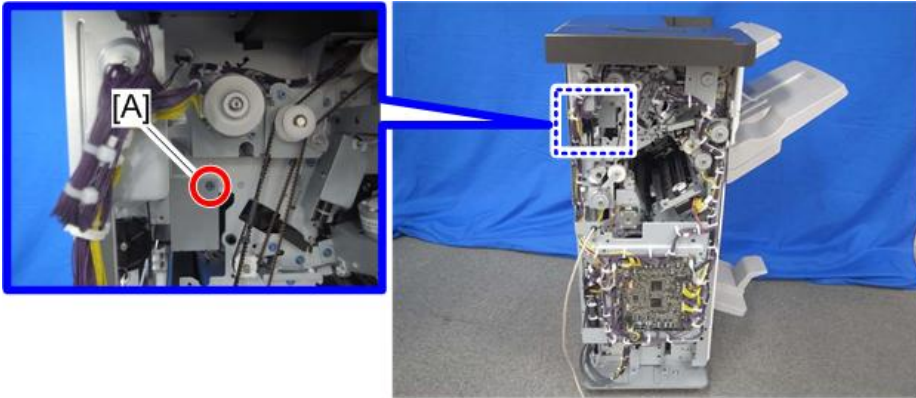
Note

- Disconnect the harness from the back side of the inner upper cover when you remove the inner upper cover.



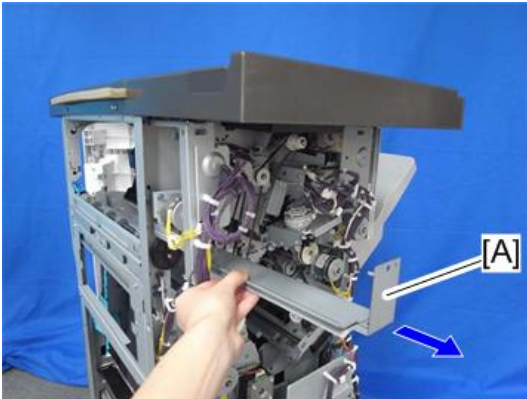
d1351679

8. Remove screw [A] of the transport guide plate from the rear side of the finisher. (🔩 x 1)



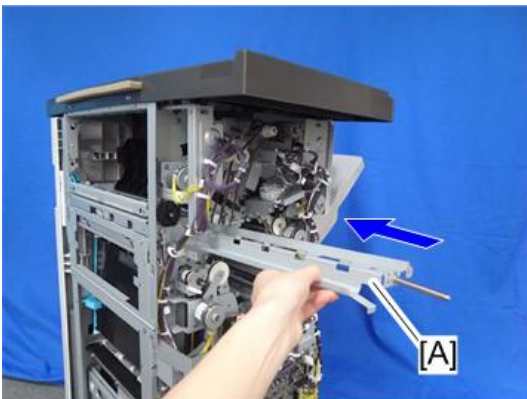
d1351680

9. Remove the transport guide plate [A].



d1351681

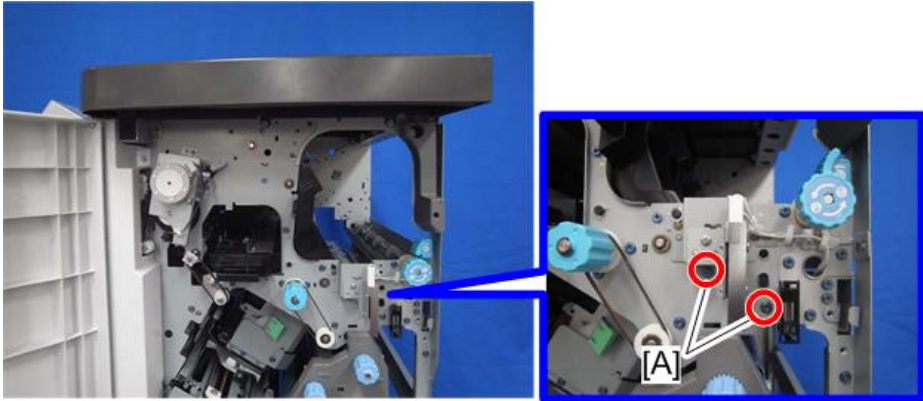
10. Install the punch unit slide stay [A] from the rear side of the finisher.



d1351682

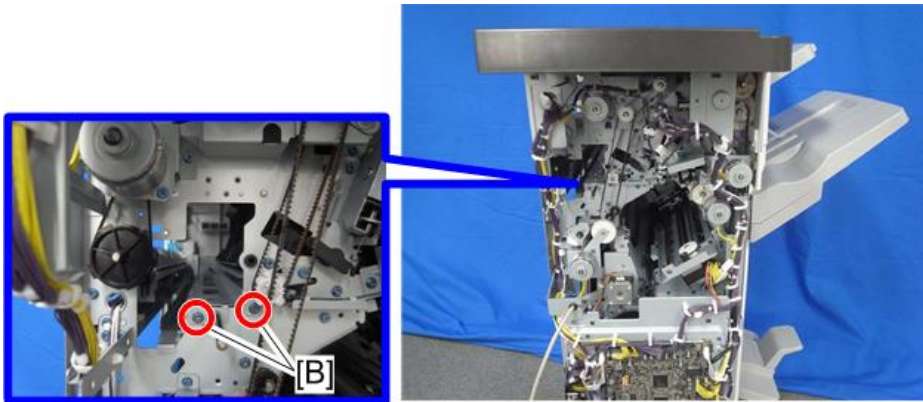
11. Fasten the punch unit slide stay. (Front side [A]:  x 2, Rear side [B]:  x 2)

- Front side:



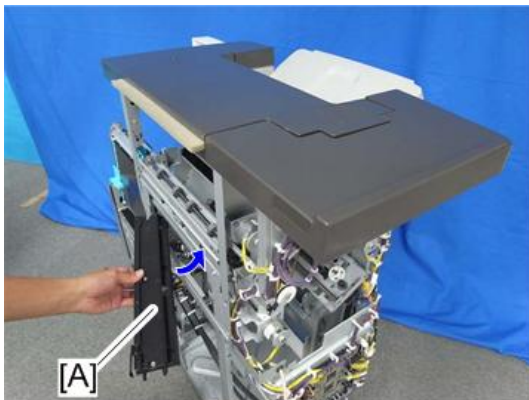
d1351683

- Rear side:



d1351684

12. Insert the paper chip guide [A] into the finisher as shown below.

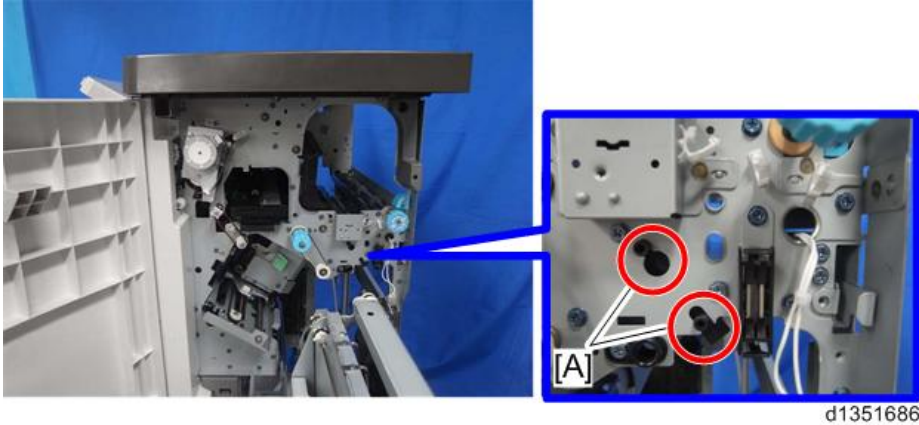


d1351685

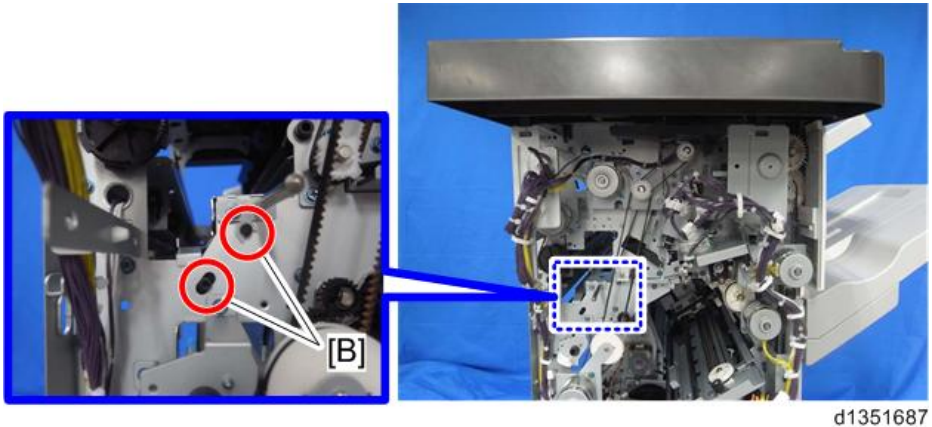
13. Install the paper chip guide. (Front side [A]: hook x 2, Rear side [B]: hook x 2, snap ring x 1)

Note

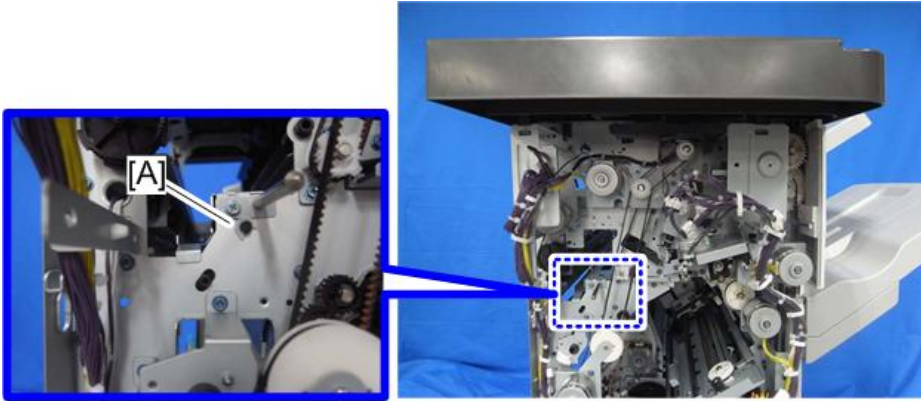
- Hook the paper chip guide onto the front side of the finisher first, and then hook it onto the rear side of the finisher.
- Front side:



- Rear side:



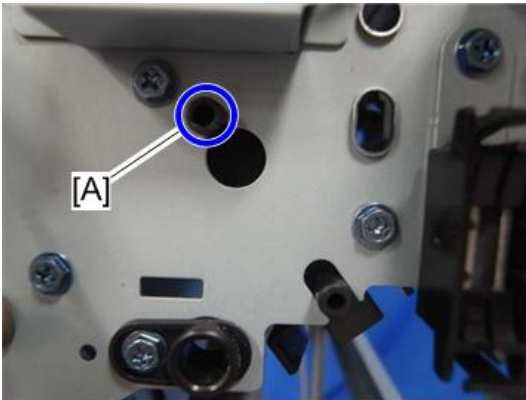
14. Fasten the paper chip guide with an E-ring from the rear side of the finisher. (snap ring x 1)



d1351688

Note

- When fastening the paper chip guide with the snap ring, make sure the front side of the paper chip guide is hooked onto the small-diameter slot [A].



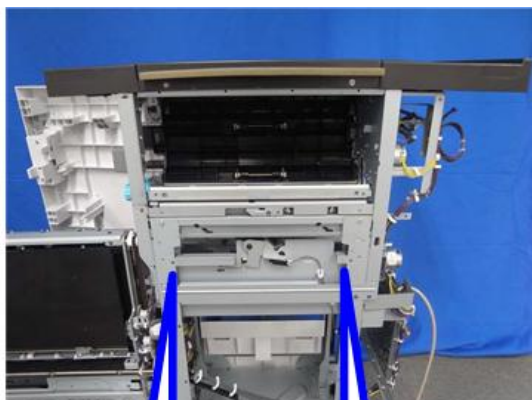
d1351689

15. Insert the hopper bracket [A] into the finisher as shown below.



d1351690

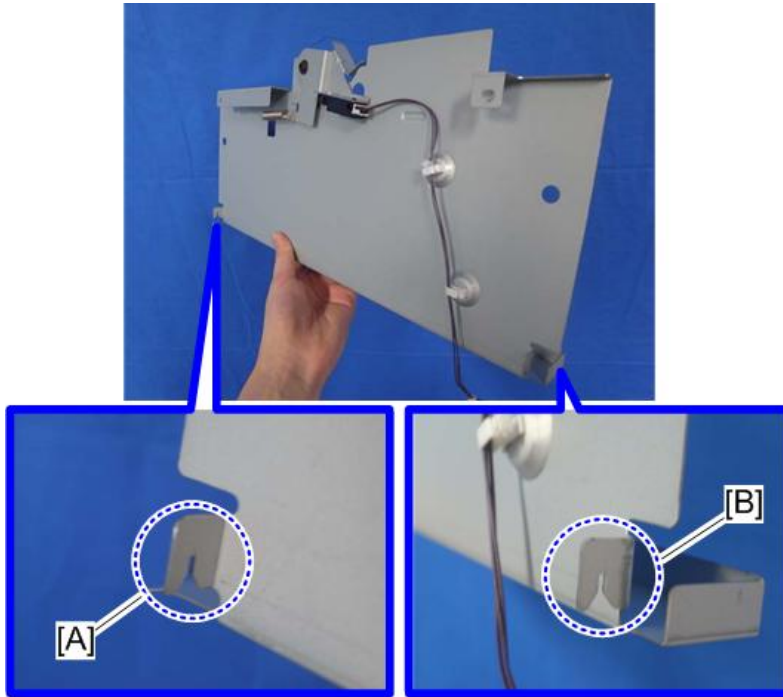
16. Hook the hopper bracket onto the frame [A] [B] of the finisher.



d1351691

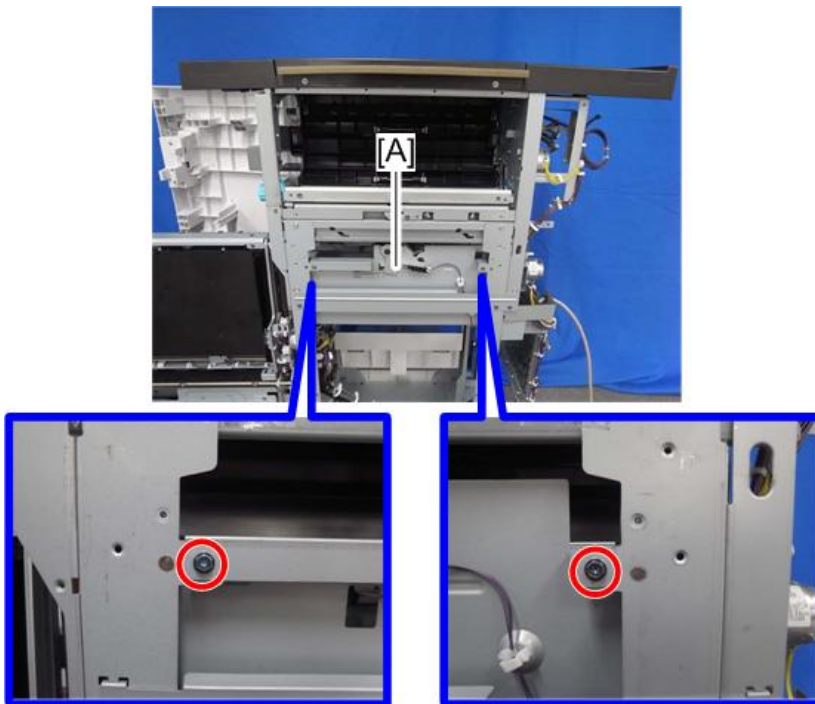
↓ **Note**

- Make sure the hooks [A] and [B] of the hopper bracket are also hooked onto the finisher.



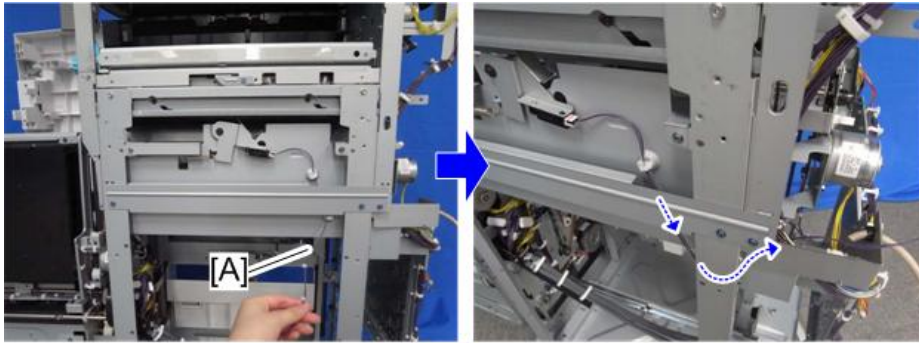
d1351693

17. Fasten the hopper bracket [A]. (⚙ x 2)




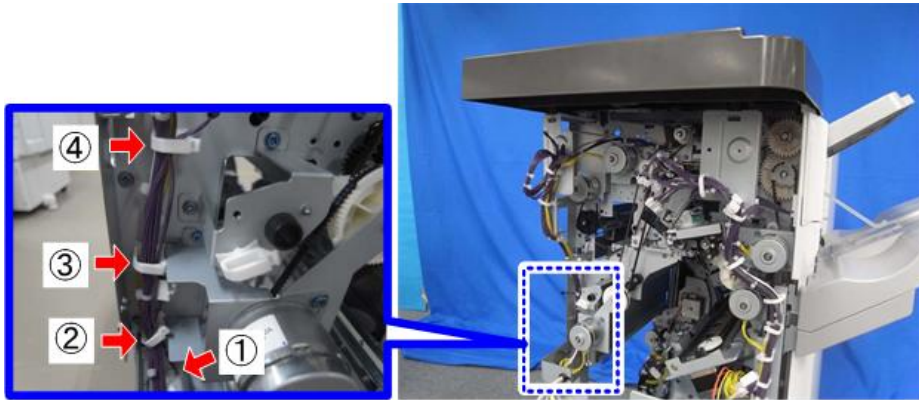
d1351692

18. Route the harness of the hopper bracket [A] inside the finisher as shown.



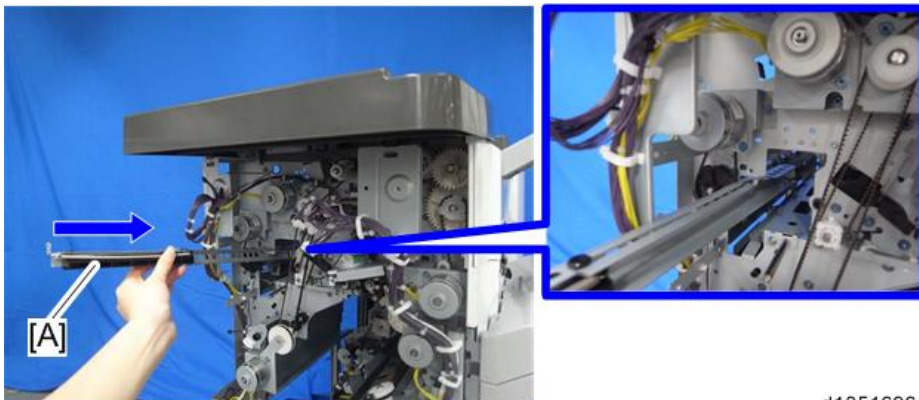
d1351694

19. Route the harness of the hopper bracket to the rear side of the finisher. (locking saddle x 1,  x 3)



d1351695

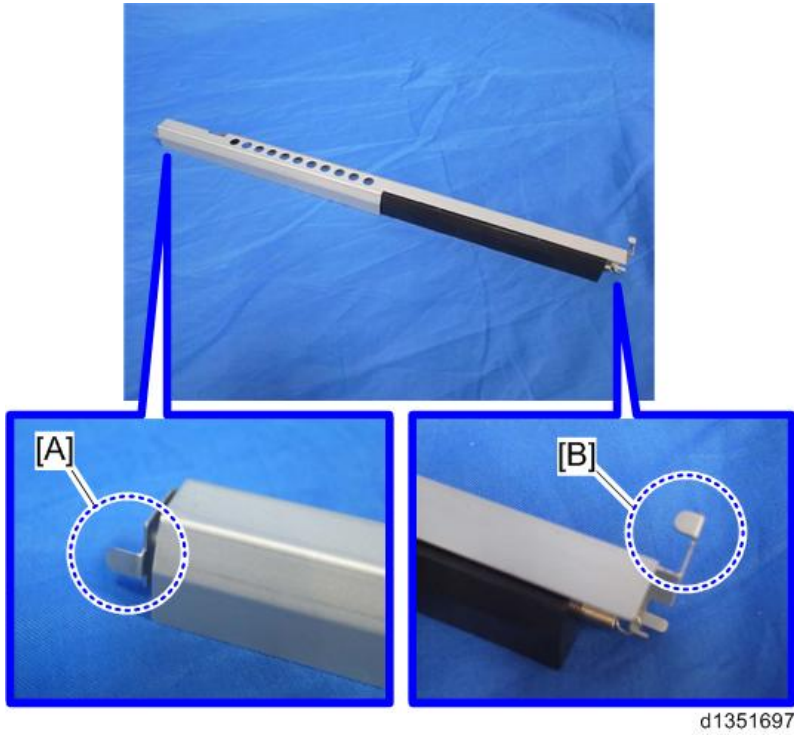
20. Insert the registration guide plate [A] from the rear side of the finisher.





d1351696

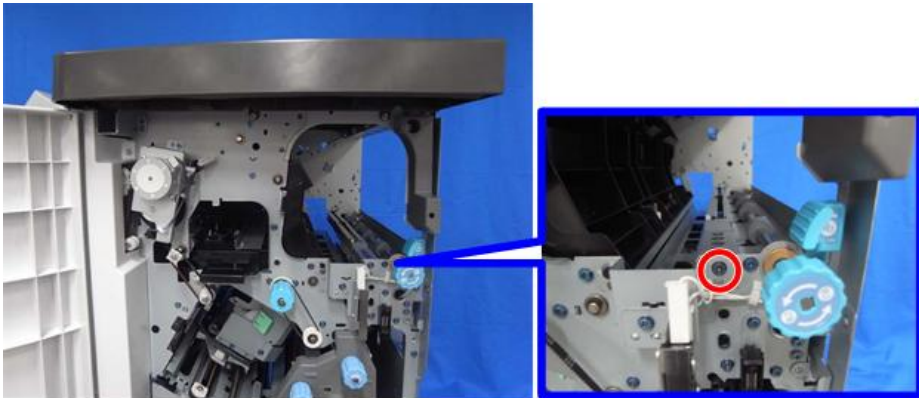
 **Note**

- Hook [A] and [B] of the registration guide plate onto the slotted holes of the finisher.

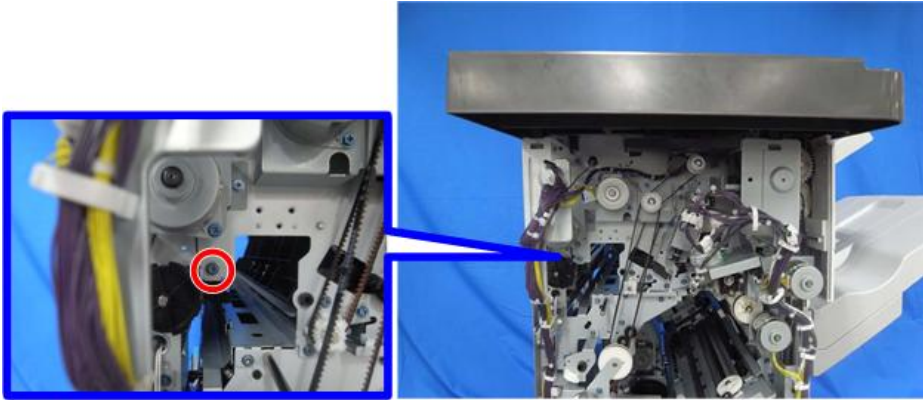


21. Fasten the registration guide plate. (front side:  x 1, rear side:  x 1)

- Front side:

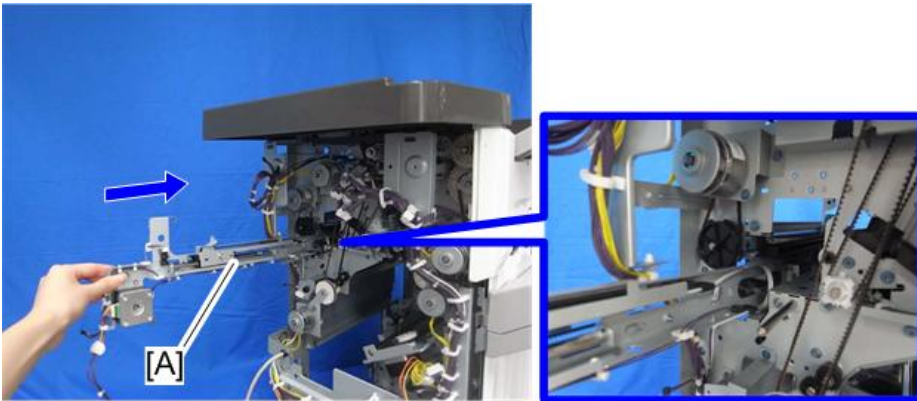


- Rear side:



d1351698

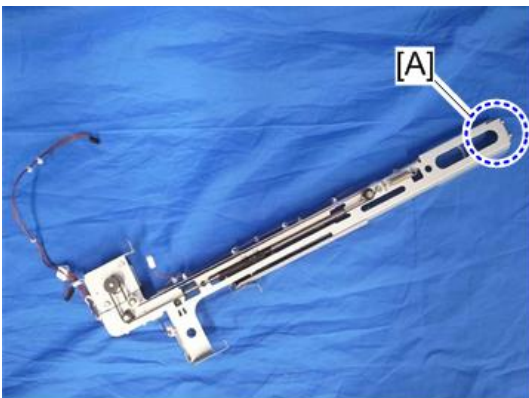
22. Inert the registration sensor bracket from the rear side of the finisher.



d1351700

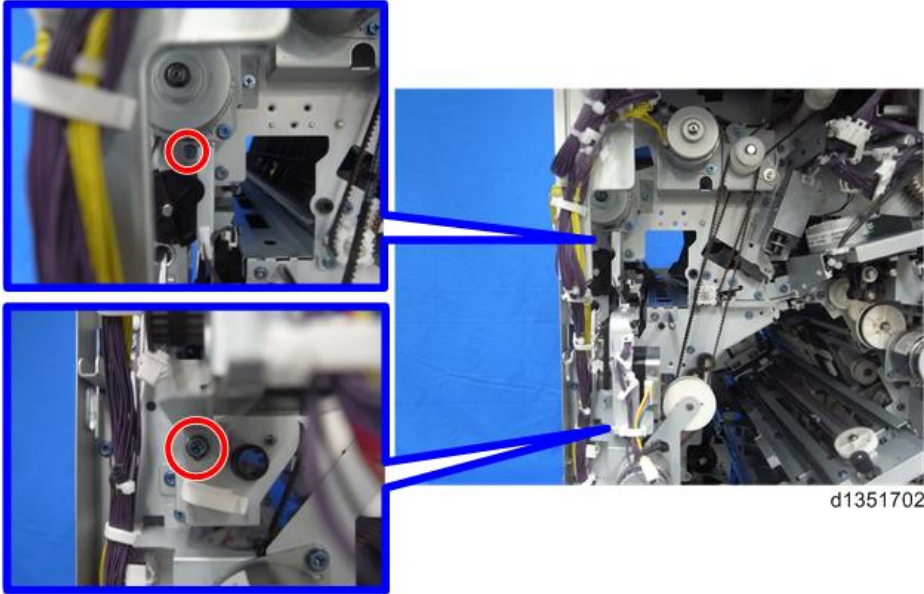
Note

- Hook [A] of the registration sensor bracket into the slotted holes of the finisher.

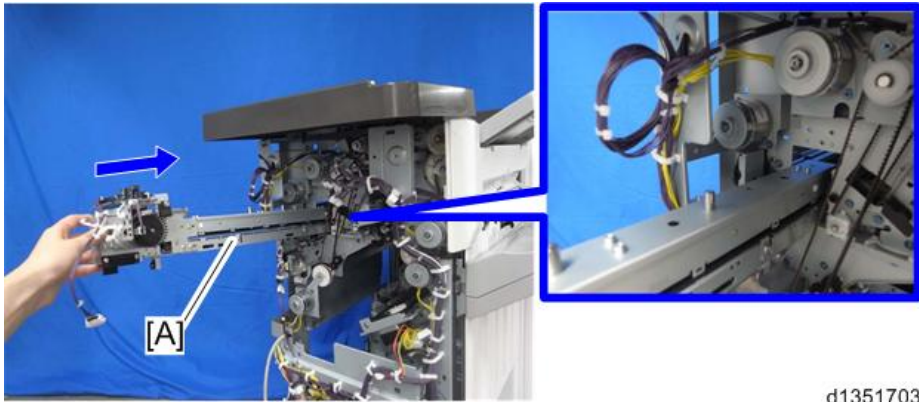


d1351701

23. Fasten the registration sensor bracket. (rear side:  x 2)

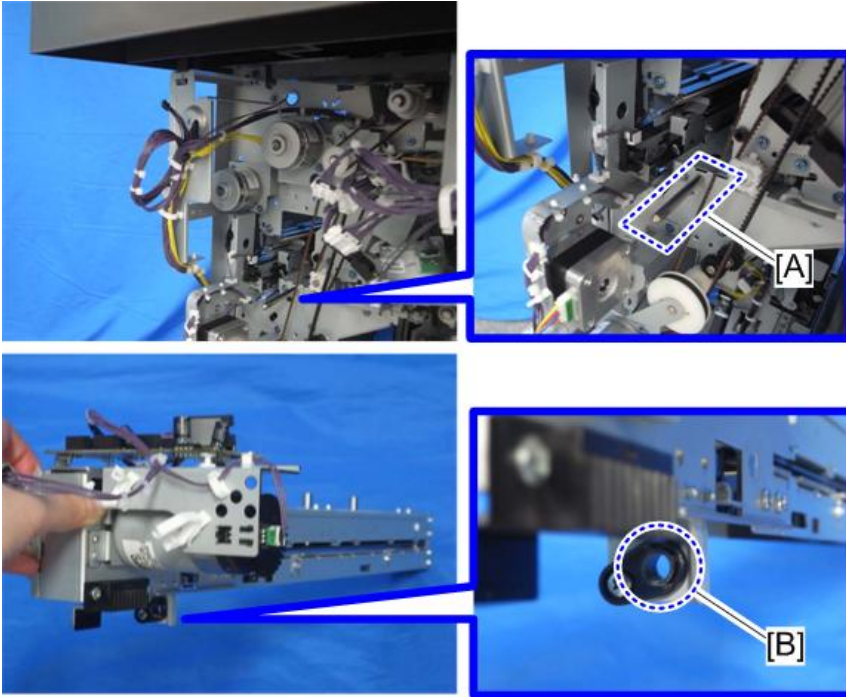


24. Inert the punch unit [A] from the rear side of the finisher.



Note

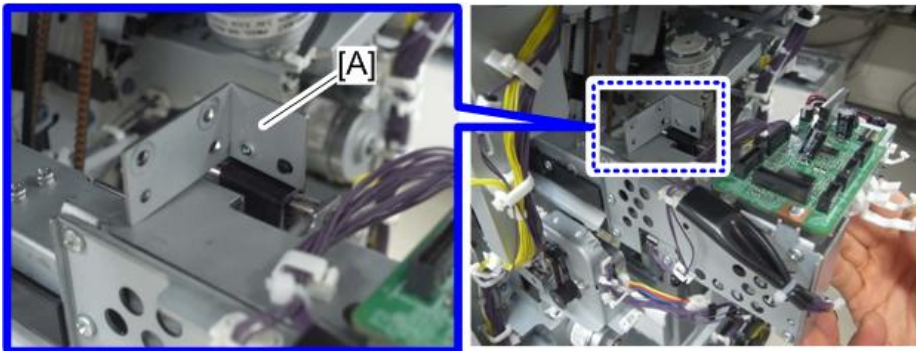
- Make sure the shaft [A] on the finisher is inserted into the punch unit [B].




d1351704

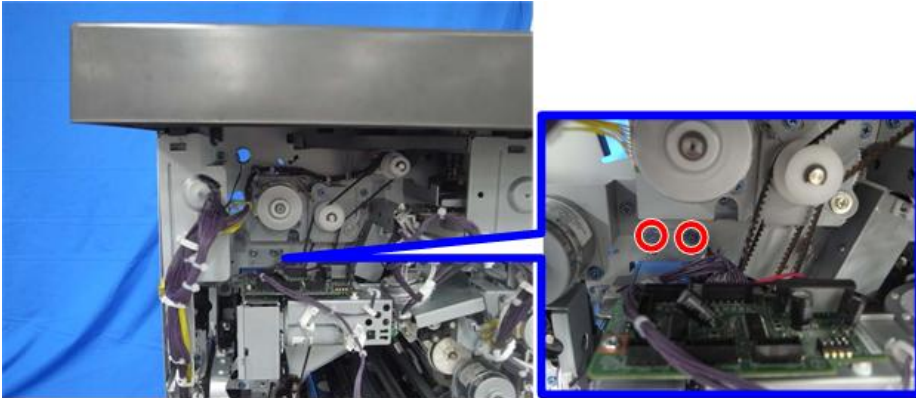
Note

- When inserting the punch unit, make sure the bracket [A] of the punch unit is in the right position as shown below.



d1351916

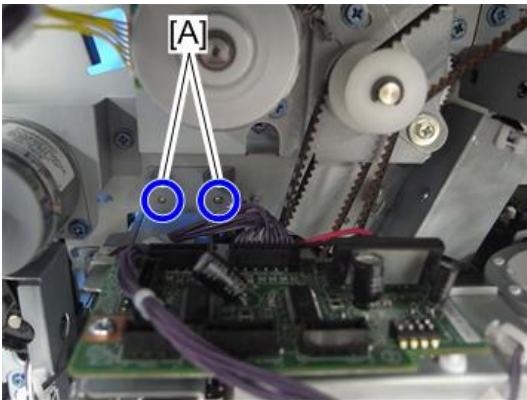
25. Fasten the punch unit. (rear side:  x 2)



d1351705

↓ **Note**

- Make sure the bracket of the punch unit fits the embossed parts [A] on the finisher.



d1351706

26. Install the stepper motor bracket [A] from the rear side of the finisher.

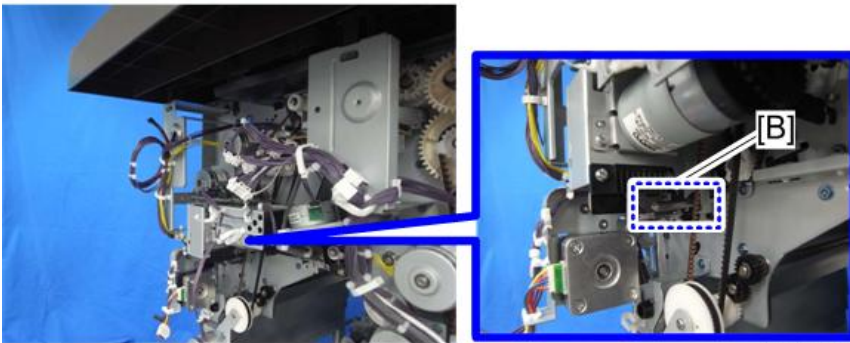
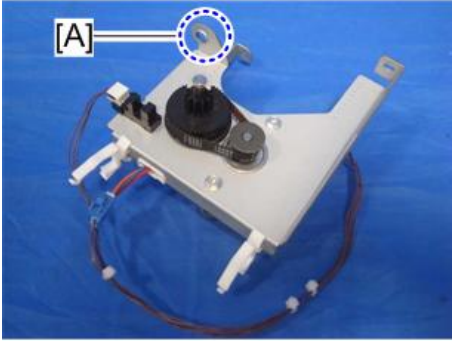


d1351707

[A]

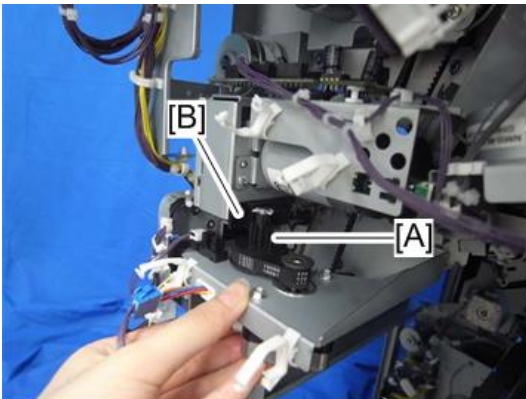
Note

- Insert the hole [A] of the stepper motor bracket into the shaft [B] on the rear side of the finisher.



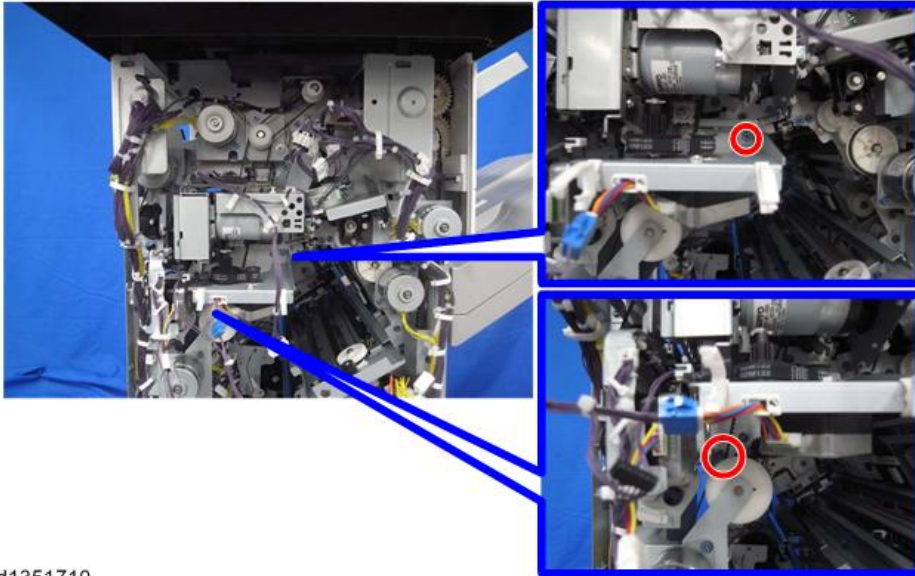
d1351708

- Make sure the rack [A] of the punch unit is engaging with the pinion [B] of the stepper motor bracket when you insert the stepper motor bracket.



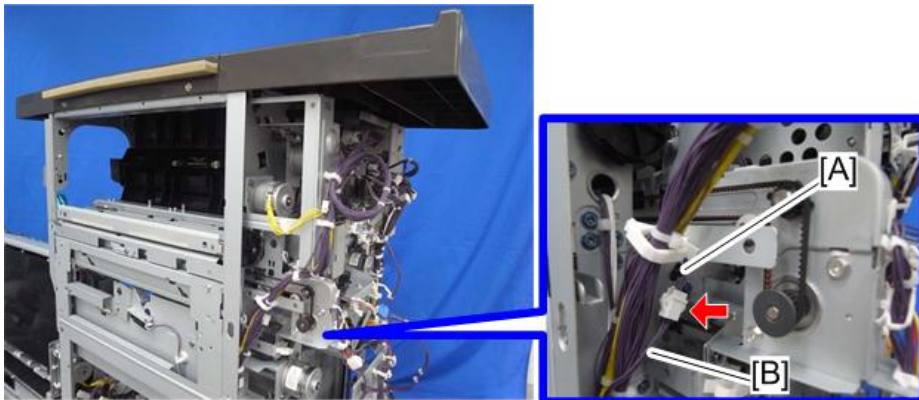
d1351709

27. Fasten the stepper motor bracket. (⚙ x 2)



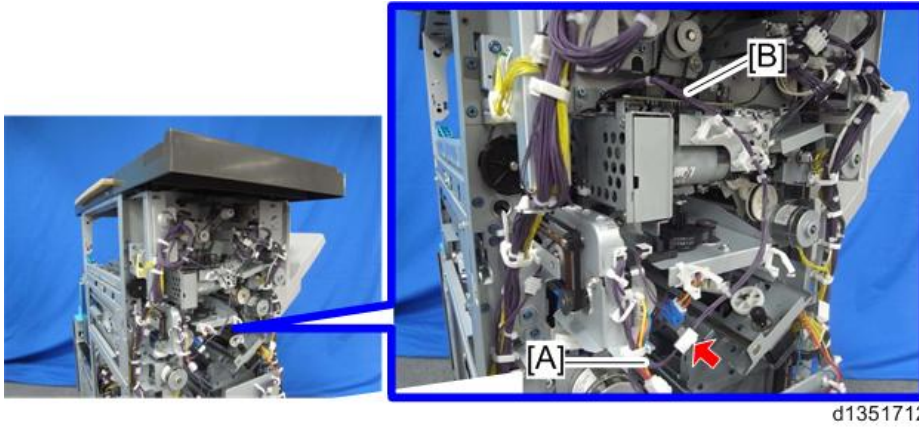
d1351710

28. Connect the harness [A] of the registration sensor bracket to the harness [B] from the hopper bracket. (🔌 x 1)

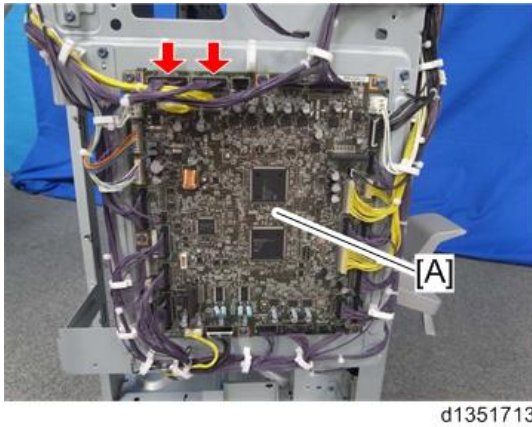


d1351711

29. Connect the harness [A] of the registration sensor bracket to the harness [B] from the punch unit. (🔌 x 1)



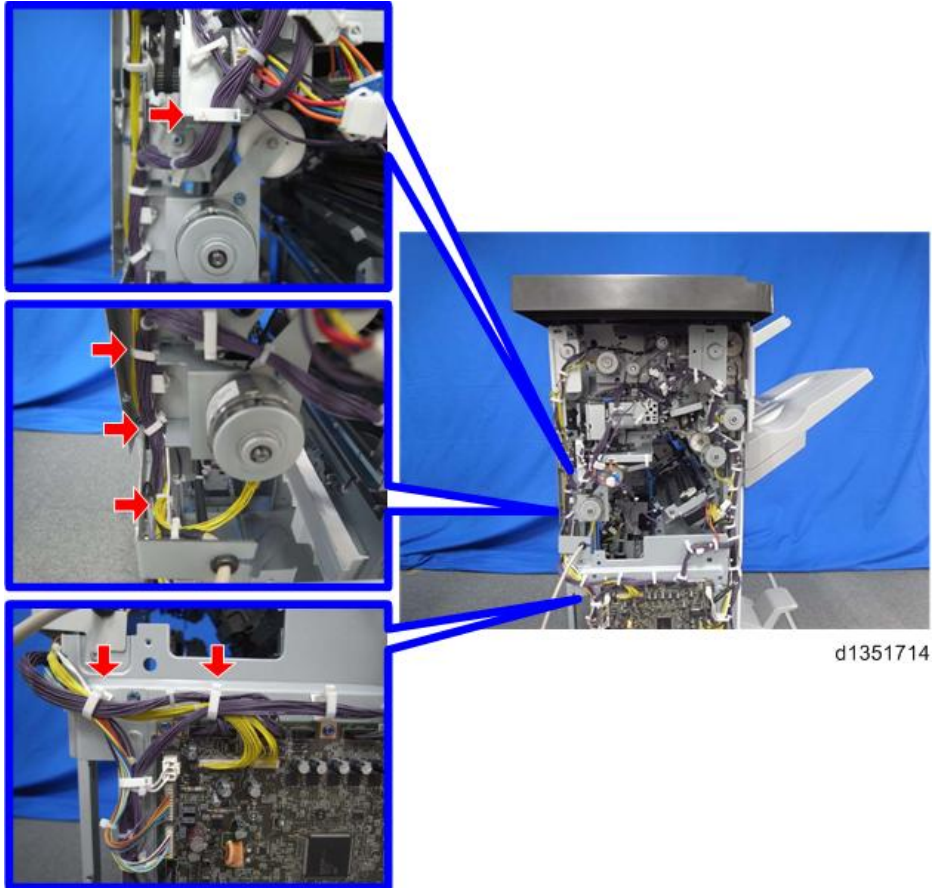
30. Connect the harness connector cable provided with the punch unit to the main board [A] of the finisher. (🔌 x 2)



⬇️ **Note**

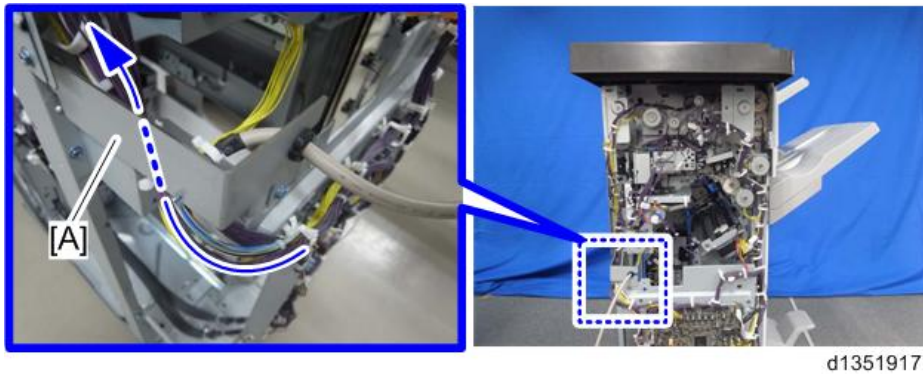
- The end that is split into two connectors must be connected to the main board.

31. Route the harness connector cable as shown below. (🔌 x 6)

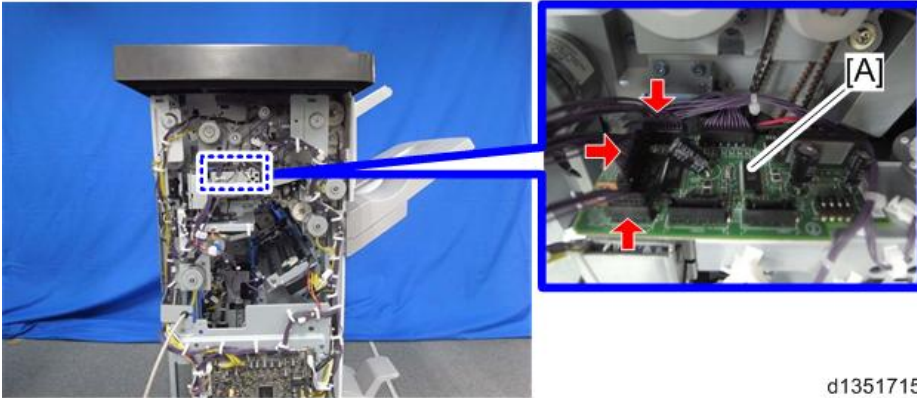


↓ **Note**

- Route the harness inside the I/F bracket [A] as shown below.

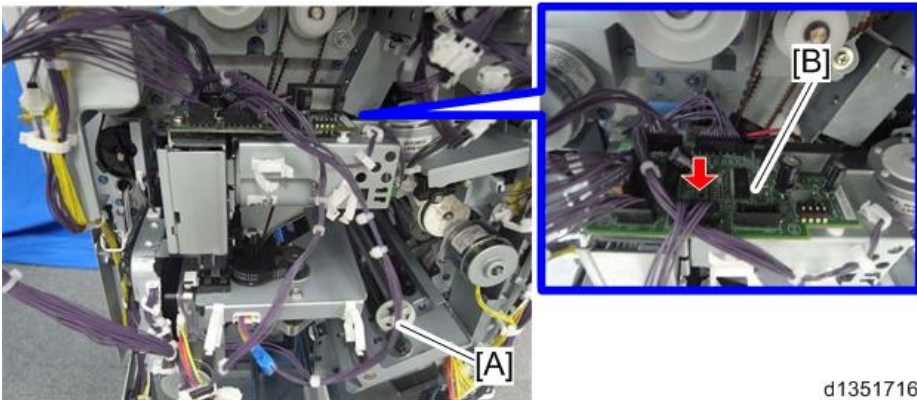


32. Connect the harness connector cable to the PCB [A] on the punch unit. (Ⓜ x 3)



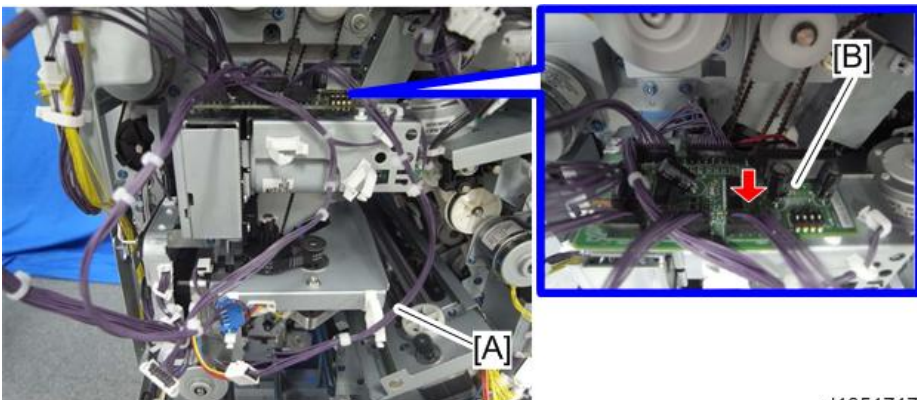
d1351715

33. Connect the harness [A] of the stepper motor bracket to the PCB [B] in the punch unit. (🔧 x 3)



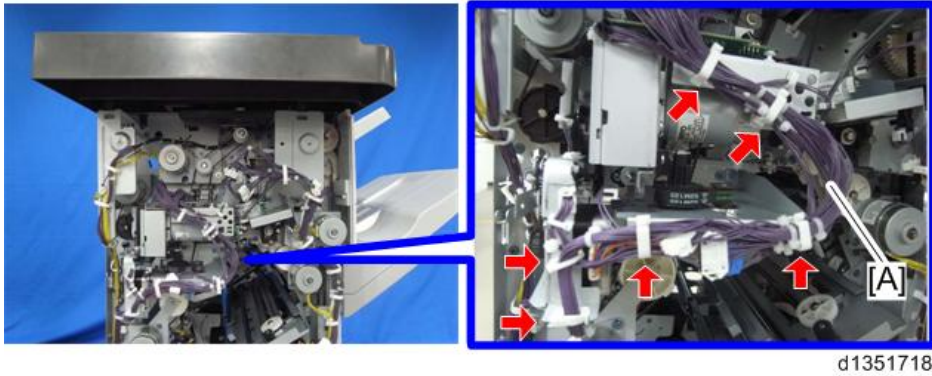
d1351716

34. Connect the harness [A] of the registration sensor bracket to the PCB [B] in the punch unit. (🔧 x 1)



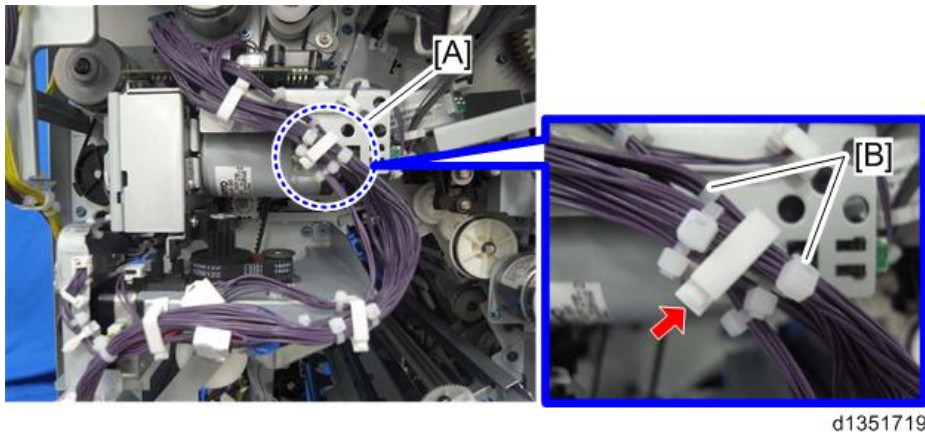
d1351717

35. Gather the harnesses of steps 32-34 [A] with your hands, and then fasten them with the clamps as shown below. (🔧 x 6)



↓ **Note**

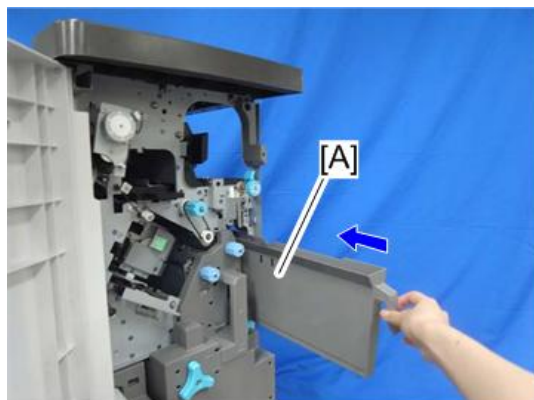
- When you clamp the harness in clamp [A], clamp the harness between the two binds [B].



- Route the harness [A] of the punch unit over the PCB as shown below.



36. Slide the punch waste hopper [A] into the finisher from the rear.



d1351721

37. Pull back the stapling unit.
38. Re-attach the covers, and then re-install the finisher on the main machine. (☛ page 145 "Finisher SR4090 (D703) /Booklet Finisher SR4100 (D704)")
39. Connect the finisher connector to the main machine.
40. Turn on the main power switch of the machine.
41. Check the finisher operation.

Finisher SR4110 (D707)

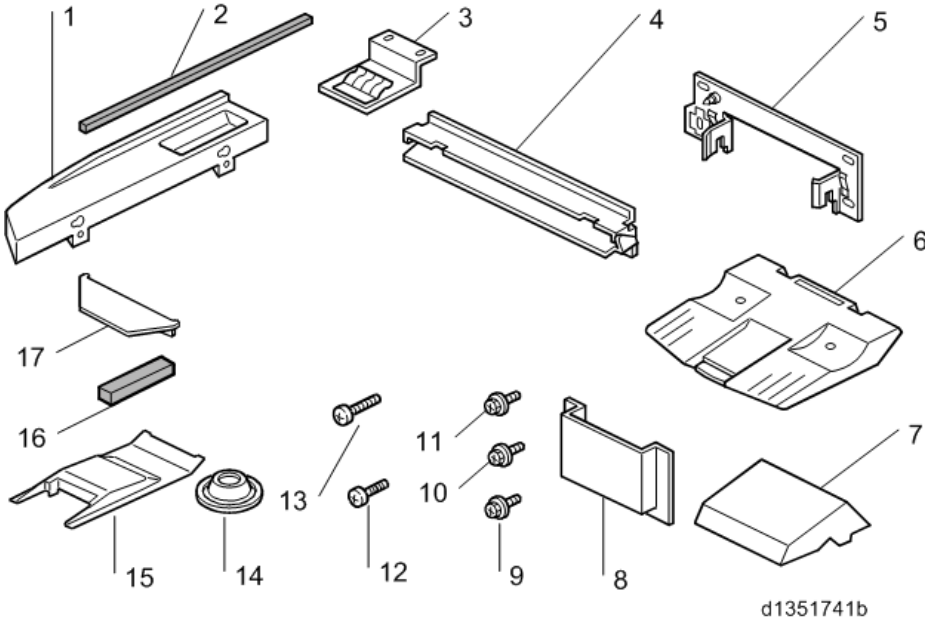
Accessories

Check the accessories and their quantities against this list.

	Description	Q'ty
1.	Side Tray	1
2.	Sponge Strip	1
3.	Ground Plate	1
4.	Entrance Guide Plate	1
5.	Joint Bracket	1
6.	Shift Tray	4
7.	Support Plate	1
8.	Support Plate Pocket	1
9.	Tapping Screws – M3 x 6	2
10.	Tapping Screws – M3 x 8	4
11.	Tapping Screws – M4 x 8	2
12.	Screws – M4 x 14	4
13.	Screws – M4 x 20	4
14.	Leveling Shoes	1
15.	Support Plate for Shift Tray	1
16.	Coupling Seal	1
17.	Support Plate for Proof Tray	1

★ Important

- The output jogger unit is pre-installed on this finisher, so it is not an option.



Spacer

A spacer for correcting paper skew is attached to the bottom right of the finisher.

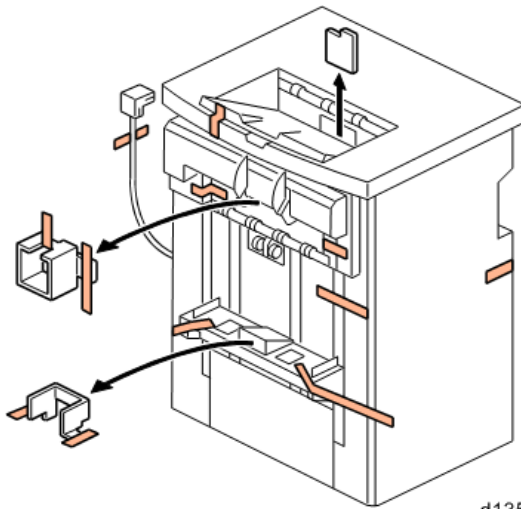


[A]: Spacer for skew correction and side-to-side registration adjustment

Installation Procedure

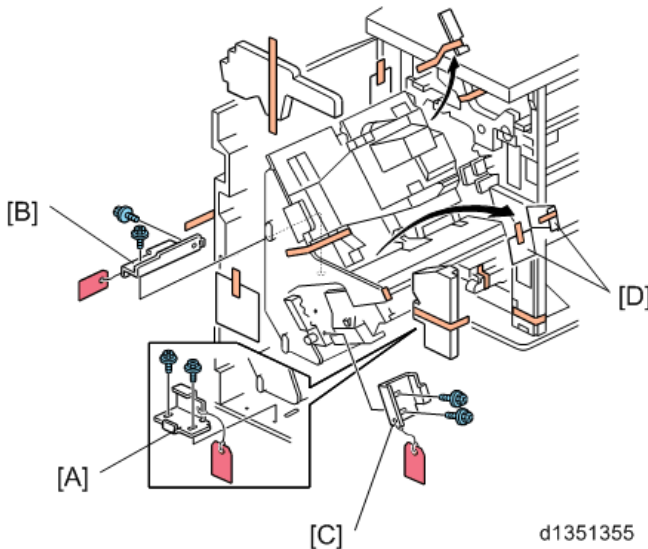
⚠ WARNING

- Turn the machine off and disconnect the machine power cord before you do this procedure.
1. Unplug the machine power cord before starting the following procedure.
 2. Unpack the finisher and remove all tapes and shipping retainers.



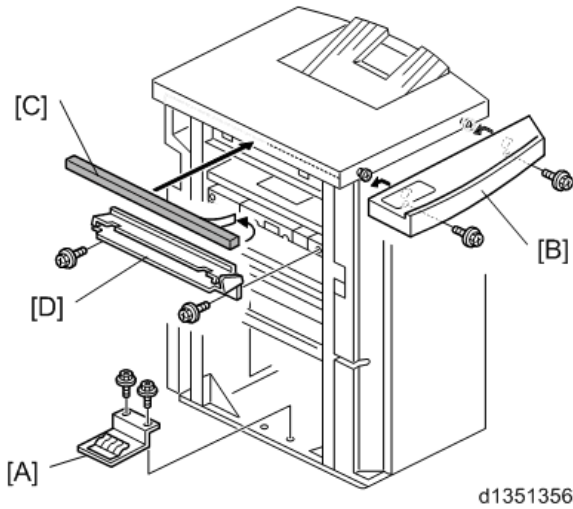
d1351354

3. Open the front door and remove the shipping retainers.
4. Remove the brackets, tags, and wires in this order: [A] > [B] > [C] (🔩 x 2 each).
5. Be sure to remove the two sheets of paper [D].



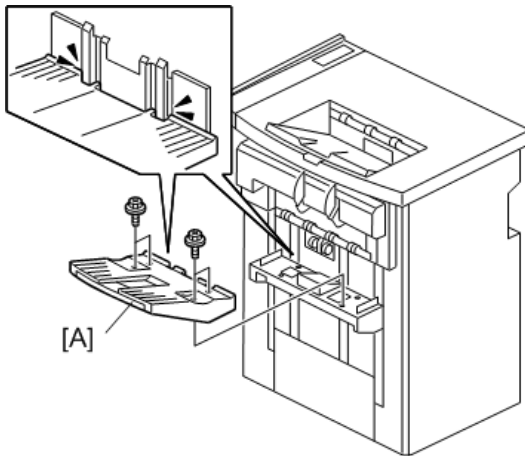
d1351355

6. Install the ground plate [A]. (🔩 x 2; M3 x 6)
Set the ground plate so that there is no gap between the plate and the bottom frame of the finisher (as shown).
7. Install the table extension [B]. (🔩 x 2; M4 x 8)
The edge of the table extension should be aligned with the edge of the finisher.
8. Attach the cushion [C] to the right side of the upper cover.
9. Install the entrance guide plate [D]. (🔩 x 2; M3 x 6)



d1351356

10. Insert the shift tray [A] into the grooves and fasten it. (⚙ x 4; M3 x 8)



d1351357

Docking the Finisher D707

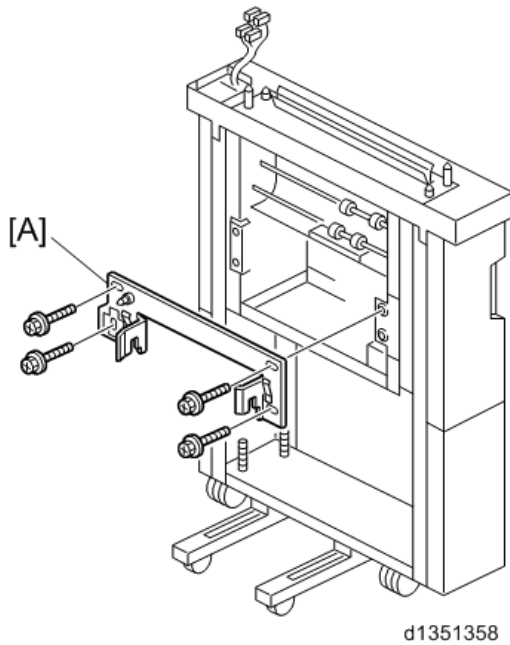
The Finisher (D707) is docked to one of the following:

- Multi-Folding Unit FD4000 (D615)
- Cover Interposer Tray CI4020 (D712)
- Buffer Pass Unit Type 5020 (D751) (D137/D138 Only)
- Decurl Unit DU5020 (D727) (D137/D138 Only)
- Main Machine

Finisher D707 to Cover Interposer Tray CI4020

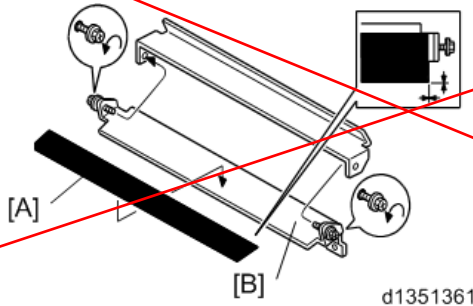
1. Fasten the joint bracket [A] to the Cover Interposer Tray CI4020.

2. Dock the finisher. (See "Connecting the Finisher D707")



Note

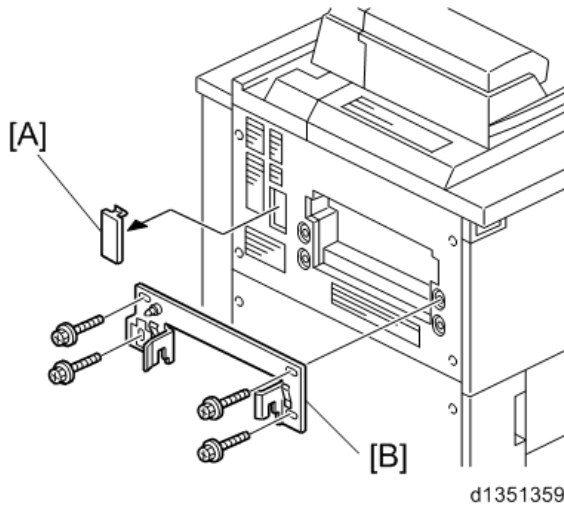
- Attach the black mylar [A] provided with the cover interposer tray accessories to the relay guide plate [B] of the Finisher D707.



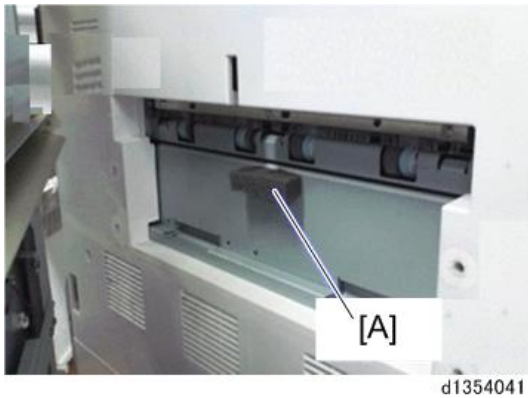
RTB 159
Delete this note

Finisher D707 to Main Machine or Other Upstream Unit

1. Remove the connector cover [A].
2. Fasten the joint bracket [B] to the Copier.



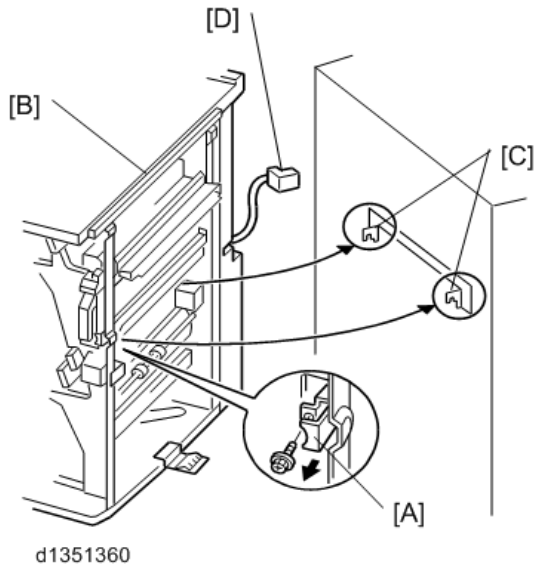
3. Attach the coupling seal [A] to the copier.



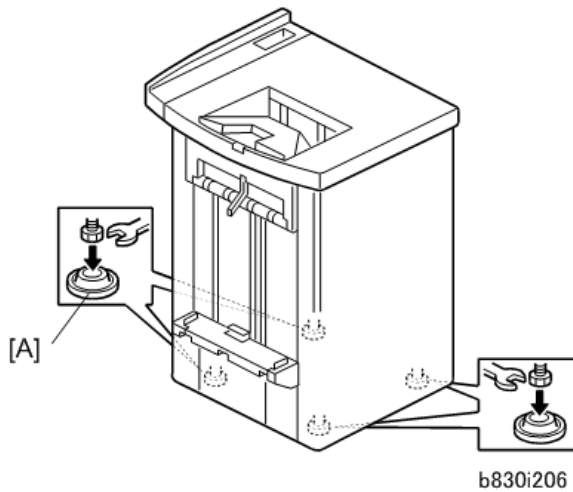
4. Dock the finisher. (See "Connecting the Finisher D707")

Connecting the Finisher D707

1. Open the front door of the finisher.
2. Pull out the locking lever [A]. (🔑 x 1)
3. Align the finisher [B] with the joint brackets [C], then slowly push the finisher onto the brackets.
4. Connect the finisher cable [D] to the copier
5. Push in the locking lever. [A]
6. Check that the top edges of the finisher are parallel with edges of the device (or copier) to the right.
7. Fasten the locking lever [A]. (🔑 x 1)
8. Close the front door.



9. Set the leveling shoes [A] (x4) under the feet.
10. Turn the nuts to adjust the height of the finisher until it is level.



How to Use the Spacer to Correct Paper Skew

A spacer for correcting paper skew is attached to the bottom right of the finisher.



d135a3123

[A] Spacer for skew correction and side-to-side registration adjustment

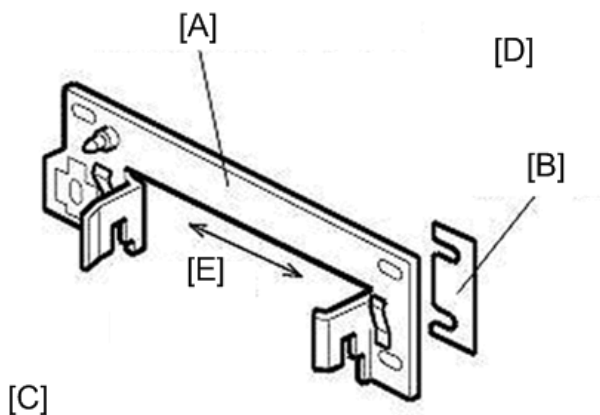
1. Check to see if the paper is skewed when it is exited from the machine.
2. If skew correction is required, dock the finisher to the copier using the **M4x20** screws included with the finisher.

Note

- This is because the M4x14 screws will not be long enough when the spacer(s) are attached.

Important

- When you attach the bracket, attach the spacer(s) as follows:
 - If the leading edge is skewed about 2mm toward the front (operator) side of the machine, attach a 2mm spacer to the rear side of the joint bracket.
 - If the leading edge is skewed about 2mm toward the rear (non-operator) side of the machine, attach a 2mm spacer to the front side of the joint bracket.



d135a3125

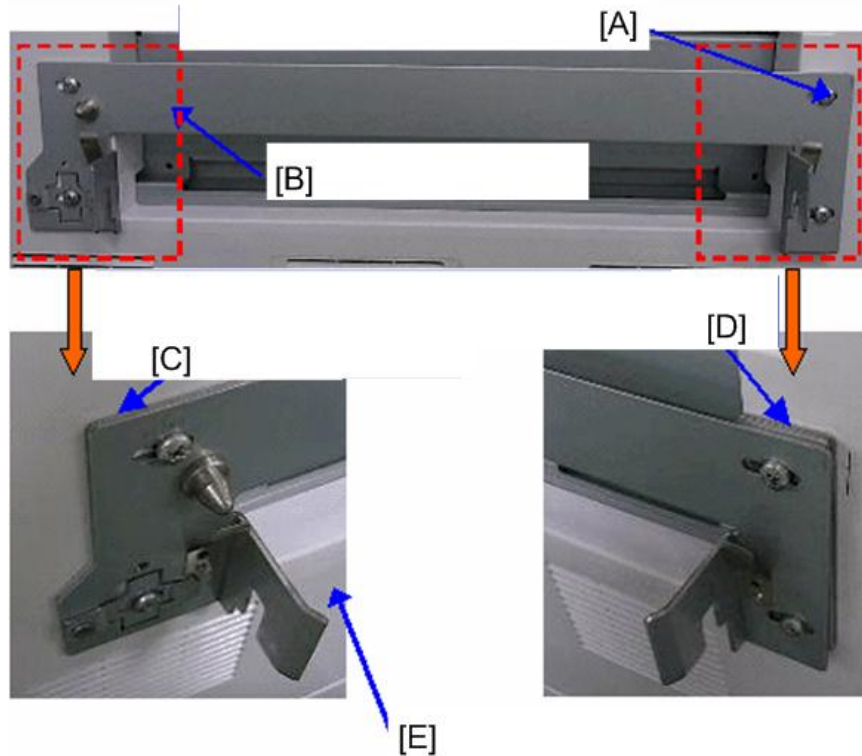
[A]: Joint Bracket

[B]: Spacer

[C]: Finisher side

[D]: Main machine (Mainframe) side

[E]: Adjustable direction



d135a3126

[A]: Screws (with spacer(s): M4 x 20, without spacer(s): M4 x 14)

[B]: Joint Bracket

[C]: Without spacer

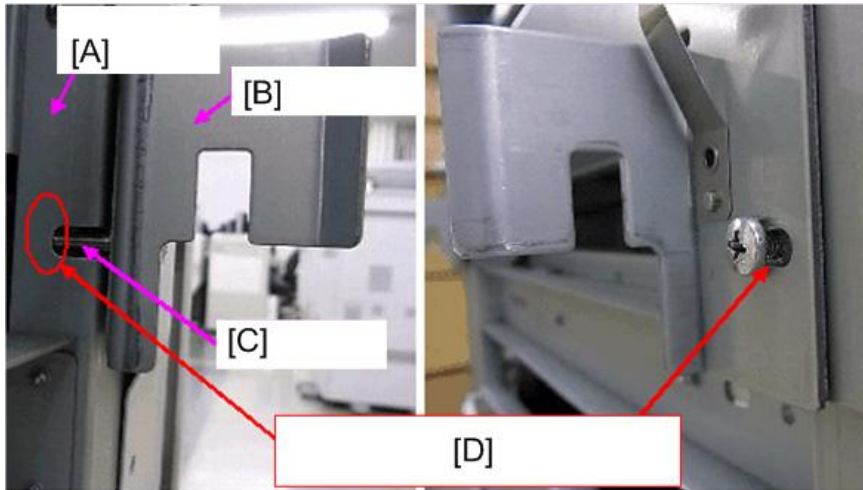
[D]: With 1-2 spacers

[E]: Exterior Cover

- If skew correction is **NOT** required, dock the finisher to the copier using the **M4x14** screws included with the finisher.

Note

- This is because without the spacer, the M4x20 screws are too long and the bracket cannot be fastened in place.



d135a3127

[A]: Folding Unit

[B]: Joint Bracket

[C]: Screw (M4 x 20)

[D]: Screw is too long and cannot be fully inserted

SP Setting

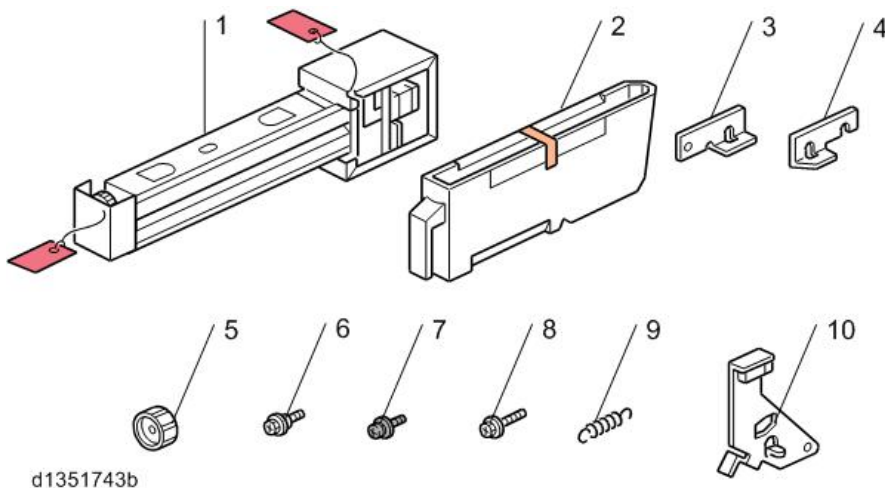
1. Enter the SP mode.
2. Do **SP5841-11** and enter the name of the staples used for corner stapling.
 - This is the name that shows when the user prints the Inquiry List.
 - To print this list push User Tools> [Inquiry]> [Print Inquiry List]> [Start].

Punch Unit PU5000 (B831)

Component Check

Check the quantity and condition of the accessories in the box against the following list:

No.	Description	Q'ty
1.	Punch Unit	1
2.	Punch Waste Collection Hopper	1
3.	Spacer (2 mm)	1
4.	Spacer (1 mm)	2
5.	Knob	1
6.	Step Screw	1
7.	Screw (M4 x 6) Black	1
8.	Screw (M3 x 10)	2
9.	Spring	1
10.	Sensor Arm and Sensor	1



Installation Procedure

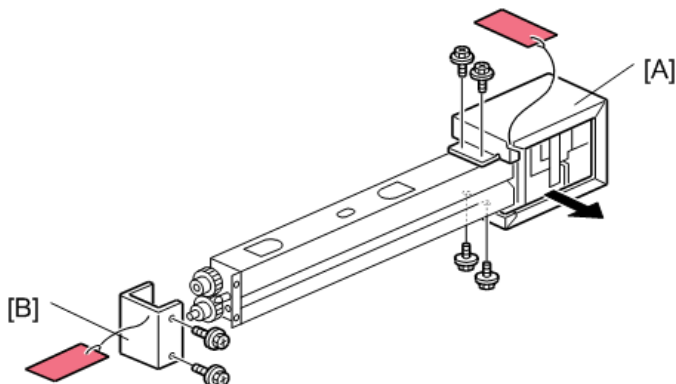
This punch unit is for the D707 finisher only.

⚠ CAUTION

- Switch the machine off and unplug the machine before starting the following procedure.
1. If the finisher is connected to the main machine, disconnect it.
 2. Open the front door and remove the rear cover (⚙ x 2).
 3. Unpack the punch unit and remove the step screw from the lower section of the unit.



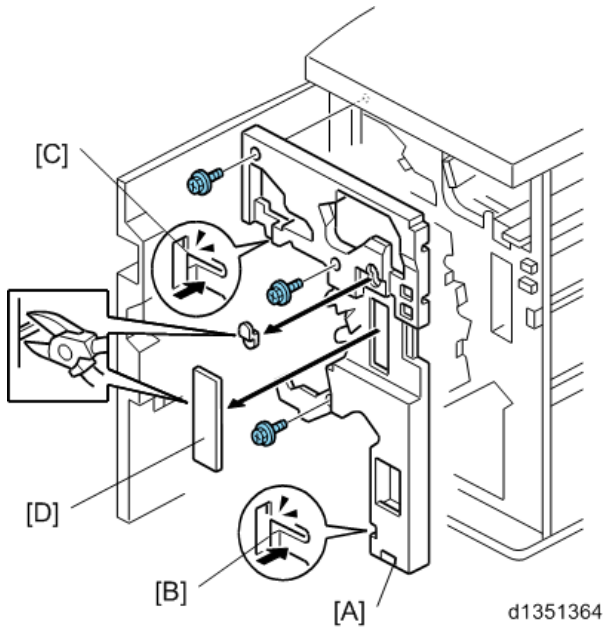
4. Remove the motor protector plate [A] (⚙ x 4).
5. Remove the cam lock plate [B] (⚙ x 2).



d1351363

6. Pull out the stapling unit.
7. Remove the inner cover [A] (⚙ x 4, M3 x 8).

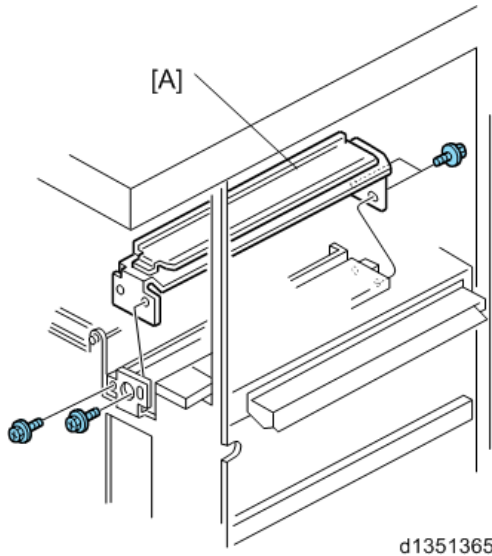
8. Behind the inner cover at [B] and [C], press the lock tab to the right to release the inner cover from the frame.
9. Remove the plastic knockouts [D].



10. Remove the rear cover. (⚙️ x 2)
11. Remove the punch cover [A]. (⚙️ x 1)



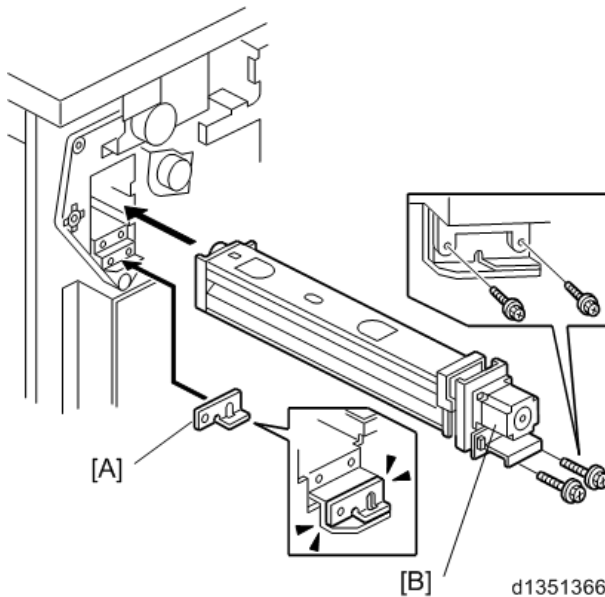
12. Remove the paper guide [A] (⚙️ x 4).



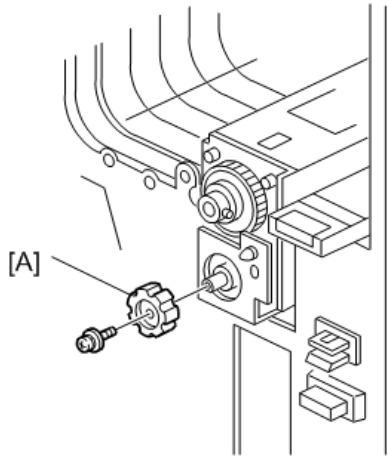
13. Position the 2 mm spacer [A] and attach the punch unit [B] (\varnothing x 2, M3 x 10).
14. Use one of the screws removed from the motor protector plate to fasten the remaining two spacers to the frame as shown.

Note

- These extra spacers can be used to adjust the position of the punch holes (front to rear, across the page).

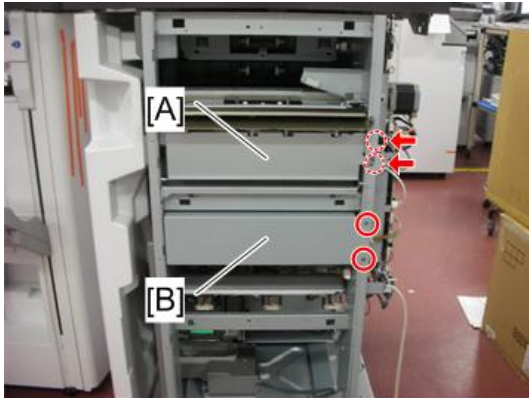


15. At the front, fasten the punch unit knob [A] (\varnothing x 1, M4 x 6).



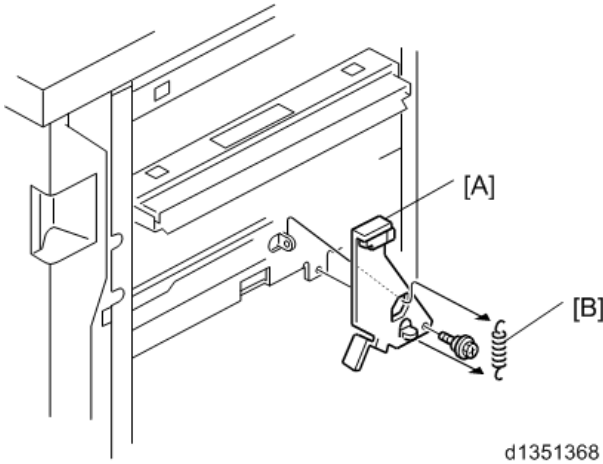
d1351367

16. Remove the harness cover [A] (🔩 x 2) and middle cover [B] (🔩 x 2).



d1354021b

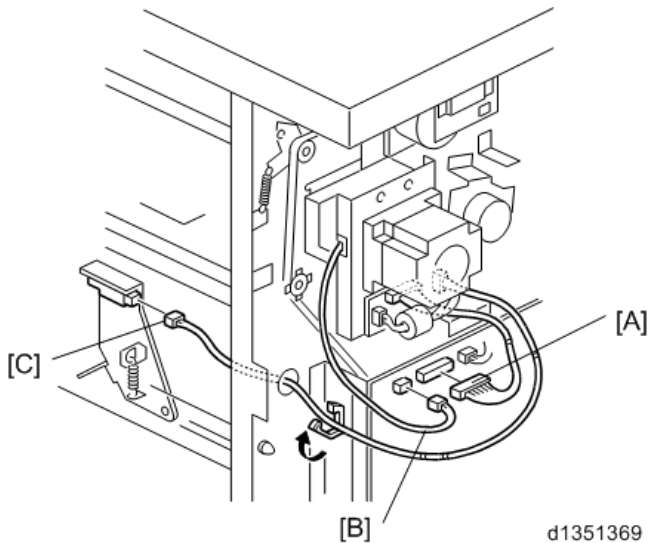
17. Install the sensor arm [A] (🔩 x 1, small step screw (M3 x 4)). Make sure that the sensor arm swings freely on the step screw.
18. Attach the spring [B].



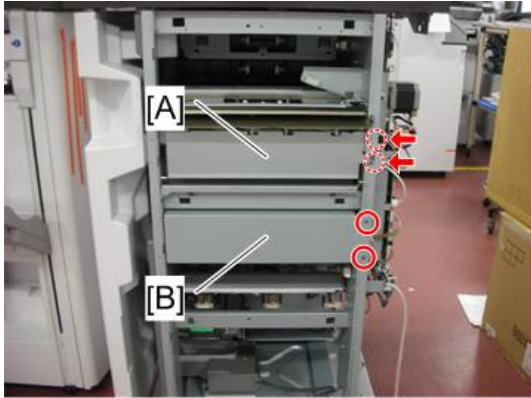
19. Connect the PCB harness connector [A] to **CN135** of the finisher PCB and to **CN600** of the punch unit PCB.
20. Connect the harness [B] to **CN136** of the finisher PCB.
21. Connect the single end of the hopper full sensor connector cable [C] to the hopper full sensor on the arm (⚙️ x 1, ⚙️ x 2).

Note

- No special DIP switch settings are required for this punch unit. A signal from the punch identifies itself by sending a signal to the copier.

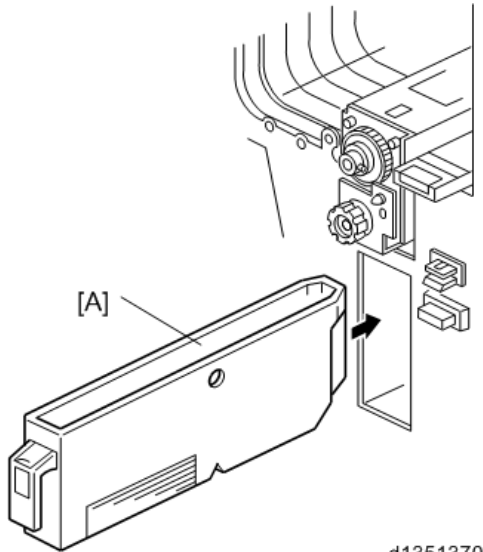


22. Reattach the harness cover [A] (⚙️ x 2) and middle cover [B] (⚙️ x 2).



d1354021b

23. Slide the punch waste collection hopper [A] into the finisher.



d1351370

24. Reattach the inner cover and rear cover.
25. Close the front door and re-connect the finisher to the machine.

Cooling Fan Unit Type M2 (D770) D135 RTB 146 New procedure

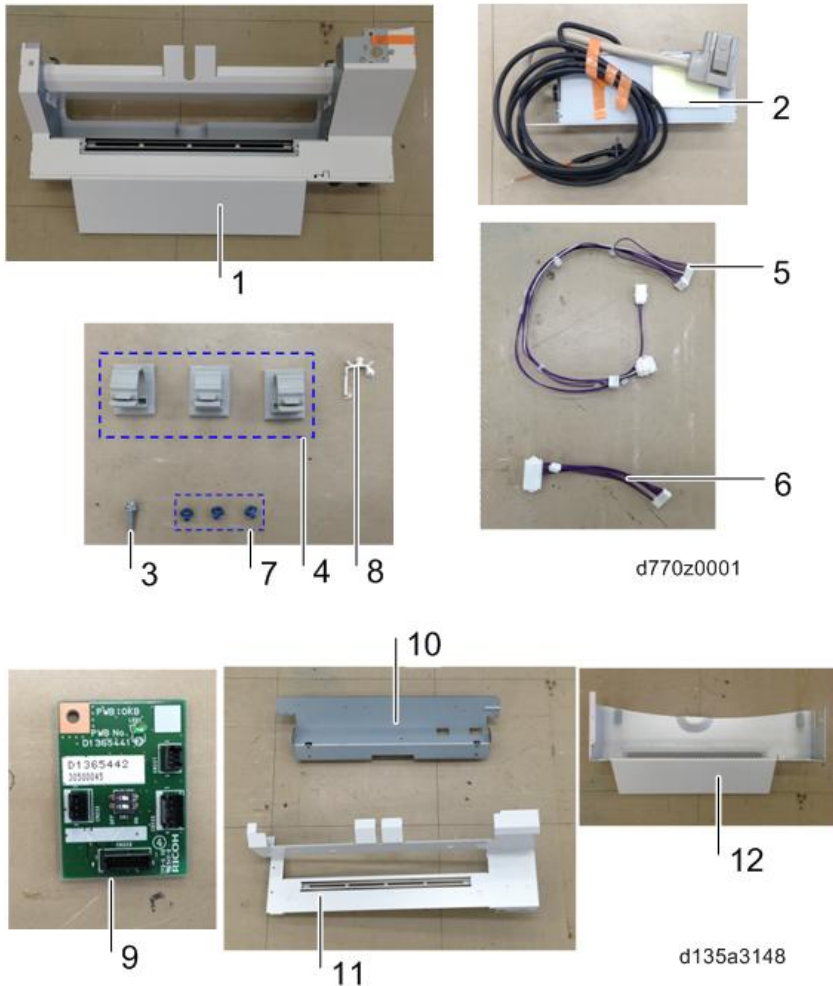
★ Important

- This option is to be installed to Finisher SR4090 (D703) or Booklet Finisher SR4100 (D704) or Finisher SR4110 (D707).
- When installing this option to the Finisher SR4090 (D703) or Booklet Finisher SR4100 (D704), install it after installing the Output Jogger Unit Type M2 (D705).
- This option is purposed to cool down the sheets delivered to the finisher shift tray.

Component Check

Check the quantity and condition of the accessories against the following list.

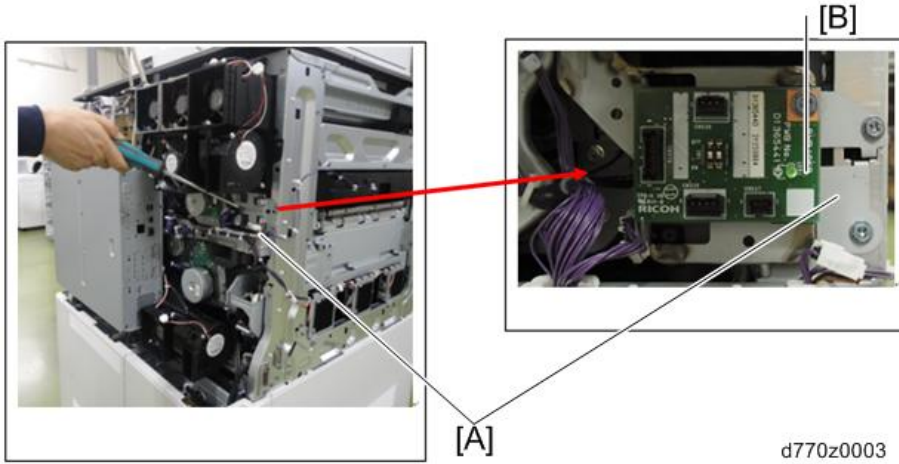
No	Description	Qty
1	Cooling Fan Assembly	1
2	Interface Unit	1
3	Tapping Screw M3 X 16	1
4	Locking Wire Saddle CKN-13	3
5	Haness: Fan: Separation	1
6	Harness: Fan	1
7	Tapping Screw M3 X 6	3
8	Wire Saddle : LWSM-0511A	1
9	PCB: OKB	1
10	Bracket (for Finisher SR4110)	1
11	Lower Cover (for Finisher SR4110)	1
12	Upper Cover (for Finisher SR4110)	1



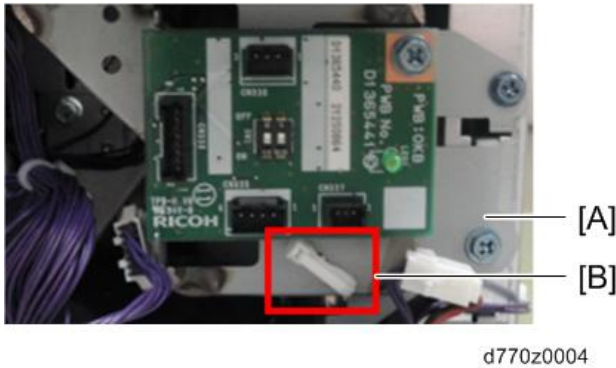
Common Installation Procedure for Finisher SR4090 / Booklet Finisher SR4100 and Finisher SR4110

⚠ CAUTION

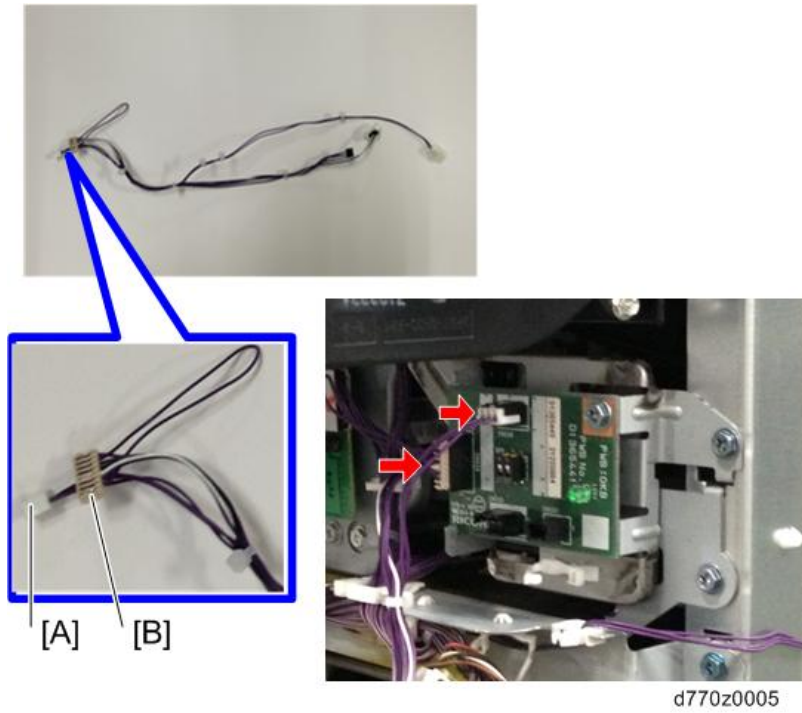
- Always switch the machine off and unplug the machine before doing the following procedure.
1. Remove the left middle cover. (👉 page 532 "Left Middle Cover")
 2. Remove the rear middle cover. (👉 page 537 "Rear middle cover")
 3. Attach the PCB: OKB [B] to bracket [A] (🔩 x 1; M3X6 tapping screw / accessory #7).



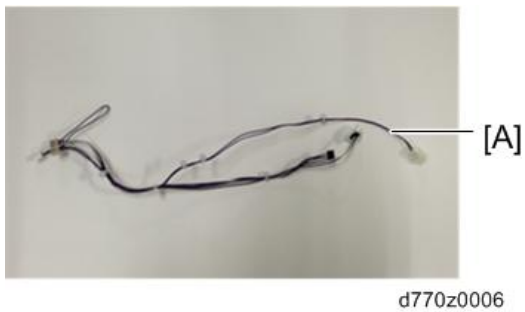
4. Attach the Wire Saddle: LWSM-0511A [B] (accessory #8) to the bracket [A].

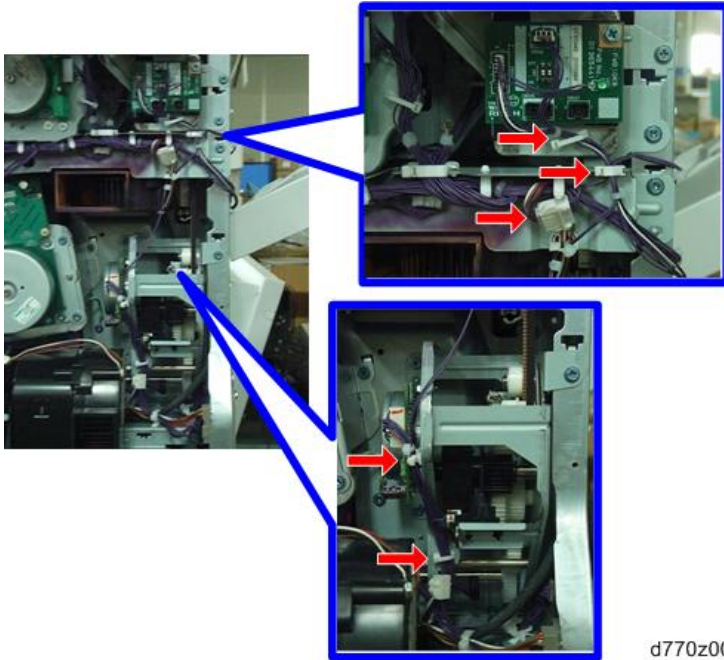


5. Connect the connectors [A] and [B] of the Harness: Fan: Separation (accessory #5) to the PCB:OKB.



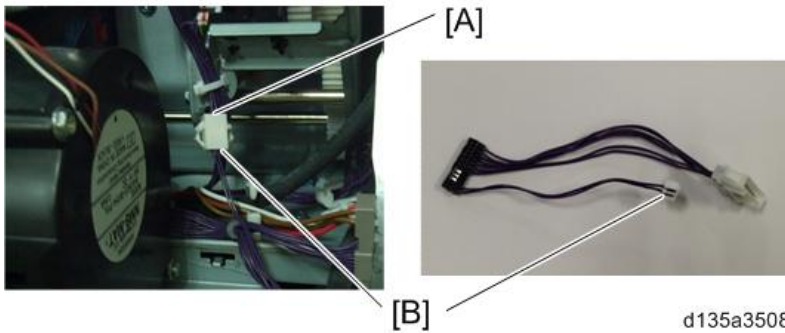
6. Lock harness [A] Harness: Fan: Separation (accessory #5) (x 5).





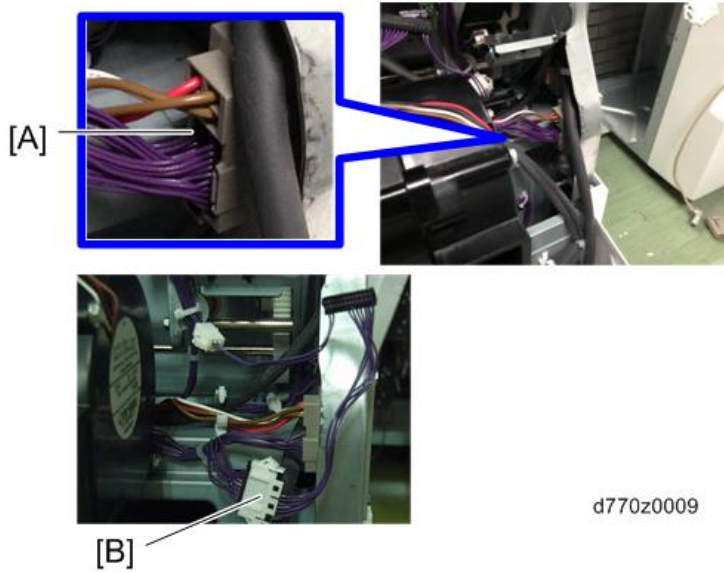
d770z0007

7. Connect the harness [A] Harness: Fan: Separation (accessory #5) clamped in step 6 to the connector [B] of Harness: Fan (accessory #6).

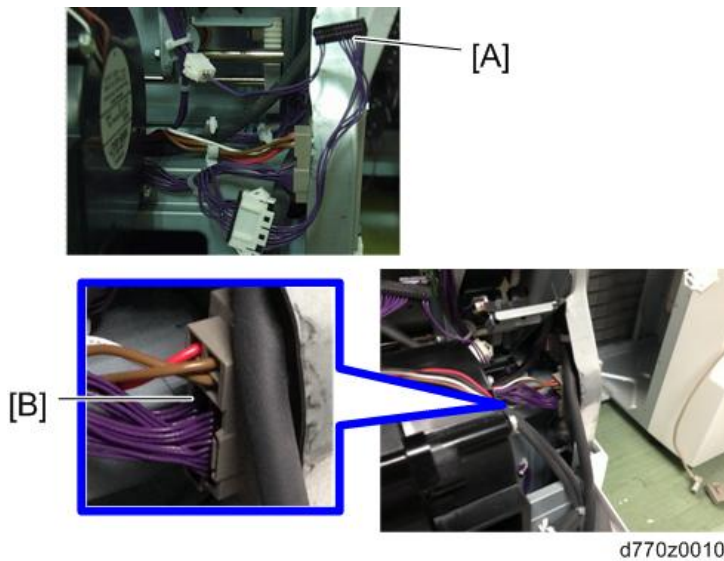


d135a3508

8. Disconnect the connector [A], then connect [A] to the connector [B] of the Harness: Fan (accessory #6) connected in step 7.



9. Connect the remaining connector [A] of the Harness: Fan (accessory #6) to connector [B].

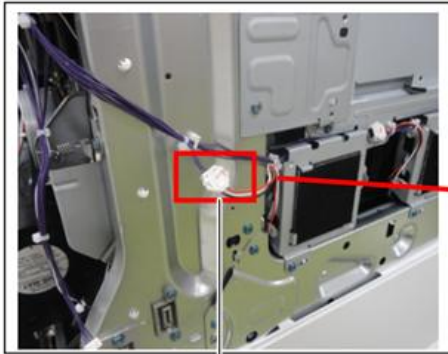


10. Lock the Harness: Fan (accessory #6) with the clamp as shown.

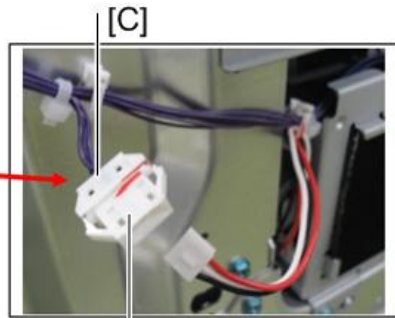


d770z0011

11. Disconnect connector [A].



[A]



[C]

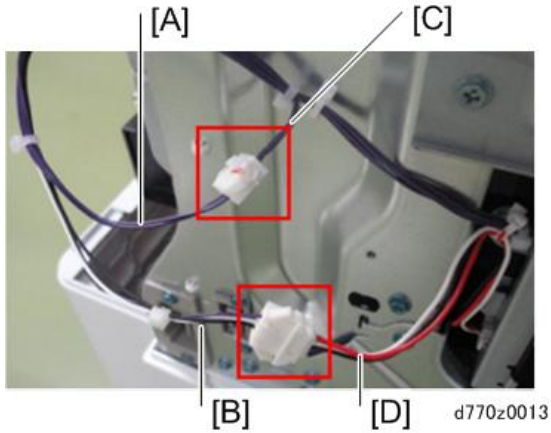
[B]

d770z0012

Note

- When disconnecting the white relay connector [B], make sure it remains connected to the connector attached to the purple harness [C]. If it remains connected to the connector attached to the red, white and black harnesses, harnesses could be connected falsely in the following steps.

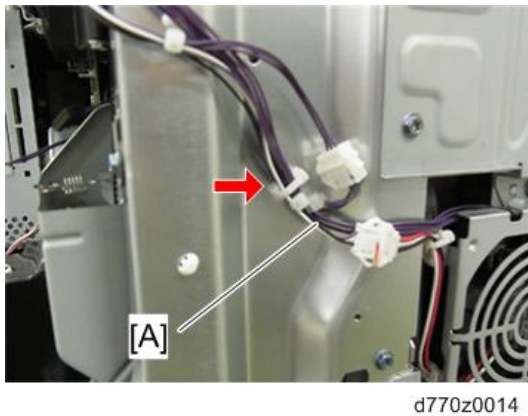
12. Connect the remaining connectors [A] and [B] of the Harness: Fan: Separation (accessory #5) to connectors [C] and [D] disconnected in step 11.



Note

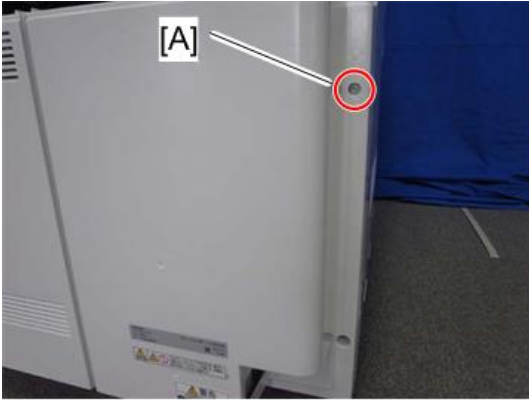
- Harnesses [A] and [C] should be purple.
- Harnesses [B] and [D] should be different colors.

13. Clamp the harness [A] with the clamp.



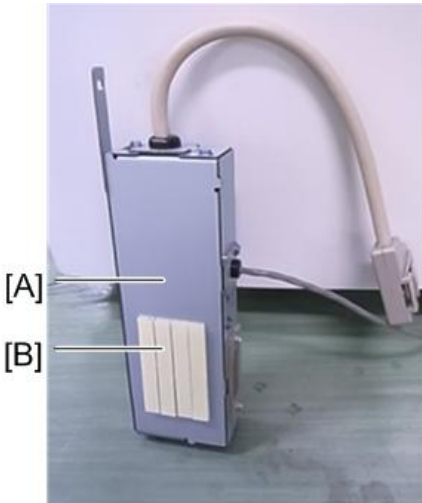
14. Attach the Left Middle Cover (⚙️ x 2) and Rear Middle Cover (⚙️ x 4).

15. Remove the upper screw [A] from the rear lower cover (⚙️ x 1).



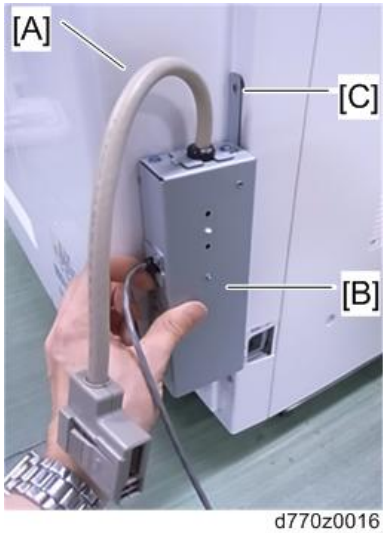
d135a0099

16. Peel off the tapes from the Velcro [B] attached to the interface unit [A] (accessory #2).



d770z0015

17. Align the screw hole [C] against the surface of the cover [A], and attach the interface unit [B] with its Velcro against the surface of the cover.



18. Attach the interface unit [A] to the lower left cover with M3X16 screw (accessory #3).

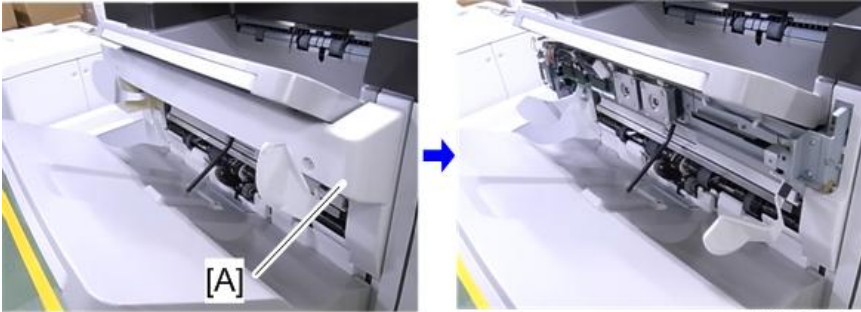


19. Connect connector [A] to the copier.



Installation Procedure for Finisher SR4090/ Booklet FinisherSR4100

1. Remove the cover [A] from the Output Jogger Unit Type M2 (⚙️ x 2).



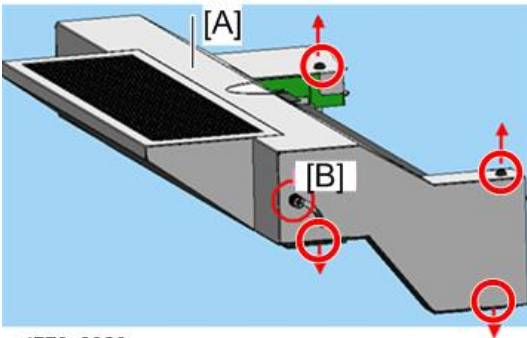
d770z0019

↓ Note

- The removed cover will not be used.

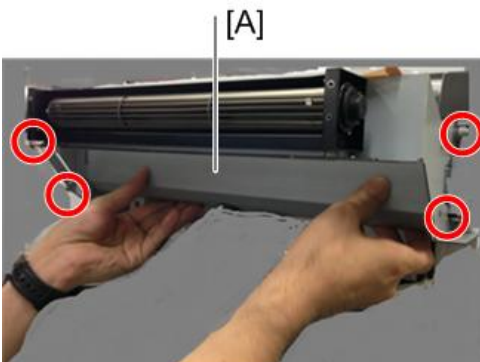
2. Remove the cover [A] from the Cooling Fan Assembly (⚙️ x4).

Do not remove screw [B].

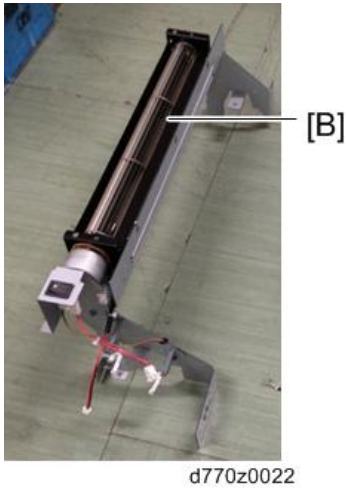


d770z0020

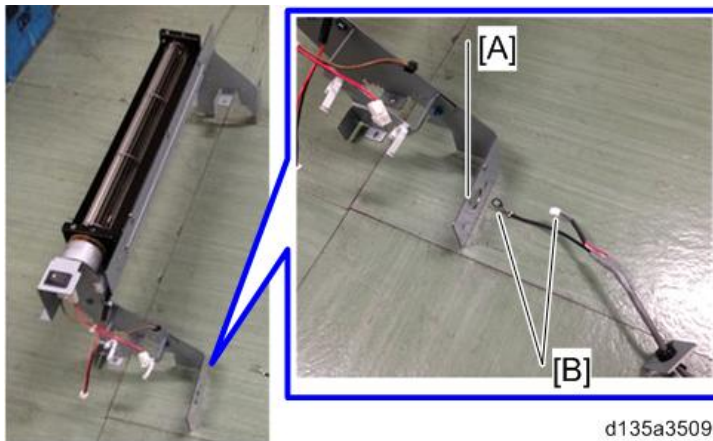
3. Remove the cover [A] and take out the cooling fan unit [B] (⚙️ x4).



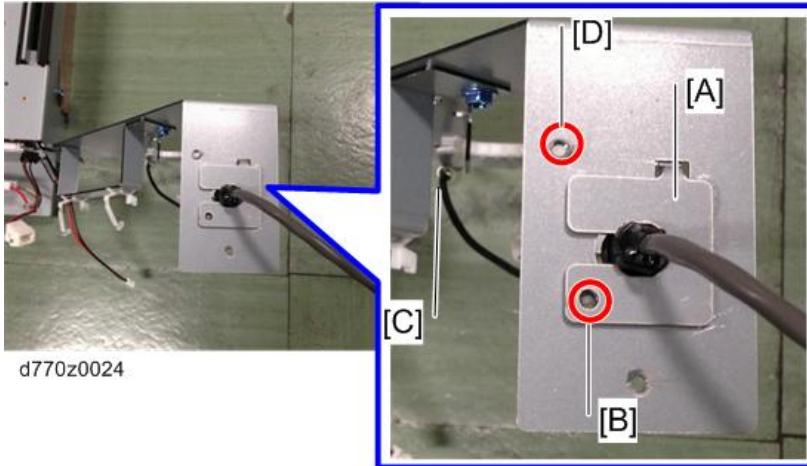
d770z0021



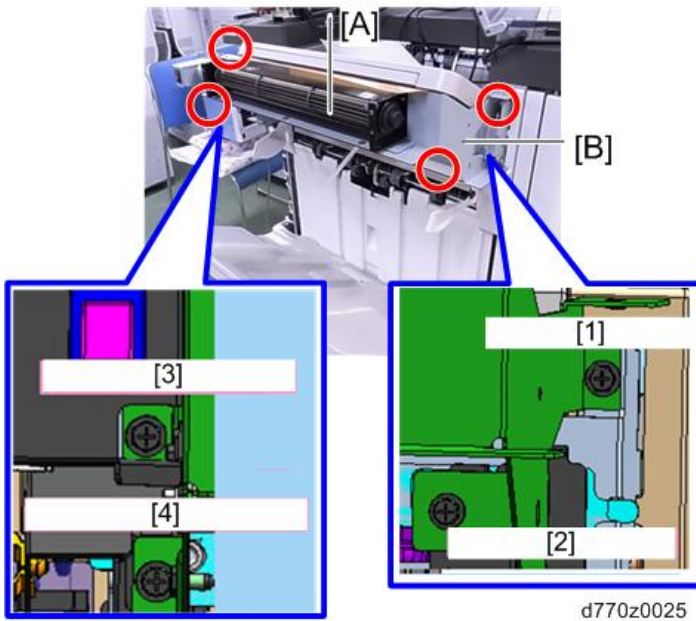
4. Route the ends of the harness [B] through the hole [A] on the fan unit bracket.



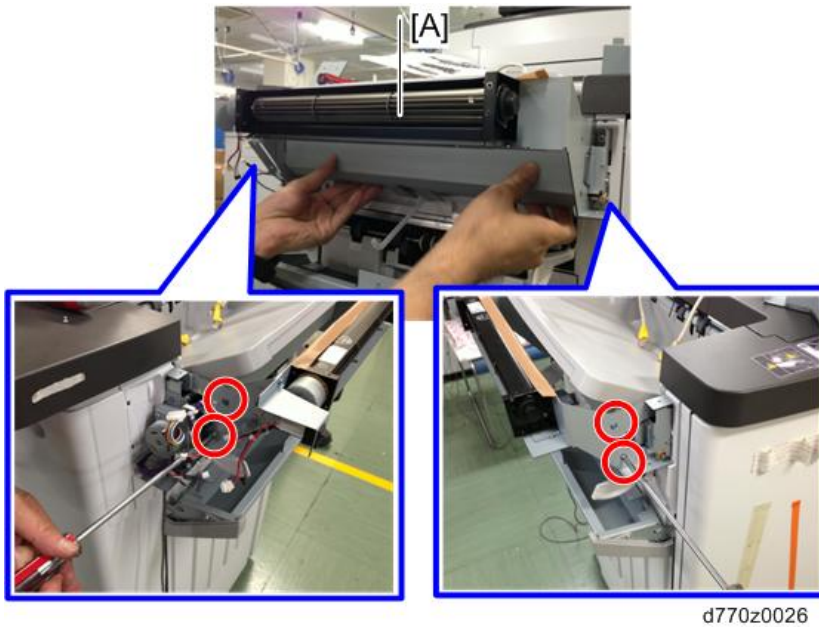
5. Attach the bracket [A] by fastening the screw (M3X6; x1) to the hole [B]. Then, fix the ground wire [C] to the hole [D] with screw (M3X6; x1).



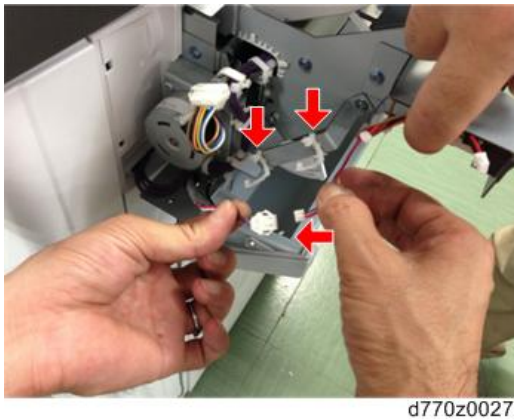
6. Mount the fan unit [A] on the Output Jogger Unit Type M2 [B] (⚙ x 4).
- Screws #1 and #3 will fasten the fan unit, output jogger unit and copier.
 - Screws #2 and #4 will fasten the fan unit and output jogger unit.



7. Attach the cover [A] removed in step 3 (⚙ x 4).

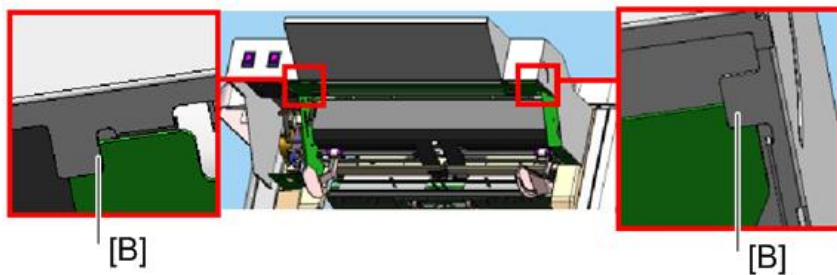
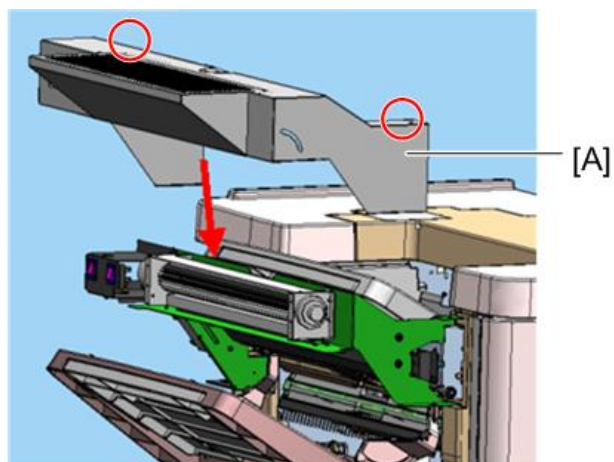


8. Connect the harness of the fan unit (🔌 x1). Clamp the harness with the clamps (🔧 x 2).



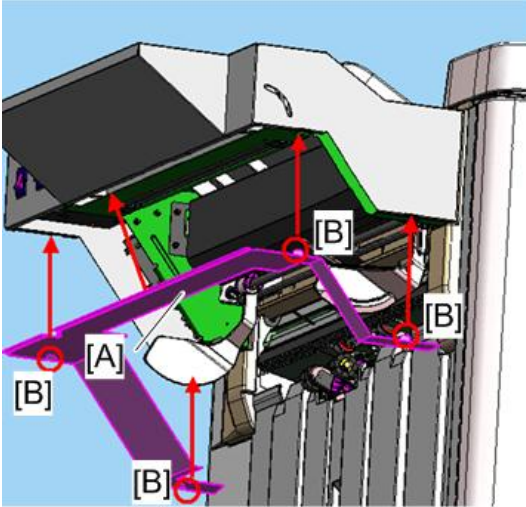
9. Attach the cover [A] of the cooling fan unit (🔧 x 2).

Make sure the tabs on both sides of the cover [B] (colored in grey) lap over the plate (colored in green).



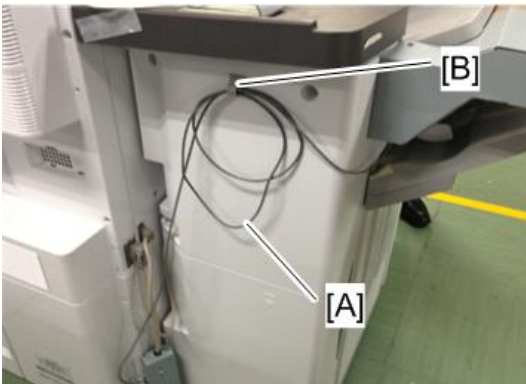
d770z0028

10. Insert the 4 tabs [B] to the upper cover to attach the cover [A].



d135a3149

11. Bind the interface unit harness [A] and clamp it with the Locking Wire Saddle CKN-13 [B] (accessory #4) as shown.



d770z0050

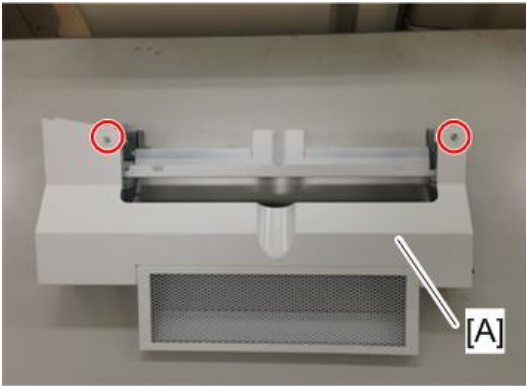
Note

- Depending on the number of options installed between the copier and Finisher SR4090/SR4100, 3 pcs of Locking Wire Saddle CKN-13 might be needed to clamp the harness.

Installation Procedure for Finisher SR4110

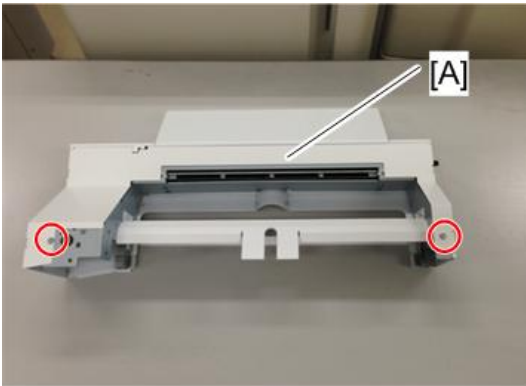
2

1. Remove the upper cover [A] from the Cooling Fan Assembly (⚙️ x2).



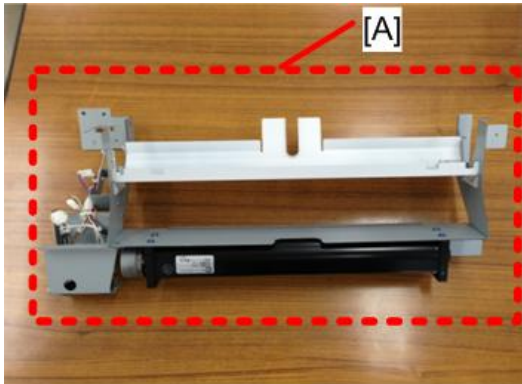
d770z0051

2. Remove the lower cover [A] from the Cooling Fan Assembly (⚙️ x2).



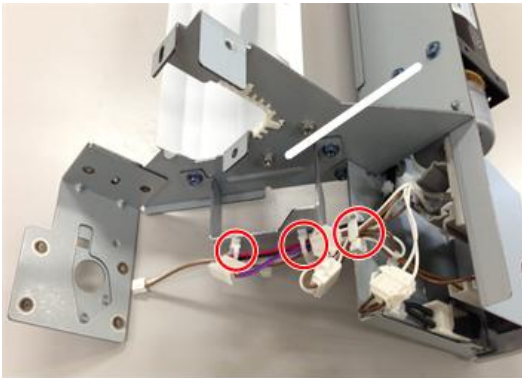
d770z0052

3. Place the Fan Assembly [A] on a table with the upper and lower covers removed.



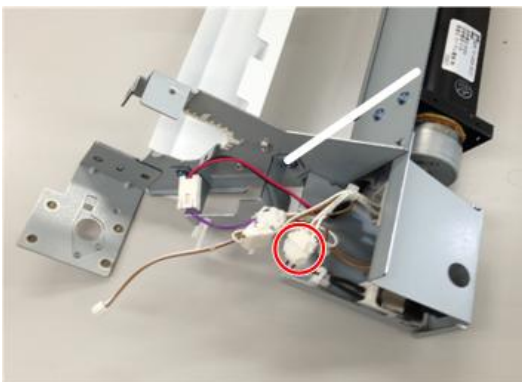
d770z0053

4. Release the 3 clamps attached to the cooling fan assembly.



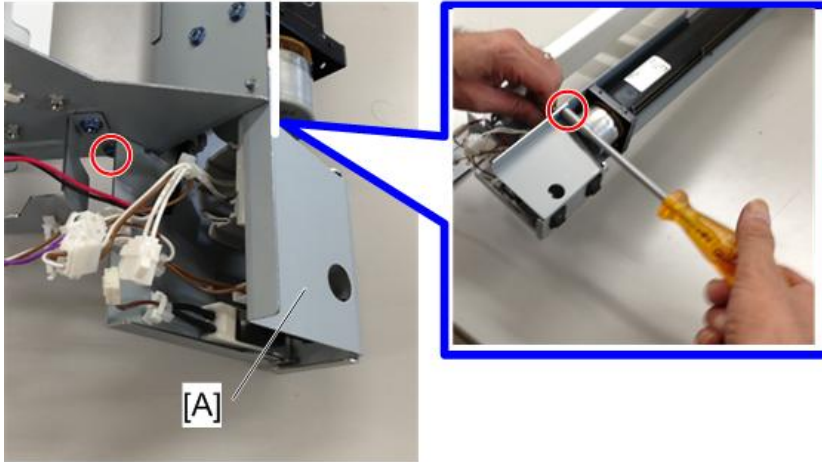
d770z0054

5. Disconnect the connector.



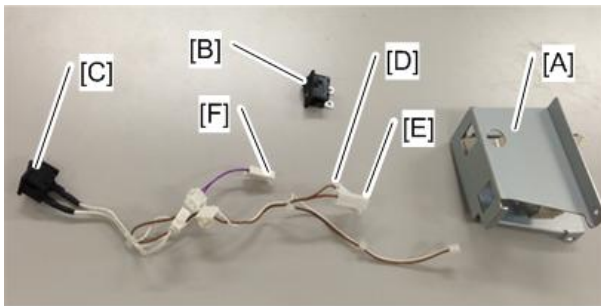
d770z0055

6. Remove the bracket [A] (⌀ x 2).



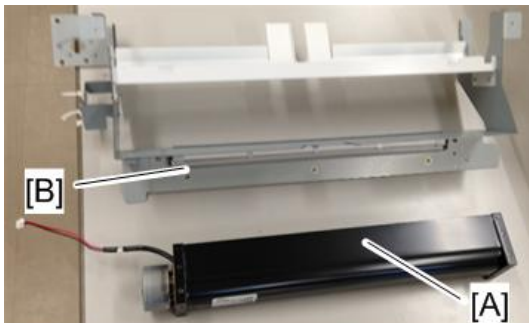
d770z0056

7. Remove the rocker switches [B] and [C] from the bracket [A] removed in step 6 (connectors [D], [E] and [F]).



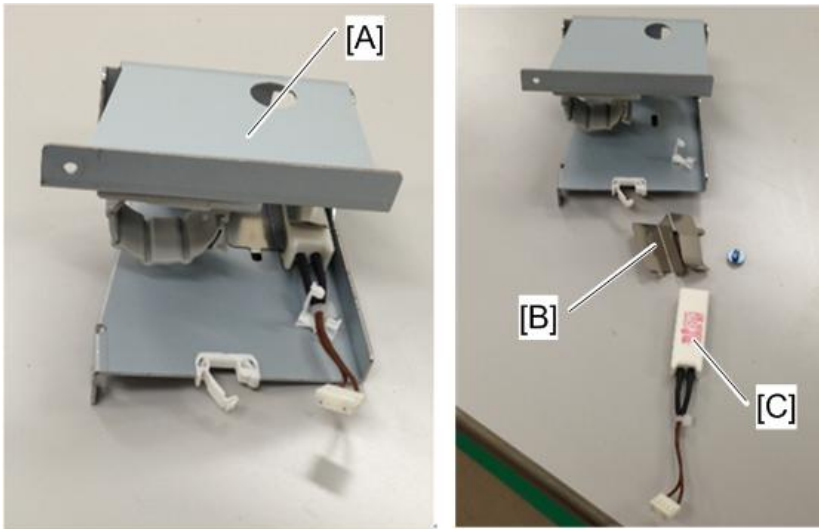
d770z0057

8. Remove the fan motor [A] from the bracket [B] (⚙️ x4, 🛠️ x1).



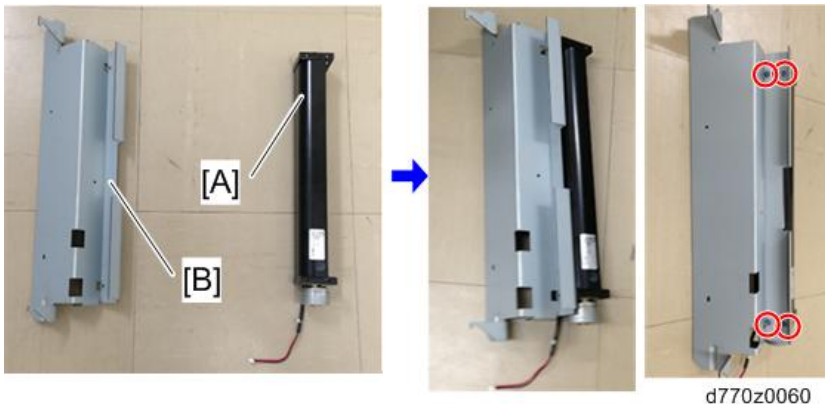
d770z0058

9. Remove the spring plate [B] (⚙️ x1) and the resistor harness [C] from the bracket [A].



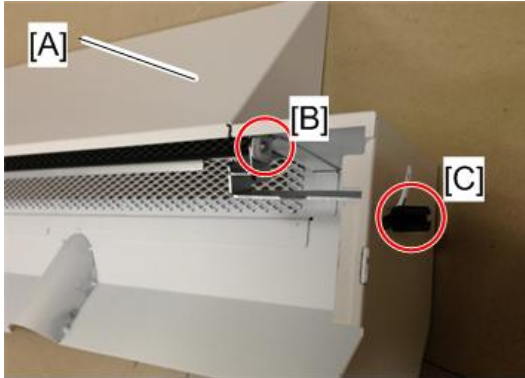
d770z0059

10. Assemble the fan motor [A] and bracket [B] (for Finisher SR4110) (accessory #10) (⌀ x4).



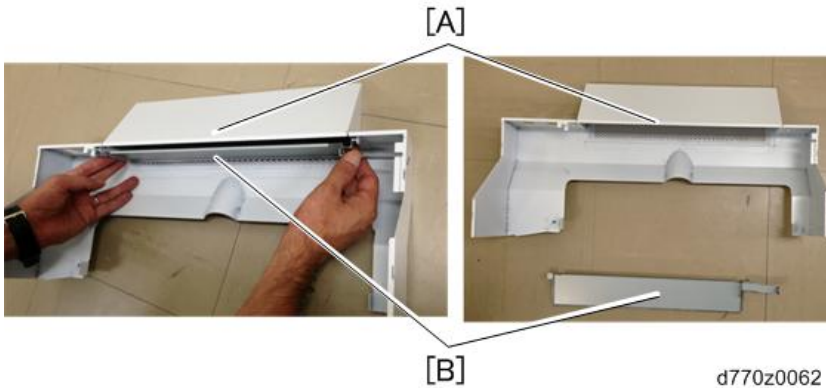
d770z0060

11. Remove the knob screw [C] and snap ring [B] from the upper cover [A] removed from the cooling fan unit in step 1.



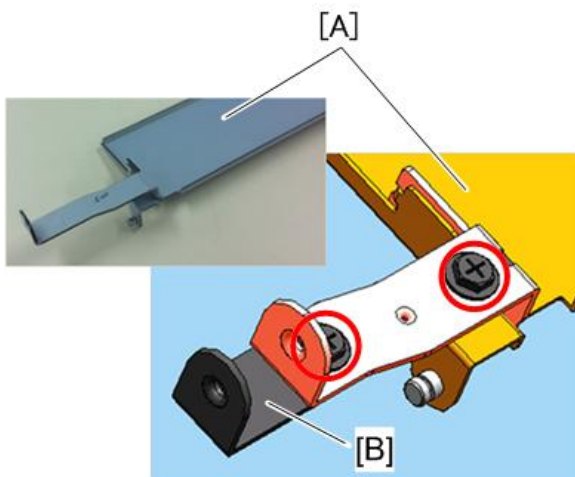
d770z0061

12. Remove the air shield [B] from the upper cover [A].



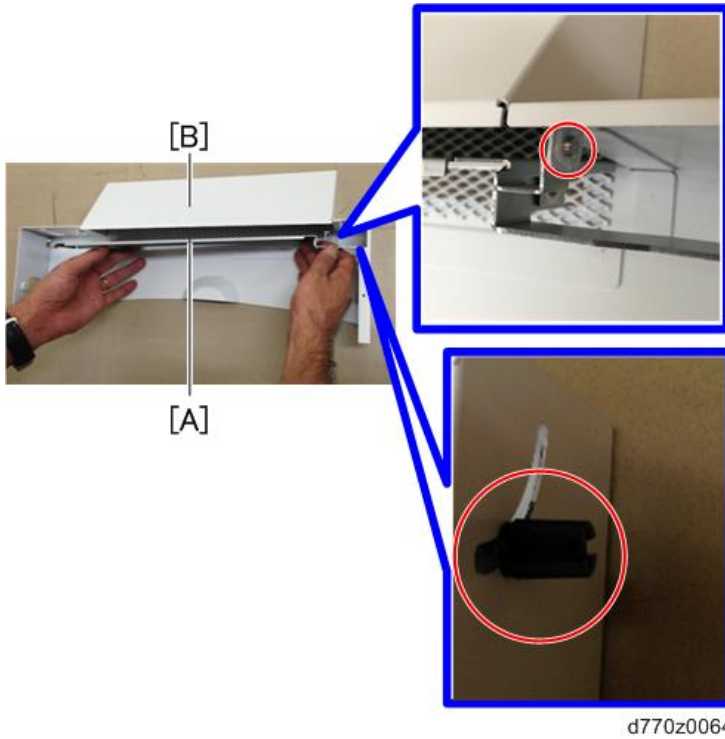
d770z0062

13. Remove the bracket [B] from the air shield [A] (⚙️ x2).

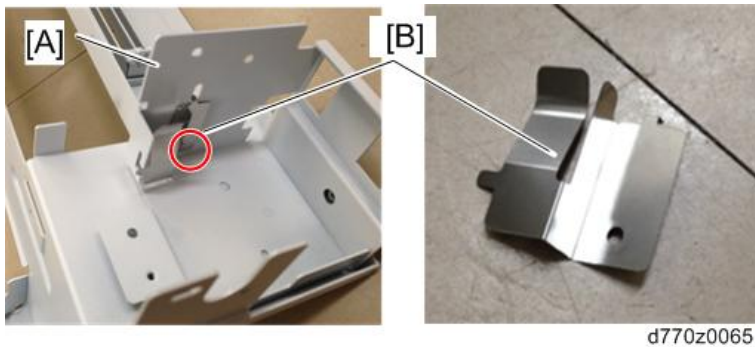


d770z0063

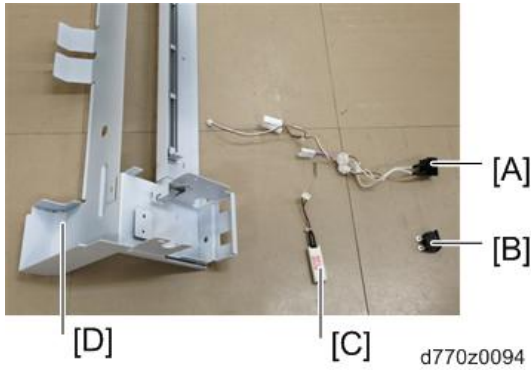
14. Assemble the air shield [A] and Upper Cover (for Finisher SR41 10) [B] (accessory #12) with the snap ring and knob screw removed in step 11.



15. Attach the spring plate [B] removed in step 9 to the Lower Cover (for Finisher SR4110) (accessory #11) [A] (⚙️ x1).



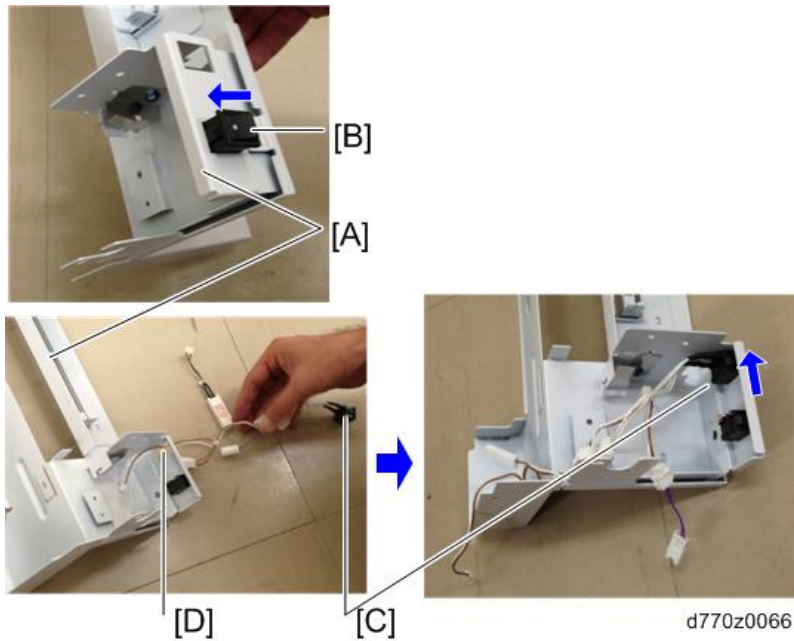
16. Prepare the following parts:
- Rocker switches [A] and [B]
 - Harness removed in step 9 [C]
 - Lower cover of Finisher SR4110 [D]



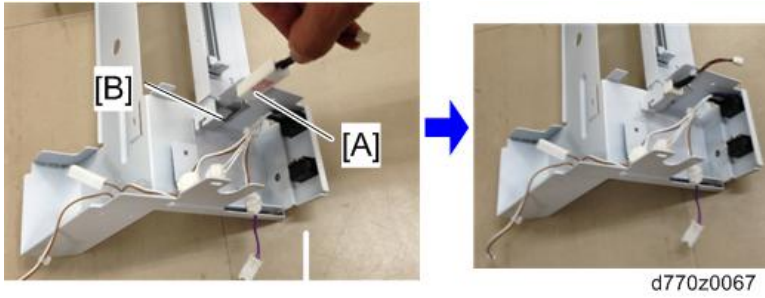
17. Route the harnesses through the openings [D] and attach the rocker switches [B] and [C] to the lower cover of Finisher SR4110 [A].

★ Important

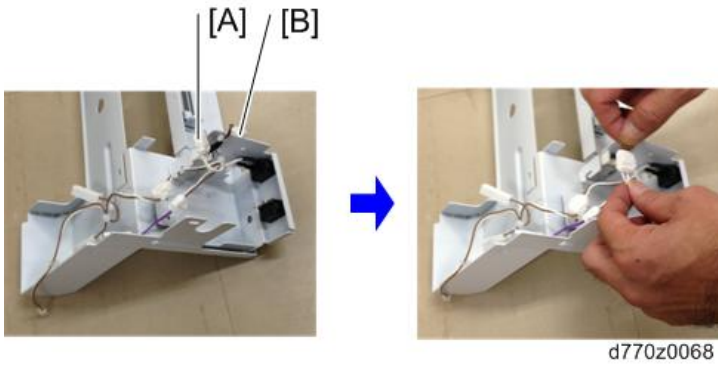
- Attach the rocker switch [B] so that the white dot marking positions to the side indicated with the arrow in the photo below.
- Attach the rocker switch [C] so that the side connected with the harness corresponds to the direction of the arrow shown in the photo below.



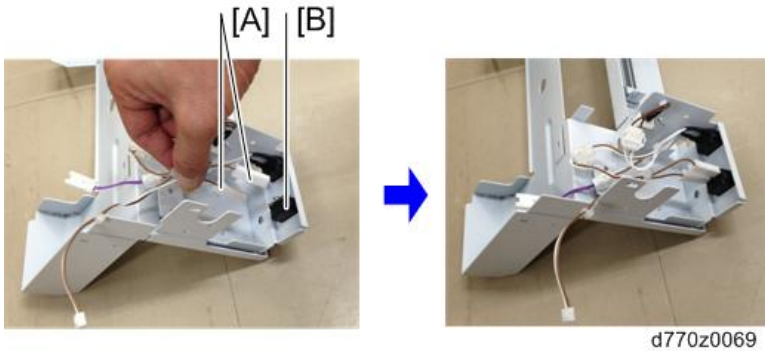
18. Insert the resistor harness [A] into the spring plate [B].



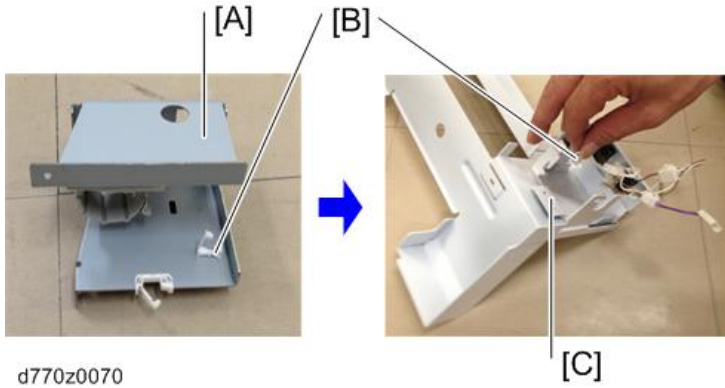
19. Connect the connectors [A] and [B].



20. Connect the 2 connectors [A] to the rocker switch [B].

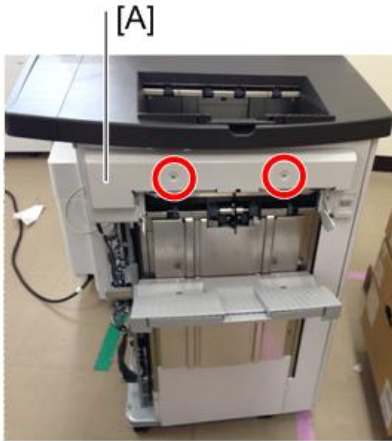


21. Remove the clamp [B] from the bracket [A] removed in step 7. Then attach the clamp [B] to the hole [C] on the lower cover of Finisher SR4110.



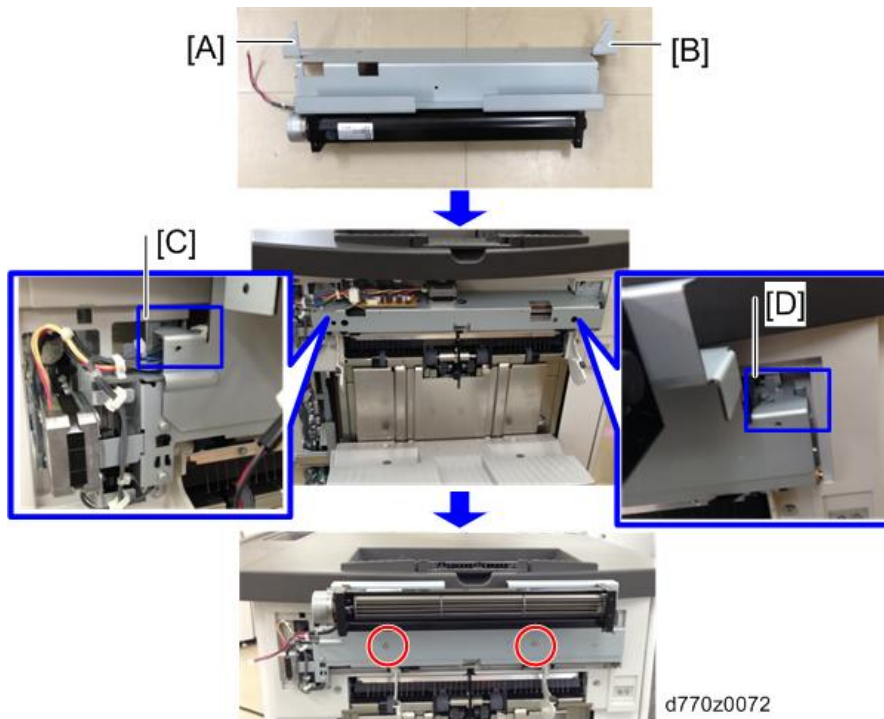
d770z0070

22. Remove the jogger unit cover [A] from Finisher SR41 10 (⚙️ x2).



d770z0071

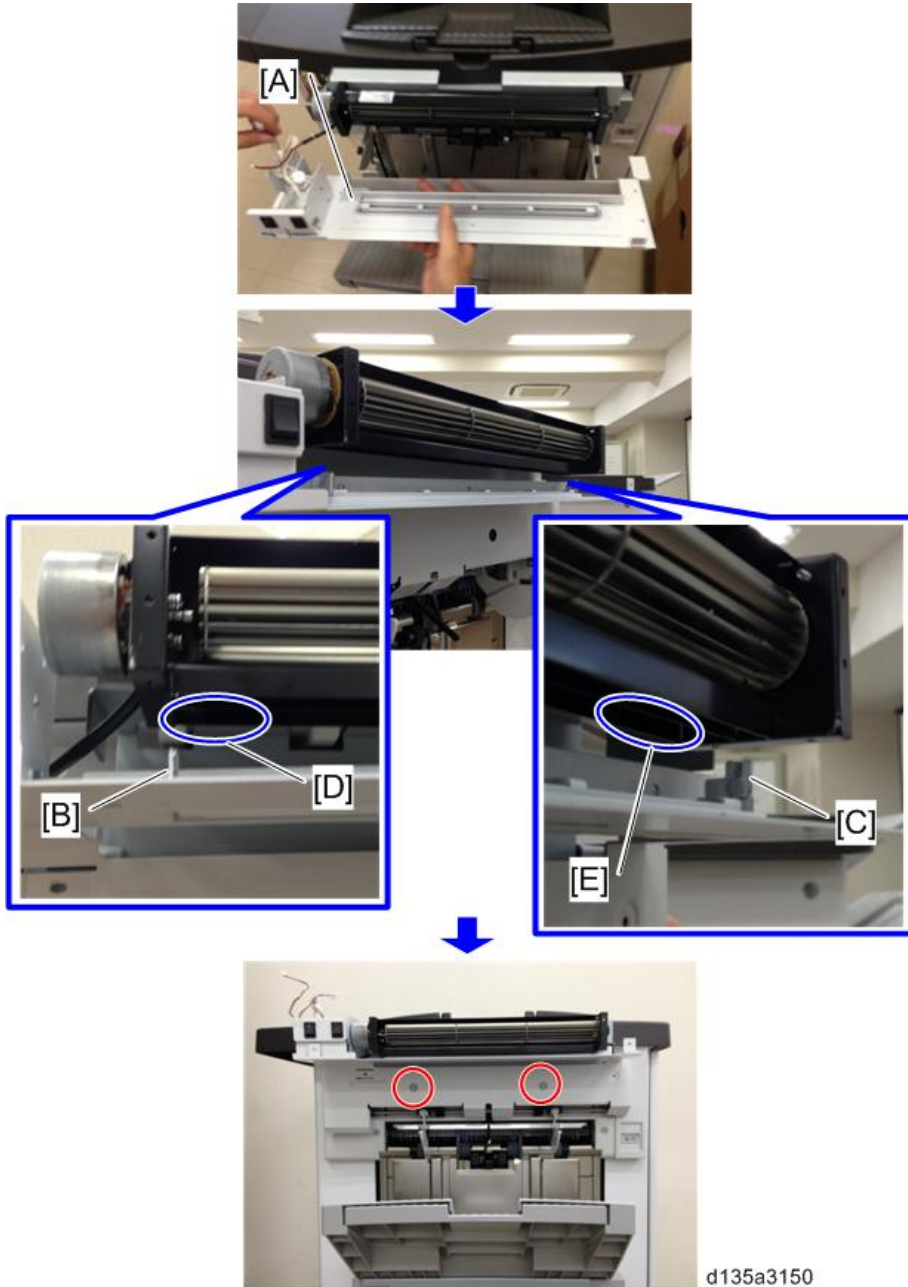
23. Mount the fan motor unit on Finisher SR41 10 by aligning the hooks [A] and [B] with the cutouts [C] and [D] (⚙️ x2).



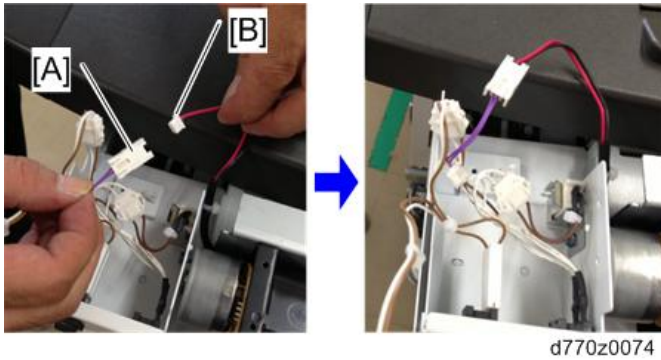
24. Attach the lower cover [A] assembled in step 21 by inserting the tabs [B] and [C] to the grooves [D] and [E] located under the cooling fan unit (x2).

Note

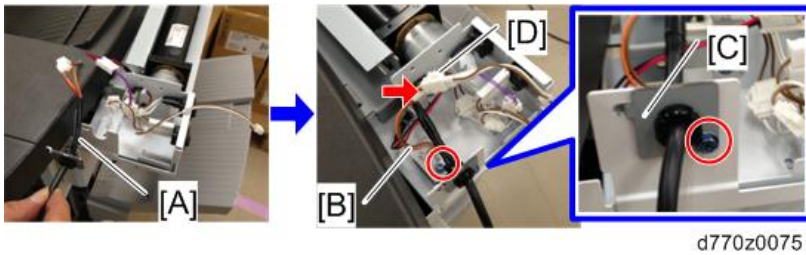
- Grooves [D] and [E] refer to the wider groove (toward the upstream of the unit).



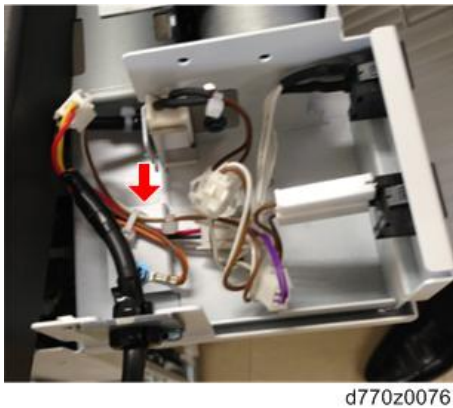
25. Connect the connectors [A] and [B].



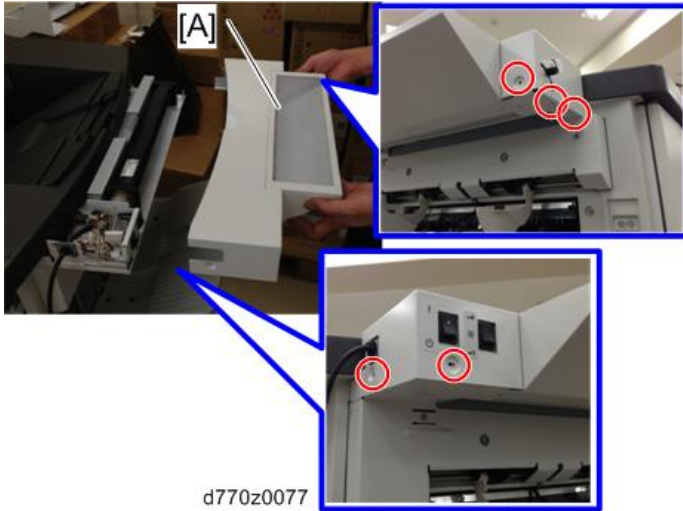
26. Fix the harness [A] from the interface unit mounted on the copier in page 203 "Common Installation Procedure for Finisher SR4090 / Booklet Finisher SR4100 and Finisher SR4110" (⚙️ x 1 for ground wire [B], ⚙️ x 1 for bracket [C], ⚙️ x 1 [D]).



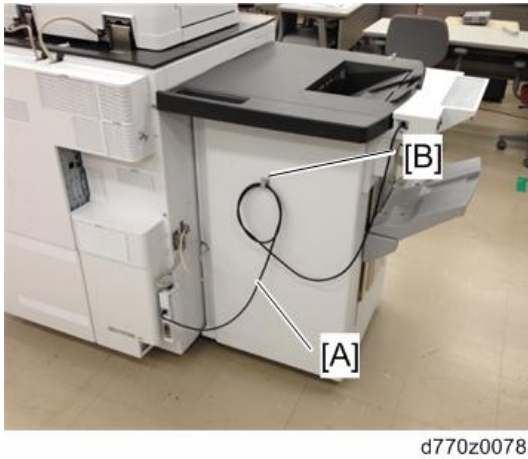
27. Clamp the harness (⚙️ x 1).



28. Mount the upper cover [A] assembled in step 14 on the cooling fan unit (⚙️ x5).



29. Bind the harness of the interface unit [A] and clamp it with Locking Wire Saddle CKN-13 [B] (accessory #4).



Note

- Depending on the number of options installed between the copier and Finisher SR4110, 3 pcs of Locking Wire Saddle CKN-13 might be needed to clamp the harness.

Information for Cooling Fan Unit Type M2

Cooling Fan Unit Type M2 activates under the following condition.

Main Power Switch [A] of Cooling Fan Unit Type M2	Mainframe	
	Printing/Copying	Ready status
ON	Active	Inactive
OFF	Inactive	Inactive

★ Important

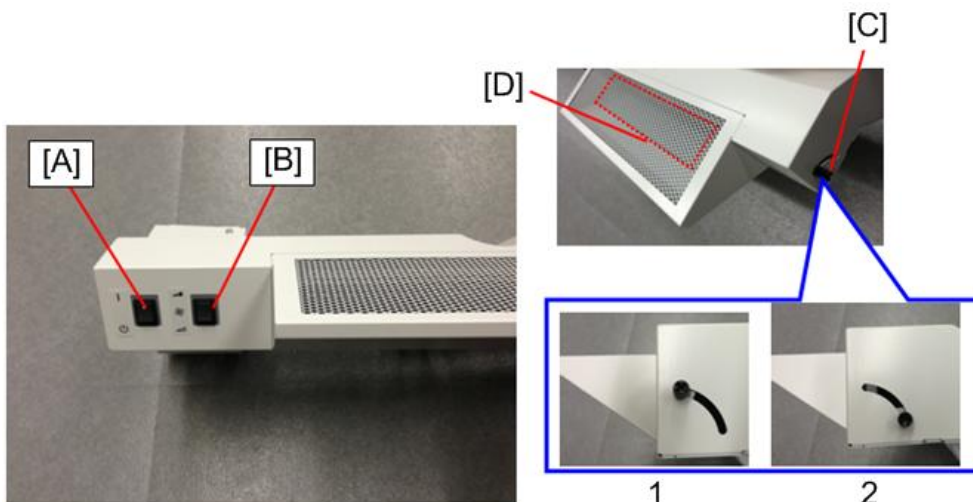
- Always keep the main power switch of the Cooling Fan Unit Type M2 ON, because the power is supplied from mainframe.
- Cooling Fan Unit Type M2 does not activate even with the mainframe power switched ON, if the printer is in ready status. Cooling Fan is activated only while print/copy operations.

Instruction for Customer

How to adjust the fan power

Cooling Fan Unit Type M2 is equipped with an fan power adjustment switch [B]. Fan power can be set to either maximum or minimum. If poor stacking is confirmed as a result of excess air volume, set this switch to minimum.

If the air volume needs to be fine adjusted, rotate the knob screw [C], which will change the position of the air shield [D] inside the unit. Air shield can be fixed at the desired position by tightening the knob screw. (Air shield [D] is located inside the meshed cover.)



d135a3151

1: Max air volume

2: Min air volume

Copy Tray Type M2 (D744)

Component Check

Check the accessories and their quantities against this list.

No.	Description	Q'ty
1.	COPY TRAY:EXIT:ASS'Y	1
2.	BRACKET:COOLING UNIT:ASS'Y	1
3.	COOLING UNIT:ASS'Y	1
4.	CLAMP:LWC-3A	1
5.	TAPPING SCREW:4X8	2
6.	TAPPING SCREW:ROUND POINT:3X6	2
7.	SCREW:M4X20	4
8.	LEVER	1
9.	BRACKET:SENSOR:PAPER VOLUME SENSOR	1
10.	SPRING PLATE:SENSOR:EXIT	1
11.	PHOTOINTERRUPTOR:GP1A173LCS2F	1
12.	CLAMPS:WES-0507	1
13.	SHEET:COPY TRAY:EXIT	1
14.	DECAL:CAUTION:EXIT	1
15.	TAPPING SCREW - M3X6	1
16.	TAPPING SCREW:3X8	2
17.	CONNECTOR:2-292246-2 (for use with D135/D136 only)	1
18.	CLAMP:LWSM-0511A	1
19.	PCB:OKB	1
20.	HARNESS:EXIT:TRAY:COOLING UNIT:OKB	1

No.	Description	Q'ty
21.	TAPPING SCREW:ROUND POINT:3X6	1

2

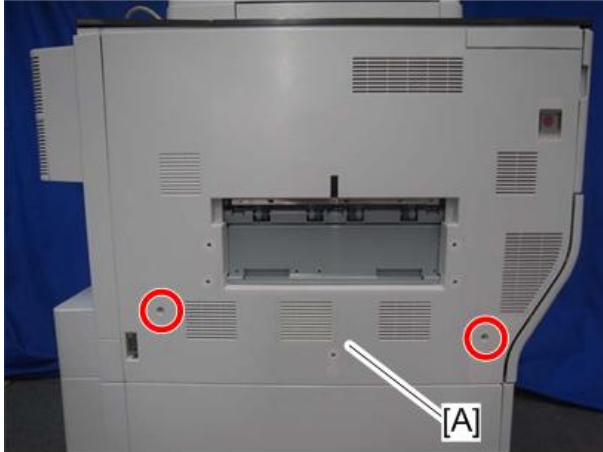


Installation Procedure

⚠ WARNING

- Turn the machine off and disconnect the machine power cord before you do this procedure.

1. Remove the rear middle cover. (🔩 x 4)
2. Remove the left middle cover [A]. (🔩 x 2)



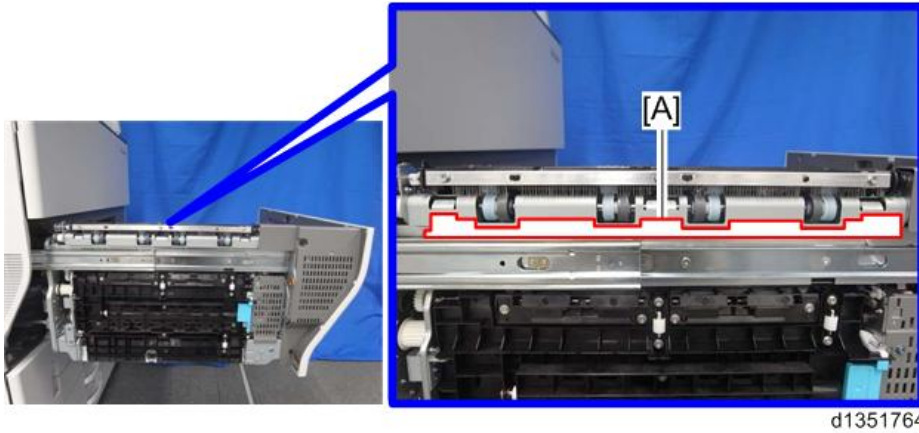
d1351783

3. Open the drawer unit [A].



d1352123

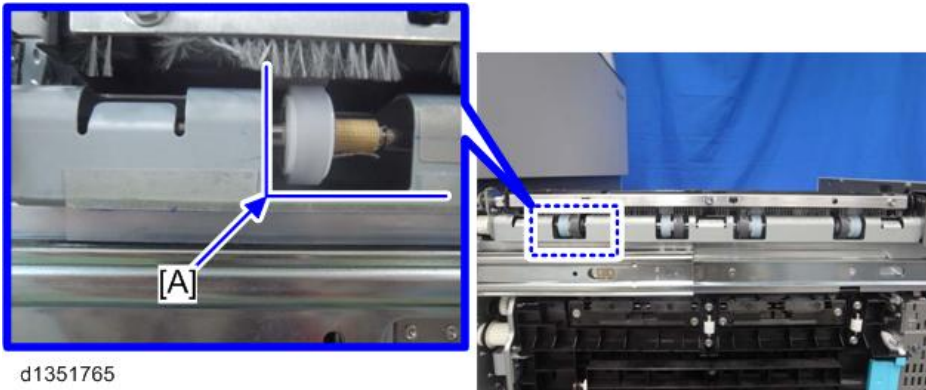
4. Attach the sheet [A] to the left side of the drawer unit.



d1351764

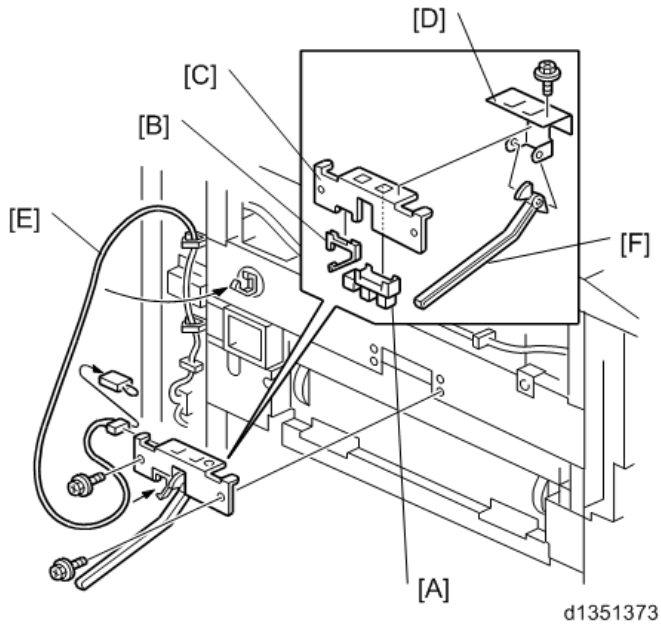
Note

- There are four cutouts in the sheet.
- Align the left-most cutout with the corner [A] of the paper exit.



d1351765

5. Attach the paper height sensor [A] and harness clamp [B] to the sensor bracket [C].
6. Attach the actuator [F] to the actuator arm bracket [D].
7. Attach the actuator bracket [D] to the sensor bracket [C]. (🔩 x 1; M3 x 6)
8. Connect the sensor harness [E] to the sensor bracket [A]. (🔌 x 1, 📡 x 1)
9. Attach the sensor bracket [C] to the main machine. (🔩 x 2; M4 x 8)



10. D135/D136 only: Remove the interface cable cover. (🔧 x 1)



11. D135/D136 only: Attach the "CONNECTOR: 2-292246-2". (🔧 x 2; M3 x 8)



12. Attach the PCB:OKB (🔧 x 1)



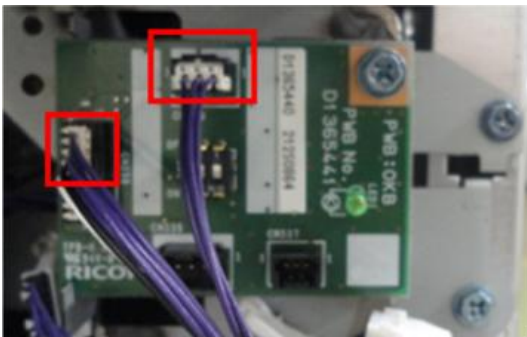
d1354051

13. Attach the CLAMP:LWSM-051 1A.



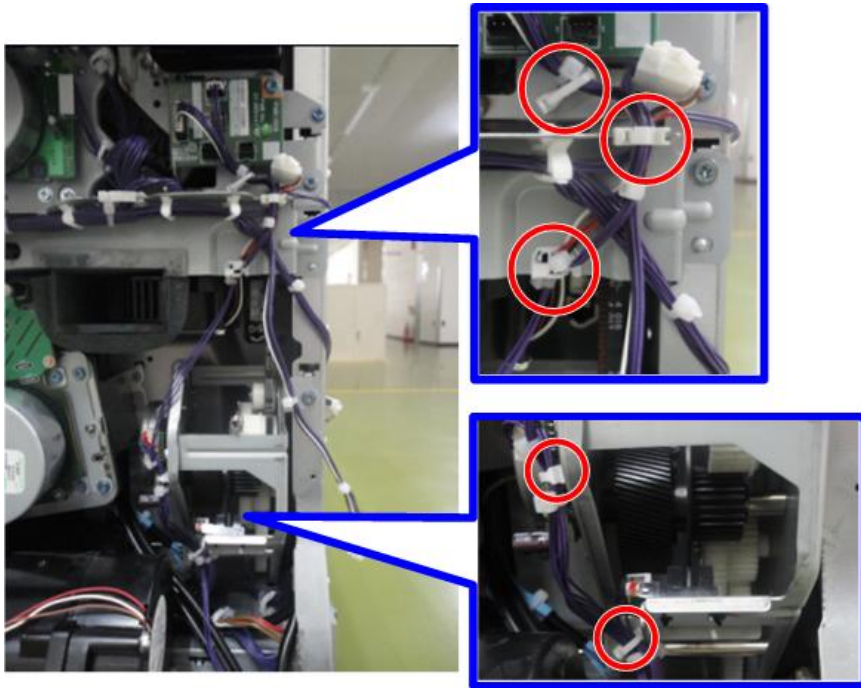
d1354052

14. Connect the branched (divided) end of the HARNESS:EXIT:TRAY:COOLING UNIT:OKB to the PCB:OKB.



d1354053

15. Bind the harness as shown in the photo. (🖱️ x 5)



d135a3124

16. D135/D136 only: Connect the harness tied with a bind to the rear side of "CONNECTOR: 2-292246-2".



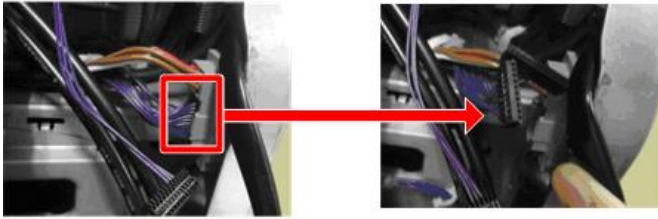
d1354054

★ Important

- If you leave this harness unconnected or connect it to the front side, SC534-02 (Duplex Exhaust Fan/Rear Lock) will occur.

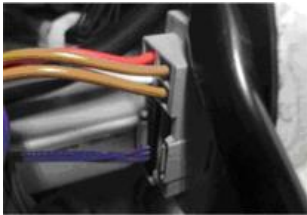
↓ Note

- D137/D138: Connect the harness tied with a bind to the peripheral interface port as shown in the following steps.
 - Disconnect the harnesses from the peripheral interface port.



d1359982

- Connect the harness tied with a bind to the rear side of the peripheral interface port.



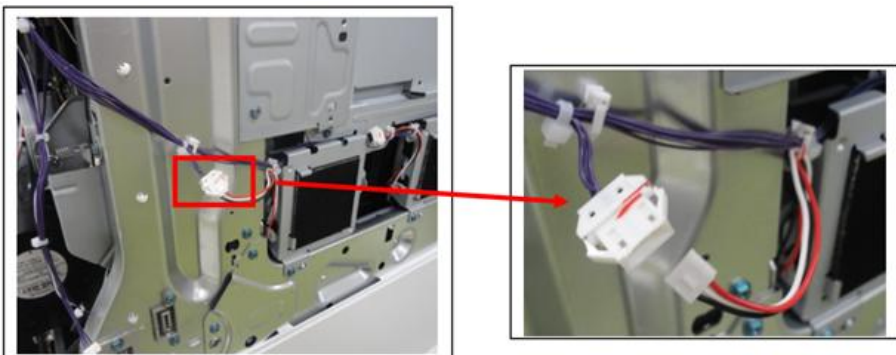
d1359983

- Reconnect the front side of the harness disconnected in the first step to the peripheral interface port.



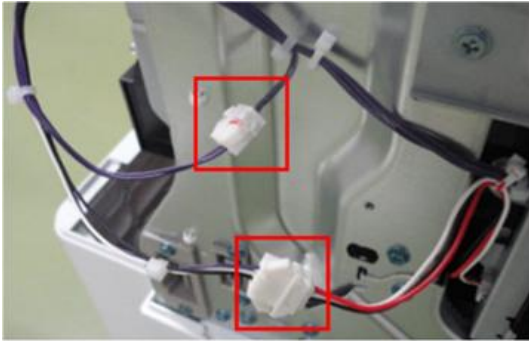
d1359984

17. Disconnect the harness [A].



d1354055

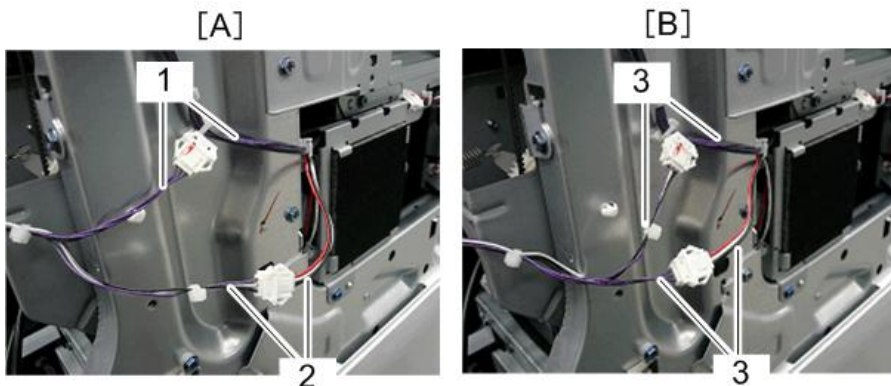
18. Connect the "HARNESS:EXIT:TRAY:COOLING UNIT:OKB" to the harness that was disconnected in Step 17 above.



d1354059

★ Important

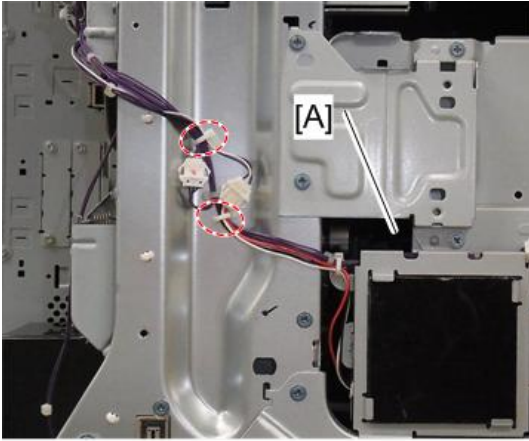
- In this step, make sure to connect the purple harnesses to each other, and the black/white harnesses to each other. DO NOT connect harnesses of a different color. If the colors are different, SC534-02 (Duplex Exhaust Fan/Rear Lock) will occur.



d135a3135

- [A]: Correct
- [B]: Incorrect
- 1 (OK): Purple harnesses connected to each other
- 2 (OK): Black/white harnesses connected to each other
- 3 (NG): Black/white harness connected to purple harness

19. Bind the harnesses that you connected in Step 18, so that they run between the two clamps (🖨️ x 2).

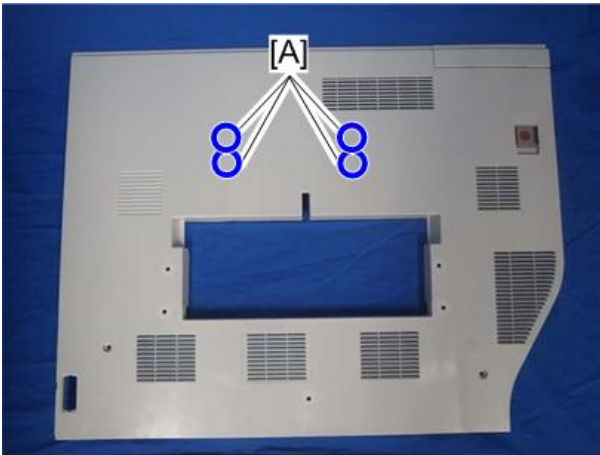


d135a0105

★ Important

- If you do not bind the harnesses, they may get caught on the left middle cover and trigger SC547-02 (Zero Cross Error).

20. Make four holes [A] in the left cover with a screwdriver.



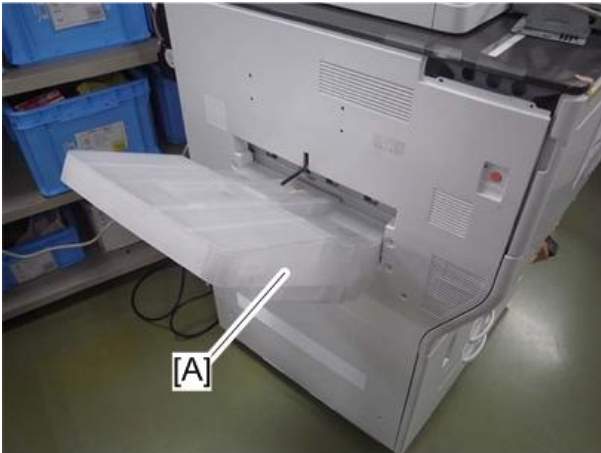
d1351766

21. Reattach the left upper cover. (🔩 x2)
22. Reattach the rear middle cover. (🔩 x 4)
23. D135/D136 only: Remove the connector cover from the rear middle cover.



d1354056

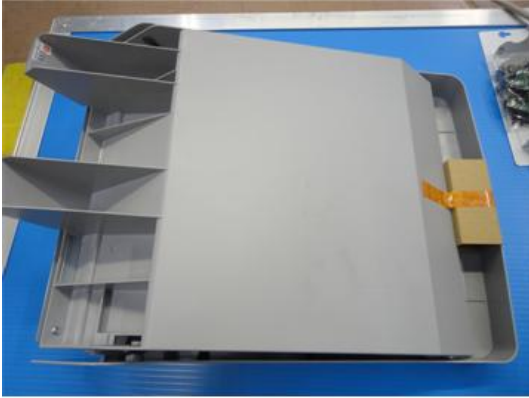
24. Attach the copy tray [A].



d1351767

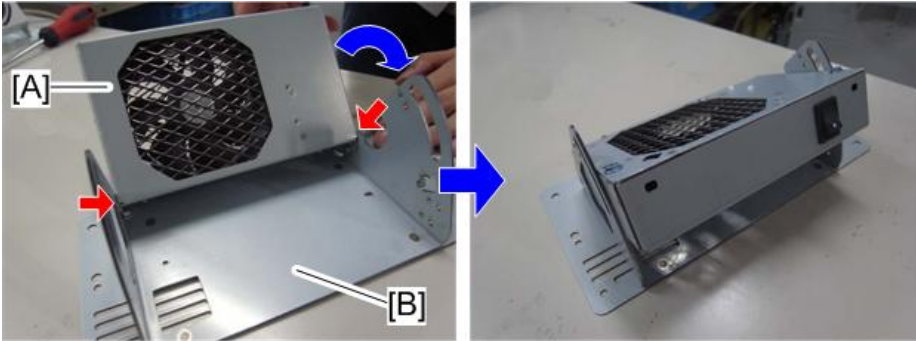
Note

- Remove the packing material from the copy tray before attaching the tray.



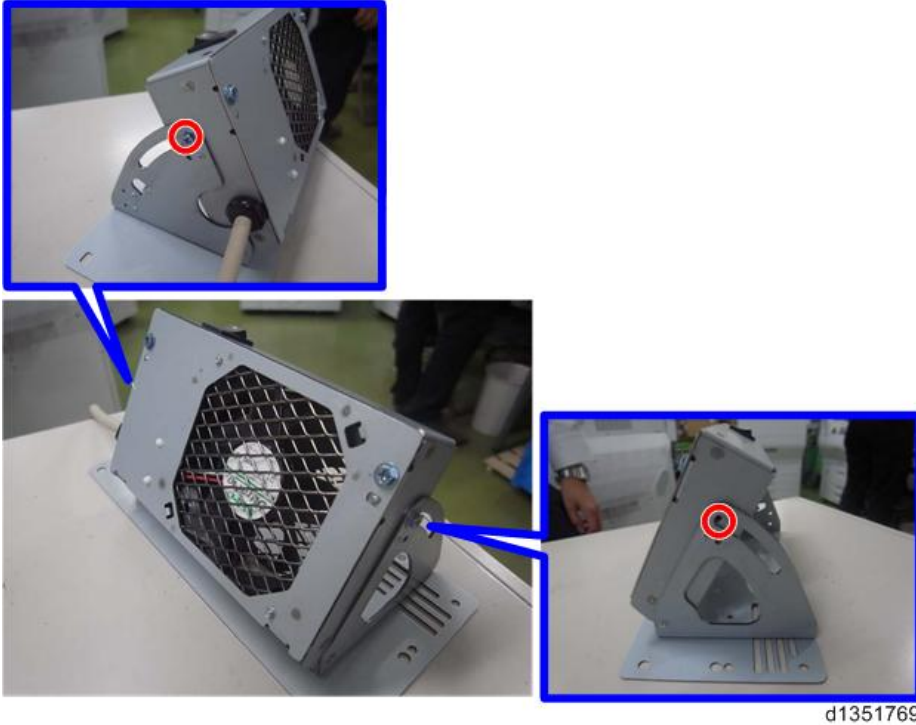
d1359985

25. Install the cooling unit [A] on the cooling unit bracket [B]. (hook x2)

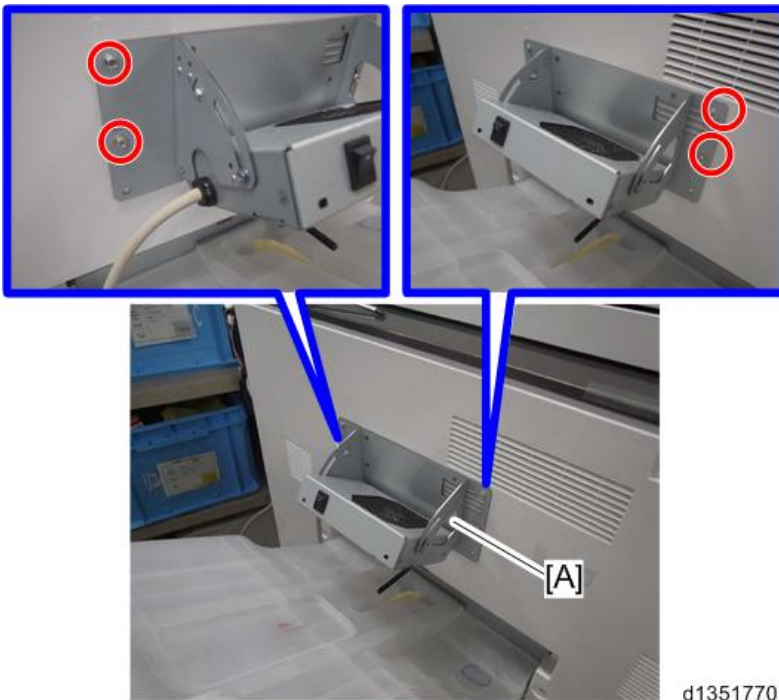


d1351768

26. Fasten the cooling unit to the cooling unit bracket. (⚙️ x2; M3 x 6)



27. Install the cooling unit bracket [A] on the left side of the main machine. (🔩 x4; M4 x 20)

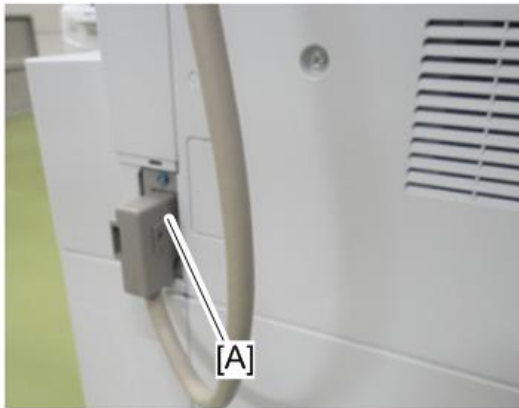


28. Attach the cable clamp [A] provided with the copy tray to the main machine. Then route the harness as shown below. (🔧 x 1)



d1351771

29. D135/D136 only: Connect the interface cable of the cooling unit to the interface [A] whose cover you removed in Step 23.



d1351772

★ Important

- If you leave this connector unconnected, SC534-02 (Duplex Exhaust Fan/Rear Lock) occurs.

30. Turn the machine main power switch ON.
31. Set SP1-907-001 (Exit Tray Full Detection) to "1: ON".

↓ Note

- The default setting of this SP is "0: OFF". It must be set to "1: ON" in order for tray full detection to work.

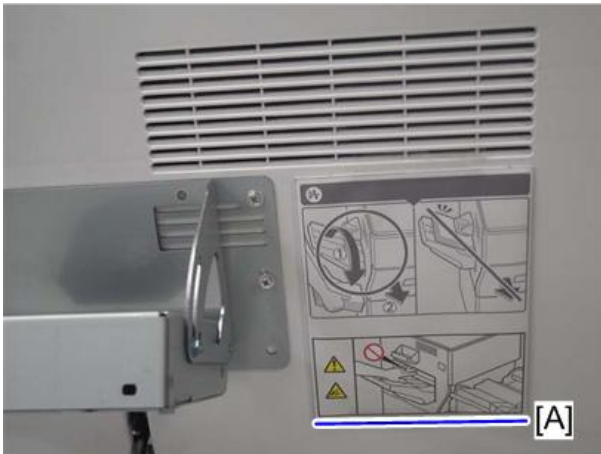
32. Attach the decal [A] to the left side of the main machine.



d1351773

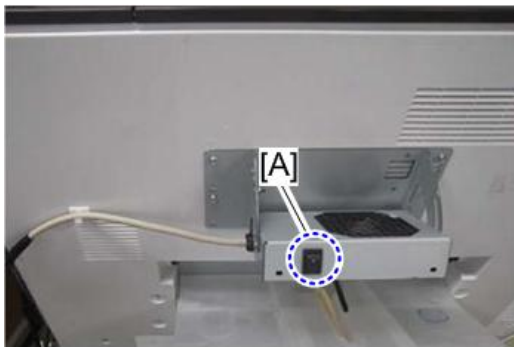
Note

- Align the lower side of the decal with the marker [A] on the main machine when you attach the decal to the main machine.



d1351774

33. Turn the power switch [A] of the cooling fan ON.



d135a0013

 **Important**

- Always keep the power switch of the cooling fan ON. This is because the fan is installed prevent paper from sticking together and jamming during duplex printing due to undried toner. (The fan stops when the print/copy job is complete).
- If the sound of the fan is unacceptable to the customer, or the air from the fan pushes thin paper off the exit tray, advise the customer to power off the fan as necessary.
- If jams still occur while the fan is ON, tilt the fan 90 degrees, as described in page 1459 "Troubleshooting for Blocking on the Paper Output Tray".

Decurl Unit DU5020 (D727) (D137/D138 Only)

CAUTION

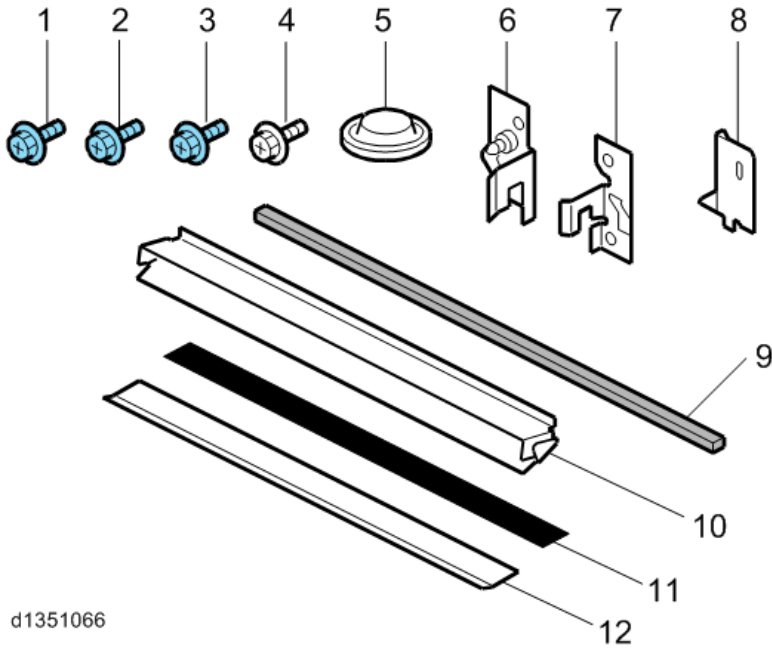
- The decurl unit is top heavy and has an extremely narrow base. It can fall over easily. Work carefully to avoid knocking it over.
- Do not set this unit upright until you are ready to install it and connect it to the side of the main machine.
- Never leave this unit standing upright and unattended in the work area during installation.

2

Accessories

Check the quantity and condition of the accessories in the box against the following illustration and list.

No.	Description	Q'ty
1.	Screws M3x6	3
2.	Screws M4x8	1
3.	Screws M4x16	4
4.	Screws M4x8	4
5.	Leveling Shoes	3
6.	Joint Bracket – L	1
7.	Joint Bracket – R	1
8.	Small Bracket	1
9.	Sponge Strip	1
10.	Paper Guide	1
11.	Mylar – Black	1
12.	Mylar – Transparent	1



d1351066

Installation Procedure

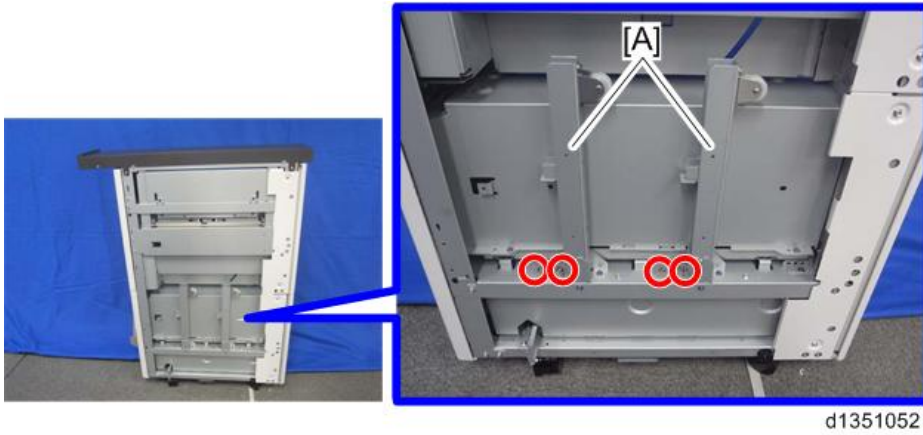
CAUTION

- Make sure that the main machine is switched off and that its power cord is disconnected before doing the following procedure.

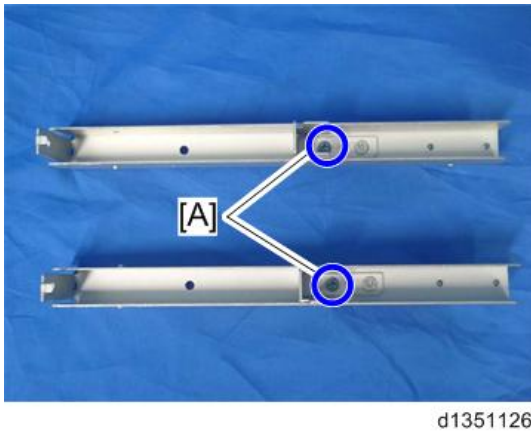
1. Remove the retainers [A]. ( x 4)

Note

- Keep the screws. They will be needed to reinstall the retainers after connecting the decurl unit with the main unit.



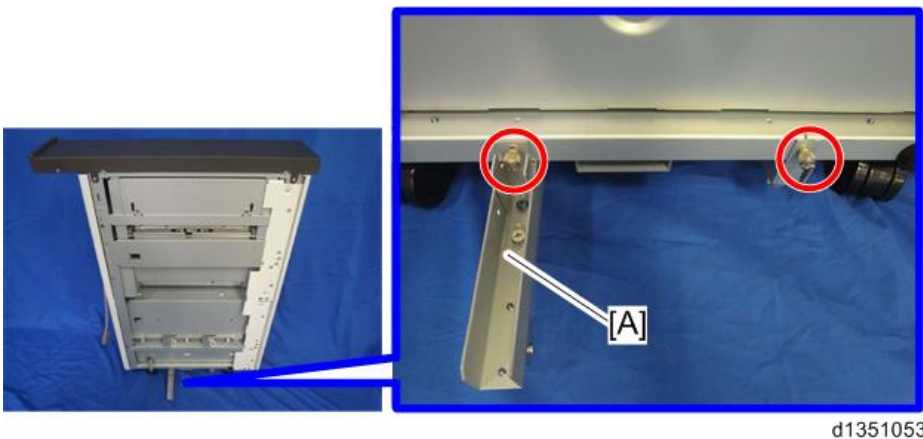
2. Loosen the screws [A] of the retainers. (⚙️ x 2)



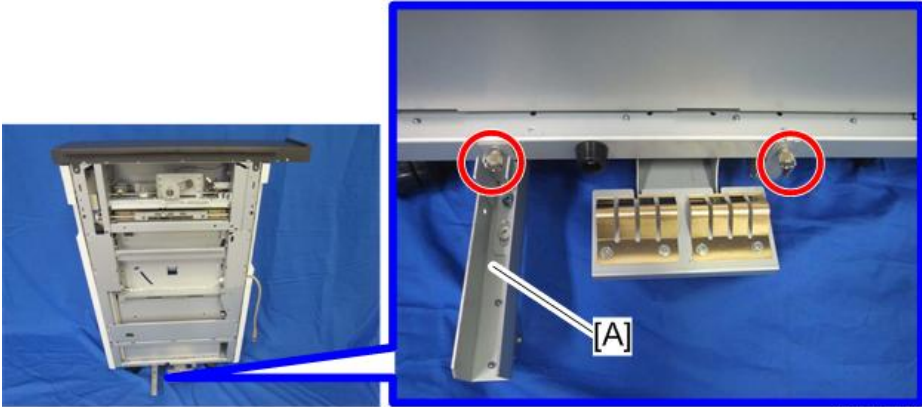
3. Install the retainers on the decurl unit. (⚙️ x 4)

Install the retainers [A] alternately on both sides of the decurl unit as shown below.

- Left side of the decurl unit



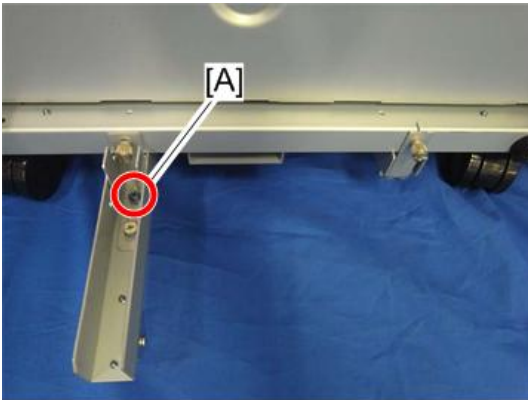
- Right side of the decurl unit



d1351054

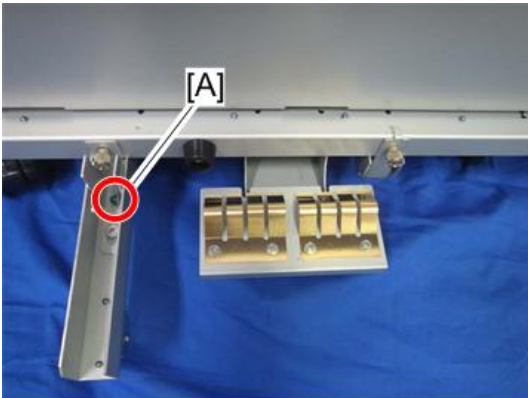
4. Fasten the screws [A] loosened in step 2. (⚙ x 2)

- Left side of the decurl unit



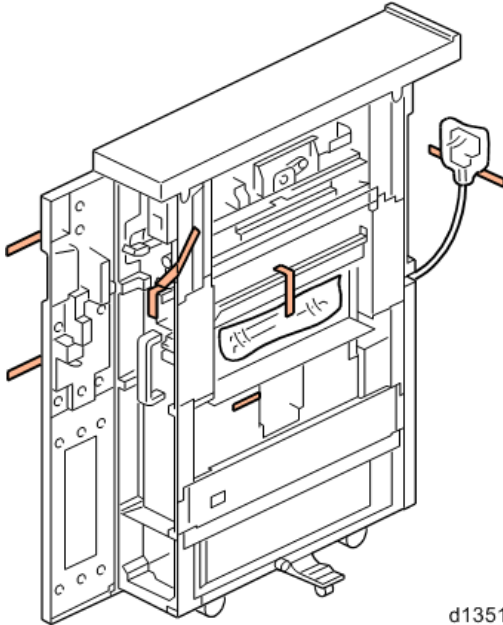
d1351055

- Right side of the decurl unit

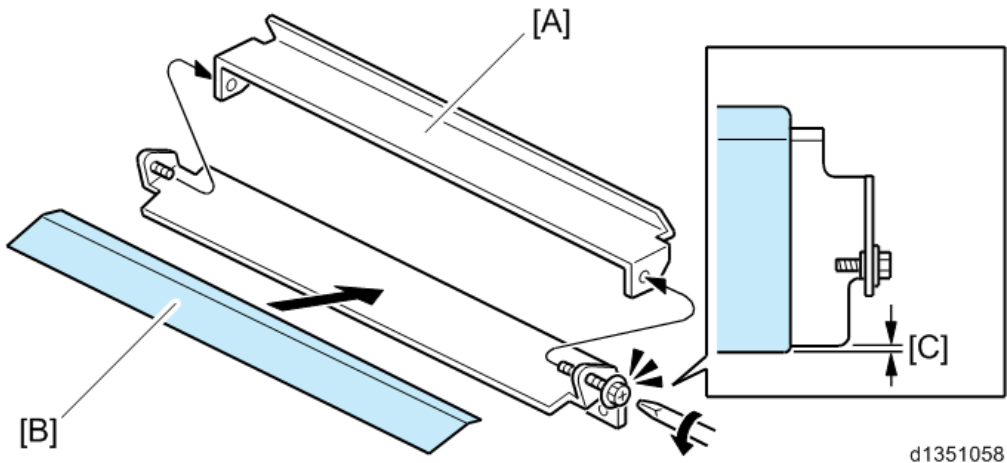


d1351056

5. Open the front door.
6. Remove tapes and retainers.



7. Disassemble the paper guide for this peripheral unit [A]. (⚙ x 2)
8. Attach the transparent mylar [B].

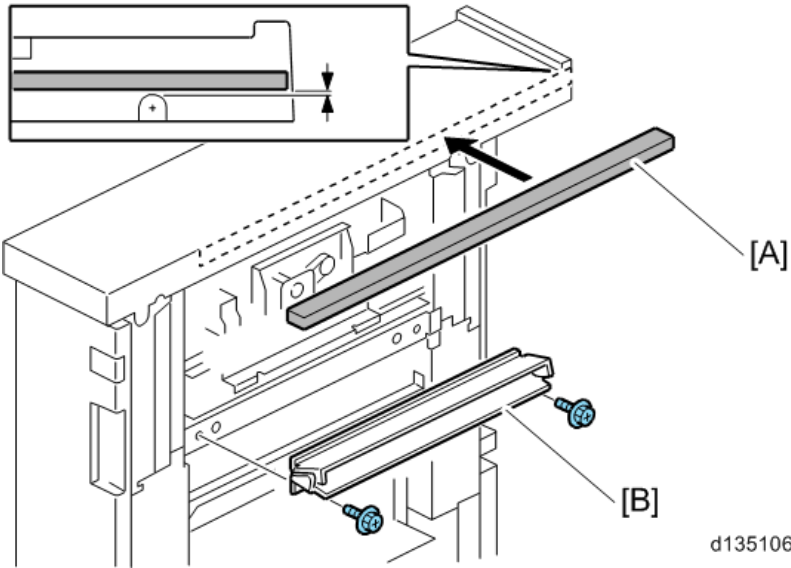


Note

- [C]: 0 to 1 mm

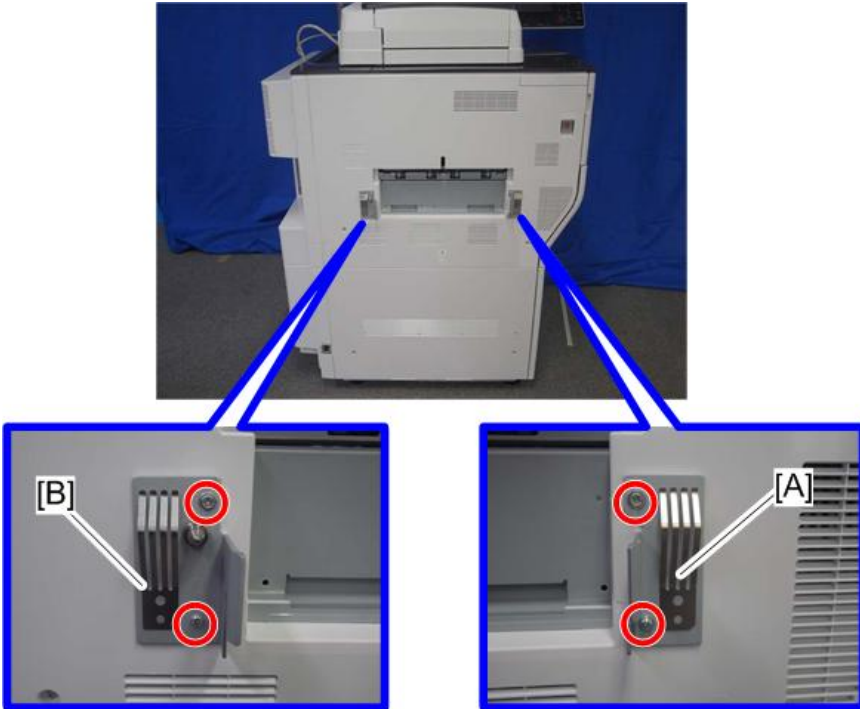
9. Assemble the paper guide. (⚙ x2)
10. Peel the tape from the sponge strip [A] and attach it to the top right edge of the unit.

11. Attach the paper guide [B]. (⚙️ x2; M3x6)



12. Attach the following to the main machine:

- [A] Right joint bracket, marked "R" (⚙️ x2; M4x16)
- [B] Left joint bracket, marked "L" (⚙️ x2; M4x16).

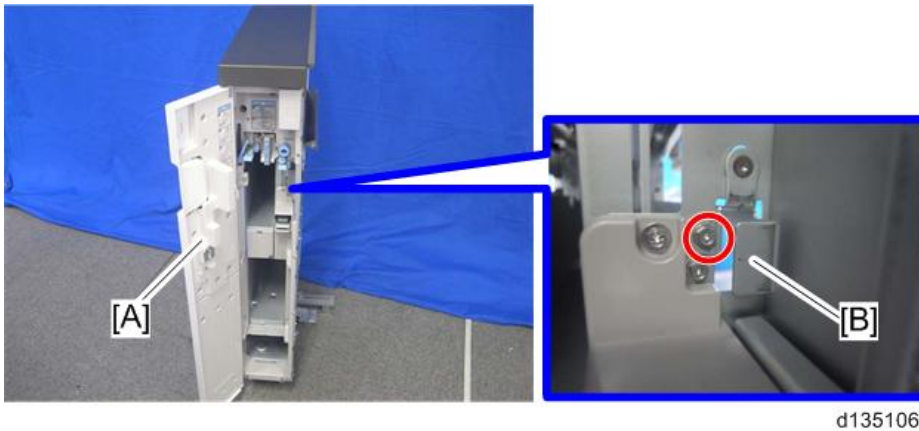


13. Remove the interface connector cover [A] from the main machine.



14. Open the front door [A].

15. Remove the screw of the lock bar [B] (⚙️ x1). Keep this screw.



16. Remove the retainers installed in step 3. (⚙️ x4)

17. Push the decurl unit [A] against the main machine so that the lock bar is below the joint brackets.



d1351062

18. Push in the lock bar [A] and fasten it with the screw removed in step 15. (⚙ x 1)



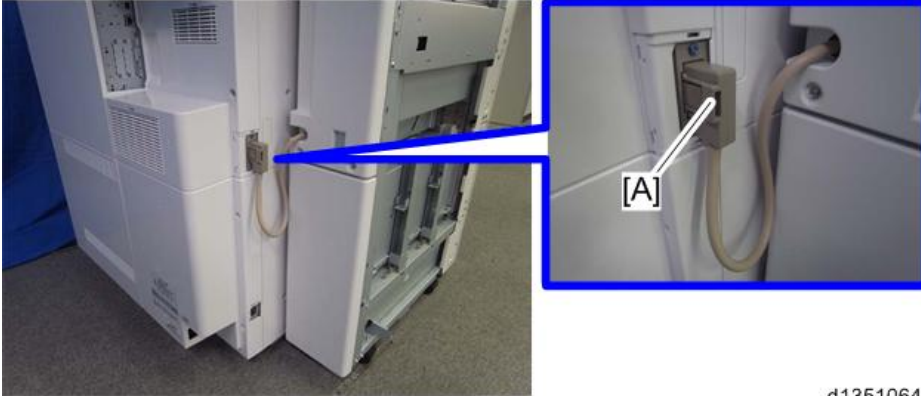
d1351063

19. Reinstall the retainers [A] removed in step 16 as shown below. (⚙ x 4)



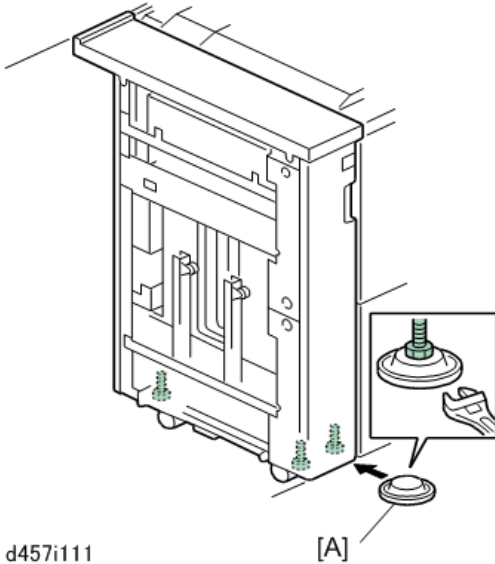
d1351065

20. Connect the I/F cable [A] of the decurl unit to the main machine.



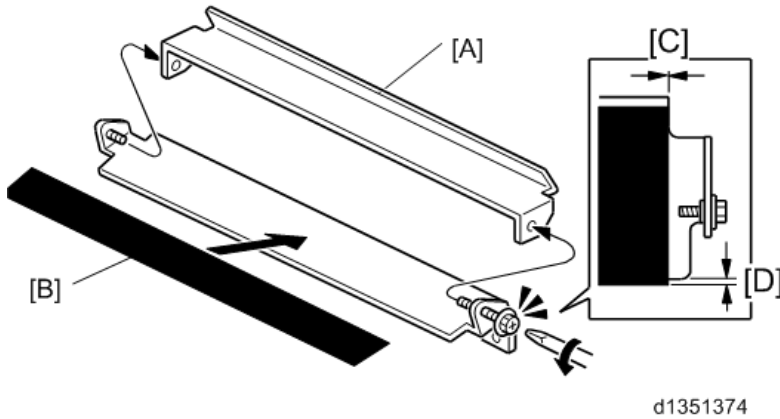
d1351064

21. Set the leveling shoes [A].
22. Adjust the height of the unit and make sure that it is level.



d457i111

23. Remove the paper guide of the downstream peripheral device.
24. Disassemble the paper guide [A]. (⚙️ x2)
25. Attach the black sheet [B].



- [C]: 0 to 1 mm
- [D]: 0 to 1 mm

★ Important

- If the downstream peripheral device is Buffer Pass Unit Type 5020 (D751), don't attach the black mylar. The mylar for the decurl unit is provided with the buffer pass unit.

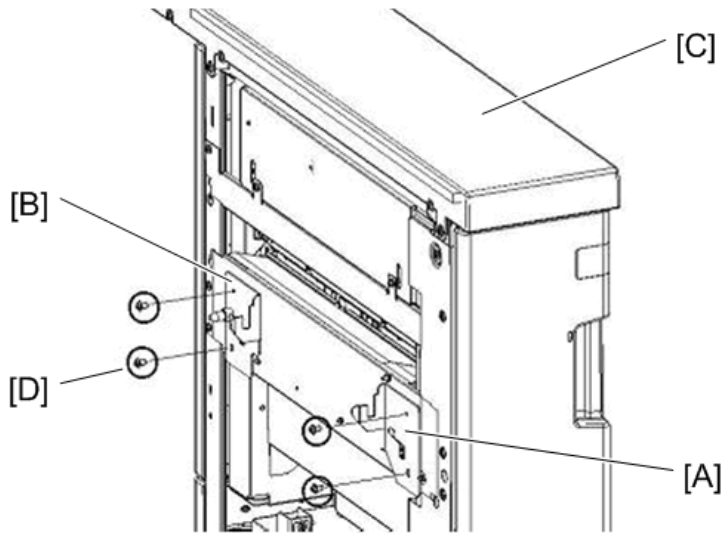
Connect the Downstream Peripheral Device

If the down stream peripheral device is Finisher SR4090 (D703) or Booklet Finisher SR4100 (D704)

1. Attach the following to the decurl unit.

[A]: Right joint bracket (🔩 x2; M4x8)

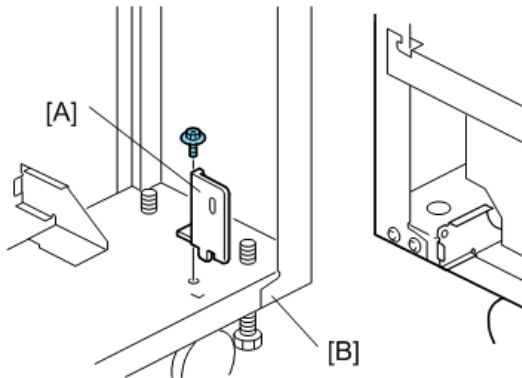
[B]: Left joint bracket (🔩 x2; M4x8).



d1354039

If the downstream peripheral device is Cover Interposer Tray CI4010 (D711) or Cover Interposer Tray CI4020 (D712)

1. Install the small bracket [A] on the cover interposer tray [B]. (⚙️ x1)

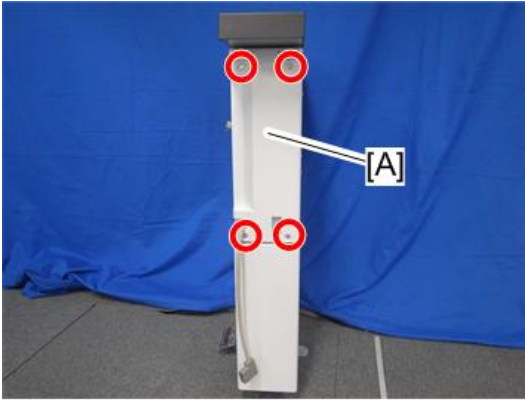


d1351375

2. Connect the downstream unit.

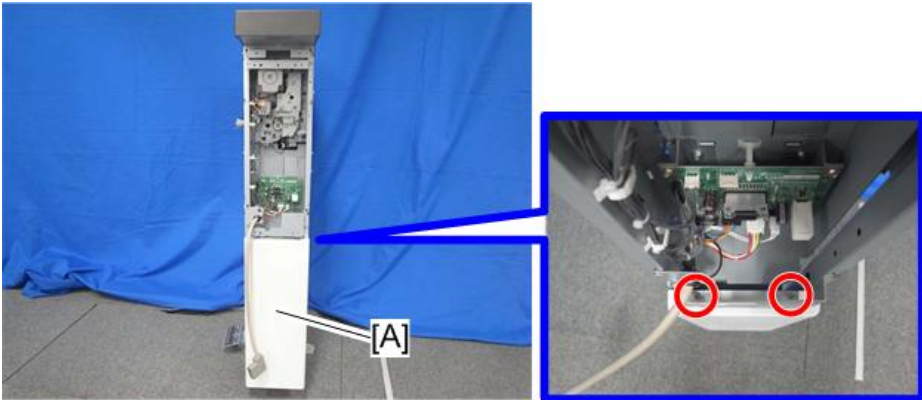
If the downstream peripheral device does not have a connecting section (such as Buffer Pass Unit Type 5020 (D751))

1. Remove the rear upper cover [A] of the decurl unit. (⚙️ x4)



d1351277

2. Remove the rear lower cover [A] of the decurl unit. (⚙️ x2)



d1351278

3. Remove the connecting bracket [A].



4. Connect the downstream unit.

★ Important

- When you remove the decurl unit, hold it in the lower half, lower than the middle.



Paper curl adjustment when Decurl Unit DU5020 connects with Finisher SR4090 or Booklet Finisher SR4100

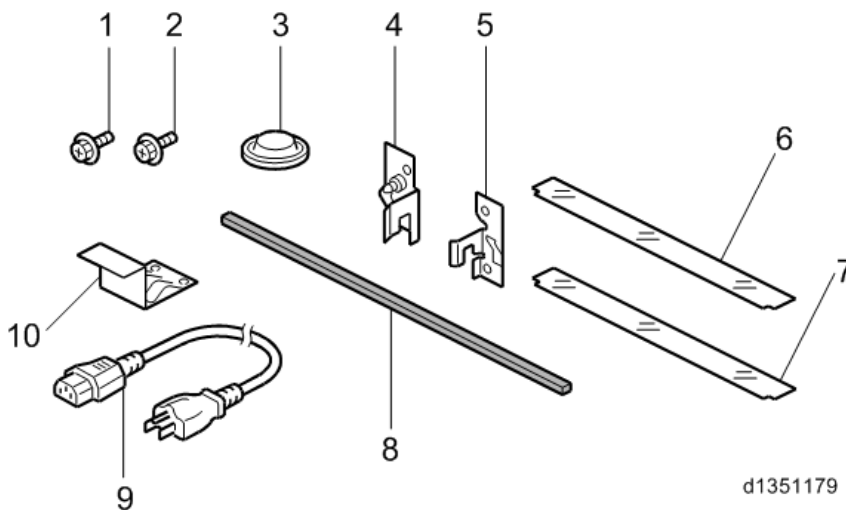
1. Print out 10 sheets of A4/LT in stapling mode, LEF.
2. Check the paper curl.
3. Adjust the paper curl in [System setting] - [Paper curl Correction level].

Buffer Pass Unit Type 5020 (D751) (D137/ D138 Only)

2

Accessory Check

No.	Description	Q'ty
1.	Screws (M4 x 8)	2
2.	Screws (M4 x 16)	4
3.	Leveling Shoes	4
4.	Docking Bracket (L)	1
5.	Docking Bracket (R)	1
6.	Wide Mylar (50.0mm width)	2
7.	Narrow Mylar (35.5mm width)	2
8.	Sponge Strip	1
9.	Power Cord	1
10.	Ground Plate	1

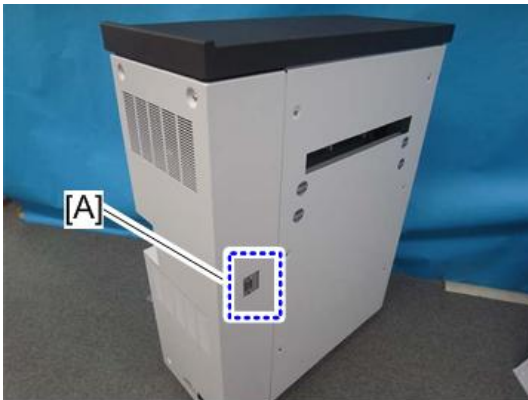


Installation

⚠ CAUTION

- The unit must be connected to a power source that is close to the unit and easily accessible.
- Make sure that the main machine is switched off and that its power cord is disconnected before doing the following procedure.
- The buffer pass unit is unstable and can fall over easily. To avoid personal injury or damage to the unit, use caution when you pull out the buffer pass unit drawer until the unit has been docked to the main machine.
- The power cord that comes with the buffer pass unit is for use with this equipment only. Do not use it with other appliances. Doing so could result in fire or electric shock.
- Rated Voltage of Output Connector [A] for Accessories: Max. DC 24 V.

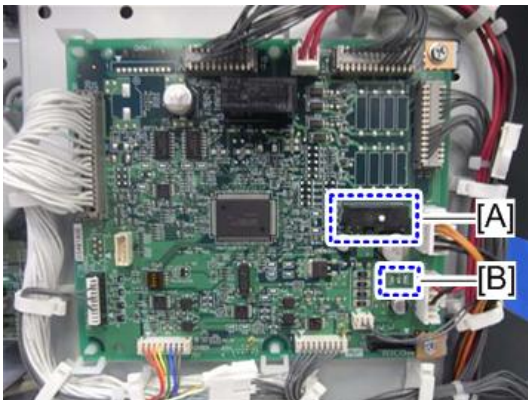
2



d1351349

Fuse Rating (DC5V, DC24V Fuse)

PCB: CTB



d1351342

	ID	Rating	Manufacturer	Type No.
[A]	CP1	DC32V/5A	IDEC CORP	NRPS10-G5A
[B]	CP2	DC6V/1.5A	TYCO ELECTRONICS CORP	miniSMDC150F

1. Remove all visible external tapes on the external surfaces.



d1351018

2. Open the front door [A] and remove all visible tapes.

⚠ CAUTION

- There are no tapes inside the unit.
- The unit is top heavy and unstable. Use caution when you pull out the buffer pass unit drawer until this unit has been connected to the main machine.



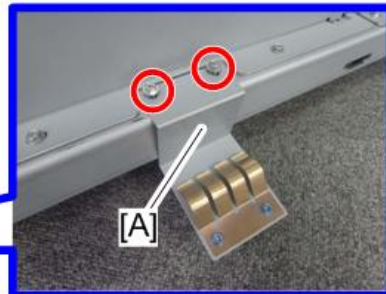
d1351019

3. Remove the right cover [A] of the buffer pass unit. (⚙ x 6)



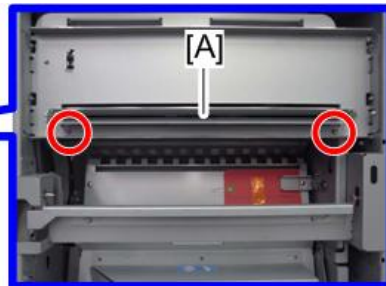
d1351020

4. Attach the ground plate [A]. (⚙ x 2)



d1351021

5. Remove the entrance guide [A]. (⚙ x 2)



d1351022

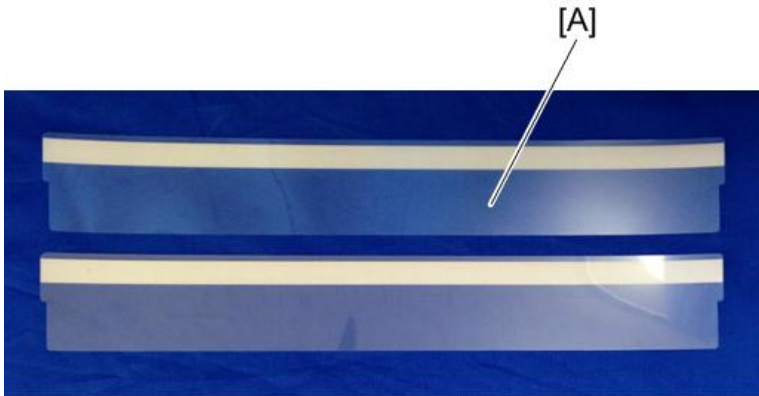
#01: When connecting the Buffer Pass Unit with the mainframe

Note

- If the Buffer Pass Unit is to be connected to the Decurl Unit DU5020 (D727), go to "#02: When connecting the Buffer Pass Unit with the Decurl Unit DU5020 (D727)".

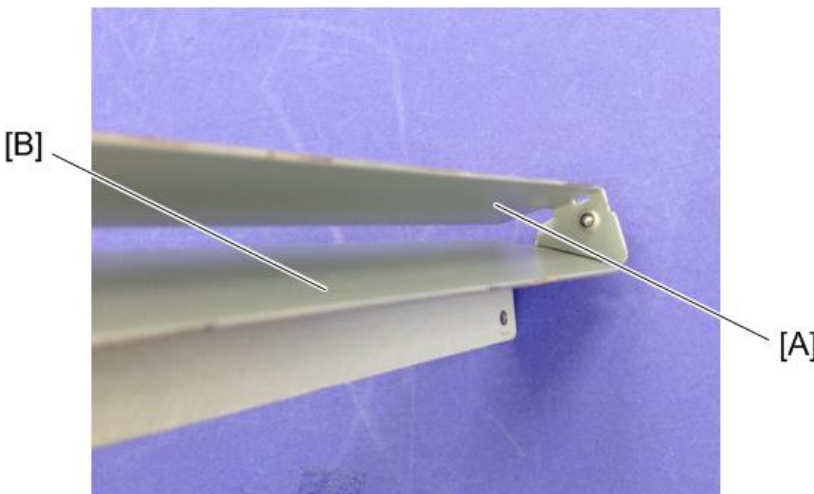
This section describes the procedure for attaching the Wide Mylar to the entrance guide that was removed in step 5.

2



d1359954

[A]: Wide Mylar (50mm, accessory item #6)



d1359955

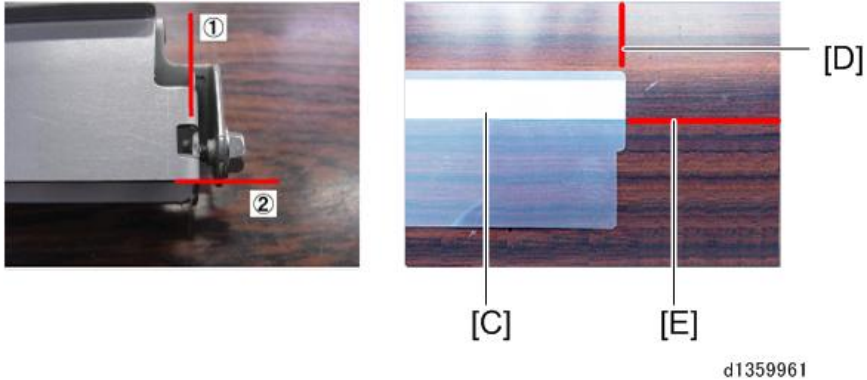
[A]: Upper entrance guide

[B]: Lower entrance guide

Attaching the Wide Mylar to the Upper entrance guide

1. Peel off the sheet from the double stick tape [C] on the Wide Mylar.

2. Attach the Wide Mylar to the Upper entrance guide by aligning the edge [D] of the Mylar with the edge (1) of the guide plate, and edge [E] of the double stick tape with the edge (2) of the guide plate.

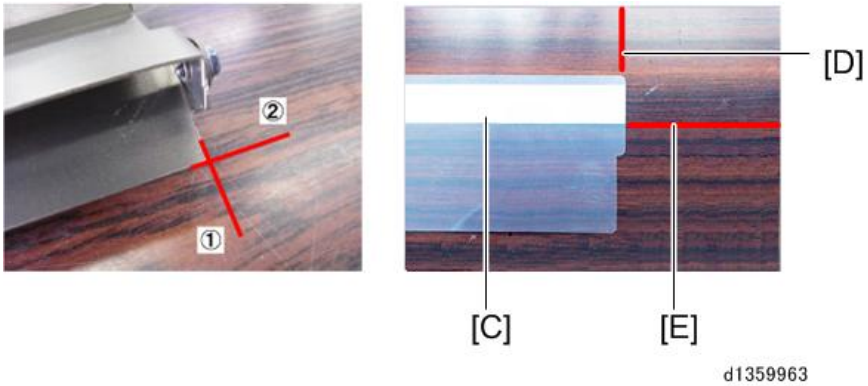


3. Confirm the Wide Mylar is attached correctly to the Upper entrance guide as shown in the photo below.

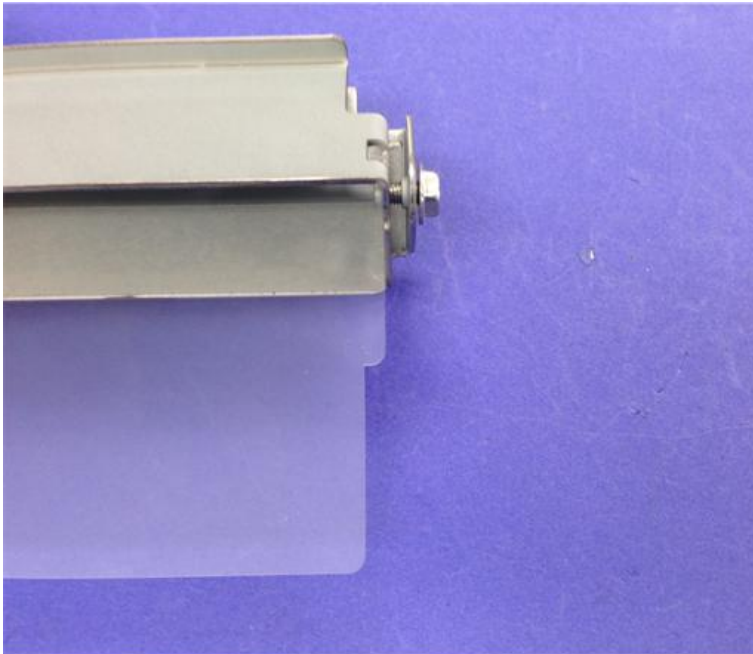


Attaching the Wide Mylar to the Upper entrance guide

1. Peel off the sheet from the double stick tape [C] on the Wide Mylar.
2. Attach the Wide Mylar to the Lower entrance guide by aligning the edge [D] of the Mylar with the edge (1) of the guide plate, and edge [E] of the double stick tape with the edge (2) of the guide plate.

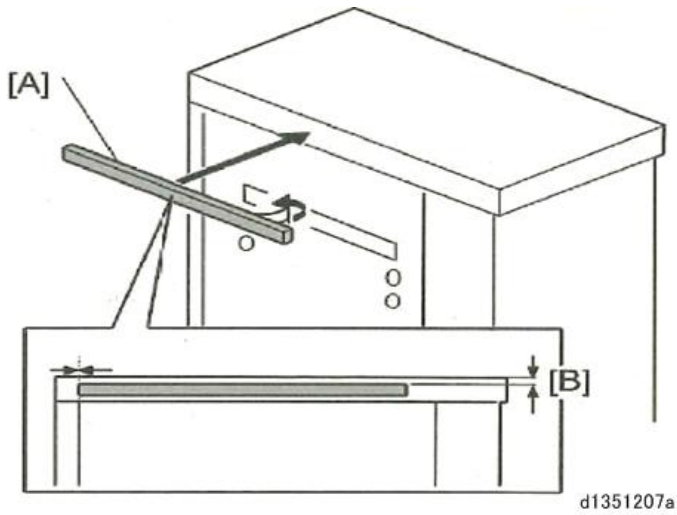


3. Confirm the Wide Mylar is attached correctly to the Lower entrance guide as shown in the photo below.



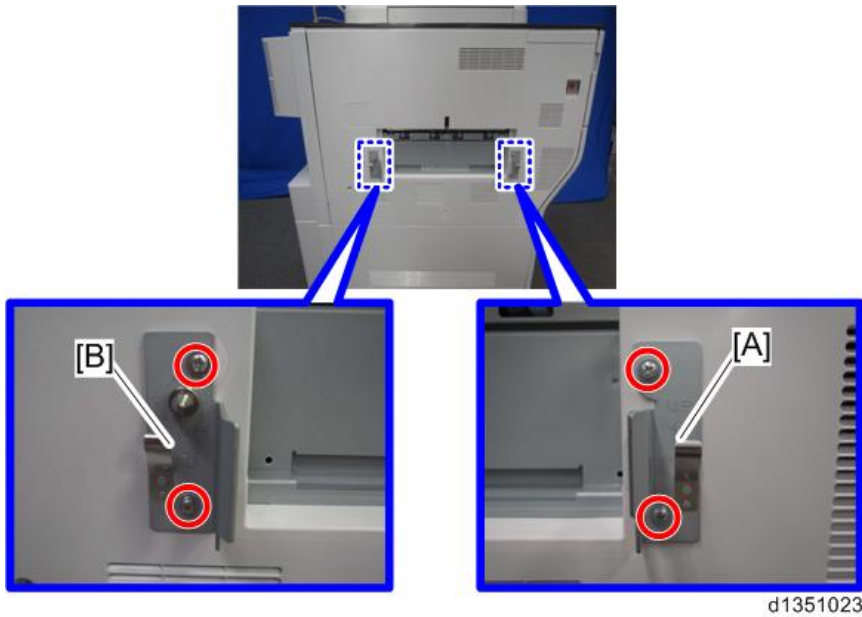
d1359965

1. Attach the entrance guide to the buffer pass unit. (⚙️ x 2)
2. Attach the right cover of the buffer pass unit. (⚙️ x 6)
3. Attach the sponge strip [A] (accessories item #8) to the Buffer Pass Unit as shown in the illustration below.

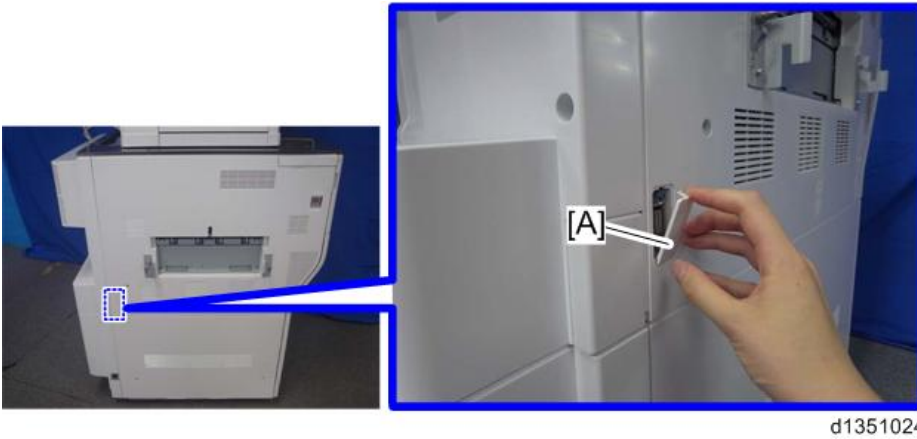


[B]: 5mm

4. Attach the docking bracket Right [A] (accessories item #5) and docking bracket Left [B] (accessories item #4) to the main frame. (⚙ x 2 each)

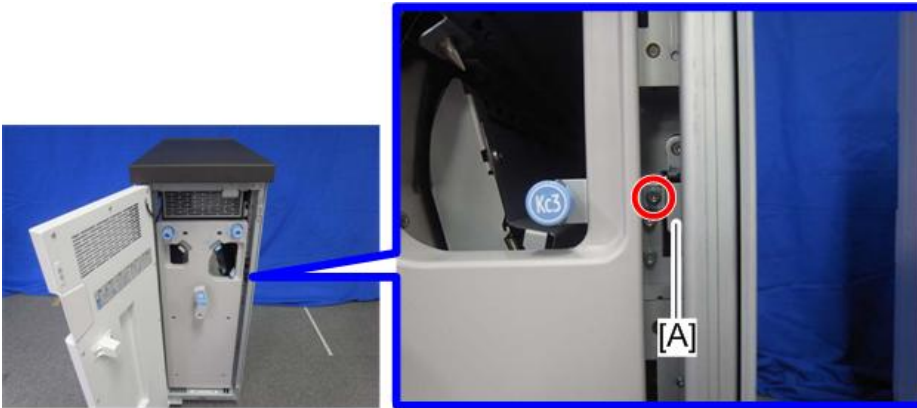


5. Remove the connector cover [A] from the mainframe.



d1351024

6. Open the front door, then pull out the locking lever [A]. (🔩 x 1)



d1351025

7. Push the buffer pass unit against the mainframe to dock the units.

8. Push the lock lever [A] and fasten it with the screw removed in step 6. (🔩 x 1)



d1351026

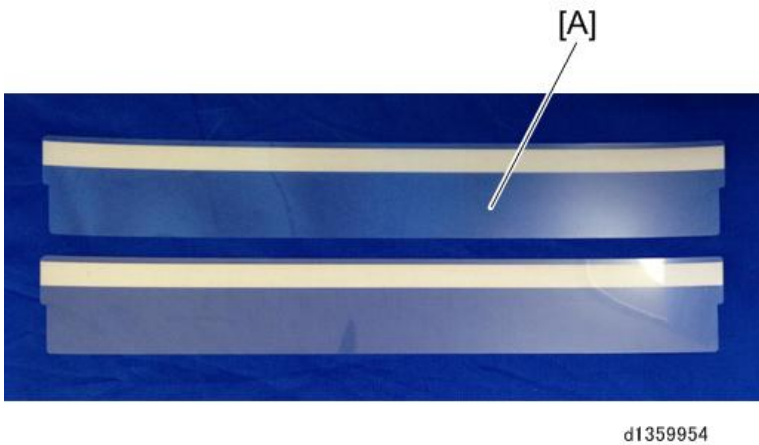
9. Connect the I/F cable of the buffer pass unit to the socket [A] on the mainframe.



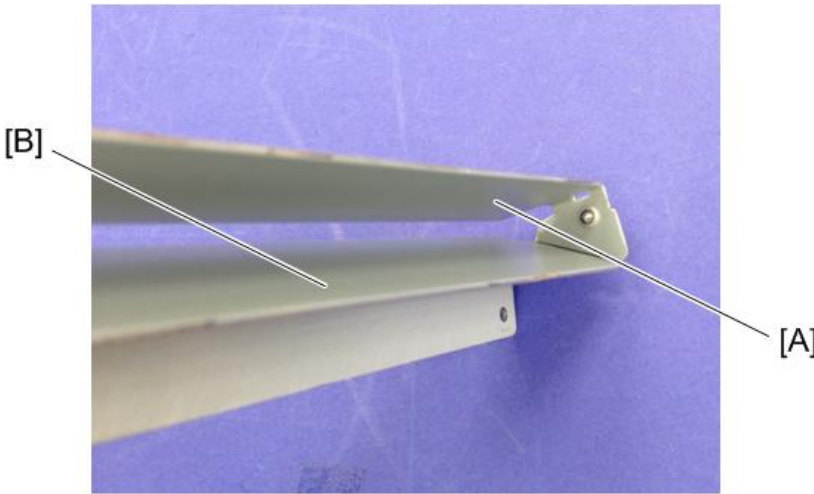
Go to page 276 "Common Procedure".

#02: When connecting the Buffer Pass Unit with the Decurl Unit DU5020 (D727)

This section describes the procedure for attaching the Wide Mylar to the entrance guide that was removed in step 5.



[A]: Wide Mylar (50mm, accessories item #6)



d1359955

[A]: Upper entrance guide

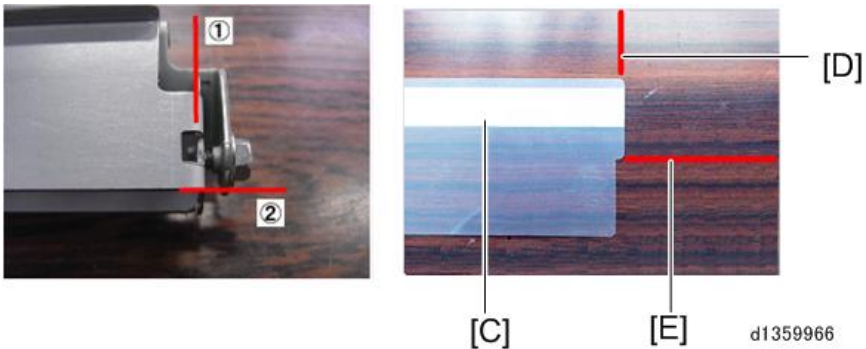
[B]: Lower entrance guide

Attaching the Wide Mylar to the Upper entrance guide

1. Peel off the sheet from the double stick tape [C] on the Wide Mylar.
2. Attach the Wide Mylar to the Upper entrance guide by aligning the edge [D] of the Mylar with the edge (1) of the guide plate, and the shorter edge [E] of the Mylar with the edge (2) of the guide plate.

⬇ Note

- Alignment position of edge [E] is different from when connecting the buffer pass unit to the mainframe.



d1359966

3. Confirm the Wide Mylar is attached correctly to the Upper entrance guide as shown in the photo below.



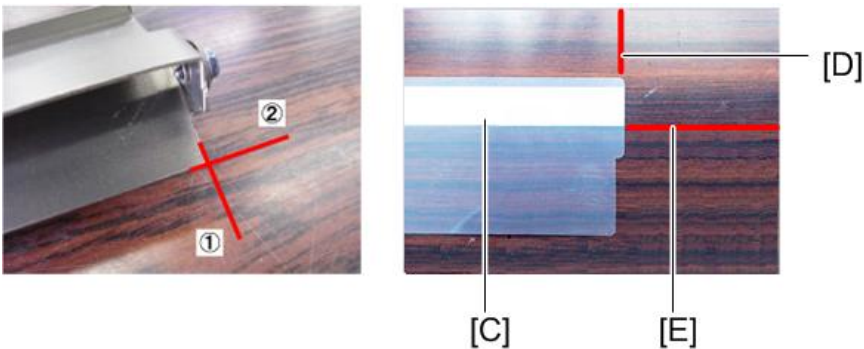
d1359967

Attaching the Wide Mylar to the Lower entrance guide

1. Peel off the sheet from the double stick tape [C] on the Wide Mylar.
2. Attach the Wide Mylar to the Lower entrance guide by aligning the edge [D] of the Mylar with the edge (1) of the guide plate, and edge [E] of the double stick tape with the edge (2) of the guide plate.

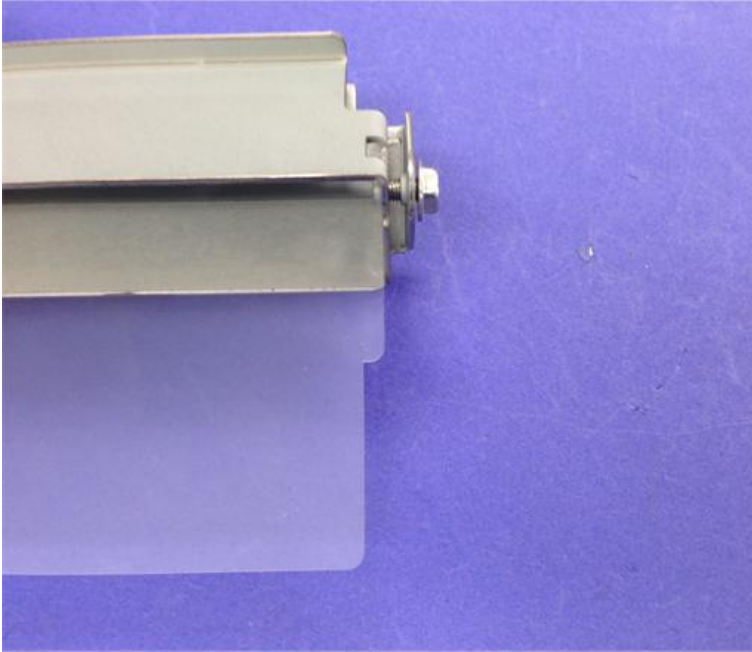
↓ Note

- Same as when connecting buffer pass unit to the mainframe.



d1359963

3. Confirm the Wide Mylar is attached correctly to the Lower entrance guide as shown in the photo below.



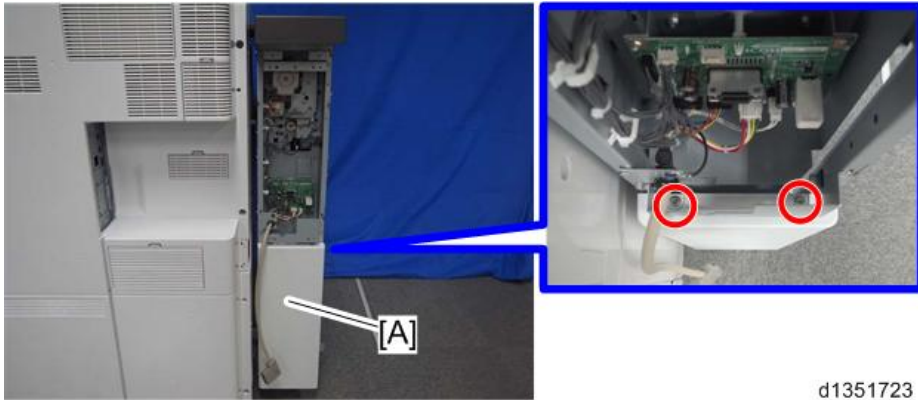
d1359965

1. Attach the entrance guide to the buffer pass unit. (🔩 x 2)
2. Attach the right cover of the buffer pass unit. (🔩 x 6)
3. Remove the rear upper cover [A] of the Decurl Unit. (🔩 x 4)



d1351722

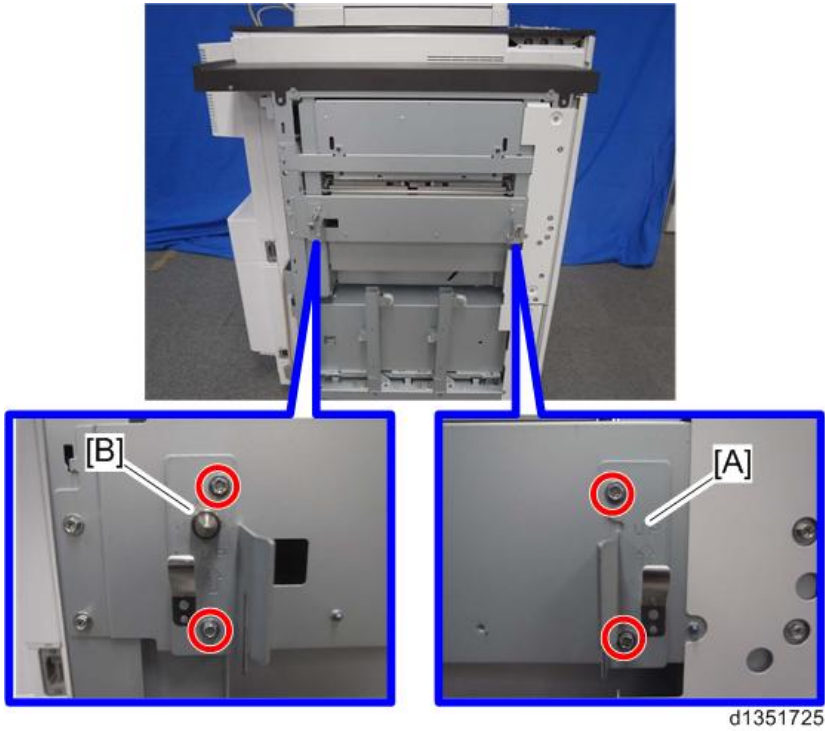
4. Remove the lower rear cover [A] of the Decurl Unit. (🔩 x 2)



5. Remove the bracket [A] from the Decurl Unit. (⚙️ x 3)



6. Attach the docking bracket Right [A] (accessories item #5) and docking bracket Left [B] (accessories item #4) to the paper exit side of the Decurl Unit. (⚙️ x2 each)



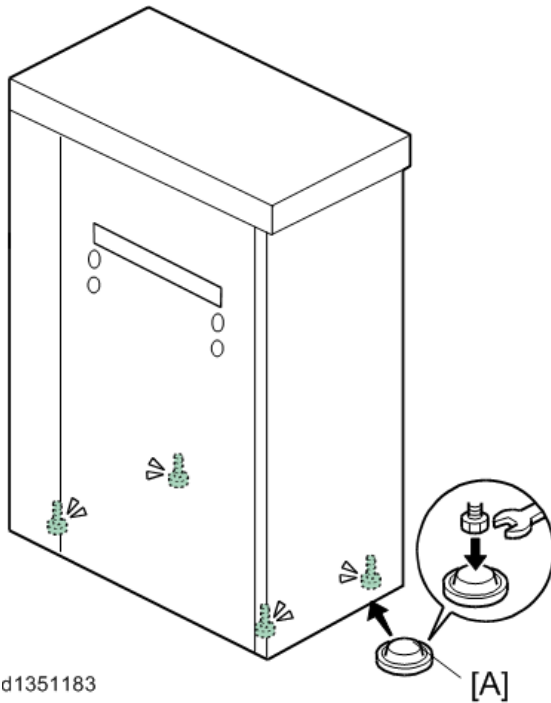
7. Connect the I/F cable of the Decurl Unit to the socket [A] of the mainframe. Then connect the Buffer Pass Unit with the Decurl Unit similarly to steps 4 through 6 of page 266 "#01: When connecting the Buffer Pass Unit with the mainframe".



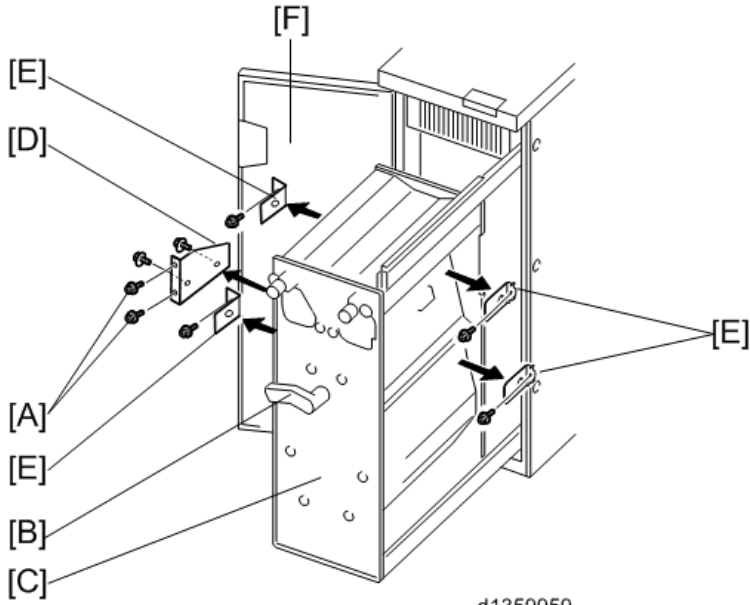
Go to page 276 "Common Procedure".

Common Procedure

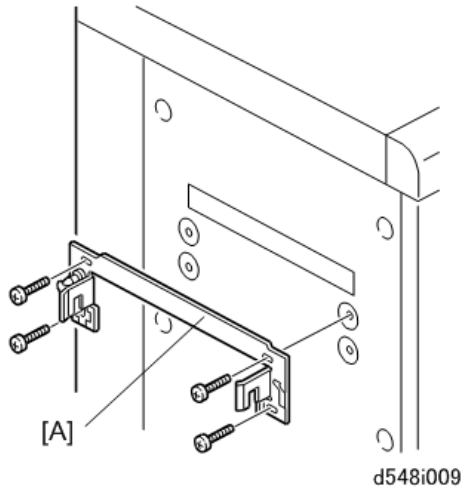
1. Set the leveling shoes [A] and adjust the height of the unit.



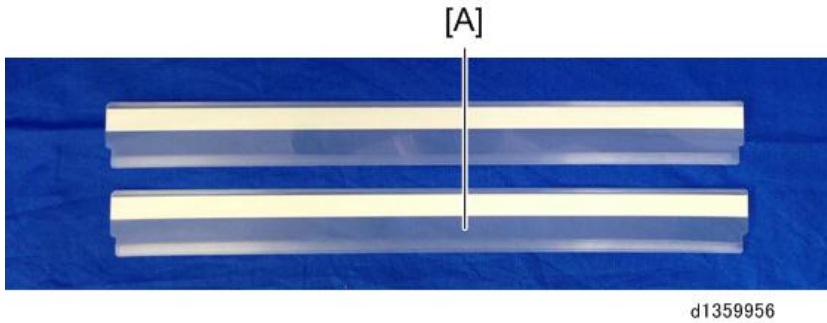
2. Remove the 2 screws [A] on the front side of clamping bracket [D].
3. Turn the Kc5 lever [B] counter clockwise and pull out the buffer pass unit drawer [C].
4. Remove the clamping bracket [D]. (⚙️ x 2)
5. Remove the 4 shipping brackets [E]. (⚙️ x 1 each)
6. Slide in the buffer pass unit drawer [C].
7. Close the front door [F].



8. Attach the docking bracket [A] of the downstream unit to the left side of the buffer pass unit. (Illustration below is an example showing the bracket for SR4110.)

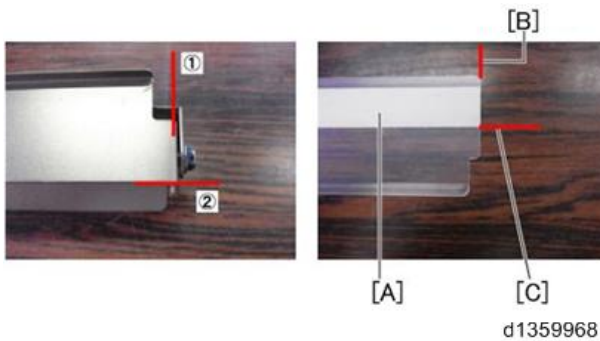


9. Attach the Narrow Mylar [A] (35.5mm, accessories item #7) to the entrance guide of the downstream unit (for example, the SR4110) by referring to the procedure described on the following page.



Attaching the Narrow Mylar to the Upper entrance guide

1. Peel off the sheet from the double stick tape [A] on the Narrow Mylar.
2. Attach the Narrow Mylar to the Upper entrance guide by aligning the edge [B] of the double stick tape with the edge (1) of the guide plate, and the edge [C] of the double stick tape with the edge (2) of the guide plate.

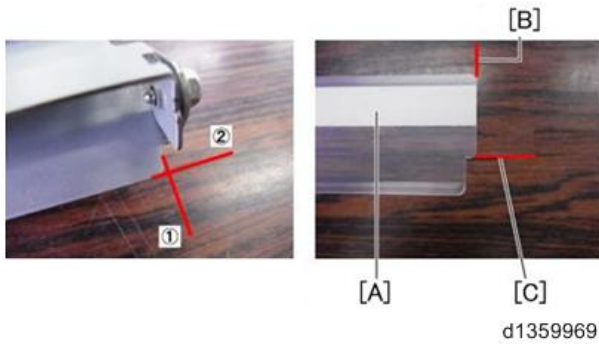


3. Confirm the Narrow Mylar is attached correctly to the Upper entrance guide as shown in the photo below.



Attaching the Narrow Mylar to the Lower entrance guide

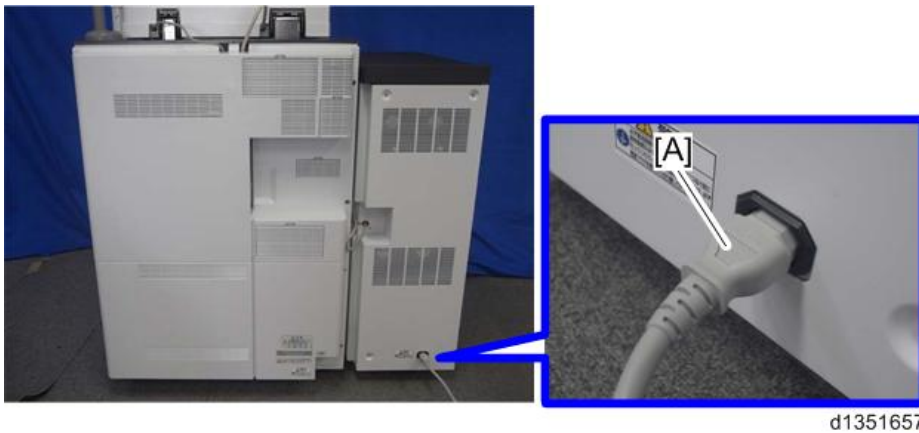
1. Peel off the sheet from the double stick tape [A] on the Narrow Mylar.
2. Attach the Narrow Mylar to the Lower entrance guide by aligning the edge [B] of the Mylar with the edge (1) of the guide plate, and edge [C] of the double stick tape with the edge (2) of the guide plate.



3. Confirm the Narrow Mylar is attached correctly to the Lower entrance guide as shown in the photo below.



1. Dock the downstream unit to the buffer pass unit.
2. Connect the power cord [A] provided with the buffer pass unit to the power inlet on the buffer pass unit.



3. Connect the buffer pass unit power cord to the wall socket, and then connect the mainframe power cord to the wall socket.

 **Note**

- Make sure the power cords are plugged to the wall socket in the above order. Otherwise, the buffer pass unit will not be recognized by the mainframe when turning on the power in the following step, and cause a paper jam in the buffer pass unit.
4. Turn ON the main power switch on the mainframe.
 5. Confirm proper function of the buffer pass unit to complete the procedure.

Multi-Folding Unit FD4000 (D615)

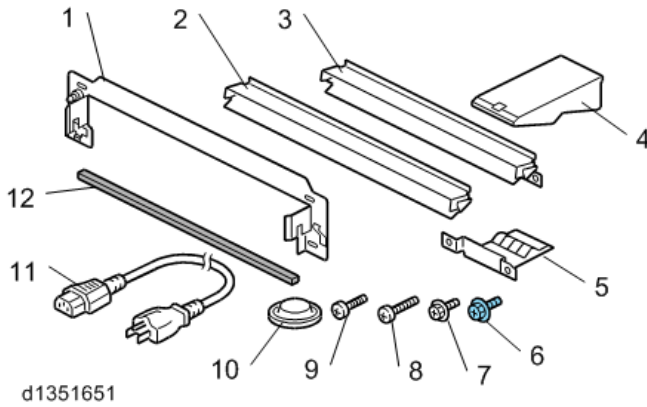
Accessories

2

Check the quantity and condition of the accessories in the box against the following illustration and list.

No.	Description	Q'ty
1.	Joint Bracket	1
2.	Paper Guide – Long (for D135/D136/D137/D138)	1
3.	Paper Guide – Short (for D131/D132/D133)	1
4.	Proof Tray Auxiliary Plate - Bottom	1
5.	Ground Plate	1
6.	Screws 3x6	2
7.	Screws M3x6	2
8.	Screws M4x20	4
9.	Screws M4x14 (Not used)	4
10.	Leveling Shoes	5
11.	Power Cord *1	1
12.	Sponge Strip	1

* 1: When using this unit in China, do not use this power cord provided with this unit. Contact your supervisor and use the power cord specified for use in China.



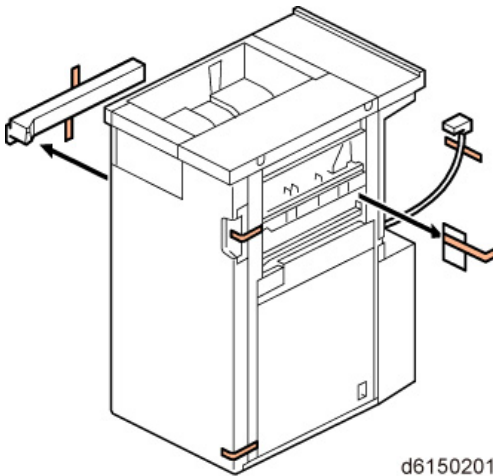
Installation

⚠ CAUTION

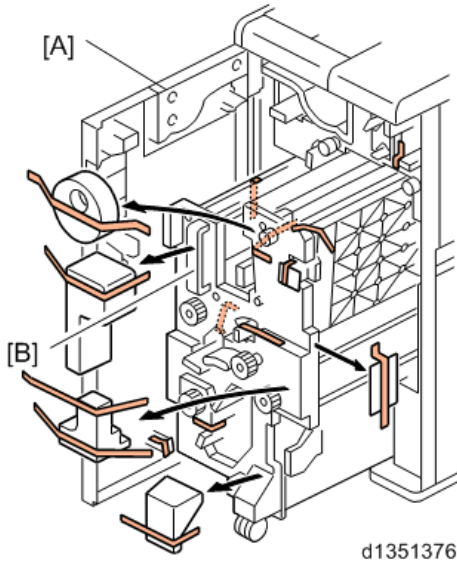
- The unit must be connected to a power source that is close to the unit and easily accessible.
- Make sure that the main machine is switched off and that its power cord is disconnected before doing the following procedure.

Tapes

1. Remove all tape and packing material from the front, left, rear, and right sides.

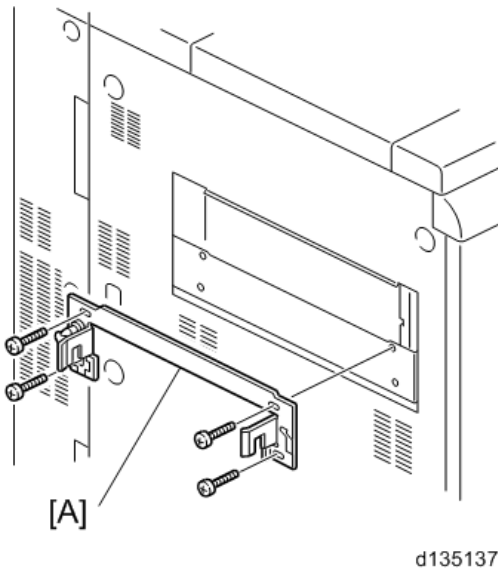


2. Open the front door [A].
3. Remove all tape from inside [B].



Paper Guide, Sponge Strip

1. Fasten the joint bracket [A] to the left side of the upstream unit. (⚙️ x4; M4x20)



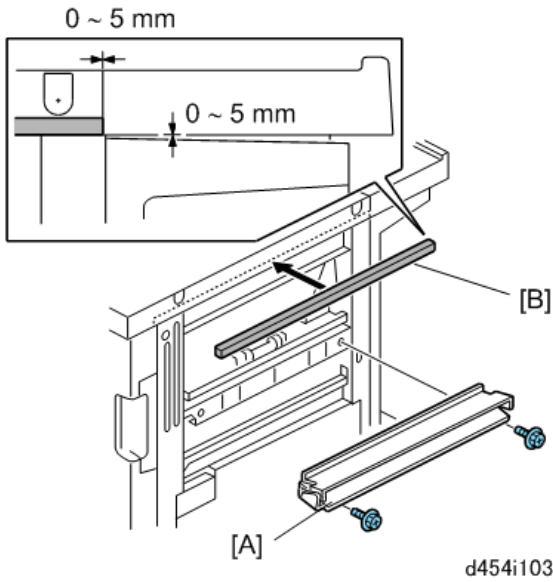
2. Fasten the joint bracket provided with the downstream device to the left side of the multi-folding unit, if a downstream device is going to be installed. (⚙️ x4; M4x14)

**Note**

- Use the screws provided with the downstream device.
3. Select the long paper guide for the installation.
 - Two paper guides are provided.
 - The short paper guide is for another machine (D131/D132/D133).

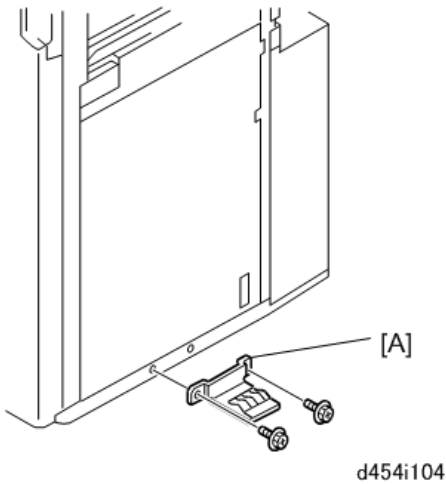
Important

- **If the upstream peripheral device is the Decurl Unit DU5020 (D727), attach the black mylar provided with the cover interposer tray or decurl unit to this paper guide.**
4. Attach the long paper guide [A] to the left side of the multi-folding unit. (x2; M3x6)
 5. Peel the tape from the sponge strip [B] and attach the strip to the top right edge of the multi-folding unit.



Ground Plate

1. Attach the ground plate [A] to the lower right edge of the unit. (🔩 x2; M3x6)



Docking

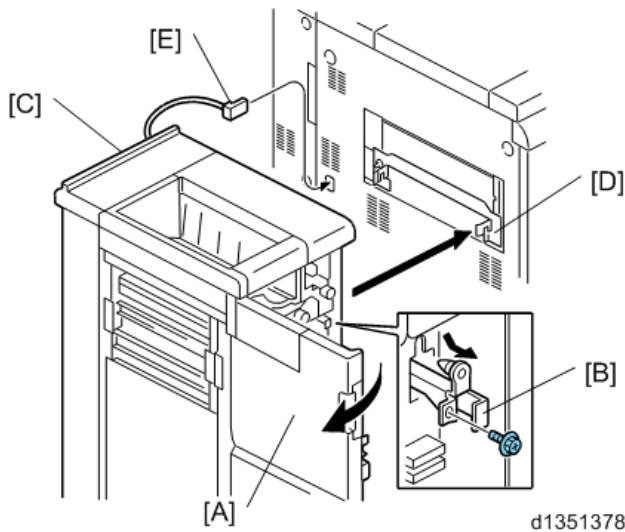
Do the step 8 to 12, only if the upstream unit is the Cover Interposer Tray CI4020 (D712).

1. Open the front door [A].
2. At the front right corner, remove the screw of the lock bar [B] (🔩 x1 M3x6). **Keep this screw.**
3. Push in the lock bar.

4. Slowly push the unit [C] against the left side of the upstream unit (or main machine) so that the lock bar is directly and squarely under the arms of the joint bracket.
5. Pull out the lock bar so it slides up into the notches in the arms on both ends of the joint bracket [D].
6. Fasten the lock bar by re-attaching the screw removed in **Step 2** (🔩 x1).
7. Connect the I/F cable [E] to the upstream unit (or main machine).

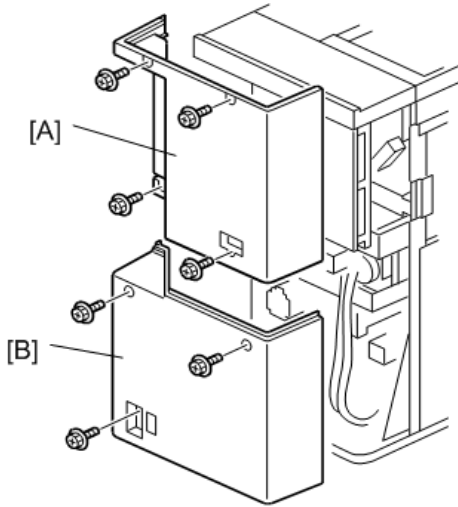
⬇ **Note**

- If you are connecting to the main machine, you must first remove the plastic cap on the I/F cable connection point.



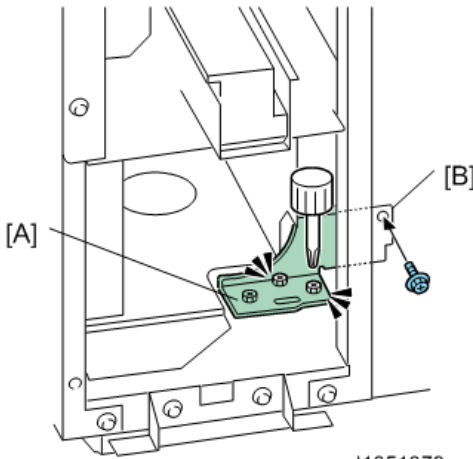
8. Remove:

- [A] Rear upper cover (🔩 x4)
- [B] Rear lower cover (🔩 x3)



d454i106

9. Use a short screwdriver to loosen bracket [A] (🔩 x2).
10. Fasten the bracket to the upstream unit at [B] (🔩 x1).
11. Tighten the screws (🔩 x3).



d1351379

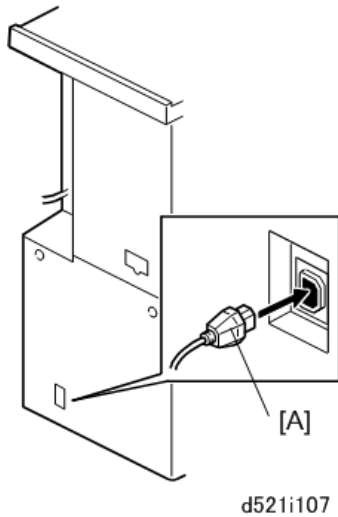
12. Re-attach the rear covers.

Power Cord

1. Insert the power cord socket [A] into the power connection point.

★ Important

- In China, do not use this power cord provided with this unit. Contact your supervisor and use the power cord specified for use in China.



2. Plug in the power cord for the Multi-Folding Unit into an AC wall outlet.
3. Disconnect the power cord from the copier, and then press the main power switch.

★ Important

- This releases the charge remaining inside the machine. If you do not do this step, the copier will not recognize the Multi-Folding Unit and paper jams will occur. (See page 517 "Notes on the Main Power Switch".)

4. Plug in the power cord for the copier into an AC wall outlet.
5. Turn on the main power switch.

★ Important

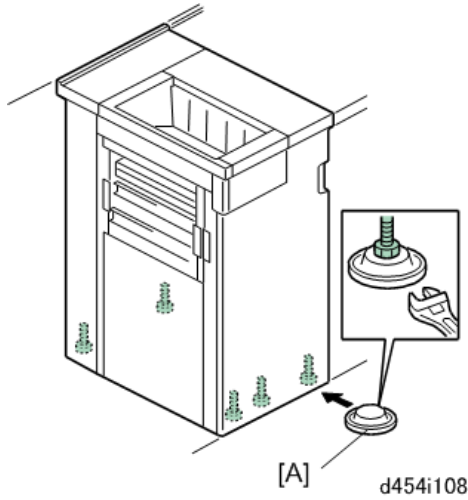
- If the copier main power turns on automatically when you plug in the cord, wait until the machine finishes warming up. Then, turn the main power OFF and ON again.

6. Make sure that the Multi-Folding Unit operates correctly.

Height Adjustment

Adjust the height of the unit and make sure that it is level.

1. Turn the lower nut to lower the bolt.
2. Set the leveling shoes [A] below the bolt.



Removing Parts for the Cover Interposer Tray CI4020 (D712)

Three parts must be removed before the tray unit of the cover interposer tray can be mounted on top of the Multi Folding Unit.

1. Open the front door.

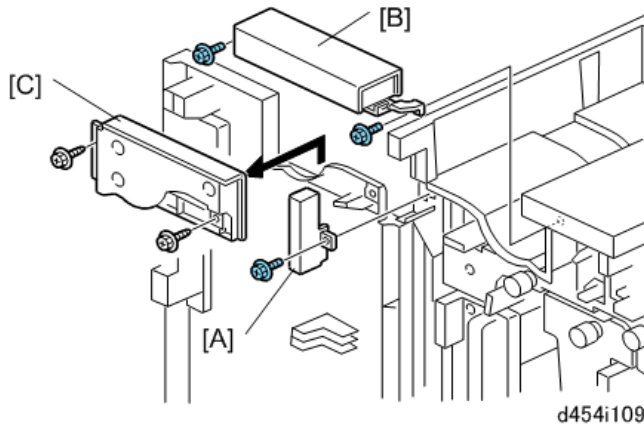
★ Important

- The following parts require removal only if the upstream unit is the Cover Interposer Tray CI4020 (D712).
- These parts must be removed so that the tray unit of the Cover Interposer Tray will fit on top of the Multi Folding Unit.

2. Remove:

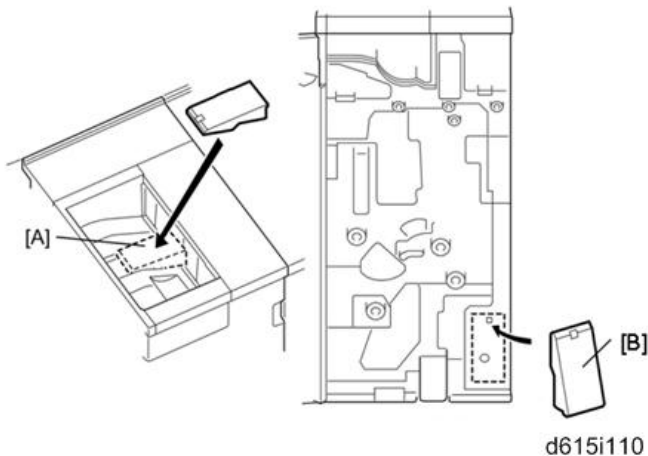
- [A] Bracket (🔩 x1)
- [B] Cross-piece (🔩 x2)
- [C] Metal plate from the door (🔩 x2)

3. After removing [B] and [C], reattach [A].



Proof Tray Auxiliary Plate

1. Install the proof tray auxiliary plate.
 - Set the plate [A] in the center aligned with the diagonal groove.
 - The back should be flat against the end fence.
2. When the plate is not being used, open the front door and store the plate at [B] inside the inner cover.
 - The plate should be used when Z-folded paper (all sizes) is output to the proof tray.
 - If the plate is not used with Z-folded output, the pages could mix and overlap.

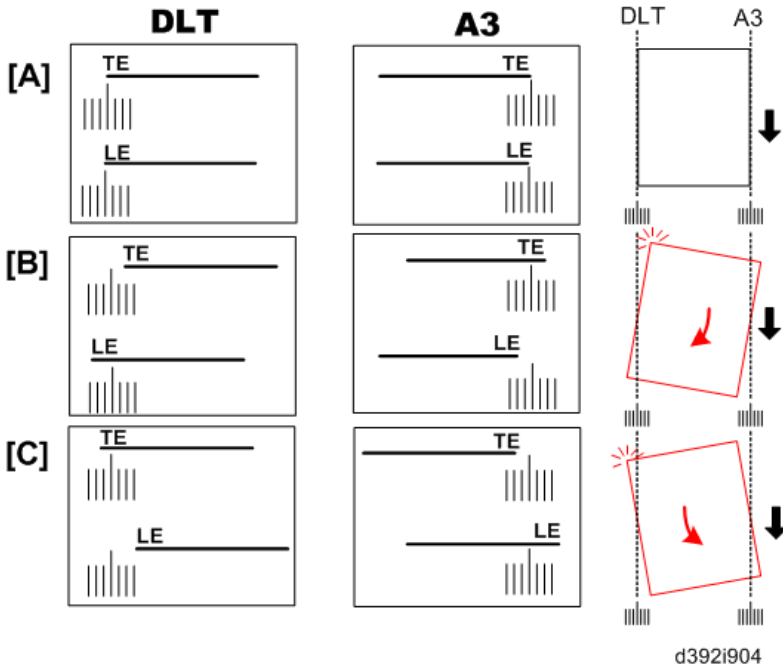


Detecting Paper Skew

Do this check to detect the presence of skew in the paper path.

1. Make sure that the I/F cable of the unit is connected to the upstream unit.

2. If a peripheral unit is connected on the left side, disconnect it and pull it away.
3. Execute a straight-through run.
4. Check the scale where each sheet exits.
 - The rear scale is for DLT-size paper.
 - The front scale [2] is for A3-size paper.
 - Be sure to read the correct scale for the paper size in use.



[A]	Centered. No adjustment necessary.
[B]	Trailing edge skew to the front, total skew more than ± 2 mm. Adjustment required.
[C]	Trailing edge skew to the rear, total skew more than ± 2 mm. Adjustment required.

Correcting Skew

1. Disconnect the multi folding unit from the upstream unit.
2. Remove the spacers from the multi folding unit.



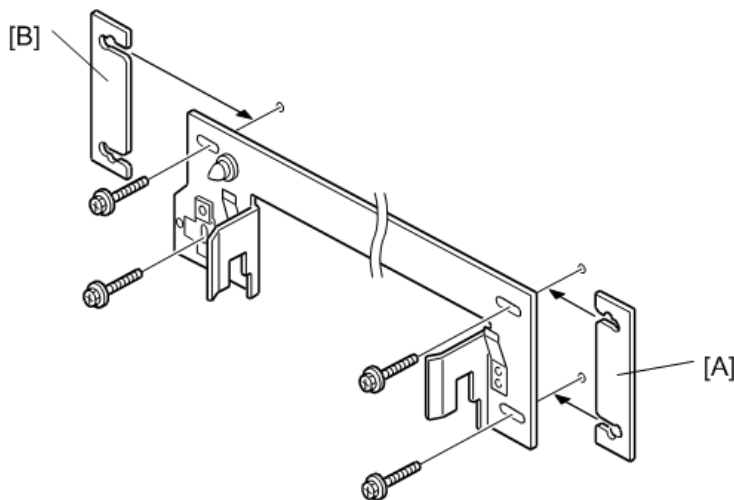
d454i111

3. Loosen the screws (🔩 x4) of the joint bracket attached to the upstream unit.
4. Insert a spacer and tighten the screws.

If the trailing edge of the paper is **skewing toward the front** of the machine, insert a spacer [A] under the **rear end of the bracket** and tighten the screws.

-or-

If the trailing edge is **skewing toward the rear** of the machine, insert a spacer [B] under the **front end of the bracket** and tighten the screws.



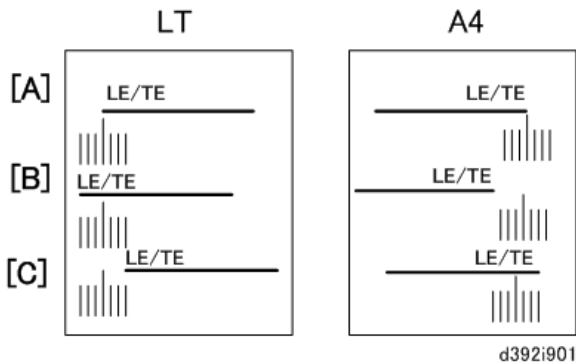
d392i906

5. Do another run to check the adjustment. If skew is still present, insert another spacer.
 - Each spacer is 2 mm thick.
 - Only two spacers are provided, so the maximum adjustment is 4 mm (using two spacers).

Checking Side-to-Side Registration

Do this procedure to confirm that the paper is centered in the paper path.

1. Make sure that the I/F cable of the unit is connected to the upstream unit.
2. Disconnect the unit to the left of the unit to be tested.
3. Execute a run by feeding paper from Tray 2 of the host machine.
4. When each sheet exits, check the position of the paper on the scale to see if the paper is centered.
 - Read the rear scale for DLT-size paper
 - Read the front scale for A3-size paper.
 - The scale lines are spaced 2 mm apart.
5. The paper must not deviate more than ± 2 mm on the scale.



[A]	Leading/trailing edges centered. No adjustment necessary.
[B]	Leading/trailing edges offset to the rear by more than 2 mm. Adjustment required.
[C]	Leading/trailing edges offset to the front by more than 2 mm. Adjustment required.

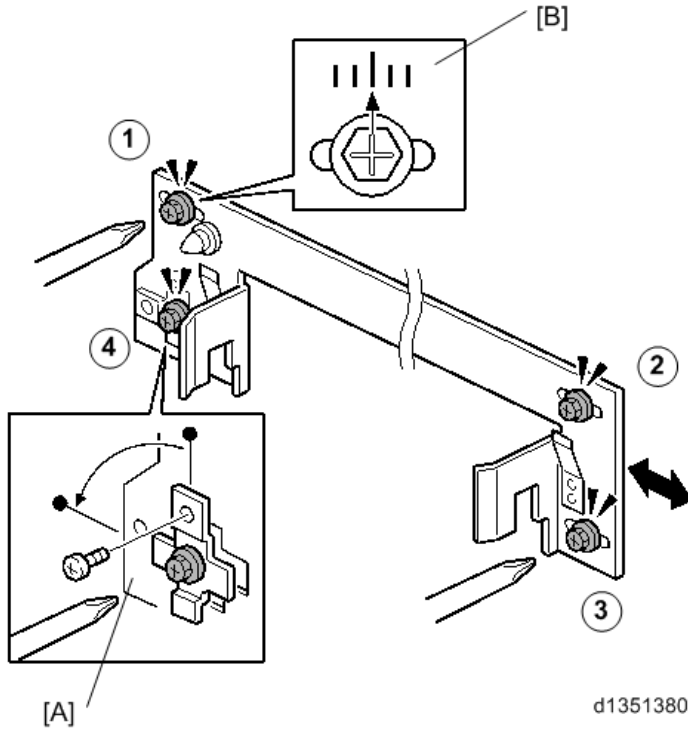
If the edge of the paper is on the scale at the center [A], no adjustment is required.

-or-

If the edge of the paper is ± 2 mm off the center line on the scale, adjustment is required. Do the procedure in the next section.

Correcting Side-to-Side Registration

1. Disconnect the multi-folding unit from the upstream unit.



2. On the joint bracket attached to the upstream unit, loosen screws ①, ②, ③, and ④.
3. Remove bracket [A] (1 x1), rotate it 90 degrees, and re-fasten the screw. Changing the position of this bracket aligns the oval cut-out horizontally and frees the joint bracket so it can slide from side to side.
4. Look at the scale [B].
5. Slide the bracket to the left or right and tighten the screw.
6. If the deviation from center was toward the front, slide the bracket to the rear and tighten the screw ①.
-or-
If the deviation from center was toward the rear, slide the bracket to the front and tighten the screw ①.
7. Tighten screws ②, ③, and ④.
8. Do another test run, so that you can check the results of the adjustment.

Mail Box CS4010 (D708) (D135/D136 Only)

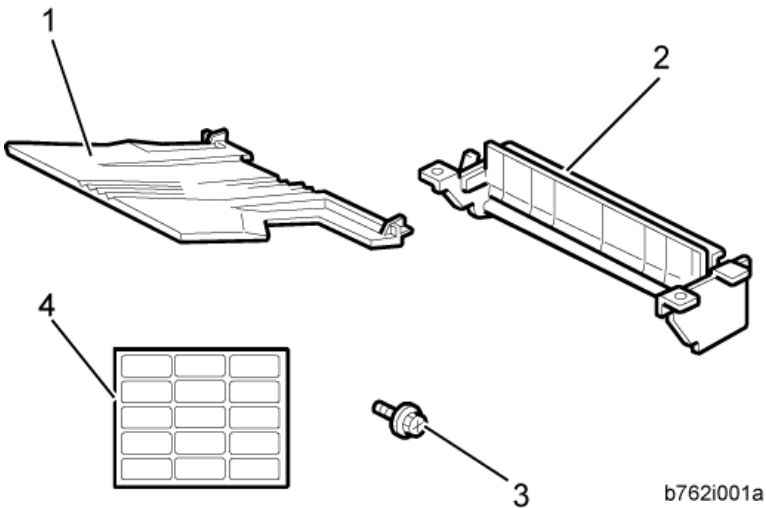
The Mail Box CS4010 is installed on the Finisher SR4090 or Booklet Finisher SR4100. It cannot be installed with the Cover Interposer Tray CI4010. (Either the mailbox or cover interposer tray can be installed on top of the finisher, but not both.)

2

Accessories

Check the accessories and their quantities against this list.

No.	Description	Qty
1.	Trays	9
2.	Guide plate	1
3.	Tapping screws - M3x8	6
4.	Decals (bin display)	1



Installation Procedure

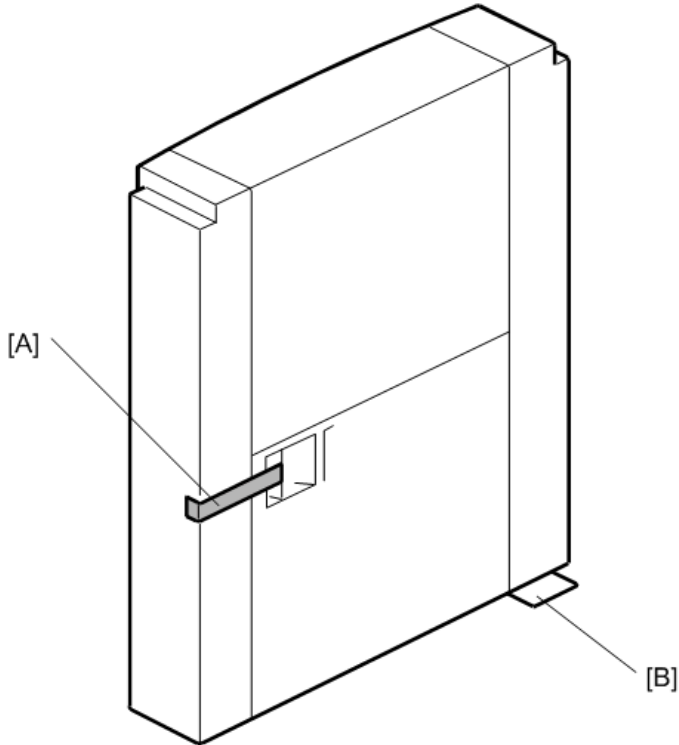
⚠ WARNING

- Turn the machine off and disconnect the machine power cord before you start this procedure.

1. Remove the filament tape [A].

★ Important

- Move the mailbox carefully. It is easy to cause damage to the corner leaf plate [B].

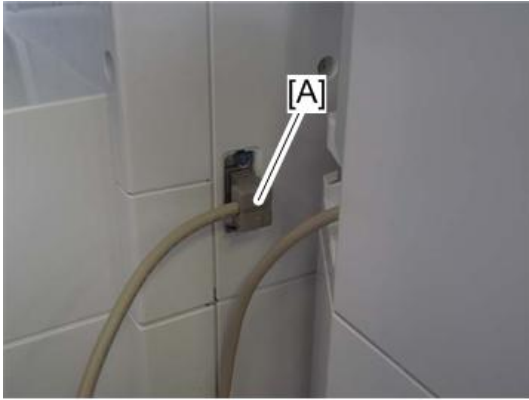


d1351381

2. If the Cover Interposer Tray CI4010 is installed on the Finisher SR4090 or Booklet Finisher SR4100, remove it.

↓ Note

- The cover interposer tray and mailbox cannot be installed on the finisher at the same time.
3. Remove the finisher from the main machine.
 - Disconnect the finisher connector [A] to the machine.



d1351196

- Open the front door [A] of the finisher, and pull the lock lever [B]. (🔑 x 1)



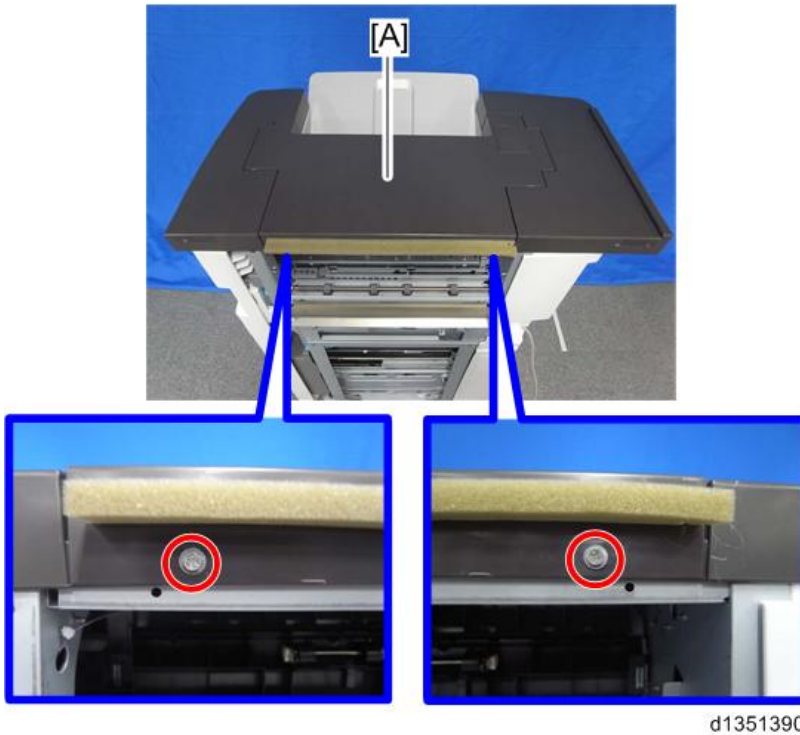
d1351391

- Remove the finisher from the main machine.



d1351392

4. Remove the top cover [A] from the finisher (🔑 x 2).



5. Install the finisher on the main machine.

- Slowly push the finisher against the left side of the machine, keeping its front door open until the brackets go into their slots.

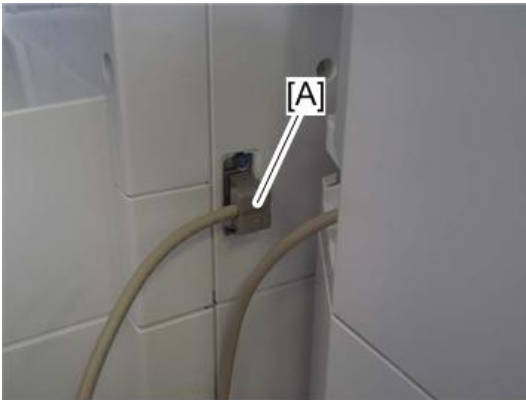


- Push the lock lever [A], and then secure it (🔑 x 1).



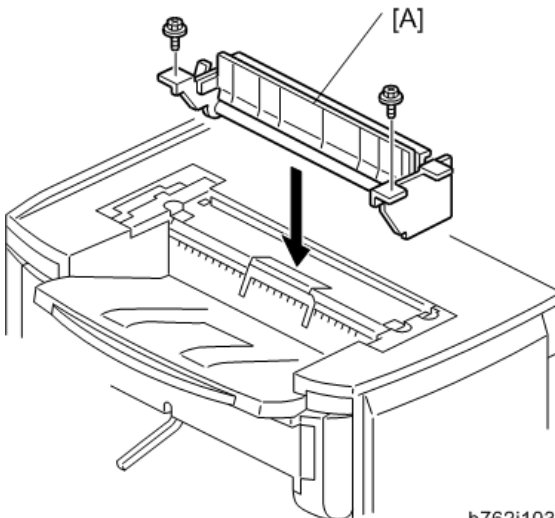
d1351195

- Connect the finisher connector [A] to the machine.



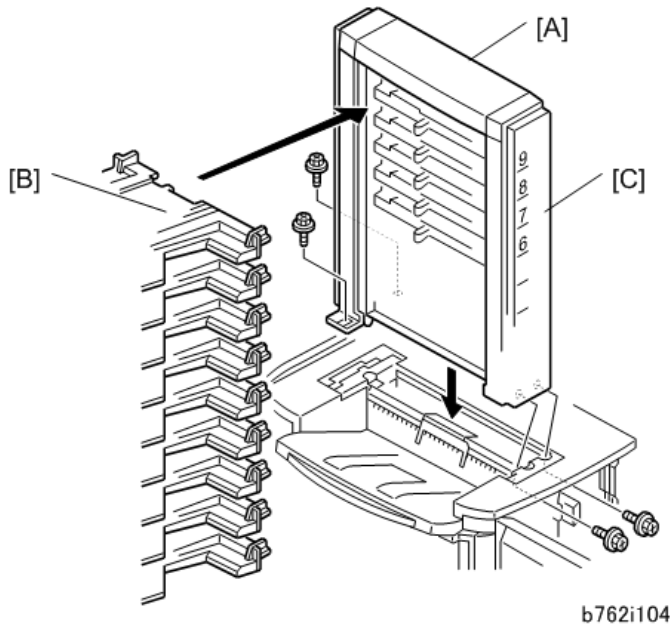
d1351196

6. Attach the guide plate [A] to the top of the finisher (⚙ x 2, M3 x 8).



b762i103

7. Attach the mailbox [A] to the top of the finisher (⌀ x 4, M3 x 8).
8. Attach the 9 trays [B] to the mailbox.
9. Give the decals [C] to the customer. The customer will write on these and attach them at the correct location.



10. Turn on the main power switch of the machine.
11. Check the finisher operation.

Cover Interposer Tray CI4010 (D711)

Cover Interposer Tray CI4010 (D711) is for installation on the Finisher SR4090 (D703)/Booklet Finisher SR4100 (D704) only and not on Finisher SR4110 (D707).

Cover Interposer Tray CI4010 (D711) inserts cover or slip sheets into copied or printed outputs.

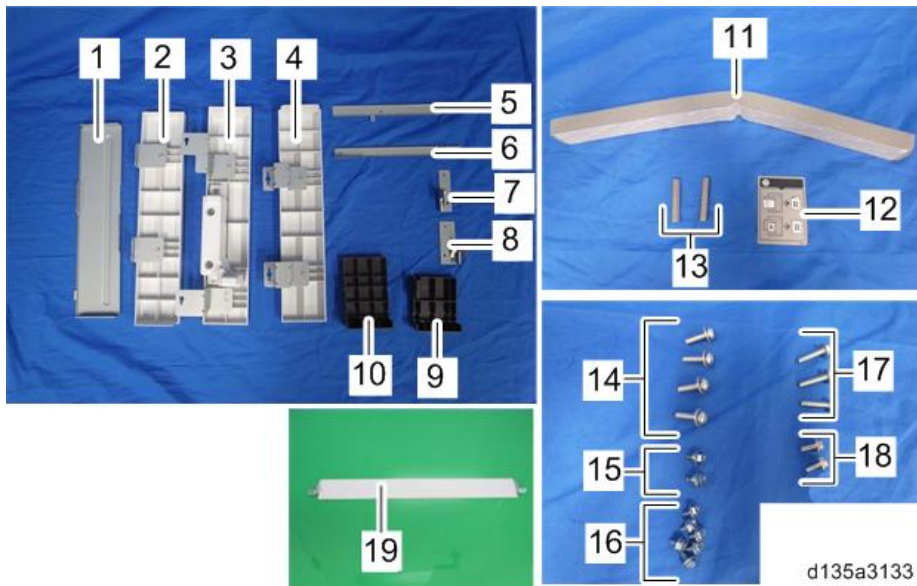
2

Accessories

Check the accessories and their quantities against this list.

No.	Description	Q'ty
1	Plate Extension (bottom)	1
2	Rear cover extension (bottom)	1
3	Front door extension (top)	1
4	Front door extension (bottom)	1
5	Connecting Bracket (rear)	1
6	Connecting Bracket (front)	1
7	Front Joint Bracket	1
8	Rear Joint Bracket	1
9	Right front corner plate	1
10	Right Rear Cover Plate	1
11	Cushion (with double-sided tape)	1
12	Label	1
13	Gasket Seals	2
14	Screws– M4 x 14	4
15	Shoulder screw	2
16	Tapping screws – M3 x 6	6
17	Tapping screws – M4 x 16	3
18	Tapping screws – 3 x 6	2

No.	Description	Q'ty
19	GUIDE PLATE:CONNECTING:LOWER	1



2

Installation Procedure

⚠ CAUTION

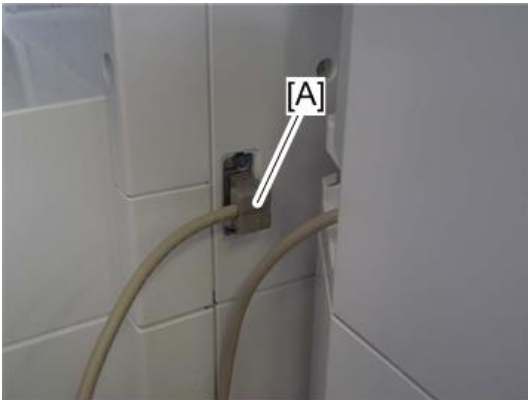
- Always switch the machine off and unplug the machine before doing the following procedure.
1. Remove all tape and retainers from the cover interposer tray.



d1351385

2. If the finisher is connected to the main machine, disconnect it.

- Disconnect the finisher connector [A] from the main machine.



d1351196

- Open the front door [A] of the finisher, and pull the lock lever [B]. (🔑 x 1)



d1351391

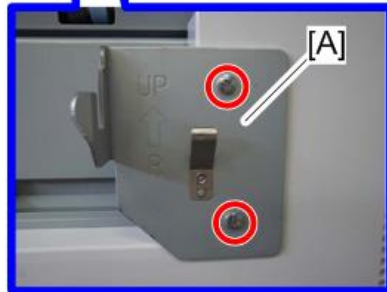
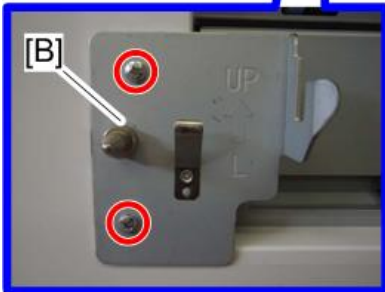
- Disconnect the finisher from the main machine.



d1351392

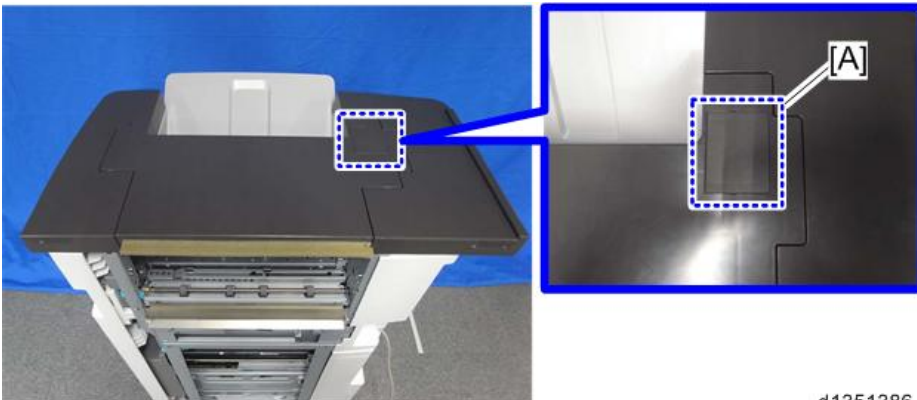
3. Remove the front joint bracket [A] and rear joint bracket [B]. (⚙ x 4)

2



d1351191

4. Remove the cover [A] from the finisher.



d1351386

5. Remove the docking bracket [A] from the finisher. (⚙️ x 2)

Also see RTB 130



6. If the "Decurler Unit DU5020 (D727)" or "Buffer Pass Unit Type 5020 (D751)" is included in the configuration, the original guide plate [A] must be replaced with "GUIDE PLATE: CONNECTING: LOWER" (item#19 of accessories).

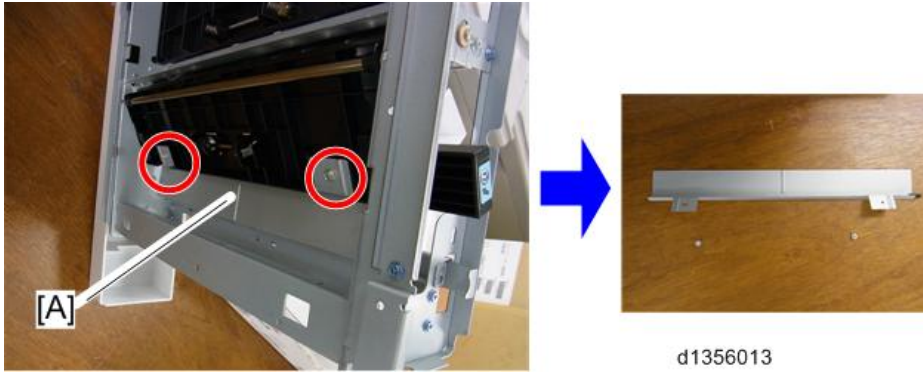
★ Important

- With the original guide plate installed, lever [A] will catch the optional device if released for jam recovery.

1) Release the lever [A].

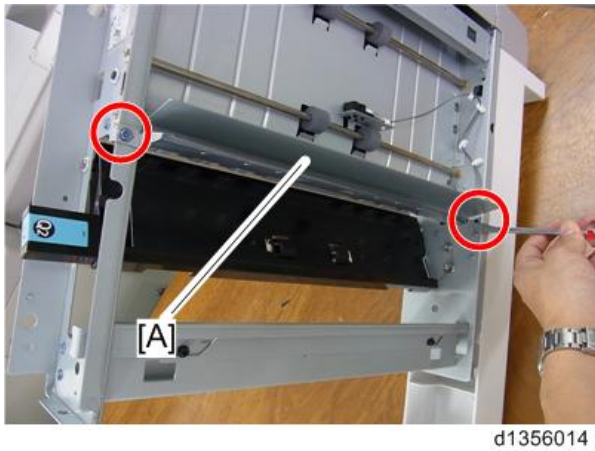


2) Remove the guide plate [A] (⚙️ x 2).



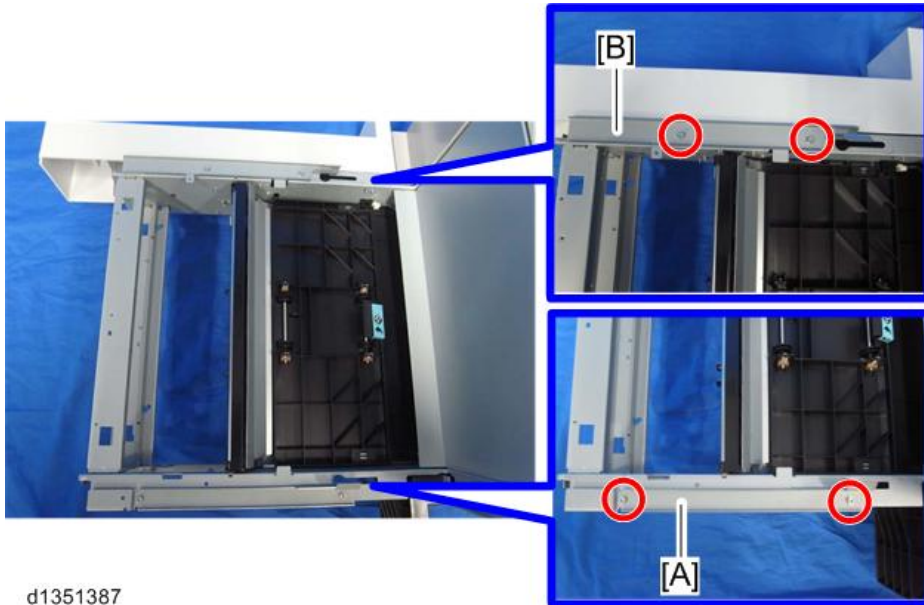
The original guide plate will no longer be used and does not have to be stored.

3) Attach the new guide plate [A] (item#19 of accessories) to the frame of the cover interposer (⚙️ x 2).



4) Lift up the lever to its home position.

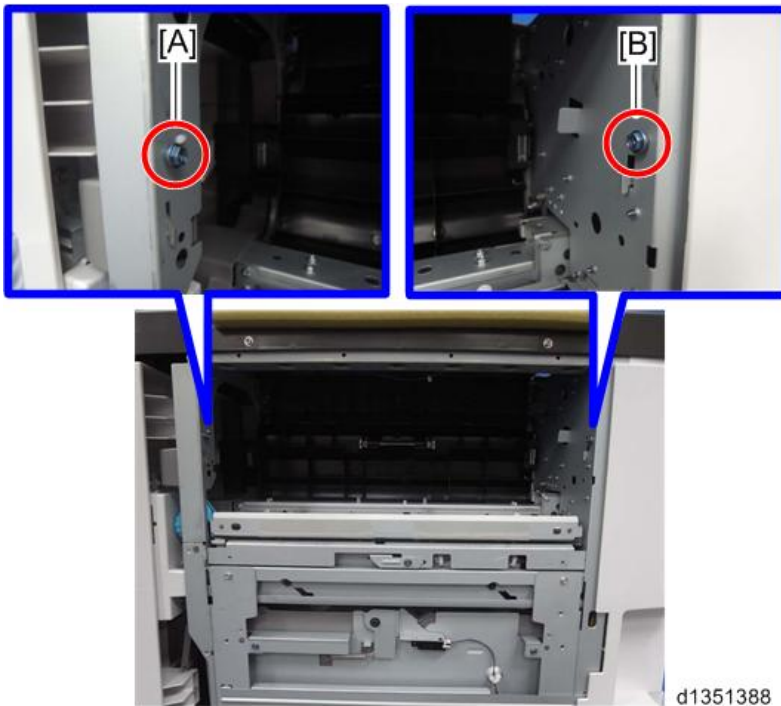
7. Install the front connecting bracket [A] and rear connecting bracket [B]. (⚙️ x 2; 3 x 6)



d1351387

8. Install the shoulder screws from inside the finisher. (⚙ x 2; shoulder screws)

- Front side [A]: (⚙ x 1)
- Rear side [B]: (⚙ x 1)



d1351388

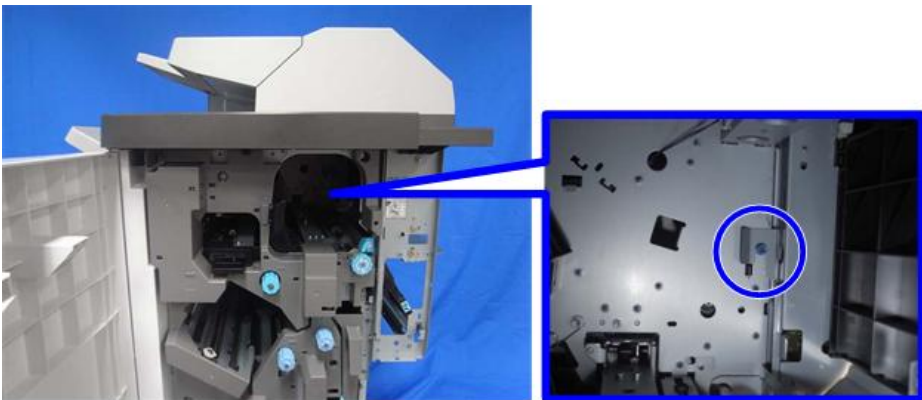
9. Open the finisher front door, and then install the cover interposer tray [A] on the finisher.



d1351393

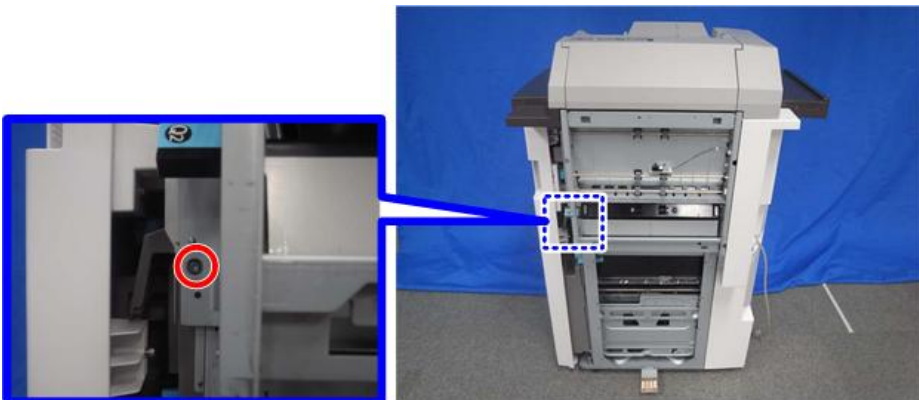
Note

- Make sure the cover interposer tray is set on the shoulder screws installed in step 7.



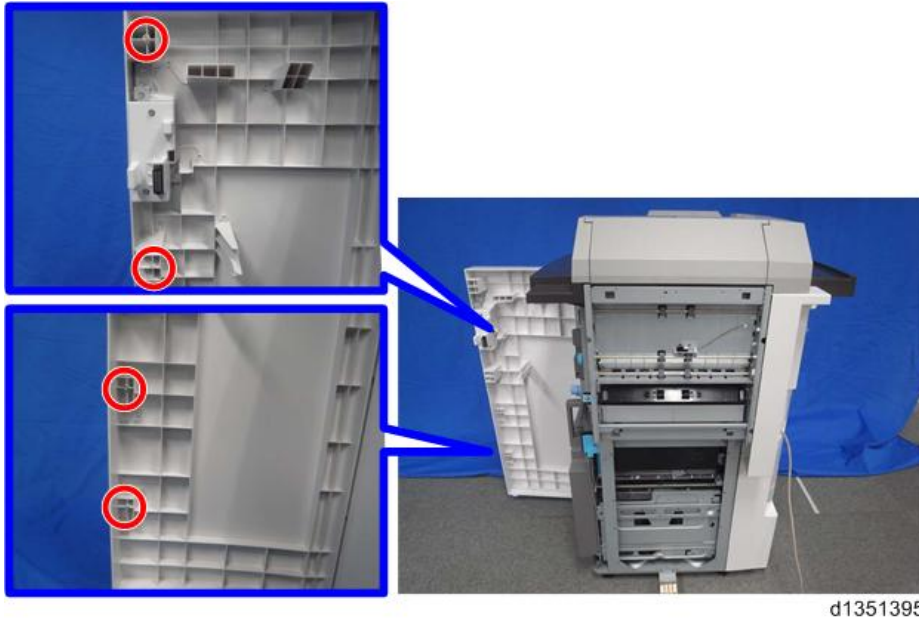
d1351394

10. Fasten the cover interposer tray on the finisher. (🔩 x 1; M3 x 6)

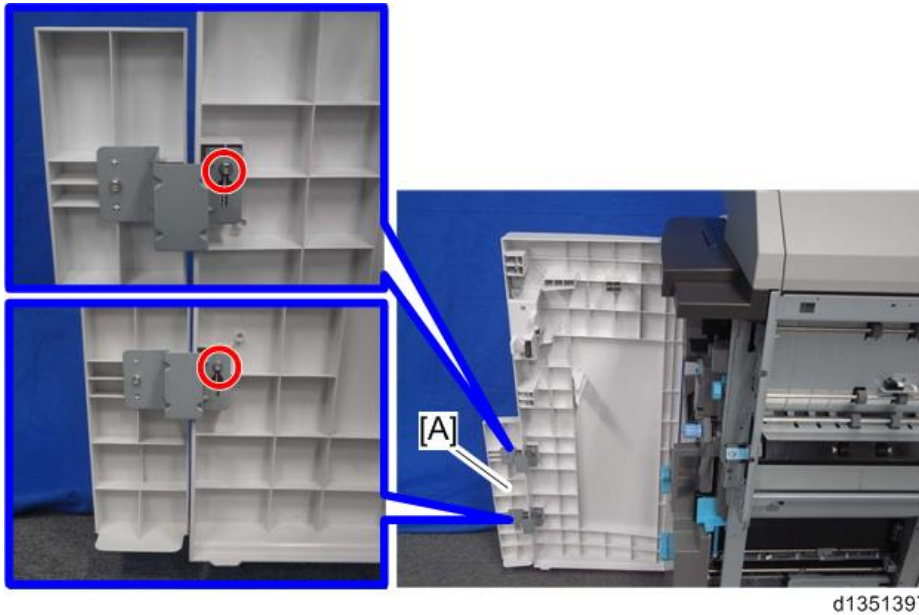


d1351396

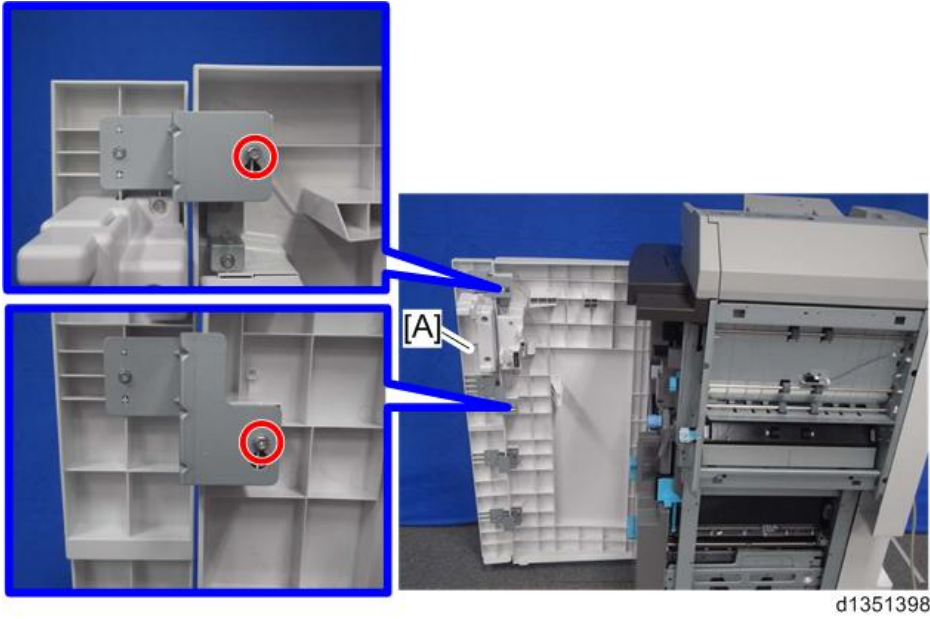
11. Install the 4 screws in the front door of the finisher. (🔩 x 4; M4 x 8)



12. Install the bottom front cover extension [A] on the front door. (⚙️ x 2; screws installed in step 10)



13. Install the top front cover extension [A] on the front door. (⚙️ x 2; screws installed in step 10)



14. Install the rear cover extension [A] on the right side of the finisher. (⚙️ x 2; M3 x 6)



15. Remove the ground plate [A] from the finisher. (⚙️ x 2)



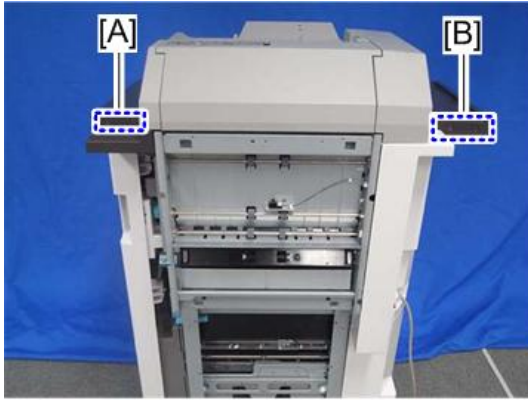
16. Install the ground plate [A] provided with the cover interposer tray. (⚙ x 2; M3 x 6)



17. Install the ground plate [A] removed in step 14. (⚙ x 2; screws removed in step 15)

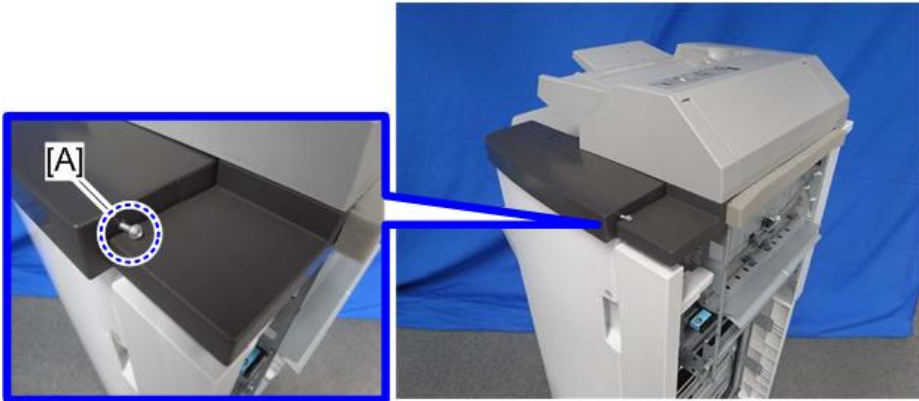


18. Peel the 2 labels from the finisher.
- Front side: The label is placed at [A]
 - Rear side: The label is placed at [B].



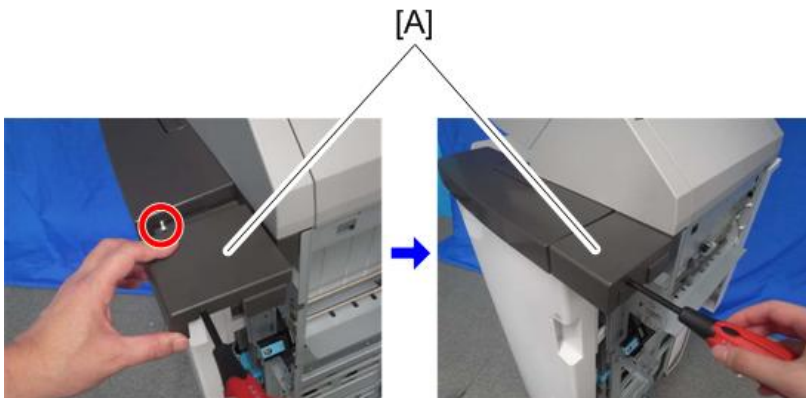
d1351411

19. Temporary tighten the screw [A] at the front side of the finisher. (🔩 x 1; M4 x 16)



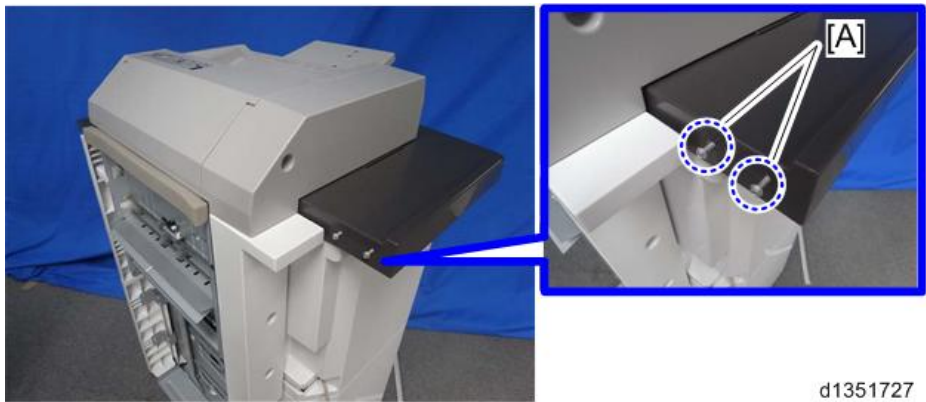
d1351726

20. Install the right front corner plate [A], and fasten the screw installed in step 18. (🔩 x 1; M4 x 16)



d1351403

21. Temporary tighten the two screws [A] at the rear side of the finisher. (🔩 x 2; M4 x 16)



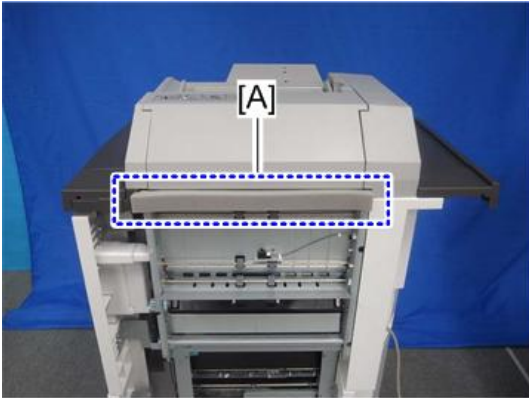
d1351727

22. Install the right rear cover plate [A], and fasten the screws installed in step 20. (⚙ x 2; M4 x 16)



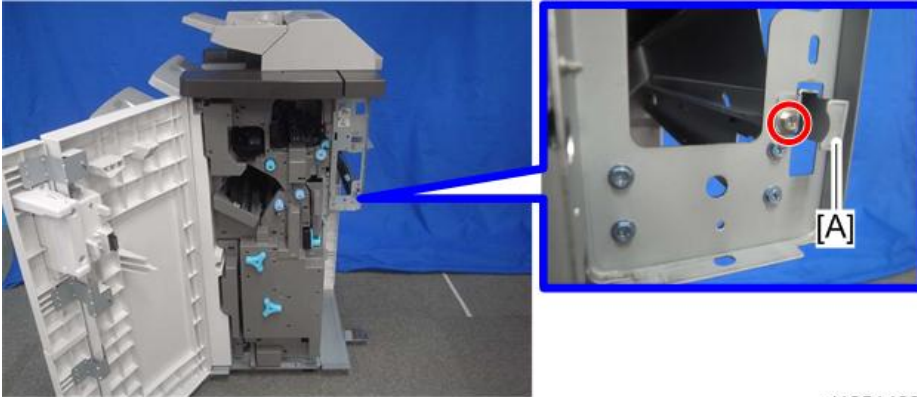
d1351404

23. Attach the cushion [A] to the finisher.



d1351405

24. Open the front door of the finisher, and pull the lock lever [A]. (🔑 x 1)



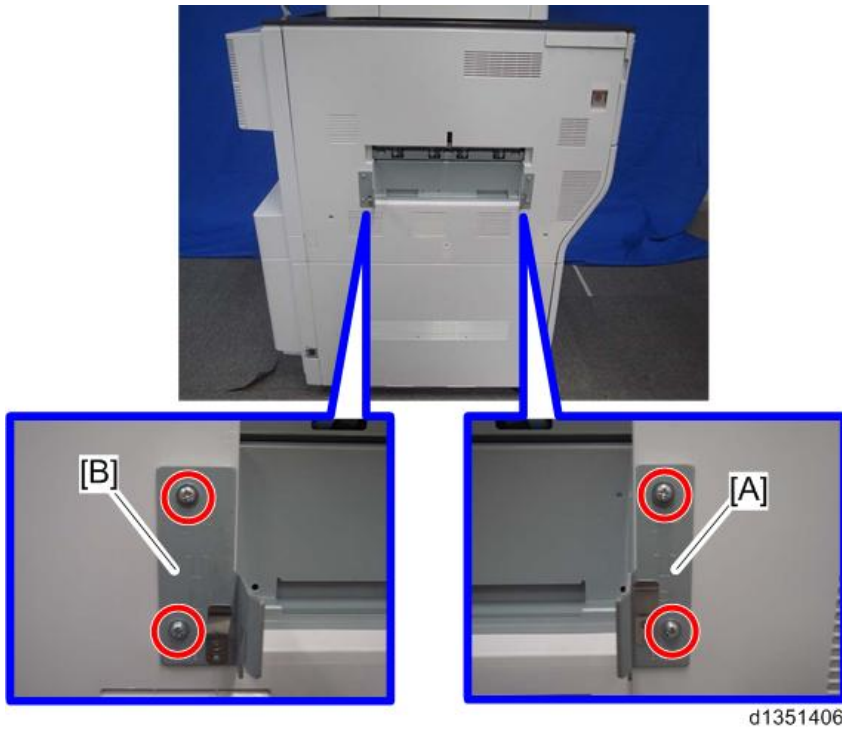
d1351408

Note

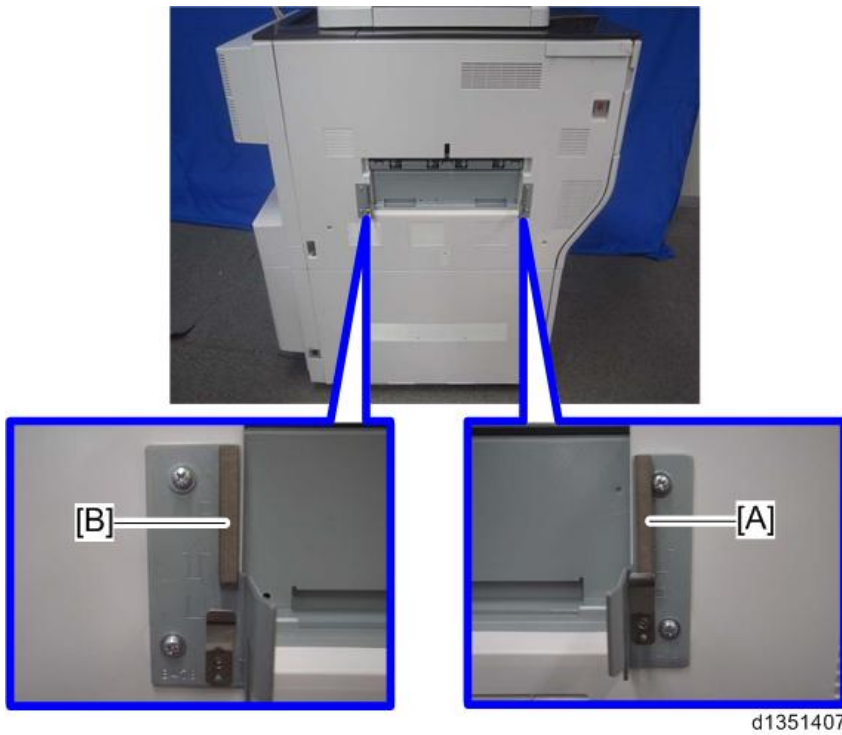
- Keep the screw that you removed.

25. Install the front joint bracket [A]. (🔑 x 2; M4 x 14)

26. Install the rear joint bracket [B]. (🔑 x 2; M4 x 14)



27. Attach the gasket seals [A] and [B].



28. Slowly push the finisher with cover interposer tray against the left side of the machine, keeping its front door open until the brackets go into their slots.



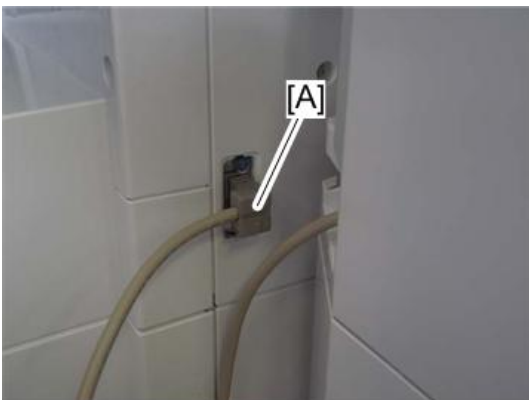
d1351409

29. Push the lock lever [A], and then secure it. (⚙ x 1; screw removed in step 23).



d1351410

30. Connect the finisher connector [A] to the main machine.



d1351196

31. Plug the machine and switch the machine on.

32. Enter the [System Settings].
33. Set the [Interposer] for the [Front Cover Sheet Tray], [Back Cover Sheet Tray], and [Designation Sheet 2 Tray] of the [Tray Paper Settings].

Cover Interposer Tray CI4020 (D712)

Cover Interposer Tray CI4020 (D712) is for installation on the Finisher SR4110 (D707) only and not on Finisher SR4090 (D703)/Booklet Finisher SR4100 (D704).

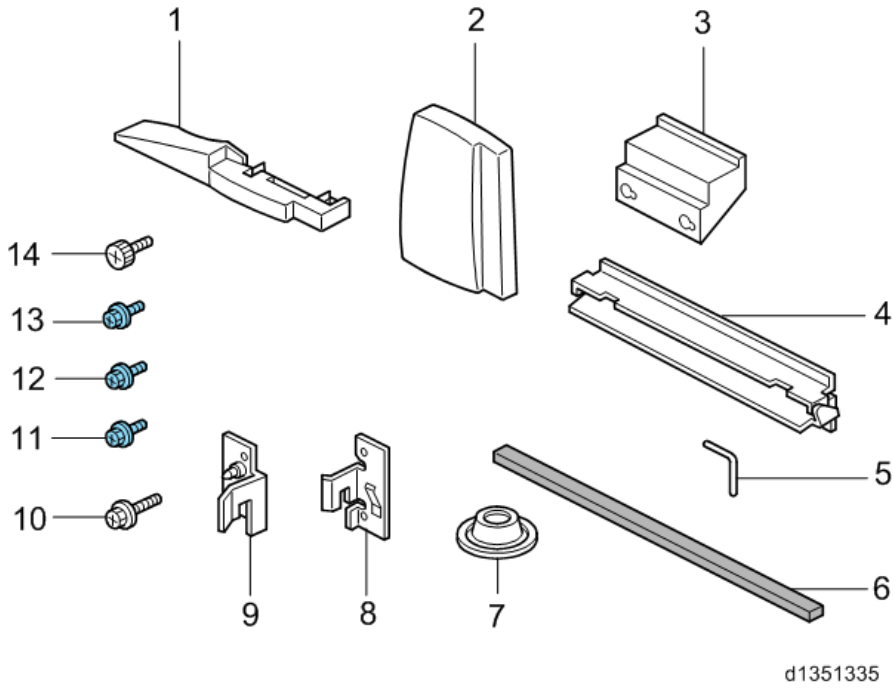
Cover Interposer Tray CI4020 (D712) inserts cover or slip sheets into copied or printed outputs.

2

Accessories

Check the quantity and condition of the accessories in the box against the following list.

No.	Description	Q'ty
1.	Base Cover (Tray Unit)	1
2.	Rear Cover	1
3.	Spacer	1
4.	Relay Guide Plate	1
5.	"L" Hinge Pins (Tray Unit Front Cover)	2
6.	Sponge Strip	1
7.	Leveling Shoes	4
8.	Front Docking Bracket	1
9.	Rear Docking Bracket	1
10.	Screw (M4 x 14)	4
11.	Screw (M3 x 6)	2
12.	Screw (M3 x 8)	1
13.	Screws (M4 x 8)	7
14.	Flat Knob Screw	1

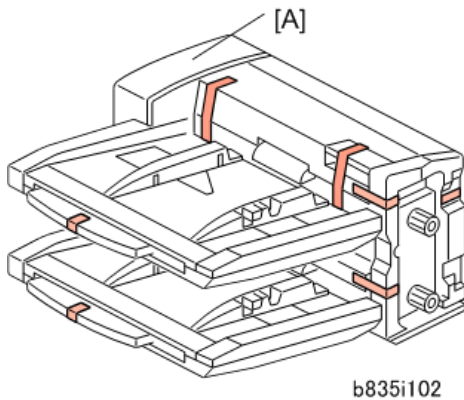


Installation Procedure

Setting up the Unit and Docking to the Copier

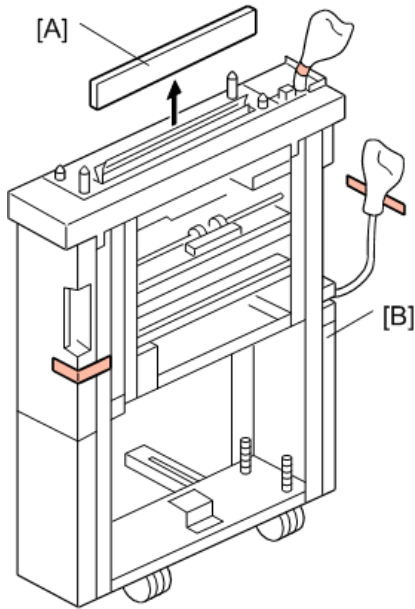
⚠ CAUTION

- Unplug the power cord before starting the following procedure.
1. Remove all the tape and shipping materials from the tray unit [A].



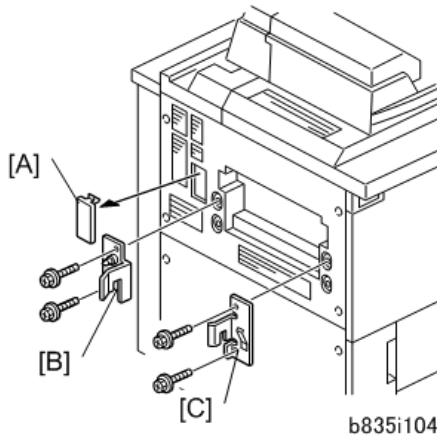
2. Remove cover [A].

3. Remove all tape and shipping materials from the transport unit [B].



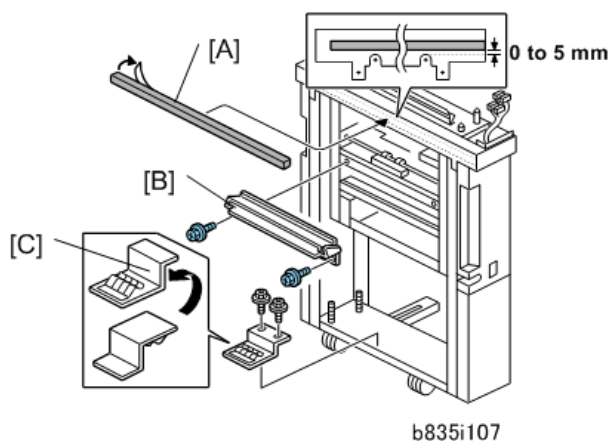
b835i103

4. Remove the interface connector cover [A].
5. Attach the rear docking bracket [B] (⚙️ x2; M4x14).
6. Attach the front docking bracket [C] (⚙️ x2; M4x14).

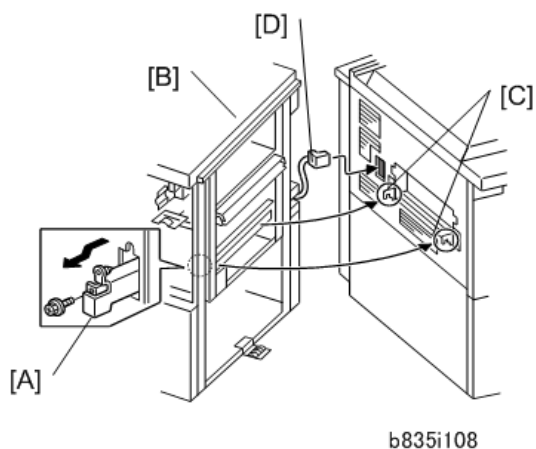


b835i104

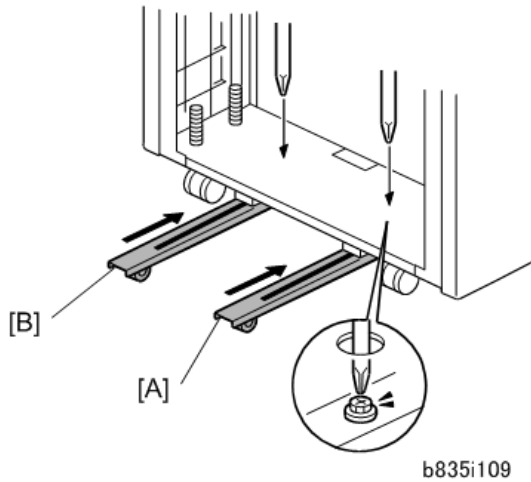
7. Peel the tape from the back of the sponge strip [A] and attach it as shown.
8. Attach the relay guide plate [B] (⚙️ x2; M3x6).
9. Remove the ground plate [C] from the bottom cross-piece (⚙️ x2).
10. Turn the ground plate over.
11. Reattach the ground plate with the same screws as shown (⚙️ x2).



12. Open the front door of the cover interposer tray.
13. Pull out the locking lever [A].
14. Align the finisher [B] with the joint brackets [C], then slowly push the finisher onto the brackets.
15. Connect the finisher cable [D] to the copier
16. Push in the locking lever.
17. Check that the top edges of the finisher are parallel with edges of the finisher (or copier) to the right.
18. Fasten the locking lever [A]. (⚙ x 1)



19. Push the runners [A] and [B] in and re-fasten them again with the screws.



20. Close the front door.

Docking the Next Peripheral Device

The next peripheral device to the left of the cover interposer tray must be installed before you can mount the tray unit on top of the transport unit of the cover interposer tray.

- The tray unit of the cover interposer tray is supported by the top of the next peripheral device in line to the left, as well as the transport unit of the cover interposer.
- The next peripheral device to the left of the cover interposer must be set up and docked to the cover interposer before the transport unit of the cover interposer can be mounted.

Connect the next peripheral unit now.

- Finisher SR4110 (☛ page 185 "Finisher SR4110 (D707)")

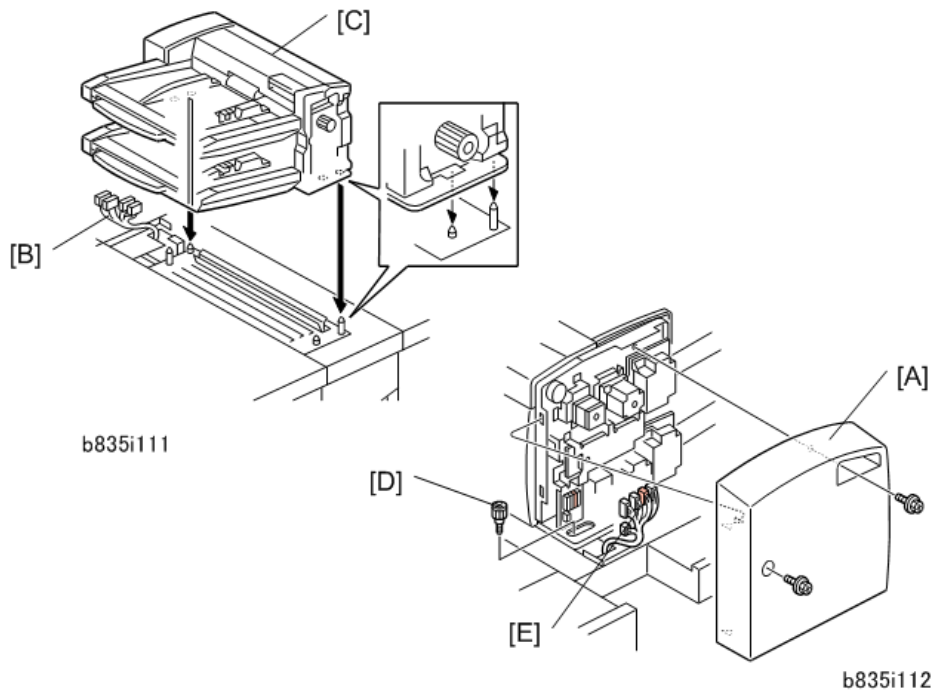
⚠ CAUTION

- Never attempt to mount the cover interposer tray unit until the next device in line has been docked to the transport unit (base) of the cover interposer tray.
- To prevent bending the frame of the tray unit and damaging its alignment, always remove the tray unit from the cover interposer tray transport unit: (1) Before disconnecting either the cover interposer tray or the next peripheral device to the left, or (2) Before doing any maintenance on either the cover interposer tray or the next peripheral device to the left.

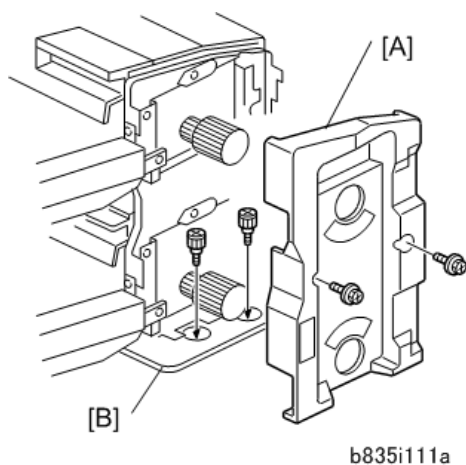
Mounting the Tray Unit

1. Remove the rear cover [A] (🔧 x2).
2. Confirm that the connectors [B] are free.
3. Place the tray unit [C] on top of the cover interposer transport unit.

4. Attach the knob screw [D] (🔩 x1).
5. Connect the harness connectors [E] (🔌 x5)

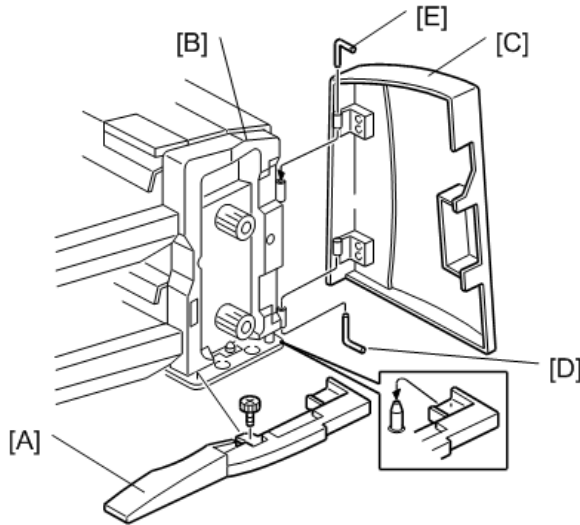


6. Reattach the rear cover.
7. Remove the front inner cover [A] from the dual-tray unit (🔩 x2).
8. Fasten the tray unit to the top of the transport unit with the knob screws [B] (🔩 x2; M4x8).



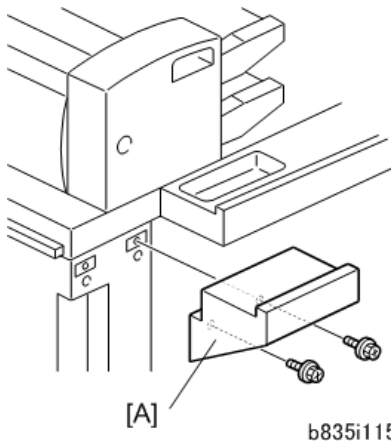
9. Attach the base cover [A] (🔩 x1; M4x10).
10. Confirm that the holes in the cover match the positions of the reference pins.

11. Re-attach the front inner cover [B] (removed at step 7 above).
12. Position the tray unit front door [C] so that its hinges match the posts on the frame of the tray unit.
13. Hold the lower L-pin [D] as shown, insert it halfway, push it up, then rotate it into its groove.
14. Hold the upper L-pin [E] as shown, insert it halfway, push it down, then rotate it into its groove.



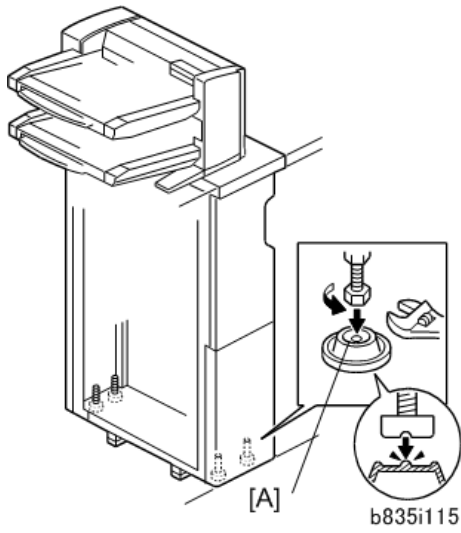
b835i113

15. Attach the spacer [A] to the rear of the transport unit (⚙️ x2; M4x12).



b835i115

16. Set the leveling shoes [A] (x4) under the feet.



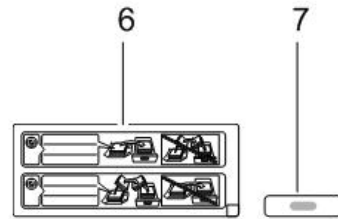
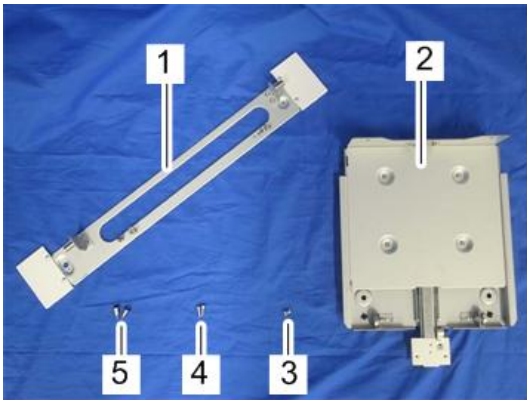
17. Turn the nuts to adjust the height of the cover interposer until it is level.

LCIT RT4020 (D709)

Accessories

Check the quantity and condition of the accessories in the box against the following list.

No	Description	Q'ty
1	Stay	1
2	Rail	1
3	Tapping screws – M3 x 6	2
4	Tapping screws – M4 x 14	2
5	Shoulder screws	2
6	Decal: caution chart: paper set direction	1
7	Decal: LED	1

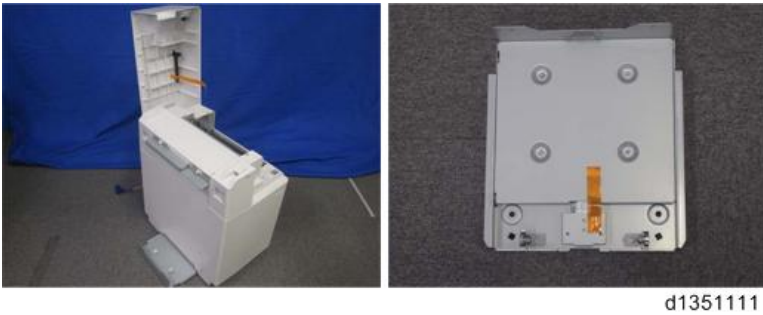


d1351241

Installation Procedure

⚠ CAUTION

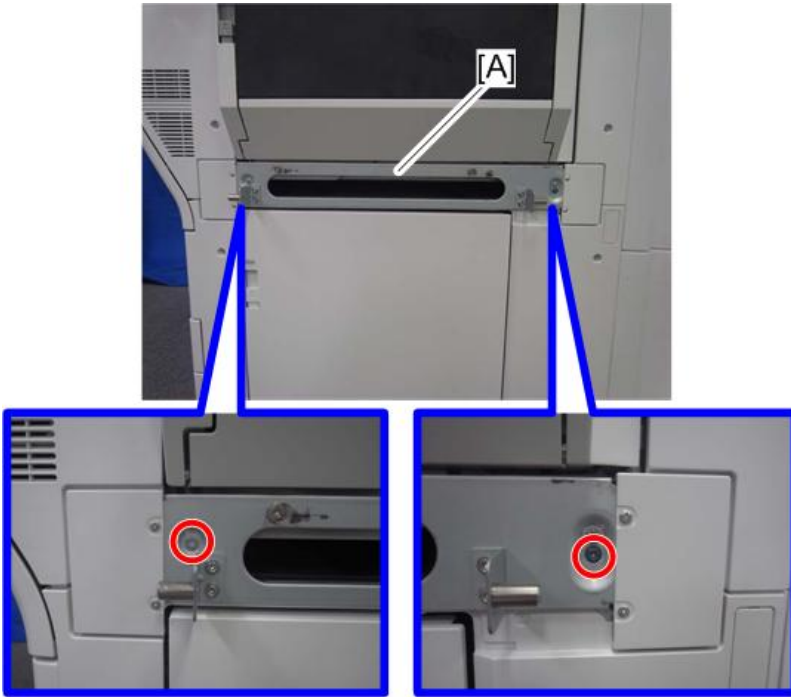
- Always switch the machine off and unplug the machine before doing the following procedure.
1. Remove all tape and retainers from the LCT.



2. Remove the paper entrance cover [A] from the main machine. (🔧 x 2)



3. Install the stay [A] on the main machine. (M3 x 6; 🔧 x 2)




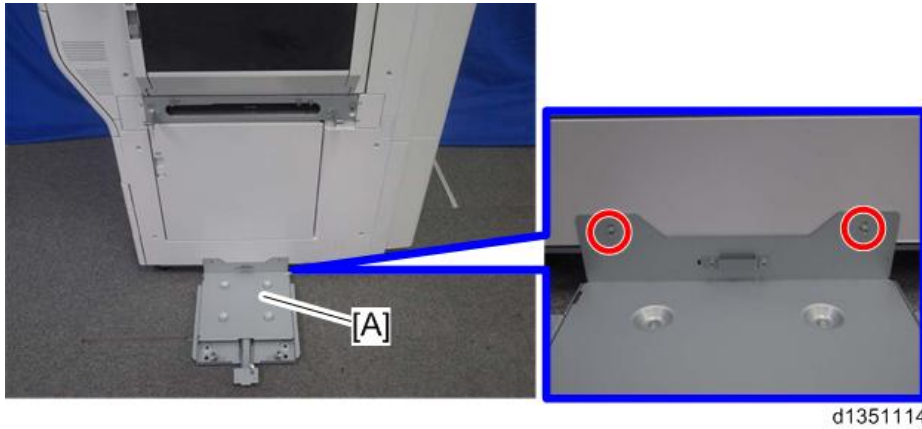
d1351113

4. Remove the connector cover [A] from the main machine.



d1351123

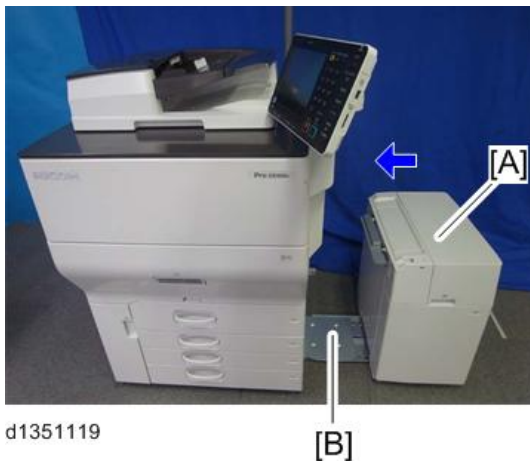
5. Install the rail [A] on the right side of the main machine. (M4 x 14;  x 2)



Note

- The rail must be standing on the floor. If the screw holes on the LCT are too high or too low, and do not overlap the vertical screw slots in the rail, the rubber feet of the rail must be adjusted. (See page 336 "Adjustment for the Rubber Foot Positions on the Rail")

6. Set the LCT [A] on the rail [B], and then slide it towards the main machine.



7. Install the LCT on the main machine.



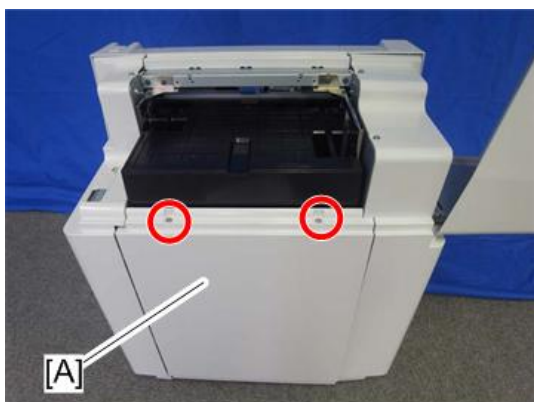
d1351120

8. Open the top right cover [A].



d1351068

9. Right cover [A] (⚙️ x2)



d1351074

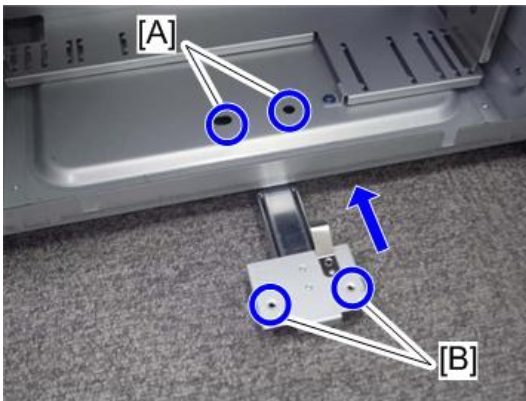
10. Fasten the rail to the LCT. (shoulder screws; ⚙️ x 2)



d1351122

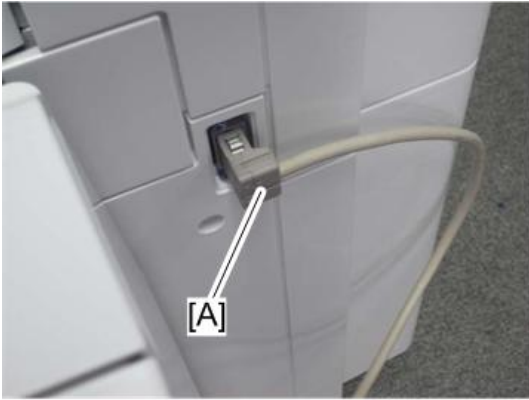
Note

- When you fasten the rail to the LCT, the screw holes [B] of the rail need to be in the same position as the screw holes [A] of the LCT.



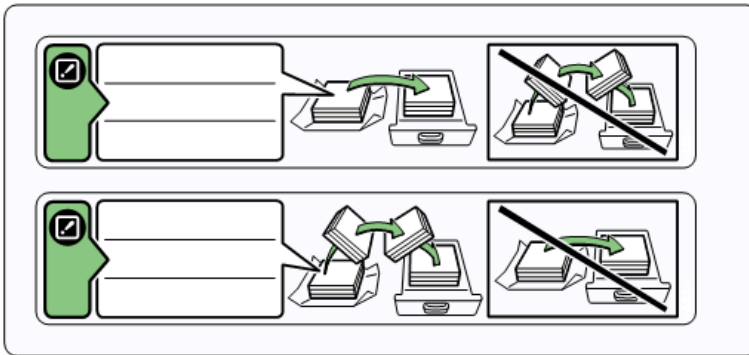
d1351121

11. Reattach the right cover, and then connect the plug [A] of the LCT power connector to the side of the machine.



d1351124

12. Prepare the Decal: caution chart: paper set direction [A].

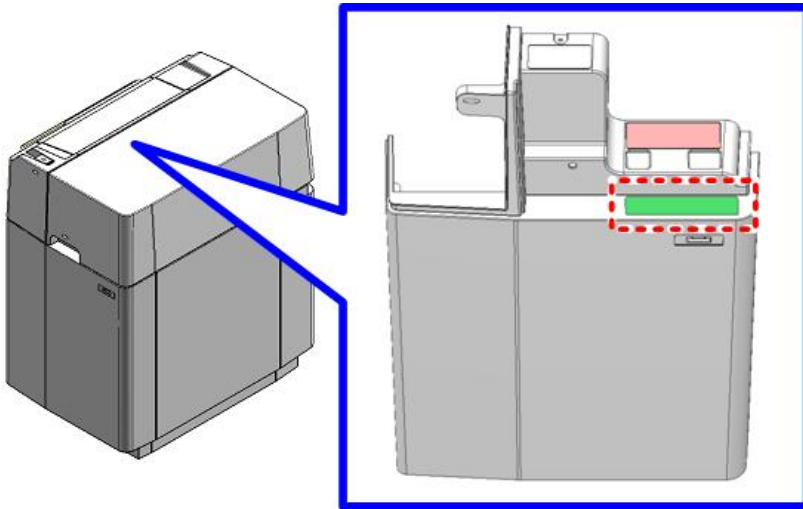


[A]

d1354017

13. Open the top right cover and attach the decal as shown below.

Select one of the decals according to the paper that will be used by the customer.

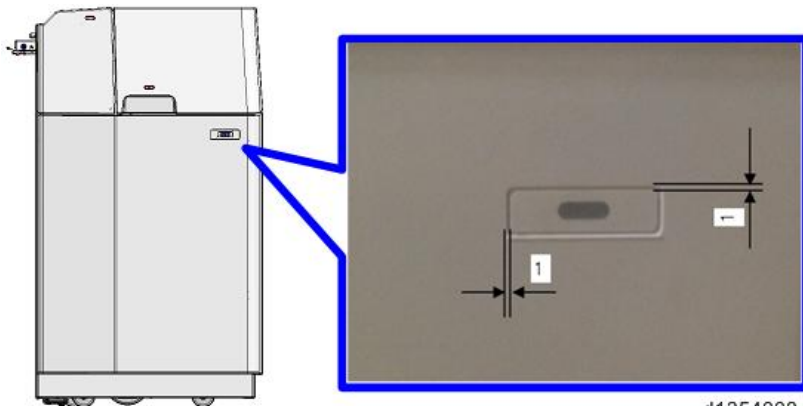


d1354007

↓ **Note**

- Paper type, brand, etc can be written on the blank space.



14. Attach a decal to the front.



d1354008

D137/D138: Attach the Decal: LED supplied with the LCIT.

D135/D136: Attach a blank sheet on the paper size decal supplied with the main machine.

1	A4	A5	8¼×13	11×17
2	A4	B4	8½×11	12×18
3	A4	B4	8½×11	SRA3
4	A4	B5	8½×11	13×19
A3	A4	B5	8½×11	
A3	A4	5½×8½	8½×13	
A4	A5	5½×8½	8½×14	
	7¼×10½	8½×14		
	7¼×10½	11×17		

d1354005

15. Plug in the machine and turn it on.

Note

- To move down the paper tray, cover the photosensor with your left hand and press the bottom plate operation button [A].

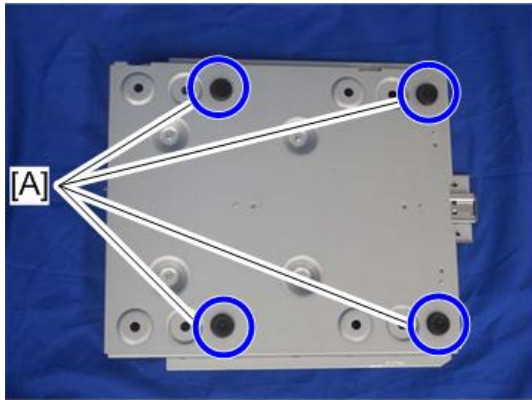


d1351125

Adjustment for the Rubber Foot Positions on the Rail

The rail must be standing on the floor. If the screw holes on the LCT are too high or too low, and do not overlap the vertical screw slots in the rail, the rubber feet of the rail must be adjusted. Change the rubber foot positions on the rail before installing the rail.

- The rubber feet are placed at [A] as shown below.



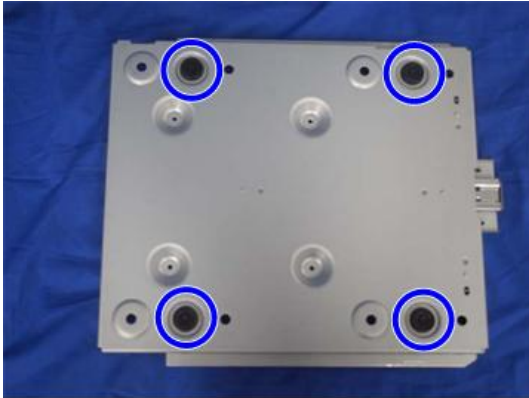
d1351117

2. The slotted screw holes in the rail for attaching the rail to the LCT have a tolerance for the height (-/+ 2 mm). If you can install the rail within -/+ 2 mm in height, you do not need to do the following steps.
3. If you cannot install the rail within -/+ 2 mm in height, change the rubber foot position to adjust the height of the rail.
 - If the screw holes of the main machine are above the slotted holes of the rail, change the rubber foot position as shown below.



d1351115

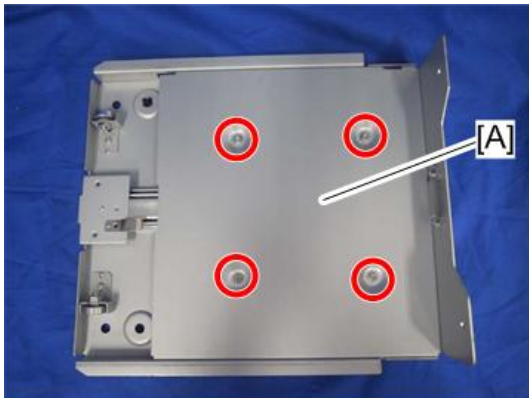
- If the screw holes of the main machine are below the slotted holes of the rail, change the rubber foot position as shown below.



d1351118

Note

- When changing the rubber foot position, remove the rail bracket [A]. (⚙ x 4). After changing the rubber foot position, reinstall the rail bracket.

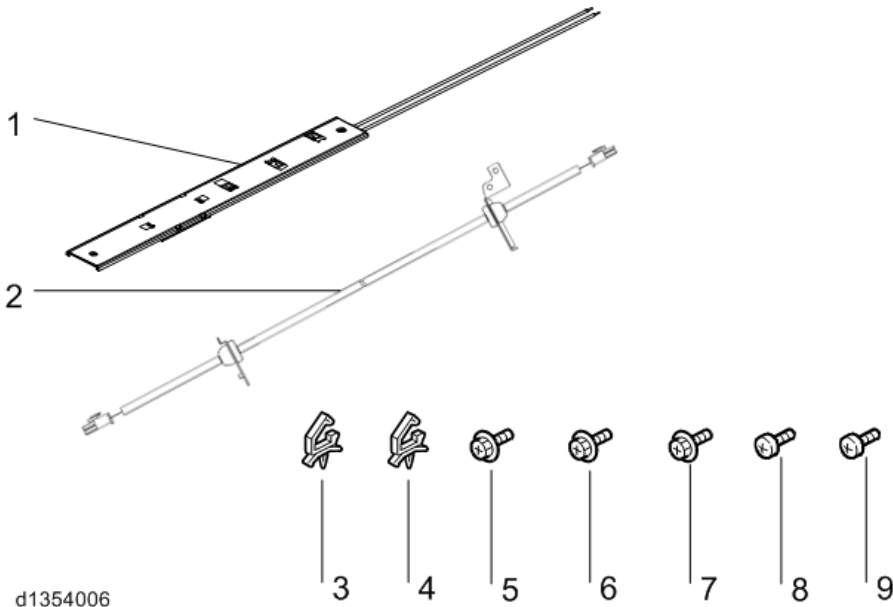


d1351116

LCIT (D709) Tray Heater

Accessories

Check the accessories against the list below.

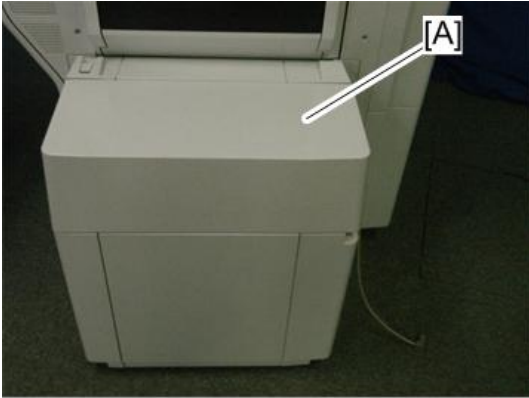


d1354006

No	Description	Q'ty
1	Heater: 15W	1
2	Heater Harness	1
3	Harness clamp	4
4	Harness clamp	1
5	Tapping Screw:4x6	2
6	Tapping Screw:4x8	2
7	Tapping Screw - M3x6	2
8	Screw: Polished Round/Spring:M4x8	1
9	Screw: Polished Round/Spring:M3x8	1

Installation

1. Open the top right cover [A].



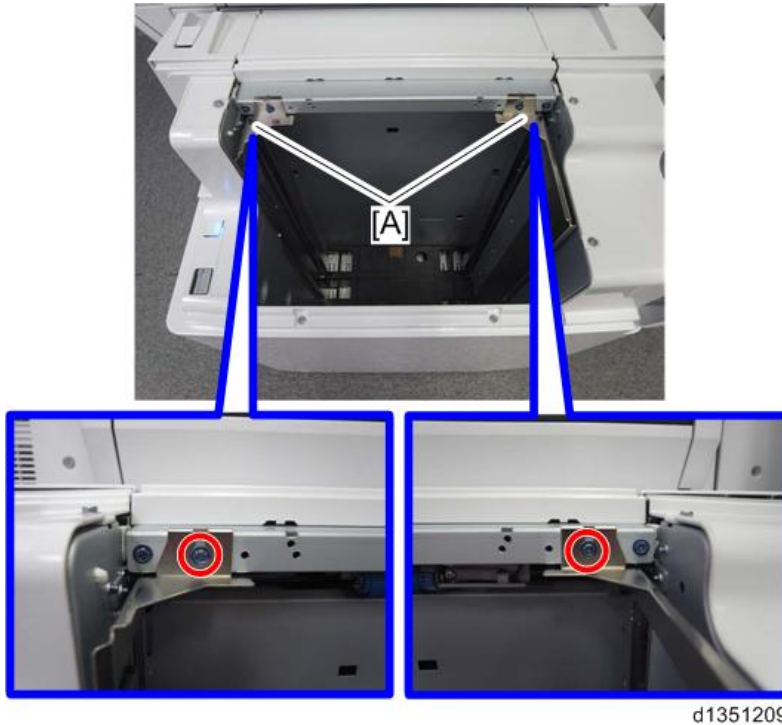
d1351127

2. To move down the paper tray, cover the photosensor with your left hand and press the bottom plate operation button [A].



d1351125

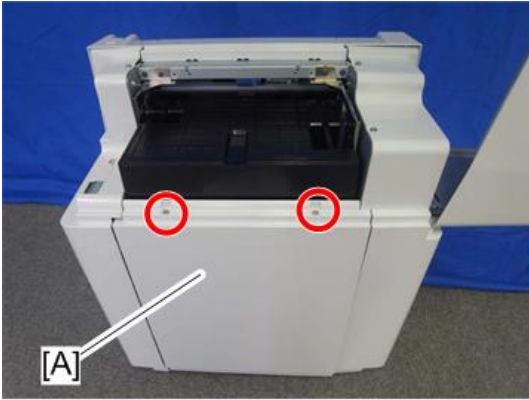
3. Remove the side fences [A]. (🔧 x 4)



4. Close the top right cover to move the paper tray upward. (The paper tray stops in about 30 seconds.)
5. Switch the machine off and unplug the machine.
6. Disconnect the LCT power connector from the machine.
7. Open the top right cover [A].



8. Right cover [A] (⚙️ x2)



d1351074

9. Release the LCT from the main machine. (⚙️ x 2)



d1351122

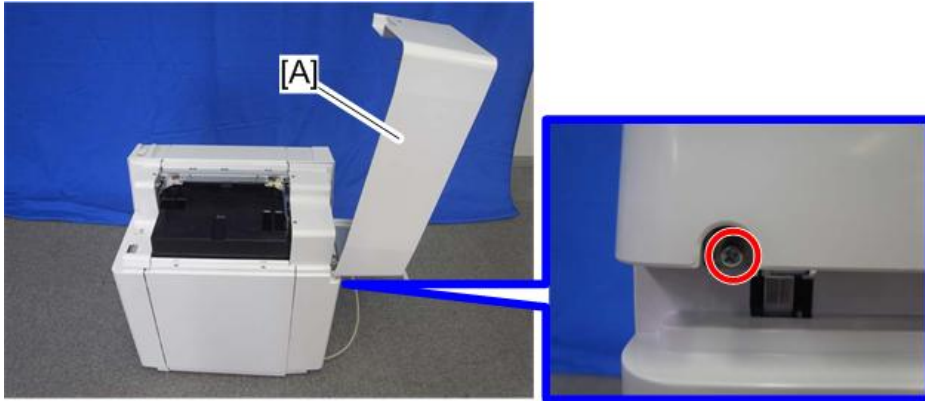
10. Slide the LCT [A] against the main machine, and then remove it from the rail [B].



d1351128

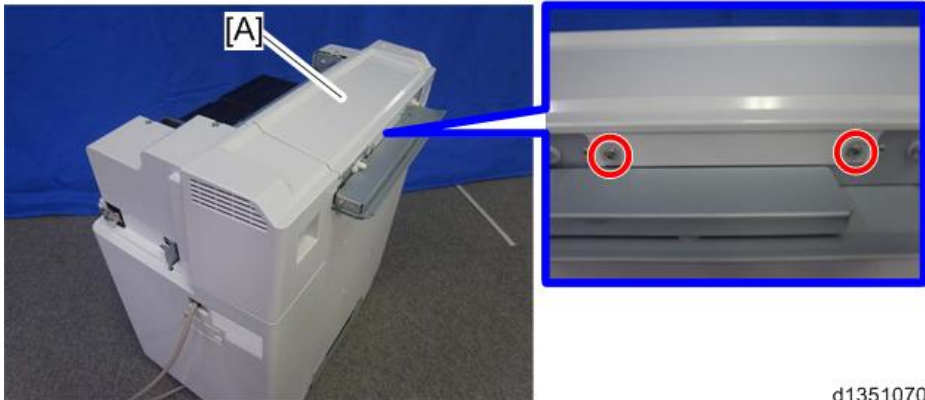
[B]

11. Top right cover [A] (⚙️ x1)



d1351069

12. Top left cover [A] (x2)



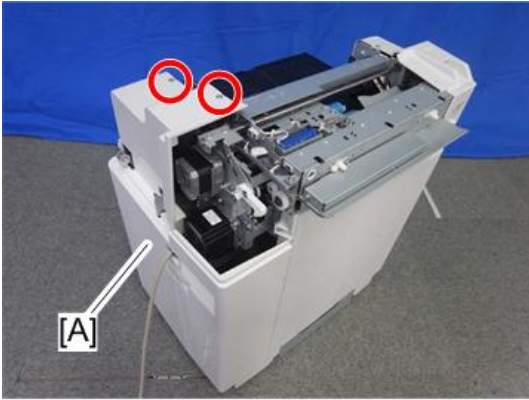
d1351070

13. Rear left cover [A] (x2)



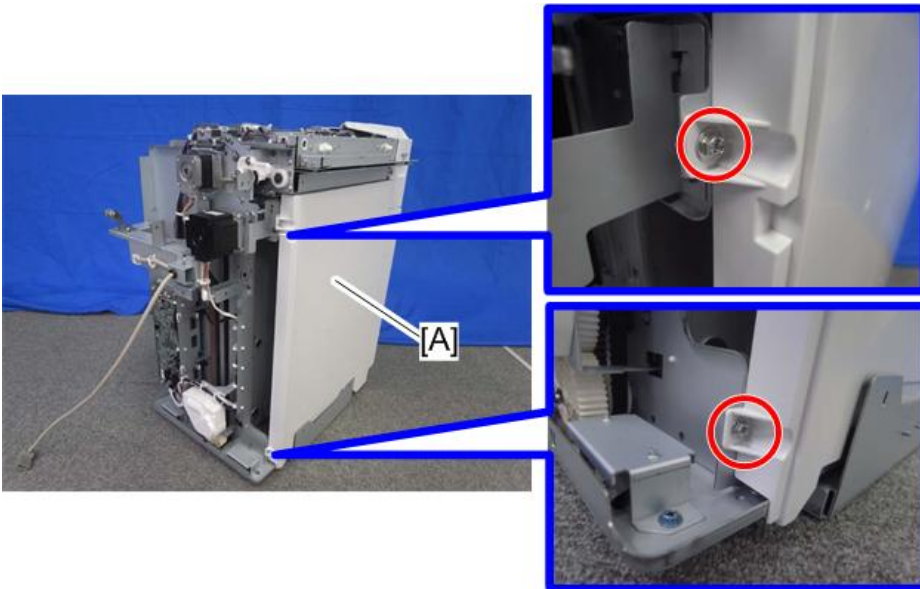
d1351071

14. Rear cover [A] (x2)



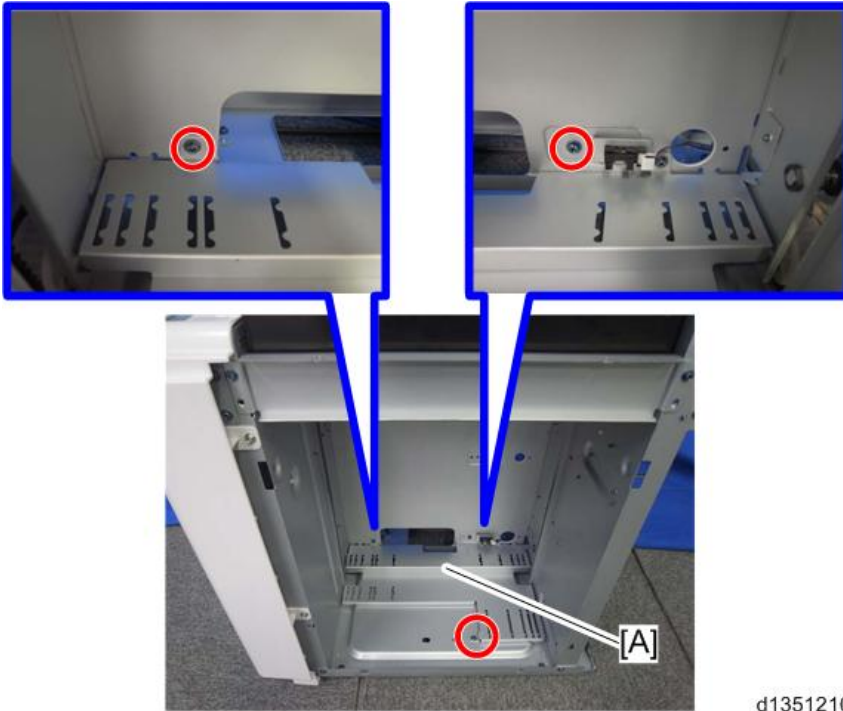
d1351073

15. Left cover [A] (🔩 x2)



d1351075

16. Remove the bottom bracket [A]. (🔩 x 3)



d1351210

17. Attach the clamp [A] on the undersurface of the LCT. (📎 x 1)

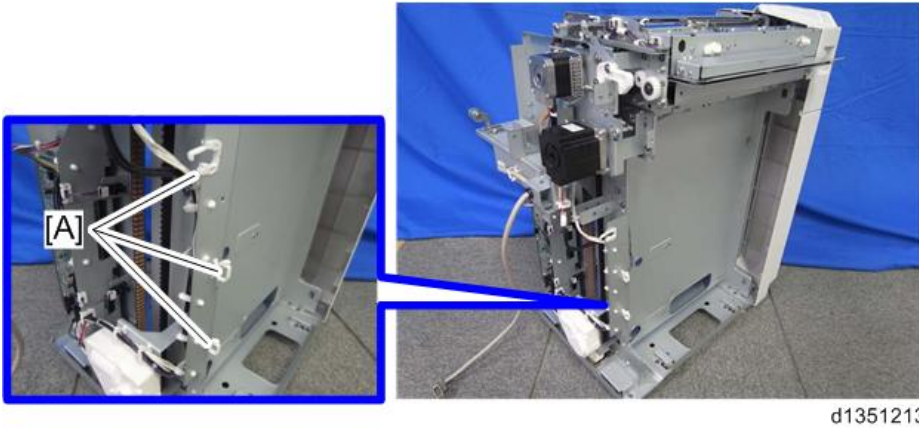


d1351211

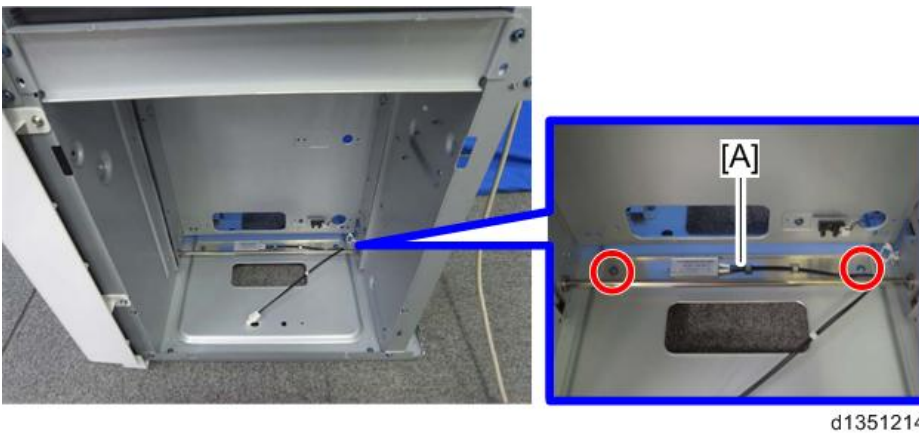
18. Attach the clamp [A] on the undersurface of the LCT. (📎 x 1)



19. Attach the three clamps [A] on the front side of the LCT. (🔧 x 3)



20. Install the tray heater [A] in the LCT. (M4 x 6; 🔧 x 2)



21. Route the heater harness to the right side of the LCT as shown below. (🔧 x 1)



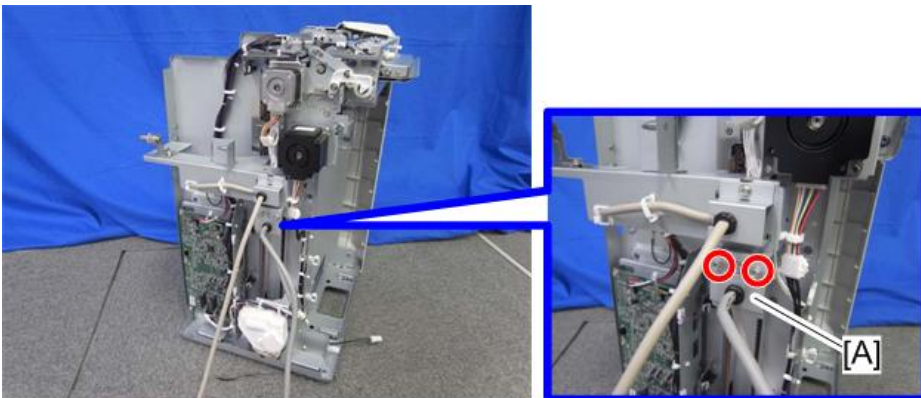
d1351215

22. Clamp the harness routed from the left side of the LCT. (🔧 x 1)



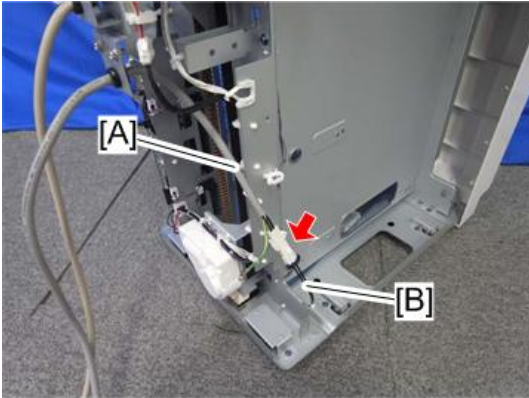
d1351216

23. Install the heater bracket [A] in the LCT. (M4 x 8; 🔧 x 2)



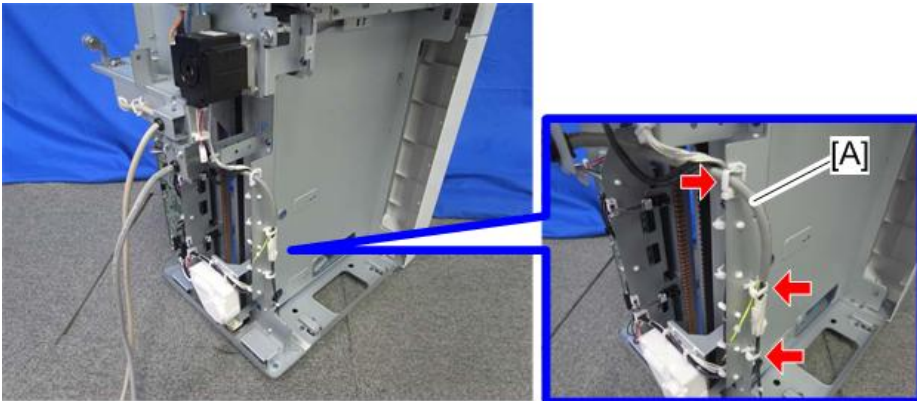
d1351217

24. Connect the heater bracket [A] and heater harness [B]. (🔧 x 1)



d1351218

25. Route the heater harness and heater bracket [A] as shown below. (🔧 x 3)



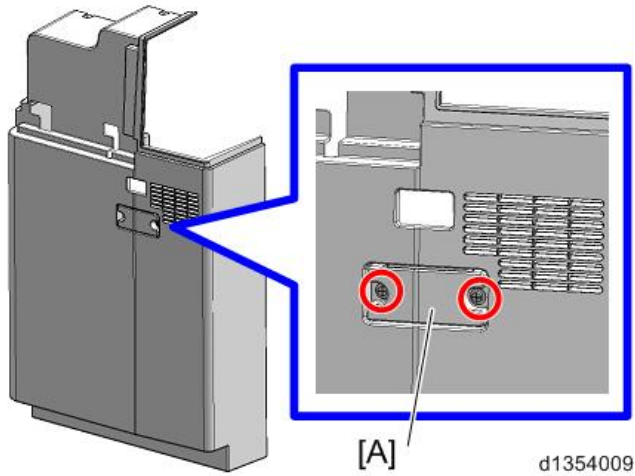
d1351219

26. Attach the ground wire [A] to the LCT. (M4 x 8; 🛠 x 1)



d1351220

27. Remove the heater harness cover [A] from the rear cover (🔧 x 2).



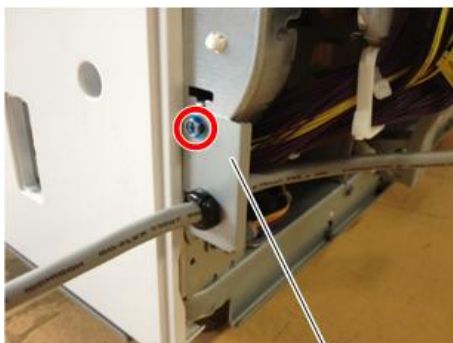
28. Reattach the following covers.

- Left cover
- Rear cover
- Rear left cover
- Top left cover
- Top right cover

When attaching the rear cover, pass the heater harness through the hole where the heater harness cover was.

29. Remove the rear lower cover of the main machine.

30. Fix the heater bracket [A]. (🔩 x 2)

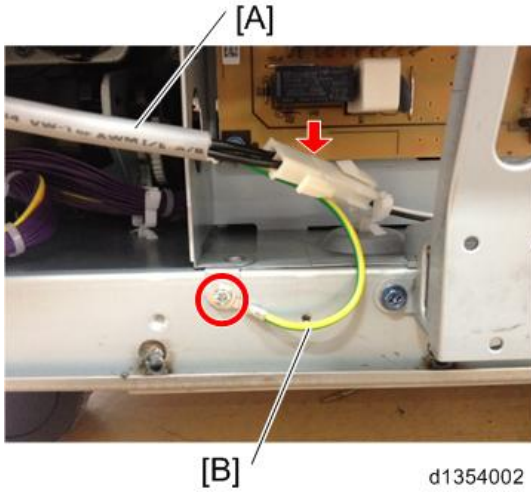


[A]

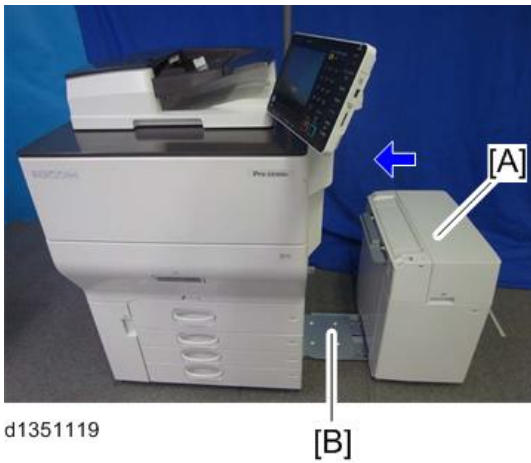
d1354001

31. Attach the heater harness [A] and ground wire [B]. (🔌 x 1, 🔩 x 1)

To attach the ground wire, remove the screw and replace it with the polished round screw M3.




- 32. Attach the rear lower cover of the main machine.
- 33. Set the LCT [A] on the rail [B], and then slide it towards the main machine.



- 34. Install the LCT on the main machine.



d1351120

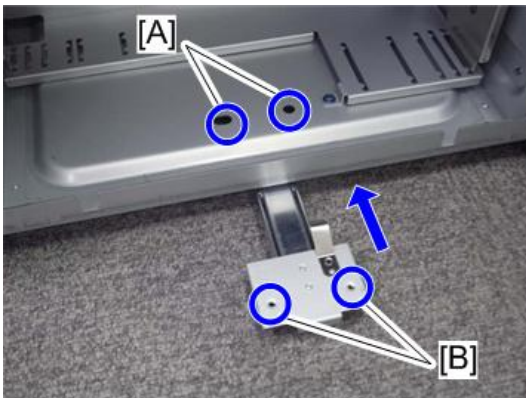
35. Open the top right cover, and then fasten the rail to the LCT. (shoulder screws;  x 2)



d1351122

Note

- When you fasten the rail to the LCT, the screw holes [B] of the rail needs to be in the same position as the screw holes [A] of the LCT.



d1351121

36. Reattach the right cover. (⚙️ x 2)
37. Remove the cover of the main machine.
38. Connect the heater bracket to the main machine.
39. Reattach the cover of the main machine.
40. Connect the LCT power connector to the main machine, and then turn on the main power.
41. To move down the paper tray, cover the photosensor with your left hand and press the bottom plate operation button [A].



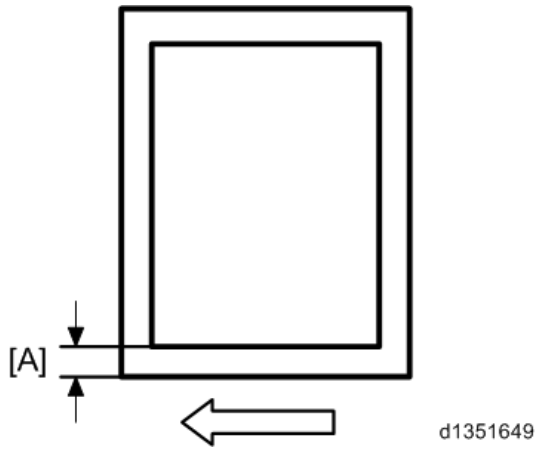
d1351125

42. Reattach the side fence.
43. Close the top right cover.

Image Adjustments: Side-to-side registration

1. Use the Trimming Area Pattern (SP2-109-003, No. 14) to print the test pattern.
2. Go to SP1-003-007 (Side-to-Side Reg: LCT).
3. Load paper (A4 LEF) in the LCT tray, and then copy a couple of sheets.
4. Enter the value in SP1-003-007 to adjust the blank margin [A] to 2 mm.

The default value is 0mm. Press [+] to broaden the margin, and press [-] to narrow it. You can adjust the value in 0.1 mm intervals.



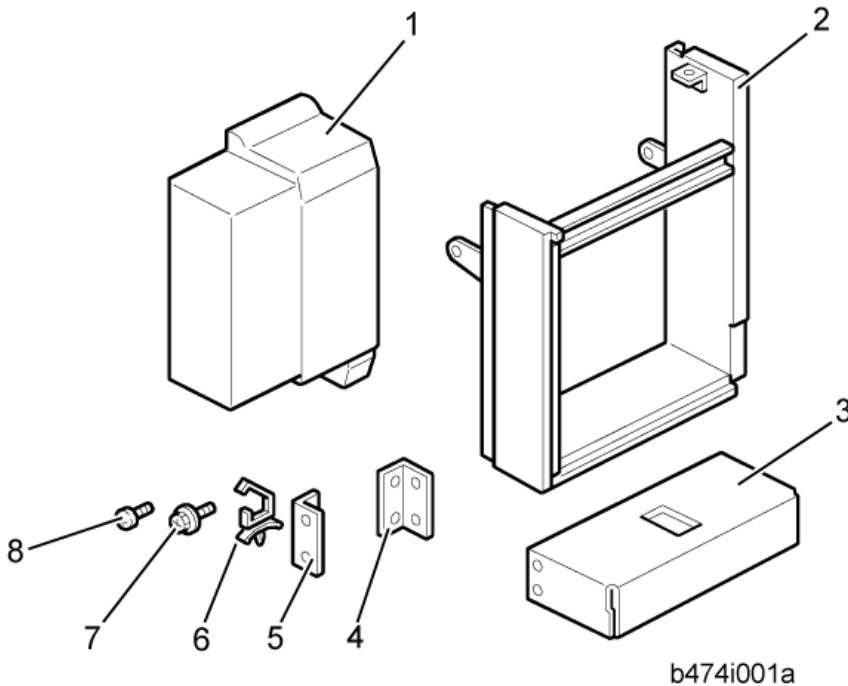
5. Exit the SP mode.

8 1/2" x 14" Paper Size Tray Type M2 (D745)

Component List

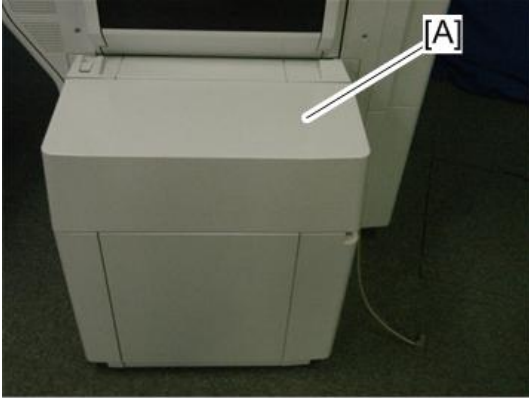
Check the quantity and condition of the accessories in the box against the following list.

No.	Description	Q'ty
1	Cover	1
2	B4/LG frame	1
3	Bottom plate extension	1
4	Rear bracket	1
5	Front bracket	1
6	Harness clamp	1
7	Tapping screws - M4x8	6
8	Tapping bind screws - M4x8	4



Installation Procedure

1. Open the upper right cover [A].



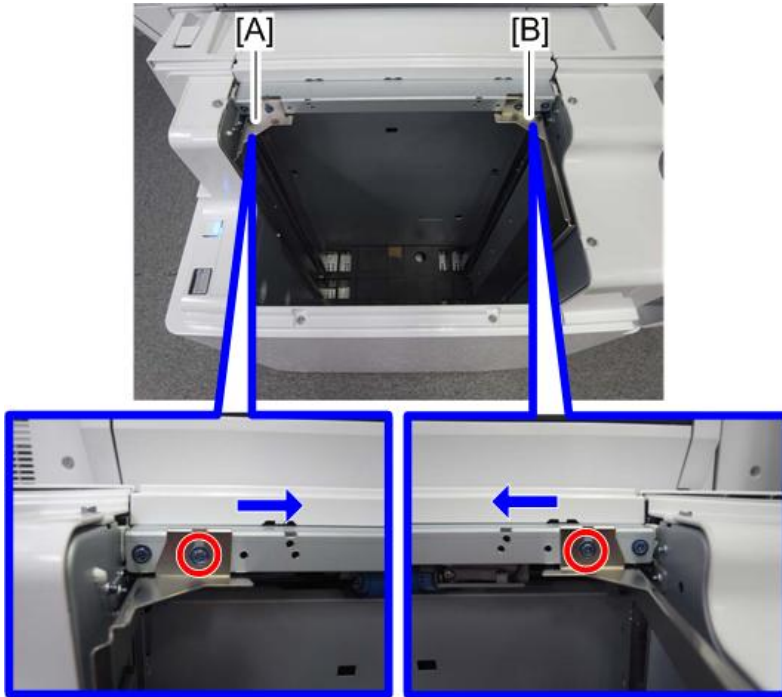
d1351127

2. Move down the paper tray, cover the photosensor with your left hand and press the bottom plate operation button [A].



d1351125

3. Move the front side fence [A] and rear side fence [B] to the B4 or LG position.



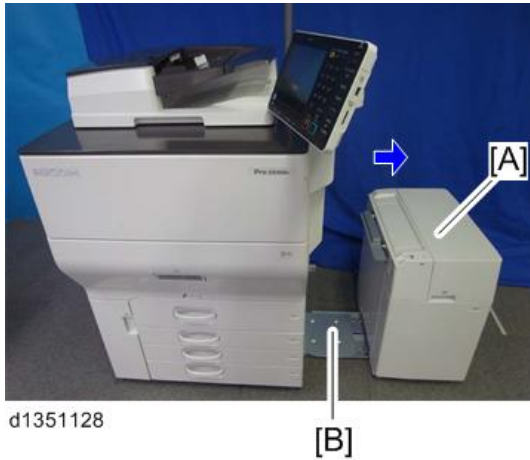
d1351230

4. Close the upper right cover [A] to move the paper tray up. (The paper tray stops in about 30 seconds.)
5. Switch the machine off and unplug the machine.
6. Disconnect the LCT power connector from the machine.
7. Remove the right cover of the LCT. (☛ page 328 "LCIT RT4020 (D709)")
8. Release the LCT from the main machine. (🔧 x 2)



d1351122

9. Slide the LCT [A] against the main machine, and then remove it from the rail [B].



10. Remove the following covers. (☛ page 328 "LCIT RT4020 (D709)")

- Upper right cover
- Upper left cover
- Rear left cover
- Rear cover
- Left cover

11. Remove the lower limit sensor bracket [A]. (🔧 x 1, 📏 x 1)

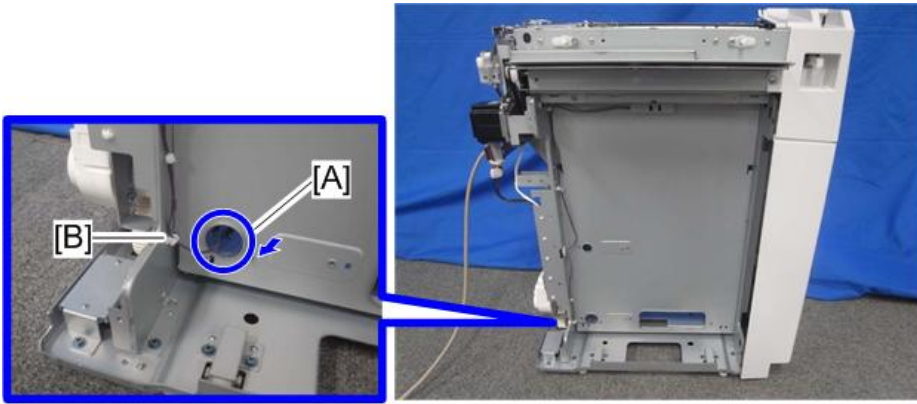


12. Install the lower limit sensor bracket [A]. (🔧 x 1)



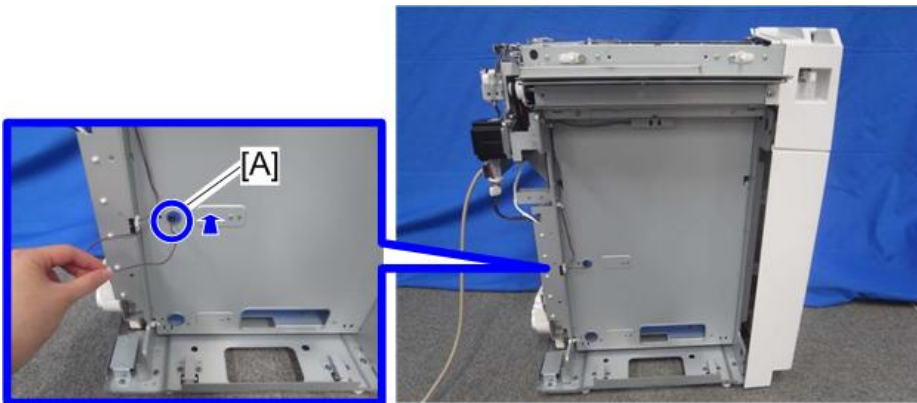
d1351658

- 13. Pull the sensor connector wire removed in step 11 through the hole [A] from the left side of the LCT.
- 14. Release the sensor connector wire from the clamp [B].



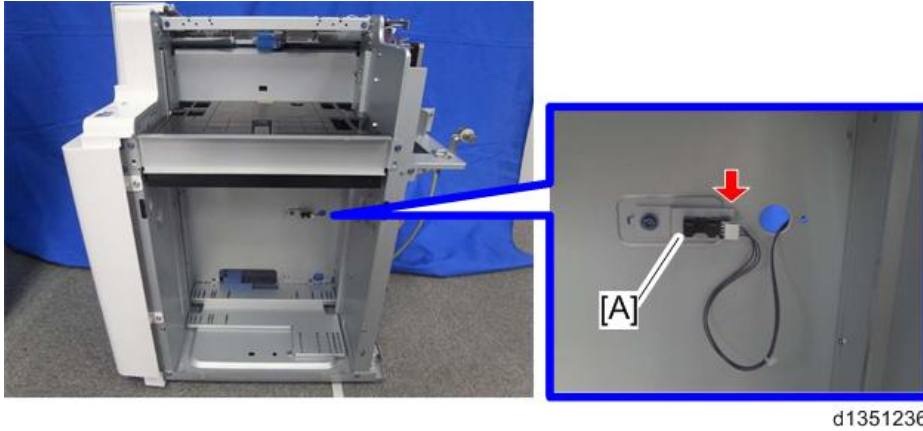
d1351659

- 15. Put the sensor connector wire to the right side of the LCT through the hole [A].



d1351660

- 16. Connect the sensor connector wire to the upper limit sensor [A]. (🔌 x 1)



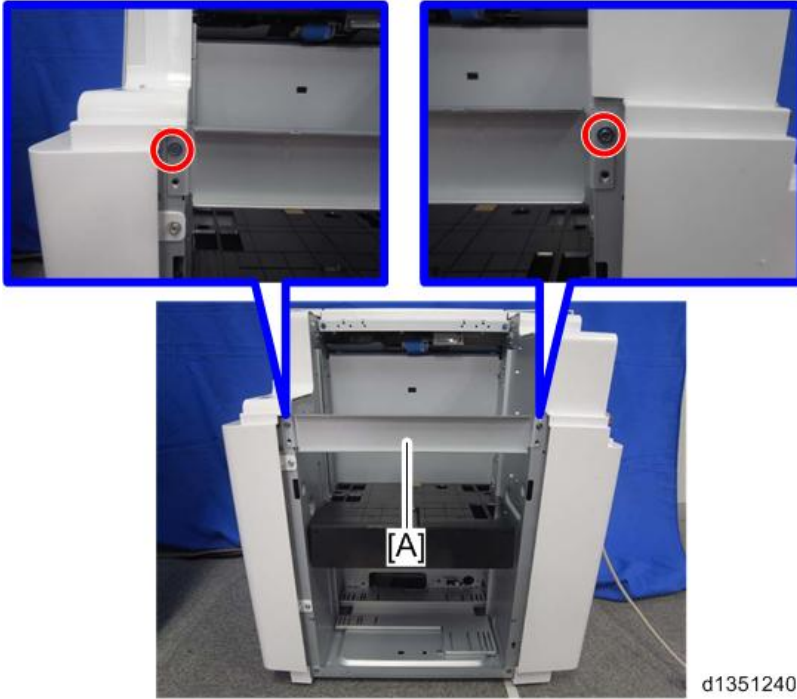
17. Attach the harness clamp to the rear of the plate [A]. Use this clamp to hold the sensor connector wire.



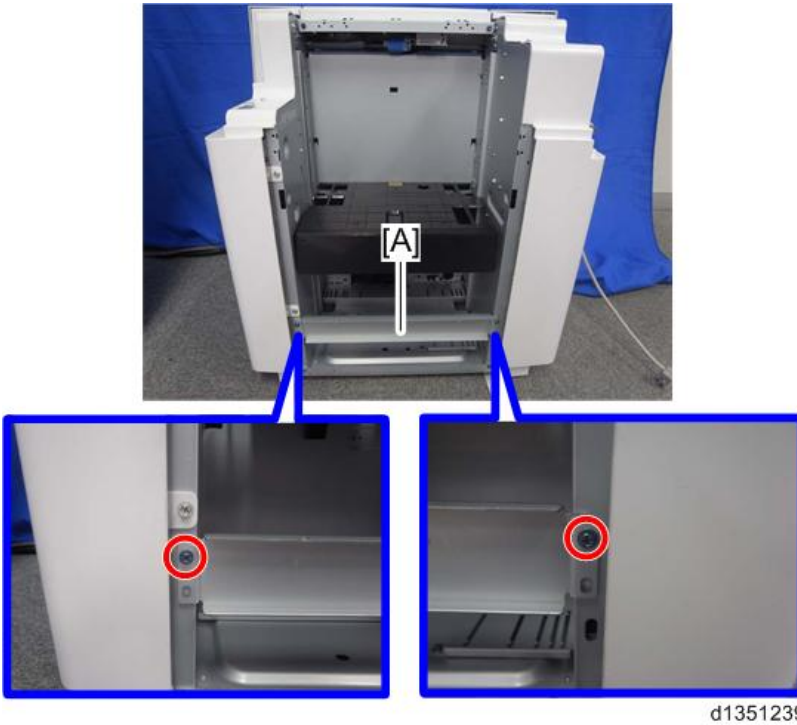
18. Reattach the following covers.

- Left cover
- Rear cover
- Rear left cover
- Upper left cover

19. Remove the right stay [A]. (⚙ x 2)



20. Attach the right stay [A] below. (⚙ x 2)

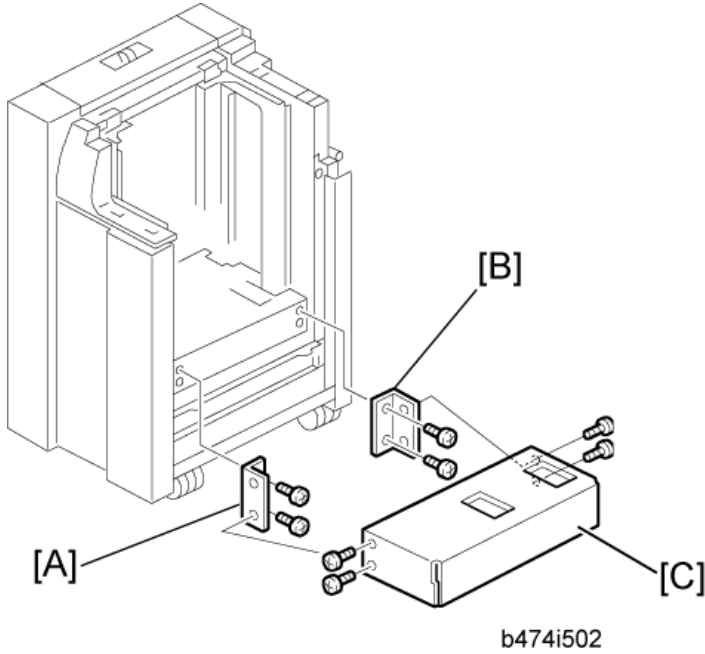


21. Attach the front bracket [A] with the beveled corner down. (⚙ x 2)

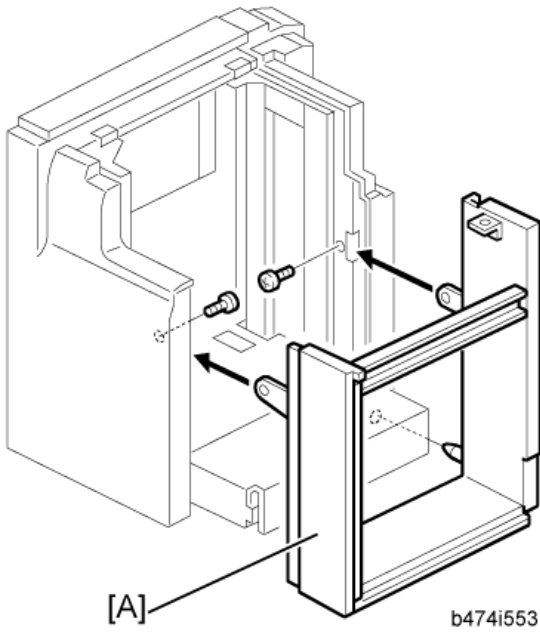
Note

- If the brackets are not easy to install, lift the bottom plate with your hand.

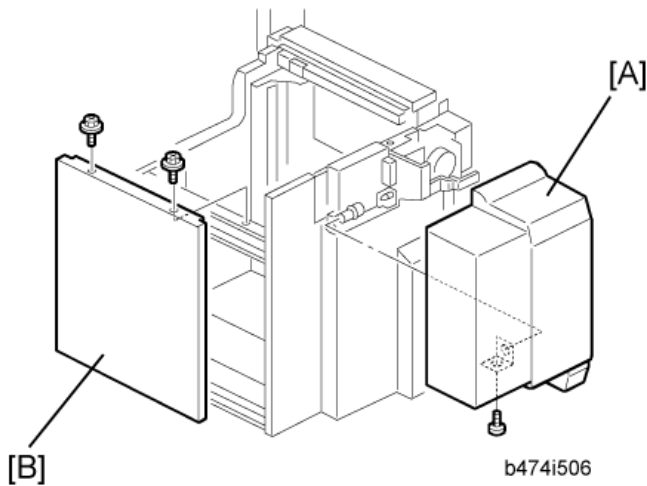
22. Attach the rear bracket [B] with the beveled corner down. (⚙️ x 2)
23. Attach the bottom plate extension [C] with the hex screws. (⚙️ x 4)



24. Attach the B4/LG frame [C] with the hex screws. (⚙️ x 2)



- 25. Attach the right cover [B]. (🔩 x 2)
- 26. Attach the upper right cover [A] provided with the 8 1/2" x 14" Paper Size Tray Type M2. (🔩 x 1)



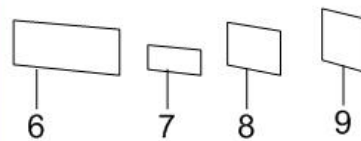
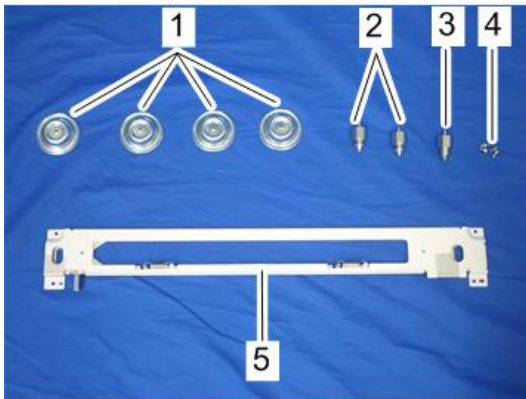
- 27. Install the LCT on the main machine. (🖨️ page 328 "LCIT RT4020 (D709)")
- 28. Plug in the machine and turn it on.
- 29. Go into the SP mode and do 5-959-003.
- 30. Input "5" for B4 SEF or "6" for 8.5" x 14" SEF.

LCIT RT4030 (D710)

Accessory Check

Check the quantity and condition of the accessories in the box against the following list.

No	Description	Q'ty
1	Shoes	4
2	Upper Joint Brackets	2
3	Lower Joint Bracket	1
4	Tapping screws – M4 x 8	4
5	Stay	1
6	Decal: caution chart: paper set direction	1
7	Decal: LED	1
8	Decal: transport: cover	
9	Decal: misfeed removal: manual feed: 250	



d1351250

Installation Procedure

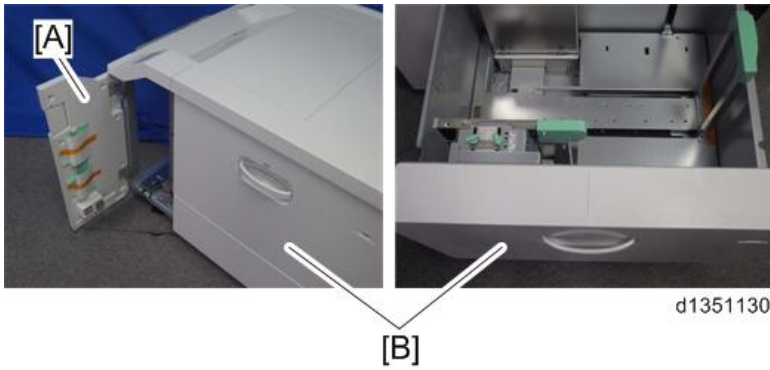
⚠ CAUTION

- Always switch the machine off and unplug the machine before doing the following procedure.

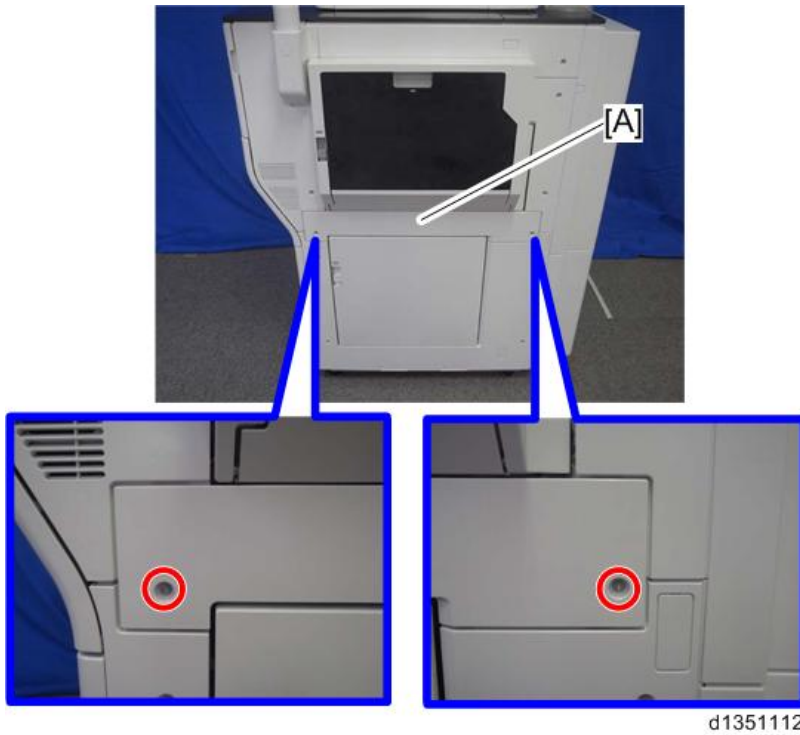
1. Remove all tape and retainers from the LCT.




2. Open the front door [A] and paper tray unit [B], and remove all tape and retainers from the LCT.



3. Remove the paper entrance cover [A] from the main machine. (🔧 x 2)



4. Install the stay [A] on the main machine. (M4 x 8;  x 2)

 **Note**

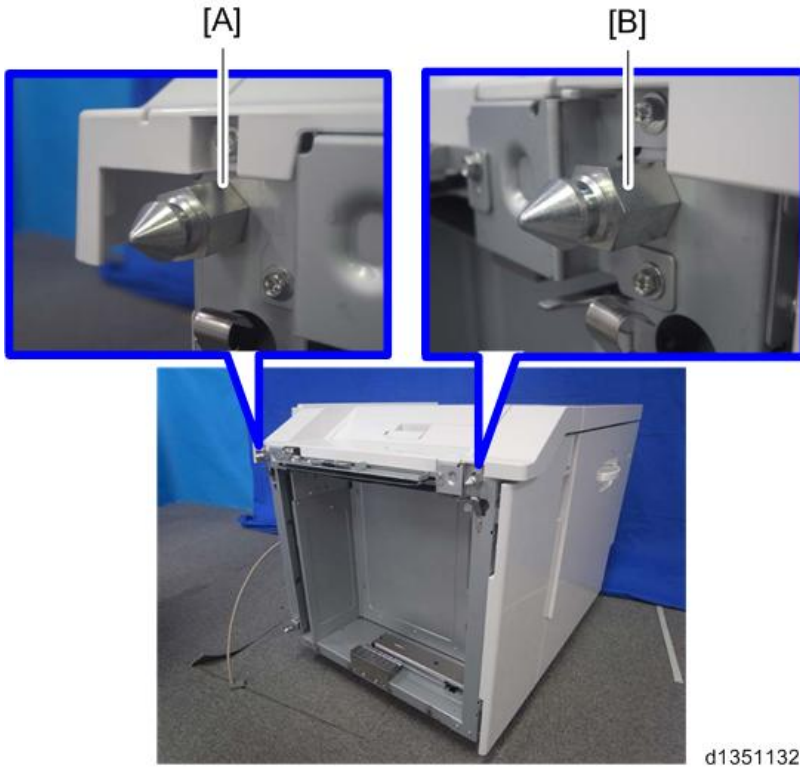
- Set the embossed side of the stay against the main machine.



5. Remove the connector cover [A] and LCT connecting cover [B].



6. Install the upper joint brackets [A] and [B].



d1351132

7. Install the lower joint brackets [A].



d1351133

8. Remove the ground plate [A]. (⚙ x 2)



9. Change the orientation of the ground plate, and then install it as shown below. (⚙️ x 2)



10. Open the front cover [A].


11. Remove the screw [B] and release the lock plate [C]. (M4 x 8; ⚙️ x 1)



12. Install the LCT [B] on the main machine [A].



d1351138

13. Reattach the left corner plate [A]. (M4 x 8;  x 1)



d1351139

14. Set the leveling shoes [A]. (front left, front right, rear left, rear right side of the LCT)



d1351140

15. Connect the LCIT I/F cable [A] to the main machine.



d1351141

16. Open the by-pass tray unit [A].



d1351751

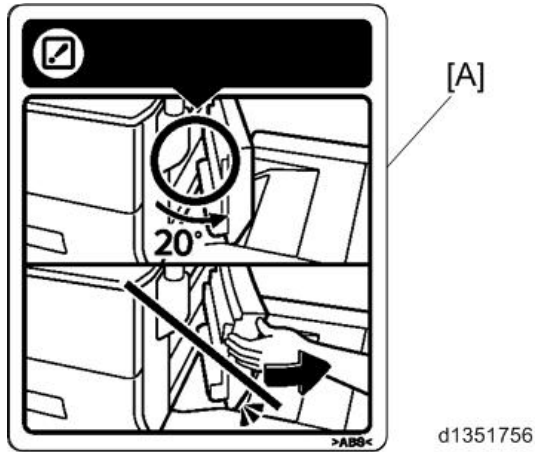
Note

- Push down the lever [A] when opening the by-pass unit.

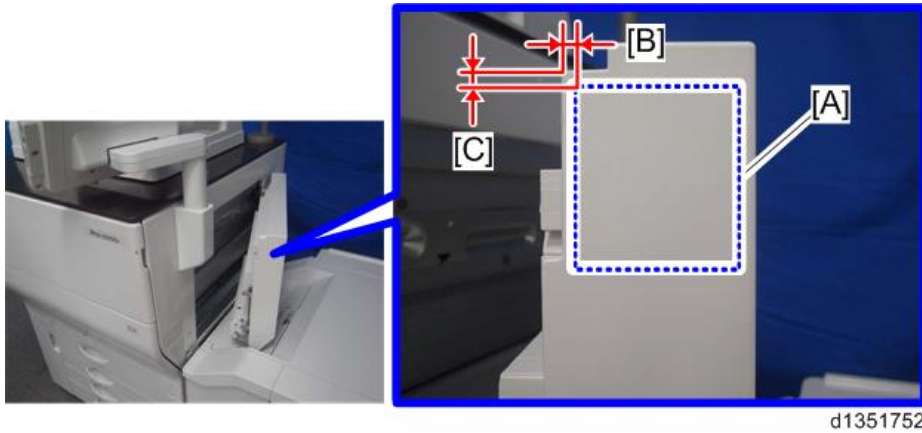


d1351755

17. Prepare the caution decal [A] provided with the LCT.

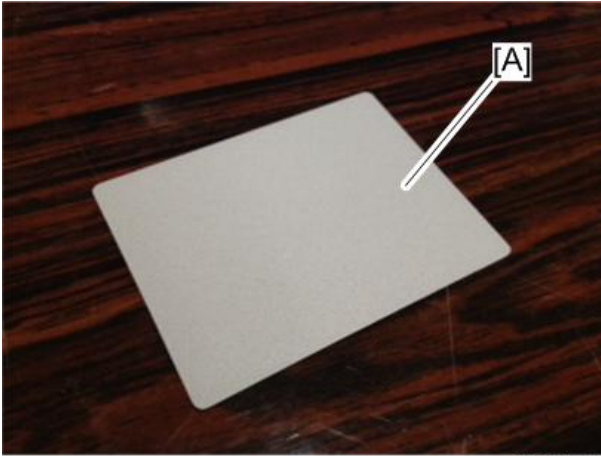


18. Attach the caution decal to [A] on the by-pass tray unit.



- [B]: 2mm
- [C]: 2mm

19. Prepare the sponge decal [A] provided with the LCT.



d1351757

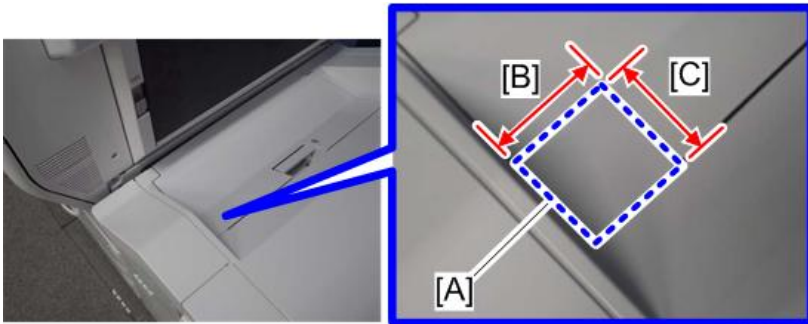
20. Attach the sponge decal to [A] on the exit cover.



d1351753

Note

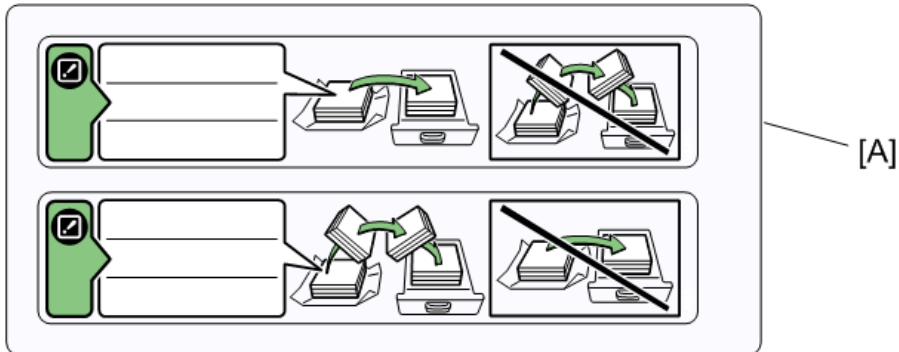
- Attach the sponge decal [A] on the corner of the exit cover.



d1351754

- [B]: 50 mm
- [C]: 65 mm

21. Prepare the Decal: caution chart: paper set direction [A].



d1354017

22. Draw out the paper tray and attach the decal [A] on the top of the front door.
Select one of the decals according to the paper that will be used by the customer.



[A]

d1354003

Note

- Paper type, brand, etc. can be written on the blank space.

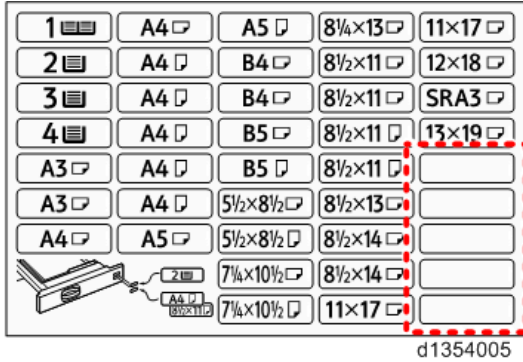
23. Attach a decal to the front door.



d1354004

D137/D138: Attach the Decal: LED supplied with the LCIT.

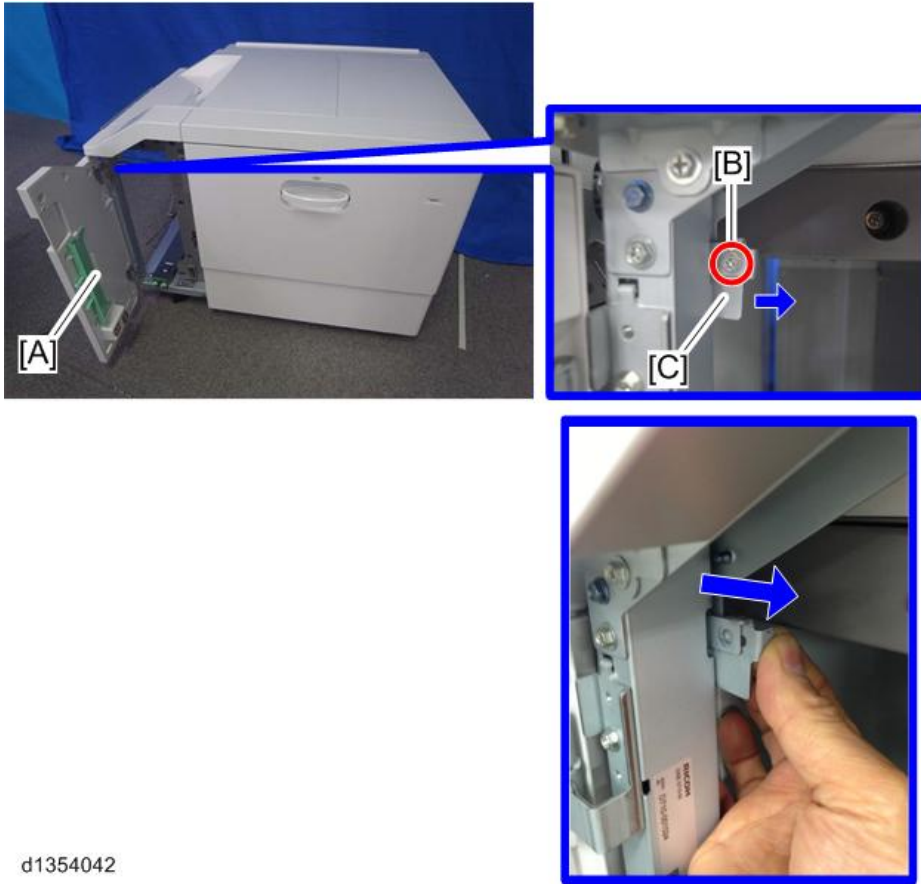
D135/D136: Attach a blank sheet on the paper size decal supplied with the main machine.



24. Plug in the machine and turn it on.

How to disconnect the LCIT from the main machine

1. Open the front cover [A]. Remove the screw [B] and pull the lock bracket [C] in the direction indicated with the arrow.



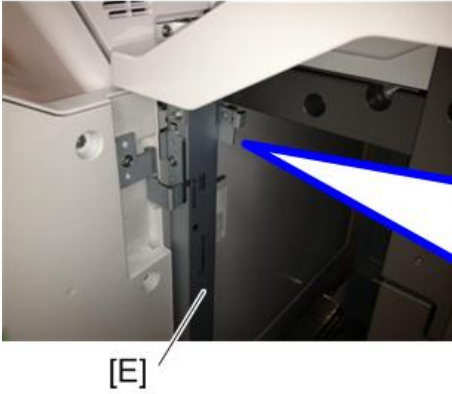
2

d1354042

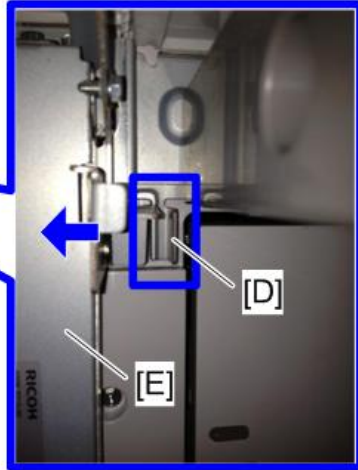
2. Disconnect the LCIT from the main machine while pressing the lock bracket [D] in the direction indicated with the arrow.

Note

- Lock bracket [D] is located at the rear side of the LCIT frame [E].



d1354043

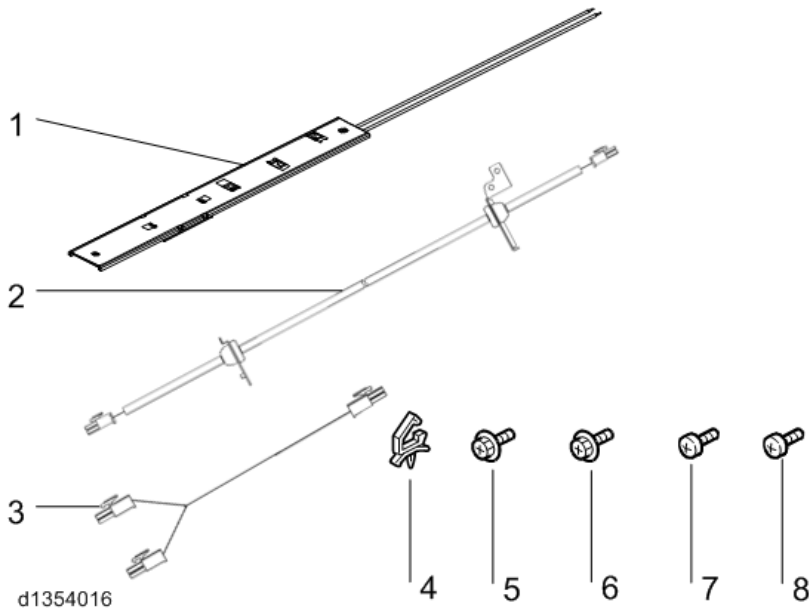


d1354044

LCIT (D710) Tray Heater

Accessories

Check the accessories against the list below.



2

No	Description	Q'ty
1	Heater: 15W	1
2	Heater Harness	1
3	Intermediate Harness	1
4	Harness Clamp	1
5	Tapping Screw:4x8	3
6	Tapping Screw - M3x6	2
7	Screw: Polished Round/Spring:M4x8	1
8	Screw: Polished Round/Spring:M3x8	1

Installation

⚠ CAUTION

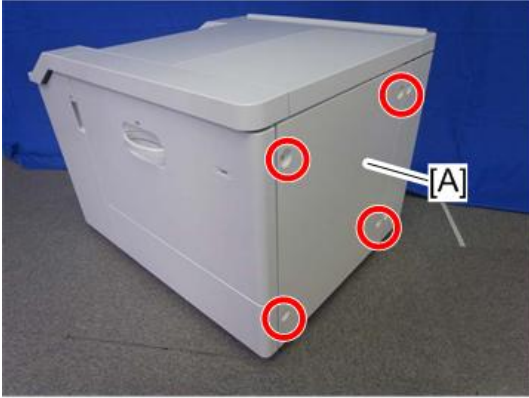
- Always switch the machine off and unplug the machine before doing the following procedure.

↓ Note

- When installing the tray heater, make sure the LCT is installed in the main machine.

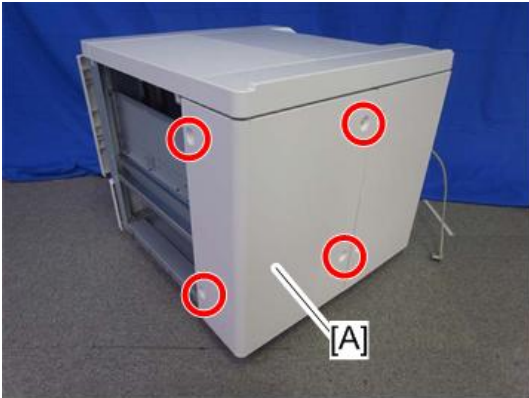
1. Right cover [A] (🔩x4)

2



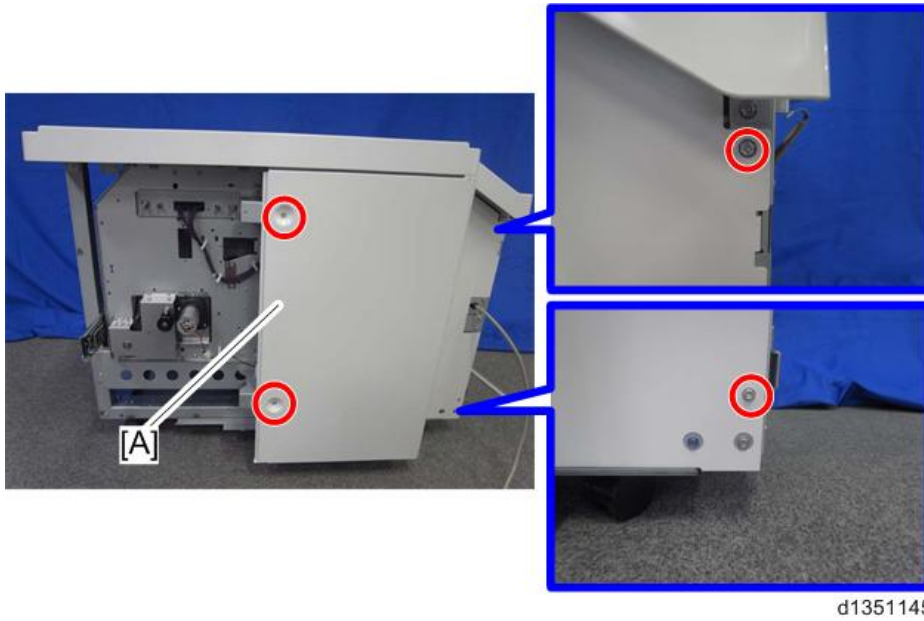
d1351143

2. Right rear cover [A] (🔩 x4)



d1351144

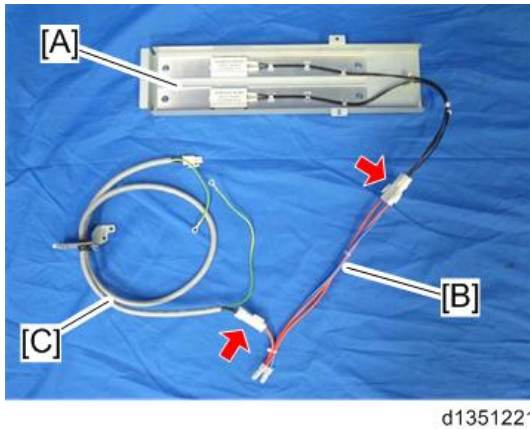
3. Left rear cover [A]



2

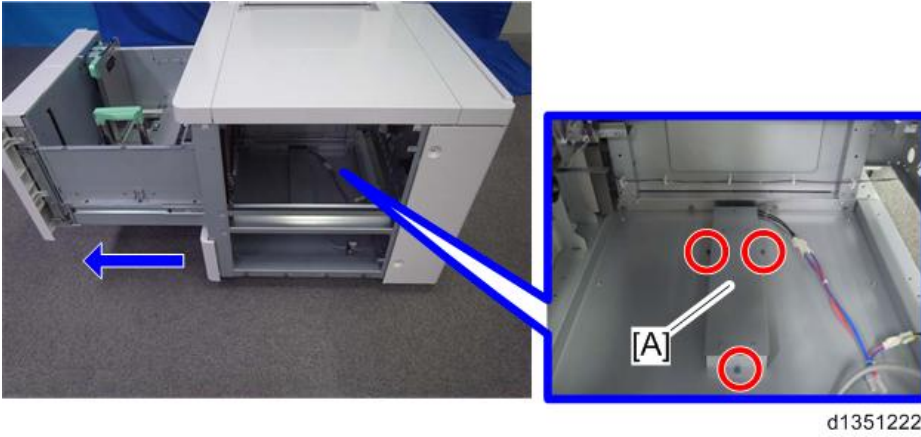
d1351145

4. Connect the heater [A], intermediate harness [B], heater harness [C]. (🔧 x 3)

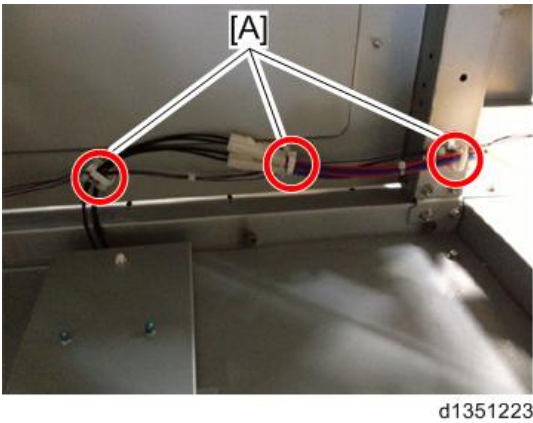


d1351221

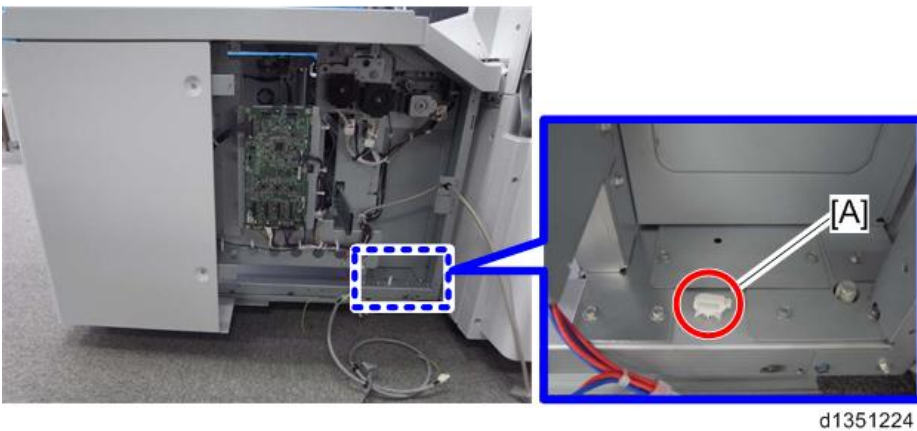
5. Pull out the paper tray, and then install the heater [A]. (🔧 x 3)



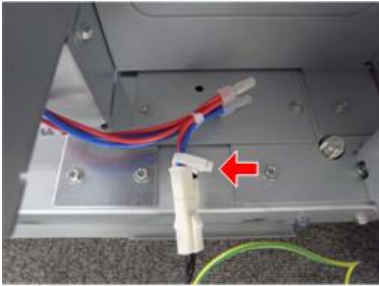
6. Route the harness with the clamp [A] as shown below, and then attach it to the rear side of the LCT. (🔧 x 3)



7. Attach the clamp [A] to the rear side of the LCT.

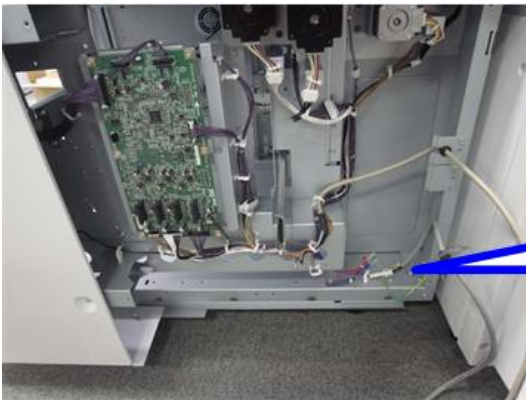


8. Clamp the heater harness. (🔧 x 1)



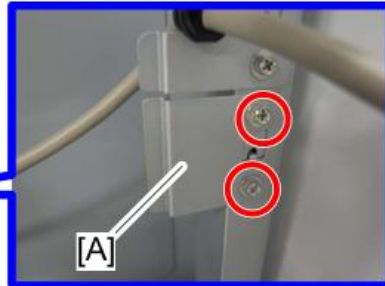
d1351226

9. Attach the ground wire [A] to the LCT. (M4 x 8;  x 3)




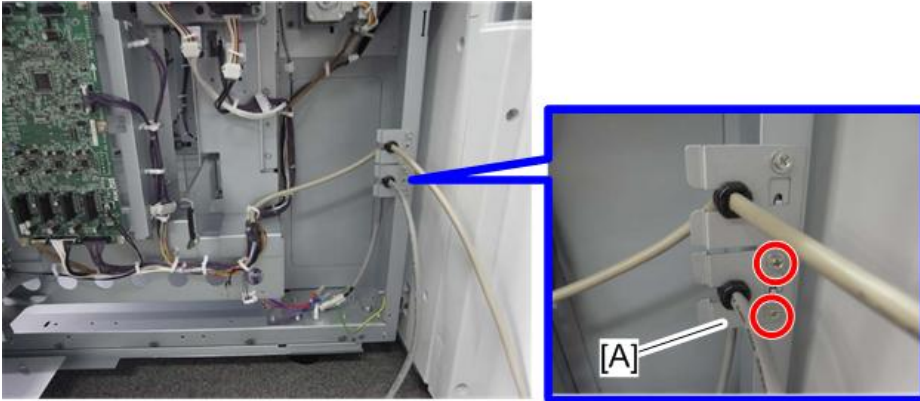
d1351225

10. Remove the LCT bracket [A]. ( x 2)



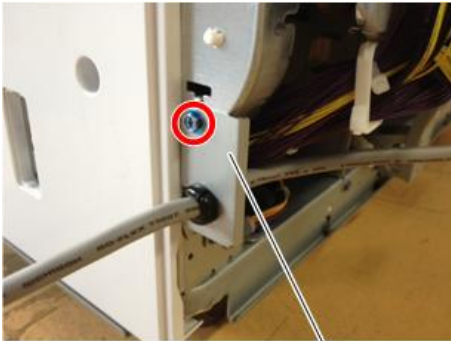
d1351227

11. Attach the heater bracket [A]. ( x 2)



d1351228

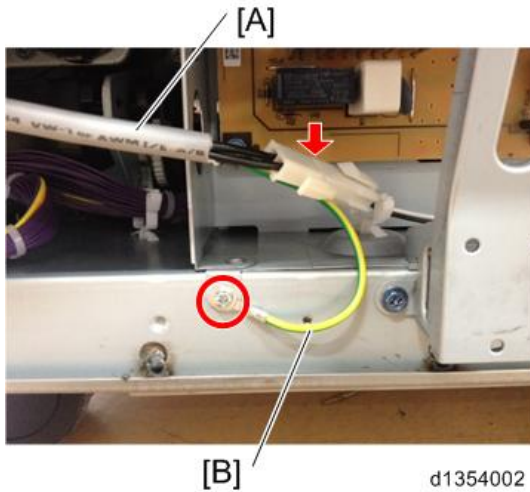
- 12. Reattach the exterior covers.
- 13. Remove the rear lower cover of the main machine.
- 14. Fix the heater bracket [A]. (🔩 x 2)



[A]

d1354001

- 15. Attach the heater harness [A] and ground wire [B]. (🔩 x 1, 🔩 x 1)
To attach the ground wire, remove the screw and replace it with the polished round screw M3.

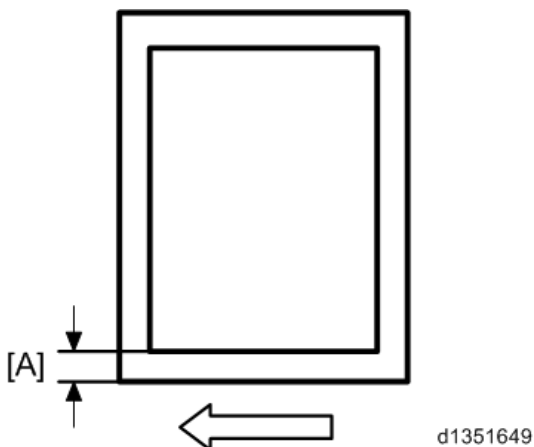


16. Attach the rear lower cover of the main machine.

Image Adjustments: Side-to-side registration

1. Use the Trimming Area Pattern (SP2-109-003, No. 14) to print the test pattern.
2. Go to SP1-003-007 (Side-to-Side Reg: LCT).
3. Load paper (A4 LEF) in the LCT tray, and then copy a couple of sheets.
4. Enter the value in SP1-003-007 to adjust the blank margin [A] to 2 mm.

The default value is 0mm. Press [+] to broaden the margin, and press [-] to narrow it. You can adjust the value in 0.1 mm intervals.



5. Exit the SP mode.

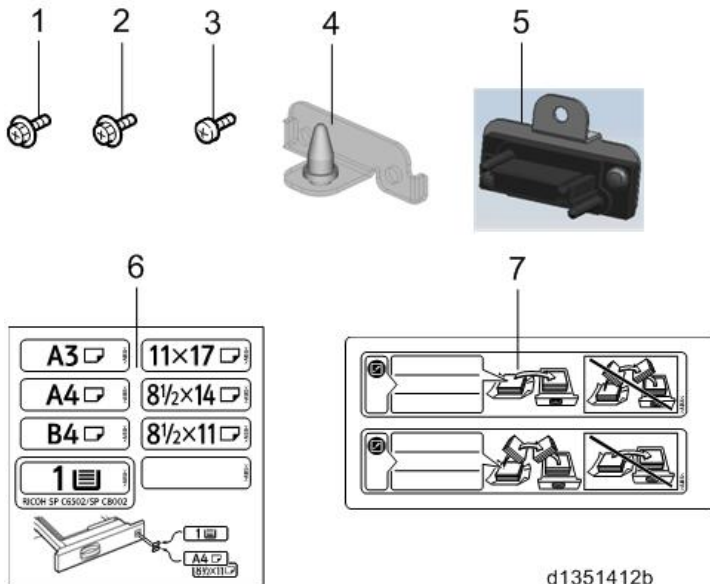
A3/11"x17" Tray Unit Type M2 (D749)

Component List

Check the quantity and condition of the accessories in the box against the following illustration and list.

2

No.	Description	Q'ty
1.	Screw – M3 x 4	4
2.	Tapping screws –M3 x 6	3
3.	Screw – M3 x 6	1
4.	Pin Bracket	1
5.	Harness	1
6.	Paper Size Decal	1
7.	Paper Set Direction Decal	1



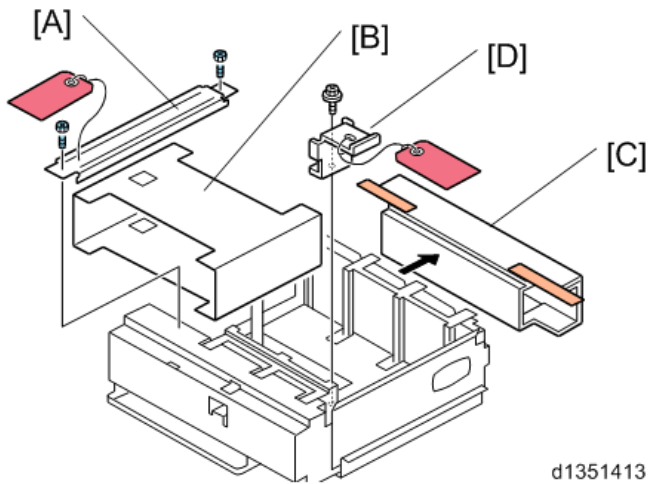
d1351412b

Installation

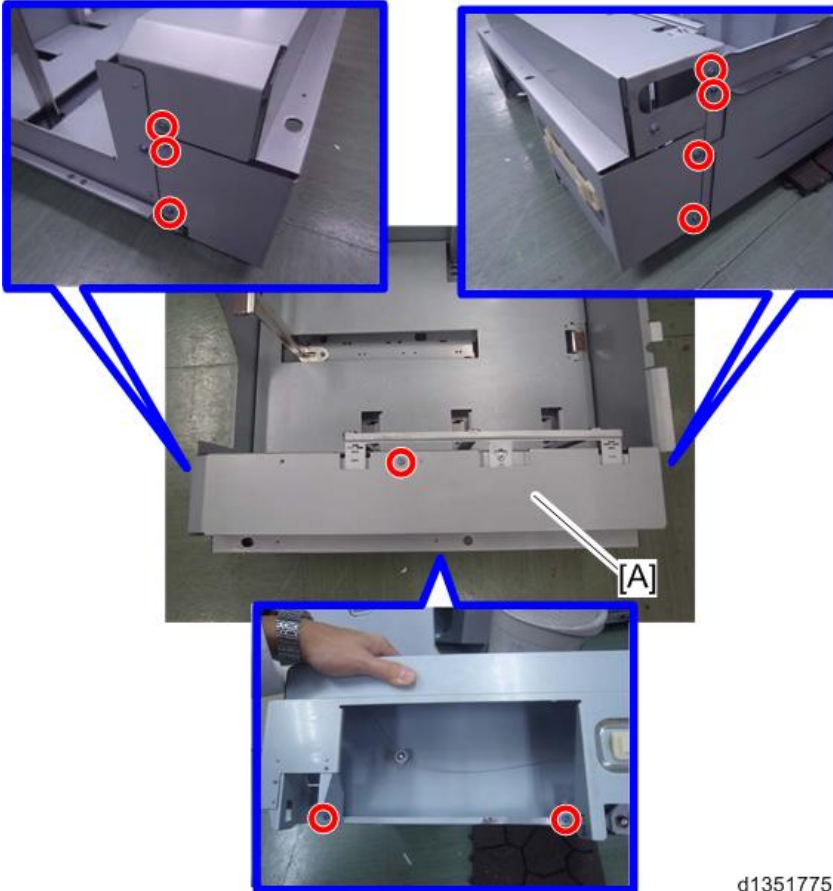
⚠ CAUTION

- The unit must be connected to a power source that is close to the unit and easily accessible.
- Make sure that the main machine is switched off and that its power cord is disconnected before doing the following procedures.

1. Remove the stay [A] (⚙ x2).
2. Remove the retainers [B] [C] and the shipping material [D] (⚙ x1).



3. Check the position of the front and back side fences and make sure that they are set for DLT or A3.
4. If you need to adjust the positions of the side fences for the paper to be loaded in the tray, remove the front panel [A] (⚙ x10).



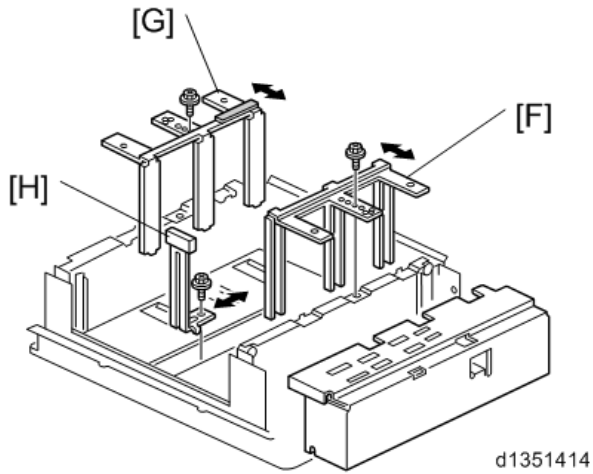
d1351775

5. Remove the fences and adjust their positions for the paper to be loaded:

[F] Side fence (🔩 x1)

[G] Back fence (🔩 x1)

[H] End fence (🔩 x1)



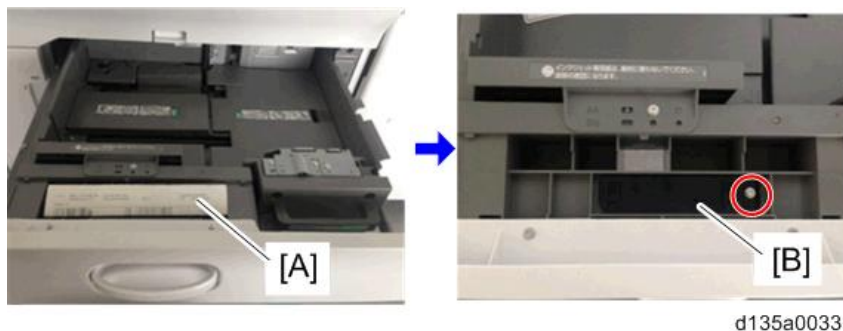
6. Reattach the front panel. (⚙ x10)
7. Open the front doors.
8. Pull out the tandem feed tray [A] and remove the paper cassette decal [B].



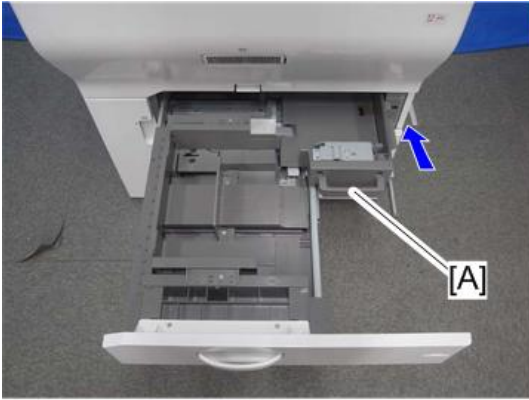
9. Remove the factory SP sheet [A] and SD card holder [B].

★ Important

- These parts will be installed in the A3/11"x17" Tray Unit later.

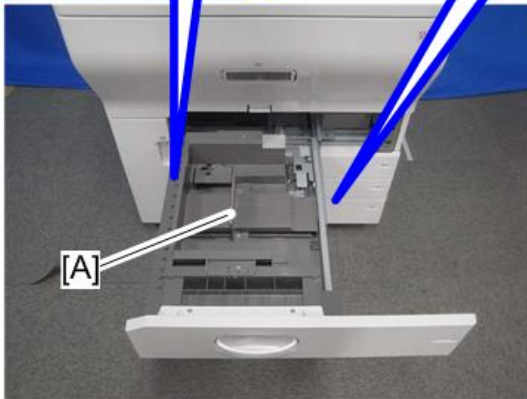
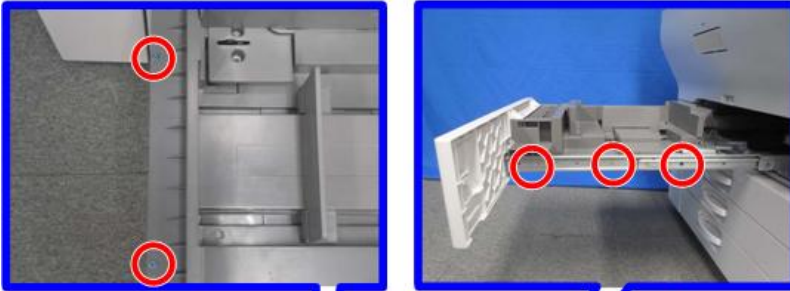


10. Push the right tandem tray [A] into the machine.




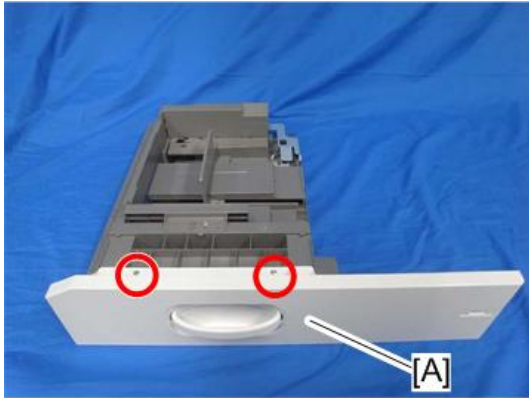
d1351662

11. Remove the left tandem tray [A] (left rail:  x 2 (M3 x 8), right rail:  x 3 (M3 x 10)).



d1351663

12. From the left tandem tray, remove the front cover [A] ( x 2).



d1351664

13. Pull out the right tandem tray [A] then remove it (🔧 x2).

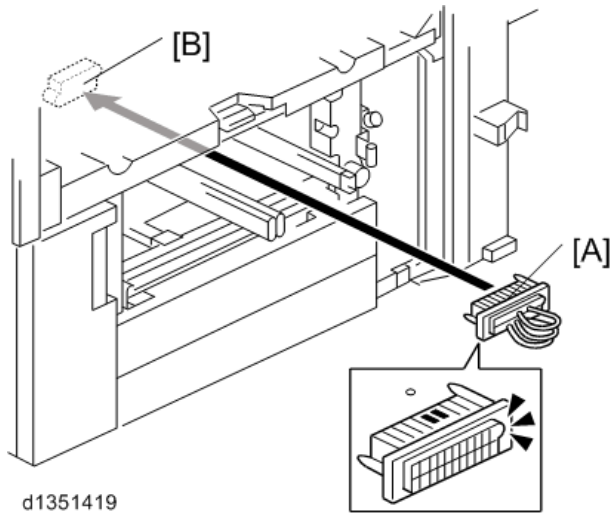


d1351665

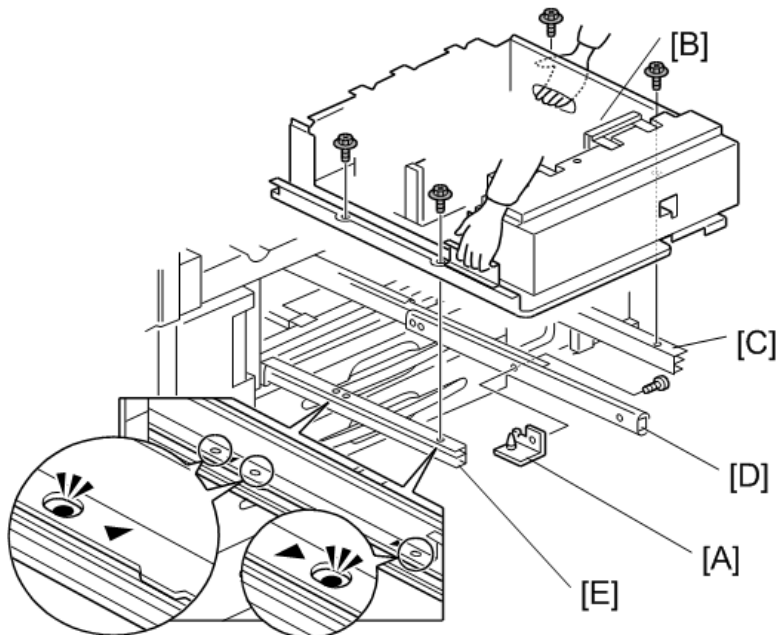
14. Insert the short connector [A] into the socket inside the machine [B]. (🔧 x1)

Note

- Hold the connector as shown in the illustration.



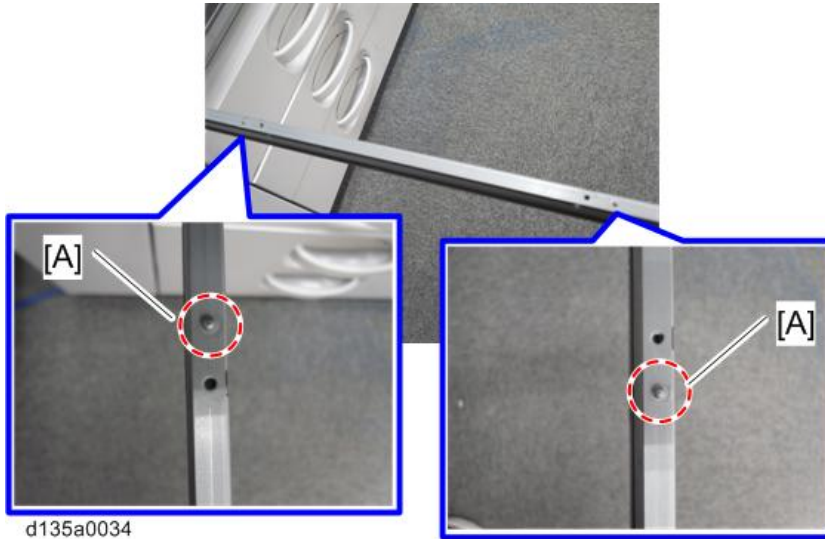
15. Using the screw provided in the accessories, attach the pin bracket [A] to the center rail. (⚙️ x2)
16. Using the screws provided in the accessories for the right rail and left rail, install the tray [B] on the right rail [C], center rail [D], and left rail [E]. (⚙️ x4)



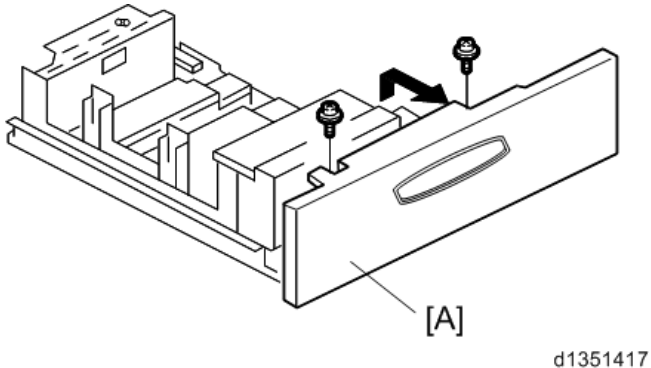
★ Important

- Make sure that the pin on the pin bracket passes through the hole in the tray bottom plate.

- Make sure that bosses [A] (two each on the left/right rails) pass through the holes in the tray. If you close the tray without doing this, it will be impossible to open the tray.



17. Return the factory SP sheet and SD card holder that you removed in Step 9.
18. Re-install the front cover [A] (⚙️ x2).



19. Turn on the machine.
20. Use **SP5959-2** to select the paper size for Tray 1 (A3 or DLT).
21. After selecting the paper size, switch the machine off and on and check that the selected paper size is displayed on the operation panel.

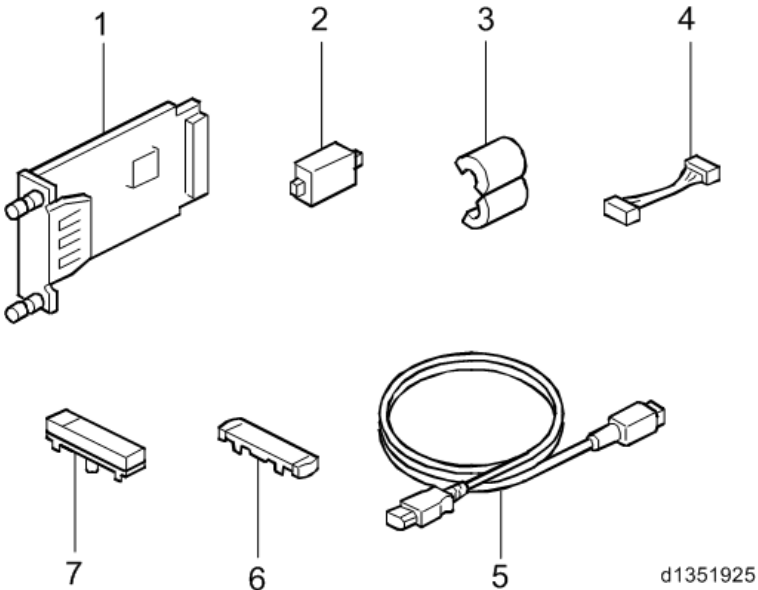
Copy Connector Type 3260 (B328)

Accessory Check

Check the quantity and condition of the accessories in the box against the following illustration and list.

2

No.	Description	Q'ty
1.	Copy Connector Board B328	2
2.	Repeater Hub 1394	2
3.	Ferrite Core	2
4.	Power Repeater Cable	2
5.	Coupling Interface Cable 1394	3
6.	Keytop for V-C1 (Not used)	4
7.	Keytop (Not Used)	4



Preparation

Before you begin the installation procedure:

- Measure the distance between the machines to be connected.

Determine the number of cables and repeater hubs that are necessary based on the distance measured between the machines.

Distance	Power Repeater Hubs Required	Interface Cables Required
Less than 9.0 m (Less than 29.5 ft)	1	2
9.0 to 13.5 m (29.5 to 112.5 ft.)	2	3

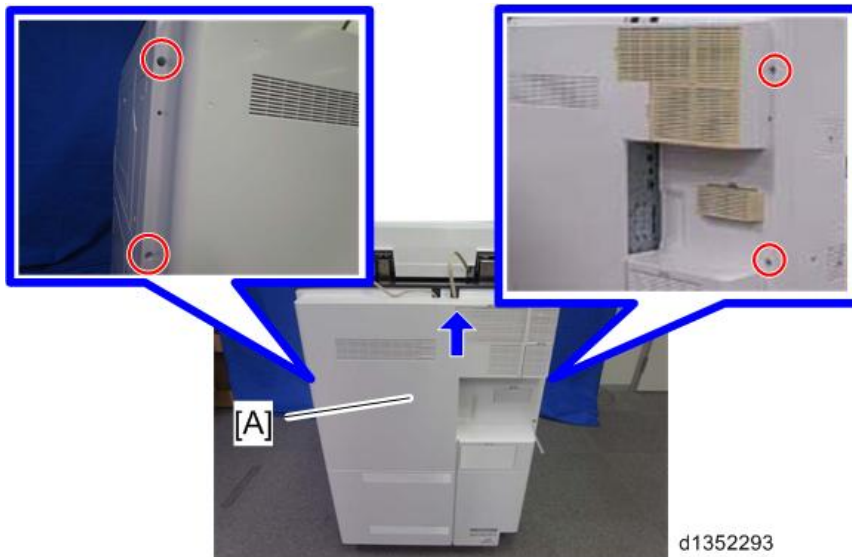
2

Installation

⚠ CAUTION

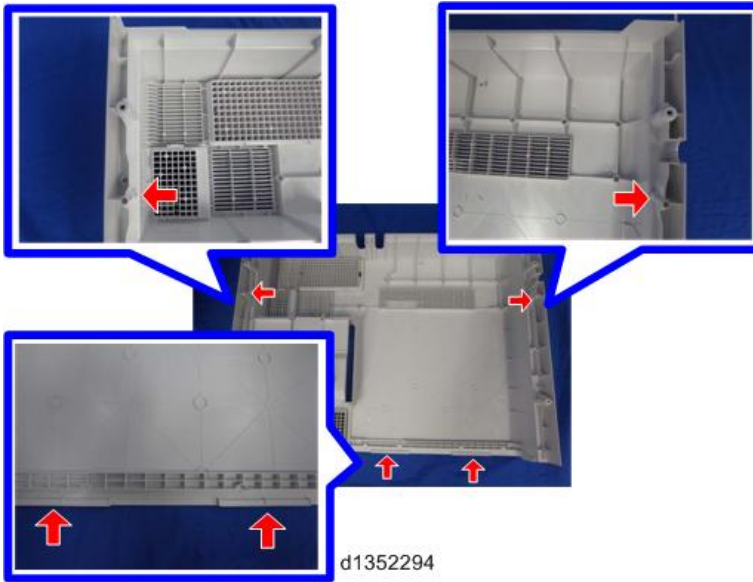
- Always switch the machine off and unplug the machine before doing the following procedure.

1. Remove the rear middle cover. (⚙ x4)

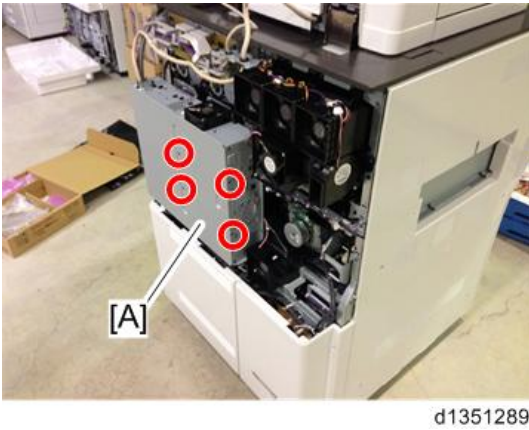


↓ Note

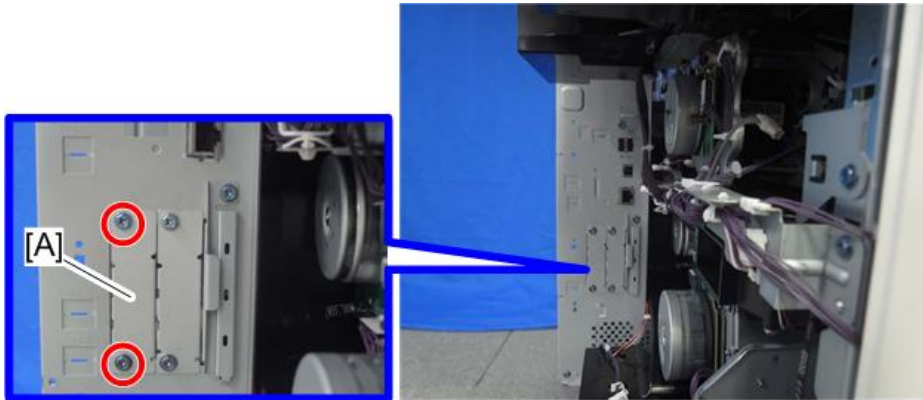
- Check the positions of the bosses and hooks before removing the lower cover.



2. Remove the controller box cover. (🔧 x 4)

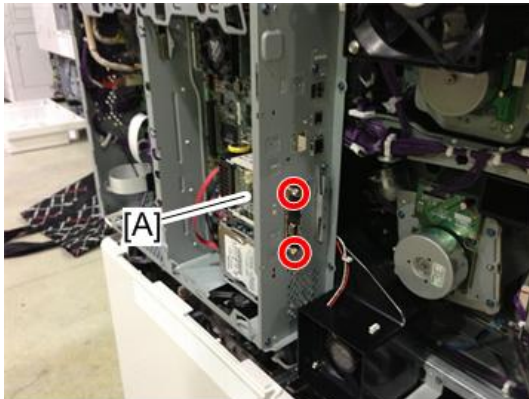


3. Remove the cover [A] of Slot A. (🔧 x 2)



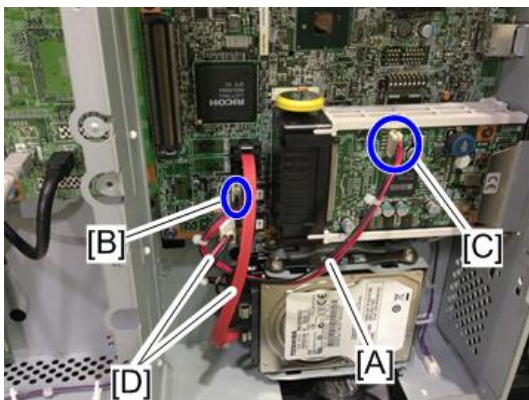
d1351242

4. Install the Copier Connection Kit Board B328 [A] in Slot A and fasten it. (⚙️ x 2)



d1351282

5. Connect the power repeater cable [A] to CN525 [B] on the controller board.
 6. Connect the other end of the power repeater cable [A] to CN4 [C] on the copy connector board.

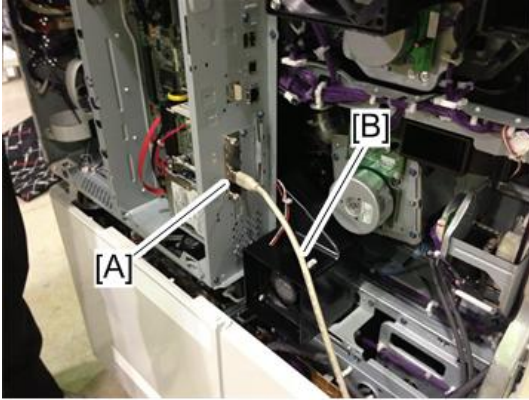


d1351283

Note

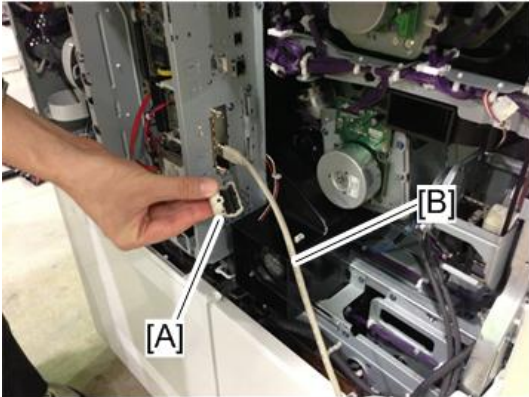
- Pass the power repeater cable [A] under the harness [D] on the controller board when you connect it to the copy connector board.

7. Connect the end of the interface cable [B] to the copy connector board [A].



d1351284

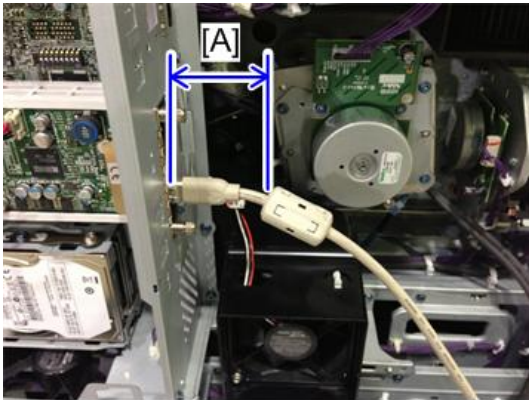
8. Attach the ferrite core [A] to the end of the interface cable [B].



d1351285

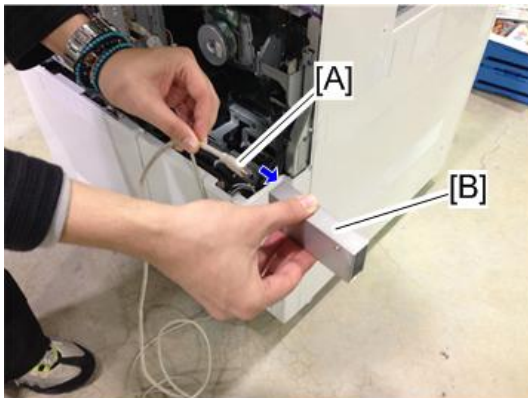
Note

- Attach the ferrite core 30 mm [A] from the end of the interface cable.



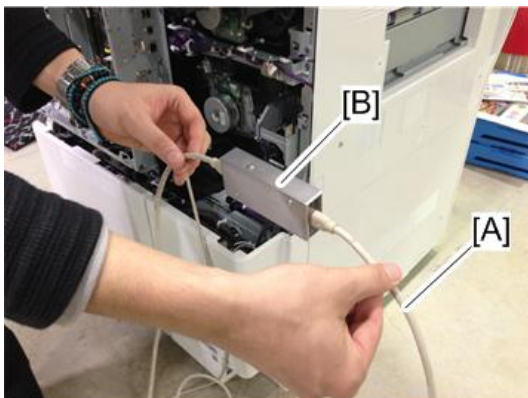
d1351286

9. Connect the other end of the interface cable [A] and repeater hub [B].



d1351287

10. Repeat Steps 1 to 9 to install the connector kit on the second machine.
11. Connect the interface cable [A] from the second machine to the repeater hub [B].



d1351288

 **Note**

- Measure the distance between the machines to be connected. Determine the number of cables and repeater hubs that are necessary based on the distance measured between the machines. (☛ page 392 "Preparation")

12. Reattach the covers.

Tab Sheet Holder Type M2 (D750)

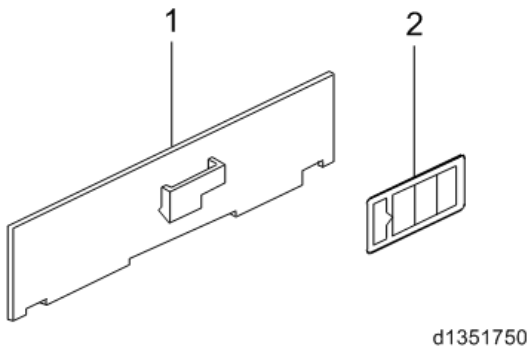
The tab sheet holder can be installed in trays 2 and 3, and allows the user to load tab stock.

Accessories

2

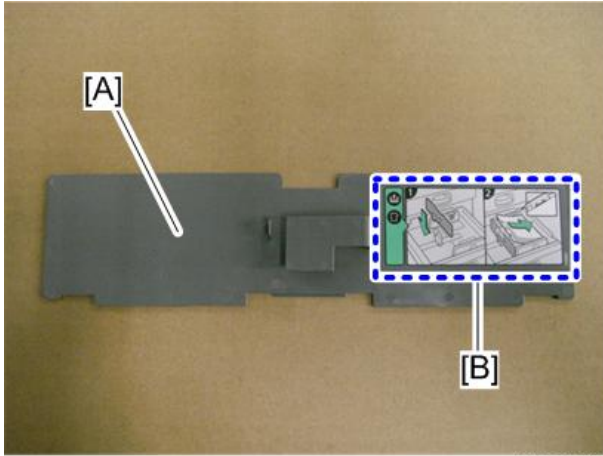
Check the quantity and condition of the accessories in the box against the following list.

No.	Description	Q'ty
1	Tab Sheet Holder	1
2	Decal	1



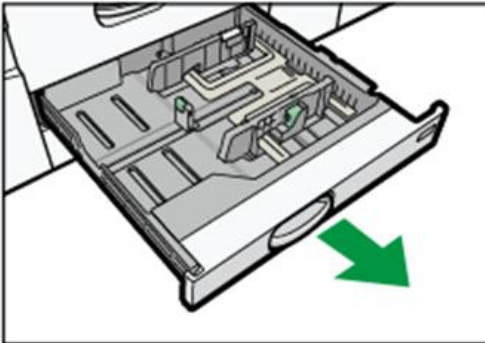
Installation

1. Attach the decal [B] to the tab sheet holder [A].



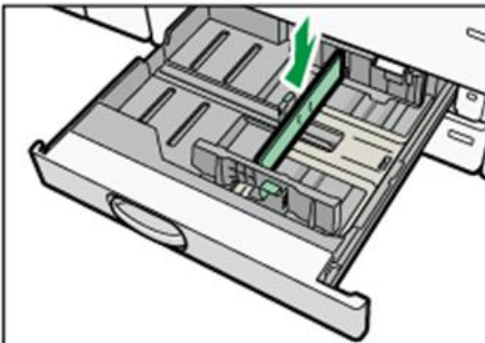
d1351749

2. Check that the paper tray is not being used, and then pull the tray carefully out until it stops.



d1351733

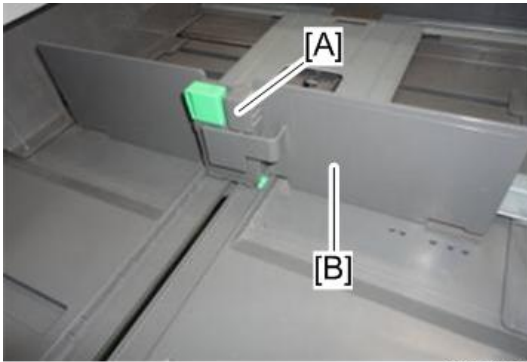
3. Install the tab sheet holder on the end fence of the paper tray.



d1351734

Note

- When the tab sheet holder is installed correctly, you can hear a clicking noise.



d1351731

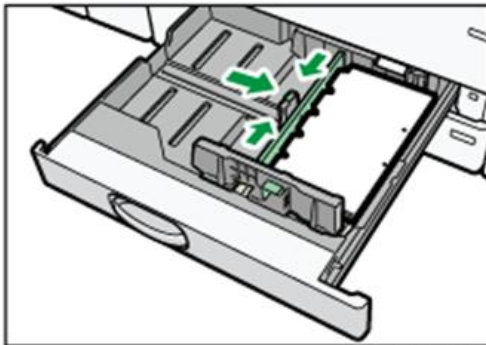
- [A]: End fence
- [B]: Tab sheet holder

4. Load tab stock in the paper tray.

Note

- Load tab stock so that the side with the tab faces the tab sheet holder.

5. Adjust the end fence position so that the tab sheet holder will fit the tab stock.



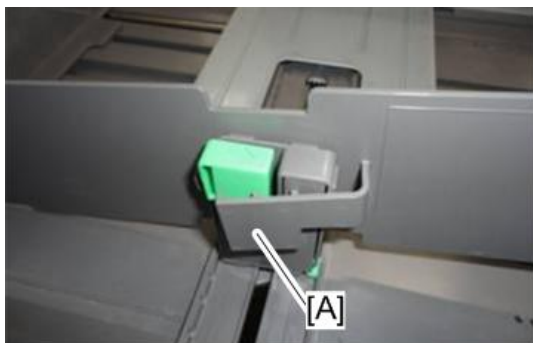
d1351735

6. Carefully slide the paper tray fully in.

Note

- When removing the tab stock holder, spread the hook [A] of the tab sheet holder and then remove it as shown below.

2



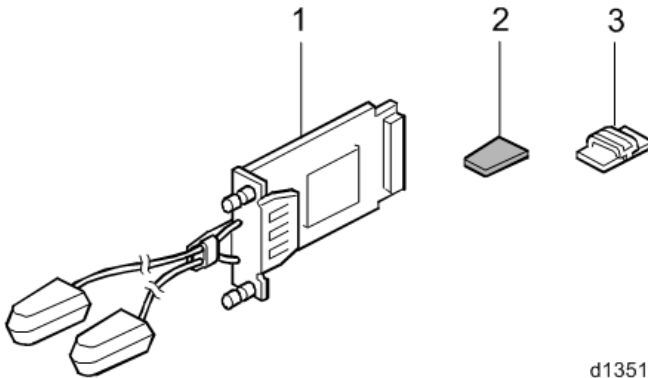
d1351732

IEEE802.11a/g/n Unit Type M2 (D164)

Component List

Check the quantity and condition of the accessories in the box against the following list.

No	Description	Q'ty
1	IEEE802.11a/g/n Unit	1
2	Velcro Fasteners	2
3	Clamps	8



d1351924

★ Important

- Don't disassemble the IEEE802.11a/g/n Unit. When you need to replace the IEEE802.11a/g/n board, replace the entire IEEE802.11a/g/n Unit.
- Provide the caution chart to the customer.
- It is prohibited by law to disassemble and modify this product. If illegal modifications are added to this product for its use, we shall not assume any responsibility.
- Depending on the environment where you use this product or the access point you select, restrictions may be imposed on the use of some usable channels. If wireless LAN communications are not possible, check the environment or access point.

Installation Procedure

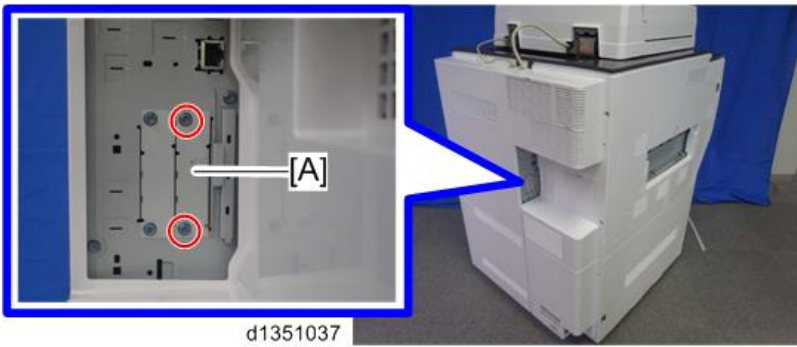
⚠ WARNING

- Unplug the main machine power cord before you do the following procedure.

⚠ CAUTION

- To prevent damage to the controller box, always work carefully. Never put your hand or a tool into the box when you remove the controller box or install an option.
- To prevent damage to the circuits on the boards, always touch a metal surface to remove static charge from your hands before you handle a board.
- The usable frequency range of this product may be used by products (industrial, scientific, or medical devices) of other companies. Also, outdoor use of wireless devices may be restricted. Pay attention to where you use this product.

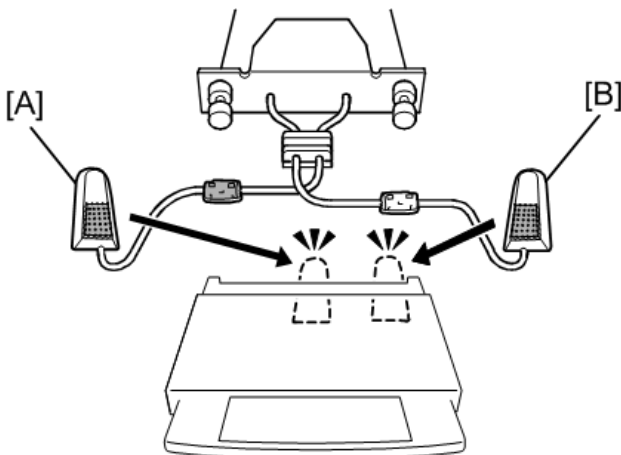
1. Remove the slot cover [A] from the board slot B. (⚙ x 2)



2. Insert the wireless LAN board into the I/F slot and fasten it with the screws. (⚙ x 2)

⬇ Note

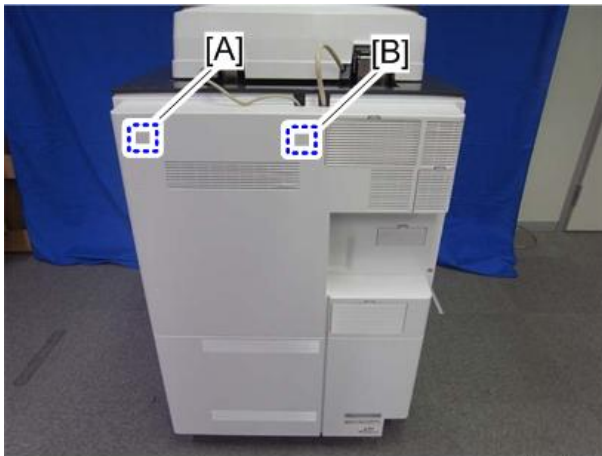
- Confirm that the interface board is firmly connected to the controller board.
3. Look at the markings on the antenna bracket.
 4. Look at the ferrite core of the antenna cable.



- **ANT1.** Antenna 1 [A] transmits and receives. It must be installed on the rear middle side of the main machine. (The core on the Antenna 1 cable is black.)
 - **ANT2.** Antenna 2 [B] only receives. It is installed on the rear right corner of the machine. (The core on the Antenna 2 cable is white.)
5. Peel off the double-sided tapes on the Velcro fasteners, and then attach them at the rear middle [B] and rear right [A] of the machine.

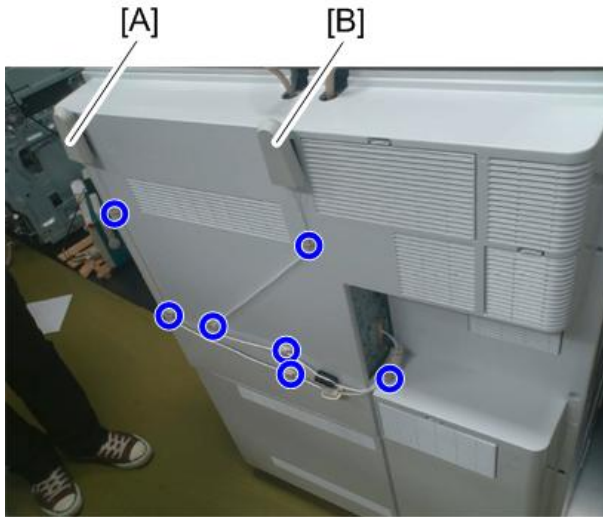
↓ **Note**

- [A] has to be kept 12 cm away from [B].



d1351789

6. Attach Antenna 1 [A] (having a black ferrite core) to the rear middle of the machine.
7. Attach Antenna 2 [B] (having a white ferrite core) to the rear right of the machine.
8. Attach the eight clamps as shown above.
9. Set the cables of Antenna 1 and Antenna 2 in the clamps and close them. (🔧 x 8)



d1351788

Note

- Make sure that the cables are not slack. Keep them wired tightly along the covers.

10. Turn on the main machine.

11. Make sure that the machine can recognize the option.: User Tools > Printer Features > List/Test Print > Configuration Page

You may have to move the machine if the reception is not clear.

- Make sure that the machine is not located near an appliance or any type of equipment that generates strong magnetic fields.
- Put the machine as close as possible to the access point.

User Tool Settings for IEEE 802.11 a/g/n

Go into the User Tools mode and do the procedure below. These settings take effect every time the machine is powered on.

Note

- You cannot use IEEE 802.11 a/g/n if you use Ethernet.

1. Press the "User Tools" key.
2. On the touch panel, touch "System Settings".

Note

- Select "Interface Settings"> "Network"> "LAN Type". The "LAN Type" (default: Ethernet) must be set for either Ethernet or wireless LAN.
3. Select "Interface Settings"> "Wireless LAN". Only the wireless LAN options show.

4. Set the "Communication Mode".
5. Enter the "SSID setting". (The setting is case sensitive.)
6. Set the "Ad-hoc Channel". You need this setting when Ad Hoc Mode is selected. The allowed range for the channel settings may vary for different countries.

- Region A (mainly Europe and Asia)
2412 - 2462 MHz (1 - 11 channels)
5180 - 5240 MHz (36, 40, 44 and 48 channels)
(default: 11)

 **Note**

- In some countries, only the following channels are available: 2412 - 2462 MHz (1 - 11 channels)
 - Region B (mainly North America)
2412 - 2462 MHz (1 - 11 channels)
5180 - 5240 MHz (36, 40, 44 and 48 channels)
(default: 11)
7. Set the "Security Method" to specify the encryption of the Wireless LAN.
 - The "WEP" (Wired Equivalent Privacy) setting is designed to protect wireless data transmission. The same WEP key is required on the receiving side in order to unlock encoded data. There are 64 bit and 128 bit WEP keys.
 - Range of Allowed Settings:
64 bit: 10 characters
128 bit: 26 characters
 - Specify "WPA2" when "Communication Mode" is set to "Infrastructure Mode". Set the "WPA2 Authent. Method".
 - WPA2 Authent. Method:
Select either "WPA2-PSK" or "WPA2".
If you select "WPA2-PSK", enter the pre-shared key (PSK) of 8-63 characters in ASCII code.
When "WPA2" is selected, authentication settings and certificate installation settings are required.
 8. Press "Wireless LAN Signal" to check the machine's radio wave status using the operation panel.
 - Press "Restore Factory Defaults" to initialize the wireless LAN settings.

SP Mode Settings for IEEE 802.11 Wireless LAN

The following SP commands and UP modes can be set for IEEE 802.11

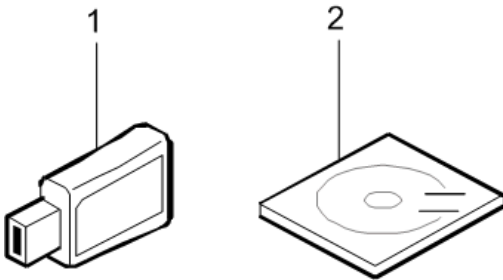
SP No.	Name	Function
5840 006	Channel MAX	Sets the maximum range of the channel settings for the country.
5840 007	Channel MIN	Sets the minimum range of the channels settings allowed for your country.
5840 008	Transmission Speed	Sets the transmission speed. Auto, 54 Mbps, 48 Mbps, 36 Mbps, 24 Mbps, 18 Mbps, 12 Mbps, 9 Mbps, 6 Mbps, 11 Mbps, 5.5 Mbps, 2 Mbps, 1 Mbps (default: Auto).
5840 011	WEP Key Select	Used to select the WEP key (Default: 00).
UP mode	Name	Function
	SSID	Used to confirm the current SSID setting.
	WEP Key	Used to confirm the current WEP key setting.
	WEP Mode	Used to show the maximum length of the string that can be used for the WEP Key entry.
	WPA2 Authent. Method	Used to confirm the current WPA authentication setting and preshared key.

Bluetooth Interface Unit Type D (D566)

Accessories

Check the quantity and condition of the accessories in the box against the following list.

No	Description	Q'ty
1	Bluetooth Module	1
2	CD-ROM	1



d1351923

Installation Procedure

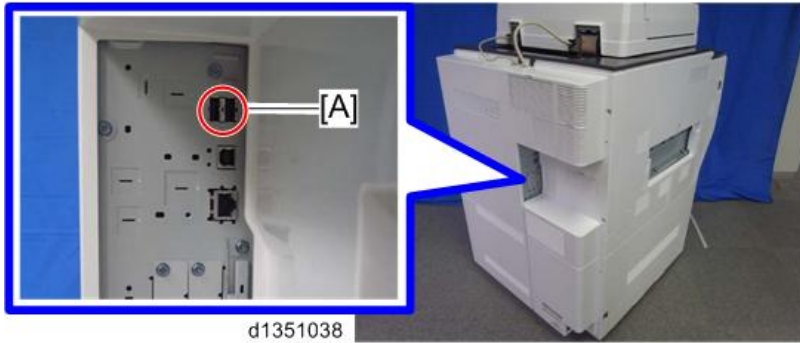
⚠ WARNING

- Turn off the power of the main unit when connecting the Bluetooth unit. Do not attach or remove the Bluetooth unit while the power of the main unit is turned on.

⚠ CAUTION

- To prevent damage to the controller box, always work carefully. Never put your hand or a tool into the box when you remove the controller box or install an option.
- To prevent damage to the circuits on the boards, always touch a metal surface to remove static charge from your hands before you handle a board.

1. Insert the Bluetooth unit into the USB Host Interface [A].



2

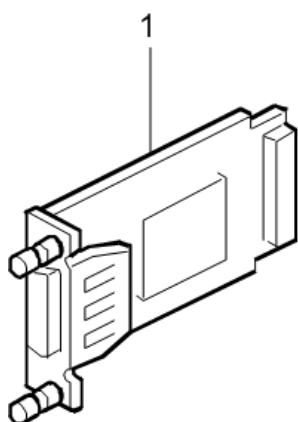
2. Make sure that the machine can recognize the option.: User Tools > Printer Features > List/Test Print > Configuration Page

IEEE1284 Interface Board Type A (B679)

Component List

Check the quantity and condition of the accessories in the box against the following list.

No	Description	Q'ty
1	PCB Unit	1



d1351922

Installation Procedure

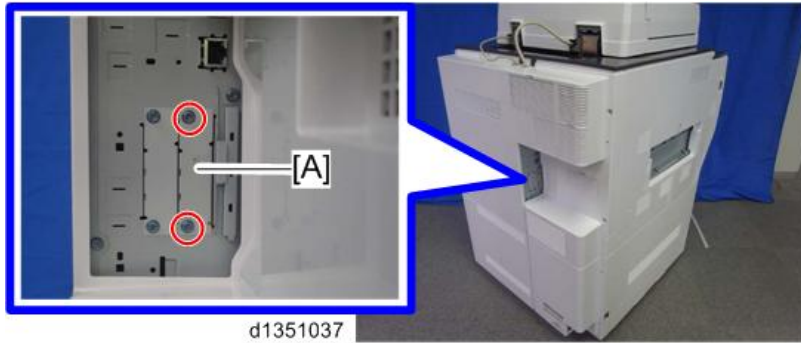
⚠ WARNING

- Unplug the main machine power cord before you do the following procedure.

⚠ CAUTION

- To prevent damage to the controller box, always work carefully. Never put your hand or a tool into the box when you remove the controller box or install an option.
- To prevent damage to the circuits on the boards, always touch a metal surface to remove static charge from your hands before you handle a board.

1. Remove the slot cover [A] from the board slot B. (🔧 x 2)



2

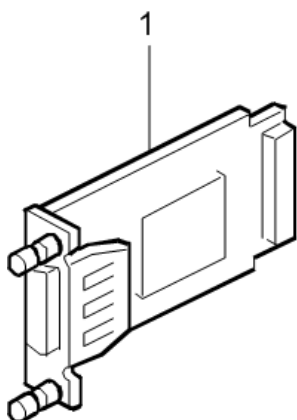
2. Insert the IEEE1284 interface board into the I/F slot and fasten it with the screws. (🔩 x 2)
3. Turn on the main machine.
4. Make sure that the machine can recognize the option.: User Tools > Printer Features > List/Test Print > Configuration Page

File Format Converter Type E (D377)

Component List

Check the quantity and condition of the accessories in the box against the following list.

No	Description	Q'ty
1	PCB Unit	1



d1351922

Installation Procedure

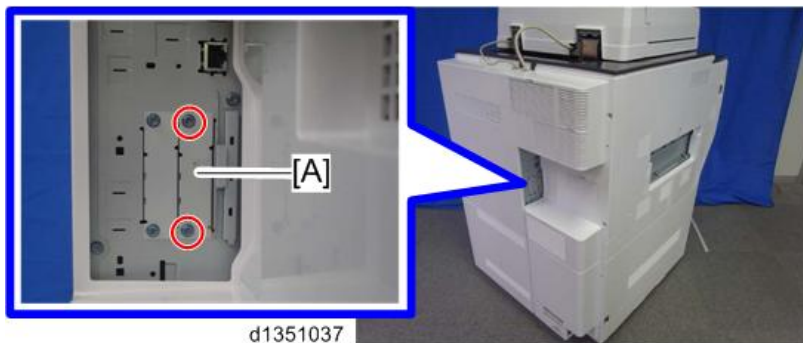
⚠ WARNING

- Unplug the main machine power cord before you do the following procedure.

⚠ CAUTION

- To prevent damage to the controller box, always work carefully. Never put your hand or a tool into the box when you remove the controller box or install an option.
- To prevent damage to the circuits on the boards, always touch a metal surface to remove static charge from your hands before you handle a board.

1. Remove the slot cover [A] from the board slot B. (🔧 x 2)



2

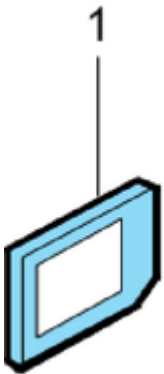
2. Insert the file format converter into the I/F slot and fasten it with the screws. (🔩 x 2)
3. Turn on the main machine.
4. Make sure that the machine can recognize the option.: User Tools > Printer Features > List/Test Print > Configuration Page

SD card for NetWare printing Type M2 (D719)

Component List

Check the quantity and condition of the accessories in the box against the following list.

No.	Description	Q'ty
1	SD Card	1



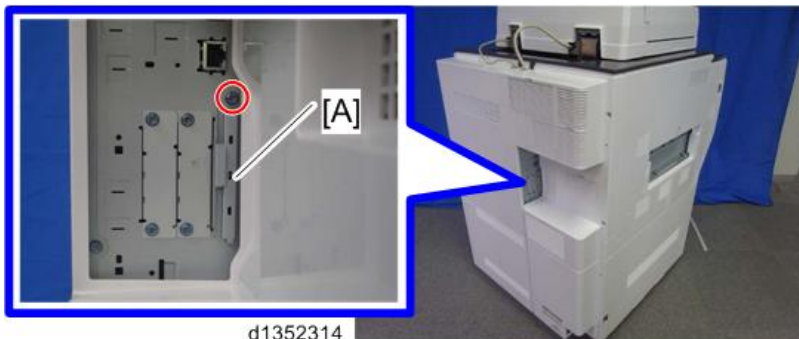
d595i900b

Installation Procedure

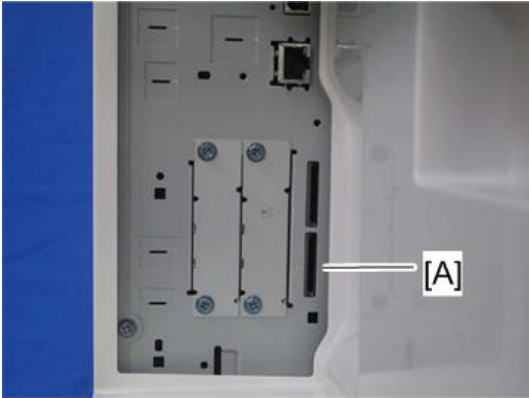
⚠ WARNING

- Unplug the main machine power cord before you do the following procedure.

1. Remove the SD-card slot cover [A] from the SD Card slots. (🔧 x 1)



2. Insert the SD card (SD card for NetWare printing) in SD slot 2 (lower) [A] with its label face towards the front of the machine. Then push it slowly into SD slot 2 (lower) until you hear a click.



d1352316

3. Perform the SD Card Appli Move. (🖨️ page 446 "SD Card Appli Move")

Note

- After the SD Card Appli Move is completed, do the following procedure.
 1. Remove the SD Card from the SD slot 2 (lower).
 2. Attach the SD-card slot cover, and then turn on the machine (🔌 x 1)
 3. Make sure that the machine can recognize the option.: User Tools > Printer Features > List/Test Print > Configuration Page

OCR Unit Type M2 (D166)

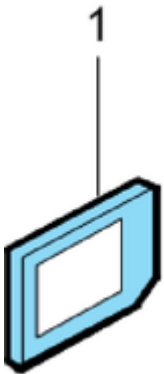
OCR unit allows you to use the searchable PDF function with the scanner application.

Accessories

2

Check the quantity and condition of the accessories in the box against the following list.

No.	Description	Q'ty
1.	SD Card	1



d595i900b

Details About Searchable PDF

- Searchable PDF embeds the text information in the scanned document without processing the data on your computer.

If this option is installed:

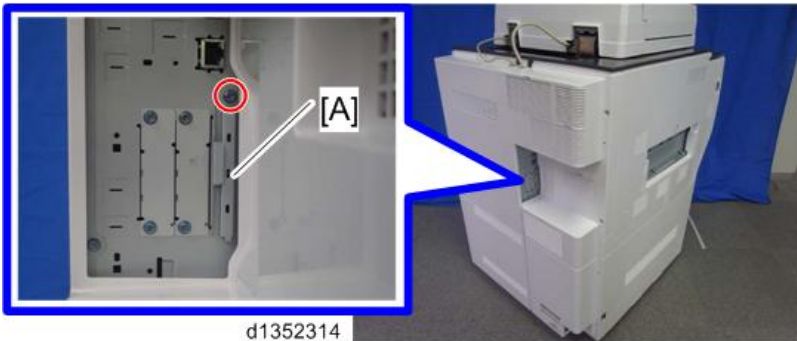
- You can search the text in the scanned document.
- You can add extra text to the file name.
- The orientation of the originals is detected, and the document is automatically rotated.
- The OCR unit is provided on an SD card. By installing the SD card on the main machine, the function key is added to the operation panel. You don't need to install the OCR unit on the computer.
- After installing the OCR unit, you can specify the settings of the searchable PDF function.

- The machine embeds the text information of the scanned document after scanning the originals (after the originals are ejected from the ADF). Therefore, you can remove the originals from the exposure glass or ADF.
- You can use other applications such as copy and printer while the machine embeds the text information of the scanned document.

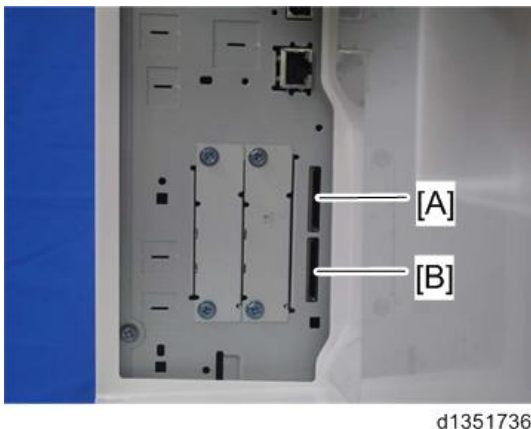
Installation Procedure

WARNING

- Unplug the main machine power cord before you do the following procedure.
1. Remove the SD-card slot cover [A] from the SD Card slots. (⚙ x 1)



2. Insert the SD card (OCR Unit) in SD card slot 1 (upper) [A] or SD slot 2 (lower) [B] with its label face towards the front of the machine. Then push it slowly into the SD slot until you hear a click.



3. Turn on the main power switch.
4. Go to SP 5-878-004 (Option Setup: OCR) and press [EXECUTE].

The SD card ID is recorded in NVRAM, and the machine ID of the main machine is recorded in the SD card.

5. When the display tells you that the execution is completed, press [Exit].

Note

- If the execution failed, the display tells you that the execution failed.
- If the execution failed, do the following.
Check if the SD card is already used.
Turn off the main power switch, and do steps 1 to 5 again.

6. Turn the main power switch off and on.

7. Go to SP 5-878-004 (Option Setup: OCR) and press [EXECUTE].

The OCR dictionary is copied to the HDD from the SD card.

Note

- SP 5-878-004 links the SD card and the machine in the first execution, and then copies the OCR dictionary to the HDD in the second execution.

8. Turn off the main power switch, and then remove the SD card from the SD card slot.

Note

- Keep the SD card in the SD card storage location. You need the original SD card if the HDD is broken.

9. Re-attach the SD card slot cover.

10. Turn on the main power switch.

11. Press [Send File Type / Name] on the [Scanner] screen.



w_d1351739

12. Check if [OCR Settings] is displayed on the [Send File Type / Name] screen.



↓ Note

- You can switch the searchable PDF function on and off in the [OCR Settings] screen after installing the OCR unit.
- If you want to use the searchable PDF function, select [On] for [OCR Settings]. (Default: [Off])

Restoration Procedure

When you install the OCR Unit Type M2, the searchable PDF function is saved on the HDD and the SD card ID is saved in NVRAM.

Therefore, you need to re-install the OCR Unit Type M2 after replacing the HDD or NVRAM.

When the original SD card exists

- When you replace the HDD
Re-install the OCR Unit Type M2 from the original SD card.
- When you replace the NVRAM
If you upload / download the NVRAM data, re-install the OCR Unit Type M2 from the original SD card.
If you don't upload / download the NVRAM data, order a new SD card (service part) of the OCR Unit Type M2. Then re-install the OCR Unit Type M2 from the new SD card.
- When you replace the HDD and NVRAM at the same time
Re-install the OCR Unit Type M2 from the original SD card.

When the original SD card is lost

Order a new SD card (service part) of the OCR Unit Type M2, and then re-install from the new SD card.

↓ Note

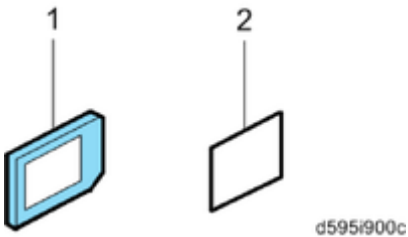
- When you re-install the OCR Unit Type M2, do the same procedure as the original installation procedure. (☞ page 418 "Installation Procedure")

Postscript3 Unit Type M2 (D719)

Accessories

Check the quantity and condition of the accessories in the box against the following list.

No.	Description	Q'ty
1	PostScript3 Emulation SD Card	1
2	Decal	1

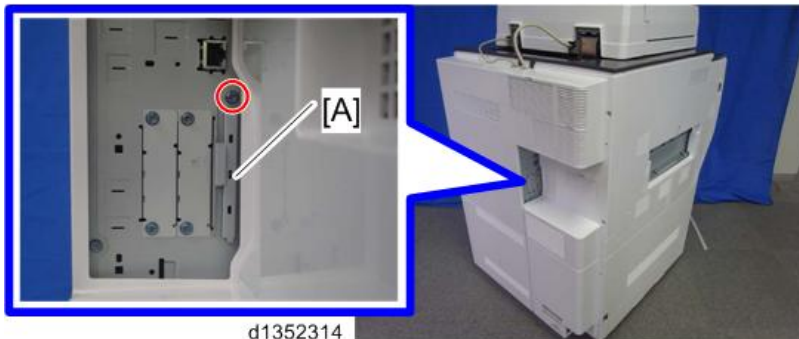


Installation Procedure

⚠ WARNING

- Unplug the main machine power cord before you do the following procedure.

1. Remove the SD-card slot cover [A] from the SD Card slots. (🔧 x 1)



2. Insert the SD card (PostScript3 Unit) in SD slot 2 (lower) [A] with its label face towards the front of the machine. Then push it slowly into SD slot 2 (lower) until you hear a click.



d1352316

3. Perform the SD Card Appli Move. (👉 page 446 "SD Card Appli Move")

Note

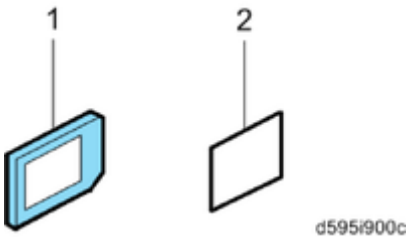
- After the SD Card Appli Move is completed, do the following procedure.
 1. Remove the SD Card from SD slot 2 (lower).
 2. Attach the SD-card slot cover, and then turn on the machine (🔧 x 1)
 3. Make sure that the machine can recognize the option.: User Tools > Printer Features > List/Test Print > Configuration Page

IPDS Unit Type M2 (D719)

Accessories

Check the quantity and condition of the accessories in the box against the following list.

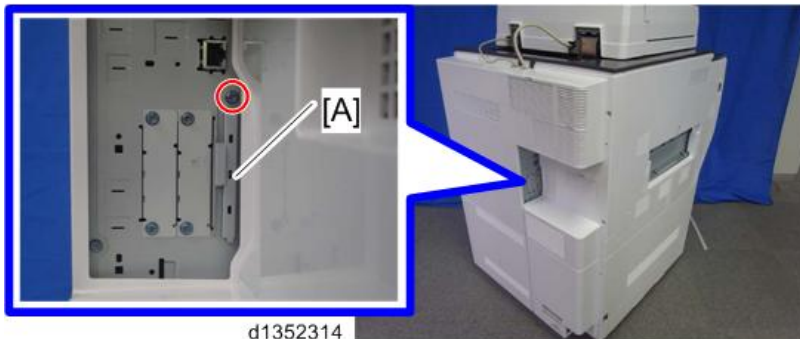
No	Description	Q'ty
1	IPDS Emulation SD Card	1
2	Decal	1



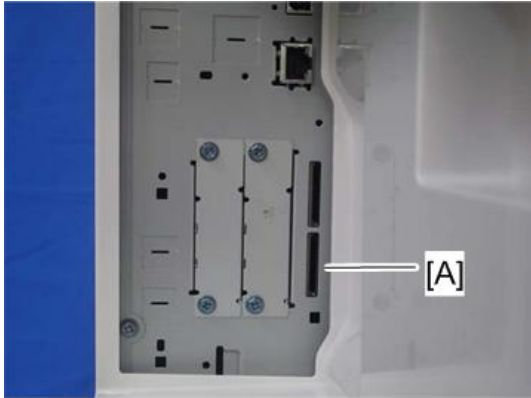
Installation Procedure

⚠ WARNING

- Unplug the main machine power cord before you do the following procedure.
1. Remove the SD-card slot cover [A] from the SD Card slots. (⚙ x 1)



2. Insert the SD card (IPDS Unit) in SD slot 2 (lower) [A] with its label face towards the front of the machine. Then push it slowly into SD slot 2 (lower) until you hear a click.



d1352316

3. Perform the SD Card Appli Move. (👉 page 446 "SD Card Appli Move")

Note

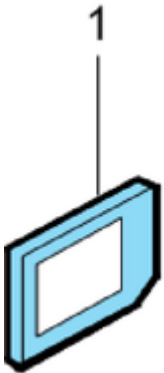
- After the SD Card Appli Move is completed, do the following procedure.
 1. Remove the SD Card from SD slot 2 (lower).
 2. Attach the SD-card slot cover, and then turn on the machine (🔧 x 1)
 3. Make sure that the machine can recognize the option.: User Tools > Printer Features > List/Test Print > Configuration Page

Browser Unit Type M2 (D719)

Accessories

No.	Description	Q'ty
1	SD Card	1

2

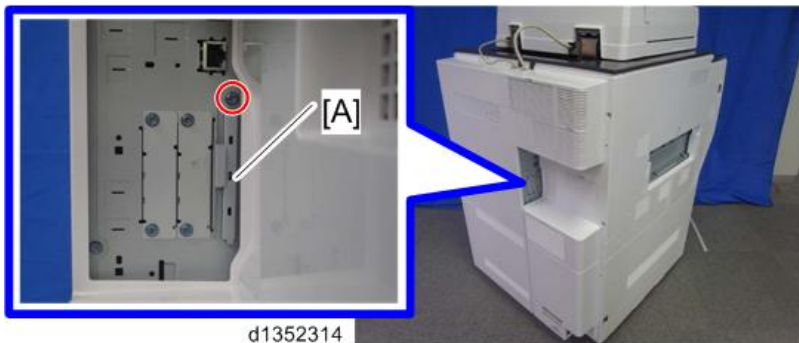


d595i900b

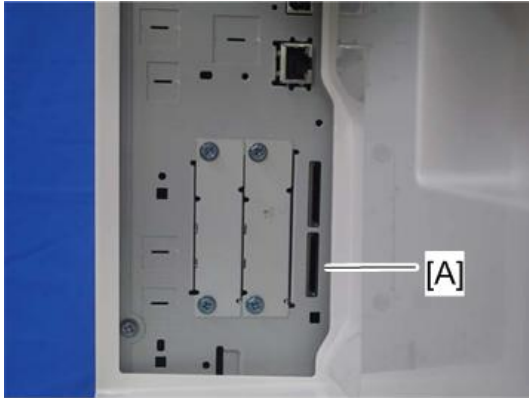
Installation Procedure

⚠ WARNING

- Unplug the main machine power cord before you do the following procedure.
1. Turn the main switch OFF.
 2. Remove the SD-card slot cover [A] from the SD Card slots. (🔧 x 1)



3. Insert the SD card (Browser Unit) in SD slot 2 (lower) [A].



d1352316

4. Turn the main switch ON.
5. D135/D136: Press the "User Tools/Counter" key.
D137/D138: Press the "User Tools" key.
6. On the touch panel, touch "Extended Feature settings".
7. Touch "Extended Feature settings" in the Extended Feature Settings Menu.
8. Make sure that "Extended JS" application was automatically installed in the Startup Settings tab.
9. Turn the main switch OFF/ON.
10. Perform the SD Card Appli Move. (👉 page 446 "SD Card Appli Move")

Note

- After the SD Card Appli Move is completed, do the following procedure.
 1. Remove the SD Card from SD slot 2 (lower).
 2. Attach the SD-card slot cover, and then turn on the machine (🔌 x 1)
 3. Make sure that the machine can recognize the option.: User Tools > Printer Features > List/Test Print > Configuration Page

11. D135/D136: Press the "User Tools/Counter" key.
D137/D138: Press the "User Tools" key.
12. Touch "Edit home".
13. Touch "Add Icon".
14. Touch "Browse".
15. Touch a blank square to set the location for the browser icon.
16. Touch "Exit" to complete the addition of the browser icon.
17. Execute SP5-801-024 (Clear Memory: BROWSER).

Do the following steps if the customer is using the Ricoh JavaScript connected to a Web application developed by Operius/RiDP.

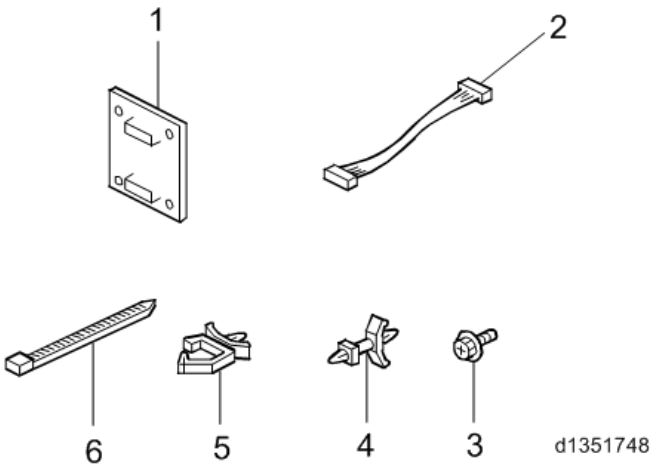
1. Turn the main switch ON.
2. D135/D136: Press the "User Tools/Counter" key.
D137/D138: Press the "User Tools" key.
3. On the touch panel, touch "Browser Features".
4. Touch "JavaScript".
5. Change the Extended JavaScript setting to "Active".

Optional Counter Interface Unit Type A (B870)

Component Check

Check the quantity and condition of the components against the following list.

No.	Description	Q'ty
1	Key Counter Interface Board	1
2	Harness	1
3	Tapping Screw: M3 x 6	4
4	Stud Stay	4
5	Harness Clamp	1
6	Band	1



Installation Procedure

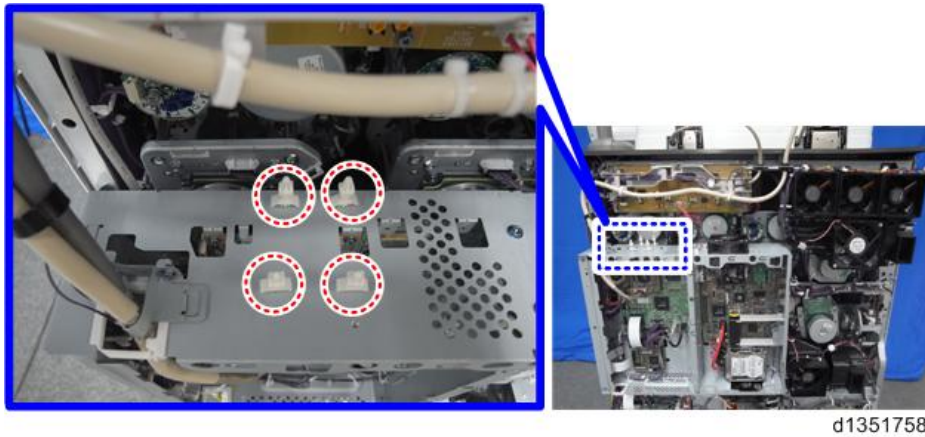
⚠ CAUTION

- Unplug the main machine power cord before starting the following procedure.

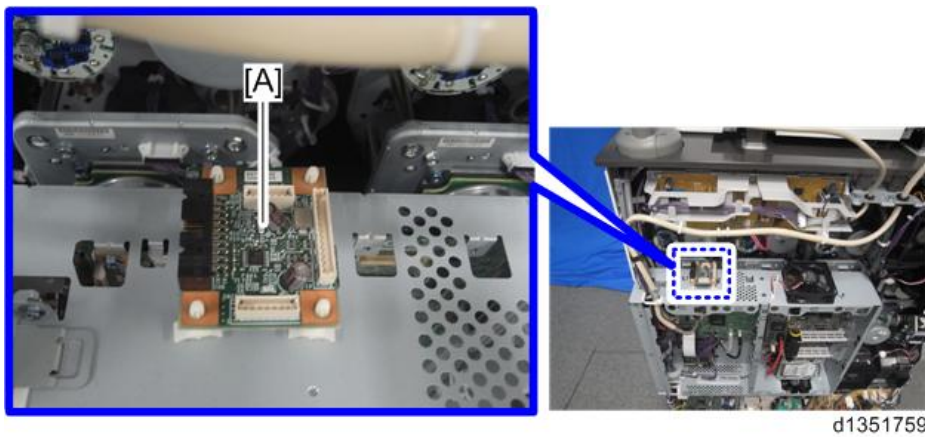
1. Remove the rear middle cover. (☛ page 522 "Outer Covers")
2. Remove the controller box cover [A]. (☛ x 4)



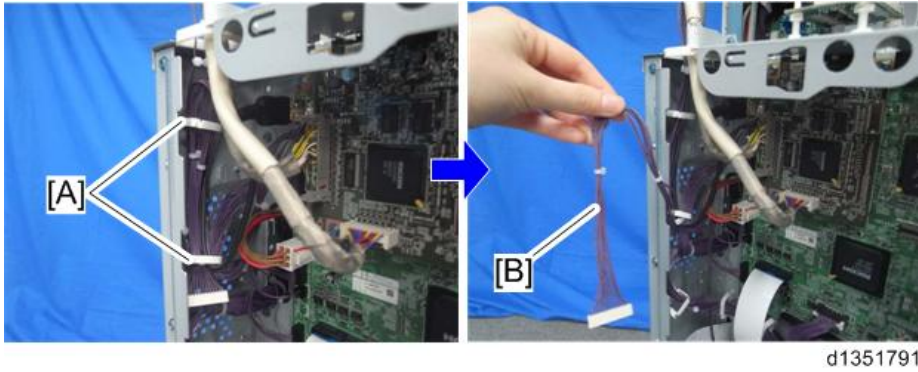
3. Install the four stud stays on the controller box.



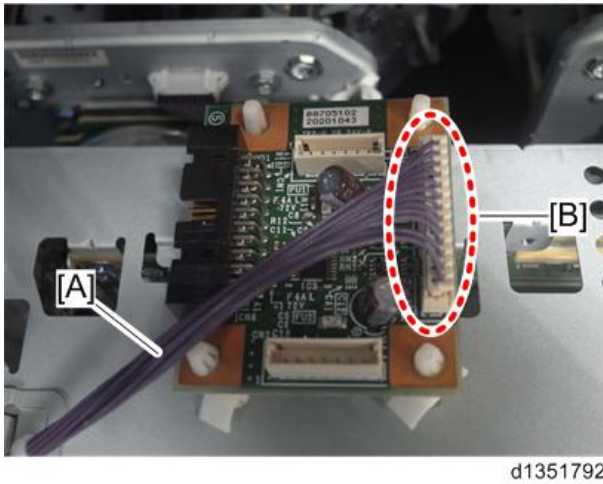
4. Install the optional counter interface board [A] on the four stud stays.



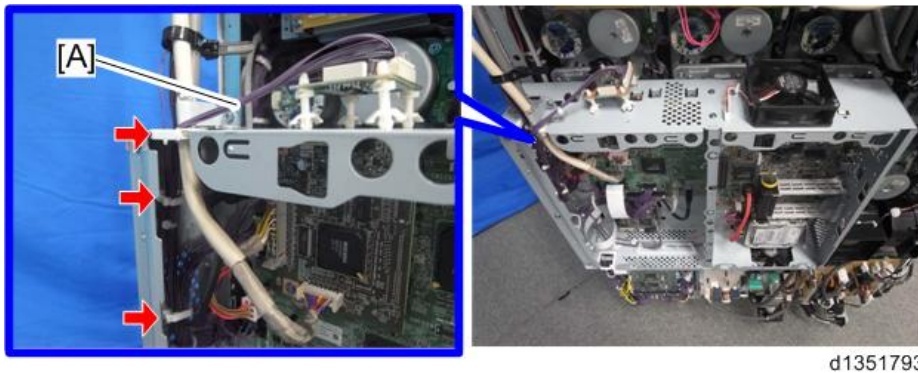
5. Release the extension harness (13-pin) [B] from the clamps [A] in the controller box. (🔧 x2)



6. Connect the harness [A] to CN3 [B] on the optional counter interface board. (🔧 x 1)



7. Route the harness [A] inside the controller box as shown below. (🔧 x 3)

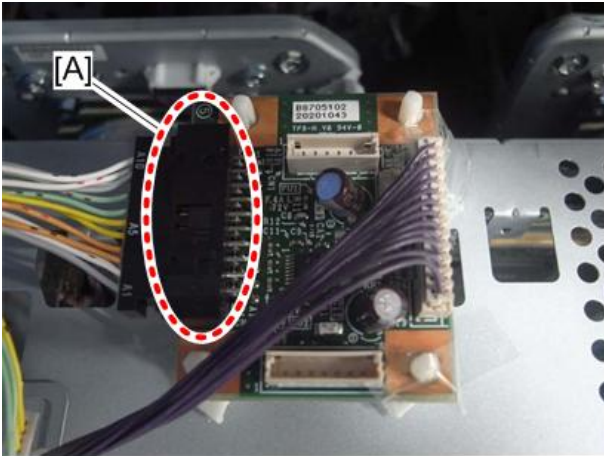


8. Remove the part [A] of the rear middle cover with a flathead screwdriver.



d1351667

9. Connect the harness from the optional counter device to CN4 [A] on the optional counter interface board through the cut off part of the right rear cover. (🔧 x 1)



d1351794

10. Reassemble the machine.

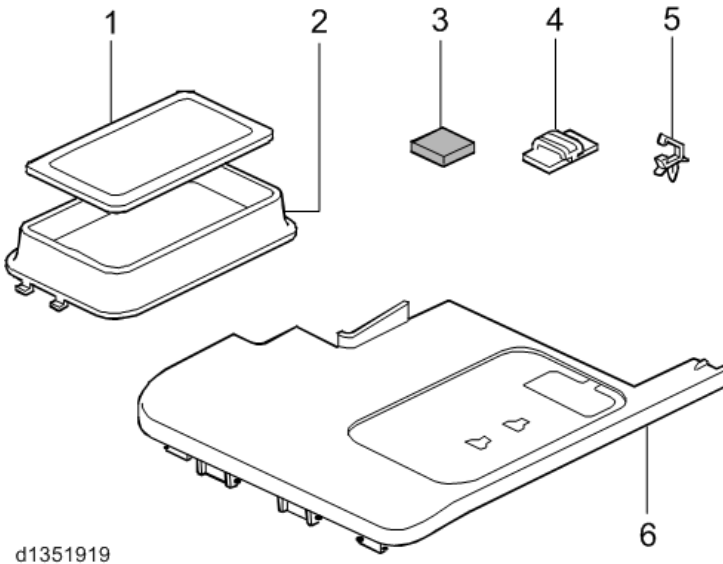
Smart Card Reader Built-in Unit Type M2 (D739) (D135/D136 Only)

2

Component Check

No.	Description	Q'ty
1	IC Card Upper Cover	1
2	IC Card Cover	1
3	Sponge	2
4	Cable Clamp	3
5	Harness Clamp	3
6	Front Upper Cover ^{*1}	1

* 1: Not used in this machine



d1351919

Installation Procedure

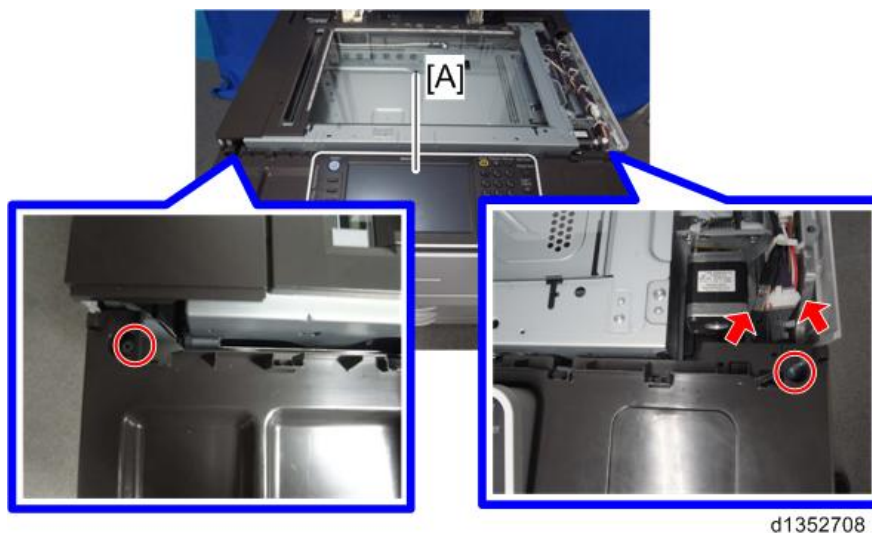
⚠ CAUTION

- Unplug the main machine power cord before starting the following procedure.

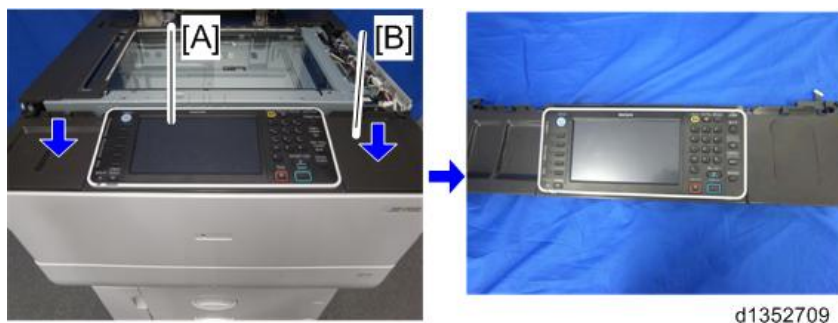
1. Remove the following covers. (☞ page 522 "Outer Covers")

- Upper front cover
- Upper rear cover
- Upper right cover
- Right middle upper cover

2. Remove the screws and connectors of the operation panel [A]. (🔧 x 2, 📧 x 2)

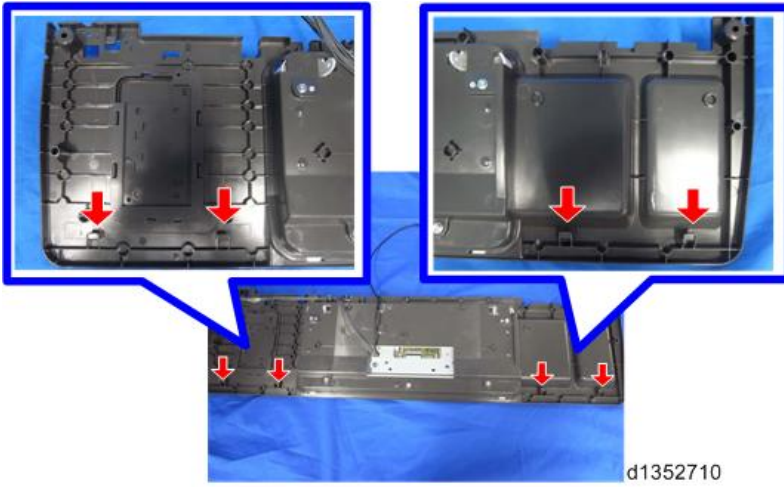


3. Pull the operation panel [A] and lower cover [B] forward to remove it.



↓ Note

- Check the position of the hooks in the photo below before removing.



4. Remove the IC card cover [A] from the operation panel lower cover.

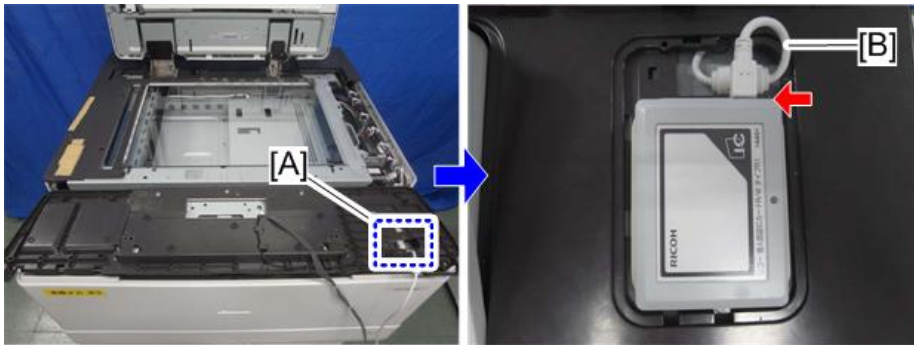


5. Attach the IC card R/W you want to install [A] on the operation panel lower cover.



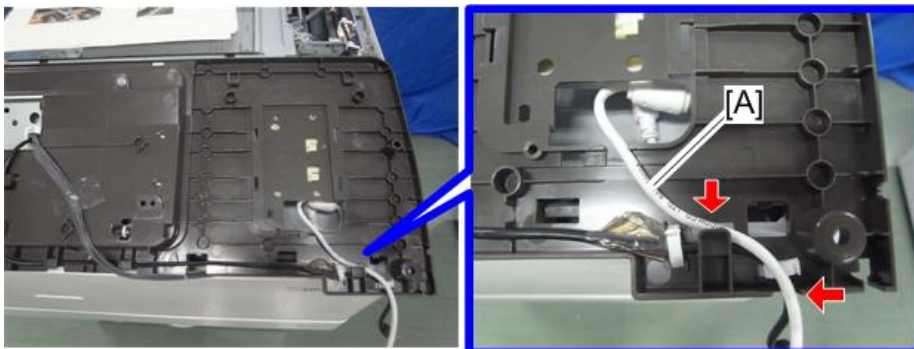
d1351878

6. Pass the USB cable through hole [A] from the back side of the operation panel lower cover, and then connect the USB cable [B] to the IC card R/W.



d1351879

7. Route the USB cable [A] along the back side of the operation panel lower cover. (hook x 2)



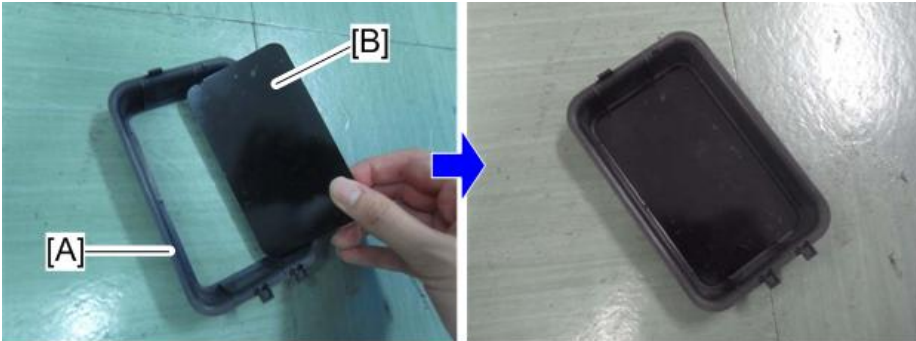
d1351880

8. Keep the USB cable routed [A] on the back side of the operation panel lower cover, and then re-attach the operation panel lower cover.



d1351881

9. Install the IC card upper cover [B] on the IC card cover [A].



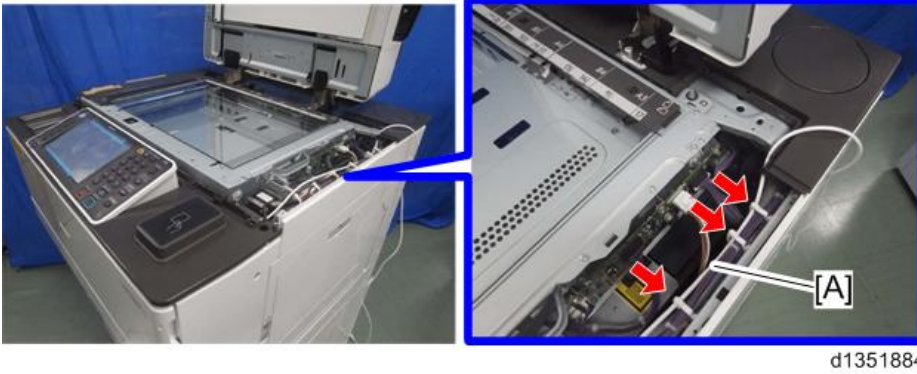
d1351882

10. Install the IC card cover [A] on the operation panel lower cover.



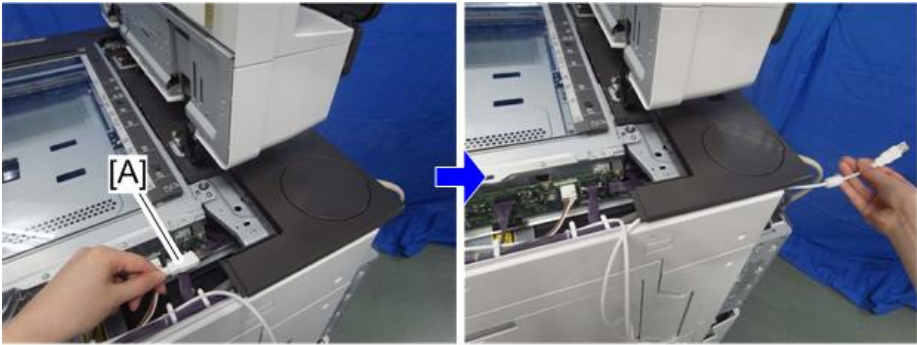
d1351883

11. Route the USB cable [A] inside the right middle upper cover. (🖨️ x 3)



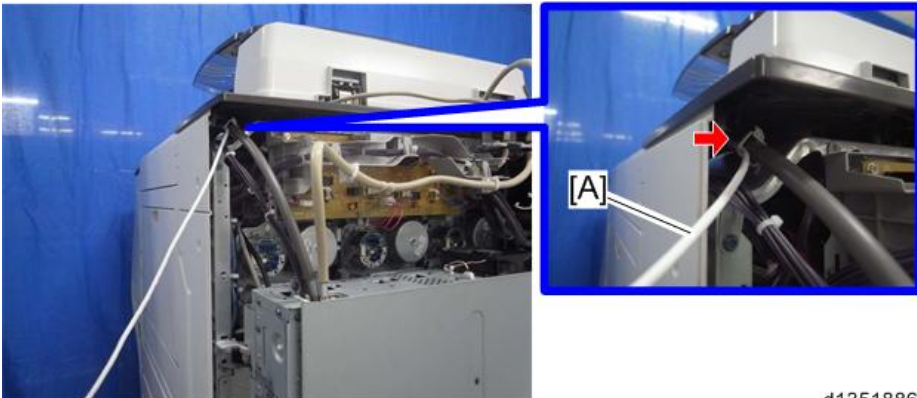
d1351884

12. Route the USB cable [A] under the upper rear cover, and then pull it out to the rear side of the machine.



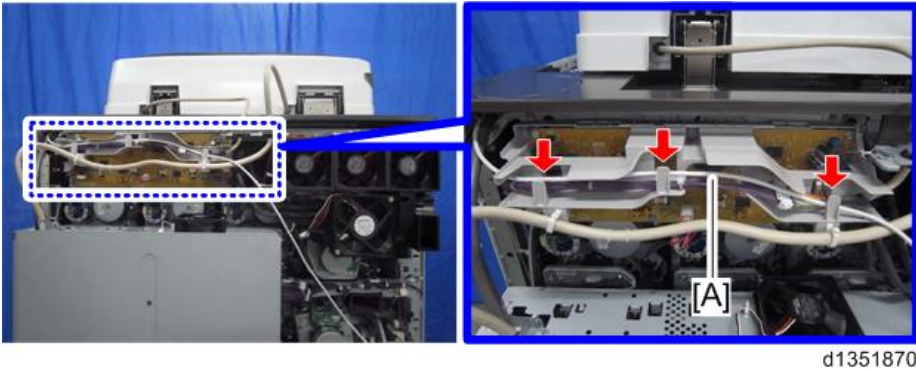
d1351885

13. Hold the USB cable with the clamp [A]. (hook x 1)

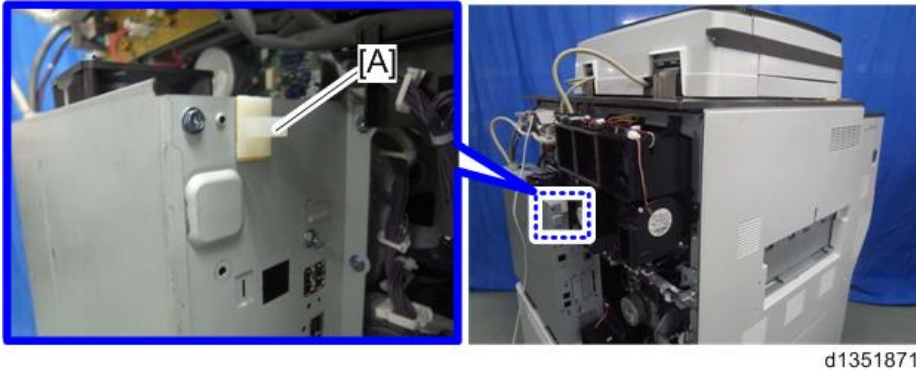


d1351886

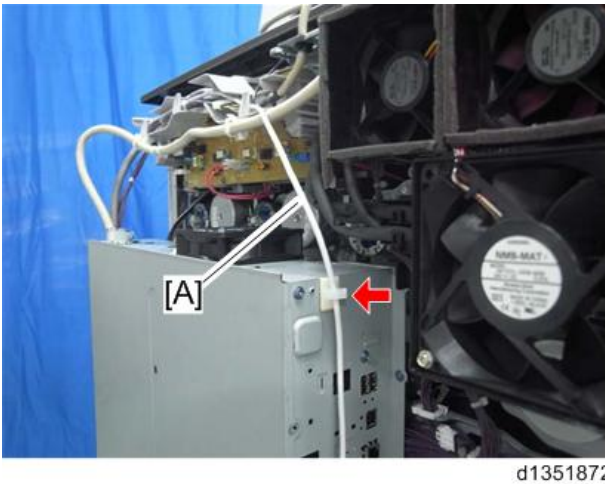
14. Route the USB cable [A] along the rear side of the machine as shown below. (hook x 3)



15. Attach the cable clamp [A] to the side surface of the controller box.



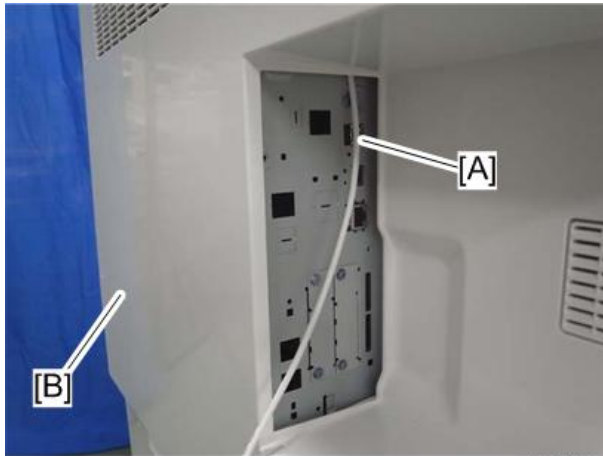
16. Hold the USB cable with the clamp [A]. (🖨️ x 1)



17. Reattach the rear middle cover.

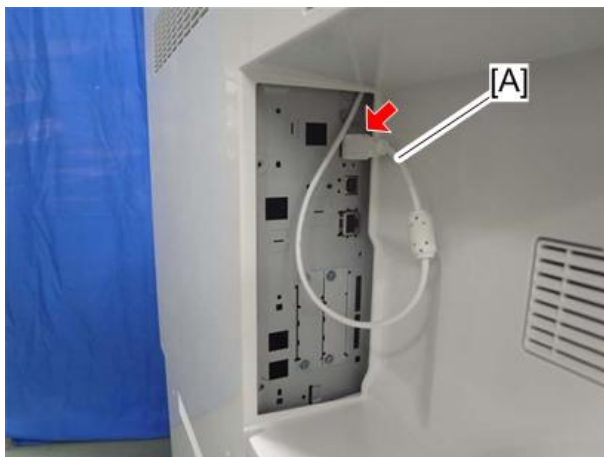
⬇️ **Note**

- When you reattach the rear middle cover [B], pull out the USB cable [A] to the outside as shown below.



d1351873

18. Connect the USB cable [A] to the USB host interface. (🖨️ x 1)



d1351887

19. Attach the cable clamps to the rear middle cover, and then route the USB cable. (🖨️ x3)



d1351888

20. Reassemble the machine.
21. Turn on the main power switch.
22. Make sure that SP5-985-002 (Device Setting - On Board USB) is set to "1".

DataOverwriteSecurity Unit Type H (B869) (D135/D136 Only)

Overview

This option should be installed only for the customer who requires the **CC certified Data Overwrite Security** function.

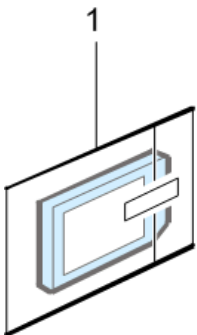
This option is for D135/D136 copiers (Office version) ONLY.

The function of this option is completely the same as the Data Overwrite Security in Security Functions, which is standard on this machine. (☛ page 132 "Security Function Installation")

Component List

Check the quantity and condition of the accessories in the box against the following list.

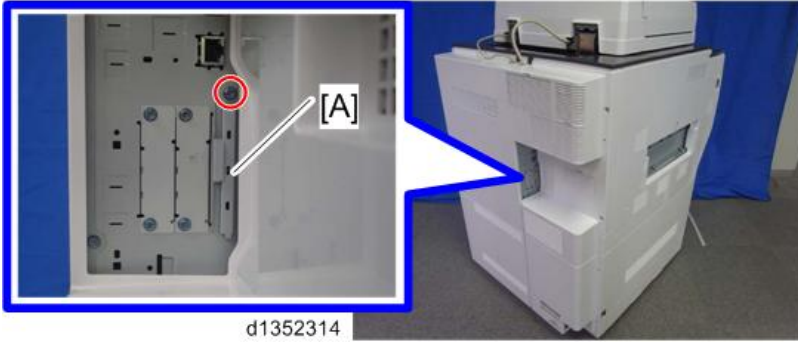
No.	Description	Q'ty
1.	SD Card	1



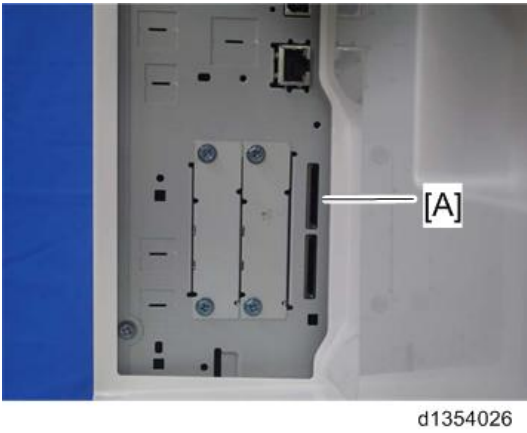
d1351921

Installation Procedure

1. Remove the SD-card slot cover [A] from the SD Card slots. (☛ x 1)



2. Insert the SD card (DataOverwriteSecurity Unit) in SD slot 1 (upper) [A] with its label face towards the front of the machine. Then push it slowly into SD slot 1 (upper) until you hear a click.



3. Install the application using SP5-878-001.

Copy Data Security Unit Type G (D640)

Component Check List

Installation of this unit requires the following components. Other components included in this kit are not used for installation on this machine.

2

No.	Description	Q'ty
1	Copy data security unit board	1
2	Screws	2

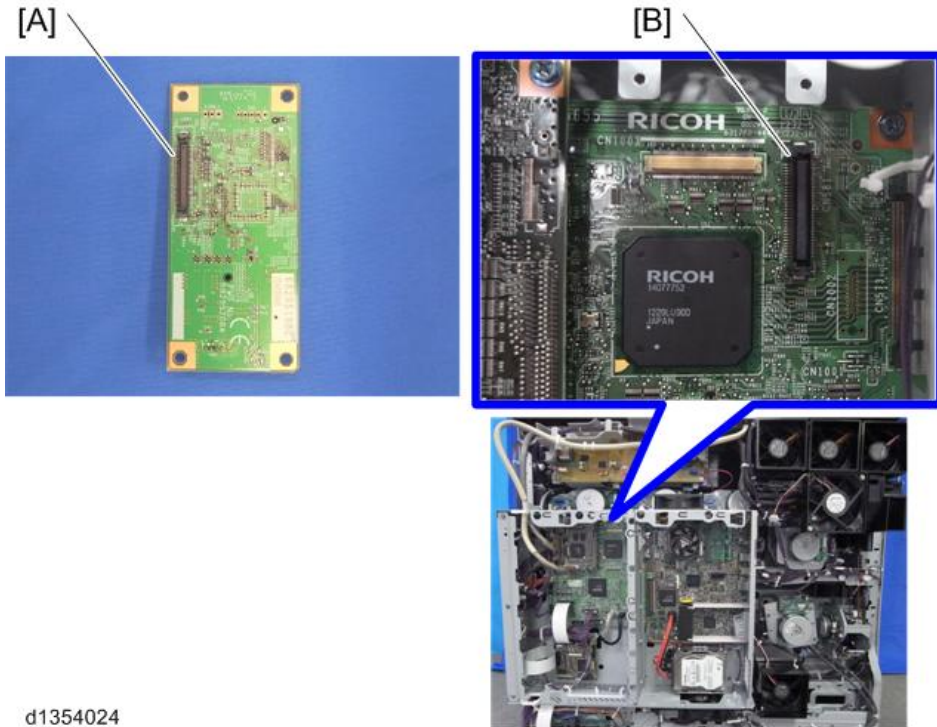


d1354023

Installation

⚠ CAUTION

- Unplug the main machine power cord before you do the following procedure.
1. Controller box cover (☞ page 927 "Controller Board")
 2. Connect the connector [A] on the copy data security unit board to the CN581 [B] on the IPU board of the copier.



d1354024

3. Attach the copy data security unit board [A] to the IPU board bracket (⚙ x 2).



d1354025

4. Reassemble the machine.

User Tool Setting

1. Plug in and turn on the main power switch.
2. Go into the User Tools mode, and select System Settings > Administrator Tools > Copy Data Security Option > "On".

3. Exit User Tools.
4. Check the operation.

Note

- The machine will issue an SC165-00 error if the machine is powered on with the Copy Data Security Unit Board removed and the "Data Security for Copying" feature set to "ON".
- The machine will issue an uncertain SC165-00 error if the machine is powered on with a defective Copy Data Security Unit Board and the "Data Security for Copying" feature set to "OFF".
- When you remove this option from the machine, first set the setting to "OFF" with the user tool before removing this board. If you forget to do this, the "Data Security for Copying" feature cannot appear in the user tool settings. And then SC165-00 will appear every time the machine is switched on, and the machine cannot be used.

Make sure that the machine can recognize the option (see "Check All Connections" at the end of this section).

Check All Connections

Make sure that the machine can recognize the option.

1. Plug in the power cord.
2. Turn on the main switch.
3. Enter the printer user mode. Then print the configuration page.
User Tools > Printer Features > List Test Print > Configuration Page
4. All installed options are shown in the "System Reference" column.

SD Card Appli Move

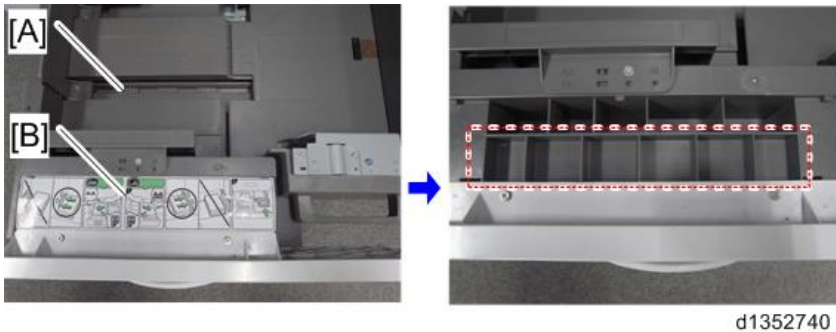
Overview

2

The service program "SD Card Appli Move" (SP5-873) lets you move application programs from one SD card to another SD card.

Be very careful when you do the SD Card Appli Move procedure:

- The data necessary for authentication is transferred with the application program from an SD card to another SD card. Authentication fails if you try to use the SD card after you move the application program from one card to another card.
- Do not use the SD card if it has been used before for other purposes. Normal operation is not guaranteed when such an SD card is used.
- Open the tandem tray [A] and remove the paper cassette decal [B]. Keep the SD card inside after you move the application program from one card to another card. This is done for the following reasons:
 - The SD card can be the only proof that the user is licensed to use the application program.
 - You may need to check the SD card and its data to solve a problem in the future.



Note

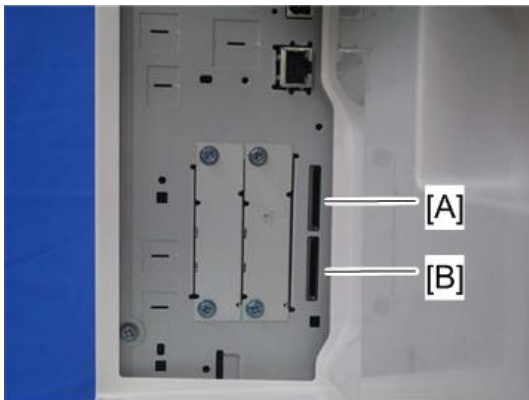
- Do not move OCR Unit Type M2 (optional) to another SD card.

Move Exec

The menu "Move Exec" (SP5-873-001) lets you move application programs from the original SD card to another SD card.

★ Important

- Do not turn ON the write protect switch of the system SD card or application SD card on the machine. If the write protect switch is ON, a download error (e.g. Error Code 44) occurs during a firmware upgrade or application merge.
1. Turn the main switch off.
 2. Make sure that a target SD card is in SD Card Slot 1 [A]. The application program is moved to this SD card.
 3. Insert the source SD card with the application program in SD Card Slot 2 [B]. The application program is copied from this source SD card.



d1352315

4. Turn the main switch on.
5. Start the SP mode.
6. Select SP5-873-001 "Move Exec".
7. Follow the messages shown on the operation panel.
8. Turn the main switch off.
9. Remove the source SD card from SD Card Slot 2 [B].
10. Turn the main switch on.
11. Check that the application programs run normally.

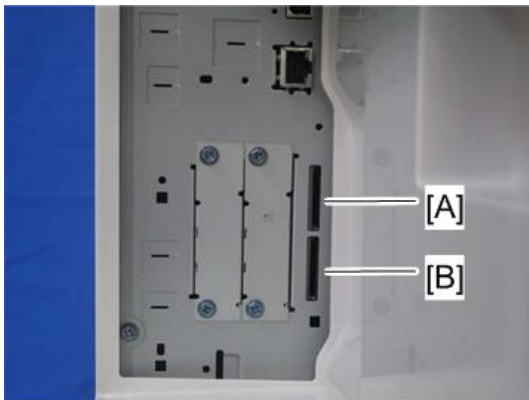
Undo Exec

"Undo Exec" (SP5-873-002) lets you move back application programs from an SD card in SD Card Slot 1 (upper) to the original SD card in SD Card Slot 2 (lower). You can use this program when, for example, you have mistakenly copied some programs by using Move Exec (SP5-873-001).

★ Important

- Do not turn ON the write protect switch of the system SD card or application SD card on the machine. If the write protect switch is ON, a download error (e.g. Error Code 44) occurs during a firmware upgrade or application merge.

1. Turn the main switch off.
2. Insert the original SD card in SD Card Slot 2 [B]. The application program is copied back into this card.
3. Insert the SD card with the application program in SD Card Slot 1 [A]. The application program is copied back from this SD card.



d1352315

4. Turn the main switch on.
5. Start the SP mode.
6. Select SP5-873-002 "Undo Exec."
7. Follow the messages shown on the operation panel.
8. Turn the main switch off.
9. Remove the SD card from SD Card Slot 2 [B].
10. Turn the main switch on.
11. Check that the application programs run normally.

Caution

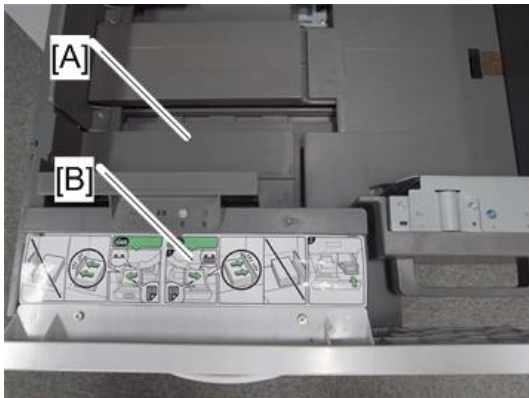
- If the customer uses the SD card on a PC, operation cannot be guaranteed.
- The SD card from which you moved an application cannot be used again.
- The SD card itself is the proof of purchase. Therefore, the application must be purchased again if the card is lost.

- Follow the procedure below to store the SD card from which you moved an application in the machine.

★ Important

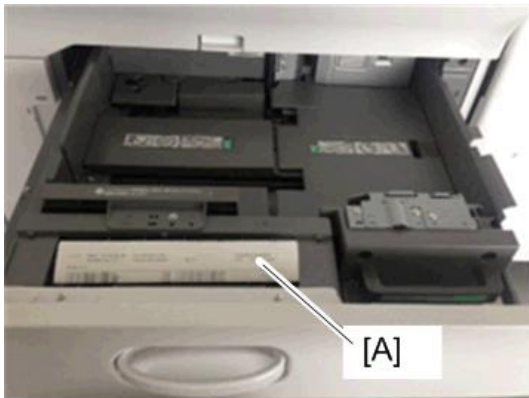
- If the SD card is lost, it will be impossible to determine which application has been installed in the case of a machine failure.
- Also, the empty SD card will required when moving back an application.

1. Pull out the tandem tray [A] and remove the paper cassette decal [B].



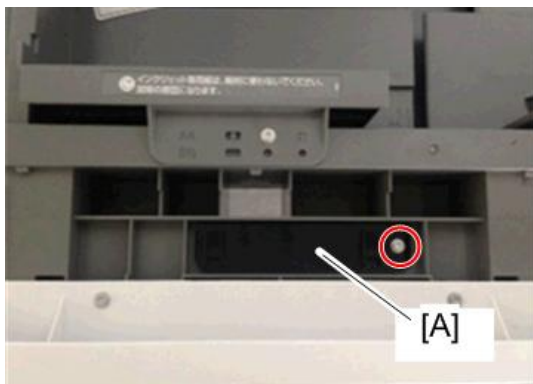
d1352740a

2. Remove the factory SP sheet [A].



d135a0010

3. Remove the SD card holder [A] (🔧 x 1).



d135a0011

4. Set the SD card in the SD card holder.



d135a0012

3. Preventive Maintenance

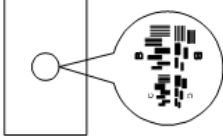
Preventive Maintenance Tables

See "Appendices" for the following information:

- Preventive Maintenance Items
- Other Yield Parts

Image Quality Standards

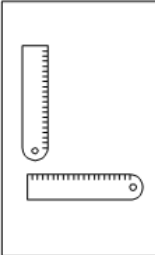
Resolution

Item	Specification	Chart	Measuring method
Copy (100%/Enlargement), Black and White (1C)	Ave 5.0 lines/mm or more Min 4.5lines/mm or more	Book: S-5 (revised)	Copy onto plain paper using Auto Image Density/5 notches and then determine resolution.
Copy (Reduction), Black and White (1C)	Min 4.5×M lines/mm or more	DF: S-5Y (revised)	 d1354027

Color shift

Item	Specification	Chart	Measuring method
Engine, Main Scan/Sub Scan	Ave.+3σ≤150.0μm	L-Pattern	
Engine, Main Scan/Sub Scan (after MUSIC)	Ave.+3σ≤120.0μm		Print within 1 minute after MUSIC correction.

Magnification ratio error margin

Item	Specification	Chart	Measuring method
Engine, Main Scan, Black and White (1C)	0.75% or less	Mono_CCD	<p>Copy the scale and compare it with the scale at 100 mm to see if it is within specification.</p> <p>Leave the sheet for 3 minutes or more after it has been output before measuring.</p>  <p>d1354028</p> <p>The swelling/shrinkage of paper caused by humidity are excluded.</p> <p>First side of the sheet only.</p>
Engine, Sub Scan, Black and White (1C)	0.50% or less	Scale chart	
Copy (100%), Main Scan, Black and White (1C)	0.75% or less		
Copy (100%), Sub Scan, Black and White (1C)	0.80% or less		
Copy (Reduction), Main Scan/Sub Scan, Black and White (1C)	1.00% or less		
Copy (Enlargement), Main Scan/Sub Scan, Black and White (1C)	1.00% or less		

Magnification ratio error margin deviation

Item	Specification	Chart	Measuring method
Copy (100% / Enlargement / Reduction), Black and White (1C)	1.00% or less	Scale chart	Leave the sheet for 3 minutes or more after it has been output before measuring.

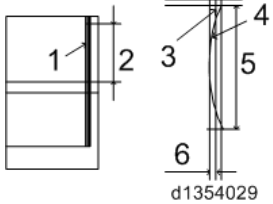
Pitch error margin

Item	Specification	Chart	Measuring method
Engine, Black and White(1C)	1.50% or less	Mono_CCD	For a line of about 1/2 inch in length.

Perpendicularity

Item	Specification	Chart	Measuring method
Engine, Black and White(1C)	$\pm 0.70\text{mm}/200\text{mm}$ or less ($90^\circ \pm 0.20^\circ$)	Mono_CCD	Measure with the full length and width of the image.
Copy (100%), Black and White (1C)	$\pm 1.00\text{mm}/200\text{mm}$ or less	Scale chart	

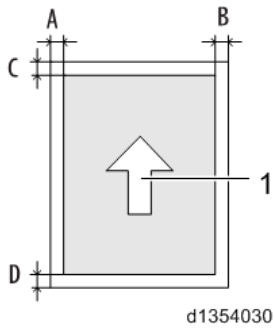
Linearity

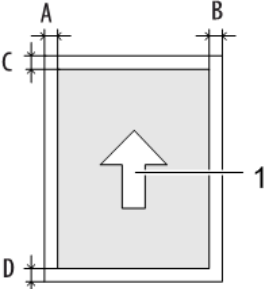
Item	Specification	Chart	Measuring method
Engine, Black and White(1C)	$\pm 0.20\text{mm}/100\text{mm}$ or less	Mono_CCD	Measure with the full length and width of the image.
Copy, Black and White (1C)	$\pm 0.50\text{mm}/100\text{mm}$ or less	Scale chart	 <ol style="list-style-type: none"> 1. Inner line 2. 100mm 3. Base line 4. Copy 5. 100mm 6. 0.5mm

Parallelism

Item	Specification	Chart	Measuring method
Item	Specification	Chart	Measuring method
Engine, Black and White(1C)	$\pm 1.0\text{mm}$ or less	Mono_CCD	Measure with the full length and width of the image.

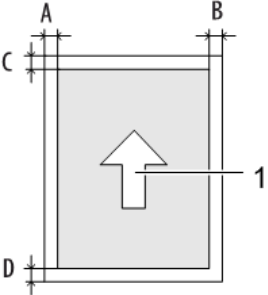
Missing Image Area (D135/D136)

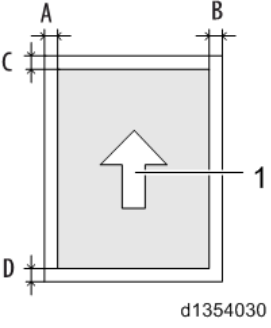
Item	Specification	Chart	Measuring method
Engine (leading edge), Black and White(1C)	[Uncoated paper] Paper thickness 1 to 3: $5.0 \pm 1.5\text{mm}$ Paper thickness 4 to 8: $4.0 + 1.8 / -1.2\text{mm}$ [Coated paper] Paper thickness 1 to 4: $5.0 \pm 1.5\text{mm}$ Paper thickness 5 to 8: $4.0 + 1.8 / -1.2\text{mm}$	Trim	<p>Since there is a variability of about 1 mm in the sizes of sheets of paper, correct the size of the sheet before measuring.</p>  <p style="text-align: center;">d1354030</p>
Engine (left/right), Black and White(1C)	$2.0 \pm 1.5\text{mm}$		<p>1. Paper feed direction</p>
Engine (trailing edge), Black and White(1C)	[Uncoated paper] Paper thickness 1 to 4: $5.0 \pm 2.0\text{mm}$ Paper thickness 5 to 8: $4.0 \pm 2.0\text{mm}$ [Coated paper] Paper thickness 1 to 6: $5.0 \pm 2.0\text{mm}$ Paper thickness 7 to 8: $4.0 \pm 2.0\text{mm}$		<p>52gsm short grain, leading edge: $5 \pm 1.5\text{mm}$ First side, trailing edge: 0.5 to 7.0mm (for reference only)</p>

Item	Specification	Chart	Measuring method
Copy (leading edge), Black and White(1C)	[Uncoated paper] Paper thickness 1 to 3: 5.0±1.5mm Paper thickness 4 to 8: 4.0+1.8/-1.2mm [Coated paper] Paper thickness 1 to 4: 5.0±1.5mm Paper thickness 5 to 8: 4.0+1.8/-1.2mm	Exposure glass open	<p>Since there is a variability of about 1 mm in the sizes of sheets of paper, correct the size of the sheet before measuring.</p>  <p style="text-align: right;">d1354030</p> <p>1. Paper feed direction</p> <p>52gsm short grain, leading edge: 5±1.5mm First side, trailing edge:0.5 to 7.0mm (for reference only)</p>
Copy (left/right), Black and White(1C)	2.0±1.5mm		
Copy (trailing edge), Black and White(1C)	[Uncoated paper] Paper thickness 1 to 4: 5.0±2.0mm Paper thickness 5 to 8: 4.0±2.0mm [Coated paper] Paper thickness 1 to 6: 5.0±2.0mm Paper thickness 7 to 8: 4.0±2.0mm		

Missing Image Area (D137/D138)

Item	Specification	Chart	Measuring method
Engine, Black and White(1C)	±0.70mm/200mm or less (90° ± 0.20°)	Mono_CCD	Measure with the full length and width of the image.

Item	Specification	Chart	Measuring method
Engine (leading edge), Black and White(1C)	[Uncoated paper] Paper thickness 1 to 3: $5.0 \pm 1.5\text{mm}$ Paper thickness 4 to 8: $4.0 \pm 1.5\text{mm}$ [Coated paper] Paper thickness 1 to 4: $5.0 \pm 1.5\text{mm}$ Paper thickness 5 to 8: $4.0 \pm 1.5\text{mm}$		<p>Since there is a variability of about 1 mm in the sizes of sheets of paper, correct the size of the sheet before measuring.</p>  <p style="text-align: center;">d1354030</p>
Engine (left/right), Black and White(1C)	$2.0 \pm 1.5\text{mm}$	Trim	
Engine (trailing edge), Black and White(1C)	[Uncoated paper] Paper thickness 1 to 4: $5.0 \pm 2.0\text{mm}$ Paper thickness 4 to 8: $4.0 \pm 2.0\text{mm}$ [Coated paper] Paper thickness 1 to 6: $5.0 \pm 2.0\text{mm}$ Paper thickness 7 to 8: $4.0 \pm 2.0\text{mm}$		<p>1. Paper feed direction 52gsm short grain, leading edge: $5 \pm 1.5\text{mm}$ First side, trailing edge: 0.5 to 7.0mm (for reference only)</p>

Item	Specification	Chart	Measuring method	
Copy (leading edge), Black and White(1C)	[Uncoated paper] Paper thickness 1 to 3: $5.0 \pm 1.5\text{mm}$ Paper thickness 4 to 8: $4.0 \pm 1.5\text{mm}$ [Coated paper] Paper thickness 1 to 4: $5.0 \pm 1.5\text{mm}$ Paper thickness 5 to 8: $4.0 \pm 1.5\text{mm}$	Exposure glass open	Since there is a variability of about 1 mm in the sizes of sheets of paper, correct the size of the sheet before measuring.  <p style="text-align: right;">d1354030</p> <p>1. Paper feed direction 52gsm short grain, leading edge: $5 \pm 1.5\text{mm}$ First side, trailing edge: 0.5 to 7.0mm (for reference only)</p>	
Copy (left/right), Black and White(1C)	$2.0 \pm 1.5\text{mm}$			
Copy (trailing edge), Black and White(1C)	[Uncoated paper] Paper thickness 1 to 4: $5.0 \pm 2.0\text{mm}$ Paper thickness 5 to 8: $4.0 \pm 2.0\text{mm}$ [Coated paper] Paper thickness 1 to 6: $5.0 \pm 2.0\text{mm}$ Paper thickness 7 to 8: $4.0 \pm 2.0\text{mm}$			

Margin position

Item	Specification	Chart	Measuring method
Engine (simplex), Main Scan/Sub Scan, Black and White (1C)	± 2.0 or less	Mono_CCD	
Engine (duplex), Main Scan, Black and White (1C)	± 3.0 or less		
Engine (duplex), Sub Scan, Black and White (1C)	± 4.0 or less		

3

1st Side/2nd Side Positional Precision (Shift Length of 2nd Side Compared to 1st Side)

Item	Specification	Chart	Measuring method
Engine, Main Scan/Sub Scan, Black and White (1C)	± 1 mm or less (for reference only)	Trim	Measure after adjusting image position and magnification ratio in SP mode.

Paper Transfer Quality Standards

Registration

Exposure glass

Item	Specification	Note
Simplex (1st print side), 100% or reduction	0 ± 2 mm (Vertically and horizontally)	
Simplex (1st print side), enlargement	0 ± 2 mm \times M mm (Vertically and horizontally)	M: Magnification ratio
Duplex (2nd print side), 100% or reduction	0 ± 2 mm (Vertically and horizontally)	
Duplex (2nd print side), enlargement	0 ± 2 mm \times (2 \times M+1) mm (Vertically and horizontally)	M: Magnification ratio

ADF

Item	Specification	Note
Simplex (1st print side), non-B6 original, 100% or reduction	Main Scan: 0 ± 4 mm Sub Scan: 0 ± 3 mm	
Simplex (1st print side), non-B6 original, enlargement	Main Scan: $0 \pm (2 \times M + 2)$ mm Sub Scan: $0 \pm (2 \times M + 1)$ mm	M: Magnification ratio
Simplex (1st print side), B6 original, 100% or reduction	Main Scan: 0 ± 5 mm Sub Scan: 0 ± 4 mm	
Simplex (1st print side), B6 original, enlargement	Main Scan: $0 \pm (2 \times M + 3)$ mm Sub Scan: $0 \pm (2 \times M + 2)$ mm	M: Magnification ratio
Duplex (2nd print side), non-B6 original, 100% or reduction	Main Scan: 0 ± 4 mm Sub Scan: 0 ± 3 mm	

Item	Specification	Note
Duplex (2nd print side), non-B6 original, enlargement	Main Scan: $0 \pm (2 \times M + 3)$ mm Sub Scan: $0 \pm (2 \times M + 2)$ mm	M: Magnification ratio

Skew

Exposure glass

Item	Specification	Note
Simplex, A4 SEF or larger * 1	± 1.0 mm/200mm or less	Excluding paper longer than 12 × 18 inches. * 1 Feed length 279mm or more * 2 Feed length 257mm or less
Simplex, B5 SEF or smaller * 2	± 1.0 mm/100mm or less	
2nd side, A4 SEF or larger * 1	± 1.0 mm/200mm or less	
2nd side, B5 SEF or smaller * 2	± 1.0 mm/100mm or less	

ADF

Original	Printed paper	Specification	Note
1st side, A3 to B5/A6 LEF	B5 SEF or smaller	Main Scan: 3.5mm/ 200mm or less Sub Scan: 3.0mm/ 200mm or less	
1st side, A3 to B5/A6 LEF	A3/DLT to A4/LT	Main Scan: ± 2.5 mm/ 200mm or less Sub Scan: 2.0mm/ 200mm or less	
1st side, other than A3 to B5/A6 LEF	B5 SEF or smaller	Main Scan and Sub Scan: ± 4.0 mm/ 200mm or less	
1st side, other than A3 to B5/A6 LEF	A3/DLT to A4/LT	Main Scan and Sub Scan: ± 3.0 mm/ 200mm or less	

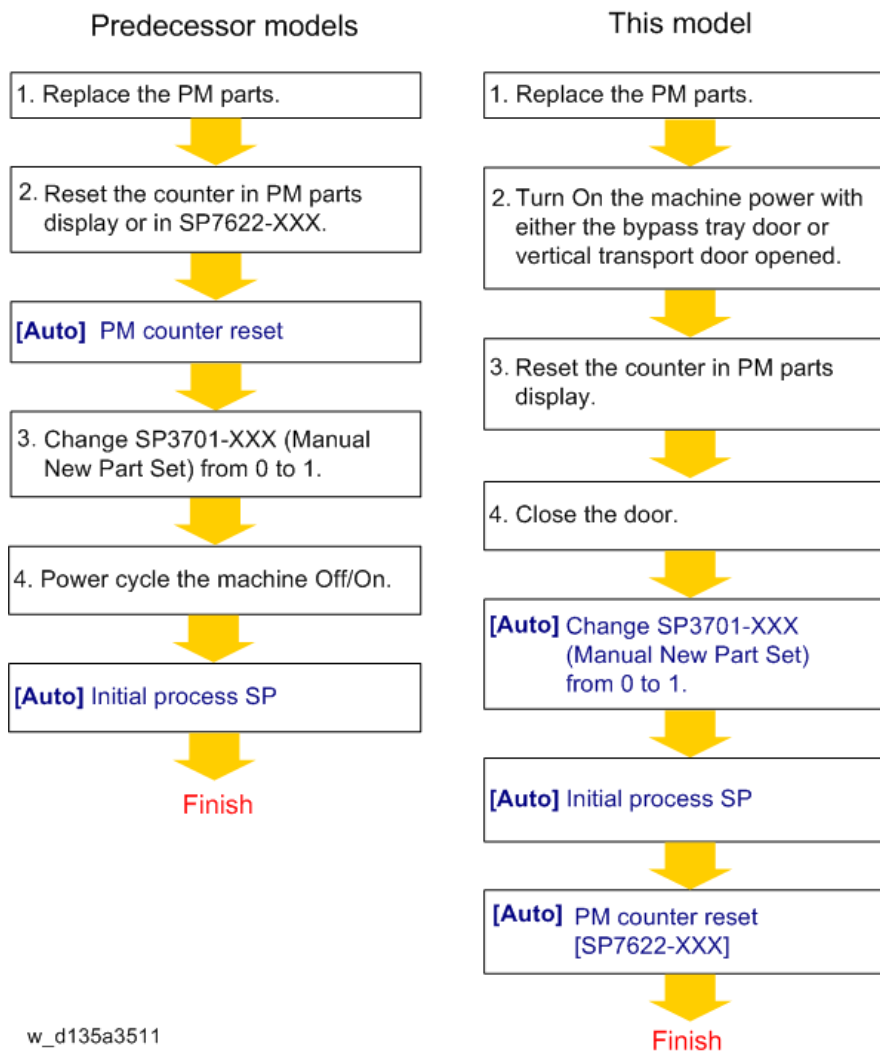
Original	Printed paper	Specification	Note
2nd side, A3 to A5	B5 SEF or smaller	Main Scan and Sub Scan: $\pm 4.0\text{mm}/200\text{mm}$ or less	
2nd side, A3 to A5	A3/DLT to A4/LT	Main Scan and Sub Scan: $\pm 3.0\text{mm}/200\text{mm}$ or less	

PM Parts Settings

PM Parts Replacement Procedure

PM parts replacement procedure for this model is different from predecessor models. If the PM counter is reset in "PM parts display", flag is set (SP3701-XXX) and initial process SPs are run automatically for the replaced part. See below for details. If the PM counter is reset in SP7622-XXX, procedure is the same as predecessor models.

Comparison of the PM parts replacement procedure



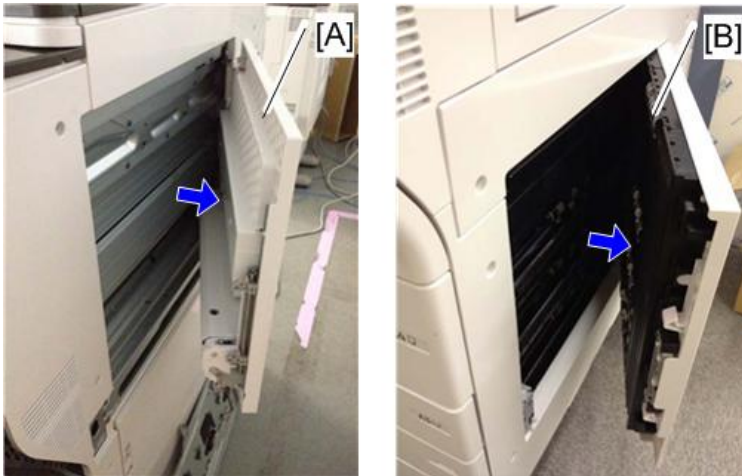
w_d135a3511

★ Important

- If the counter for the Lubricant Bar is reset in SP7622-XX, make sure to set the flag in SP3701-XXX. Otherwise, the lubricant end detection (SP3810-XXX) will not be reset and the banner message indicating near-end will remain on the operation panel.

PM part replacement procedure

1. Turn off the power on the operation panel button, and unplug the AC power cord.
2. Turn off the main power switch located inside the door.
3. Replace the PM parts.
4. Plug in the AC power cord and turn on the main power switch with either the bypass tray door [A] or vertical transport door [B] opened.



d1352984

↓ Note

- Make sure to open either the bypass tray or vertical transport door before turning on the main power. Otherwise, troubles could occur as a result of unneeded initialization processes.
5. Enter the SP mode and push the PM parts counter reset button in the PM Parts display. (☛ page 466 "PM Counter Display")

↓ Note

- Pressing the reset button in PM Counter Display does not reset the PM counter. The PM counter is reset after closing the door in step 6.
6. Close the bypass tray door (or the vertical transport door). The machine will reset the PM counters automatically followed by an initialization process. (☛ page 472 "Initial Adjustment SP Lists")
 7. Check the Initial Adjustment SP Lists and execute initialization in the SP mode, if required. (☛ page 472 "Initial Adjustment SP Lists")

8. Enter SP5-990-004 and check the counter values in the SMC logging data.
Make sure that the PM counters for the replaced units are "0" in the PM parts display.
If a PM counter for a unit that had been replaced does not display "0," reset that counter in the procedure described above.
9. Exit the SP mode.

Note

- Machine operation will automatically stop when the PM counters for the fusing cleaning web and drum lubricant bar reach their yield.
- Counter clearance is not required when replacing the developer, as this counter is cleared by SP3-024 (Developer Fill: Execute).
- Counter clearance triggers the initialization of the parts described in this section. When initialization is required for these parts, open the front door and clear the counter.

Preparation before Operation Check

1. Clean the exposure glasses (for DF and book scanning). Check the PM table to see if any other cleaning is scheduled at this time.
2. Enter the user tools mode.
3. Do the "Automatic Color Calibration (ACC)" for the copier mode & printer mode.
4. Exit the User Tools mode, and then enter the SP mode.
5. Do the "Forced line position adjustment"
 - First do SP2-111-3 (Mode c).
 - Then do SP2-111-1 (Mode a).
 - Check the process by viewing the operation panel to confirm successful results. Results can also be viewed in SP 2-194-10 to 12.
6. Exit the SP mode.

Operation Check

Print out a sample image and confirm proper image quality.

PM Counter Display

The PM Counter main menu and submenu allow you to view the PM counts for both units and individual components.

On the CH-C1, Estimated usage rate / Remaining days and Commissioning Status Report have been added to this menu.

Similarly to the Taurus, CH-C1 applies the running distance calculation to display the usage rate and remaining days of parts.

3

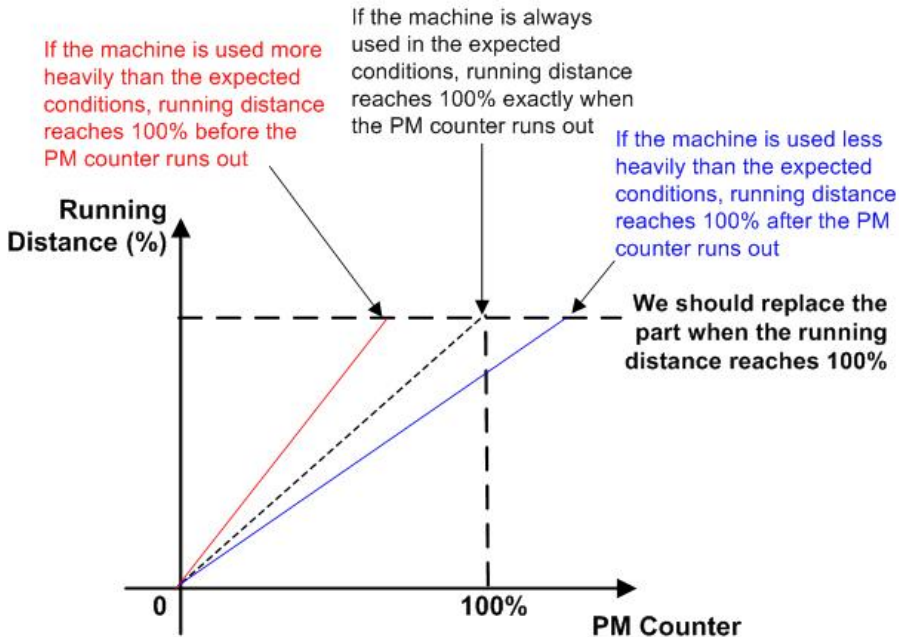
With this system, PM can be scheduled with more accuracy in accordance with the machine usage conditions unique to every user.

Please refer to the usage rate and remaining days when doing PM for the CH-C1.

Note concerning Running Distance Data

Since the PM parts yield is based on set conditions (for example, CH-C1 Pro: A4LEF, 26P/J, FC70%, etc), if a machine is used in an unexpected manner, parts could reach their life before the prescribed yield (EM), or could exceed the prescribed yield.

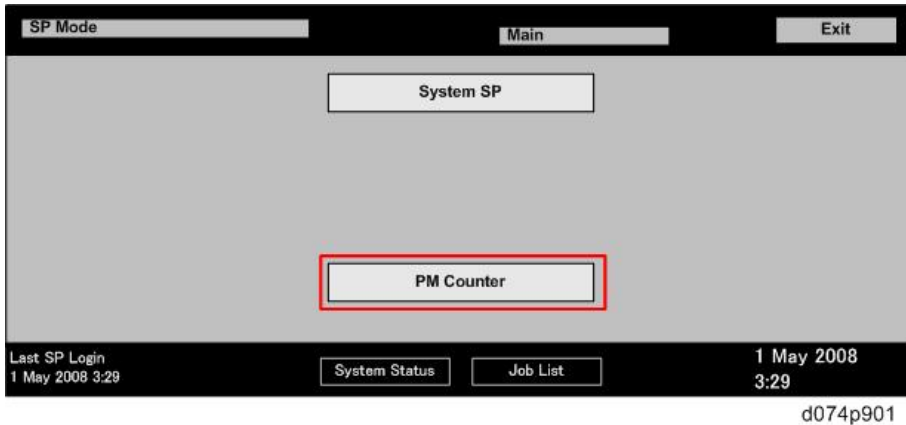
However, if the machine uses the running distance of the parts (which is a calculation based on the total number of revolutions made by the parts), PM can be carried out at more precise times, because the running distance reflects the actual status of the machine.



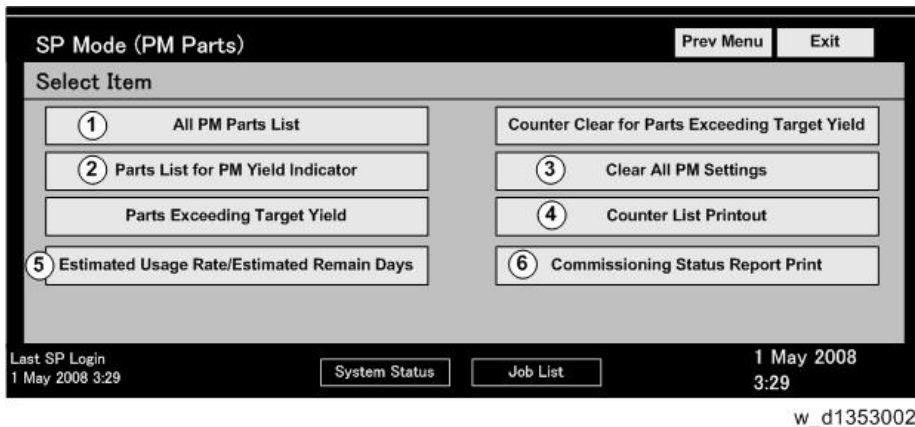
w_d1353004

Opening the PM Counter

1. Enter the SP mode.



2. Touch [PM Counter].



① All PM Parts List.

Displays all PM items (all PM items, not only PM units). Lists all PM items regardless of PM yield indicator settings.

② Parts list for PM yield indicator

Displays on the items with their PM yield indicator settings set to "Yes".

③ Clear all PM settings

Resets all PM counter settings to "0" at the same time. PM items can be reset one by one with the [Clear] button.

④ Counter list print out

Prints the PM counter on paper.

⑤ Estimated Usage Rate/Estimated Remain Days

Displays the estimated usage rate (0 to 100%) and remaining days (255 to 0 days) of the PM items, in which the calculation is based on page counter value and running distance, allowing more accuracy in comparison to the conventional PM page counter.

⑥ Commissioning Status Report Print

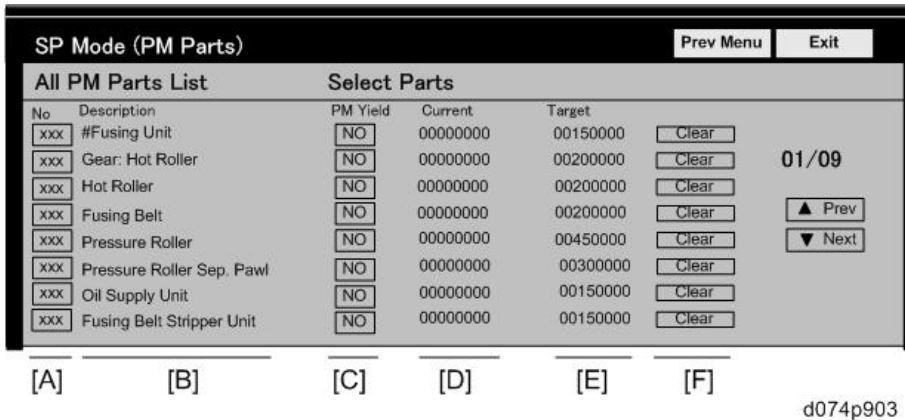
Prints the status report.

3

PM Parts Screen Details

All PM Parts list: Main Menu

The "All PM Parts list" displays all PM units and individual items. This list shows all PM items, regardless of their "PM yield indicator settings".



- [A]: Number buttons. Pressing a number button opens a submenu.
- [B]: Descriptions. The # mark denotes a "unit" (not an individual item).
- [C]: PM yield buttons. Function is the same as the "PM yield indicator settings" button.
- [D]: Current PM counter value.
- [E]: Target PM interval. This can be changed by pressing a number button [A].
- [F]: PM counter clear button. Function is the same as the [Clear current counter] button.

↓ Note

- The fusing belt smoothing roller and fusing cleaning web unit are prescribed as PM parts only for D137/D138. These parts do not appear in the "All PM Parts list" because the PM counter of these parts is not based on page count. To check if PM is needed or not for these parts, check the "Remaining Days" on the "Estimated Usage Rate/Estimated Remaining Days" screen. (page 470 "Estimated Usage Rate/Estimated Remaining Days") Make sure to clear the counter with the [Clear] button after replacing these parts.

Number Button Submenu

Press any number button to open the submenu for a part. In the example below, the number button [001] #Development Unit was pressed.

xxx	#Fusing Unit	
Current counter	0010892	[A] <input type="button" value="Clear current counter"/>
Target yield	0300K	[B] <input type="button" value="Change Target Yield"/>
Latest1	0014846	[C] PM yield indicator settings <input type="button" value="No"/> <input checked="" type="button" value="Yes"/>
Latest2	[D] 0000000	
Latest3	0000000	
<input type="button" value="Exit"/>		<input type="button" value="▲Prev"/> <input type="button" value="▼Next"/>

d074p904

[A]: Clear current counter. Press to reset the selected PM counter (in this example 001 #Development Unit) to "0". You can also clear the settings by pressing the [Clear] button on the right side of the PM Counter Main Menu ([F] in the previous section).

[B]: Change target yield. Press the change the target PM yield. To change the setting:

- Press [Change target yield]
- Enter the number for the new target with the 10-key pad.
- Press [#] on the operation panel.

[C]: PM yield indicator settings. [Yes] is the default. Press [No] to remove the current item from the "Parts list for PM yield indicator".

- When set to "Yes", items marked with the # mark (# = a unit) will not have their individual items displayed automatically in the "Parts list for PM yield indicator list".
- When set to "No", items marked with the # mark (# = a unit) only the individual components will appear in the list (the units will not appear).

[D]: PM counter history. This is a summary of the most recent counts

- Latest 1. The latest PM count since the unit (or part) was replaced.
- Latest 2. The previous PM count since the unit (or part) was replaced.
- Latest 3. The previous but one PM count since the unit (or part) was replaced.

Parts List for PM Yield Indicator

This list shows the PM Parts Main Menu with only items set to "Yes" displayed.

JAN 23, 2002 11:09PM

SP Mode(PM Parts) Prev. Menu Exit

Parts list for PM yield indicator Select parts

No	Description	Exceed	Current	Target	
001	#K:PCU	[A]	0010892	0300K	Clear
017	#M:PCU		0005570	0300K	Clear
033	#C:PCU		0005223	0300K	Clear
049	#Y:PCU		0005514	0300K	Clear
065	ITB		0025738	0600K	Clear
066	#ITB Cleaning Unit		0025738	0300K	Clear
070	#PTR Unit		0025738	0600K	Clear

01/02 ▲ Prev ▼ Next

d074p905

3

Note

- The # mark denotes a unit.
- Items without the # (for example, 065 ITB) denote individual components.
- An asterisk (*) will appear in the Exceed column [A] to show items that have exceeded their target PM yields.

Estimated Usage Rate/Estimated Remaining Days

Displays the estimated usage rate (0 to 100%) and remaining days (255 to 0 days) of the PM items against the PM yield, which are based on calculations using the page counter and running distance.

SP Mode (PM Parts) Prev Menu Exit

Estimated UsageRate/RemainDays Select parts

No	Description	Exceed	Usage Rate	Remain Days	
001	#PCDU:K		000	255	Clear
003	#Development Unit:K		000	255	Clear
008	#Cleaning Unit:K		000	255	Clear
012	#Charge Roller Unit:K		000	255	Clear
021	#Photo Conductor:K		000	255	Clear
024	#PCDU:C		000	255	Clear
026	#Development Unit:C		000	255	Clear
031	#Cleaning Unit:C		000	255	Clear

01/05 ▲ Prev ▼ Next

[A] [B] [C] [D] [E]

w_d1353003

- [A]: Number buttons. Pressing a number button opens a submenu.
- [B]: Descriptions. The # mark denotes a "unit" (not an individual item)
- [C]: Displays the estimated usage rate (0 to 100%)
- [D]: Displays the estimated remaining days (255 to 0 days)
- [E]: Clear button

Calculation of Estimated remaining days (255 to 0 days) and Estimated usage rate (0 to 100%)

- Calculation of estimated remaining days (255 to 0 days)

Displays either the page counter (SP7-951-XXX) or the running distance (SP7952-XXX), whichever is smaller. Note that parts such as rollers always show the page counter value, because running distance is not counted.

Remaining days by page counter (SP7-951-XXX) = $(A - B) / C$

A: Standard end value as pages (SP7623-xxx)

B: PM page counter (SP7621-xxx)

C: Average PM page counter per day = PM page counter (SP7621-xxx)/Number of days since last replacement

Remaining days by running distance (SP7952-XXX) = $(A - B) / C$

A: Standard end value as distance (SP7940-xxx)

B: PM distance counter (SP7944-xxx)

C: Average distance per day = PM distance counter (SP7944-xxx) /Number of days since last replacement

- Calculation of estimated usage rate (0 to 100%)

Displays either the page counter (SP7-954-xxx) and running distance (SP7-942-xxx), whichever is larger. Note that parts such as rollers always show the page counter value, because running distance is not counted.

Estimated usage rate % (by Page counter) is calculated as follows.

Current page counter value <SP7-621-xxx> / Standard page end value <SP7-623-xxx> x 100

Estimated usage rate % (by Running distance) is calculated as follows.

Current distance <SP7-944-xxx> / Standard distance end value <SP7-940-xxx> x 100

Commissioning Status Report Print

Prints out the status report.

Contents of the status report are as follows:

1. SP7403-001 to 010SC History
2. SP7507-001 to 010 Print Engine Jam History
3. SP7508-001 to 010 Original Jam History
4. SP7910-001,002ROM No(-001:System/Copy, -002:Engine)
5. SP7911-001,002Firmware version (-001:System/Copy, -002:Engine)
6. SP8581-001 T: Counter (-001: Total, -002: Total Full Color, -003B&W/Single Color, -010:Total Color, -011:Total B/W)
7. SP8591-001 O: Counter (-001:A3/DLT Counter, -002:Duplex Counter)

Initial Adjustment SP Lists

This section describes the following:

D137 RTB 94

[Important notes on waste toner bottle counter reset](#)

- Automatic execution to be performed after replacement
- SP that needs to be done manually after replacement

★ Important

- Parts of the automatic adjustment items that are described in this section are automatically executed as a trigger counter is cleared. Therefore, press the counter clear button for the corresponding parts and turn the power off and on for automatic execution
- Initial adjustment for "Force Apply Lubricant Execute" is done manually. This is because it is necessary to perform this after separating the ITB cleaning blade from the ITB. For more information, check the replacement and adjustment procedures for each part..

3

D137/D138

Parts list	Manual SP	Auto/ Manual	Adjustment SP		SP description	SP time
Developer	No	Auto	SP3-030-001 to 006	Initial TD Sensor Execute	Initial setting of TD sensor	50s
		Auto	SP3-011-002	Manual ProCon Exe Density Adjustment	Pro Con	15 to 85s
Development Filter	Yes	Manual	SP3-040-001 to 005	DEMS : EXECUTE	DEMS Control (Pro Only)	110 to 180s
Cleaning Unit	Yes	Auto	SP3-032-001 to 006	Initial cleaning setting : Execute	Initial cleaning setting	15s
		Manual	SP3-040-001 to 005	DEMS : EXECUTE	DEMS Control (Pro Only)	110 to 180s
Cleaning Blade	Yes	Auto	SP3-032-001 to 006	Initial cleaning setting Execute	Initial cleaning setting	15s
		Manual	SP3-040-001 to 005	DEMS : EXECUTE	DEMS Control (Pro Only)	110 to 180s
Lubrication Roller	Yes	Manual	SP3-040-001 to 005	DEMS : EXECUTE	DEMS Control (Pro Only)	110 to 180s

Parts list	Manual SP	Auto/ Manual	Adjustment SP		SP description	SP time
Lubricant Bar	Yes	Manual	SP3-040-001 to 005	DEMS : EXECUTE	DEMS Control (Pro Only)	110 to 180s
Lubricant Blade	Yes	Manual	SP3-040-001 to 005	DEMS : EXECUTE	DEMS Control (Pro Only)	110 to 180s
Joint	Yes	Manual	SP3-040-001 to 005	DEMS : EXECUTE	DEMS Control (Pro Only)	110 to 180s
Gears	Yes	Manual	SP3-040-001 to 005	DEMS : EXECUTE	DEMS Control (Pro Only)	110 to 180s
Charge Roller Unit	Yes	Auto	SP3-011-002	Manual ProCon Exe Density Adjustment	Pro Con	15 to 85s
		Manual	SP3-040-001 to 005	DEMS : EXECUTE	DEMS Control (Pro Only)	110 to 180s
Charge Roller	Yes	Auto	SP3-011-002	Manual ProCon Exe Density Adjustment	Pro Con	15 to 85s
		Manual	SP3-040-001 to 005	DEMS : EXECUTE	DEMS Control (Pro Only)	110 to 180s
Cleaner: Charge Roller	Yes	Manual	SP3-040-001 to 005	DEMS : EXECUTE	DEMS Control (Pro Only)	110 to 180s
Gear: Charge Roller	Yes	Manual	SP3-040-001 to 005	DEMS : EXECUTE	DEMS Control (Pro Only)	110 to 180s
OPC Drum	Yes	Auto	SP3-011-002	Manual ProCon Exe Density Adjustment	Pro Con	15 to 85s
		Auto	SP2-111-004	Forced line Position	MUSIC	15s
		Manual	SP3-040-001 to 005	DEMS : EXECUTE	DEMS Control (Pro Only)	110 to 180s

Parts list	Manual SP	Auto/ Manual	Adjustment SP		SP description	SP time
Image Transfer Belt Unit	Yes	Auto	SP2-924-004	Dancing Control Belt	speed control of ITB+MUSIC	45 to 60s
		Auto	SP3-011-002	Manual ProCon Exe Density Adjustment	Pro Con	15 to 85s
		Manual	SP2-696-001	Force Apply Lubricant Execute	Lubrication	180s
Transfer Belt	Yes	Auto	SP2-924-004	Dancing Control Belt	speed control of ITB+MUSIC	45 to 60s
		Auto	SP3-011-002	Manual ProCon Exe Density Adjustment	Pro Con	15 to 85s
		Manual	SP2-696-001	Force Apply Lubricant Execute	Lubrication	180s
Image Transfer Roller	No	Auto	SP2-924-004	Dancing Control Belt	speed control of ITB+MUSIC	45 to 60s
		Auto	SP3-011-002	Manual ProCon Exe Density Adjustment	Pro Con	15 to 85s
ITB Bias Roller	No	Auto	SP2-924-004	Dancing Control Belt	speed control of ITB+MUSIC	45 to 60s
		Auto	SP3-011-002	Manual ProCon Exe Density Adjustment	Pro Con	15 to 85s
ITB drive shaft gear	Yes	Manual	SP2-924-004	Dancing Control Belt	speed control of ITB+MUSIC	45 to 60s

Parts list	Manual SP	Auto/ Manual	Adjustment SP		SP description	SP time
ITB Cleaning Unit	Yes	Auto	SP2-924-004	Dancing Control Belt	speed control of ITB+MUSIC	45 to 60s
		Manual	SP2-696-001	Force Apply Lubricant Execute	Lubrication	180s
ITB Cleaning Blade	Yes	Auto	SP2-924-004	Dancing Control Belt	speed control of ITB+MUSIC	45 to 60s
		Manual	SP2-696-001	Force Apply Lubricant Execute	Lubrication	180s
ITB Lubricant Brush	No	-	-	-	-	-
ITB Lubricant Bar	No	Manual	SP2-696-001	Force Apply Lubricant Execute	Lubrication	180s
ITB Lubricant Blade	No	Manual	SP2-696-001	Force Apply Lubricant Execute	Lubrication	180s
Paper Transfer Roller Unit	No	Auto	SP3-011-002	Manual ProCon Exe Density Adjustment	Pro Con	15 to 85s
Paper Discharge Plate	No	-	-	-	-	-
Paper Transfer Roller	No	Auto	SP3-011-002	Manual ProCon Exe Density Adjustment	Pro Con	15 to 85s

D135/D136

3

Parts list	Manual SP	Auto/ Manual	Adjustment SP		Parts list	SP time
Developer	No	Auto	SP3-030-001 to 006	Initial TD Sensor Execute	Initial setting of TD sensor	50s
		Auto	SP3-011-002	Manual ProCon Exe Density Adjustment	Pro Con	15 to 85s
Development Filter	No	-	-	-	-	-
Cleaning Unit	No	Auto	SP3-032-001 to 006	Initial cleaning setting: Execute	Initial cleaning setting	15s
	No	Auto	SP3-032-001 to 006	Initial cleaning setting: Execute	Initial cleaning setting	15s
Cleaning Blade	No	-	-	-	-	-
	No	-	-	-	-	-
Lubrication Roller	No	-	-	-	-	-
Lubricant Bar	No	-	-	-	-	-
Lubricant Blade	No	-	-	-	-	-
Charge Roller Unit	No	Auto	SP3-011-002	Manual ProCon Exe Density Adjustment	Pro Con	15 to 85s
Charge Roller	No	Auto	SP3-011-002	Manual ProCon Exe Density Adjustment	Pro Con	15 to 85s
	No	-	-	-	-	-
Cleaner: Charge Roller	No	-	-	-	-	-

Parts list	Manual SP	Auto/ Manual	Adjustment SP		Parts list	SP time
OPC Drum	No	Auto	SP3-011-002	Manual ProCon Exe Density Adjustment	Pro Con	15 to 85s
		Auto	SP2-111-004	Forced line Position	MUSIC	15s
Image Transfer Belt Unit	Yes	Auto	SP2-924-004	Dancing Control Belt	speed control of ITB+MUSIC	45 to 60s
		Auto	SP3-011-002	Manual ProCon Exe Density Adjustment	Pro Con	15 to 85s
		Manual	SP2-696-001	Force Apply Lubricant Execute	Lubrication	180s
Transfer Belt	Yes	Auto	SP2-924-004	Dancing Control Belt	speed control of ITB+MUSIC	45 to 60s
		Auto	SP3-011-002	Manual ProCon Exe Density Adjustment	Pro Con	15 to 85s
		Manual	SP2-696-001	Force Apply Lubricant Execute	Lubrication	180s
Image Transfer Roller	No	Auto	SP2-924-004	Dancing Control Belt	speed control of ITB+MUSIC	45 to 60s
		Auto	SP3-011-002	Manual ProCon Exe Density Adjustment	Pro Con	15 to 85s
ITB Bias Roller	No	Auto	SP2-924-004	Dancing Control Belt	speed control of ITB+MUSIC	45 to 60s
		Auto	SP3-011-002	Manual ProCon Exe Density Adjustment	Pro Con	15 to 85s

Parts list	Manual SP	Auto/ Manual	Adjustment SP		Parts list	SP time
ITB drive shaft gear	Yes	Manual	SP2-924-004	Dancing Control Belt	speed control of ITB+MUSIC	45 to 60s
ITB Cleaning Unit	Yes	Auto	SP2-924-004	Dancing Control Belt	speed control of ITB+MUSIC	45 to 60s
		Manual	SP2-696-001	Force Apply Lubricant Execute	Lubrication	180s
ITB Cleaning Blade	Yes	Auto	SP2-924-004	Dancing Control Belt	speed control of ITB+MUSIC	45 to 60s
		Manual	SP2-696-001	Force Apply Lubricant Execute	Lubrication	180s
ITB Lubricant Brush	No	-	-	-	-	-
ITB Lubricant Bar	Yes	Manual	SP2-696-001	Force Apply Lubricant Execute	Lubrication	180s
ITB Lubricant Blade	Yes	Manual	SP2-696-001	Force Apply Lubricant Execute	Lubrication	180s
Paper Transfer Roller Unit	No	Auto	SP3-011-002	Manual ProCon Exe Density Adjustment	Pro Con	15 to 85s
Paper Discharge Plate	No	-	-	-	-	-
Paper Transfer Roller	No	Auto	SP3-011-002	Manual ProCon Exe Density Adjustment	Pro Con	15 to 85s

Cleaning Points

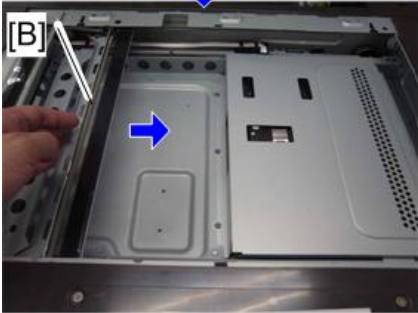
Scanner

Exposure Glass, ADF Exposure Glass, Reflective Plate, 1st Mirror, 2nd Mirror, 3rd Mirror, Original Size Sensors

1. Exposure glass (☛ page 638)
2. Clean the front and back of the exposure glass with a glass cleaner.
3. Move the non-adhesive surface (left), then clean the front and back of the ADF exposure glass [A] with a glass cleaner.



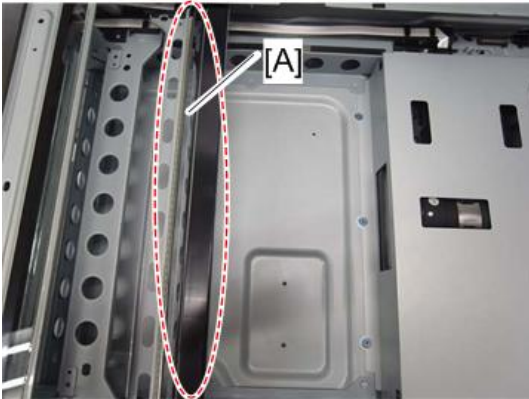
4. First, turn the gear [A] and move the 1st scanner carriage [B] to the center.



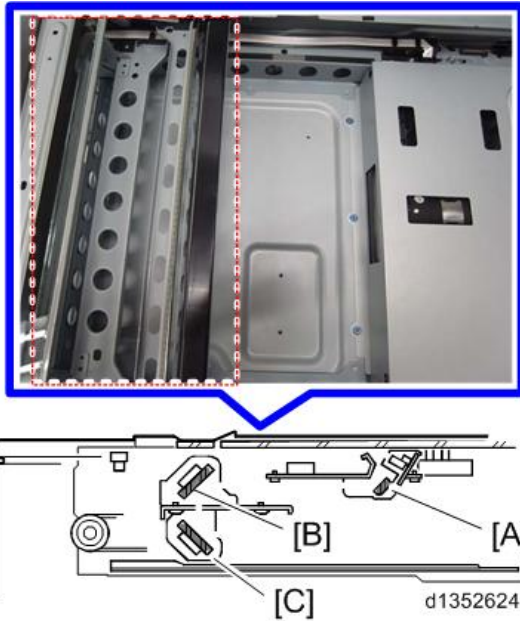
Note

- Do not touch the mirror, reflector, or light guide plate in the scanner carriage.

5. Clean the reflective plate [A] with a dry optical cloth.



6. Clean the 1st mirror [A], 2nd mirror [B] and 3rd mirror [C] with a dry optical cloth.



7. Clean the original size sensors [A] with a dry cloth.



Laser Unit

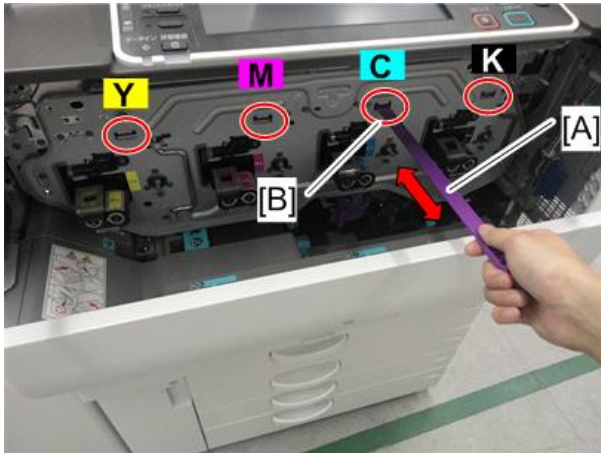
Toner shield glass

1. Open the drawer unit [A] and remove the Toner Shield Glass Cleaning Tool [B].



d135a3110

2. Toner supply unit. (☛ page 624)
3. Insert the Toner Shield Glass Cleaning Tool [A] to the slot [B], and slide it back-and-forth about 5 times to clean the toner shield glass on the laser units. Do this procedure for all 4 colors.



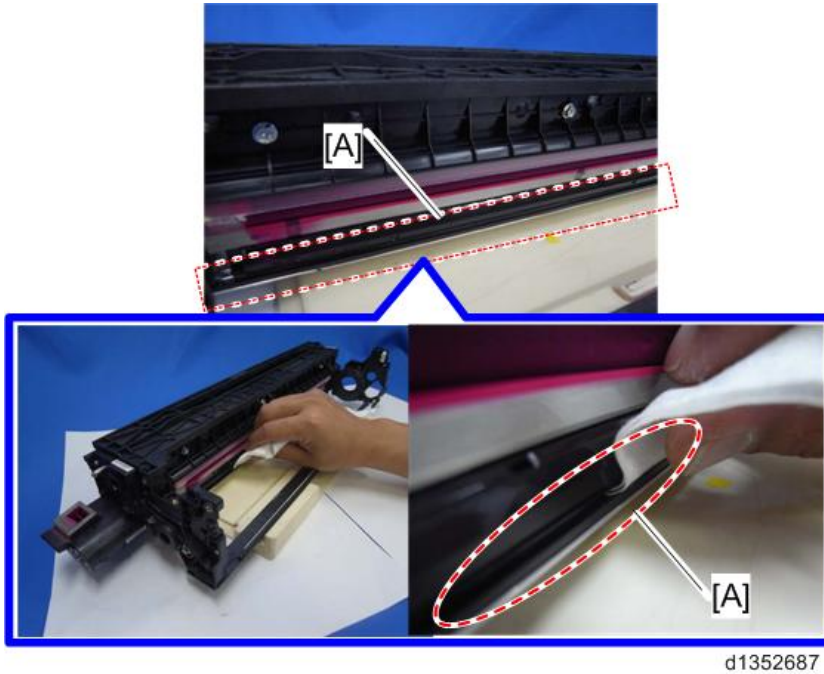
d135a3111

Developer

Development Unit

Do the following cleaning at 300k.

1. Development unit (☛ page 702)
2. Wipe off the toner at the toner receptacle [A] with a dry cloth.



d1352687

3. Clean off the toner adhering around the unit with a dry cloth.

Toner Supply

Toner Supply Unit

1. Open the toner supply unit front cover [A].

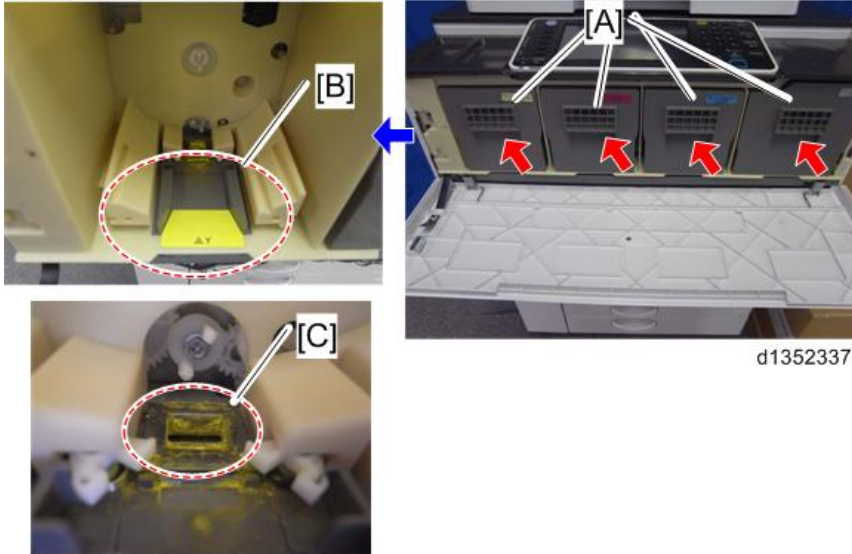


d1352239

2. Remove the toner cartridge [A].
Clean the toner supply unit [B] with a damp cloth that has been wrung out.

Clean the sponge seal [C] of the supply port with a dry cloth.

e.g.: Y

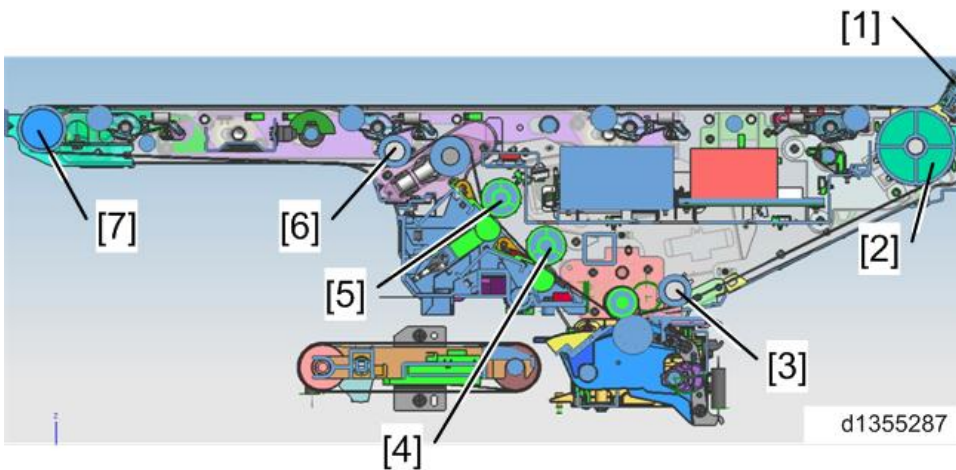


Note

- In order to prevent the scattering of toner, do not use a blower brush to clean.

ITB Unit

As shown below, there are seven parts to clean at a certain interval.



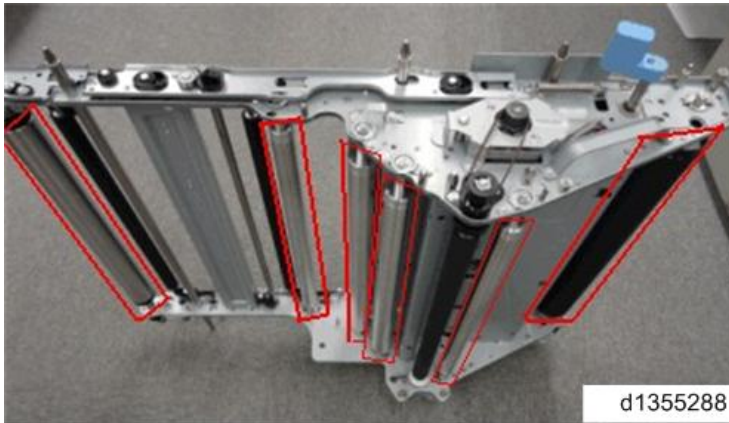
1. ID Sensor
2. ITB Drive Roller

3. Pre-Transfer Roller
4. ITB Cleaning Blade Counter Roller
5. ITB Lubricant Blade Counter Roller
6. Back-up Roller
7. ITB Driven Roller

Rollers

Rollers need cleaning every 900k prints

1. Transfer Belt (page 719 "ITB Replacement")
2. With a dry cloth, wipe each roller.

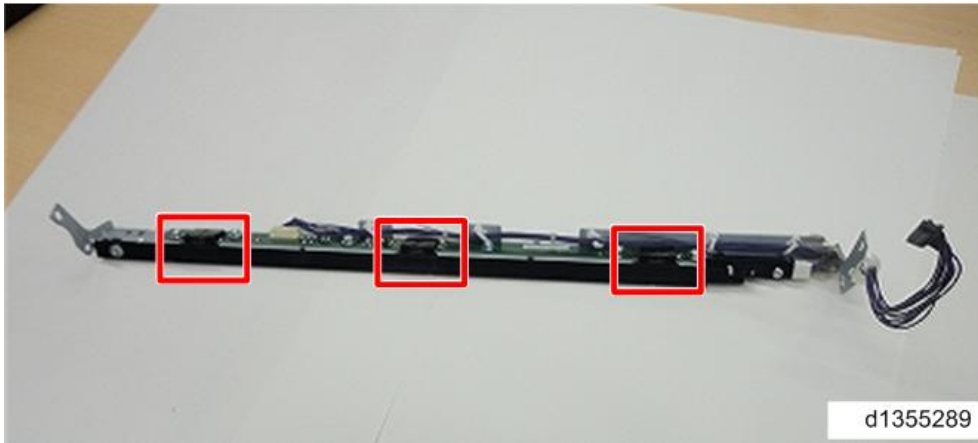


ID Sensor

Clean the ID sensor every 600k prints.

1. Bracket with the ID sensor

2. With a damp cloth, wipe the ID sensor (three areas indicated below).



3

Fusing

Stripper Plate (Fusing / Pressure)

1. Pull the fusing unit out and then raise the stripper unit to open it.
2. With a dry cloth, wipe the circled area shown below.

Fusing Stripper Plate: Clean the surface and the back.

Pressure Stripper Plate: Clean the seven pawls of the stripper plate.

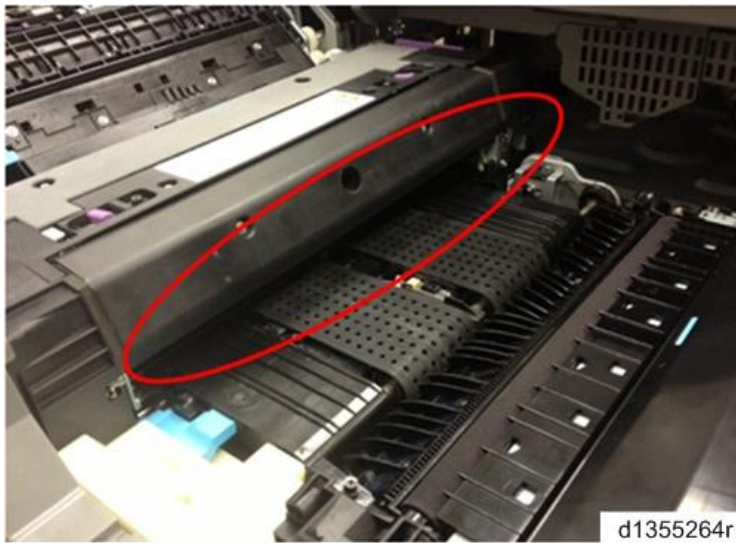


★ Important

- Do not wipe too strongly.

Fusing Entrance Guide

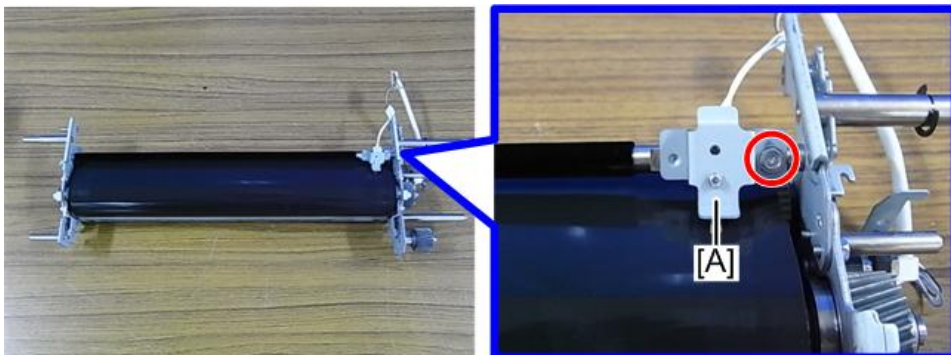
1. Pull the fusing unit out.
2. With a dry cloth, wipe the circled area shown below.



3

Thermistor (Fusing Belt)

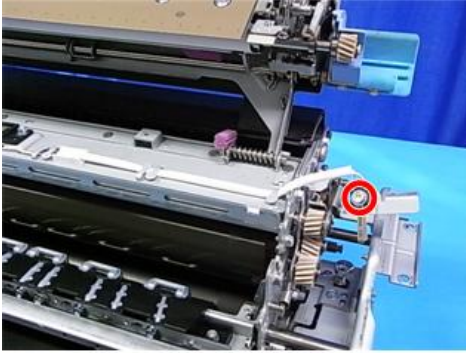
1. Access the thermistor (Fusing Belt) (page 801 "Thermistor (Fusing Belt)")
2. Wipe the circled area shown below.



d1355150

Thermistor (Hot Roller Shaft) (ProC5100S/5110S Only)

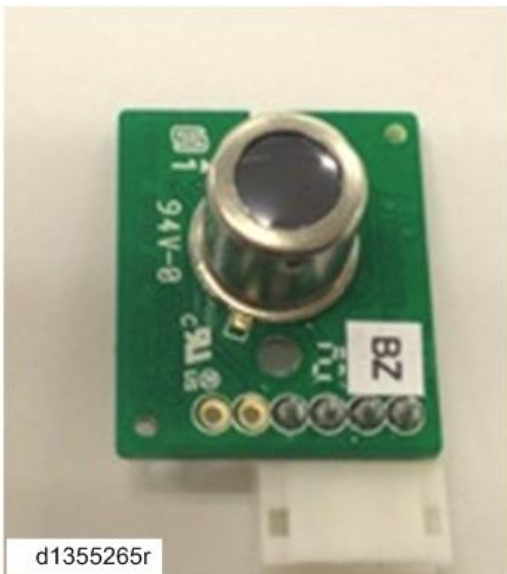
1. Access the thermistor (hot roller shaft) (page 802 "Thermistor (Hot Roller Shaft)")
2. With a dry cloth, wipe the circled area shown below.



d1355163a

Thermopile

1. Access the thermopile. (page 807 "Thermopile (Pressure Roller)")
2. With a dry cloth, wipe the surface of the lens.



d1355265r

★ Important

- Do not wipe too strongly.

Other

Development Intake Dust Filter

1. Access the development intake filter. (☛ page 996 "Development Intake Fans (KCMY)")
2. Clean the locations marked with a red circle below with some dry cloth.

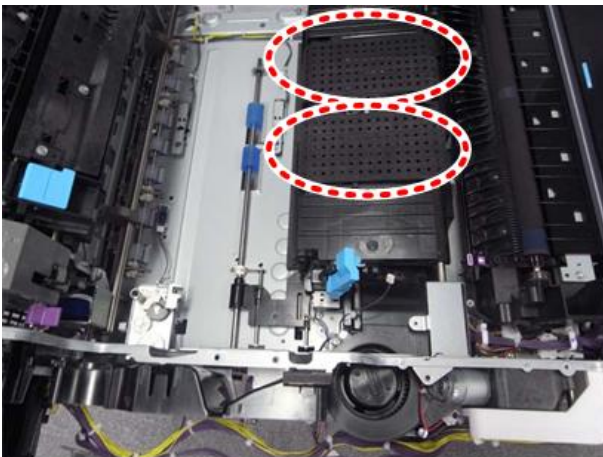


d1351932

3

Pressure Roller Dust Filter (D137/D138 only)

1. Access the pressure roller intake filter. (☛ page 621 "Fusing Pressure Roller Intake Fan (D137/ D138 only)")
2. Clean the locations marked with a red circle below with some dry cloth.



d1351936

Paper Feed

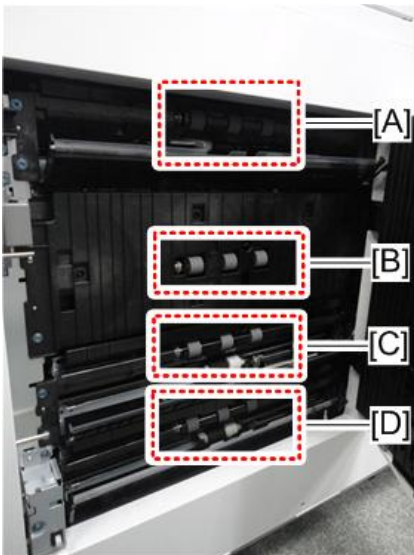
1st to 4th Transport Roller (Drive/Idle)

1. Open the vertical transport door [A].



d1353018

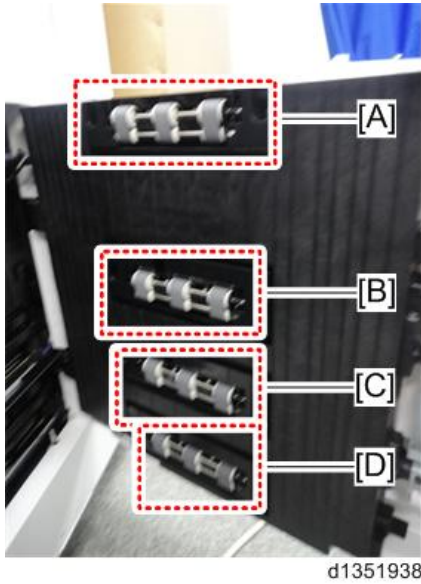
2. Wipe the 1st to 4th feed roller (drive) with damp cloth.



d1351937

- [A]: 1st feed roller (drive)
- [B]: 2nd feed roller (drive)
- [C]: 3rd feed roller (drive)
- [D]: 4th feed roller (drive)

3. Wipe the 1st to 4th feed roller (idle) with damp cloth.



- [A]: 1st feed roller (idle)
- [B]: 2nd feed roller (idle)
- [C]: 3rd feed roller (idle)
- [D]: 4th feed roller (idle)

Registration Roller (Drive/Idle)

1. Pull out the drawer unit [A].



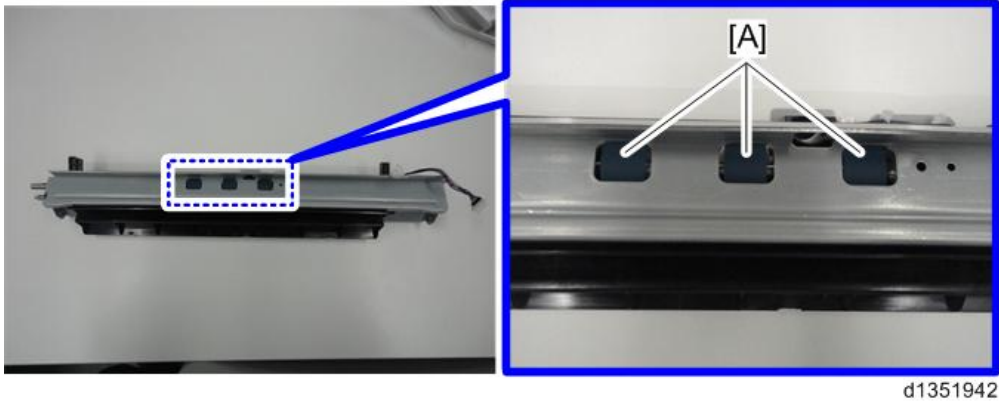
2. Open the registration section and wipe the registration roller (drive/idle) with a damp cloth.



- [A]: Registration roller (Drive)
- [B]: Registration roller (Idle)

Relay Roller (Drive/Idle)

1. Remove the registration unit. (☛ page 882)
2. Remove the relay unit. (☛ page 884)
3. Wipe the relay roller (drive) [A] with a damp cloth.



4. Remove the relay sensor. (☛ page 889)
5. Wipe the relay roller (idle) [A] with a damp cloth.



d1351943

3

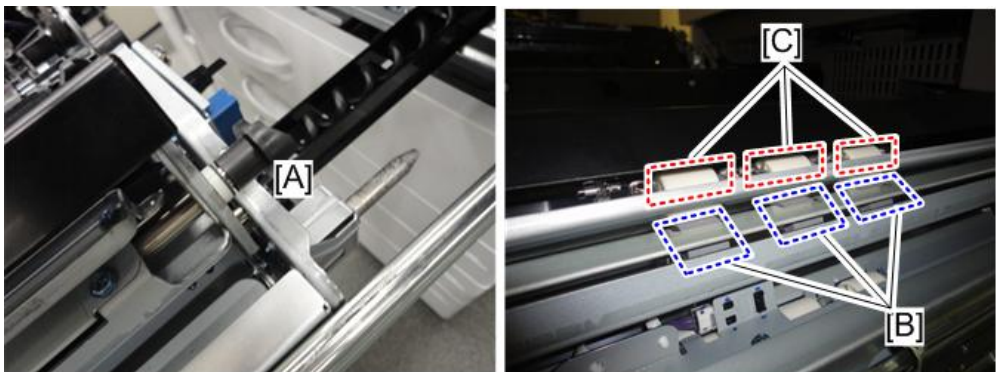
Bypass Relay Roller (Drive/Idle)

1. Pull out the drawer unit [A].



d1352123

2. Wipe the by-pass relay roller (drive/idle) with a damp cloth while rotating the joint [A].



d1351941

- [B]: By-pass relay roller (Drive)

- [C]: By-pass relay roller (Idle)

Registration Sensor

1. Pull out the drawer unit [A].



d1352123

2. Open the registration section and clean the registration sensor [A] with a blower brush.



d1351940

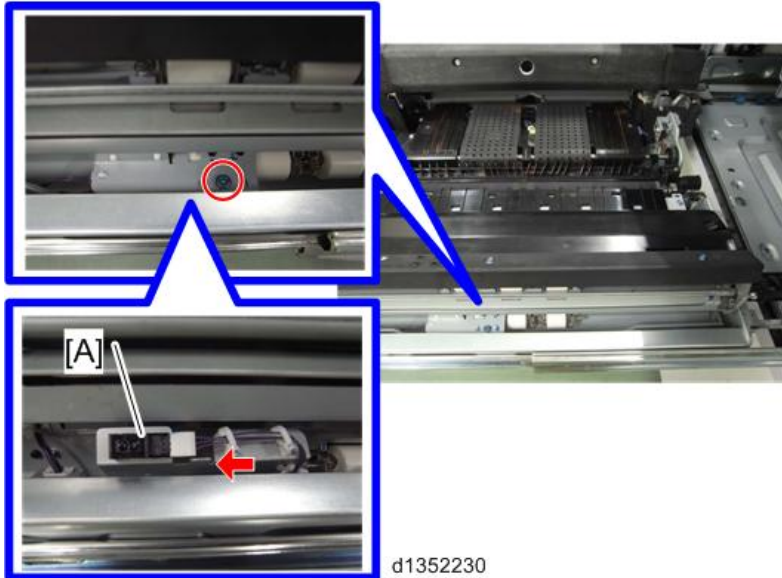
Relay Sensor

1. Open the drawer unit cover [A].



d1352123

2. Clean the relay sensor [A] with a blower brush



d1352230

Paper Dust Collection Unit

1. Pull out the drawer unit [A].



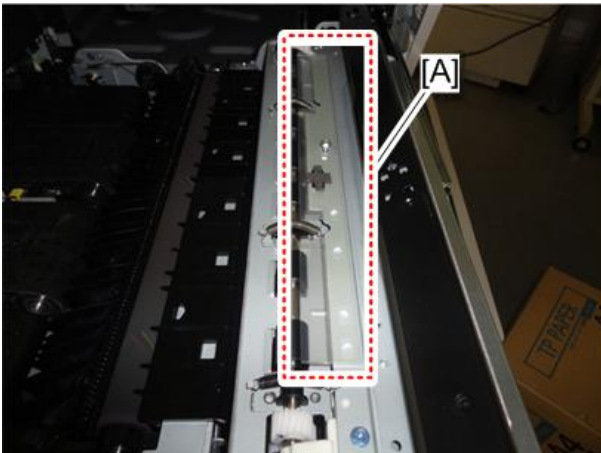
d1352123

2. Remove the upper cover [A] of the paper dust collection unit. (⚙️ x2)



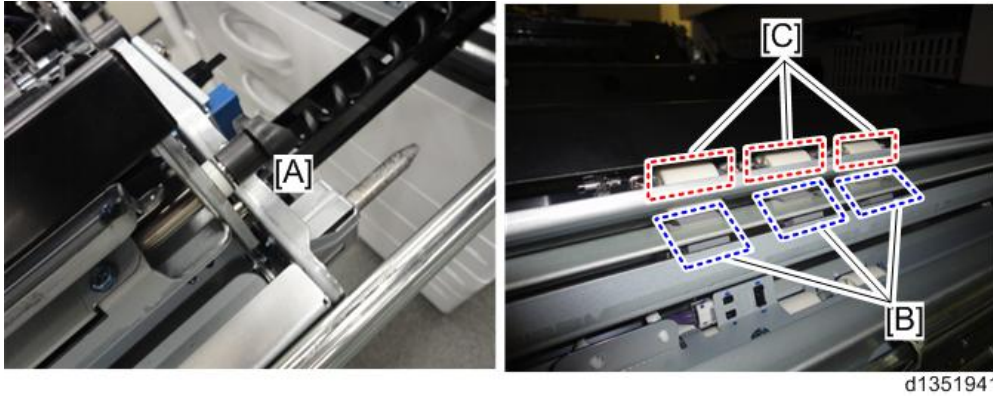
d1351944

3. Remove the paper dust, and then wipe the dust collection unit [A] with a dry cloth.



d1351945

4. Reattach the upper cover of the paper dust collection unit.
5. Wipe the by-pass relay roller (drive/idle) with a damp cloth while rotating the joint [A].

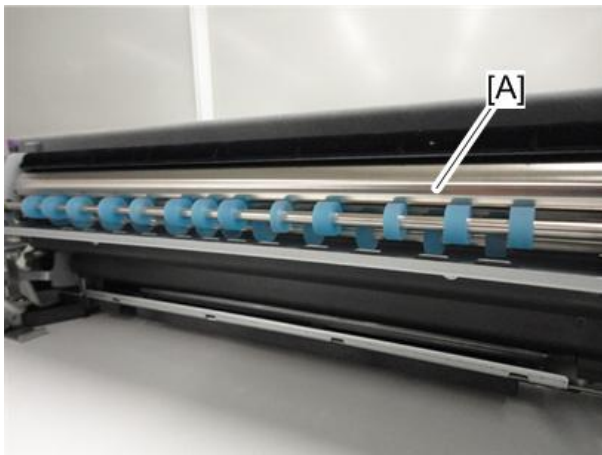


- [B]: By-pass relay roller (Drive)
- [C]: By-pass relay roller (Idle)

Duplex

Heat Pipe Roller

1. Remove the fusing unit. (🔗 page 764)
2. Wipe the heat pipe roller [A] with a damp cloth.



d1351946

Heat Pipe Drive Roller

1. Remove the fusing unit. (🔗 page 764)
2. Wipe the heat pipe drive roller [A] with a damp cloth.



d1351947

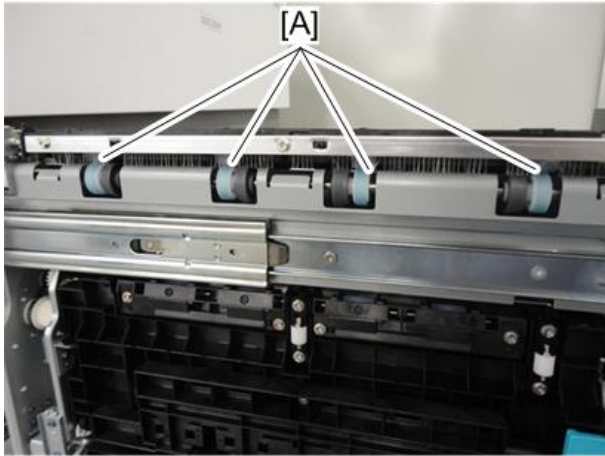
Paper Exit Roller (Drive/Idle)

1. Pull out the drawer unit [A].



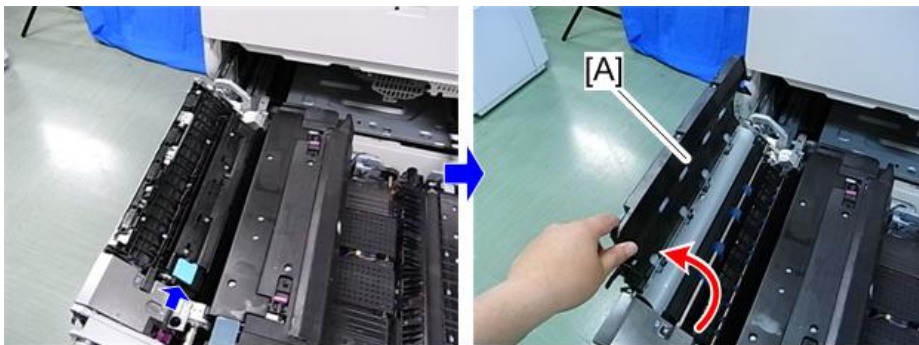
d1352123

2. Wipe the paper exit roller (drive) [A] with a damp cloth.



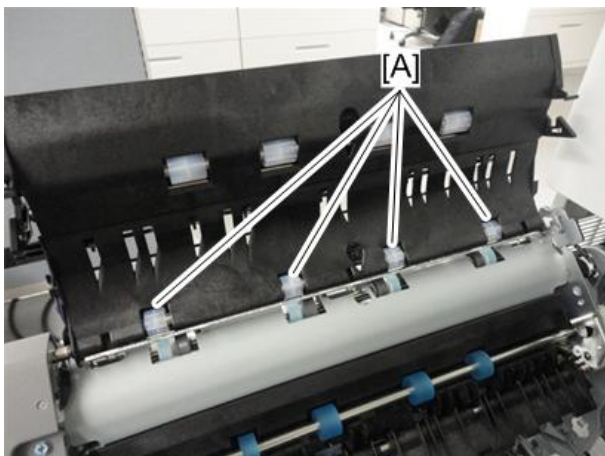
d1351948

3. Hold up the exit guide plate [A].



d1351949

4. Wipe the paper exit roller (idle) [A] with a damp cloth



d1351950

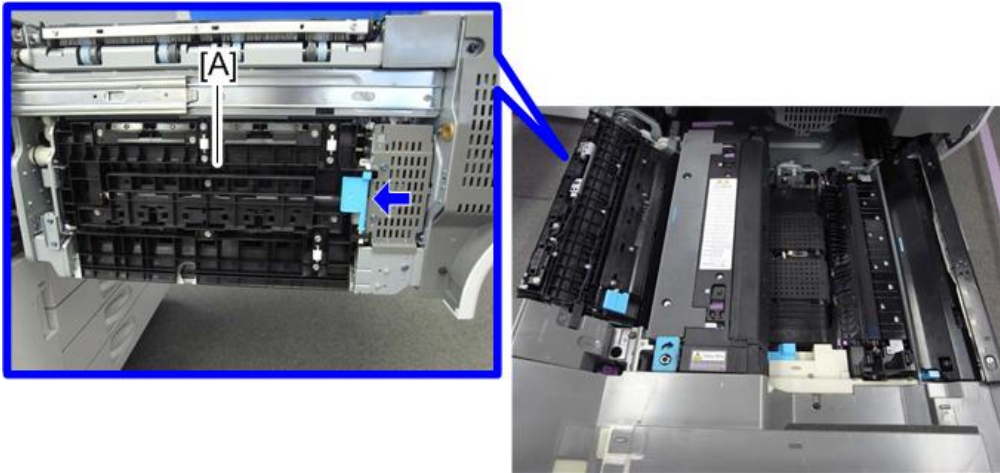
Inverter Feed Out Roller (Drive/Idle)

1. Pull out the drawer unit [A].



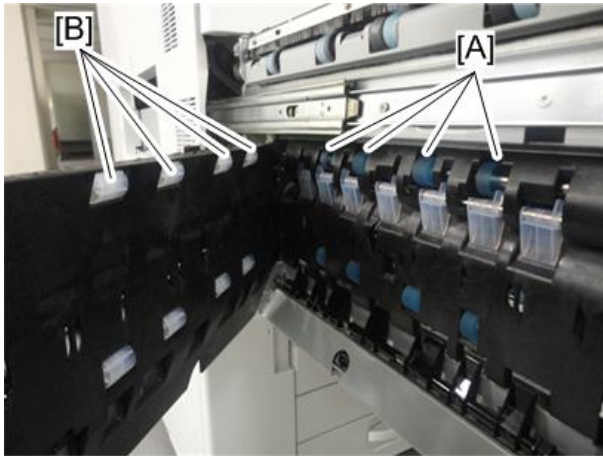
d1352123

2. Open the paper exit feed guide plate [A].



d1351951

3. Wipe the inverter feed out roller (drive/idle) with a damp cloth.



d1351952

- [A]: Inverter feed out roller (Drive)
- [B]: Inverter feed out roller (Idle)

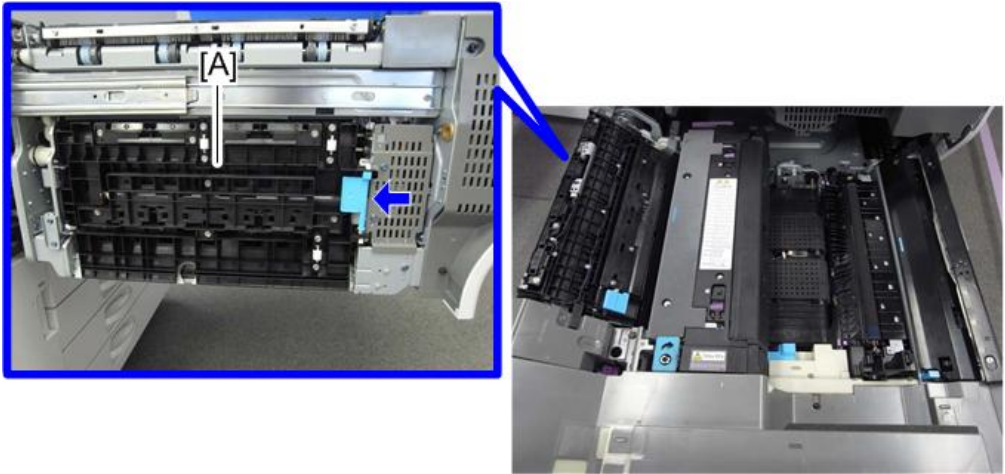
Inverter Exit Roller (Drive/Idle)

1. Pull out the drawer unit [A].



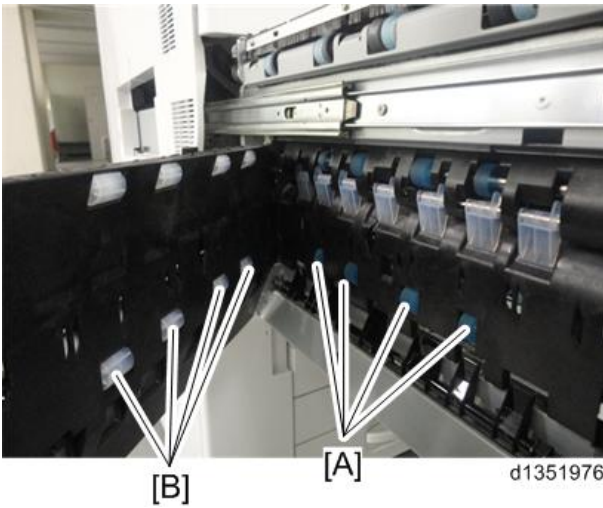
d1352123

2. Open the paper exit feed guide plate [A].



d1351951

3. Wipe the inverter exit roller (drive/idle) with a damp cloth.



d1351976

- [A]: Inverter exit roller (Drive)
- [B]: Inverter exit roller (Idle)

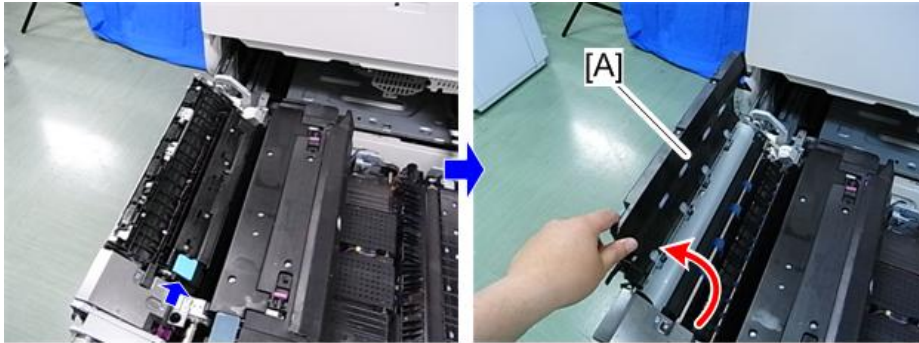
Paper Exit Relay Roller (Drive/Idle)

1. Pull out the drawer unit [A].



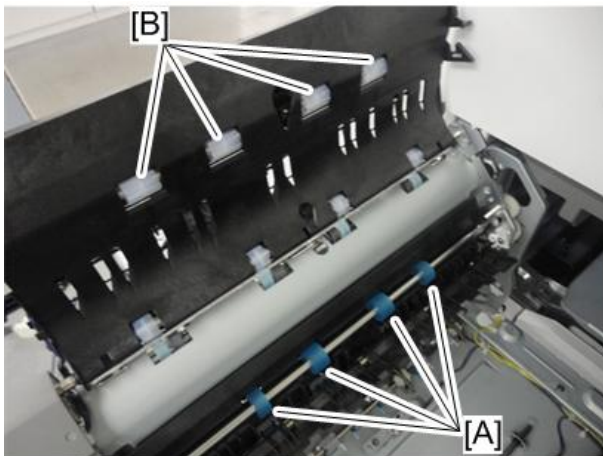
d1352123

2. Hold up the exit guide plate [A].



d1351949

3. Wipe the paper exit relay roller (drive/idle) with a damp cloth.



d1351954

- [A]: Paper exit relay roller (Drive)
- [B]: Paper exit relay roller (Idle)

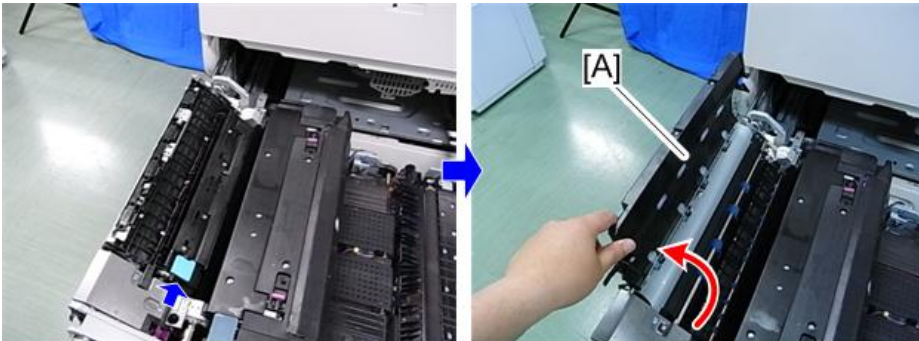
Inverter Feed In Roller (Drive/Idle)

1. Pull out the drawer unit [A].



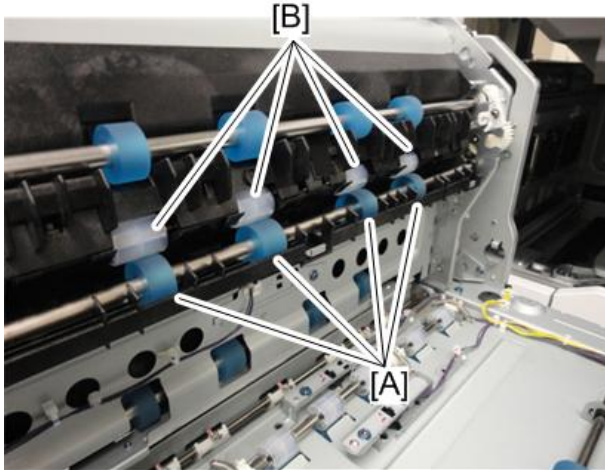
d1352123

2. Hold up the exit guide plate [A].



d1351949

3. Remove the fusing unit. (☛ page 764)
4. Remove the separation pawl (e-ring x 2).
5. Wipe the inverter feed roller (drive/idle) with a damp cloth.



d1351955

- [A]: Inverter feed roller (Drive)
- [B]: Inverter feed roller (Idle)

3

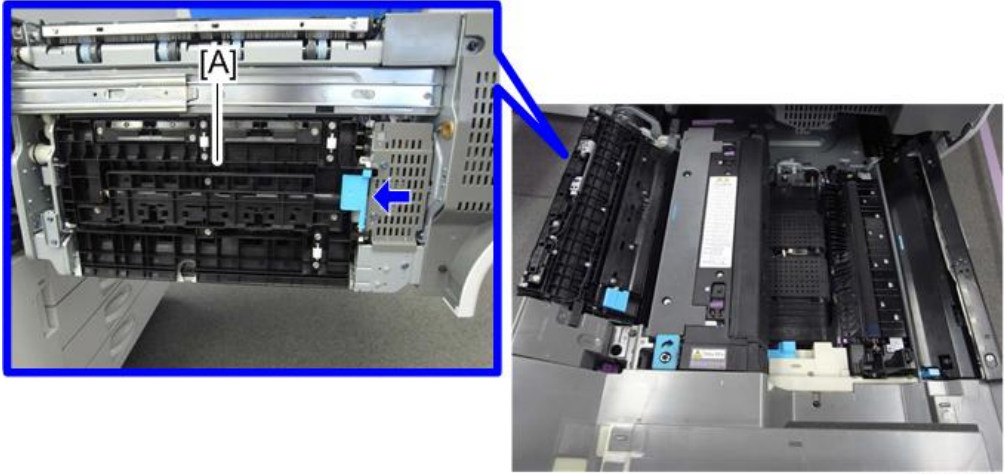
Exit Transport Guide Plate (Upper/Middle/Left)

1. Pull out the drawer unit [A].



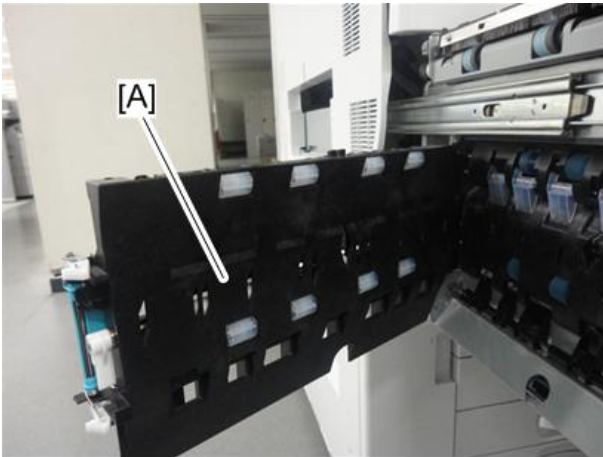
d1352123

2. Open the reverse guide plate [A].



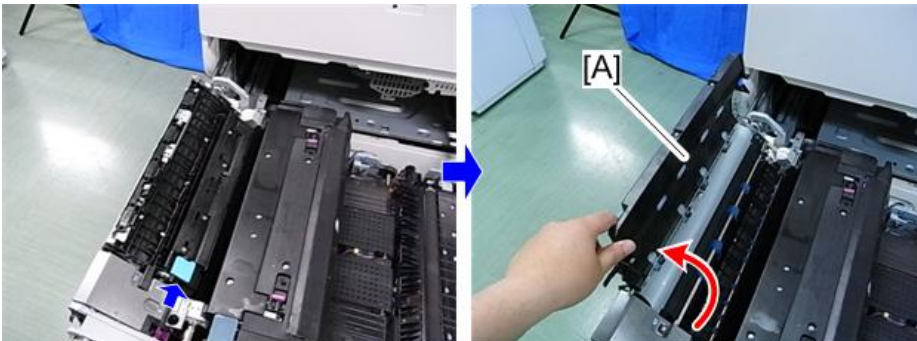
d1351951

- 3. Open the paper exit feed guide plate.
- 4. Wipe the paper exit feed guide plate (left) [A] with a dry cloth.



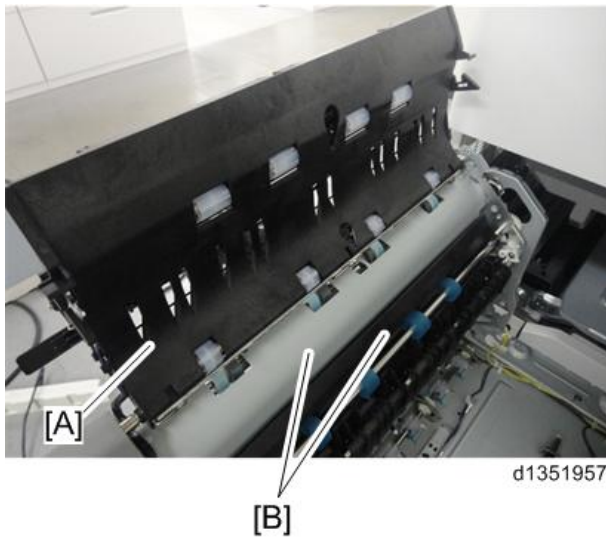
d1351956

- 5. Hold up the paper exit guide plate [A].



d1351949

6. Wipe the paper exit feed guide plate (upper/middle) with a dry cloth.



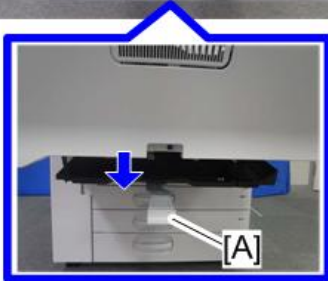
- [A]: Paper exit feed guide plate (Upper)
- [B]: Paper exit feed guide plate (Middle)

Duplex Unit Roller 1st to 4th (Drive/Idle)

1. Pull out the drawer unit [A].

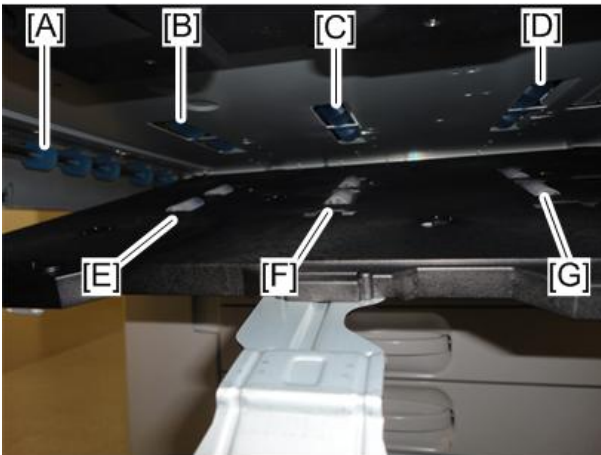


2. Push down the guide plate [A].



d1351958

3. Wipe the duplex feed roller 1st to 4th (drive) and duplex feed roller 2nd to 4th (idle) with a damp cloth.

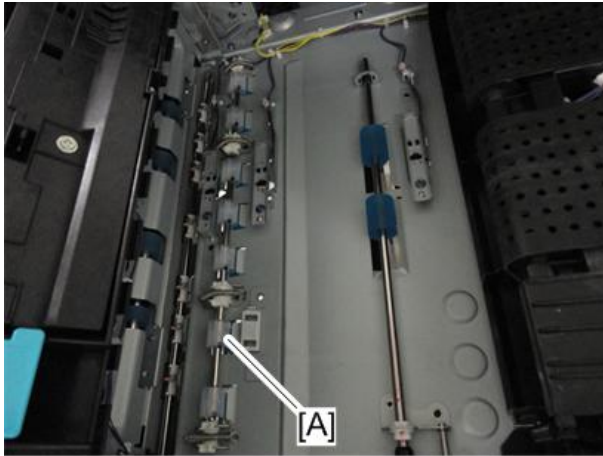


d1351959

- [A]: Duplex feed roller 1st (Drive)
- [B]: Duplex feed roller 2nd (Drive)
- [C]: Duplex feed roller 3rd (Drive)
- [D]: Duplex feed roller 4th (Drive)
- [E]: Duplex feed roller 2nc (Idle)
- [F]: Duplex feed roller 3rd (Idle)
- [G]: Duplex feed roller 4th (Idle)

4. Remove the fusing unit. (📄 page 764)

5. Wipe the duplex feed roller 1st (idle) [A] with a damp cloth.



d1351960

3

Duplex Exit Roller (Drive/Idle)

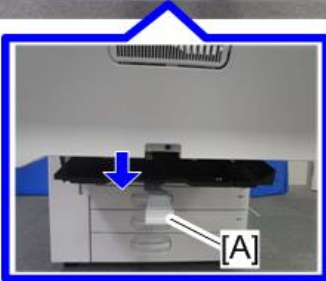
1. Pull out the drawer unit [A].



d1352123

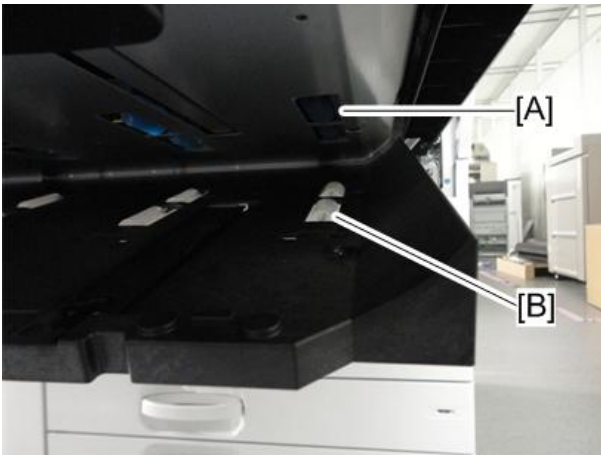
2. Push down the guide plate [A].

3



d1351958

3. Wipe the duplex exit roller (drive/idle) with a damp cloth.



d1351961

- [A]: Duplex exit roller (Drive)
- [B]: Duplex exit roller (Idle)

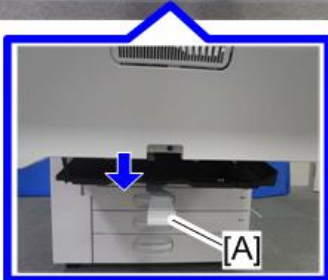
Transport Guide Plate (Upper/Lower)

1. Pull out the drawer unit [A].



d1352123

2. Push down the guide plate [A].



d1351958

3. Wipe the transport guide plate (upper/lower) with a damp cloth.



d1351962

- [A]: Transport guide plate (Upper)
- [B]: Transport guide plate (Lower)

Purge Guide Plate (Lower)

1. Open the purge door [A].



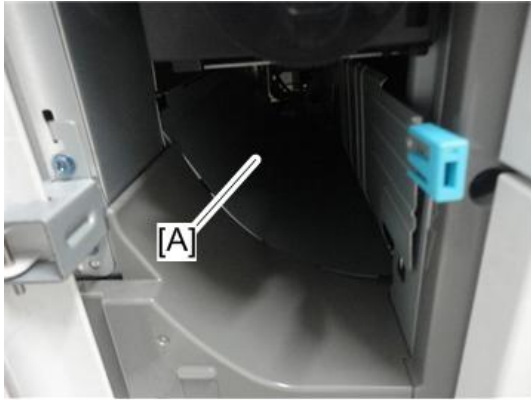
d1351963

2. Move the purge guide plate (lower) [A] to the upright position.



d1351964

3. Wipe the area [A] under the transport guide plate (lower) with a damp cloth.



d1351965

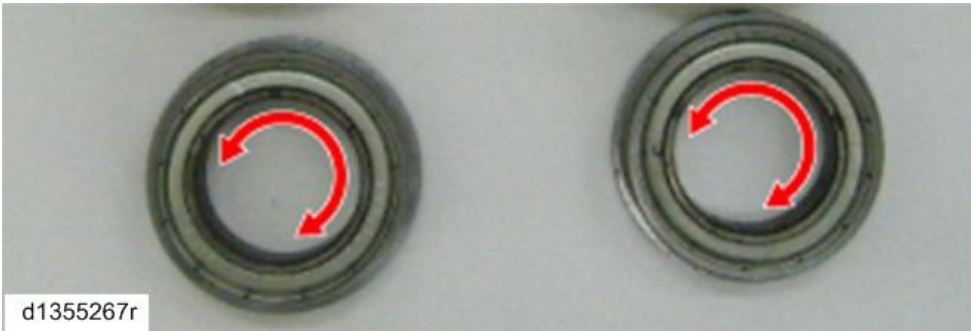
Lubrication Points

Fusing

Bearing (Hot Roller/Pressure Roller) Lubrication

3

1. Detach the bearing (page 787 "Heating Roller, Fusing Roller, Fusing Belt")
2. Use grease (Barrierta S552R) to lubricate the inner surface of the bearing.
3. Rotate the inner surface of the bearing to check if the bearing can rotate smoothly.



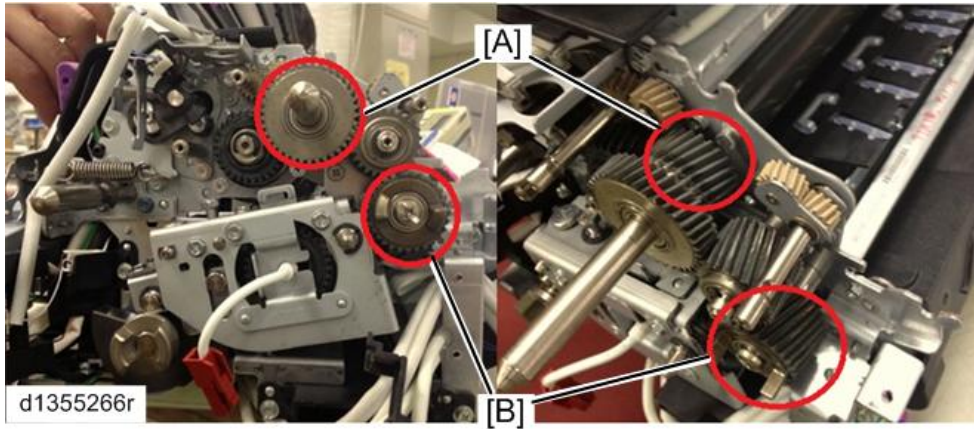
★ Important

- Replace the bearing if it cannot rotate smoothly.

Fusing Gear Lubrication

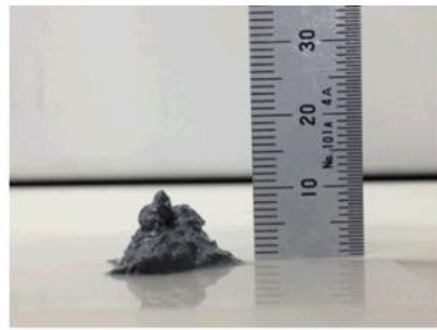
1. While rotating the gear [B], lubricate the small diameter teeth of the gear [A] and all teeth of the gear [B] circled below.

2. Make sure that grease is applied to all the gears.



[Left]: FLUOTRIBO MG Grease 4.0g

[Right]: FLUOTRIBO MG Grease 1.5g



d1355209

★ Important

- The max. and min. amount of grease you should use is shown below.

[A]: Min. Amount

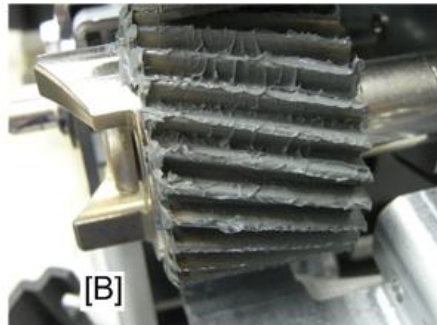
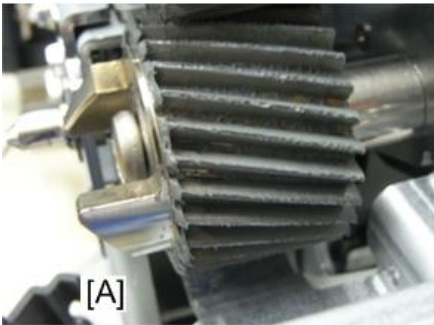
[B]: Max. Amount



d1355208a

[A]: Min. Amount

[B]: Max. Amount



d1355207

4. Replacement and Adjustment

Notes on the Main Power Switch

Push Switch

The main power button of this machine has been changed to a push-button switch (push button) from the conventional rocker switch. The push switch has characteristics and specifications different from the rocker switch. Care must be taken when replacing and adjusting parts.

Characteristics of the Push Switch (DC Switch)

Power is supplied to the machine even when the main power switch is turned OFF.

The push switch in this machine uses DC (direct current). Therefore, if the AC power cord is connected to an electrical outlet, power is supplied to the controller board, the operation unit and other modules even when the main power is turned OFF. When replacing the controller board and the operation unit in this state, not only these boards, it will damage other electrical components.

So, when performing maintenance work such as replacing parts, in addition to turning off the main power with the push switch, always unplug the AC power cord.

When you disconnect the power cord from the AC wall outlet, inside the machine there is still residual charge.

When you disconnect the power cord from the AC wall outlet, inside the machine for a while there is still residual charge. Therefore, if you remove boards in this state, it can cause a blown fuse or memory failure.

- How to remove the residual charge inside the machine

After you unplug the power cord from the AC wall outlet, in order to remove the residual charge from inside the machine, be sure to press the main power switch. Thus, the charge remaining in the machine is released, and it is possible to remove boards.

When you reconnect the AC power cord into an AC wall outlet, the machine will start automatically.

In order to remove the residual charge, push the main power switch while you disconnect the AC power cord. At that time, the power ON flag inside the machine is set. Therefore, after you finish work on the machine and reconnect the power cord to the AC, even if you do not press the main power switch, the machine will start automatically and the moving parts will begin to move. **When working on moving parts, be careful that fingers or clothes do not get caught.**

↓ Note

- Automatic restart deals with cases when you accidentally unplugged the AC power cord or unexpected power outages. By keeping the power flag ON, after the resumption of power, the machine will start up automatically.

In rare cases, when you reconnect the AC power cord to a power outlet, the machine does not start automatically. In this case, the machine has not failed. The cause is due to the timing of releasing the residual charge. If you press the main power switch while the residual charge was already released, the power ON flag will not be set. At this time, start the machine manually by pressing the main power switch.

★ Important

- If an option that is powered independently from a different power source, i.e. the Multi-Folding Unit FD4000 (for D135/D136/D137/D138) or the Buffer Pass Unit Type 5020 (for D137/D138), is included in the configuration, always follow the procedure below when reconnecting the AC power cord into an AC wall outlet after disconnecting it and pressing the main power switch to release the charge. If you do not follow the procedure below, the option that is powered independently will not be recognized by the copier and paper jams will occur.
 1. Connect the AC power cord of the option into an AC wall outlet, and then connect the AC power cord of the copier into an AC wall outlet.
 2. After the copier starts up automatically, press the main power switch of the copier again to power off and on the machine, and then run a copy job to check the operation.

Shutdown Method

1. Press the main power switch [A] on the left side of the machine.
2. Take out the power cord
3. Wait 3 minutes (this is the time required if you will remove the rear cover and access the interior of the machine, to take out the controller board for example).

Note: If some LEDs on any of the boards are blinking or lit, current is still flowing.

After the shutdown process, the main power is turned off automatically.



d1352680

When the shutdown is complete

Main power LED: Off

Operation panel LED: Off

Note

- How to start from shutdown
- To start the machine, press the main power switch. However, if you press the main power switch between the beginning and the end of a shutdown, the machine will not start.

Forced Shutdown

In case normal shutdown does not complete for some reason, the machine has a forced shutdown function.

To make a forced shutdown, press and hold the main power switch for 6 seconds.

In general, do not use the forced shutdown.

Important

- **Forced shutdown may damage the hard disk and memory, and can cause damage to the machine. Use a forced shutdown only if it is unavoidable.**

Special Tools and Lubricants

D137/D138

The following special tools should be prepared for maintenance of this model in the field:

Unique or Common:

U: Unique for this model

C: Common with listed

Item	Part Number	Description	Q'ty	Unique or Common
1	D0159501	ZINC STEARATE	1	C (*1)
2	D0159500	G104 YELLOW TONER	1	C (*1)
3	VSSG9002	FLUOTRIBO MG GREASE: 100G	1	C (*2)
4	B6455020	SD Card	1	C(General)
5	B6456705	PCMCIA Card Adapter	1	C (General)
6	G0219350	Loop-back Connector – Parallel	1	C (General)
7	C4019503	20X Magnification Scope	1	C (General)
8	A0929503	C4 Color Test Chart (3 pcs/set)	1	C (General)
9	B6795100	Plug - IEEE1284 Type C	1	C (General)

Note

- These items are common with the following models.
(*1): Common with Venus-C2/Venus-C3
(*2): Common with Taurus-C1
- Loop-back Connector [Parallel (item 6)] requires Plug [IEEE1284 Type C (item 9)].
- A PC (Personal Computer) is required for creating the Encryption key file on an SD card when replacing the controller board in which HDD encryption has been enabled.

D135/D136

The following special tools should be prepared for maintenance of this model in the field:

Unique or Common:

U: Unique for this model

C: Common with listed

Item	Part Number	Description	Q'ty	Unique or Common
1	D0159501	ZINC STEARATE	1	C (*1)
2	D0159500	G104 YELLOW TONER	1	C (*1)
3	VSSG9002	FLUOTRIBO MG GREASE : 100G	1	C (*2)
4	B6455020	SD Card	1	C(General)
5	C4019503	20X Magnification Scope	1	C (General)
6	A0929503	C4 Color Test Chart (3 pcs/set)	1	C (General)
7	A2579300	Grease Barrierta – S552R	1	C (*1)
8	A1849501	OPTICS ADJUSTMENT TOOL	2	C (*3)

Note

- These items are common with the following models.
 (*1): Common with Venus-C2/Venus-C3
 (*2): Common with Taurus-C1
 (*3): Common with Apollon-C2.5/Athena-C2.5
- A PC (Personal Computer) is required for creating the Encryption key file on an SD card when replacing the controller board in which HDD encryption has been enabled.

Outer Covers

Right Cover

Right Middle Front Cover (D137/D138)

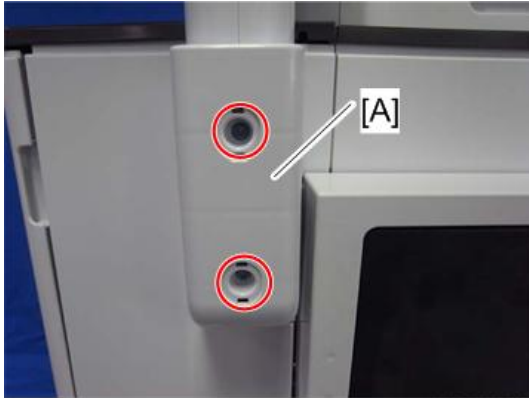
1. LCT cover [A] (🔩 x 2)



2. Screw covers [B] on the arm cover [A] of the operation panel

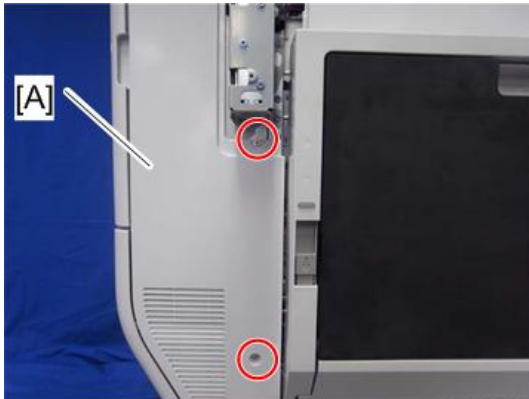


3. Arm cover [A] of the operation panel (🔩 x 2)



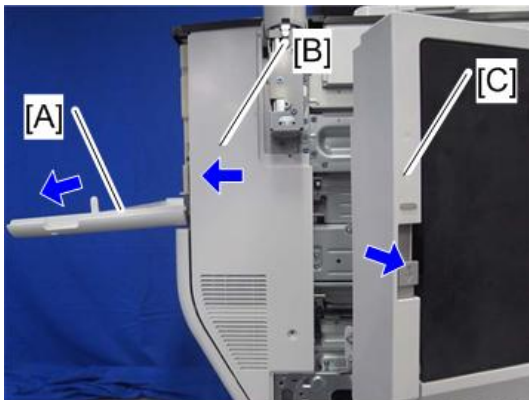
d1352298

4. Remove the fixing screws of the right middle front cover (🔩 x 2)



d1352299

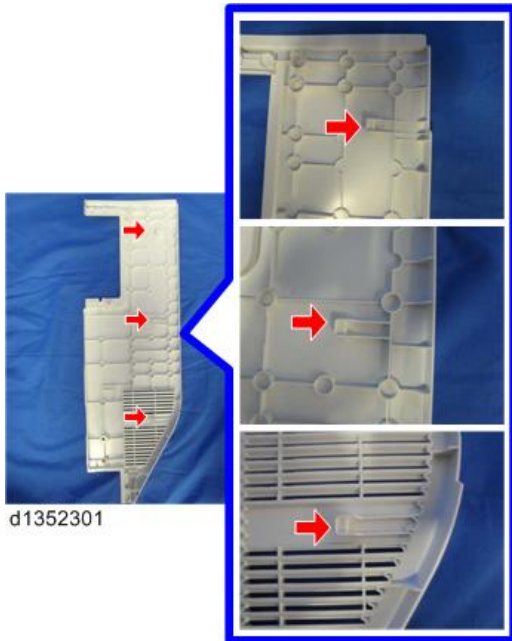
5. Open the toner supply unit front cover [A] and by-pass tray unit [C]. Slide the right middle front cover [B] to the left.



d1352300

↓ **Note**

- Check the position of the hooks in the photo below before removing.



Right Middle Front Cover (D135/D136)

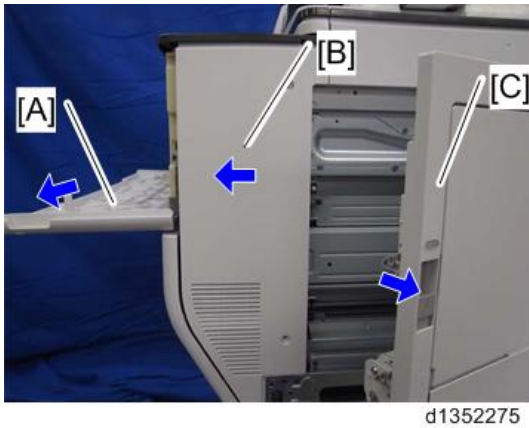
1. LCT cover [A] (🔩 x 2)



2. Remove the fixing screws of the right middle front cover [A] (🔩 x 2)

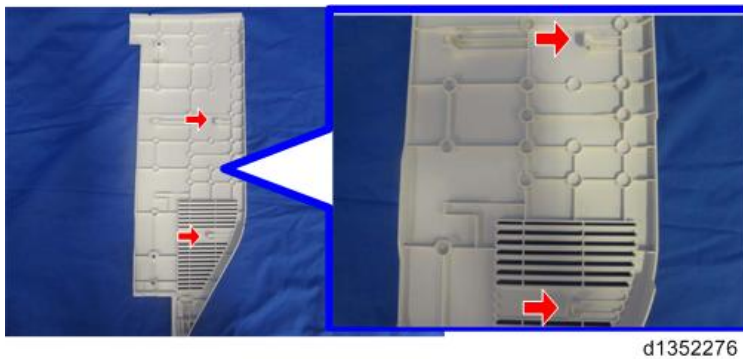


3. Open the toner supply unit front cover [A] and by-pass tray unit [C]. Slide the right middle front cover [B] to the left.



Note

- Check the position of the hooks in the photo below before removing.



Right Middle Upper Cover (D137/D138)

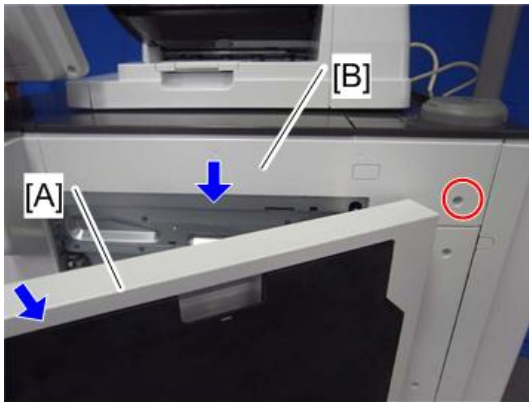
1. In order to easily remove the right middle upper cover [A], remove the fixing screws on the left side of the rear middle cover [B] (2 x 2).



d1352302

2. Open the by-pass tray unit [A]. Remove the right middle upper cover [B], moving it downward (🔧 x 1).

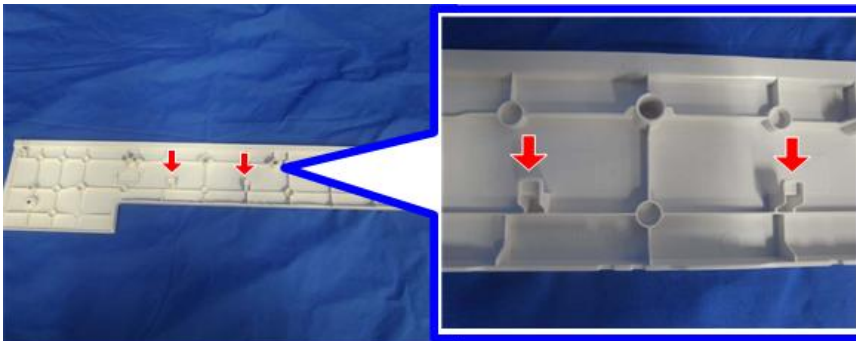
4



d1352303

Note

- Check the position of the hooks in the photo below before removing.



d1352279

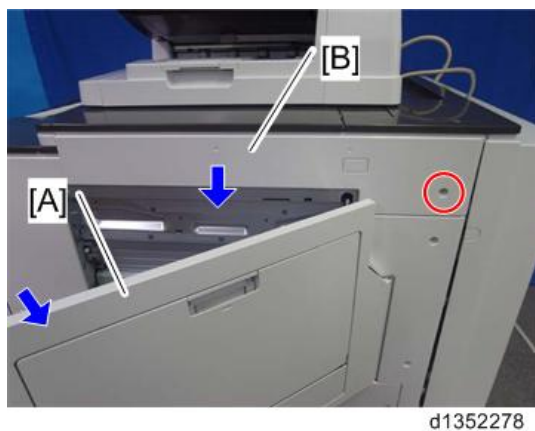
Right Middle Upper Cover (D135/D136)

1. In order to easily remove the right middle upper cover [A], remove the fixing screws on the left side of the rear middle cover [B] (⚙️ x 2).



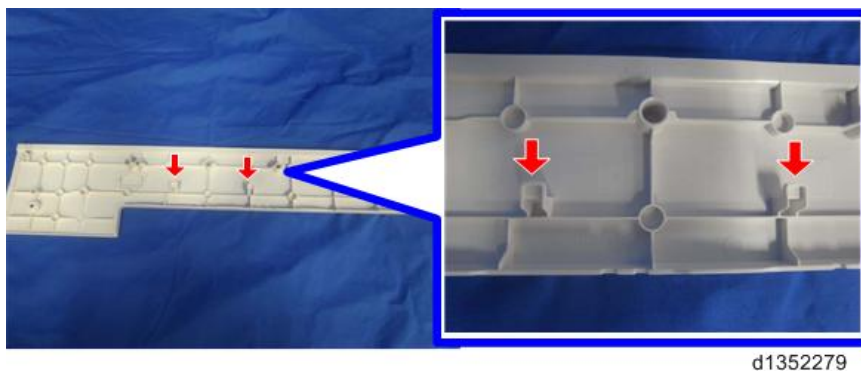
4

2. Open the by-pass tray unit [A]. Remove the right middle upper cover [B], moving it downward (⚙️ x 1).



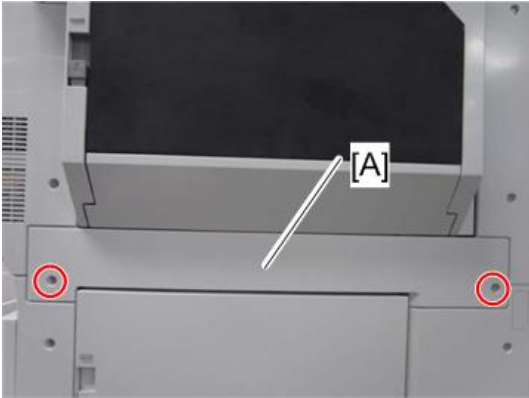
⚠️ Note

- Check the position of the hooks in the photo below before removing.



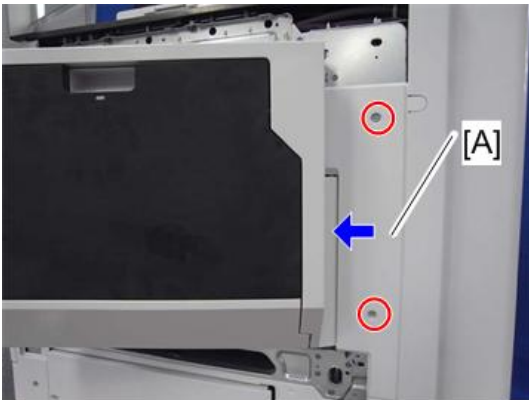
Right Middle Rear Cover (D137/D138)

1. Right middle upper cover (D137/D138) (🔧 page 525)
2. LCT cover [A] (🔧 x 2)



d1352595

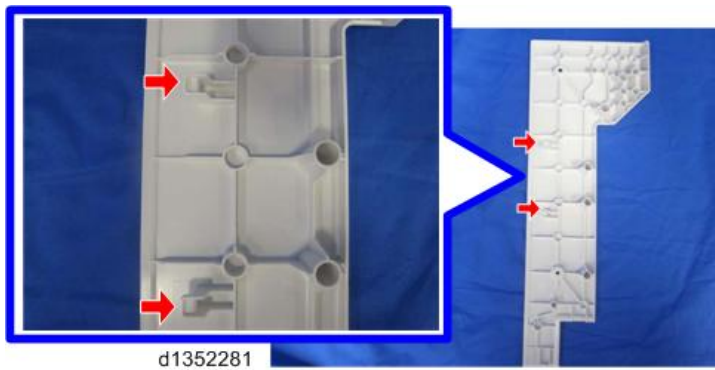
3. Slide the right middle rear cover [A] to the left (🔧 x 2)



d1352304

Note

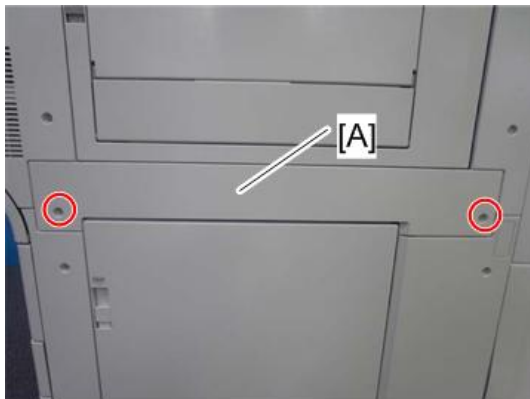
- Check the position of the hooks in the photo below before removing.



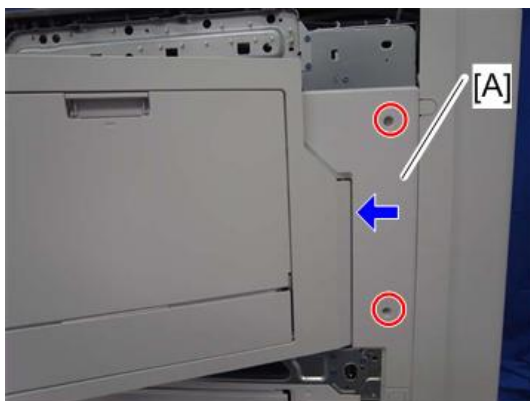
Right Middle Rear Cover (D135/D136)

4

1. Right middle upper cover (D135/D136) (🔧 page 527)
2. LCT cover [A] (🔧 x 2)

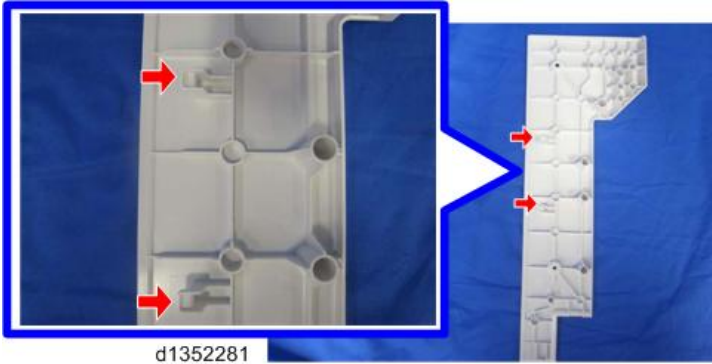


3. Slide the right middle rear cover [A] to the left (🔧 x 2)



Note

- Check the position of the hooks in the photo below before removing.

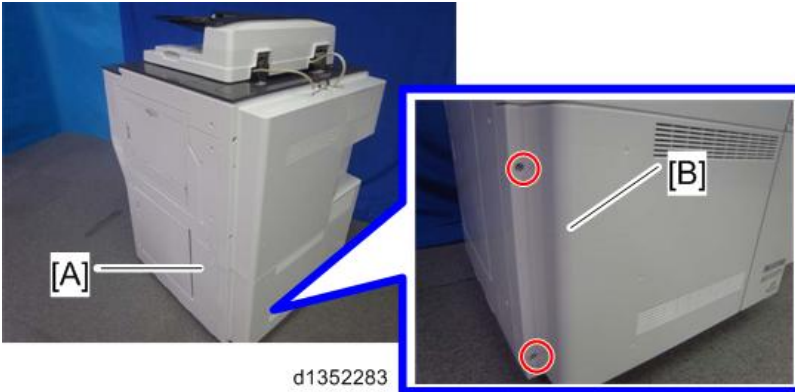


d1352281

4

Right Lower Cover

1. In order to easily remove the right lower cover [A], remove the fixing screws on the left side of the rear lower cover [B] (⚙ x 2).



d1352283

2. LCT cover [A] (⚙ x 2)



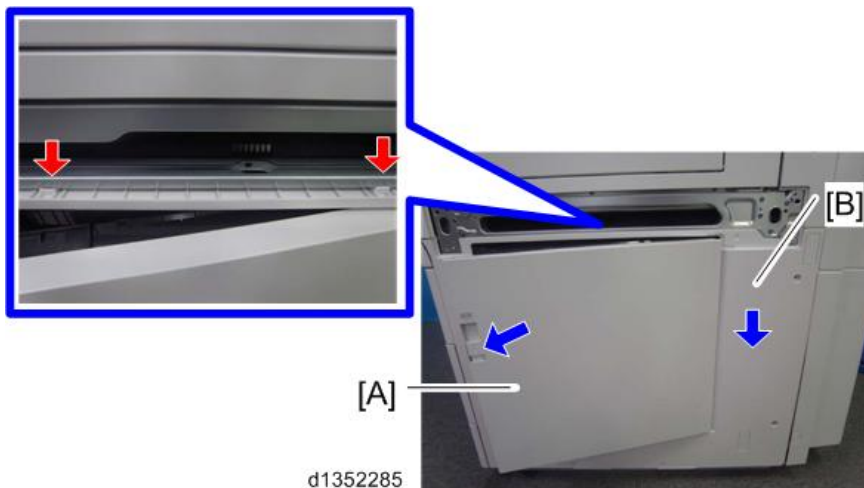
d1352282

3. Remove the fixing screws of the right lower cover (⚙ x 4).



d1352284

4. Open the vertical transport door [A]. Remove the hooks (x 2) located on the upper side of the right lower cover [B], then remove by sliding downward.



d1352285

Note

- Check the position of the hooks in the photo below before removing.

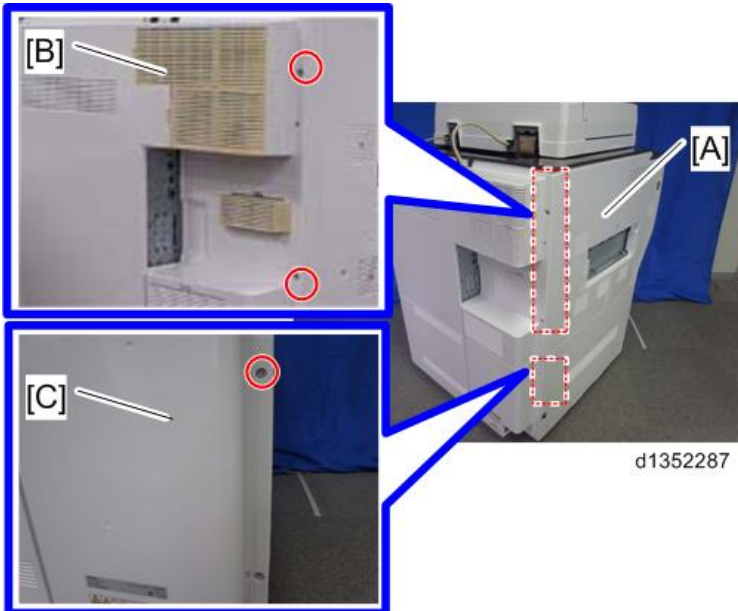


4

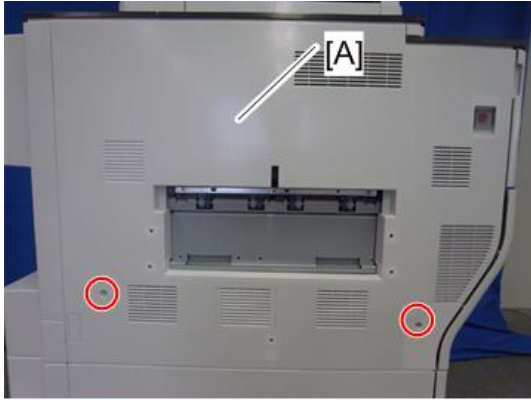
Left Cover

Left Middle Cover

1. In order to easily remove the left middle cover [A], remove the fixing screws on the right side of the rear middle cover [B] and rear lower cover [C] (🔩 x 3).



2. Remove the fixing screws of the left middle cover (🔩 x 2).



d1352288

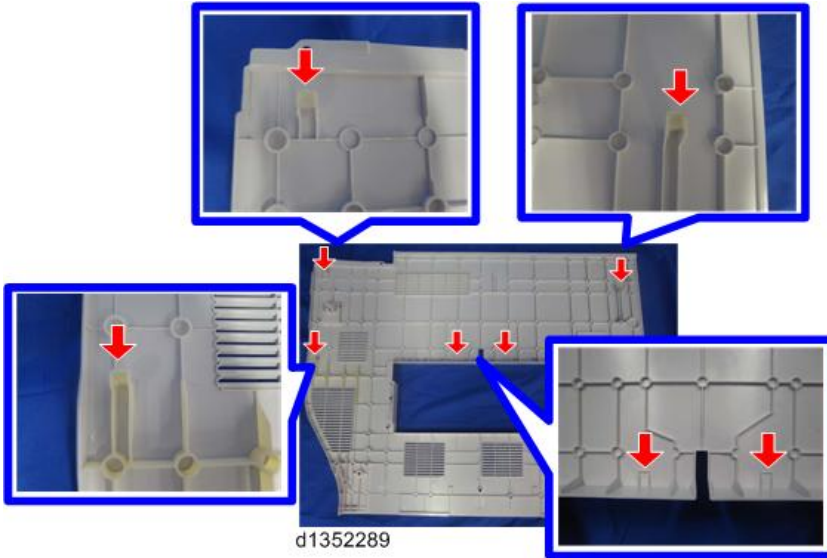
3. Remove the left middle cover [A].



d1352698

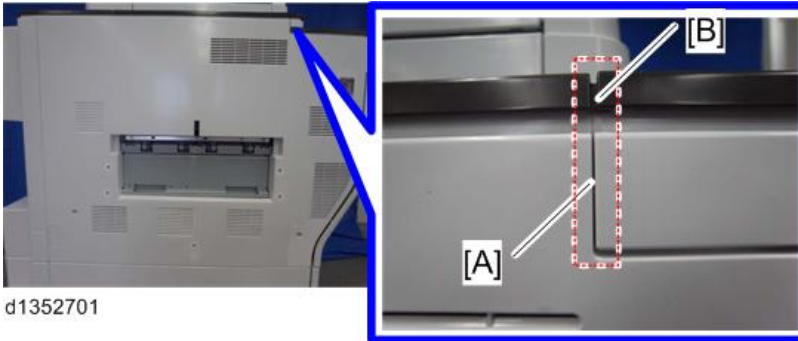
Note

- Check the position of the hooks in the photo below before removing.

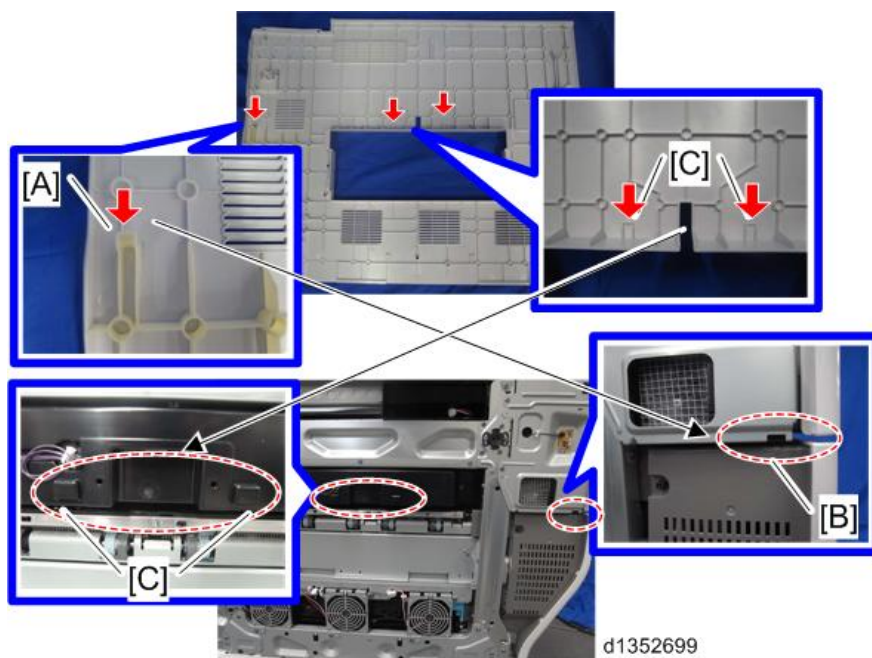


Notes on left middle cover attachment

- Attach the left middle cover to align the left middle cover [A] and the upper cover [B].



- Attach the hook [A] to fit location [B] on the machine.
- Attach the hook [C] to fit location [D] on the machine.

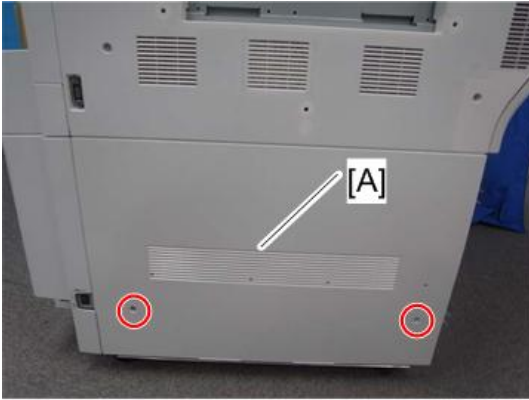


Left Lower Cover

1. Purge cover [A] (pin x 2)



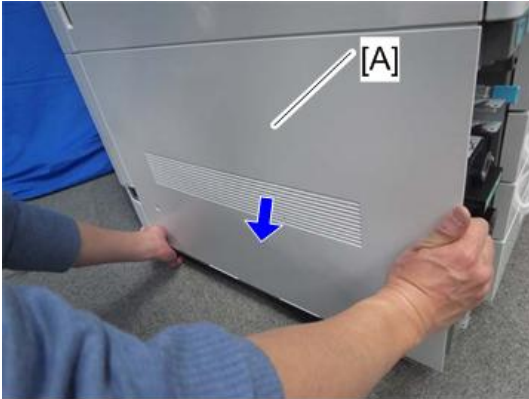
2. Remove the fixing screws of the left lower cover (🔩 x 2).



d1352291

4

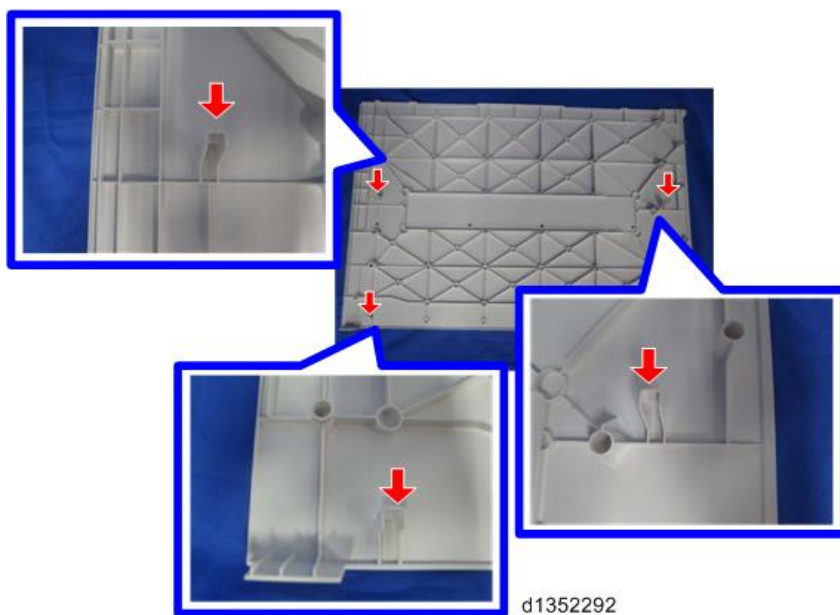
3. While holding the right side of the left lower cover [A], remove it in a downward direction.



d1352700

Note

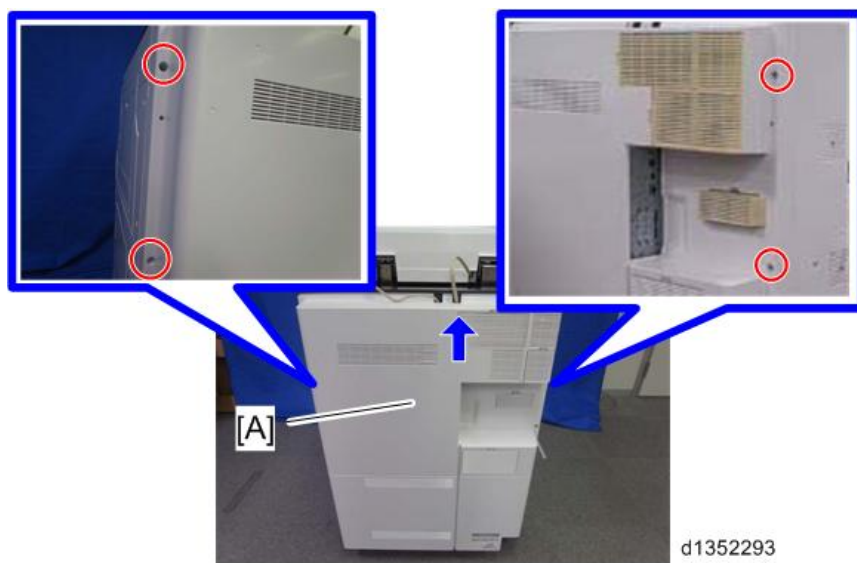
- Check the position of the hooks in the photo below before removing.



Rear Cover

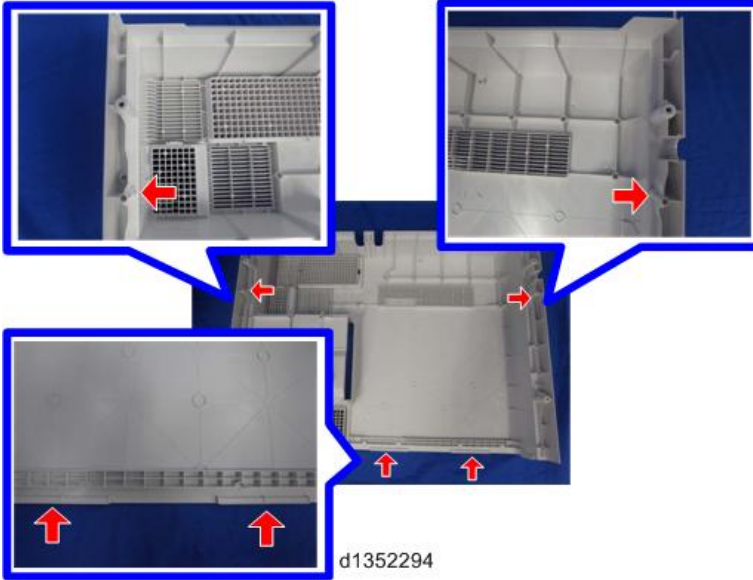
Rear middle cover

1. Remove the rear middle cover [A] by moving it upward (🔧 x 4).



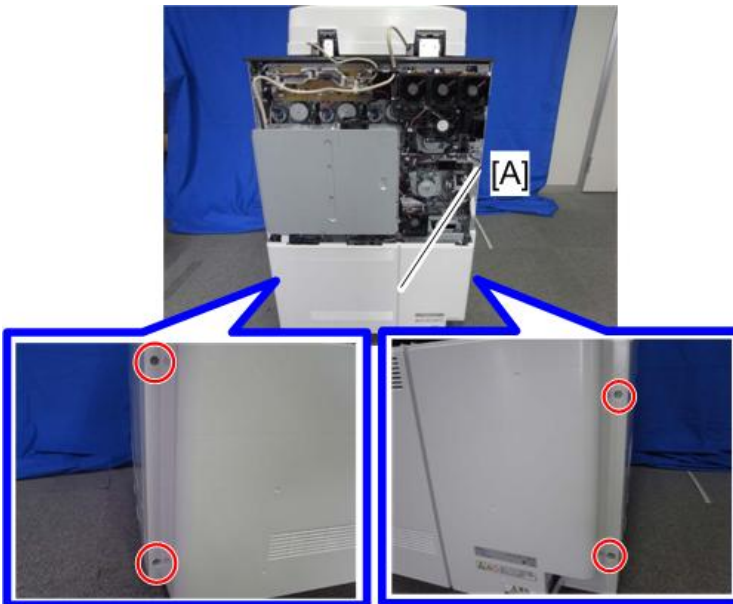
Note

- Check the position of the hooks in the photo below before removing.



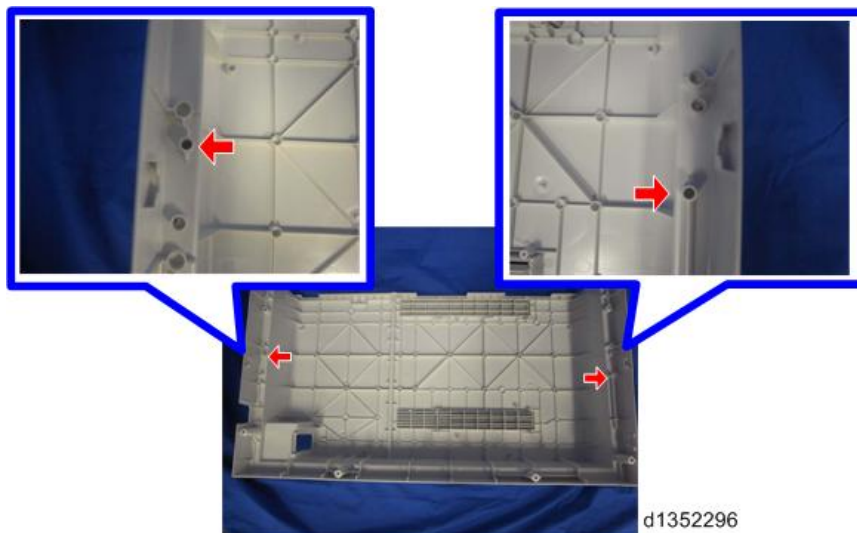
Rear Lower Cover

1. Rear middle cover (🔧 page 537)
2. Rear Lower Cover [A] (🔩 x 4).



Note

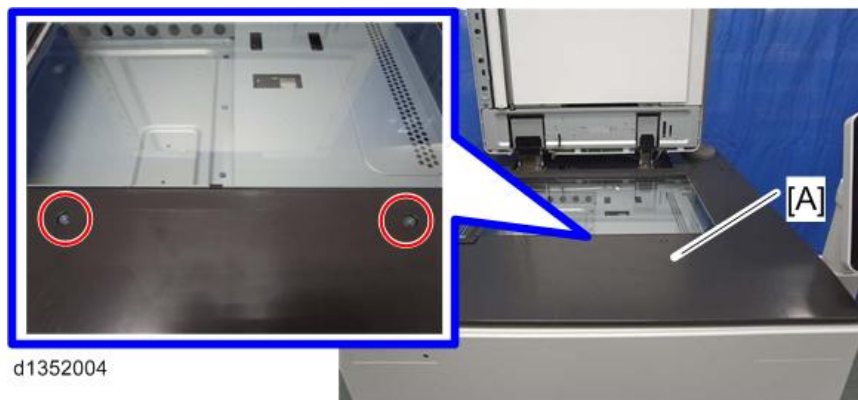
- Check the position of the hooks in the photo below before removing.



4

Upper Cover**Upper Front Cover (D137/D138)**

1. Open the ADF and remove the fixing screws of the upper front cover [A] (⌀ x 2).



2. Lift the upper front cover [A] and slide it forward.



d1352704

4

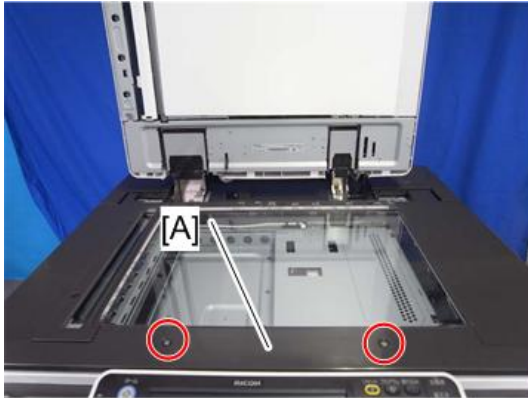
Note

- Check the position of the hooks in the photo below before removing.



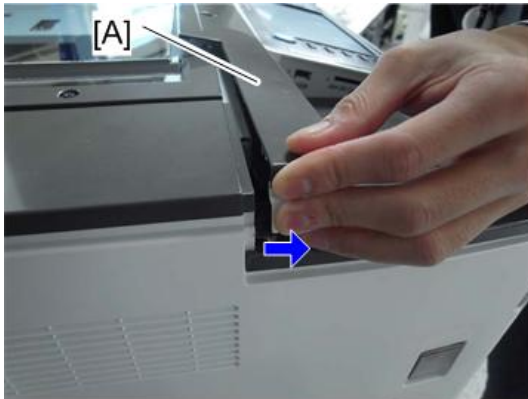
Upper Front Cover (D135/D136)

1. Open the ADF and remove the fixing screws of the upper front cover [A] (🔩 x 2).



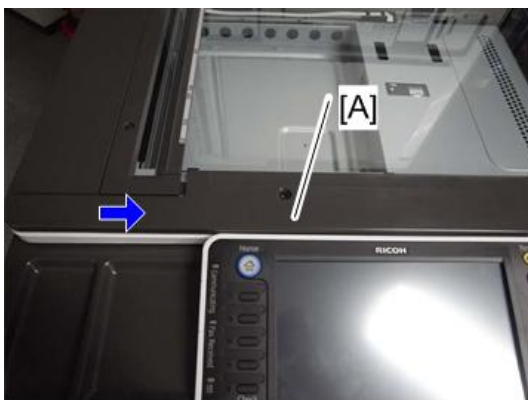
d1352703

2. Disconnect the left hook of the upper front cover [A].



d1352706

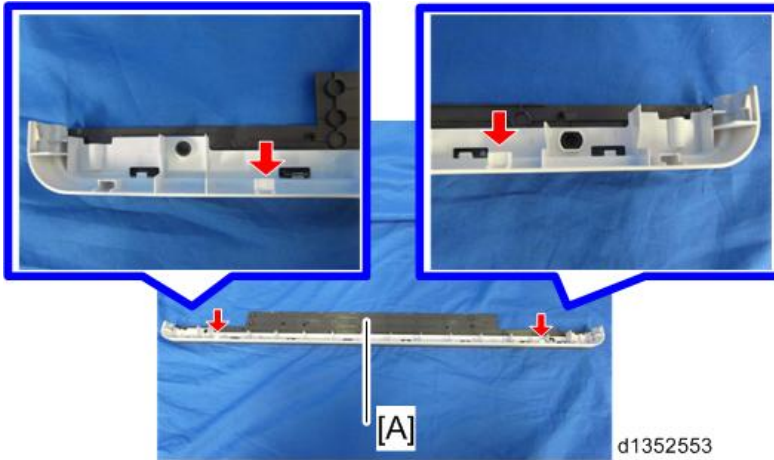
3. Slide the upper front cover [A] to the right.



d1352707

Note

- Check the position of the hooks in the photo below before removing.



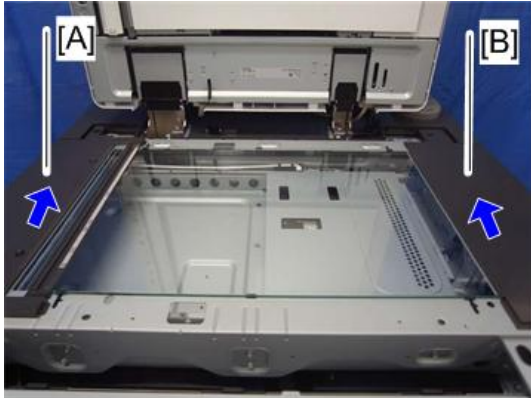
Upper Rear Cover (Small)

1. Open the ADF and remove the fixing screws of the upper rear cover (small) [A] (🔩 x 2).



Upper Left Cover/ Upper Right Cover

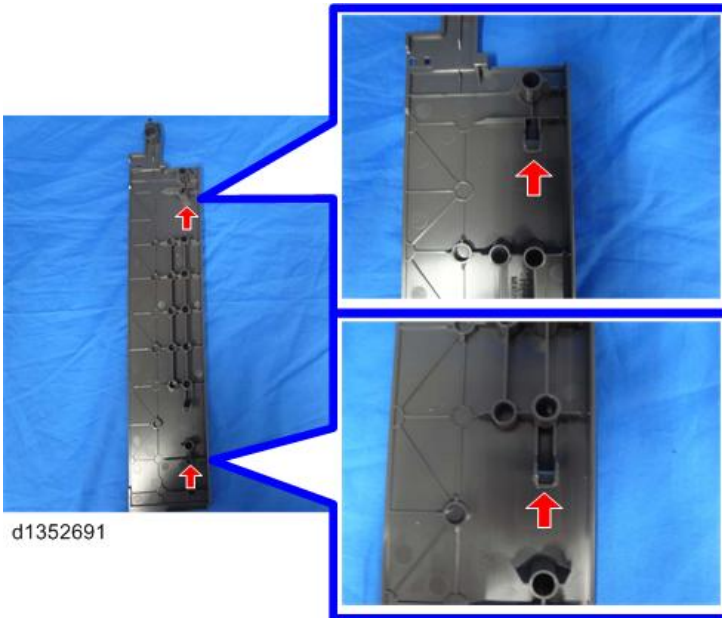
1. Upper front cover (🔑 D137/D138: page 539, D135/D136: page 540)
2. Upper rear cover (small) (🔑 page 542)
3. Remove the upper left cover [A] and upper right cover [B] by sliding them toward the rear.



d1352006

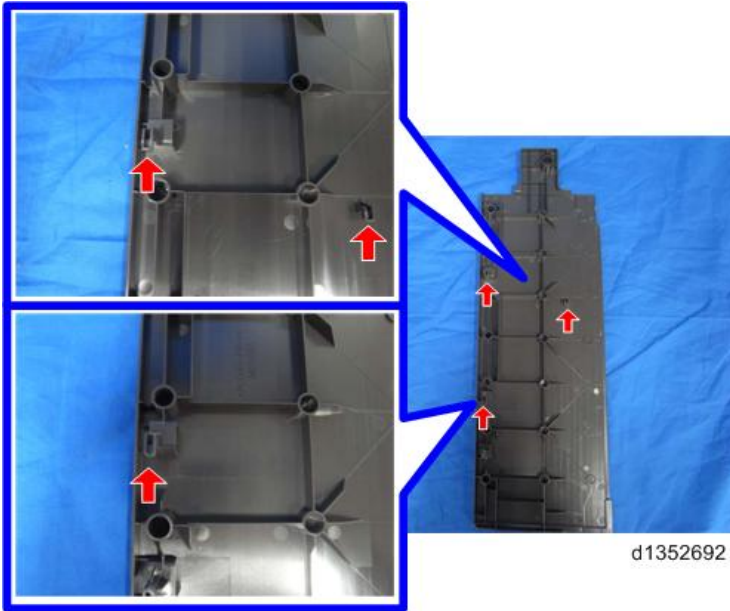
Note

- Check the position of the hooks in the photo below before removing.
- Upper left cover



d1352691

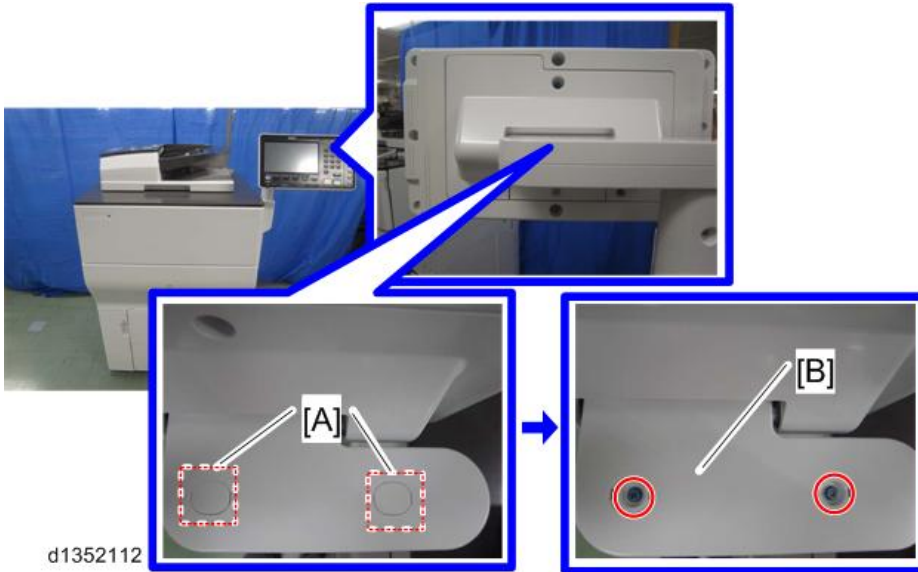
- Upper right cover



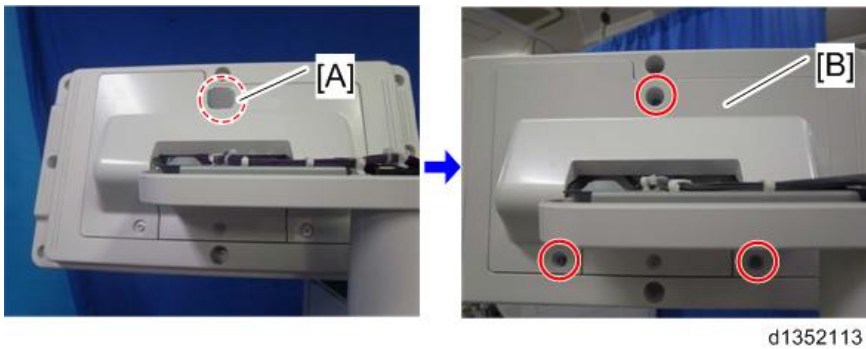
Operation Panel (D137/D138)

Operation Panel

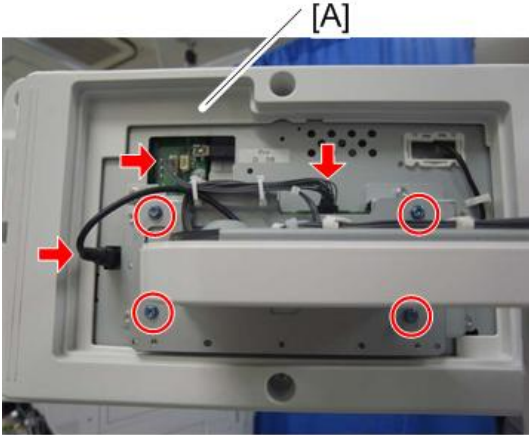
1. Remove the screw covers [A] on the back of the operation panel. Remove the arm upper cover [B] (🔩 x 2).



2. Screw cover [A] and the rear cover [B] (🔩 x 3)



3. Operation panel (🔩 x 4, 📐 x 3)

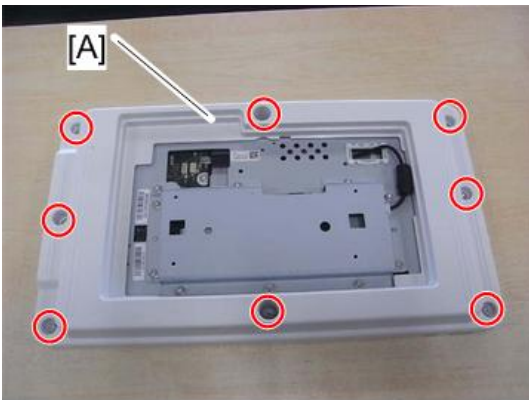


d1352114

4

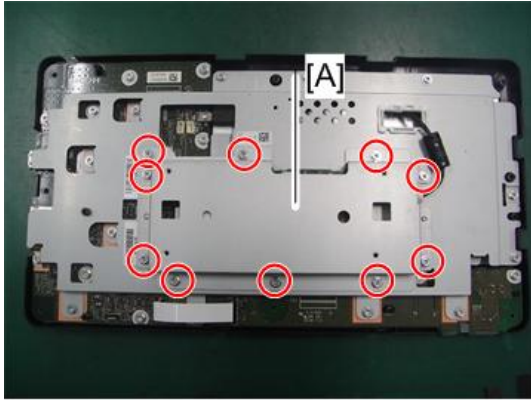
LDCD Board

1. Operation Panel (☛ page 545)
2. Rear cover [A] (🔩 x 8)



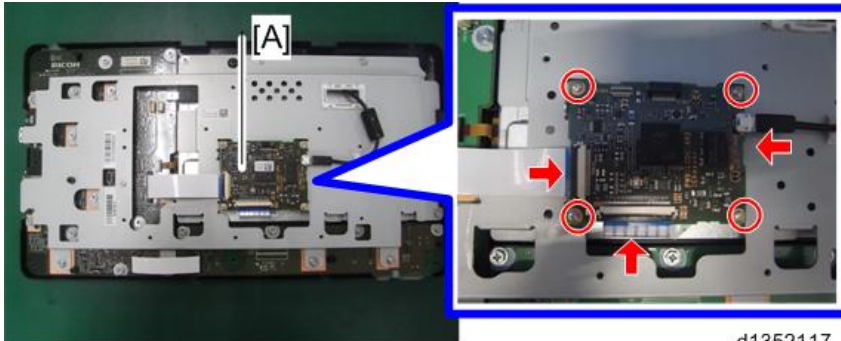
d1352115

3. Bracket [A] (🔩 x 10)



d1352116

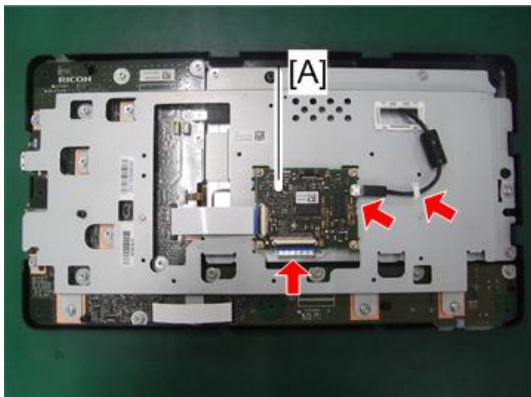
4. LCD board [A] (⚙️ x 4, 📡 x 1, 📡 x 2, flat cable x 2)



d1352117

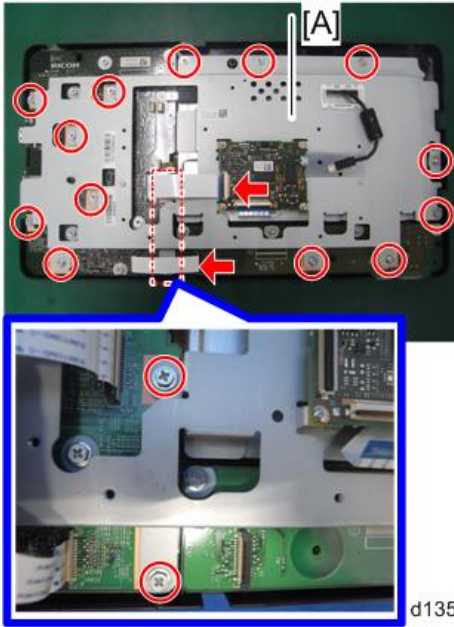
OPU Board / OPR Board

1. Remove the connector and the clamp that is connected to the LCD board [A] (📡 x 1, 📡 x 1, flat cable x 1).

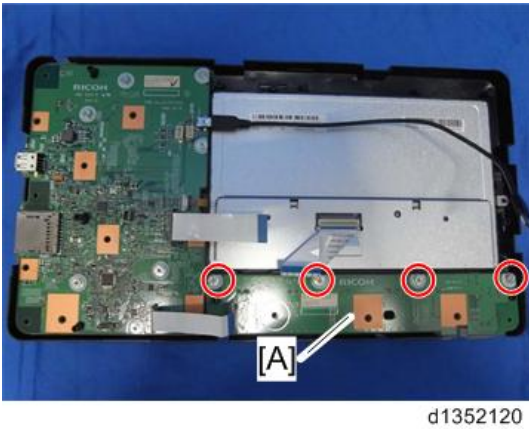


d1352118

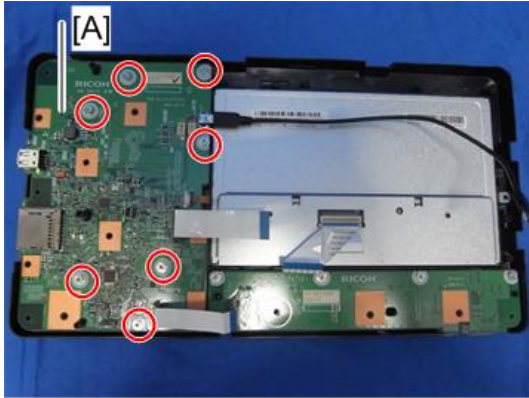
- 2. Bracket [A] (⚙️ x 15, flat cable x 2)



- 3. OPU board (⚙️ x 4)



- 4. OPR board (⚙️ x 7)

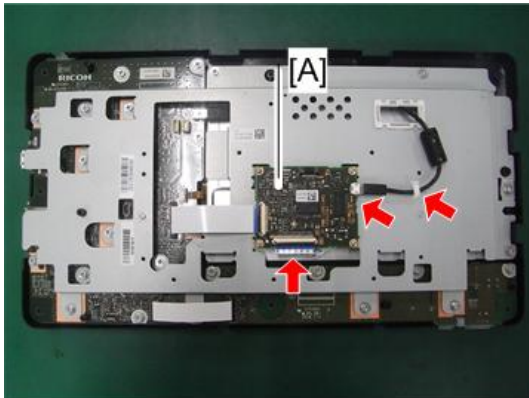


d1352121

4

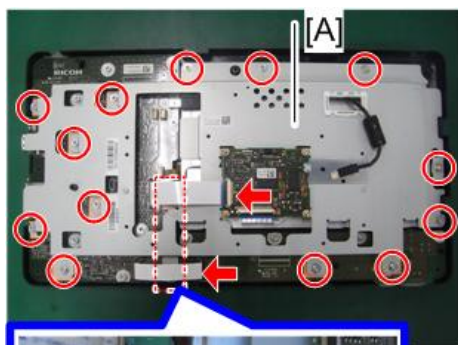
LCD Board (Touch Panel Unit)

1. Remove the connector and the clamp that is connected to the LCD board [A] (🔌 x 1, 📏 x 1, flat cable x 1).



d1352118

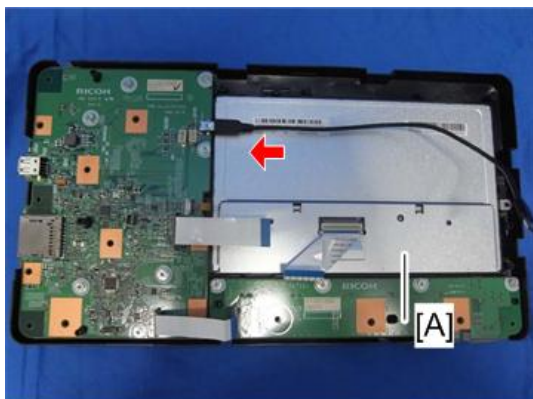
2. Bracket [A] (🔌 x 15, flat cable x 2)



d1352119

4

3. LCD Board (Touch Panel Unit) [A] (📱 x 1)

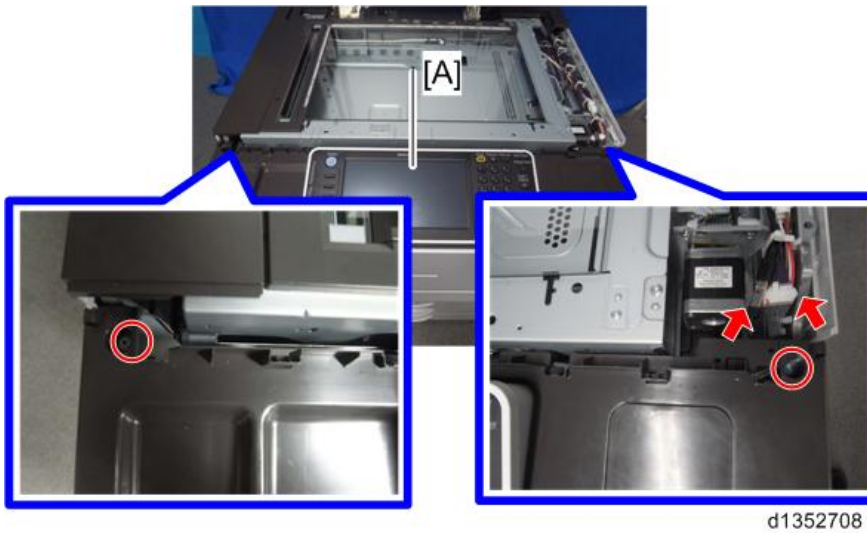


d1352122

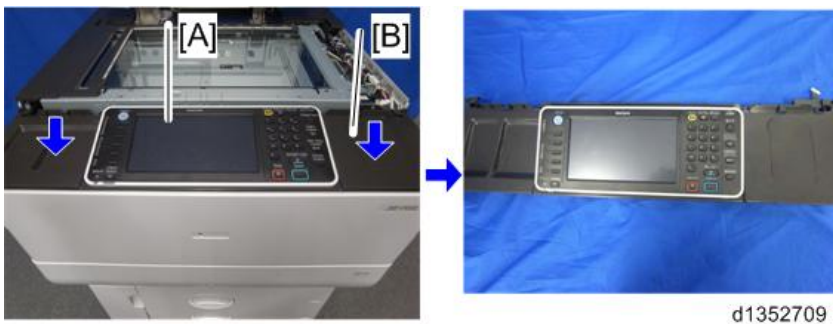
Operation Panel (D135/D136)

Operation Panel

1. Upper right cover (☞ page 542 "Upper Left Cover/ Upper Right Cover")
2. Remove the fixing screws and connectors of the operating unit [A] (🔩 x 2, 📡 x 2)

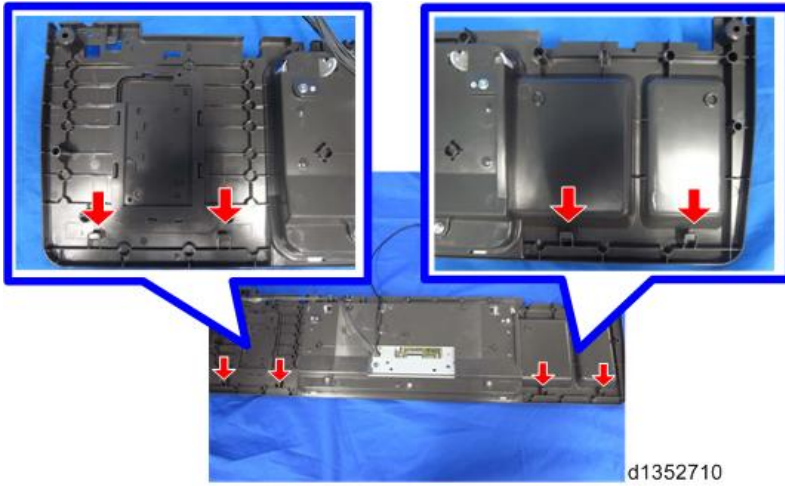


3. Slide the operation panel [A] and lower cover [B] forward.



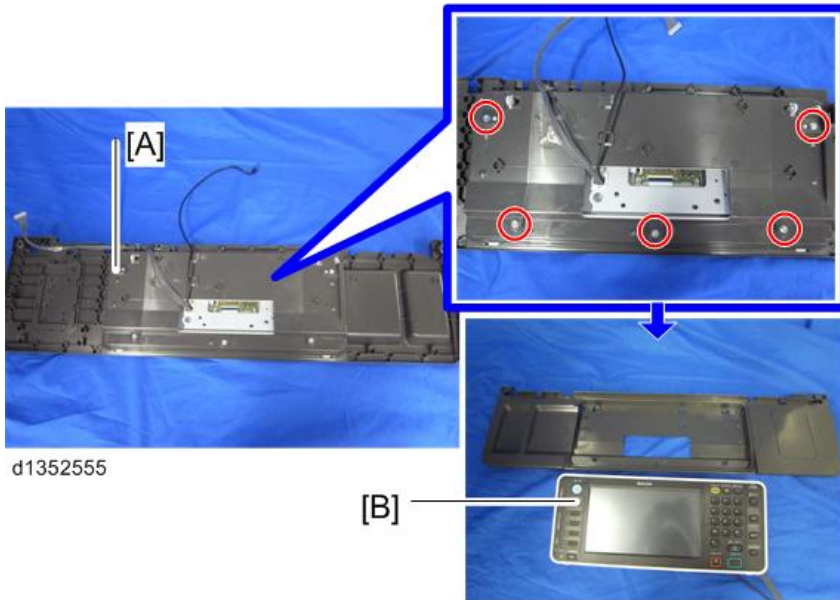
⬇ Note

- Check the position of the hooks in the photo below before removing.



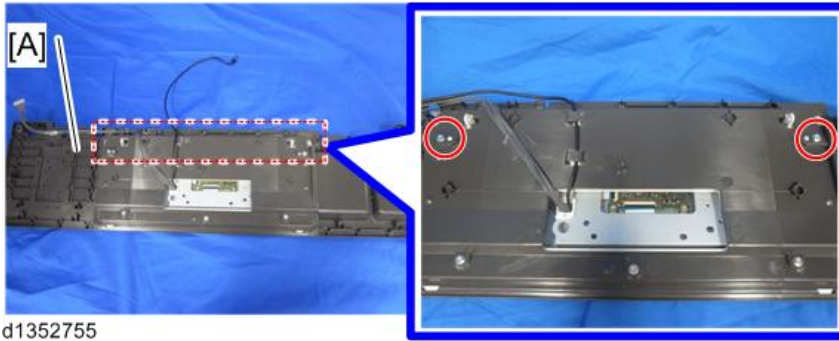
4

4. Remove the operation panel [B] from the lower cover [A] (⚙️ x 5).



Touch Panel Calibration

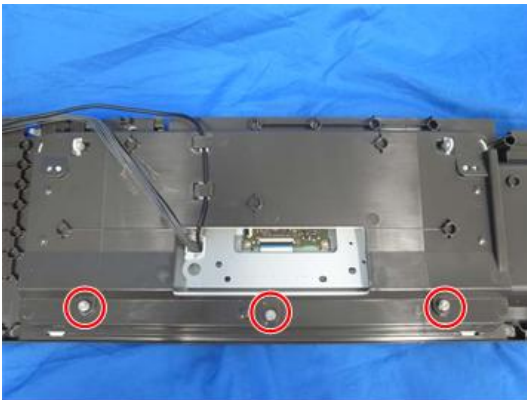
1. Operation Panel (🔧 page 551)
2. Turn the operation panel (including the lower cover) [A] and remove the fixing screws (⚙️ x 2,).



d1352755

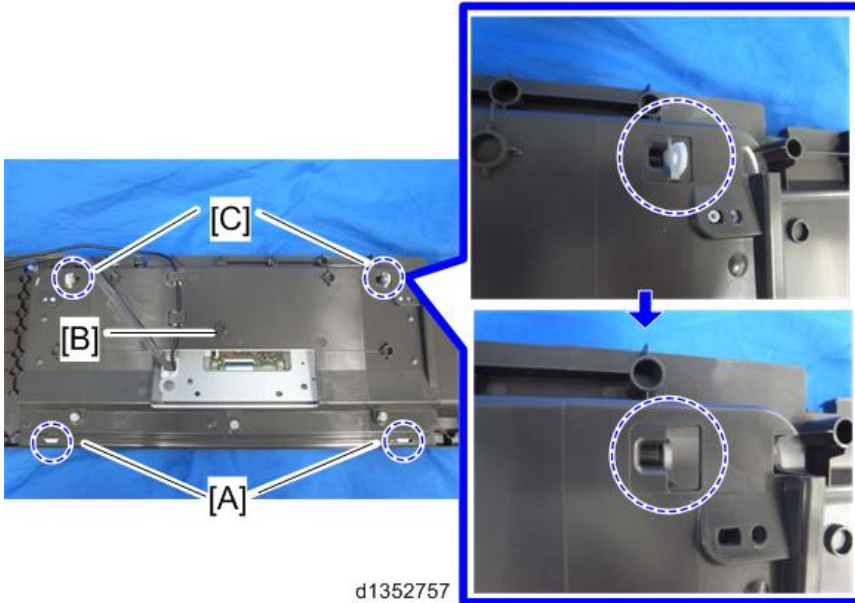
d1352756

3. For tilt adjustment, loosen the screws in three places.



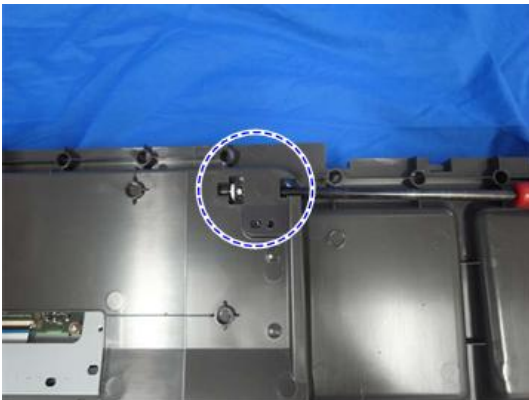
d1352756

4. Lift the lower cover [B] to pivot the hooks [A] on the front side. Then align the cover [B] with the ribs [C].



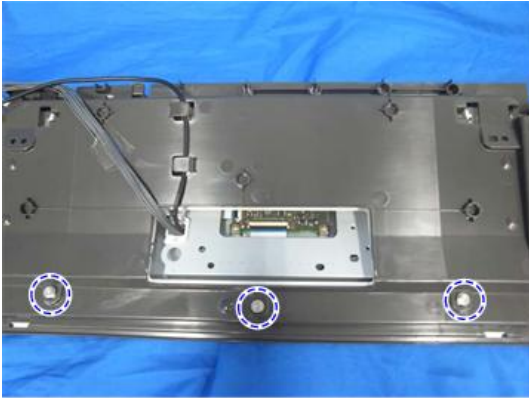
d1352757

1. Fix the ribs and lower cover with the screws you removed in step 2 (2 x 2,).
e.g.: right side



d1352758

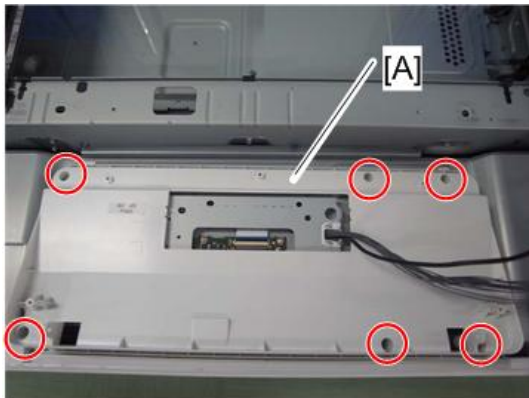
2. Tighten the screws in three places to fix the operation panel.



d1352759

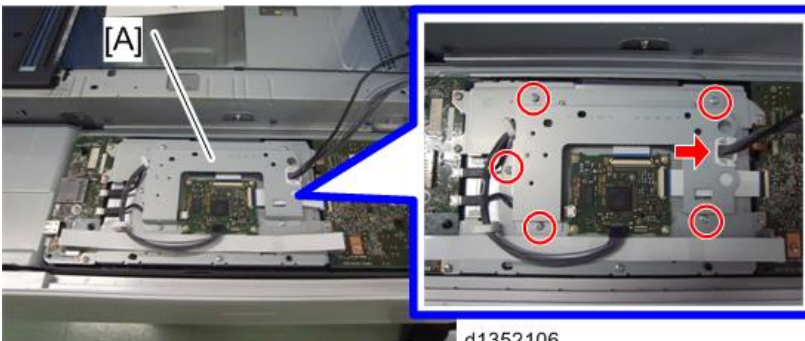
LDCD Board

1. Operation Panel (🔧 page 551)
2. Middle cover [A] (🔧 x 6)



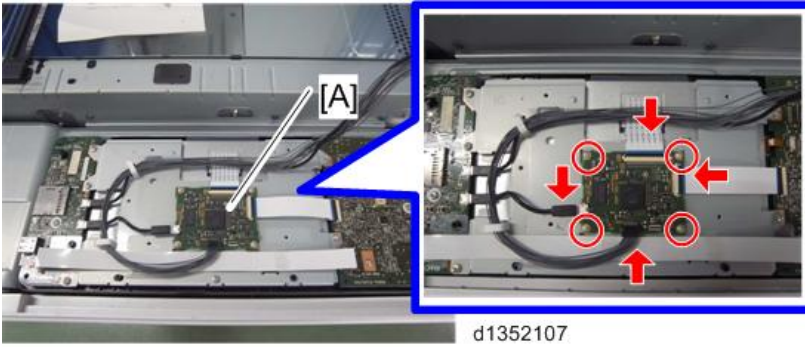
d1352105

3. Bracket [A] (🔧 x 5, 📏 x 1)



d1352106

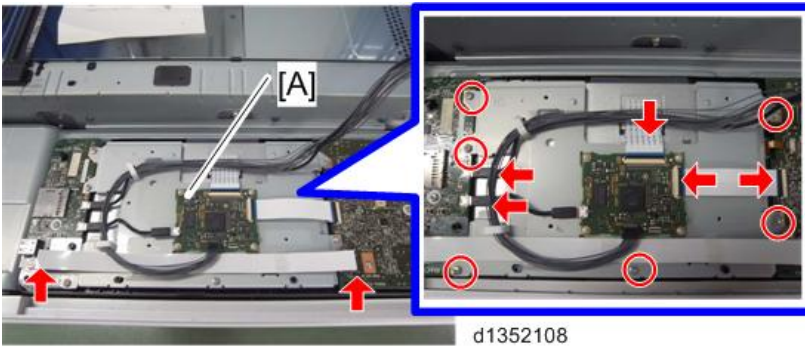
4. LDCD board [A] (⚙️ x 4, 📏 x 2, flat cable x 1)



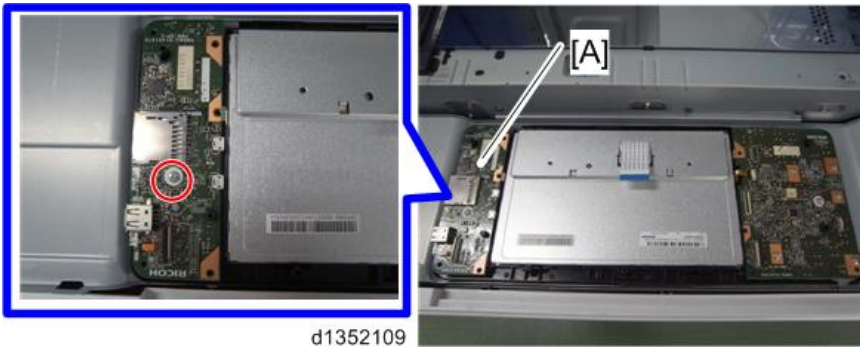
4

OPU Board / OPR Board

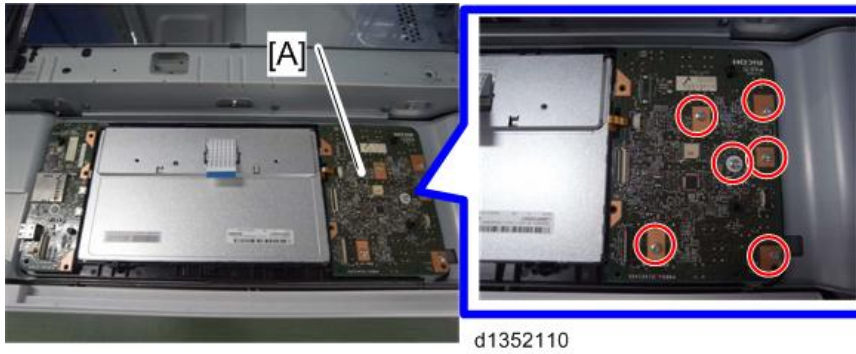
1. LDCD board [A] along with the bracket (⚙️ x 6, 📏 x 2, flat cable x 5)



2. OPU board (⚙️ x 1)



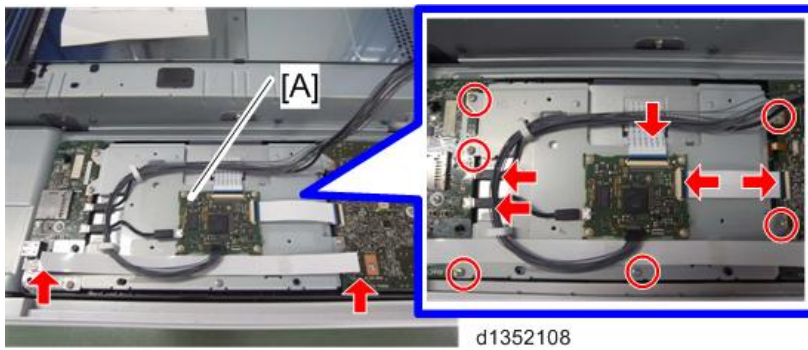
3. OPR board (⚙️ x 6)



LCD Board (Touch Panel Unit)

4

1. LCD board [A] along with the bracket (⚙️ x 6, 📏 x 2, flat cable x 5)



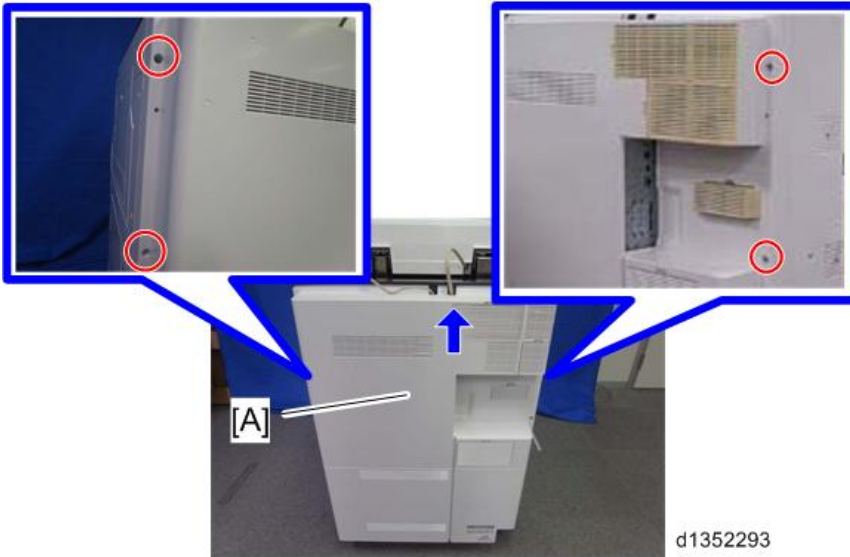
2. LCD Board (Touch Panel Unit) [A]



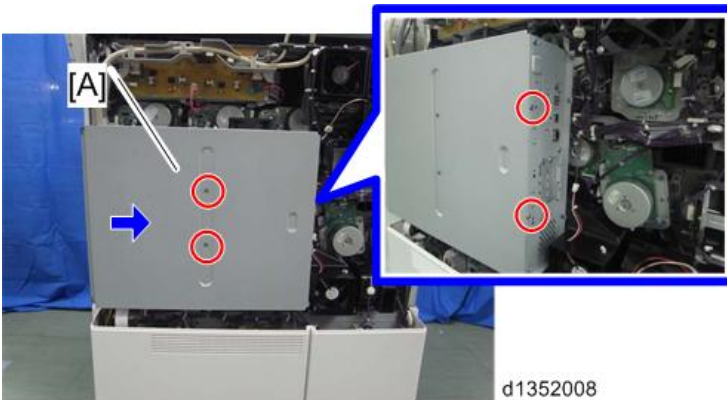
ADF

ADF Removal

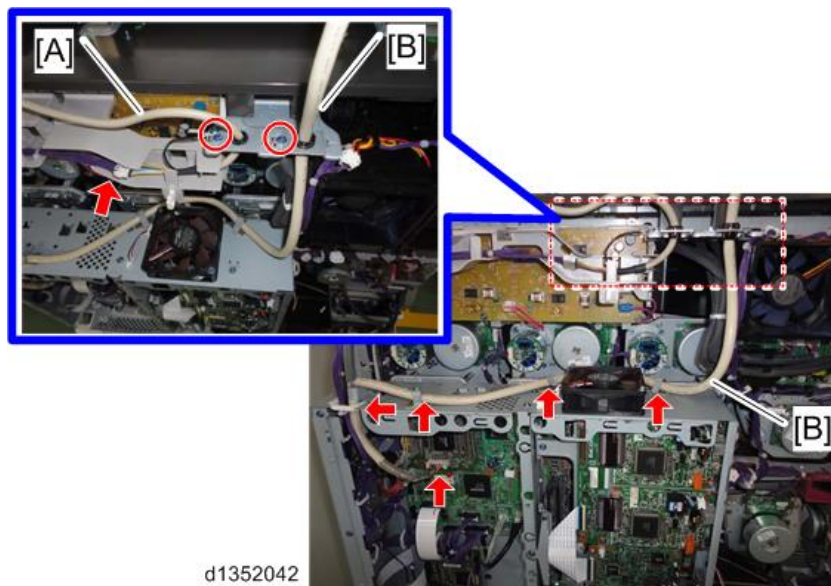
1. Remove the rear middle cover [A] by moving it upward (🔧 x 4).



2. Controller box cover [A] (🔧 x 4).



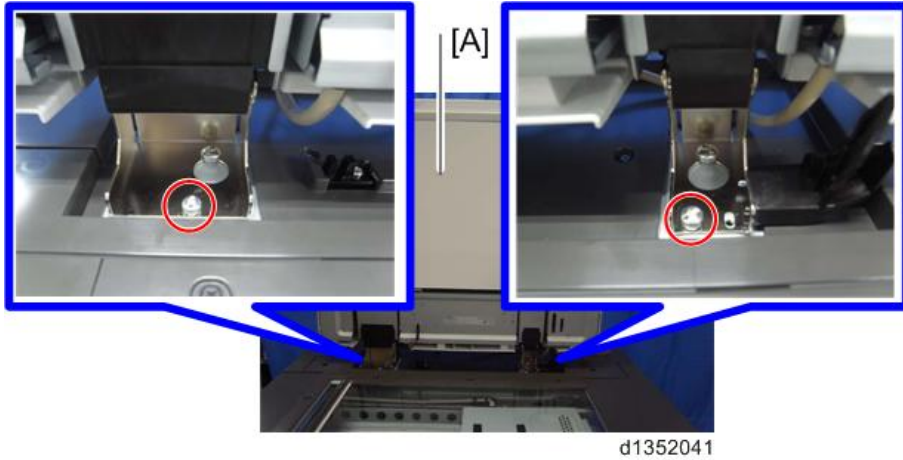
3. Disconnect the interface cable [A] (🔧 x 1, 📡 x 1) and CIS unit cable [B] (🔧 x 1, 📡 x 1, 🖨️ x 4) from the rear of the machine.



4. Open the ADF [A].



5. Remove the fixing screws of the ADF (🔩 x 2).



4

6. While holding the left and right sides of the ADF, lift up to remove it.

Note

- Because of the weight of the ADF, handle with care.

Adjustment after Replacing the ADF

CIS RGB Adjustment

Enter the four-digit numeric values for RGB that are listed on the paper that comes with the ADF into the following SP.

R: SP4-712-001 (CIS GB Adj Value: R)

G: SP4-713-001 (CIS GB Adj Value: G)

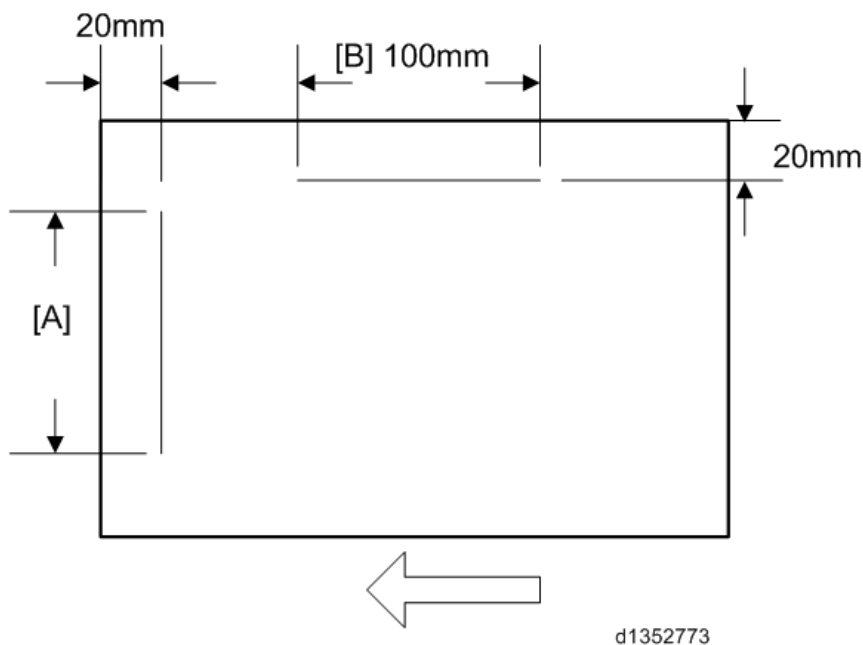
B: SP4-714-001 (CIS GB Adj Value: B)

Checking the vertical registration

SP6-006-001 (ADF Adjustment Side-to-Side Regist: Front)

SP6-006-002 (ADF Adjustment Side-to-Side Regist: Rear)

1. Create an original as shown in the following picture.



*The arrows indicate the direction of feed.

2. Copy the original and make sure that the position of the line [A] is within 0 ± 1 mm
3. If not within the standard, adjust with the SP modes.

Checking the horizontal registration

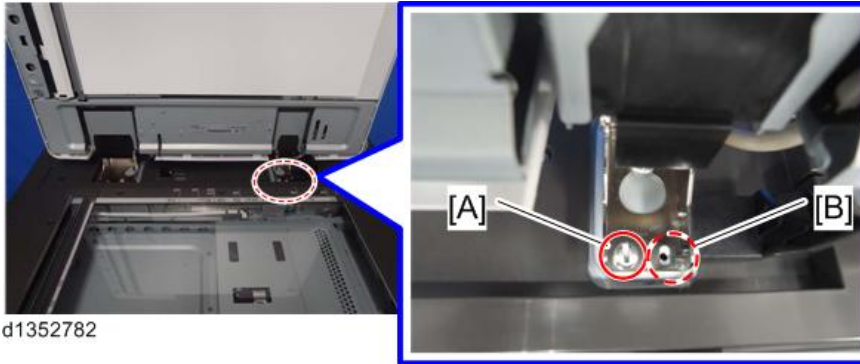
SP6-006-010 (ADF Adjustment L-Edge Regist (1-Pass): Front)

SP6-006-011 (ADF Adjustment L-Edge Regist (1-Pass): Rear)

1. Copy the original and make sure that the position of the line [B] is within 0 ± 2 mm.
2. If not within the standard, adjust with the SP modes.

Checking the skew

1. Make sure that the difference between both end positions of the line [A] is within 0 ± 2 mm.
2. If not within the standard, change the position of the fixing screw [A] to the long hole [B] at the right hinge.



4

Checking the magnification

SP6-017-001 (DF Magnification Adj.)

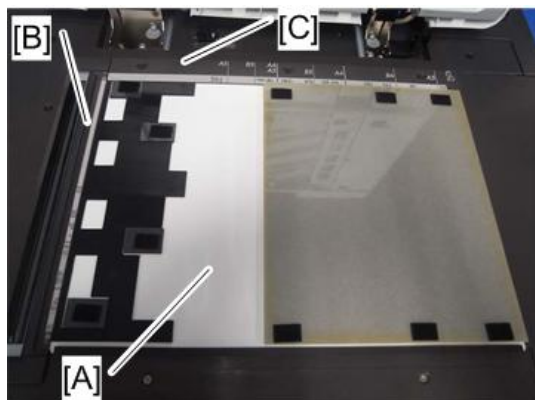
1. Copy the original and make sure that the length of the line [B] is within 100 ± 1 mm.
2. If not within the standard, adjust with the SP mode.

Platen Adjustment

1. Open the ADF and remove the white cover (magic tape x 10).



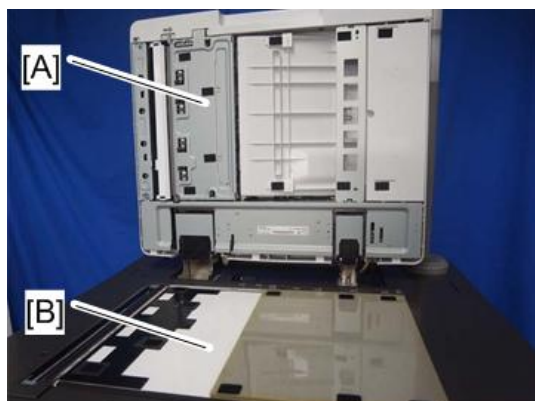
2. Put the white cover [A] in the correct position on the exposure glass, aligning it with the glass cover [B] and the rear scale [C].



d1352783

3. Close the ADF [A] slowly and paste the ADF and the white cover [B] with the magic tapes.

4

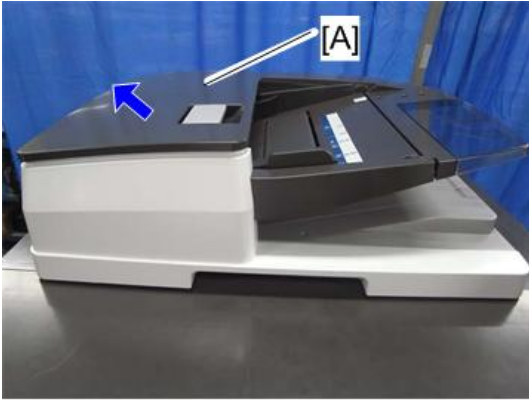


d1352784

ADF Cover

ADF Front Cover

1. Open the feed cover [A].



d1352047

4

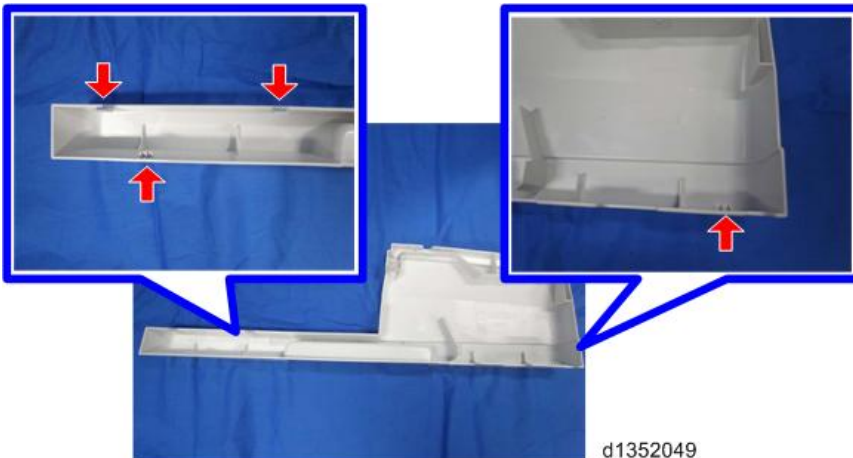
2. Slide the ADF front cover [A] to the left (hook x 2, hook x 4).



d1352048

Note

- Check the position of the hooks in the photo below before removing.



d1352049

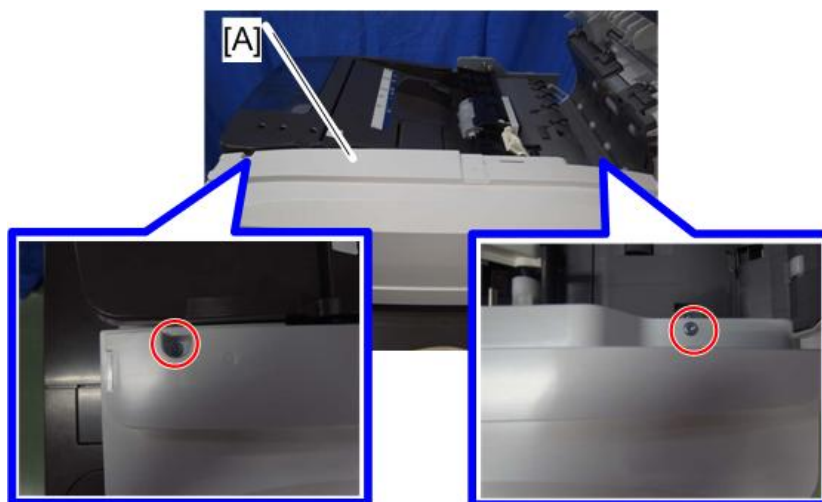
ADF Rear Cover

1. Open the feed cover [A].
2. Cover [A] (⚙️ x 1).



d1352050

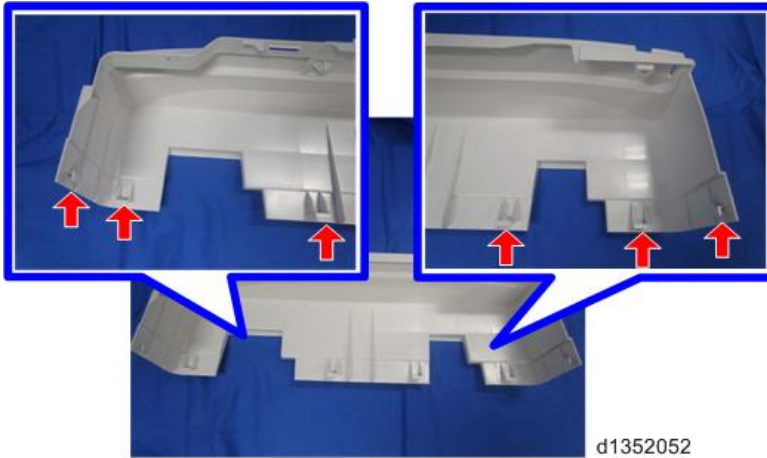
3. Lift off the rear cover [A] (⚙️ x 2, hook x 4).



d1352051

⚠️ Note

- Check the position of the hooks in the photo below before removing.



Feed Cover

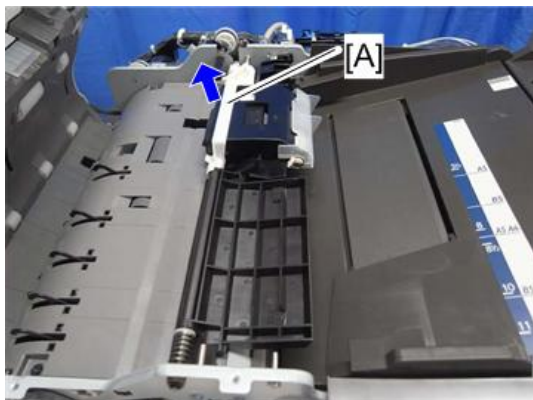
1. ADF front cover (🖨️ "ADF Front Cover" in page 563 "ADF Cover")
2. ADF rear cover (🖨️ "ADF Rear Cover" in page 563 "ADF Cover")
3. Feed cover [A] (🔩 x 3, 📏 x 1)



Original Feed Unit

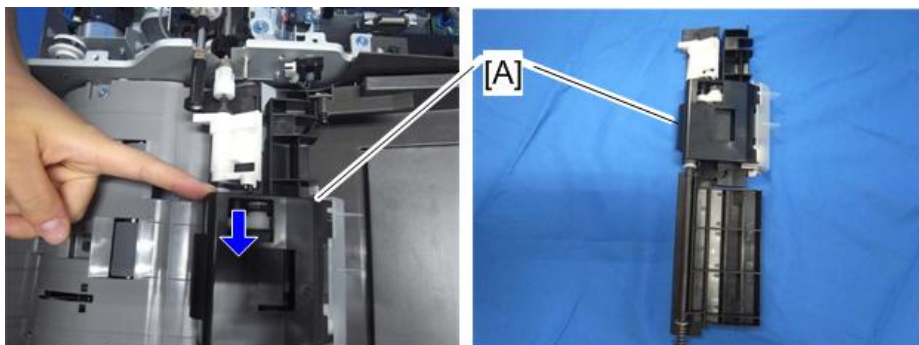
1. Open the feed cover.

2. Remove the snap-fit [A].



d1352054

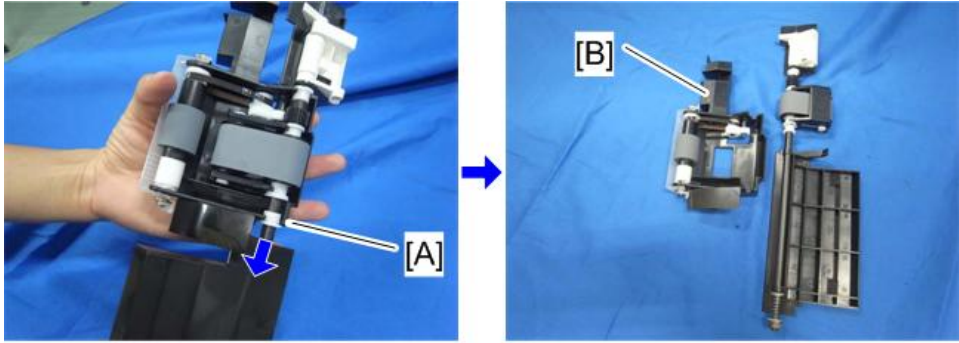
3. Original feed unit [A] (Pull the original feed unit, remove the back side of the shaft. Then, remove the bushing in the foreground.)



d1352055

Pick-up Roller / Transport Belt

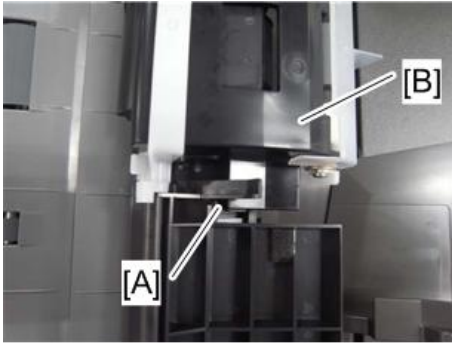
1. Original feed unit (☛ page 566)
2. Slide the resin bushing [A], and then remove the pick-up roller unit [B].



d1352058

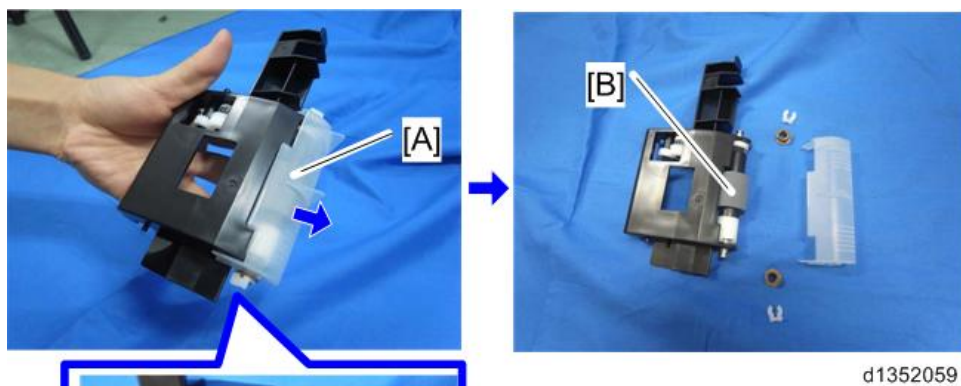
Note

- At re-assembly, make sure that the tab on the front guide plate [A] is above the pick-up roller [B].



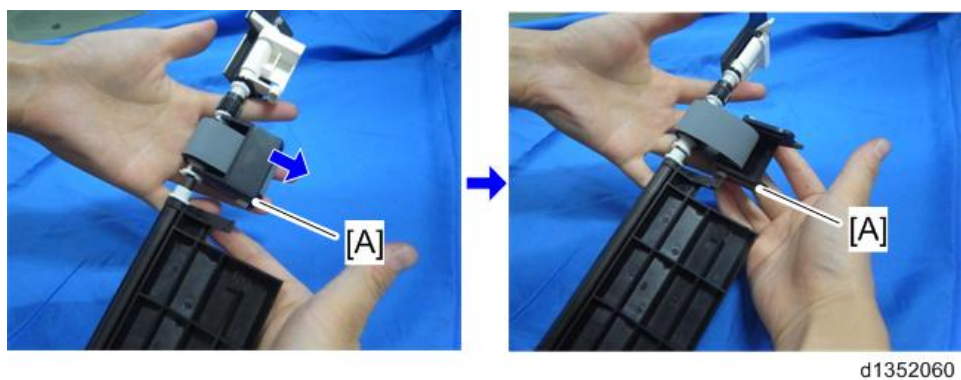
d1352237

3. Pick-up roller cover [A] and pick-up roller [B] (snap-fit x 2, bushing x 2, one-way clutch x 1)

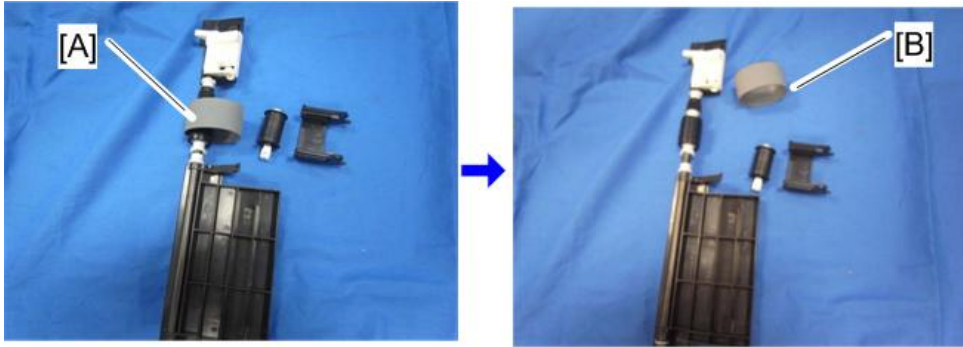


4

4. Lift the left and right sides of the feed belt holder [A], then remove it.



5. Remove the feed belt [B] from the feed belt holder [A].

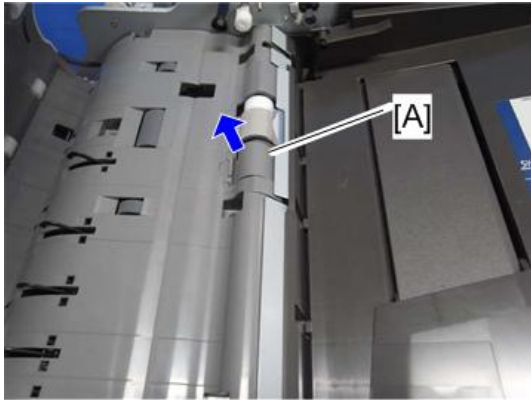


d1352061

4

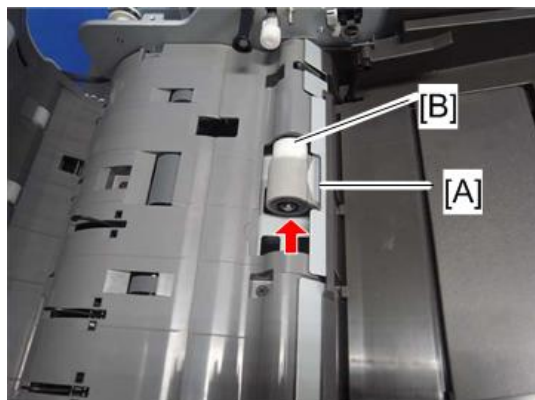
ADF Separation Roller

1. Open the feed cover.
2. Original feed unit (☛ page 566)
3. ADF separation roller cover [A].



d1352056

4. ADF separation roller [A] and torque limiter clutch [B] (snap-fit x 1)

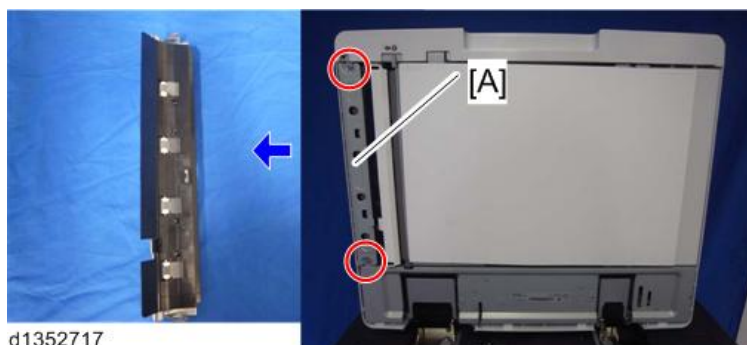


d1352057

4

Original Registration Sensor

1. Entrance lower guide [A] (🔩 x 2).



d1352717

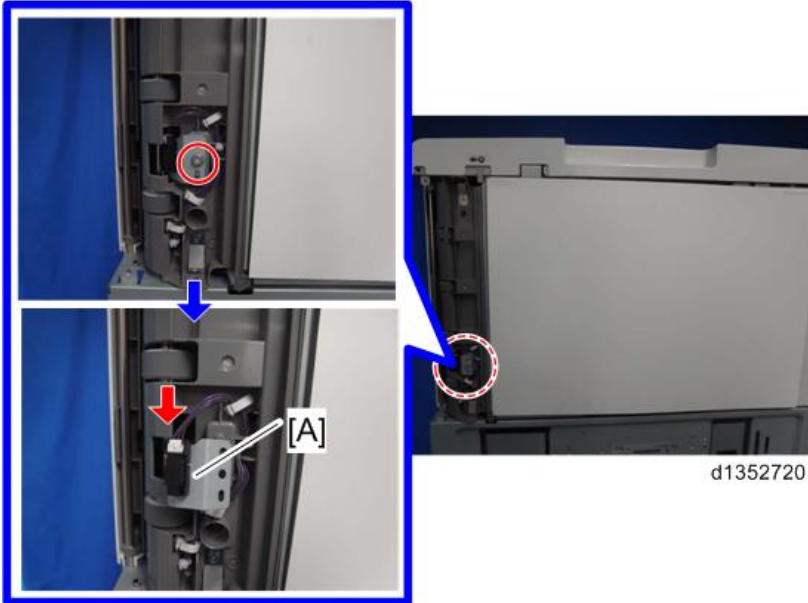
2. Scanning guide plate [A] (hook x 1).



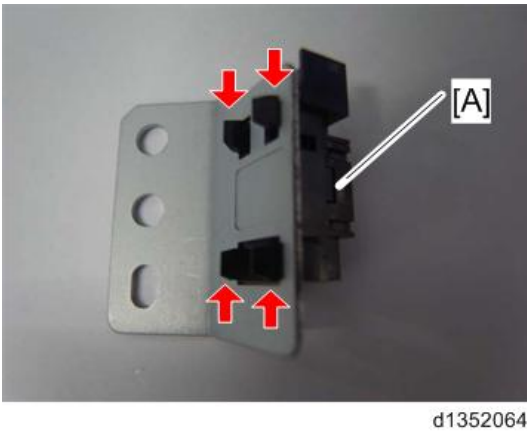
d1352718

3. Original registration sensor [A] along with the bracket (🔩 x 1, 📐 x 1).

4

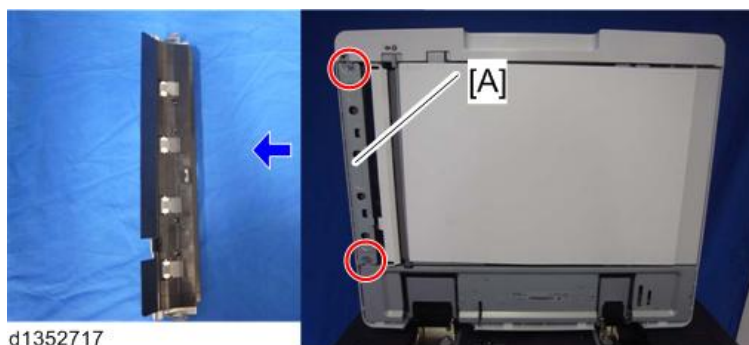


4. Original Registration Sensor [A] (hook x 4).

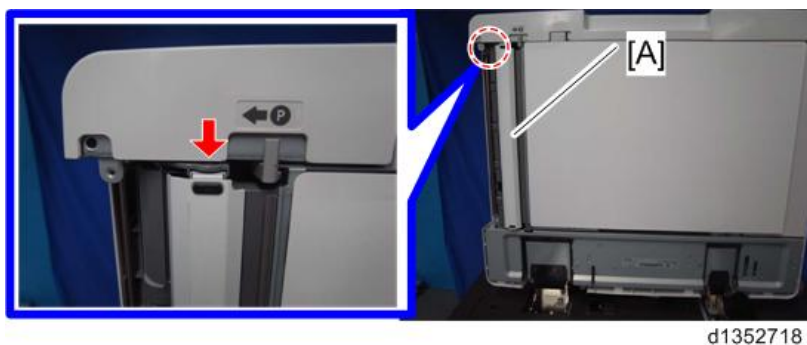


Original Exit Sensor

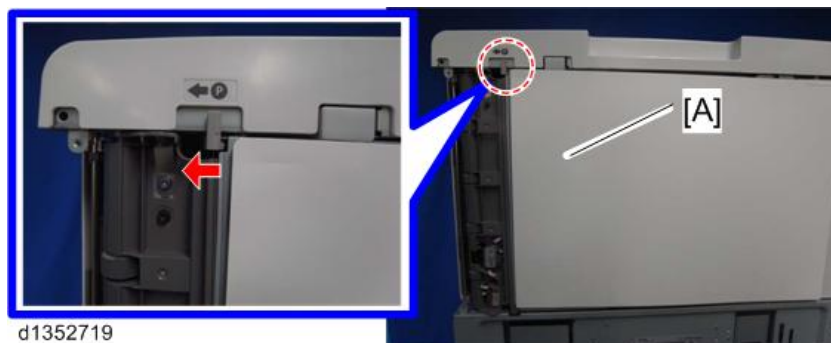
1. Entrance lower guide [A] (hook x 2).



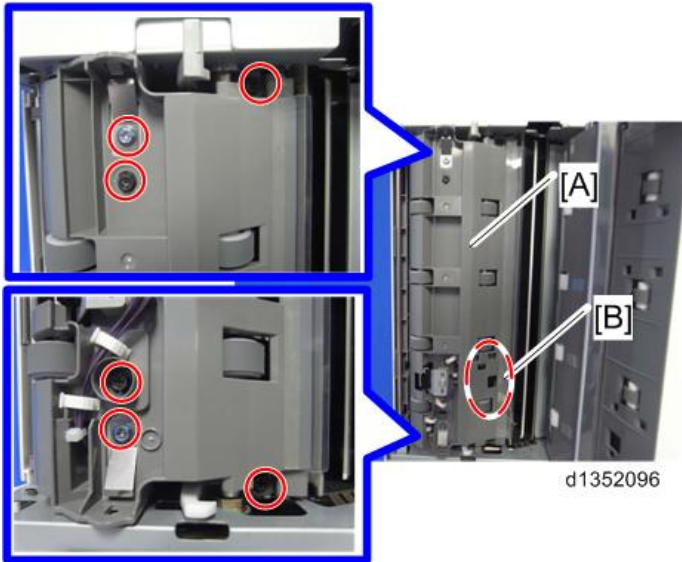
2. Scanning guide plate [A] (hook x 1).



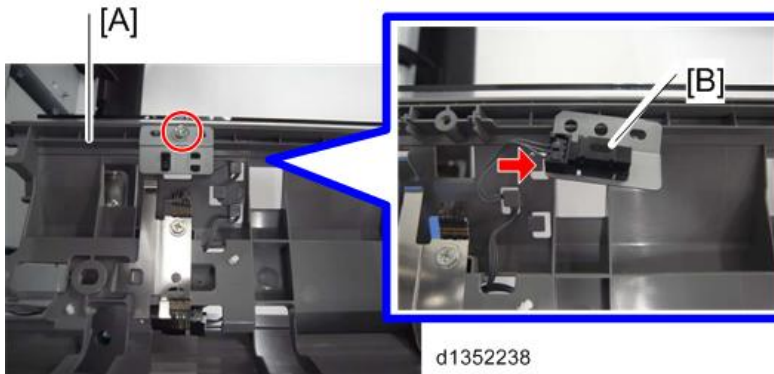
3. Open the white cover [A].



4. Remove the original exit sensor [B], which is mounted on the upper guide [A] (⚙️ x 6).

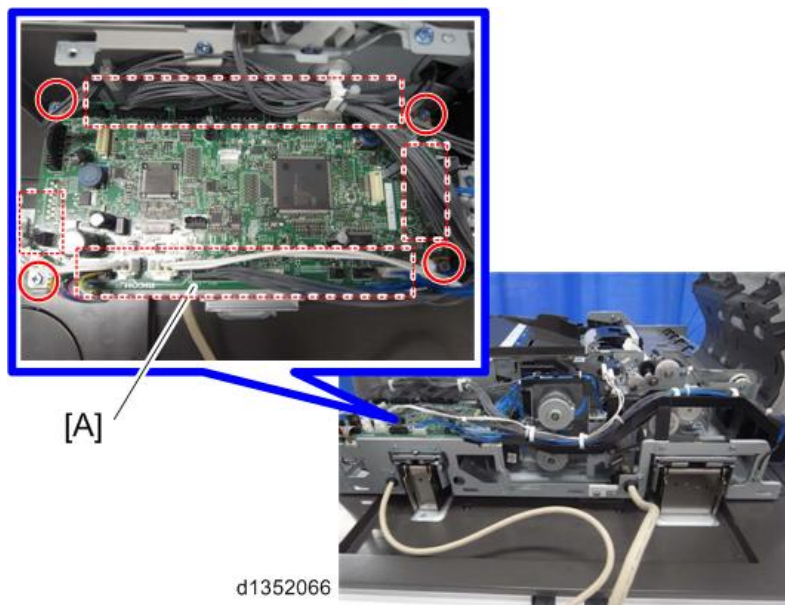


5. Remove the original exit sensor [B] from the upper guide [A] (🔧 x 1, 🛠️ x 1).



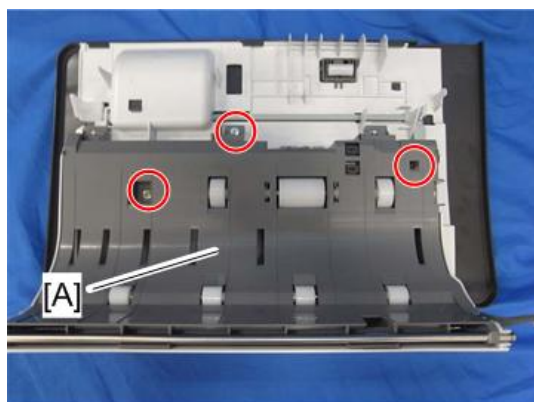
ADF Control Board

1. ADF rear cover (🖱️ "ADF Rear Cover " in page 563 "ADF Cover")
2. ADF control board [A] (🔧 x 4, all 🛠️s)

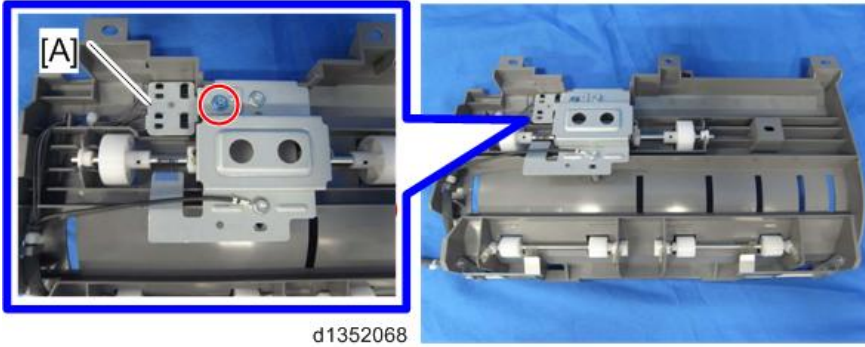


Separation Sensor / Skew Correction Sensor

1. Feed upper guide [A] in the feed cover (🔧 x 3)

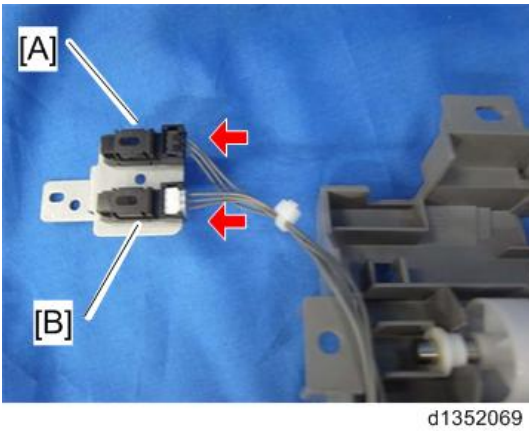


2. Remove the sensors along with the bracket [A] (🔧 x 1)



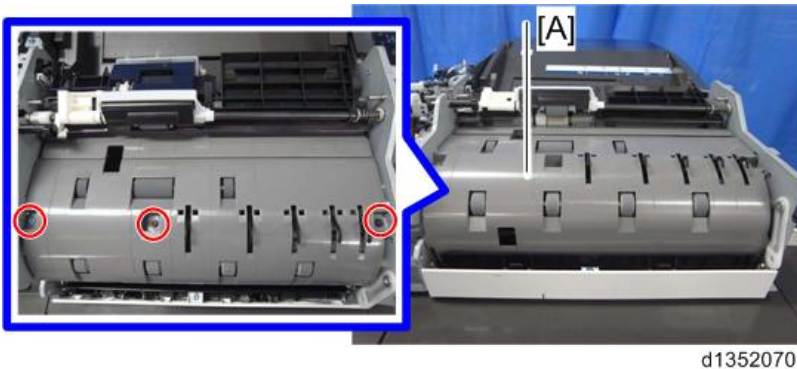
3. Separation Sensor [A] and Skew Correction Sensor [B] (🔌 x 1 each)

4

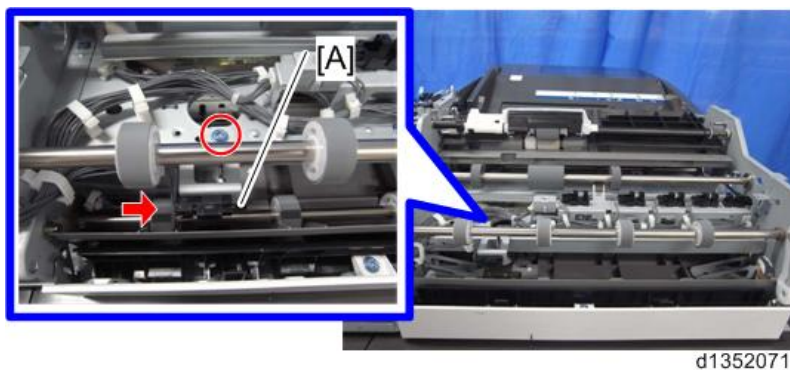


Original Width Sensor / Interval Sensor

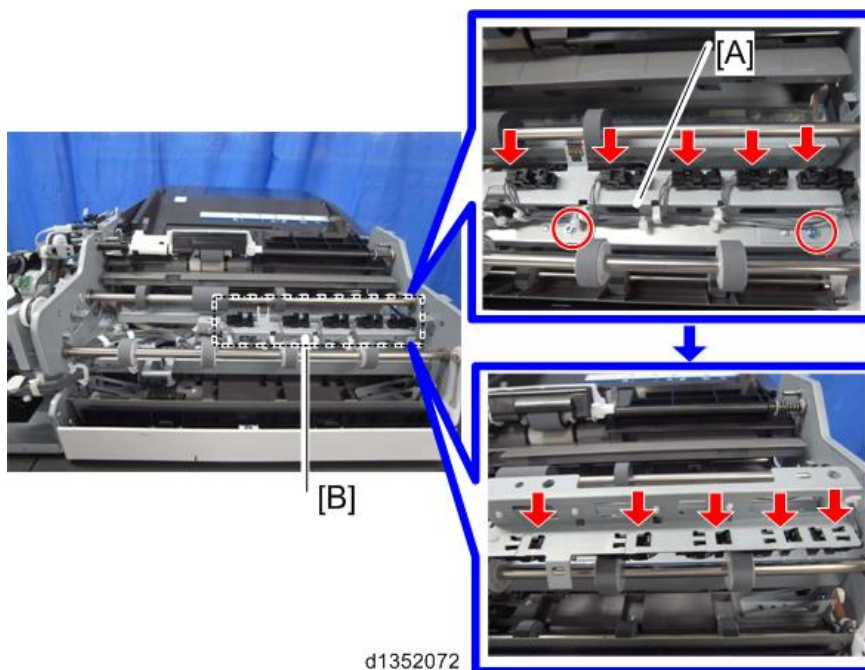
1. Feed cover (🔑 "Feed Cover" in page 563 "ADF Cover")
2. Guide plate [A] (🔧 x 3)



3. Interval sensor [A] (🔧 x 1, 🔌 x 1)

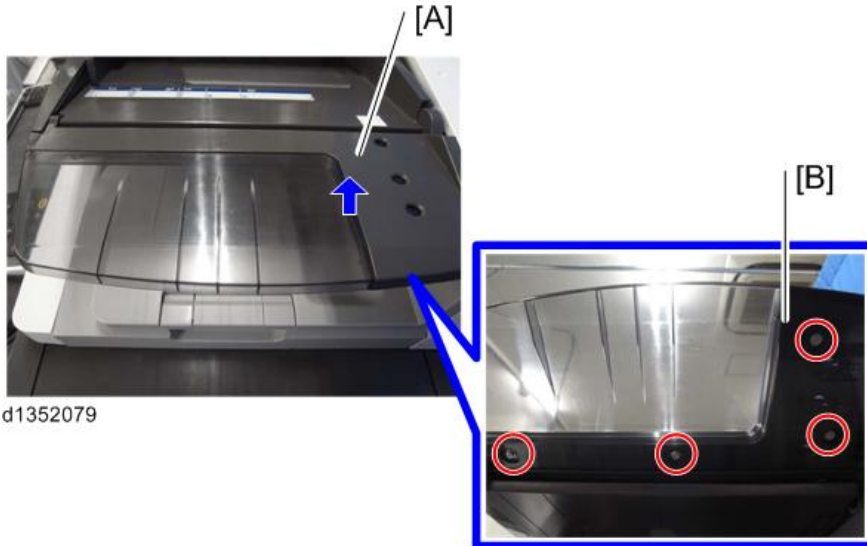


4. Remove the original width sensor guide plate [A] (🔧 x 2), then remove the original width sensors (x 5) [B] (🔧 x 1 each).

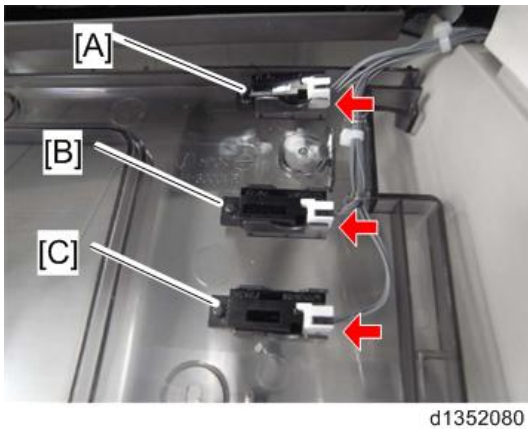


B5 Width Sensor / A4 Width Sensor / LG Width Sensor

1. Raise the document tray [A], then remove the lower cover [B] (🔧 x 4).

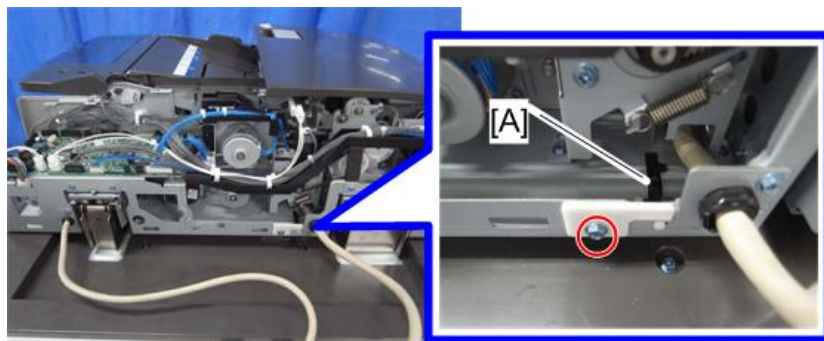


2. B5 Width Sensor [A] (🔧 x 1)
3. A4 Width Sensor [B] (🔧 x 1)
4. LG Width Sensor [C] (🔧 x 1)



APS Feeler

1. ADF rear cover (🔧 "ADF Rear Cover" in page 563 "ADF Cover")
2. APS Feeler [A] (🔧 x 1)

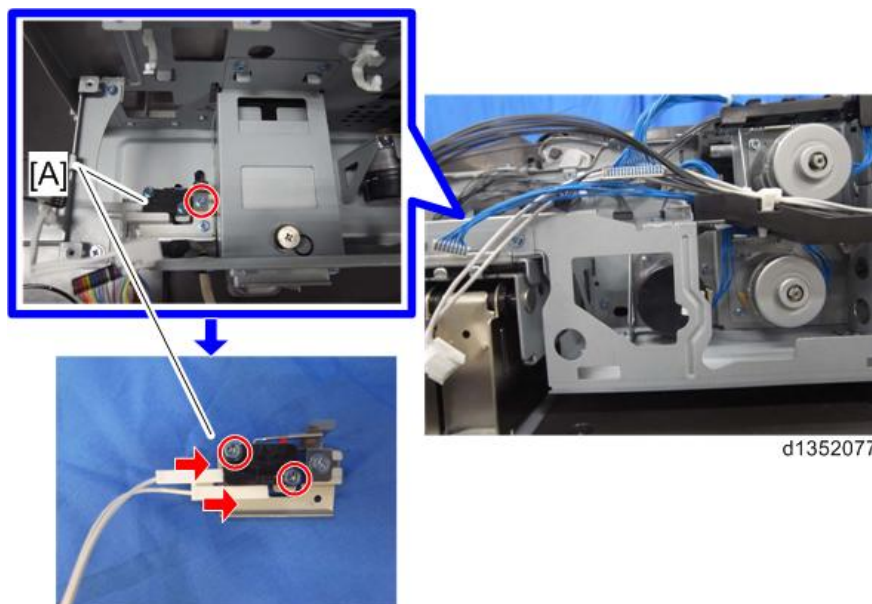


d1352095

ADF Lift-Up Interlock SW / Lift-Up Sensor

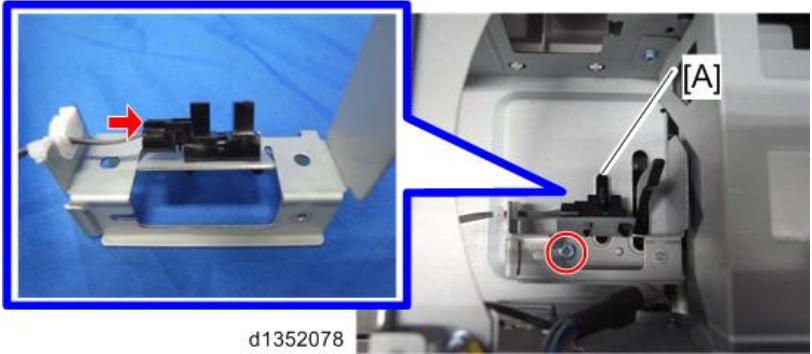
4

1. ADF Control Board (🔌 page 574)
2. ADF lift-up interlock SW [A] along with the bracket (🔩 x 3, 📏 x 2)



d1352077

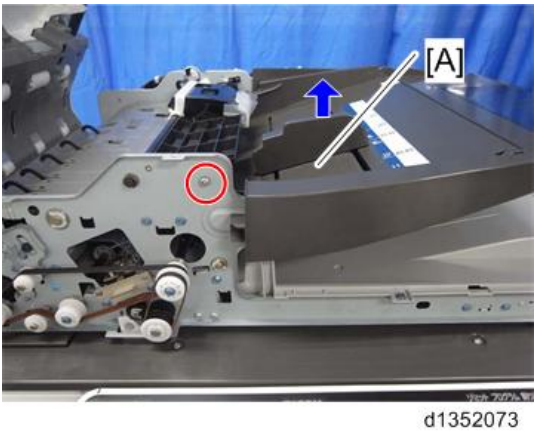
3. Lift-Up Sensor [A] along with the bracket (🔩 x 1, 📏 x 1)



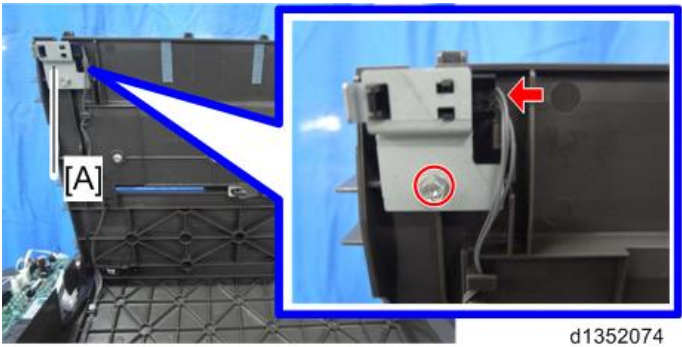
4

Original Set Sensor

1. ADF front cover (☛ "ADF Front Cover" in page 563 "ADF Cover")
2. Remove the screw and raise the original tray [A].

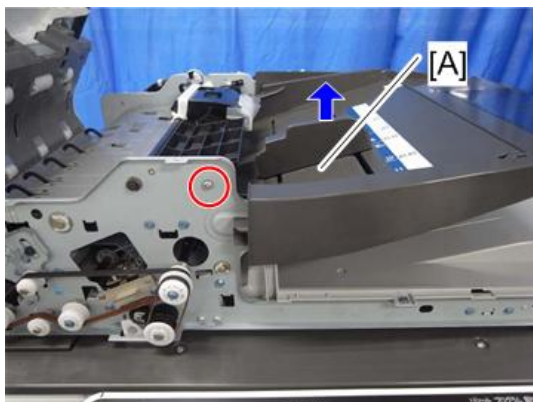


3. Original set sensor [A] (🔧 x 1, 📏 x 1)



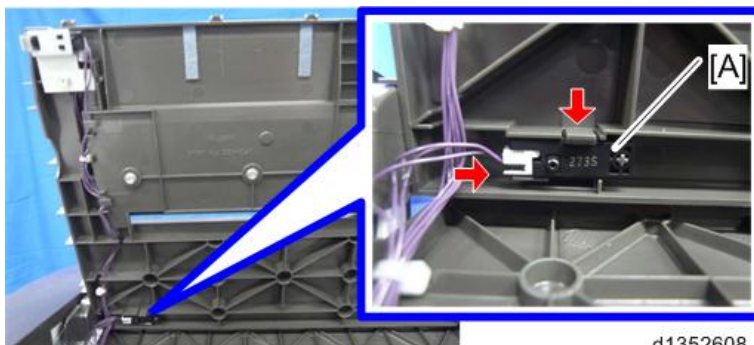
A4 LEF/LT LEF Sensor

1. ADF front cover (☛ "ADF Front Cover" in page 563 "ADF Cover")
2. Remove the screw and raise the original tray [A].



d1352073

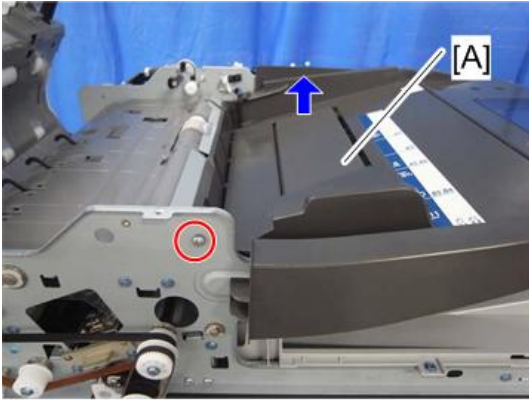
3. A4 LEF/LT LEF Sensor [A] (hook x 1, ☛ x 1)



d1352608

Bottom Plate HP Sensor

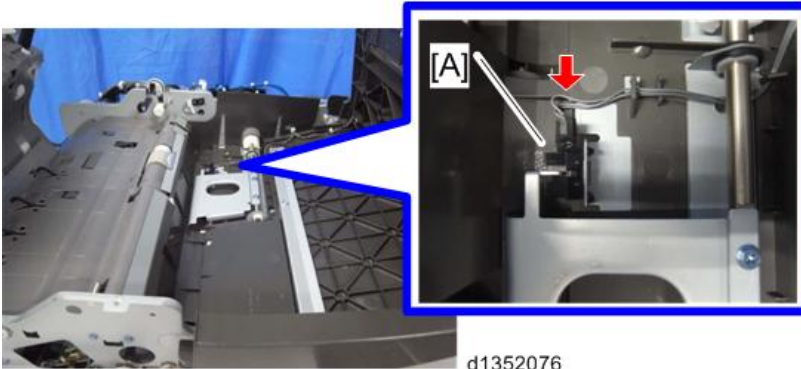
1. Original feed unit (☛ page 566)
2. ADF front cover (☛ "ADF Front Cover" in page 563 "ADF Cover")
3. Remove the screw and raise the original tray [A].



d1352075

4

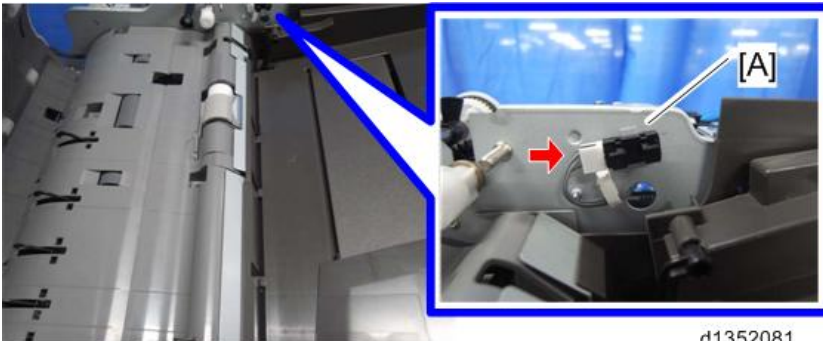
4. Bottom plate HP sensor [A] (🔧 x 1)



d1352076

Bottom Plate Position Sensor

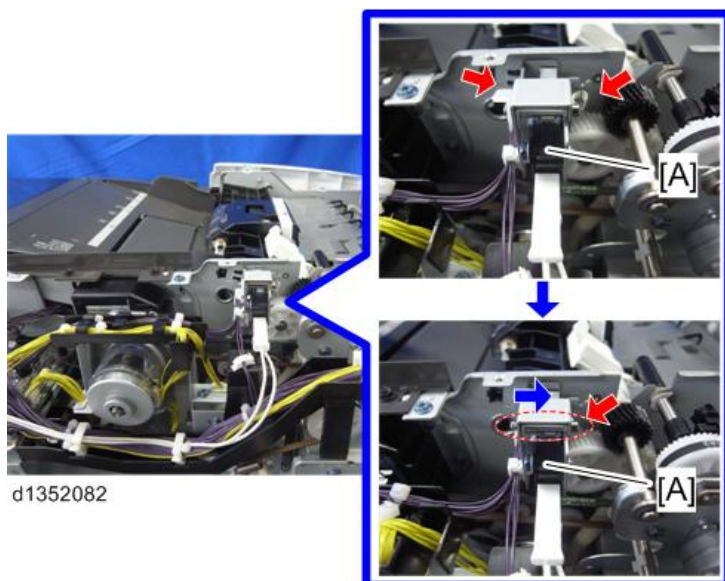
1. ADF rear cover (🔧 "ADF Rear Cover" in page 563 "ADF Cover")
2. Original feed unit (🔧 page 566)
3. Bottom plate position sensor [A] (🔧 x 1)



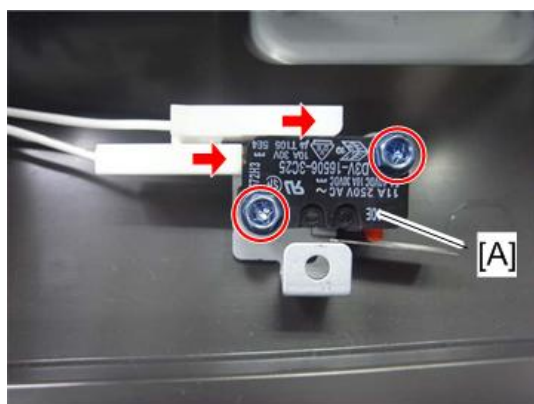
d1352081

ADF Feed Cover Interlock SW / Pick-up Roller HP Sensor

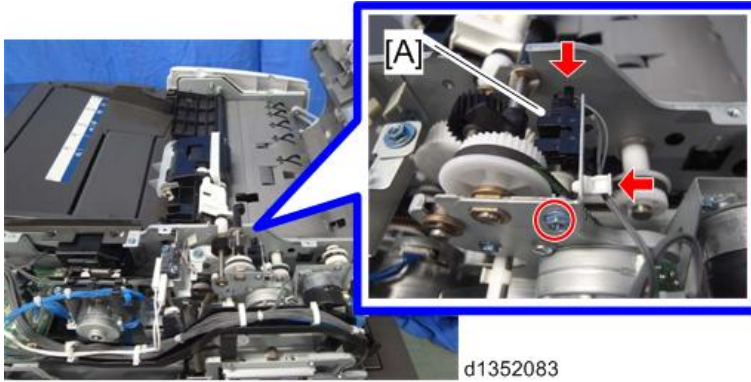
1. ADF rear cover (☛ "ADF Rear Cover" in page 563 "ADF Cover")
2. Remove the ADF feed cover interlock SW [A] from the retaining bracket (snap-fit x 1, spring x 1, pin x 1).



3. ADF feed cover interlock SW [A] (☛ x 2, ☛ x 2)



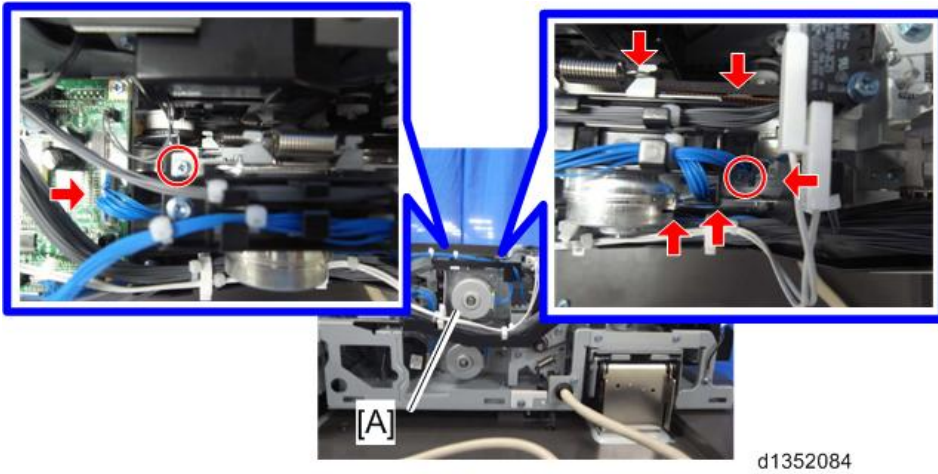
4. Pick-up roller HP sensor [A] along with the bracket (☛ x 1, ☛ x 1, ☛ x 1)



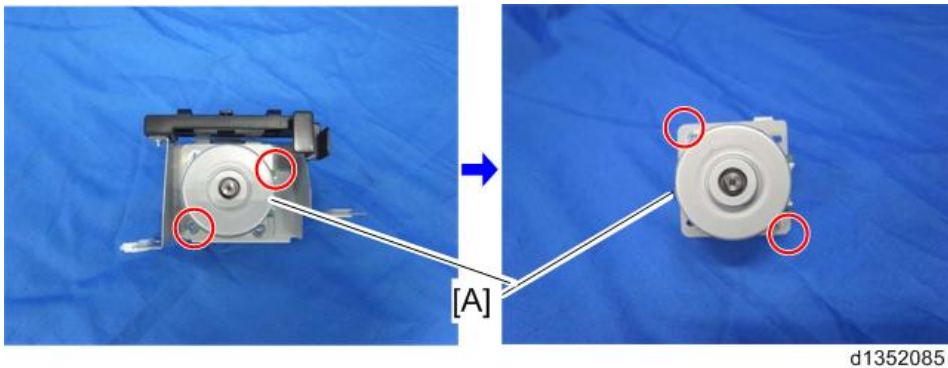
4

ADF Entrance Motor

1. ADF rear cover (☛ "ADF Rear Cover" in page 563 "ADF Cover")
2. ADF entrance motor [A] along with the frame (🔩 x 2, 🛠 x 2, 🛠 x 2, spring x 1, timing belt x 1)

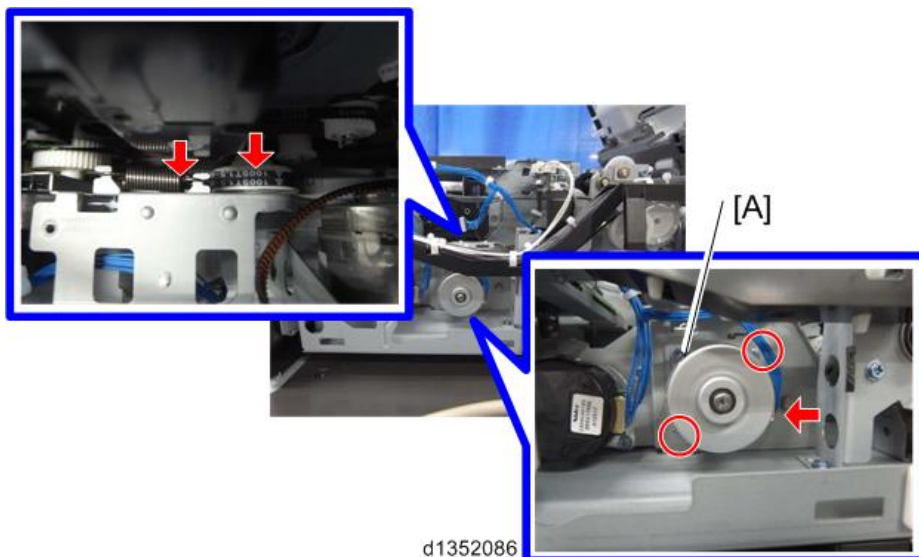


3. ADF entrance motor [A] (🔩 x 4)

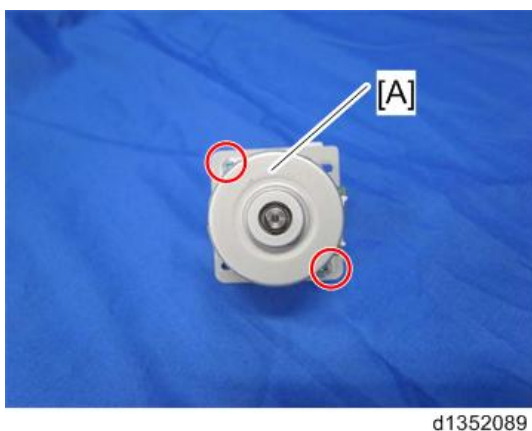


ADF Scanning Motor

1. ADF entrance motor along with the frame (☛ page 584 "ADF Entrance Motor")
2. ADF read motor [A] along with the bracket (🔩 x 2, 📏 x 1, spring x 1, timing belt x 1)

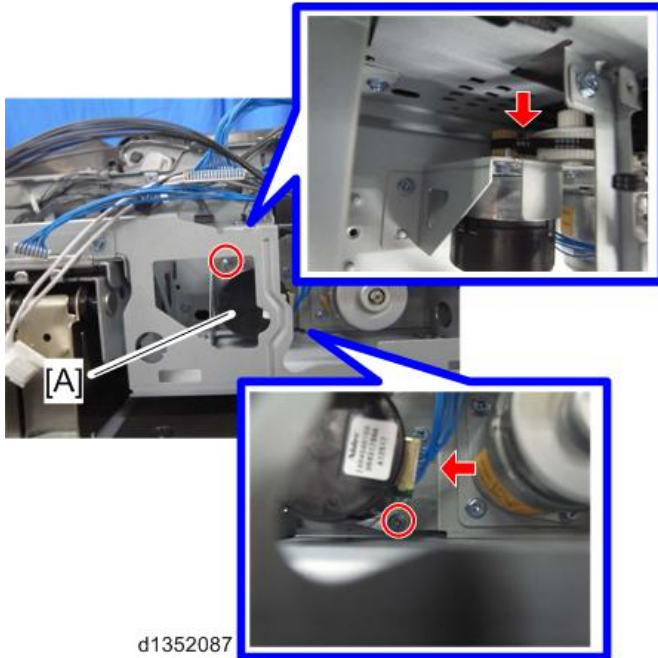


3. ADF scanning motor [A] (🔩 x 2)

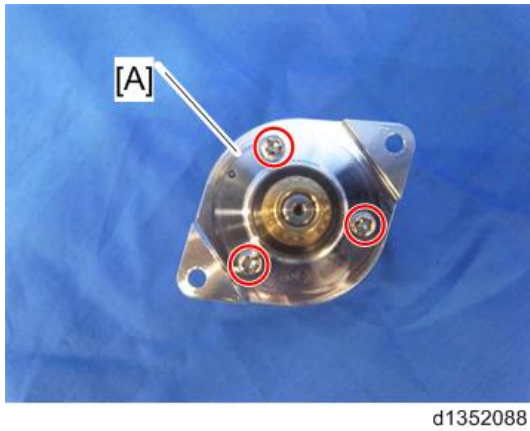


ADF Exit Motor

1. ADF Control Board (☛ page 574)
2. ADF exit motor [A] along with the bracket (🔩 x 2, 📏 x 1, spring x 1, timing belt x 1)

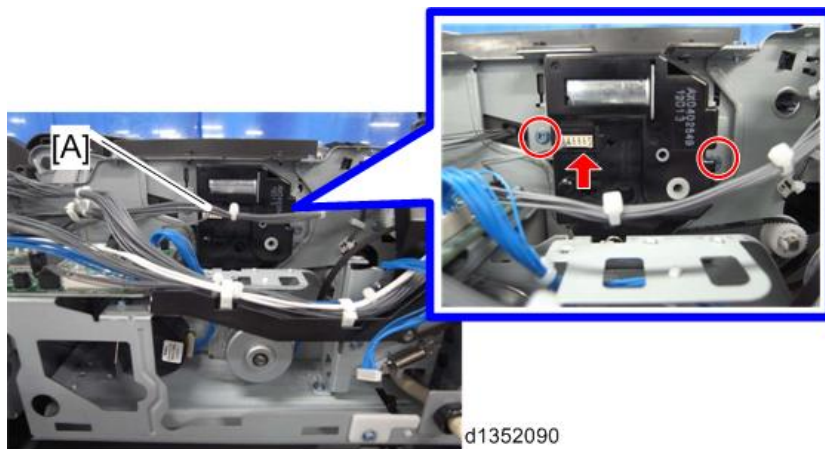


- 3. ADF exit motor [A] (🔩 x 3)



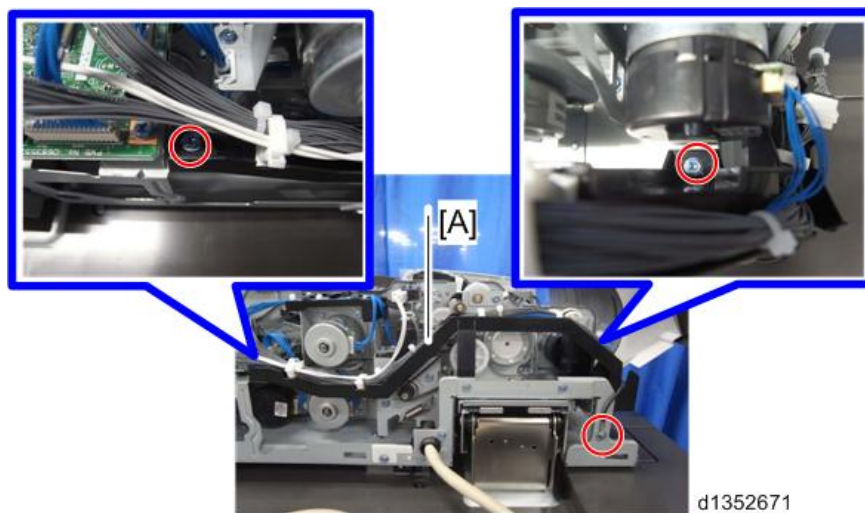
ADF Bottom Plate Lift Motor

- 1. ADF entrance motor along with the frame (🔩 page 584 "ADF Entrance Motor")
- 2. ADF bottom plate lift motor [A] (🔩 x 2, 📏 x 1)



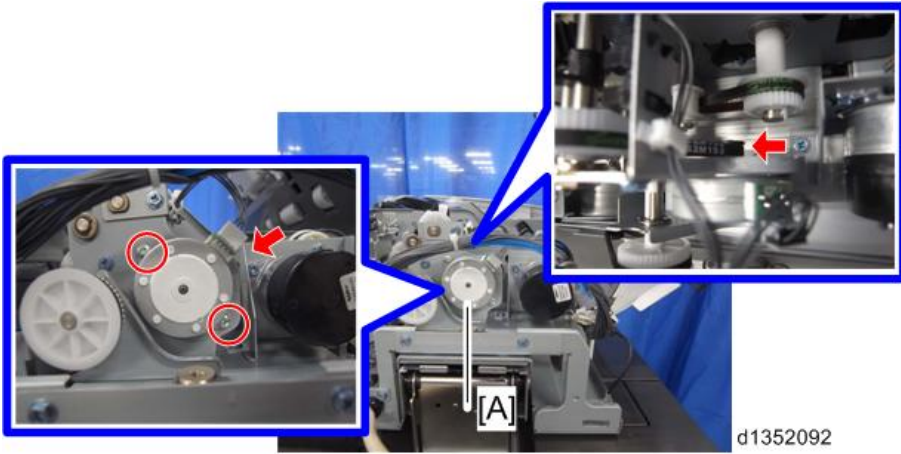
ADF Pick-up Roller Lift Motor / ADF Transport Motor

1. ADF rear cover (☛ "ADF Rear Cover" in page 563 "ADF Cover")
2. Frame (black) [A] (☛ x 3)

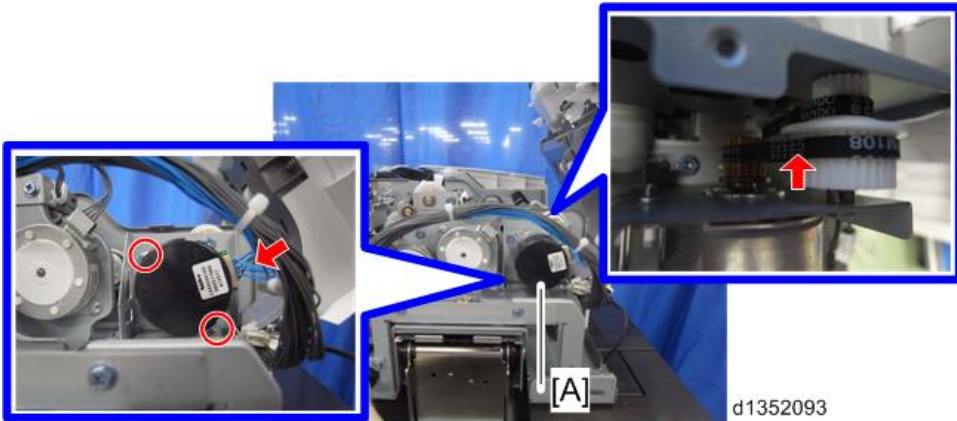


3. ADF pick-up roller lift motor [A] (☛ x 2, ☛ x 1, timing belt x 1)

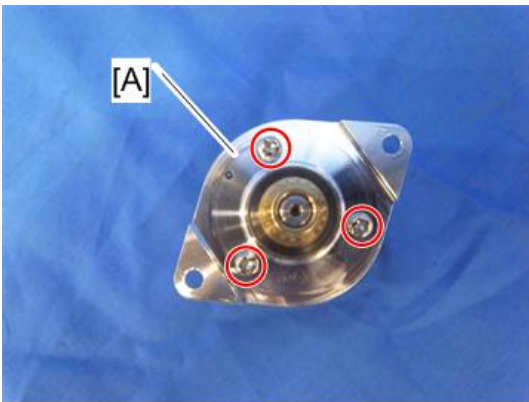
4



4. ADF transport motor [A] along with the bracket (⚙️ x 2, 📏 x 1, timing belt x 1)

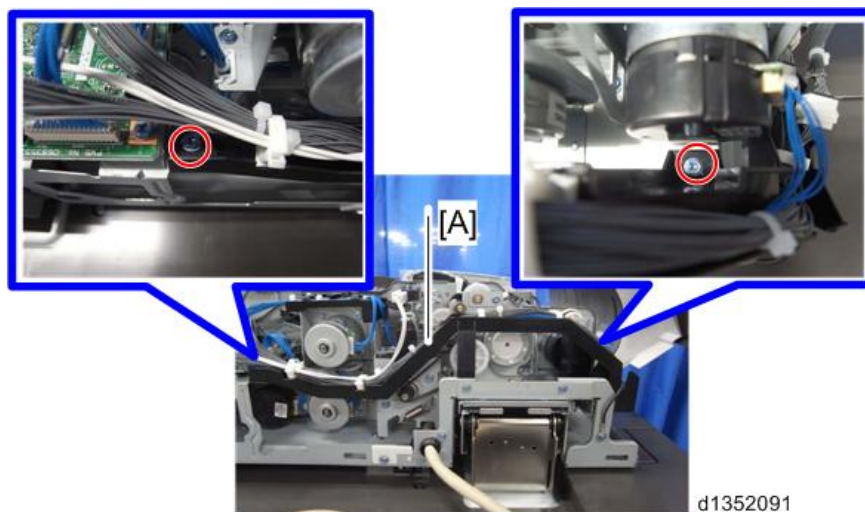


5. ADF transport motor [A] (⚙️ x 3)

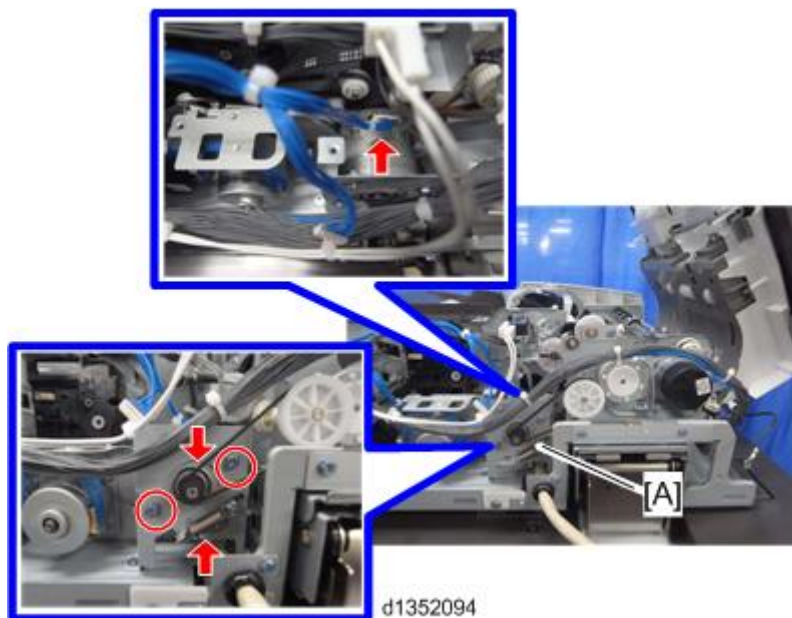


ADF Feed Motor

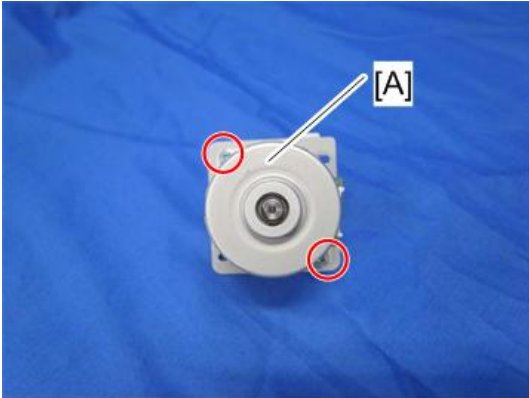
1. ADF rear cover (☛ "ADF Rear Cover" in page 563 "ADF Cover")
2. Remove the fixing screws of the frame (black) [A] (🔩 x 2).



3. ADF entrance motor along with the frame (☛ page 584 "ADF Entrance Motor")
4. ADF feed motor [A] along with the bracket (🔩 x 2, 📏 x 1, spring x 1, timing belt x 1)



5. ADF feed motor [A] (🔩 x 2)



d1352089

4

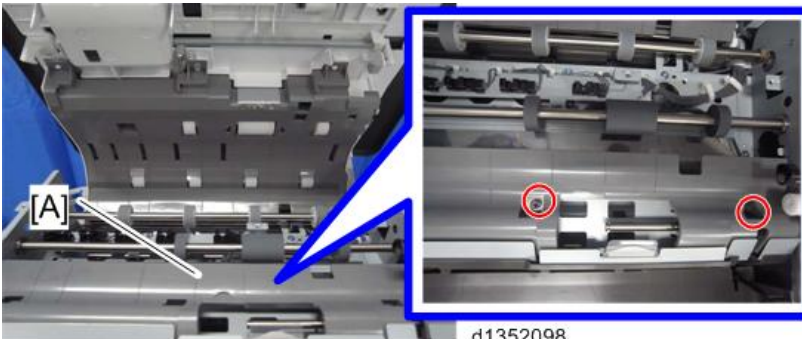
CIS Unit

1. Original Feed Unit (☛ page 566)
2. ADF Separation Roller (☛ page 570)
3. ADF front cover (☛ "ADF Front Cover" in page 563 "ADF Cover")
4. Guide plate (large) [A] (🔩 x 3)



d1352097

5. Guide plate (small) [A] (🔩 x 2)

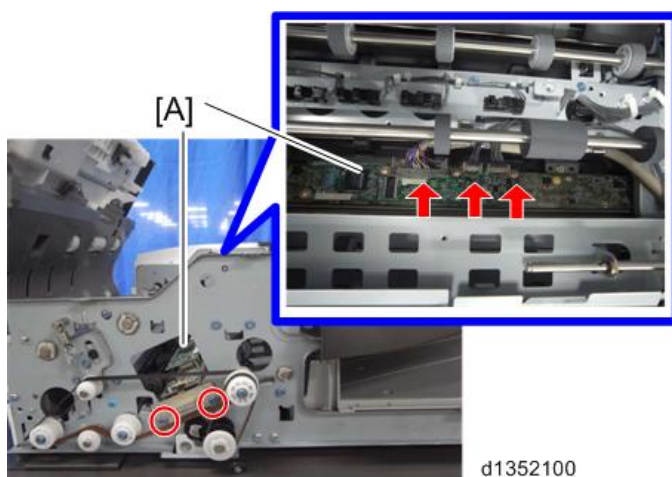


d1352098

6. Guide plate [A] (🔧 x 1)

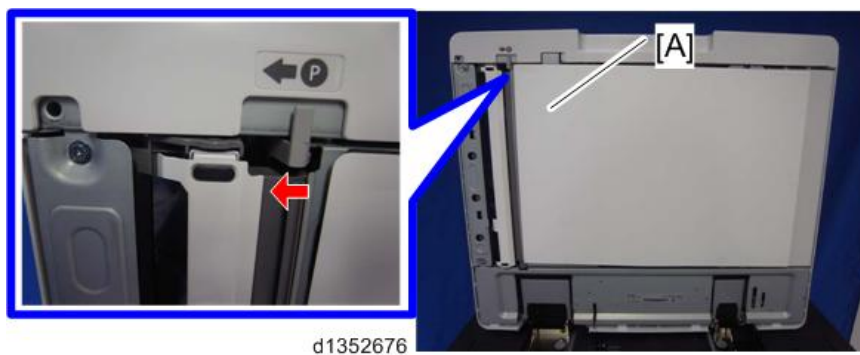


7. CIS unit [A] (🔧 x 2, 📡 x 3)



↓ **Note**

- To prevent scratches on the surface of the CIS glass, removal of the CIS unit must be done with the white cover [A] open.



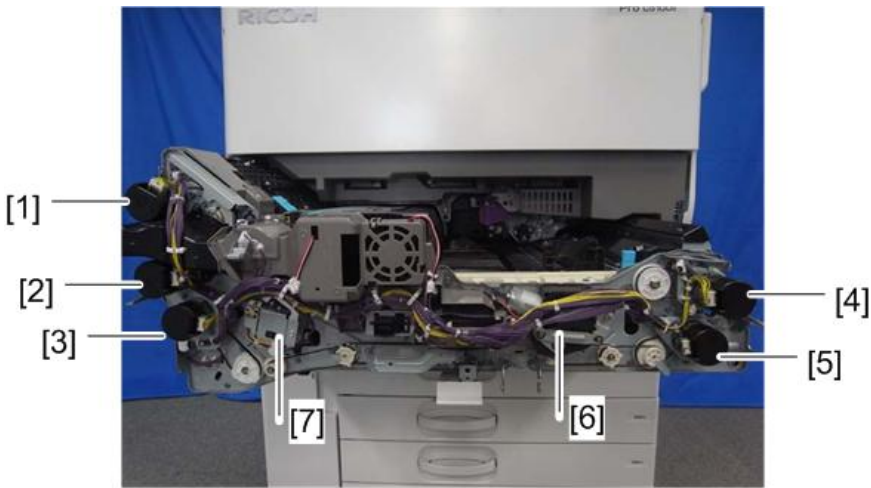
Drawer Unit

Layout (Motors)

Drawer Unit (Front)

To replace the motors on the front of the drawer unit, first remove the drawer unit cover. (➡ page 594 "Drawer Unit Cover")

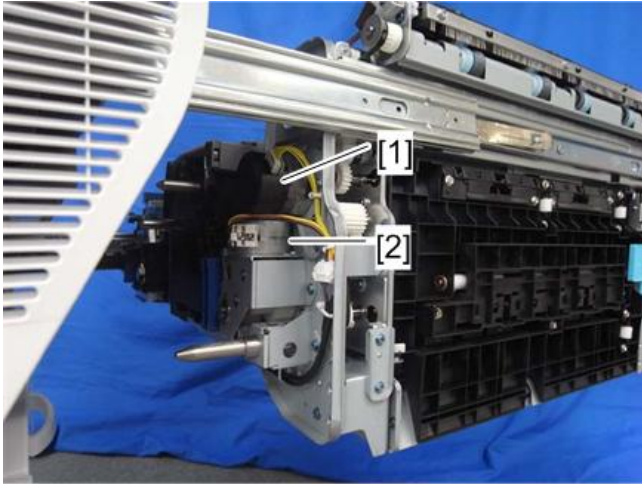
4



d1352742

No.	Part Name	Replacement procedure	Remarks
1	Exit Motor	➡ page 612	
2	Duplex Inverter Entrance Motor	➡ page 612	
3	Duplex Transport Motor	➡ page 614	
4	Registration Motor	➡ page 611	
5	Duplex Exit Motor	➡ page 615	
6	Cleaning Web Motor	➡ page 616	D137/ D138 only

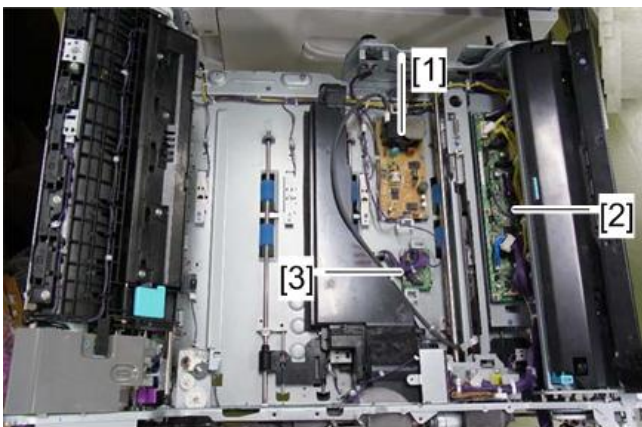
Drawer Unit (Rear)






d1352743

No.	Part Name	Replacement procedure	Remarks
1	Exit Inverter Motor	👉 page 613	
2	Cleaning Web Contact Motor	👉 page 617	D137/ D138 only

Layout (Boards)



d1352769

No.	Part Name	Replacement procedure	Remarks
1	Paper Separation AC Power Pack	 page 600	
2	DUB	 page 600	
3	Fusing Web Control Board-Drawer	 page 601	D137/ D138 only

Drawer Unit Cover

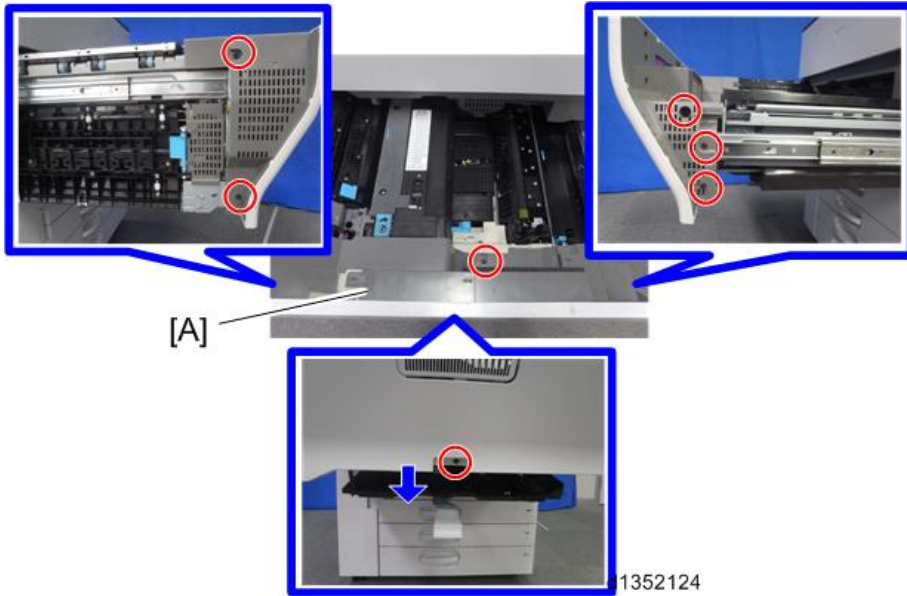
4

1. Open the drawer unit [A].



d1352123

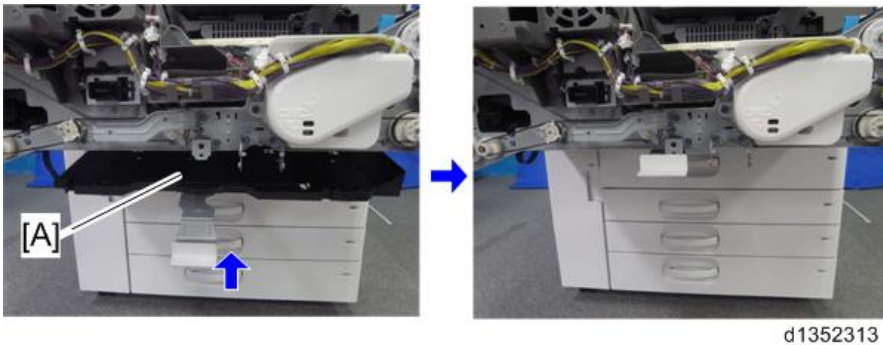
2. Drawer unit cover [A] ( x 7*)



* D137/D138 use TCRU/ORU screws

Note

- After removing the drawer unit cover, when the drawer unit is returned to the machine, you can close the guide plate [A] of the paper exit and duplex unit.



If the Drawer is Locked

When the drawer is locked, deal with the problem depending on the symptom. (☛ page 1470 "Other 001: Drawer Unit")

This section shows the procedure to unlock when there is a failure of the drawer unit lock sensor or drawer unit lock motor.

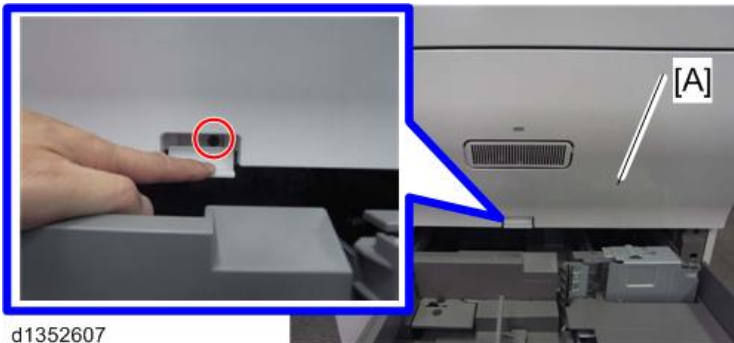
1. Left middle cover of the outer cover (☛ page 532)
2. Right middle front cover of the outer cover (☛ D137/D138: page 522. D135/D136: page 524)

3. Remove the fixing screws of the left and right sides of the drawer unit cover [A] (⚙ x 5).



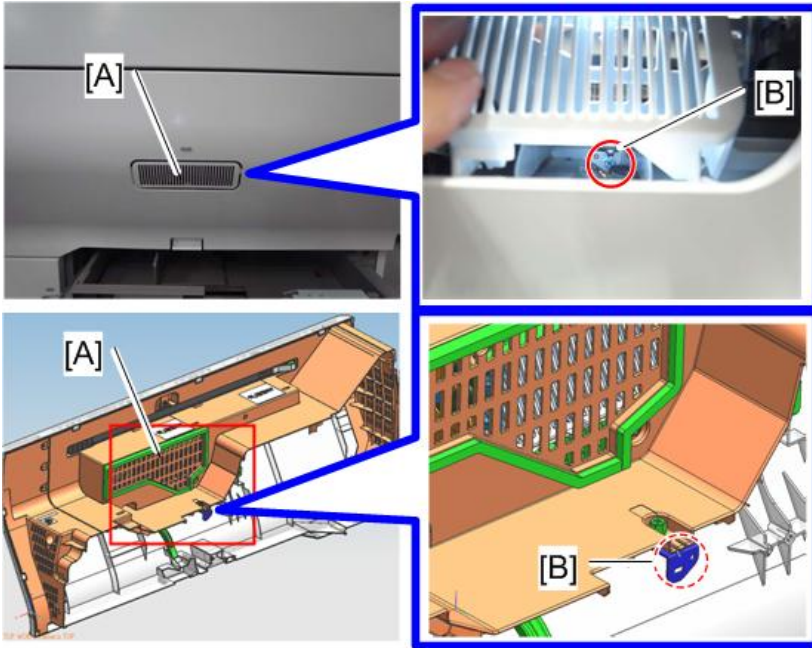
d1352606

4. Open the paper feed tray, then remove the fixing screw on the bottom of the drawer unit cover [A].



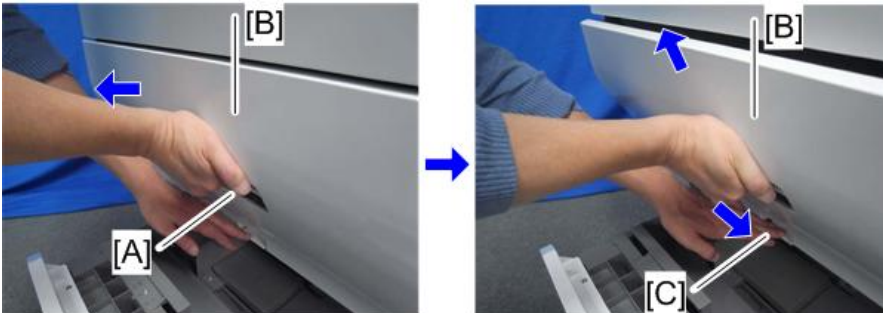
d1352607

5. Insert the driver from the flapper handle [A], and remove the bracket screw [B].



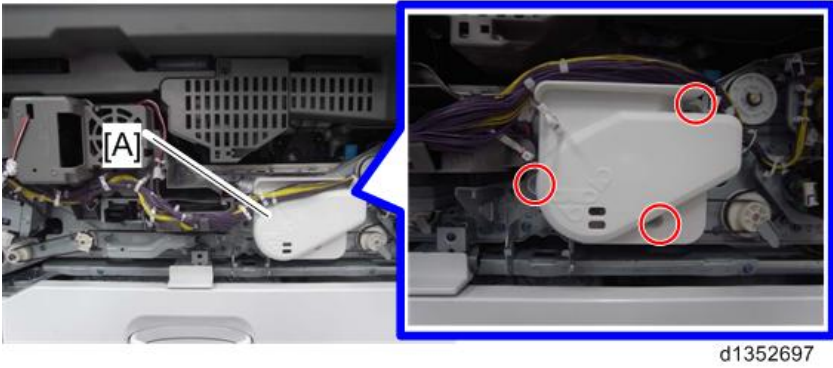
d1352681

6. Put a hand in the flapper handle [A] and pull the drawer unit cover [B] to the front. Then hold the guide plate [C] of the paper exit and duplex unit, and remove the drawer unit cover [A] in an upward direction.



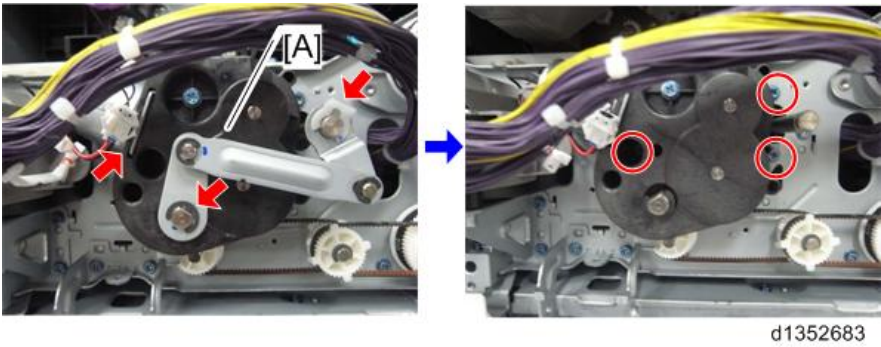
d1352682

7. Drawer unit lock motor cover [A] (⚙ x 3)

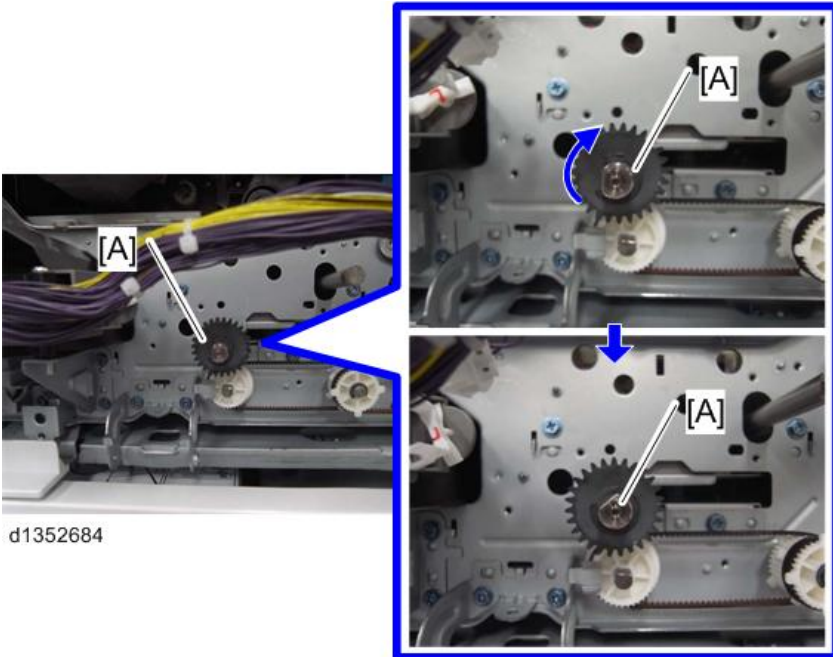


8. Drawer unit lock motor block [A] (Ⓢ x 1, snap-fit x 1, ⚙ x 3, ⚙ x 1)

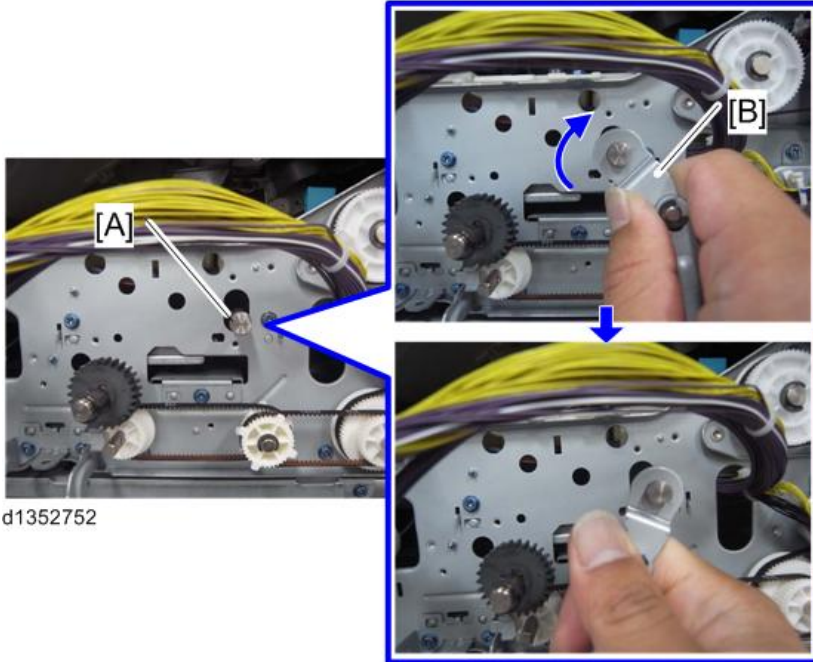
4



9. Turn the lock shaft [A] clockwise to release the lock.

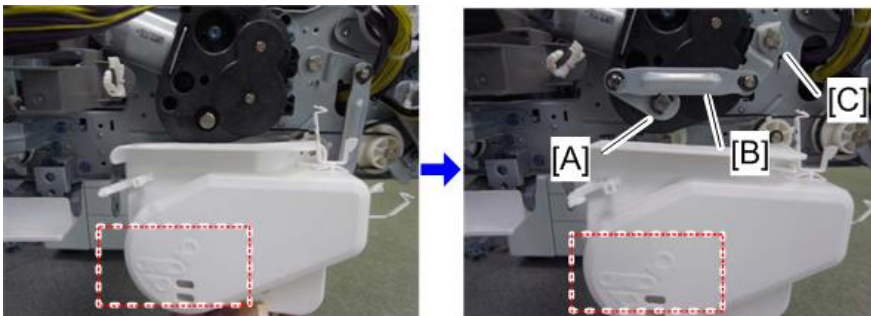


- Turn the paper transfer roller shaft [A] clockwise by using the link [B] to separate the paper transfer roller unit from the ITB. You can pull the drawer unit out.



Note

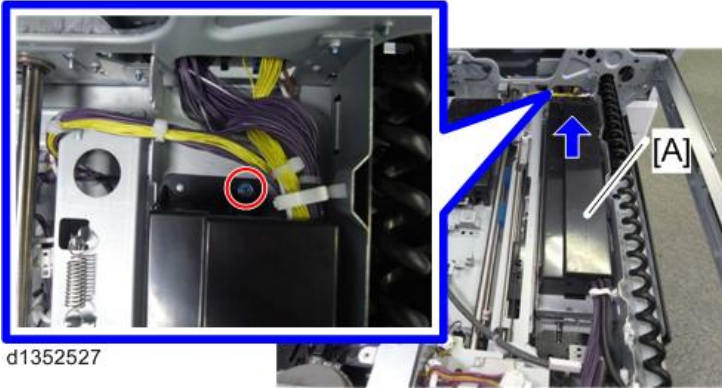
- When mounting the motor block, screw the motor in first. Then, assemble links [A], [B] and [C] as shown below. There is also a diagram embossed on the motor cover to help you to install the links correctly.
- Lock shaft (Cut surface to the upper left) [A]
- Link (Long hole to the right) [B]
- Paper transfer roller shaft (Cut surface to the lower side) [C]



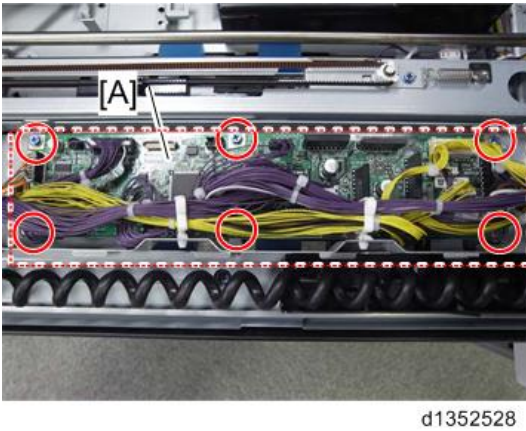
d1352529

DUB (Drawer Unit Board)

1. Drawer unit cover (🔑 page 594)
2. Registration unit (🔑 page 882)
3. Paper transfer roller unit (🔑 page 757)
4. DUB cover [A] (🔑 x 1)

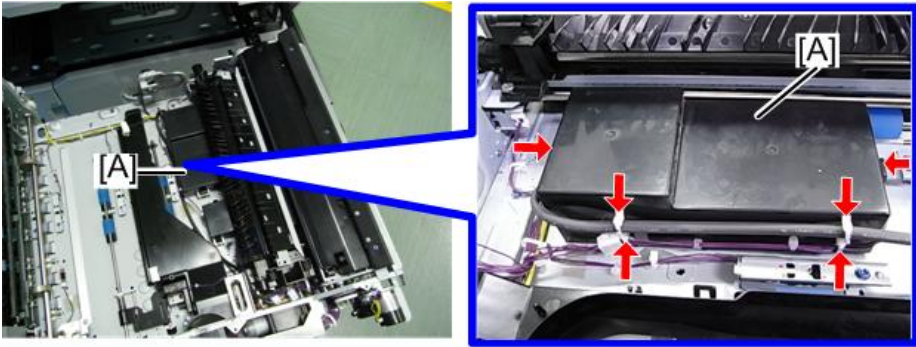


5. DUB [A] (🔑 x 6, all 📁s)



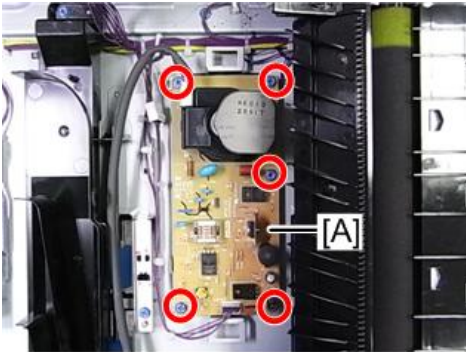
Paper Separation AC Power Pack

1. Paper transfer roller unit (🔑 page 757)
2. Cover [A] (🔑 x 4, hook x 2)



d1355076

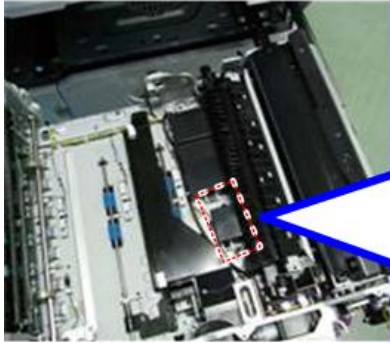
3. Paper separation AC power pack [A] (🔌 x 5, all 📁s)



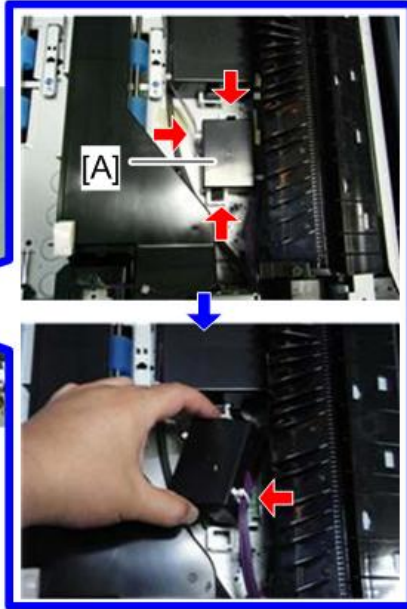
d1355095

Fusing Web Control Board-Drawer (D137/D138 only)

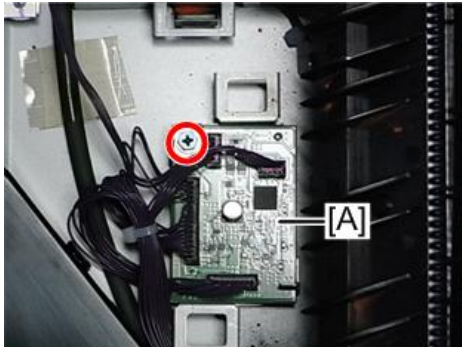
1. Paper transfer roller unit (📁 page 757)
2. Cover [A] (📁 x 2, hook x 2)



d1352768



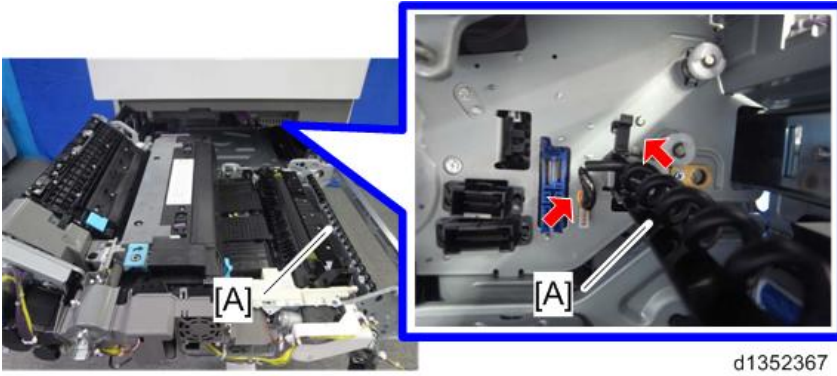
3. Fusing web control board-drawer [A] (🔩 x 1, all 📁 x 4)



d1355059

Curled Cord

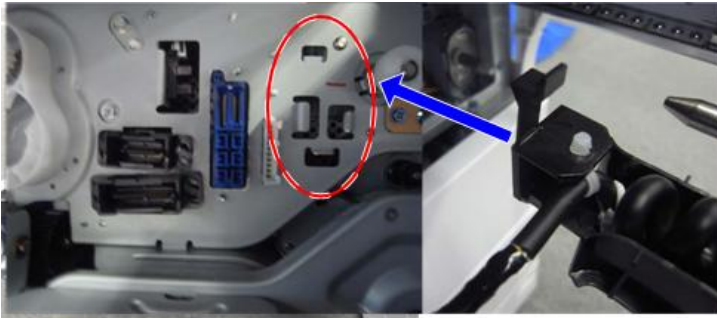
1. Drawer unit cover (📄 page 594)
2. Registration unit (📄 page 882)
3. Relay unit (📄 page 884)
4. Paper transfer roller unit (📄 page 757)
5. Remove the curled cord connector and fixing material [A] that is connected to the rear of the machine.



d1352367

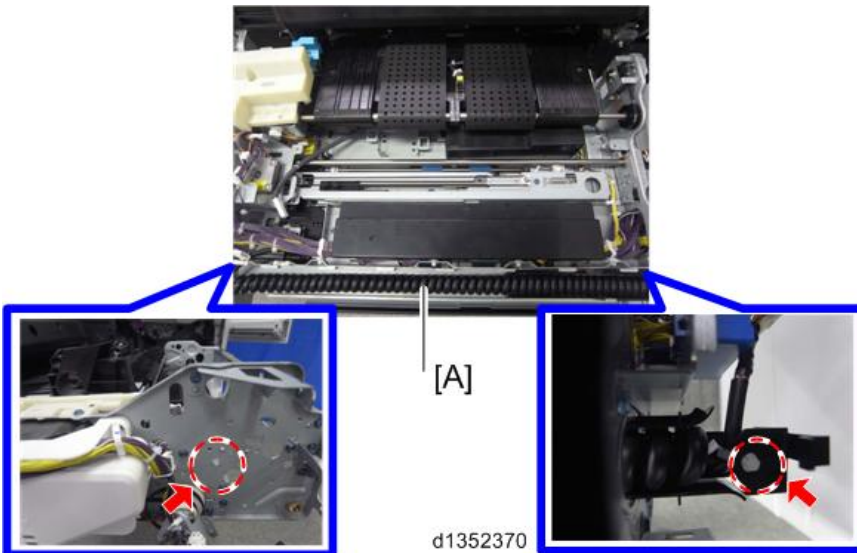
Note

- When mounting the curled cord, fit the fixing material in the hole on the rear of the machine.



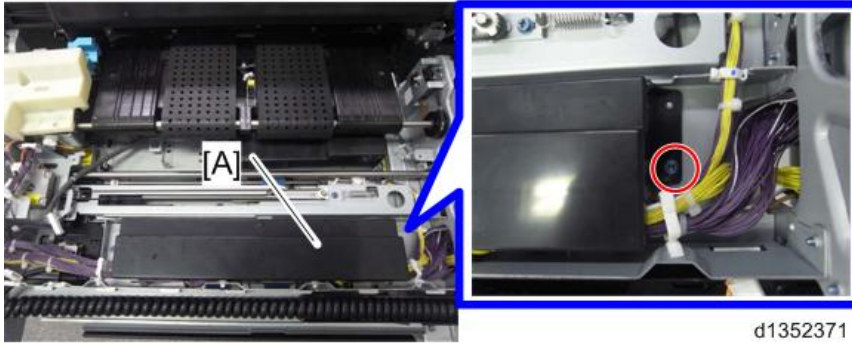
d1352368

6. Remove the left and right clamps fixing the curled cord [A].



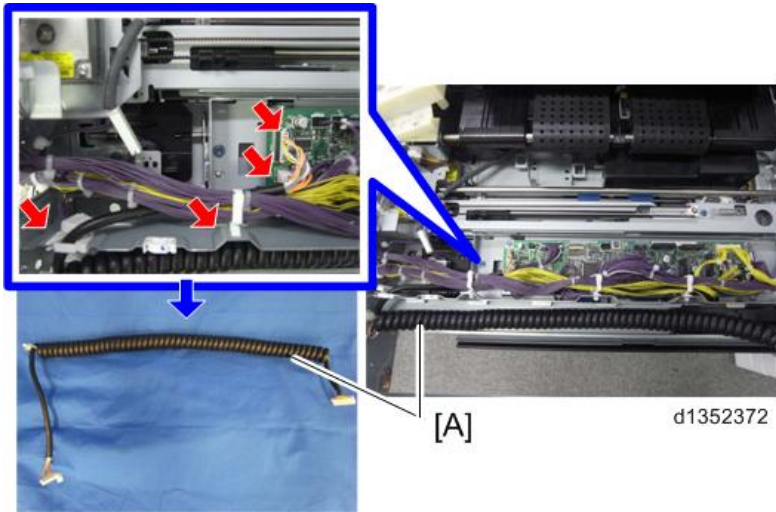
d1352370

7. DUB cover [A] (⚙ x 1)



8. Curled cord (🔌 x 2, 🖨️ x 2)

4



Drawer Unit Connector

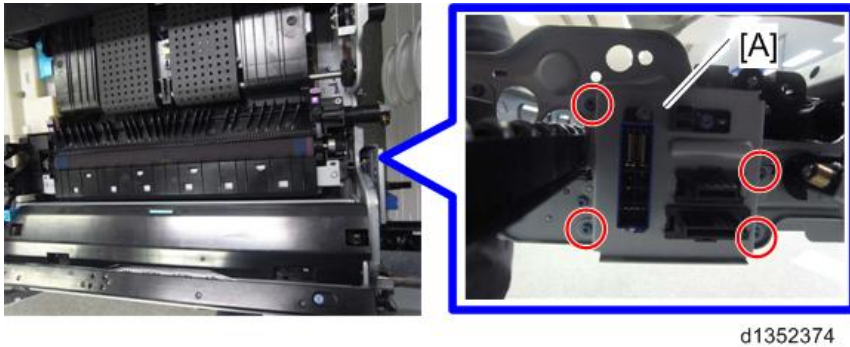
1. In order to facilitate the work, pull the drawer unit out half way, then press the release levers (one on the left side and one on the right side, shown by the red arrows) and pull the drawer unit [A] out fully.



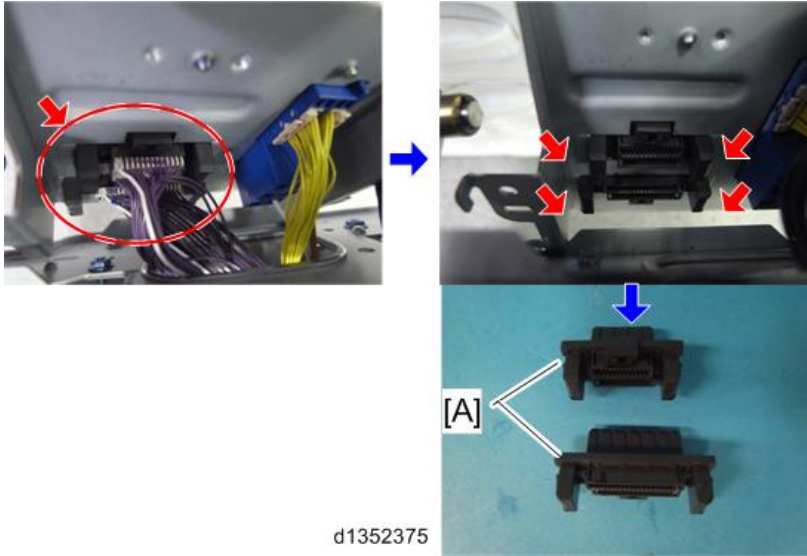
Note

- In a low-temperature environment (below 15°C), the tension of the curled cord may be reduced. So, do not pull the drawer unit out for a long time, or the curled cord will be deformed and will not curl up again when you try to slide the drawer unit back in. As a guide, every 30 minutes, push the drawer unit back to the half-way position. There is no decrease in tension of the curled cord with a low-temperature environment if the drawer unit is open half-way.

2. Drawer unit connector bracket [A] (🔩 x 4)

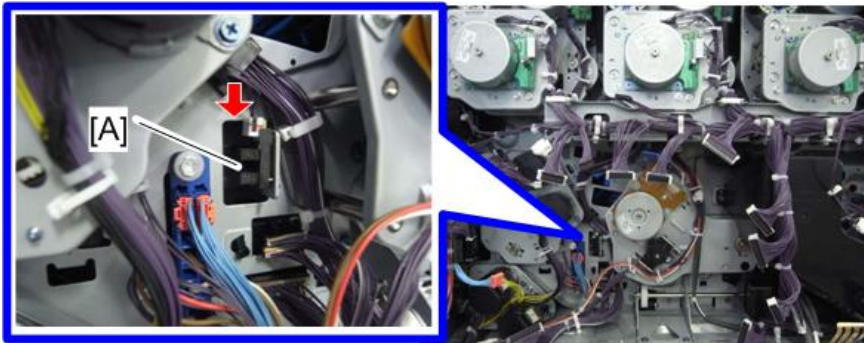


3. Remove the drawer unit connector [A] (x 2) by pressing the ends (👉 x 2 each).



Drawer Unit Set Sensor

1. IOB along with the bracket, located on the back side of the machine (☛ page 940 "When removing the motors that are behind the IOB")
2. Drawer unit set sensor [A] (☛ x 1)



Drawer Unit Lock Sensor

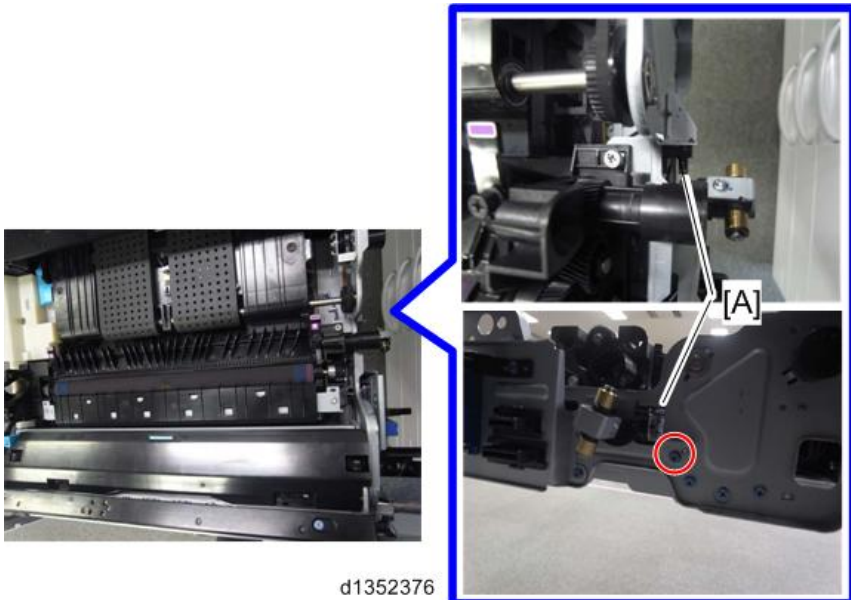
1. In order to facilitate the work, pull the drawer unit out half way, then press the release levers (one on the left side and one on the right side, shown by the red arrows) and pull the drawer unit [A] out fully.



Note

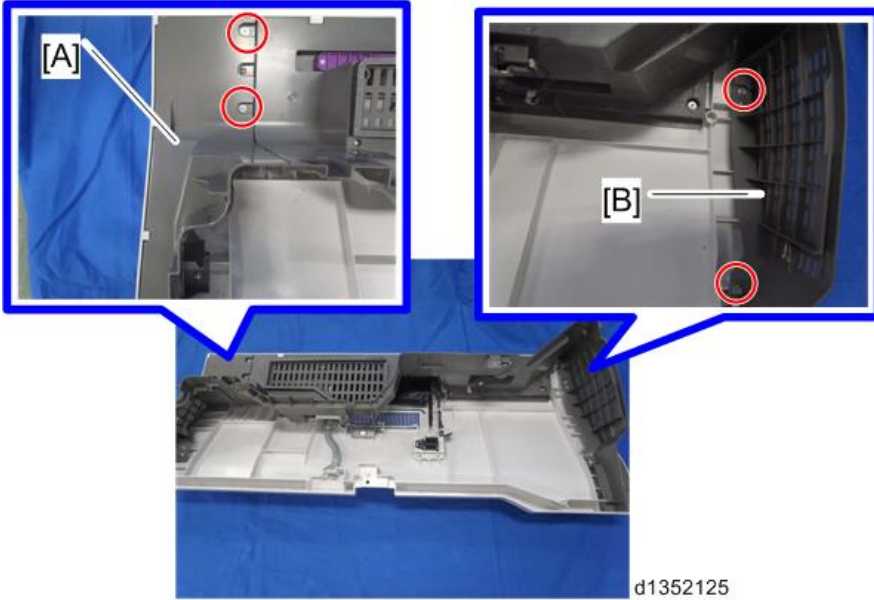
- In a low-temperature environment (below 15°C), the tension of the curled cord may be reduced. So, do not pull the drawer unit out for a long time, or the curled cord will be deformed and will not curl up again when you try to slide the drawer unit back in. As a guide, every 30 minutes, push the drawer unit back to the half-way position. There is no decrease in tension of the curled cord with a low-temperature environment if the drawer unit is open half-way.

2. Drawer Unit Lock Sensor [A] along with the bracket (1 x 1)

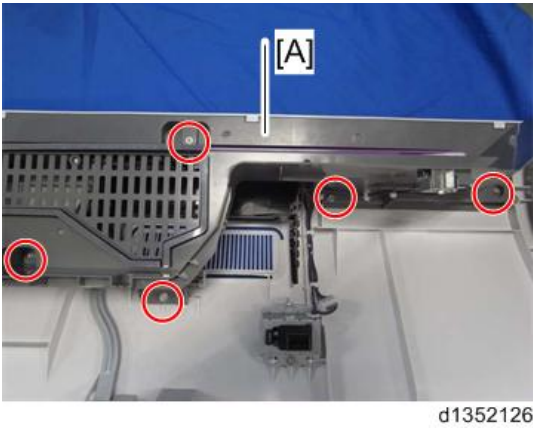


Drawer Unit Handle Sensor

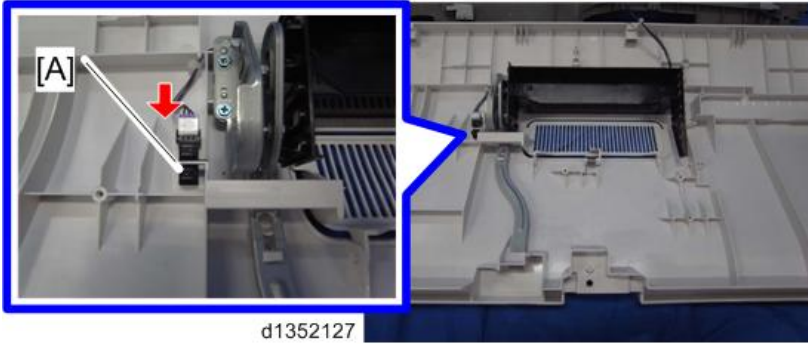
1. Drawer unit cover (☛ page 594)
2. Right cover [A] and left cover [B] (🔩 x 2 each)



3. Middle cover (🔩 x 5)



4. Drawer unit handle sensor [A] (🔩 x 1)

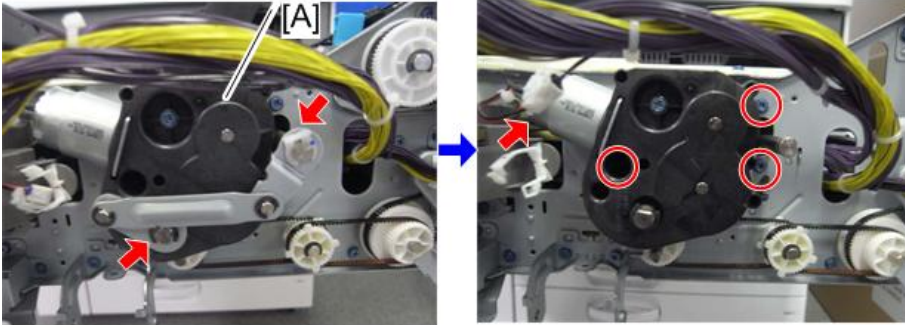


Drawer Unit Lock Motor

1. Drawer unit cover (☞ page 594)
2. Drawer unit lock motor cover [A] (🔩 x 3)



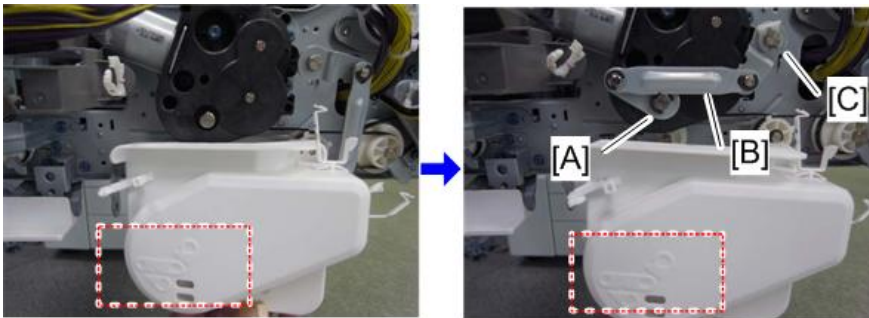
3. Drawer unit lock motor block [A] (Ⓢ x 1, snap-fit x 1, 🔩 x 3, 📏 x 1)



d1352377

Note

- When mounting the motor block, screw the motor in first. Then, assemble links [A], [B] and [C] as shown below. There is also a diagram embossed on the motor cover to help you to install the links correctly.
- Lock shaft (Cut surface to the upper left) [A]
- Link (Long hole to the right) [B]
- Paper transfer roller shaft (Cut surface to the lower side) [C]



d1352529

4. Drawer unit lock motor holder [A] (⚙ x 5)



d1352378

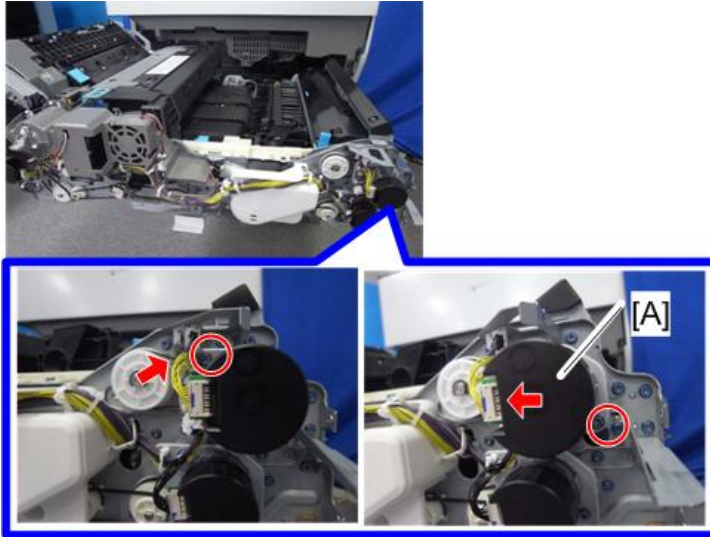
5. Take off the gears, and remove the drawer unit lock motor [A] (🔩 x 2)



d1352379

Registration Motor

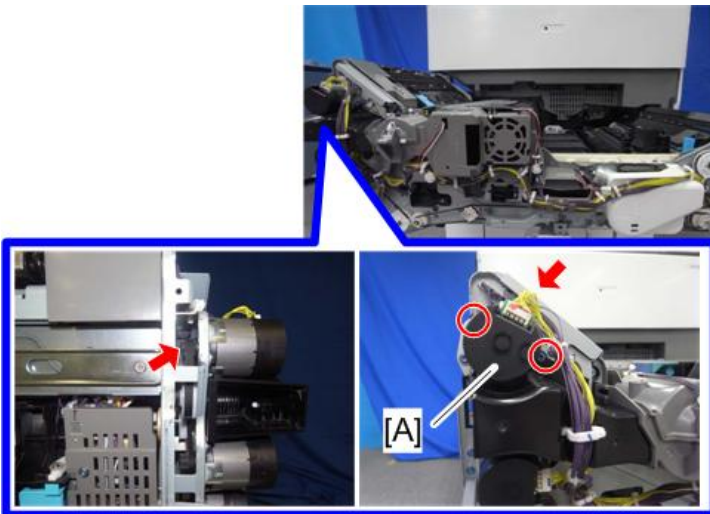
1. Drawer unit cover (🔩 page 594)
2. Registration motor [A] (🔩 x 2, 📦 x 1, timing belt x 1)



d1352346

Exit Motor

1. Drawer unit cover (🔧 page 594)
2. Exit motor [A] (🔧 x 2, 📏 x 1, timing belt x 1)

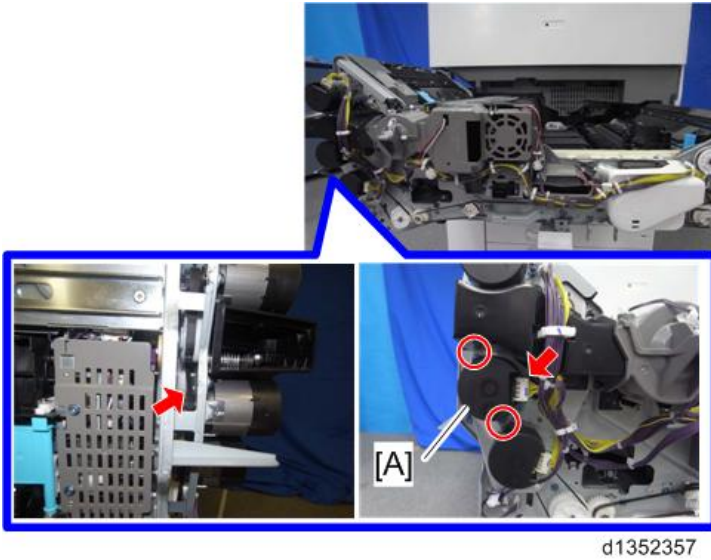


d1352348

Duplex Inverter Entrance Motor

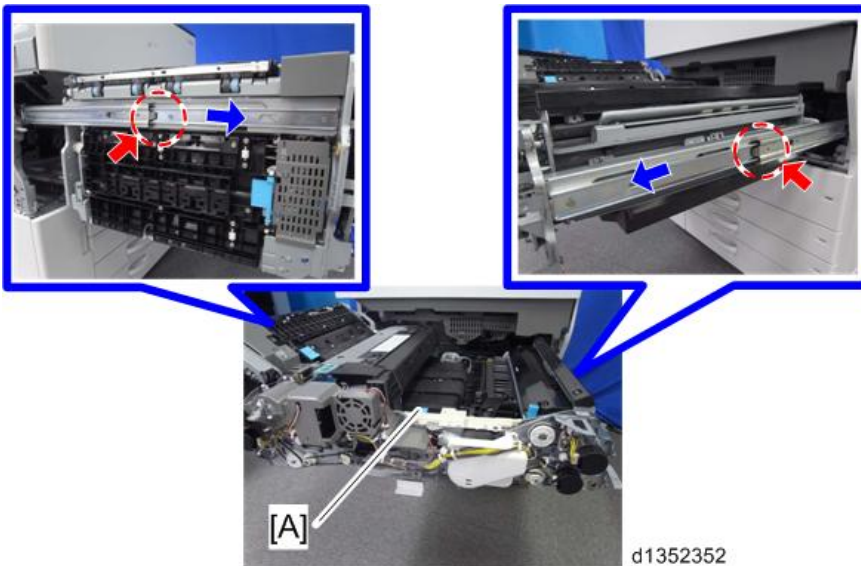
1. Drawer unit cover (🔧 page 594)

2. Duplex inverter entrance motor [A] (⚙️ x 2, 📏 x 1, timing belt x 1)



Exit Inverter Motor

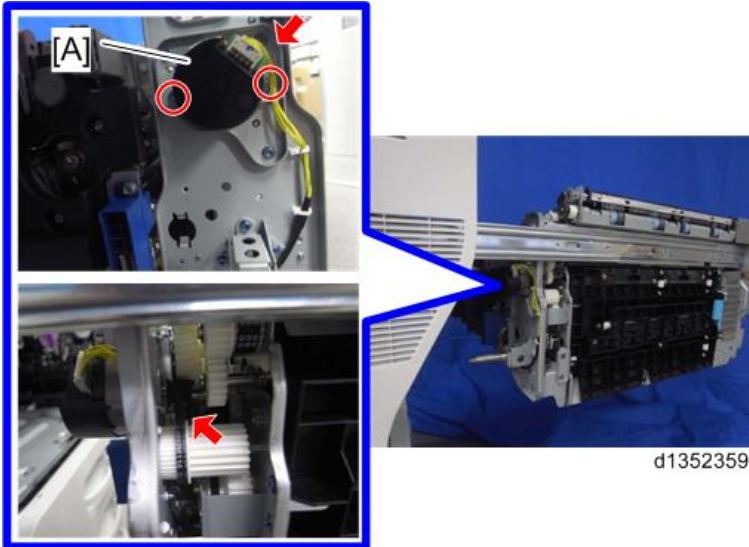
1. In order to facilitate the work, pull the drawer unit out half way, then press the release levers (one on the left side and one on the right side, shown by the red arrows) and pull the drawer unit [A] out fully.



Note

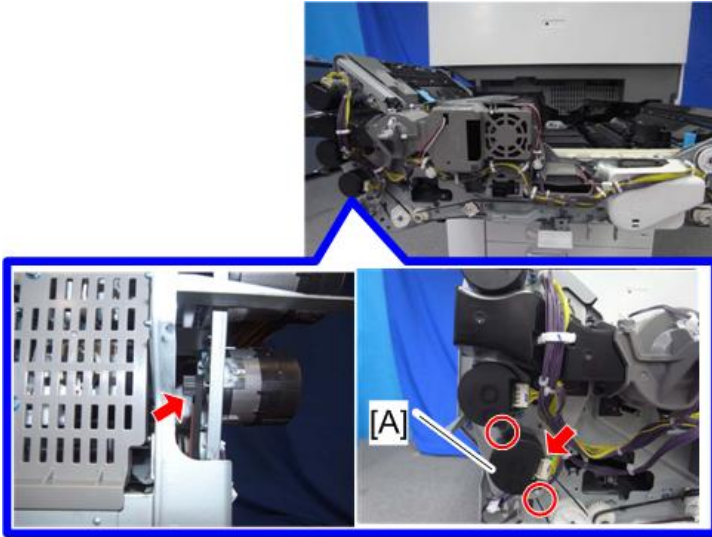
- In a low-temperature environment (below 15°C), the tension of the curled cord may be reduced. So, do not pull the drawer unit out for a long time, or the curled cord will be deformed and will not curl up again when you try to slide the drawer unit back in. As a guide, every 30 minutes, push the drawer unit back to the half-way position. There is no decrease in tension of the curled cord with a low-temperature environment if the drawer unit is open half-way.

2. Exit Inverter Motor [A] (⚙️ x 2, 🛠️ x 1, timing belt x 1)



Duplex Transport Motor

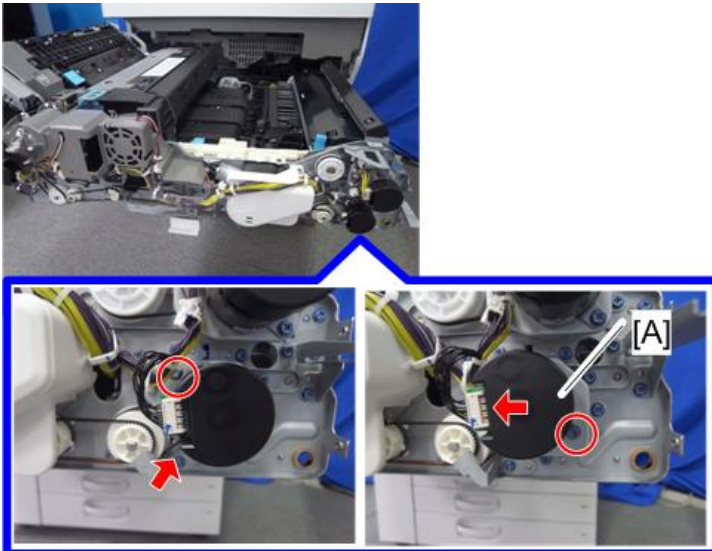
1. Drawer unit cover (🔑 page 594)
2. Duplex transport motor [A] (⚙️ x 2, 🛠️ x 1, timing belt x 1)



d1352358

Duplex Exit Motor

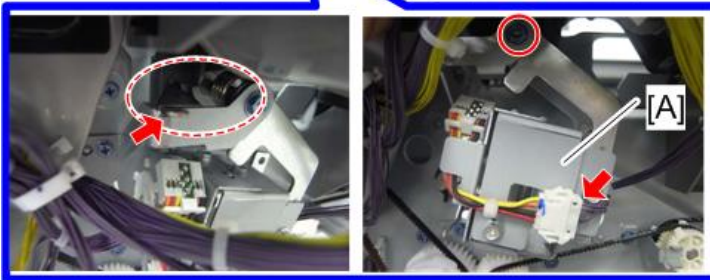
1. Drawer unit cover (🔧 page 594)
2. Duplex exit motor [A] (🔧 x 2, 📦 x 1, timing belt x 1)



d1352347

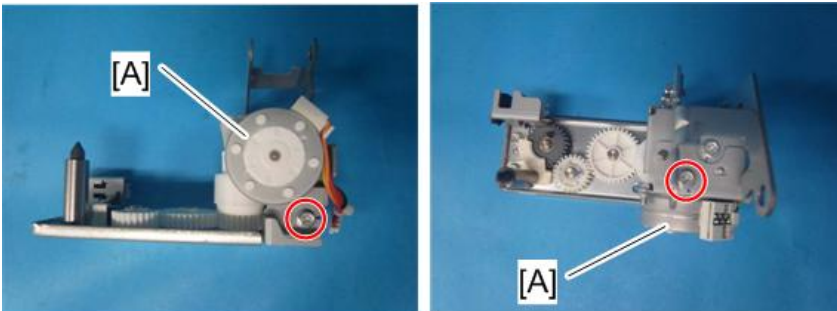
Cleaning Web Motor (D137/D138 only)

1. Drawer unit cover (☛ page 594)
2. Cleaning Web Motor block [A] (torsion spring x 1, ⚙️ x 1, 📌 x 1)



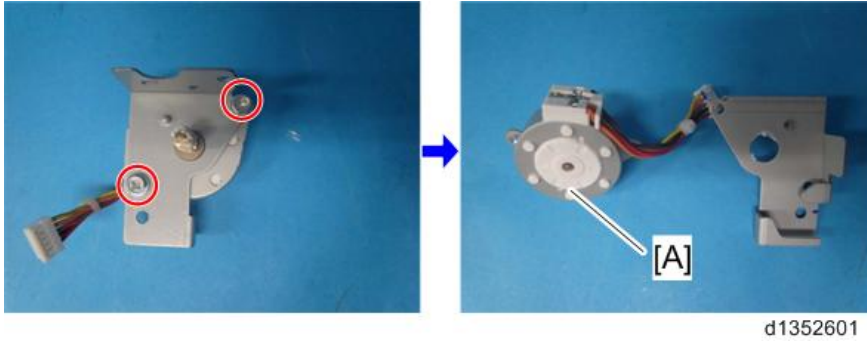
d1352599

3. Cleaning Web Motor [A] along with the bracket (⚙️ x 2)



d1352600

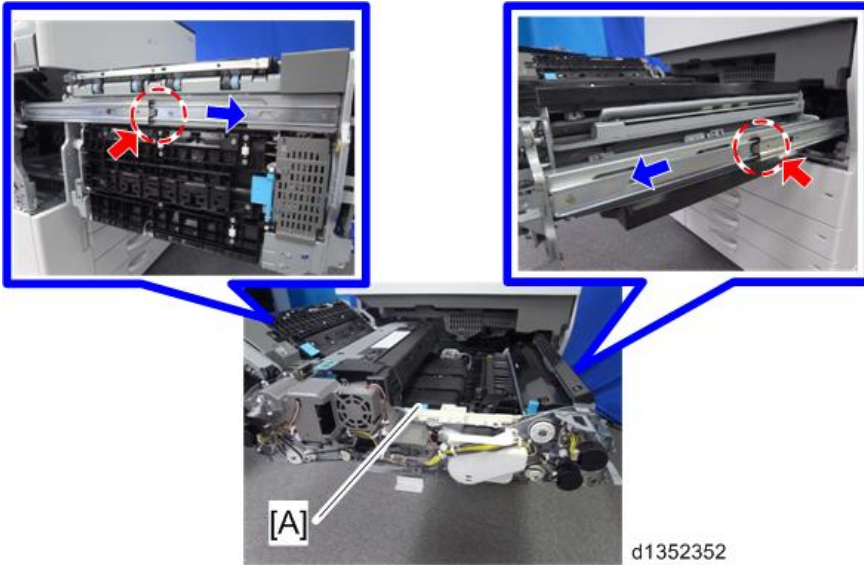
4. Cleaning Web Motor [A] (⚙️ x 2)



Cleaning Web Contact Motor (D137/D138 only)

4

1. In order to facilitate the work, pull the drawer unit out half way, then press the release levers (one on the left side and one on the right side, shown by the red arrows) and pull the drawer unit [A] out fully.



Note

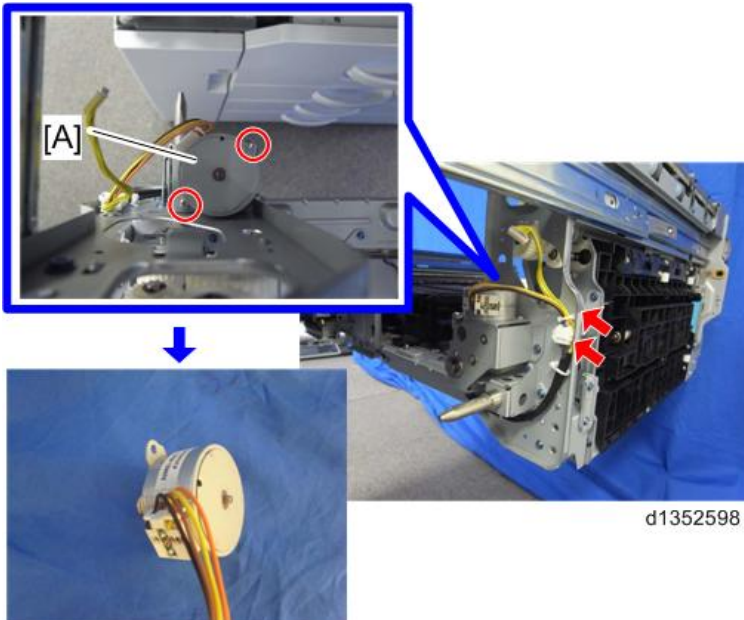
- In a low-temperature environment (below 15°C), the tension of the curled cord may be reduced. So, do not pull the drawer unit out for a long time, or the curled cord will be deformed and will not curl up again when you try to slide the drawer unit back in. As a guide, every 30 minutes, push the drawer unit back to the half-way position. There is no decrease in tension of the curled cord with a low-temperature environment if the drawer unit is open half-way.

2. Exit inverter motor [A] along with the bracket (⚙ x 3, 📏 x 1)



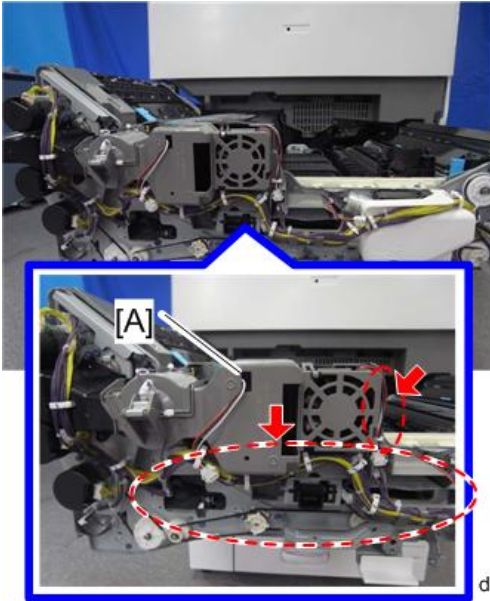
3. Cleaning Web Contact Motor [A] (🔧 x 2, 🧼 x 1, 🛠️ x 1)

4



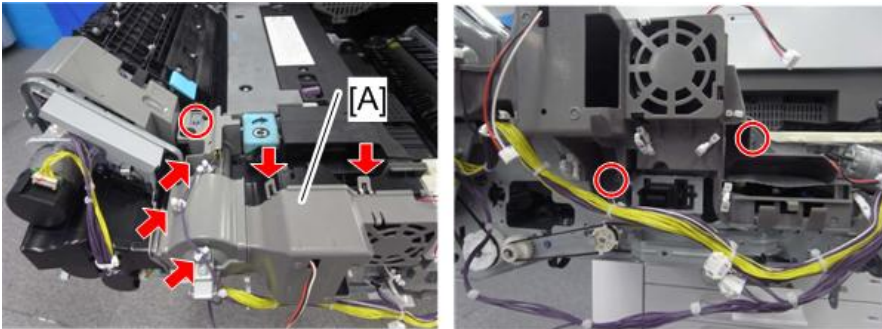
Fusing Heat Pipe Cooling Fan

1. Drawer unit cover (📄 page 594)
2. Disconnect the connector, clamp, etc., in order to remove the duct together with the fusing heat pipe cooling fan [A].



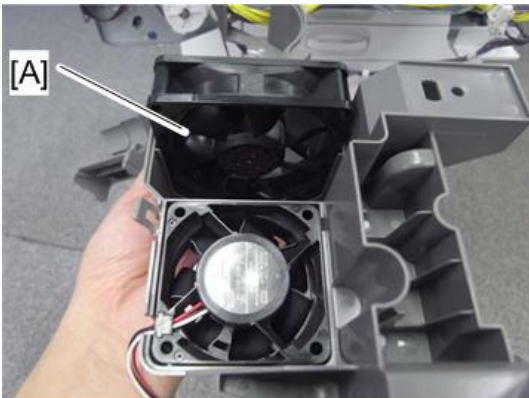
d1352380

3. Fusing heat pipe cooling fan [A] along with the duct (🔧 x 3, 🛠️ x 3, hook x 2)



d1352381

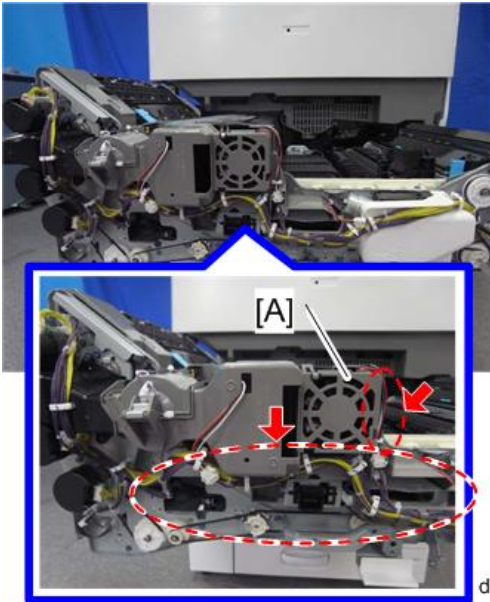
4. Fusing heat pipe cooling fan [A]



d1352382

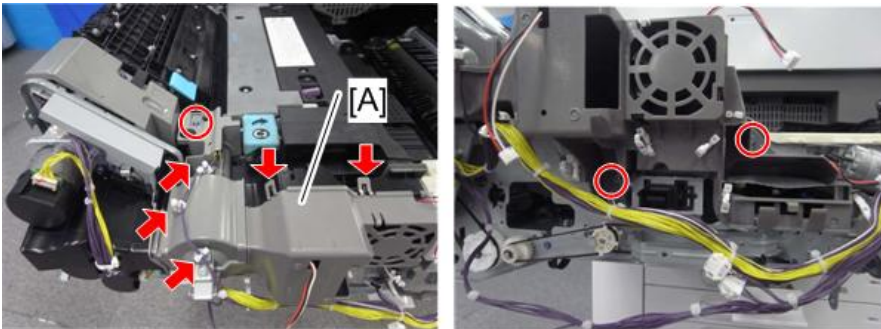
IH Coil Cooling Fan

1. Drawer unit cover (☛ page 594)
2. Disconnect the connector, clamp, etc., in order to remove the duct together with the IH coil cooling fan [A].



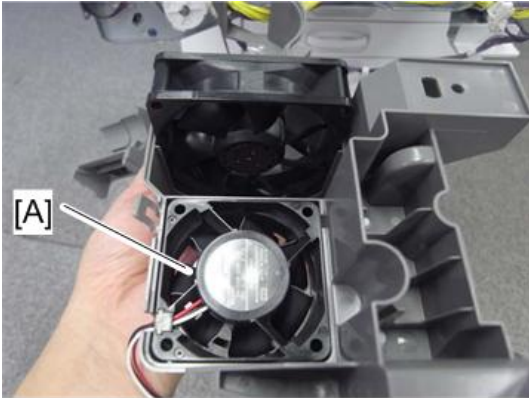
d1352383

3. IH coil cooling fan [A] along with the duct (⚙ x 3, ⚙ x 3, hook x 2)



d1352381

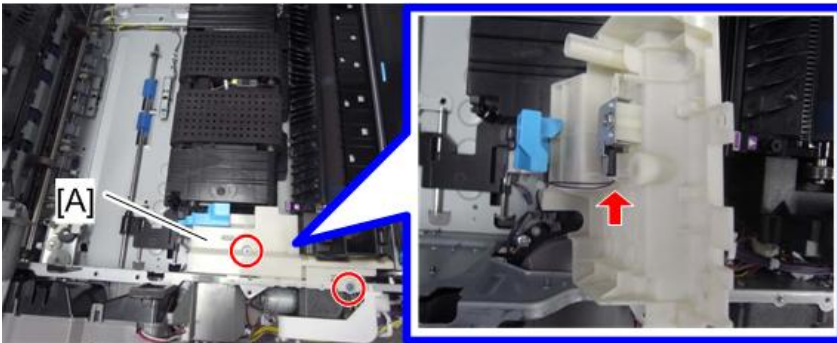
4. IH coil cooling fan [A]



d1352384

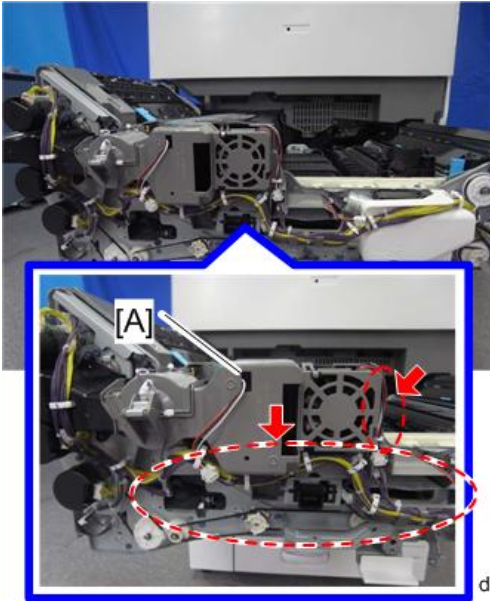
Fusing Pressure Roller Intake Fan (D137/D138 only)

1. Drawer unit cover (🔧 page 594)
2. Fusing unit (🔧 page 764)
3. Inner cover [A] (🔧 x 2, 📏 x 1)

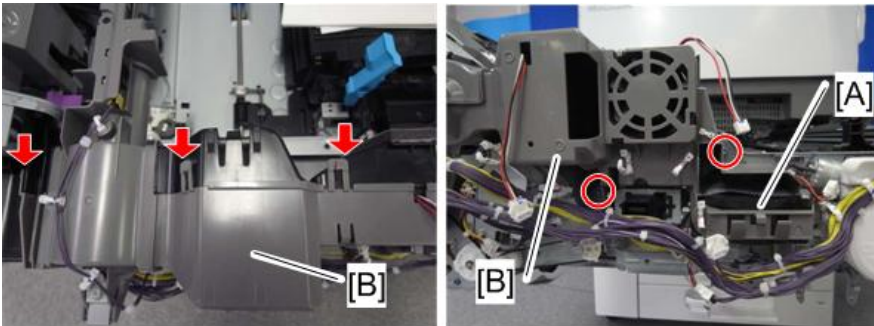


d1352538

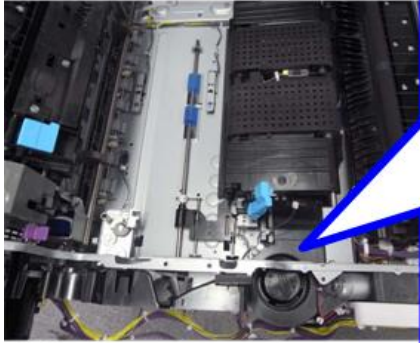
4. Disconnect the connector, clamp, etc., of the duct [A] for the fusing heat pipe cooling fan and IH coil cooling fan.



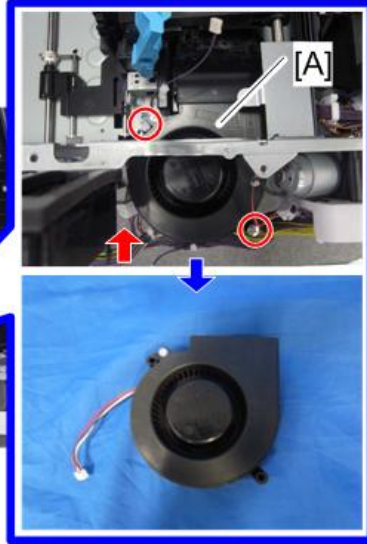
5. Duct [A] for the fusing heat pipe cooling fan (🔧 x 2, 🛠️ x 3, hook x 4 (On the left side, there is a hook on the top and bottom.))



6. Fusing pressure roller intake fan [A] (🔧 x 2, 🛠️ x 1)



d1352540



Toner Supply Unit

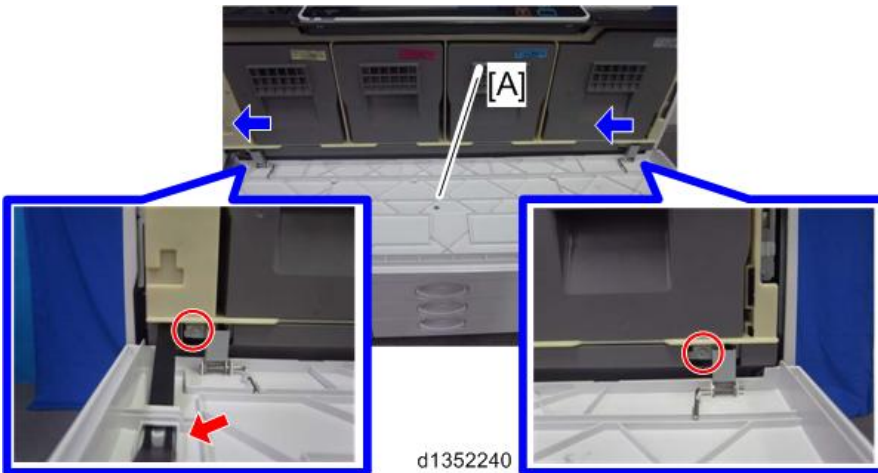
Toner Supply Unit Front Cover

1. Open the toner supply unit front cover [A].



d1352239

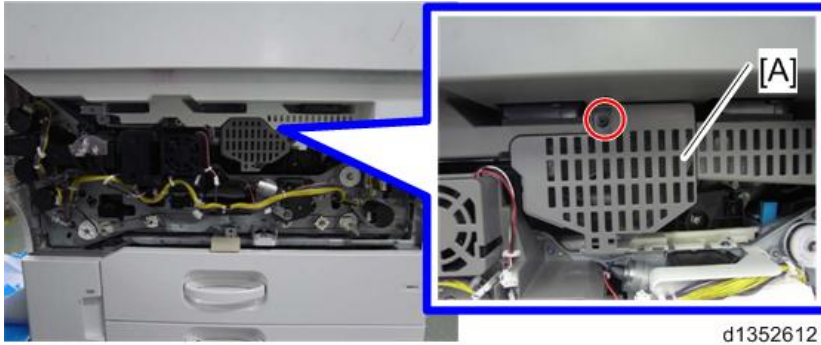
2. Remove the toner supply unit front cover [A] by sliding it to the left, fastener x 1).



d1352240

Toner Supply Unit

1. Drawer unit cover (🔧 page 594)
2. ITB cleaning intake fan [A] along with the duct (🔧 x 1*).



d1352612

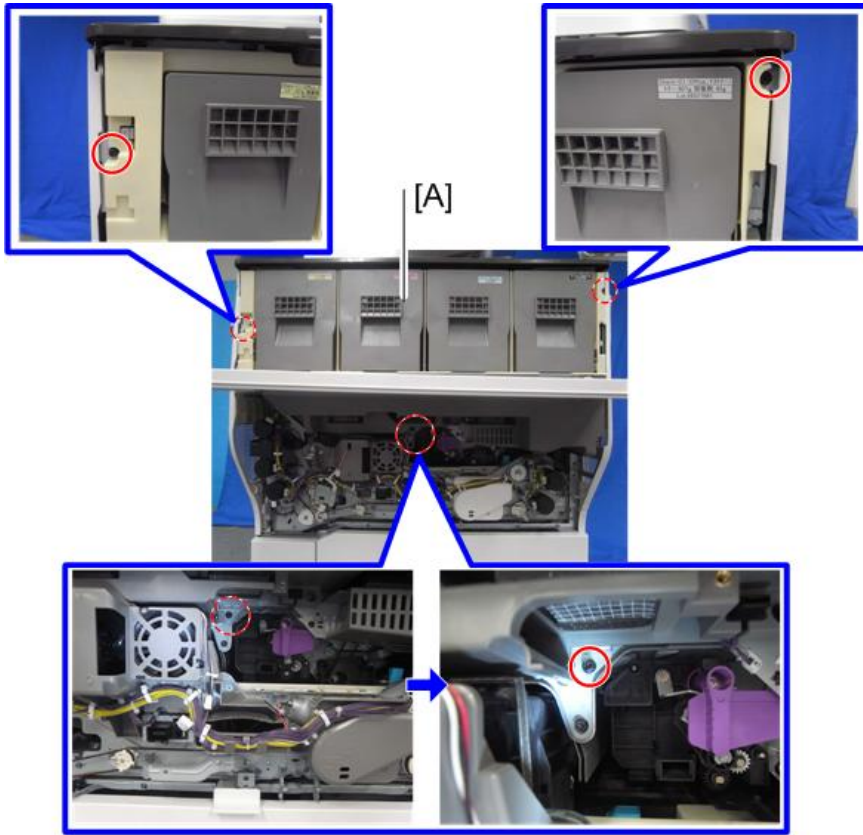
* D137/D138 use TCRU/ORU screws

3. Open the toner supply unit front cover [A].



d1350026

4. Remove the fixing screws of the toner supply unit [A] (⚙ x 3*).



d1350027

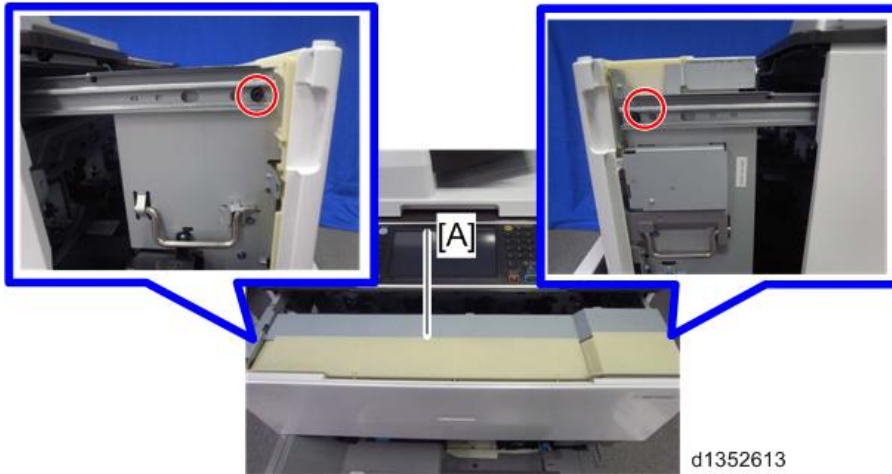
* D137/D138 use TCRU/ORU screws

5. Slide the toner supply unit [A] to the front.



d1350028

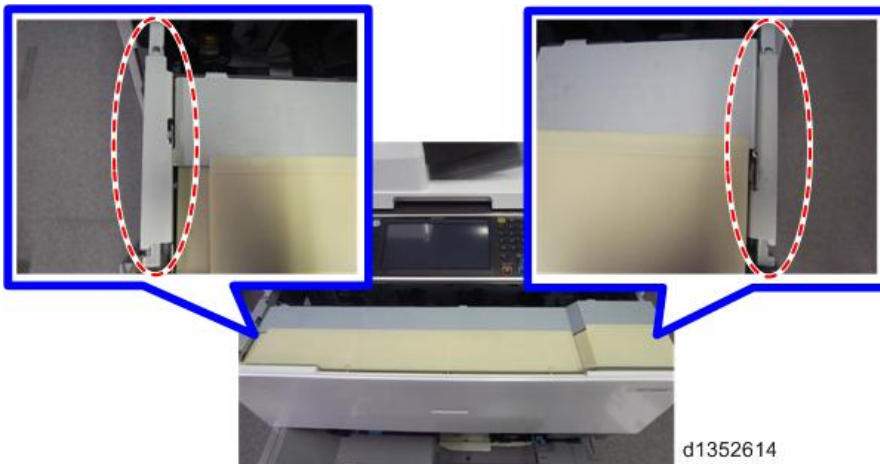
6. Pull out the toner supply unit [A], and remove it from the slide rail with the handles on the left and right (⚙️ x 2*).



* D137/D138 use TCRU/ORU screws

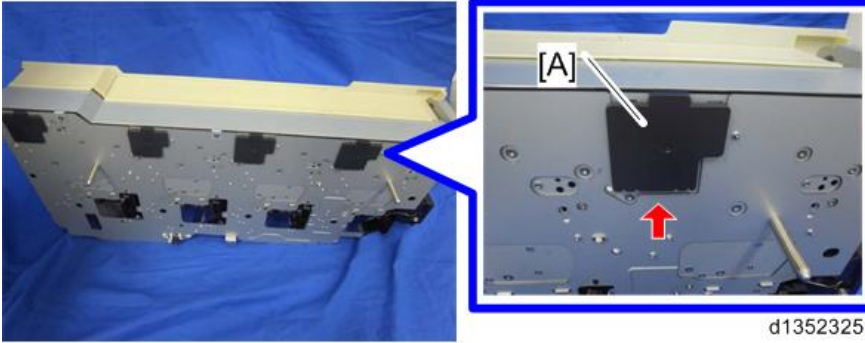
Note

- When attaching the toner supply unit to the machine, the hooks of the toner supply unit should be fit into the holes in the slide rails.



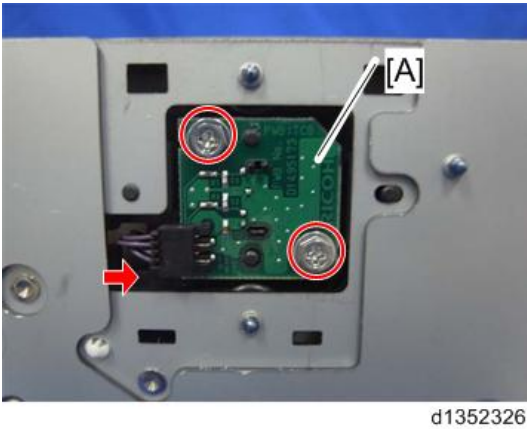
ID Chip Connector Board (KCMY)

1. Toner supply unit (☛ page 624)
2. ID chip connector board cover [A].
e.g.: Y



3. ID chip connector board [A] (🔩 x 2, 📁 x 1).

4



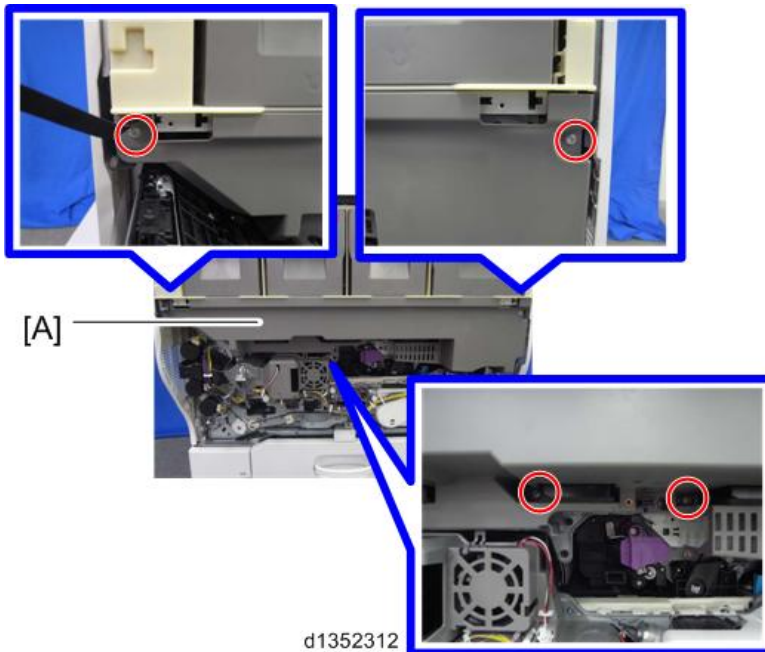
Toner Supply Unit Inner Cover

1. Toner supply unit front cover (📄 page 624)
2. Drawer unit cover (📄 page 594)
3. ITB cleaning intake fan [A] along with the duct (🔩 x 1*).



* D137/D138 use TCRU/ORU screws

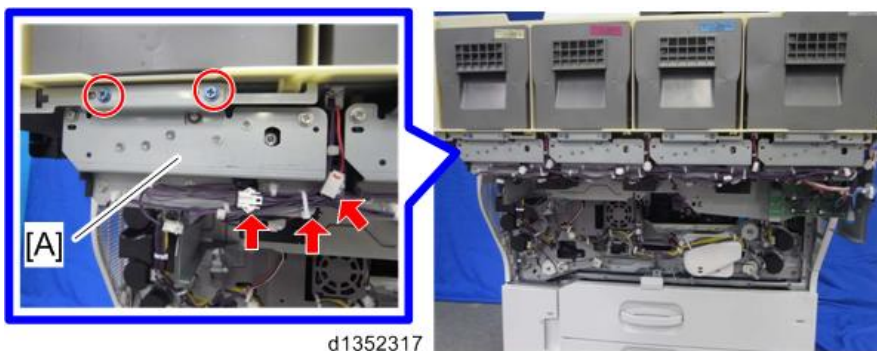
4. Toner supply unit inner cover [A] (🔩 x 4).



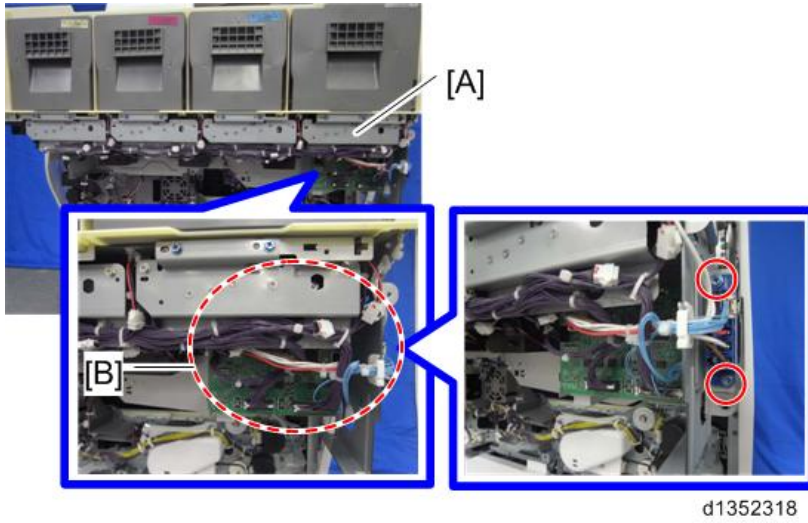
4

Sub Hopper Unit (KCMY)

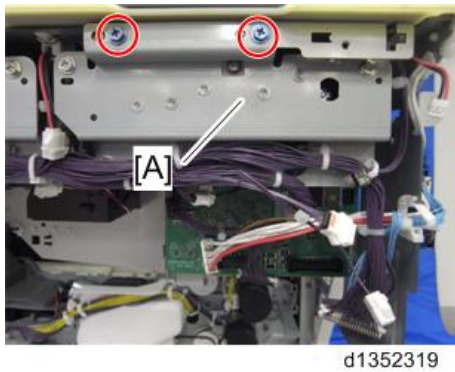
1. Toner supply unit inner cover (🔩 page 628)
2. CMY: Sub Hopper Unit [A] (🔩 x 2 each, all 🔄s)
e.g.: Y



3. K: Disconnect all the connectors and clamps connected to the sub hopper unit [A] and toner supply board (TSB) [B] (🔩 x 2).

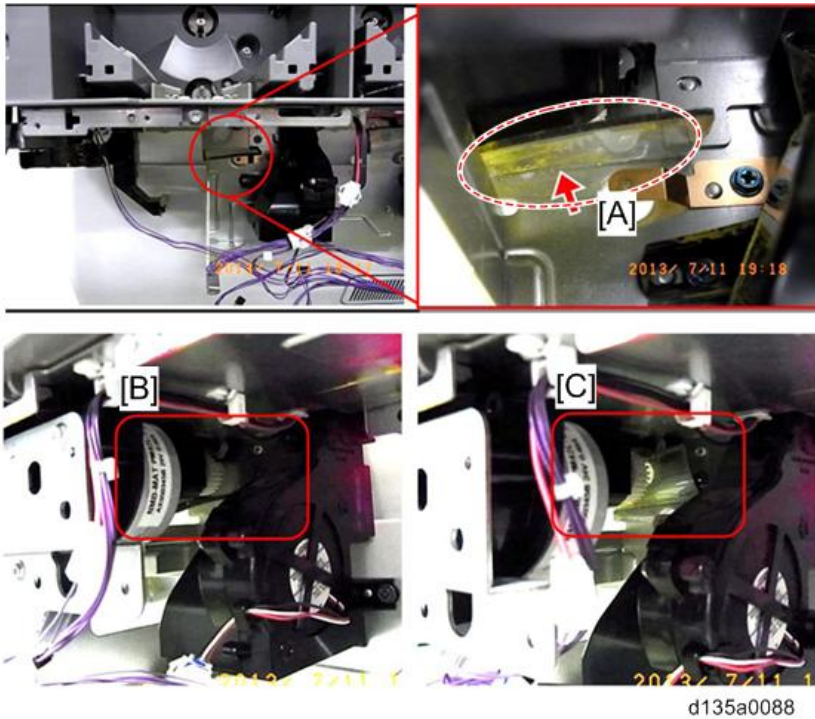


Sub hopper unit [A] (x 2)



Note

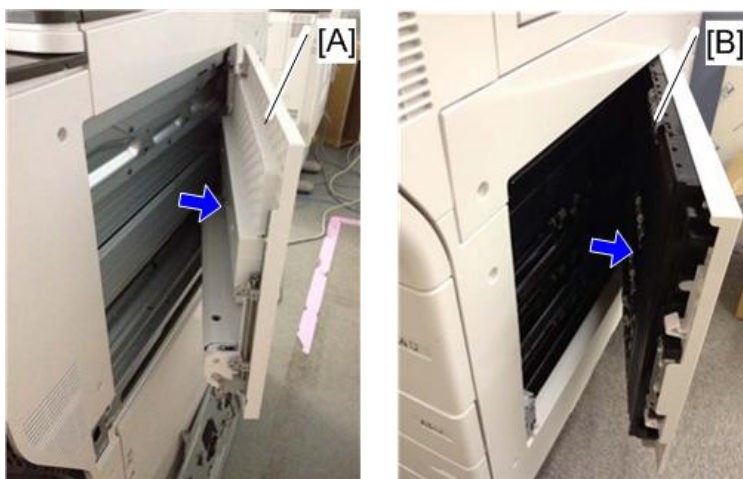
- When installing the sub hopper unit, take care not to tuck the toner fall prevention sheet [A] attached to the toner supply unit.
[B]: Normal state
[C]: Toner fall prevention sheet is tucked



Adjustment after Sub Hopper Unit (KCMY) replacement

After replacing the Sub Hopper Unit, you have to execute Density Adjustment Process Control.

1. Turn on the main power switch with the by-pass tray unit [A] or the vertical transport door [B] open.

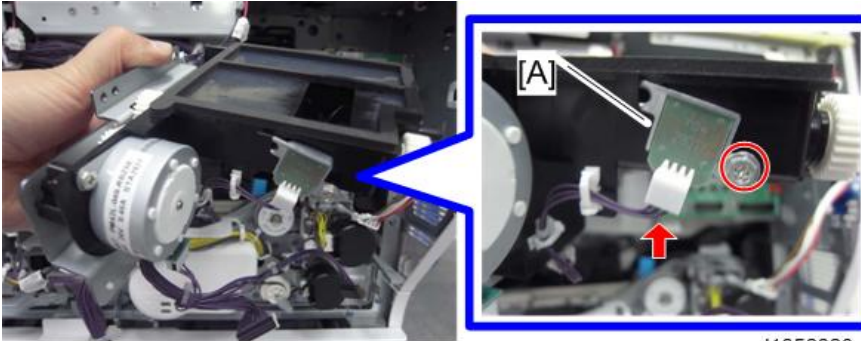


2. Enter SP mode and close the by-pass tray unit or vertical transport door.
3. Execute SP3-011-002 (Manual ProCon:Exe > Density Adjustment).

4. Confirm that SP3-012-001 (ProCon OK? > History:Latest) shows "11111111".

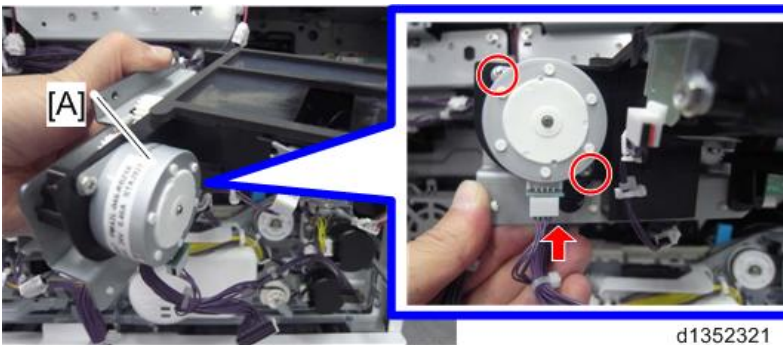
Toner End Sensor (KCMY)

1. Sub Hopper Unit (🔧 page 629)
2. Toner end sensor [A] (🔧 x 1, 📌 x 1)



Sub Hopper Motor (KCMY)

1. Sub Hopper Unit (🔧 page 629)
2. Sub hopper motor [A] (🔧 x 2 each, 📌 x 1 each)



Toner Supply Board (TSB)

1. Sub Hopper Unit (K) (🔧 page 629)
2. Toner Supply Board (TSB) [A] (🔧 x 2)



d1352322

Toner Cartridge Guide

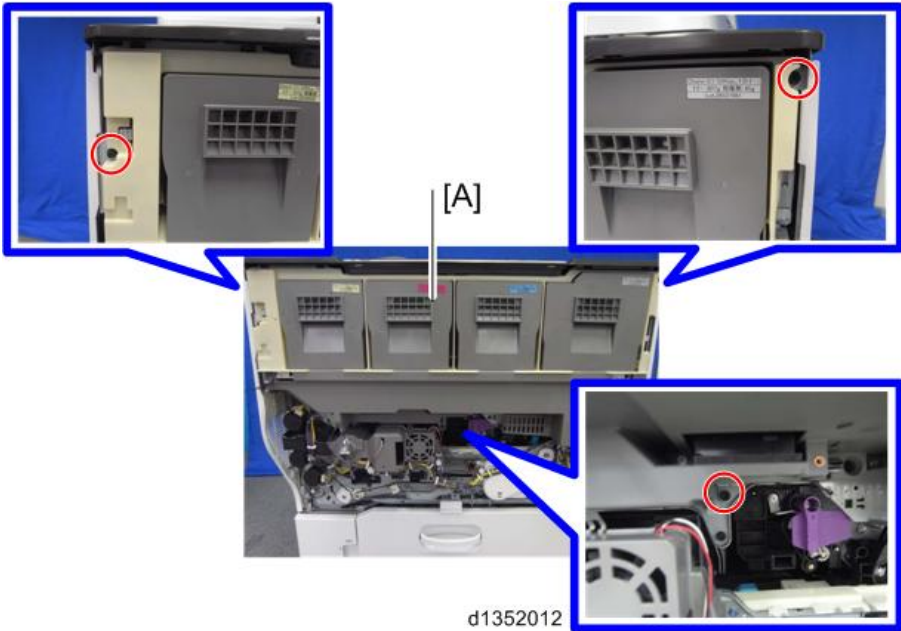
1. Toner supply unit inner cover (🔧 page 628)
2. Drawer unit cover (🔧 page 594)
3. ITB cleaning intake fan [A] along with the duct (🔧 x 1*).



d1352305

* D137/D138 use TCRU/ORU screws

4. Remove the fixing screws of the toner supply unit [A] (🔧 x 3*).



* D137/D138 use TCRU/ORU screws

5. Slide forward the toner supply unit [A].

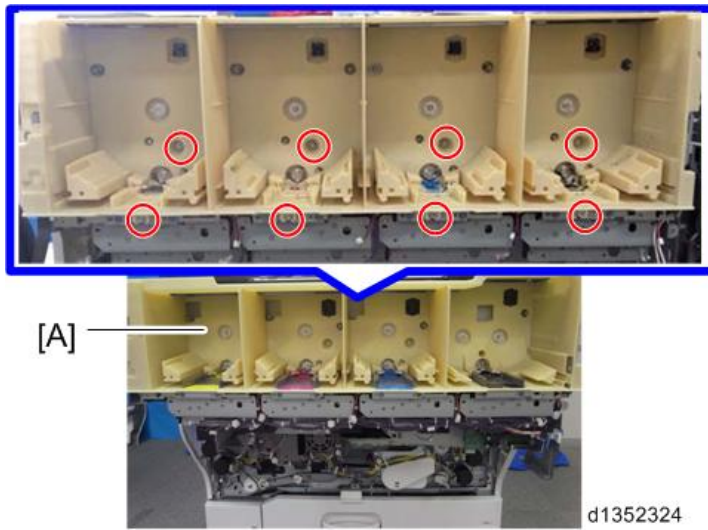


6. Toner cartridge [A]



d1352323

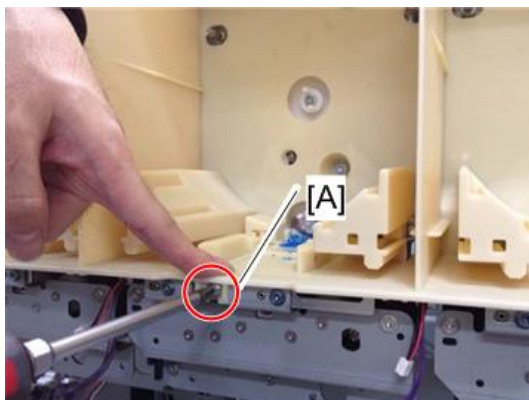
7. Toner cartridge guide [A] (🔩 x 8)



d1352324

⬇️ **Note**

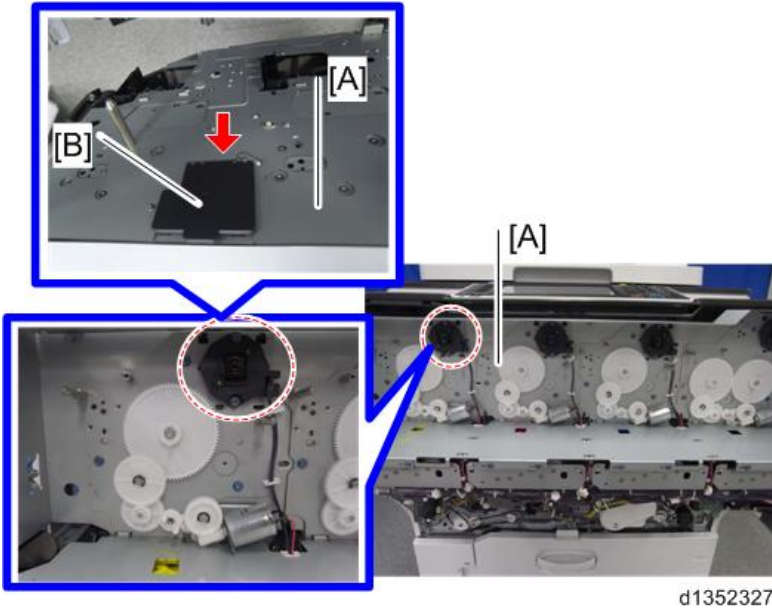
- When installing, tighten the screws on the bottom while holding from the top as shown below.



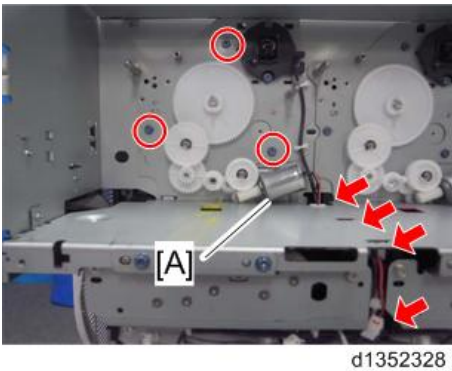
d1352778

Toner Supply Motor (KCMY)

1. Toner cartridge guide (🔗 page 633)
2. Remove the ID chip connector cover [B] from the back of the toner supply unit [A].
e.g.: Y

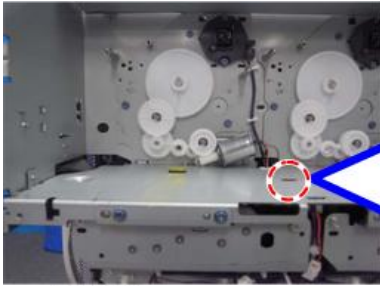


3. Toner supply motor [A] along with the bracket (🔗 x 3, 🔗 x 1, 🔗 x 3)



Note

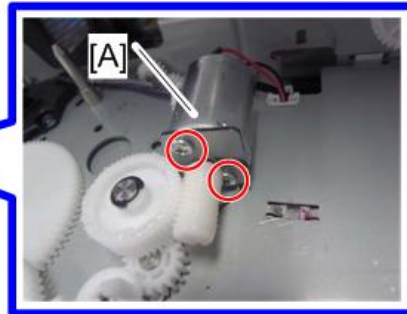
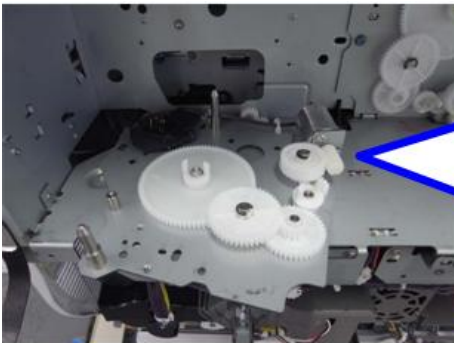
- It will be easier to access the clamp shown below if you remove the development intake fan. (🔗 page 996 "Development Intake Fans (KCMY)")



d1352330



4. Toner supply motor [A] (⚙️ x 2)
e.g.: Y

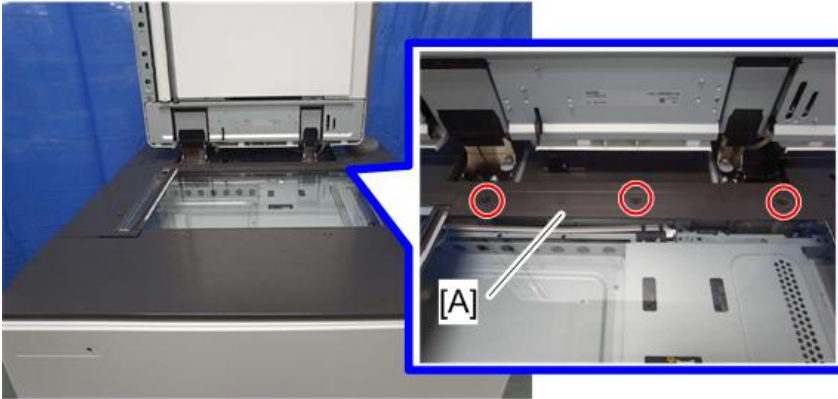


d1352329

Scanner Unit

Exposure Glass

1. Rear scale [A] (🔩 x 3)



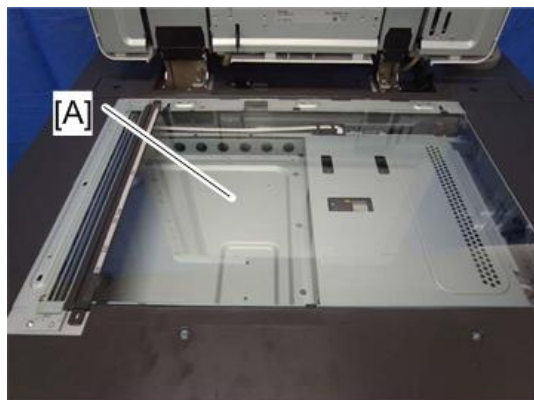
d1352020

2. Glass cover [A] (🔩 x 2)



d1352021

3. Exposure glass [A]



d1352022

↓ **Note**

- When attaching the glass cover, ensure that the glass cover is not riding on the upper front cover or the upper rear small cover.

4

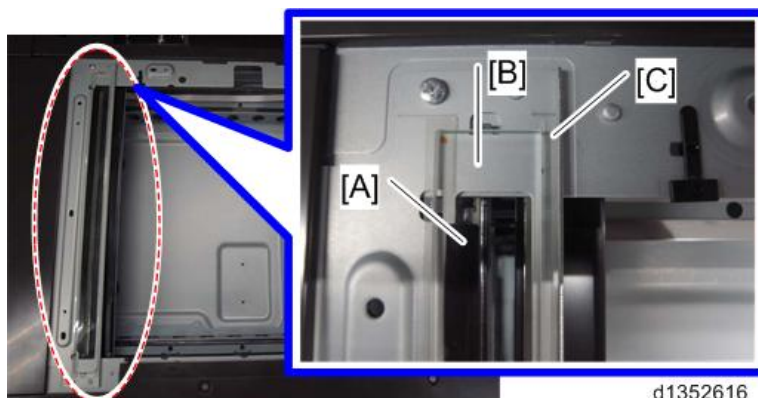
ADF Exposure Glass / Gap Sheet (D135/D136)

↓ **Note**

- The document transport system of the ADF is different between D135/D136 and D137/D138. D135/D136 uses a new non-contact transport system, so the glass replacement procedure is changed accordingly.

How to Remove the ADF Exposure Glass/Gap Sheet

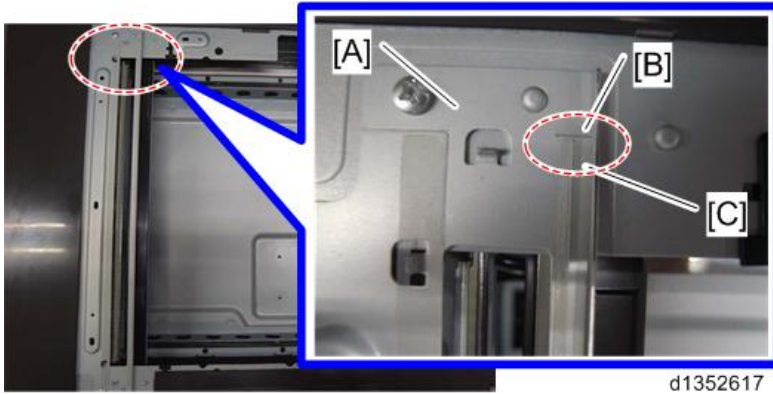
1. Exposure glass (☞ page 638)
2. Remove the gap sheet (black) [A], ADF exposure glass [B] and exposure glass seal (transparent) [C].



d1352616

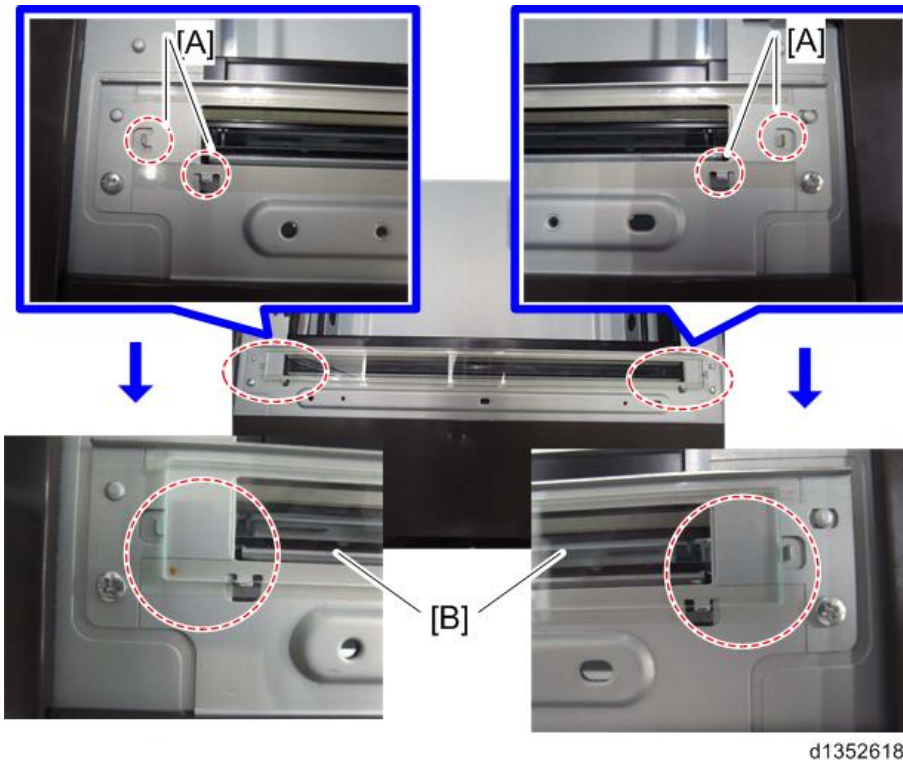
How to Attach the ADF Exposure Glass/Gap Sheet

1. Clean the place to attach the exposure glass seal on the exposure glass bracket with alcohol.
2. Attach the exposure glass seal* [C] along the marking [B] on the exposure glass bracket [A].



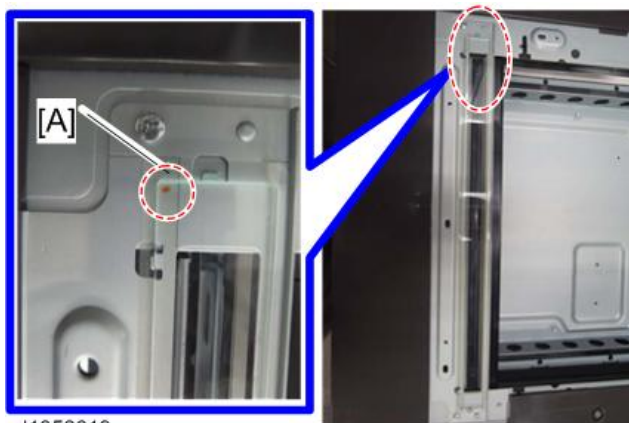
* The tip of the seal is cut at an angle.

3. Peel off the release paper of the exposure glass seal.
4. Attach the ADF exposure glass [B] along the lancing parts [A] on the exposure glass bracket.



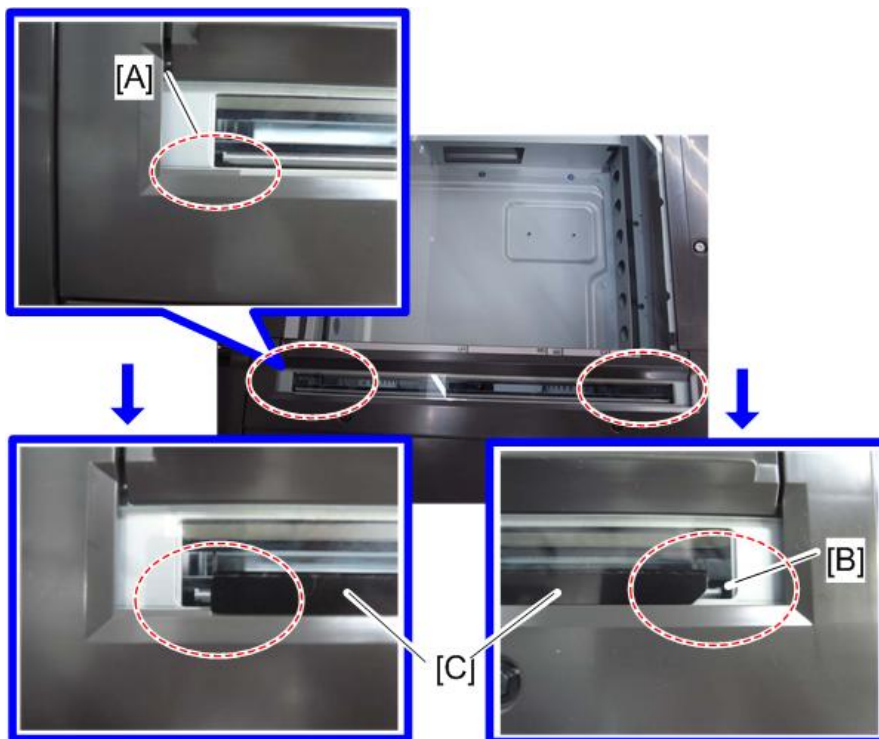
↓ **Note**

- Attach the ADF exposure glass, so that the marking [A] is on the upper left.



d1352619

5. Attach in the order of exposure glass, glass cover and rear scale.
6. Clean the ADF exposure glass with a dry cloth.
7. Peel off the release paper of the gap sheet.
8. Fit the gap sheet* [C] to the convex portion [A] on the glass cover.



d1352620

*The tip of the seal is cut at an angle. Its tip faces the front [B].

Note

- When replacing an ADF exposure glass, replace with a new exposure glass seal and a gap sheet as well.
- ADF Exposure Glass (D137/D138): Same as for D135/D136, except there is no gap sheet.

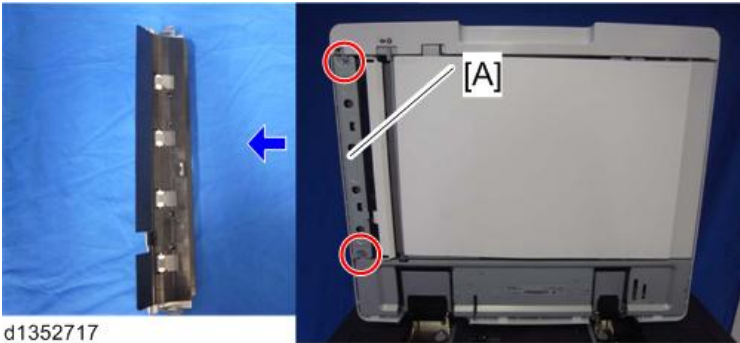
Modification Procedure for Original Transport

For D135/D136, if you change from contact transport to non-contact transport, it is necessary to replace parts of the scanner unit and the ADF.

4

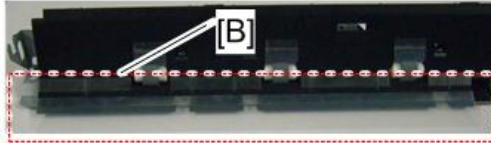
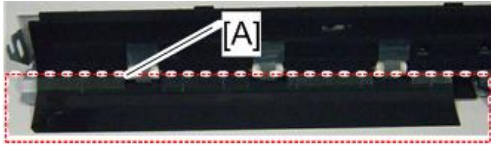
Replacing Parts of the ADF

1. Open the ADF
2. Entrance lower guide unit [A] (🔧 x 2).



Note

- Entrance lower guide unit for non-contact transport: the following areas are black [A].
- Entrance lower guide unit for contact transport (part number: D6833401): the following areas are clear and colorless [B].



d1352723

3. Scanning guide plate [A] (hook x 1).



d1352718

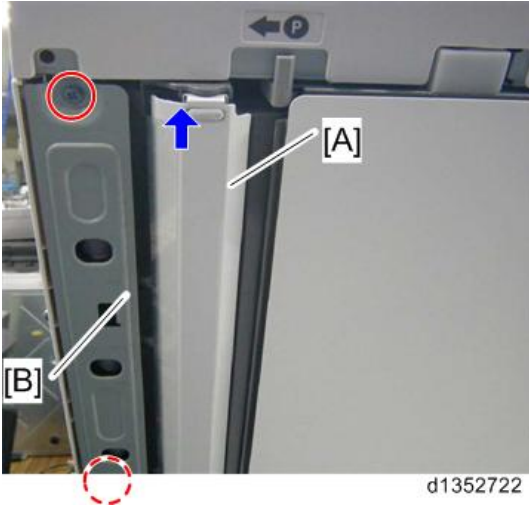
Note

- Scanning guide plate for non-contact transport: the following areas are black [A].
- Scanning guide plate for contact transport (part number: D6833350): the following areas are white [B].



d1352721

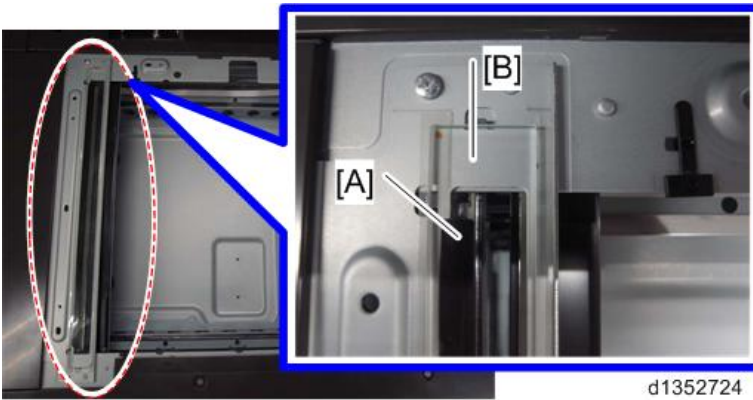
4. Attach the scanning guide plate for contact transport [A] (hook x 1).
5. Attach the entrance lower guide unit for contact transport [B] (hook x 2).



6. Enter the SP mode, set "98" at SP4-688-002 (Scan Image Density Adjustment 1-pass).

Removing the Scanner Parts

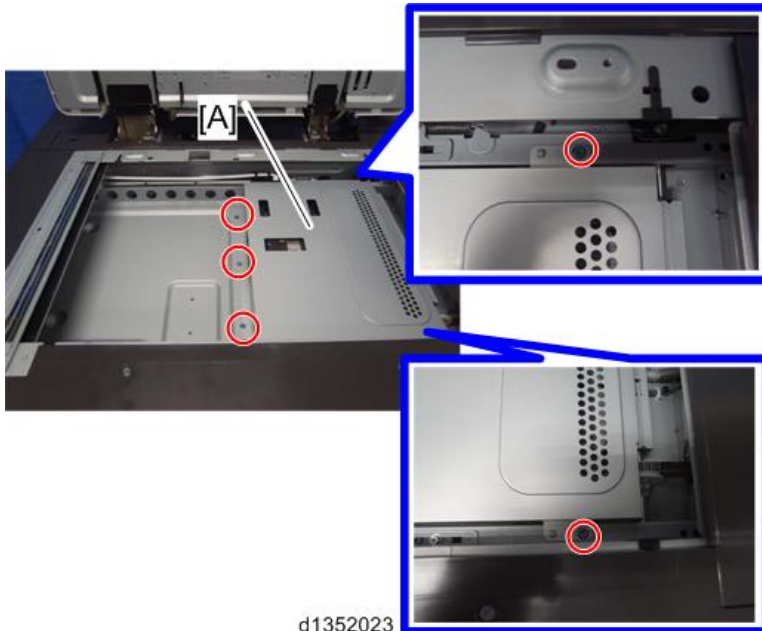
1. Exposure glass (🔧 page 638)
2. Remove the gap sheet (black) [A] from the ADF exposure glass [B].



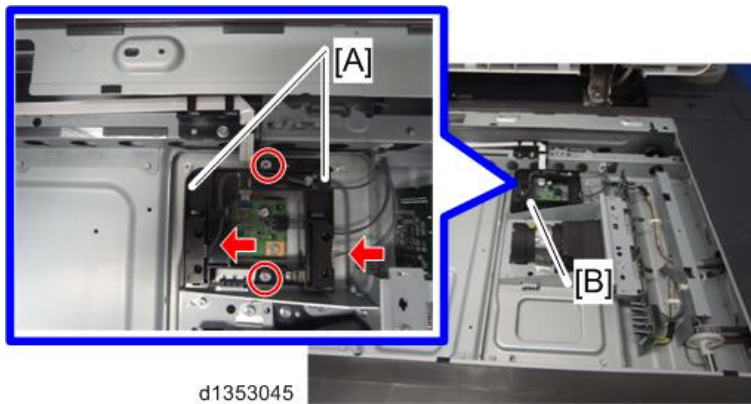
3. Clean the ADF exposure glass with alcohol.

Lens Block / Original Size Sensor

1. Exposure glass (🔧 page 638)
2. Lens cover [A] (🔧 x 5)



3. Original size sensors [A] (🔌 x 2) and the sensor cradle [B] (🔌 x 2)



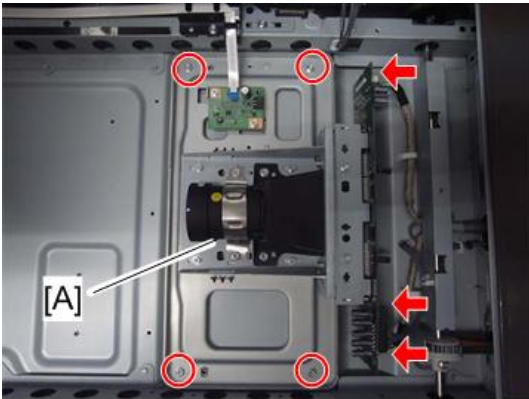
4. IDB [A] (🔌 x 2, 📏 x 2)



d1352025

4

5. Lens Block [A] (🔩 x 4, 📏 x 3)



d1352026

Adjustment after Replacing the Lens Block

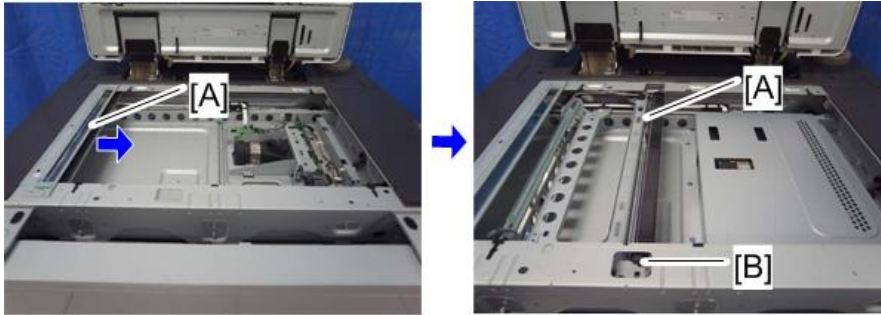
SP4-008-001: Sub Scan Magnification Adj (🔧 "Sub Scan Magnification Adjustment" in page 669 "Magnification and Registration Adjustment")

SP4-010-001: Sub Scan Registration Adj (🔧 "Sub Scan Registration Adjustment" in page 669 "Magnification and Registration Adjustment")

SP4-011-001: Main Scan Reg (🔧 "Main Scan Registration Adjustment" in page 669 "Magnification and Registration Adjustment")

Exposure Lamp (LED)

1. Exposure glass (🔧 page 638)
2. Upper front cover (🔧 D137/D138: page 539, D135/D136: page 540)
3. Move the 1st scanner carriage [A] to the notched section [B].

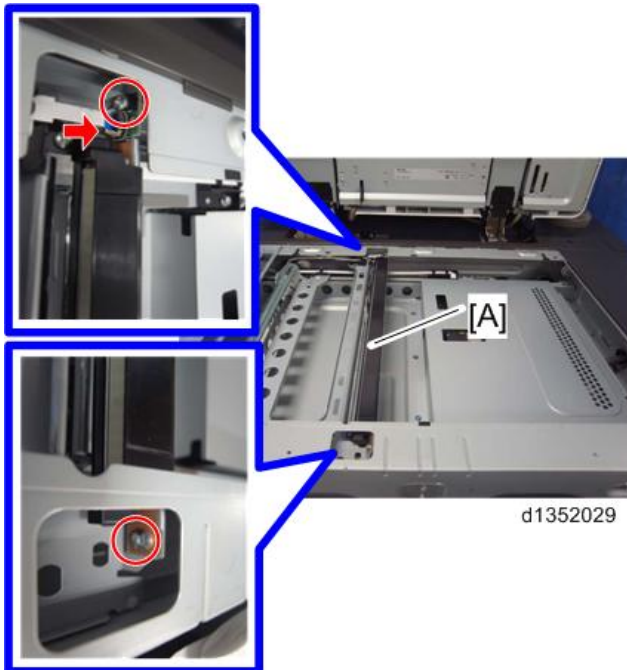


d1352028

↓ **Note**

- Do not touch the mirror, reflector, or light guide plate in the scanner carriage.

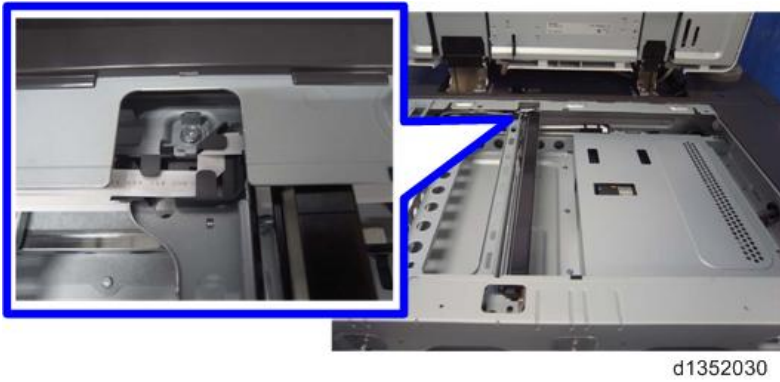
4. Exposure lamp (LED) [A] (🔧 x 2, 📡 x 1)



d1352029

↓ **Note**

- When attaching the exposure lamp, put the harness in the hook.



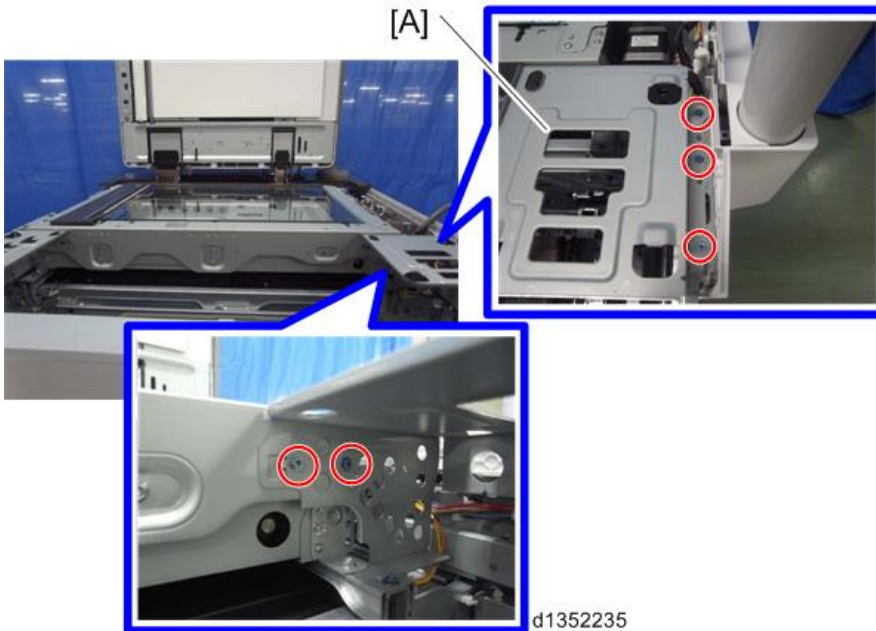
4

Scanner Drive Motor

1. Upper right cover (☞ page 542 "Upper Left Cover/ Upper Right Cover")

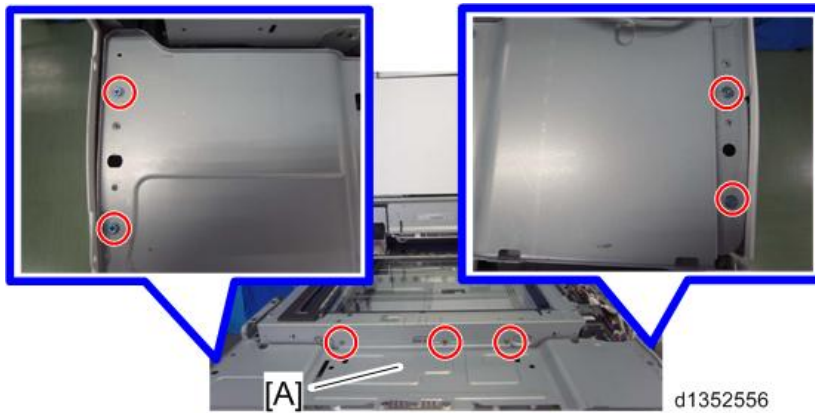
Note

- In the case of D135/D136, also remove the operation panel. (☞ page 551 "Operation Panel")
2. Pull out the toner supply unit. (☞ page 624)
 3. Right side stay [A] (🔧 x 5)

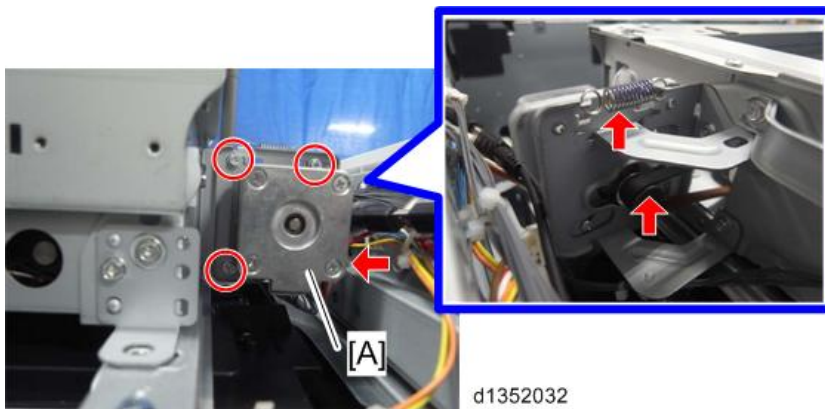


Note

- In the case of D135/D136, remove the operation panel bracket [A] (🔧 x 7).



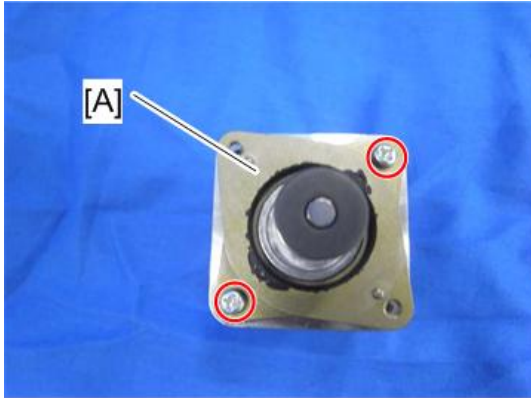
4. Scanner drive motor [A] along with the bracket (⚙️ x 3, 📏 x 1, spring x 1, timing belt x 1)



5. Motor bracket [A] (⚙️ x 2)



6. Motor cushion [A] (⚙️ x 2)



d1352034

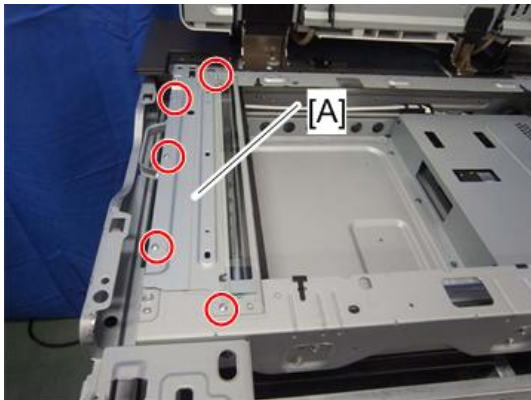
4

Note

- When attaching the motor, make sure that the timing belt does not come off. Slide the motor a few times. Screw the motor into place while the spring is pulled.

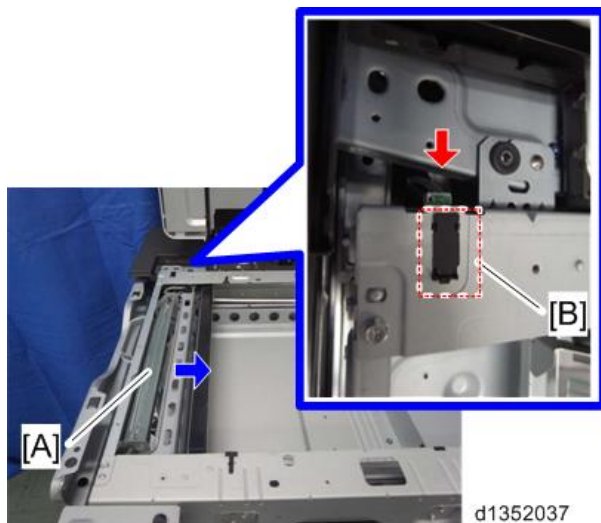
Scanner HP Sensor

1. Exposure glass (☛ page 638)
2. Upper left cover (☛ page 542 "Upper Left Cover/ Upper Right Cover")
3. Left bracket [A] (☛ x 5)



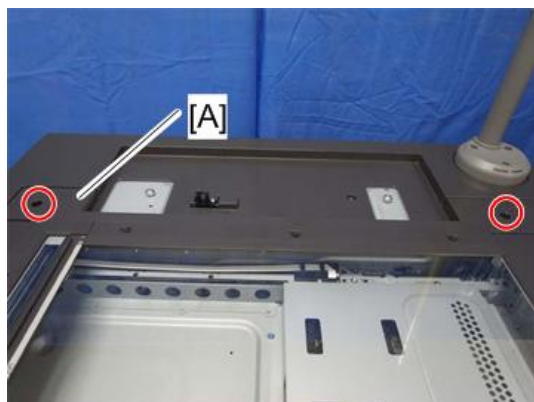
d1352036

4. Move the 1st scanner carriage [A] to the center. Peel off the shielding plate [B], Then remove the scanner HP sensor (☛ x 1).

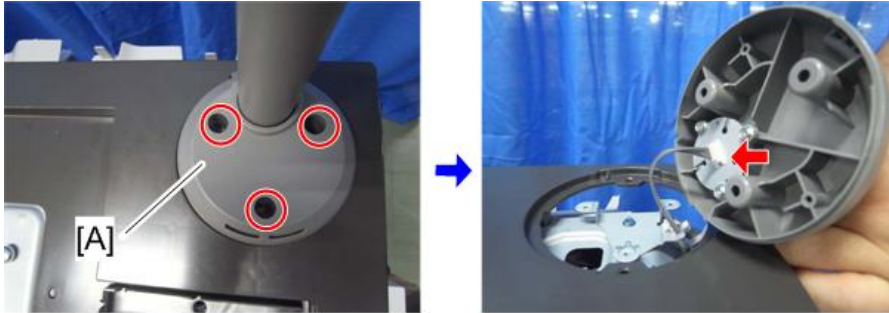


DF Position Sensor

1. ADF (🔌 page 558)
2. Upper rear small cover [A] (🔧 x 2)



3. Operator call light [A] (🔧 x 3, 📺 x 1)



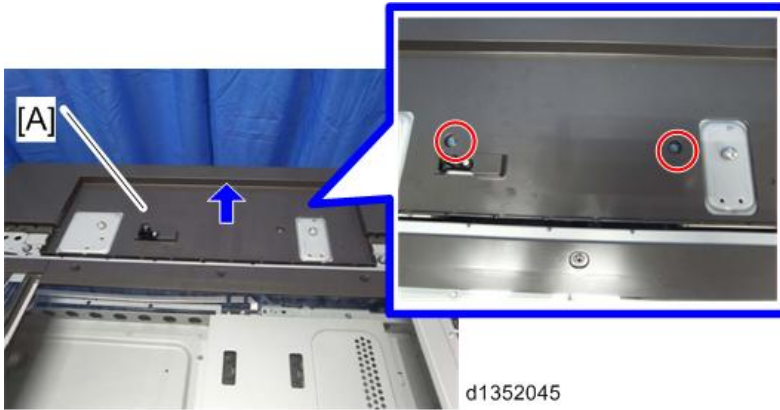
d1352044

Note

- The operator call light is not attached to D135/D136, so this step is not required.

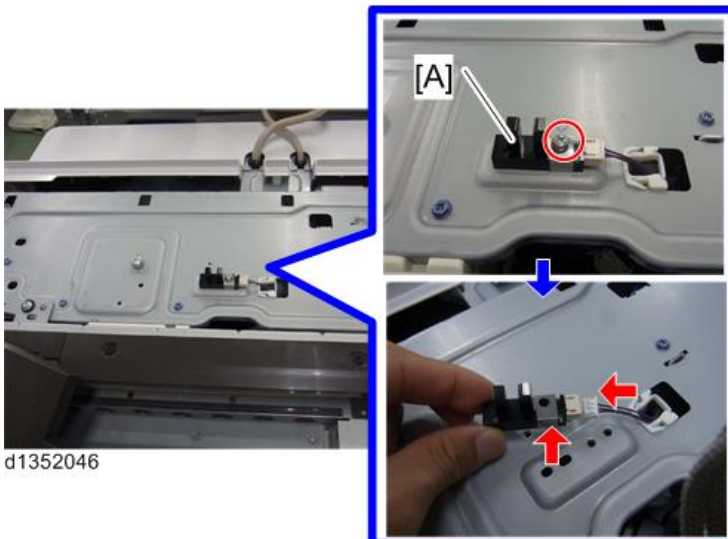
4

4. Upper rear cover [A] (🔧 x 2)



d1352045

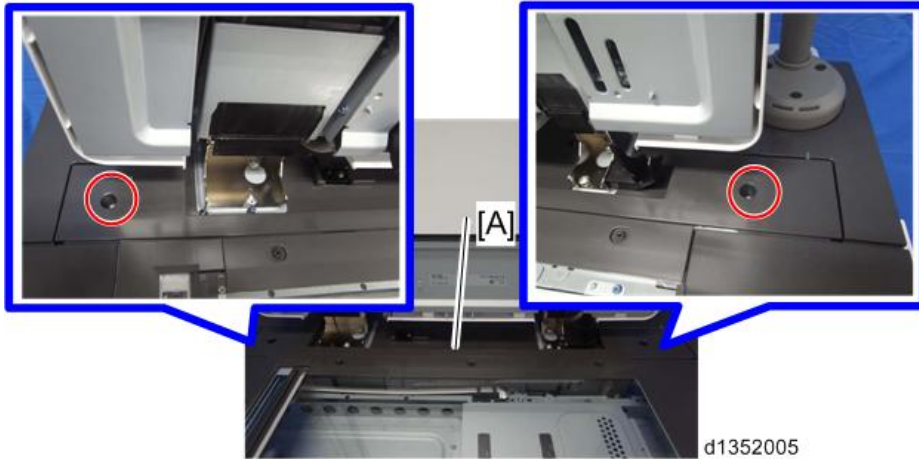
5. DF position sensor [A] (🔧 x 1, 📡 x 1, spring plate x 1)



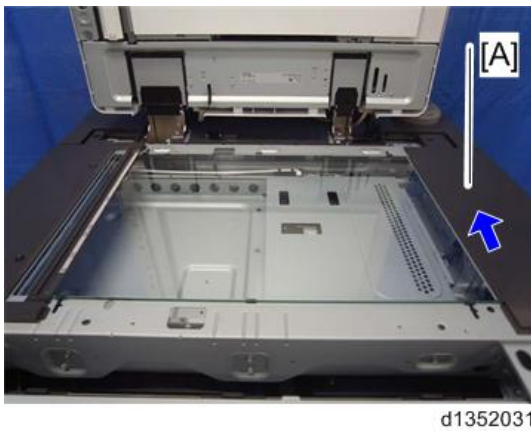
d1352046

SIO Board

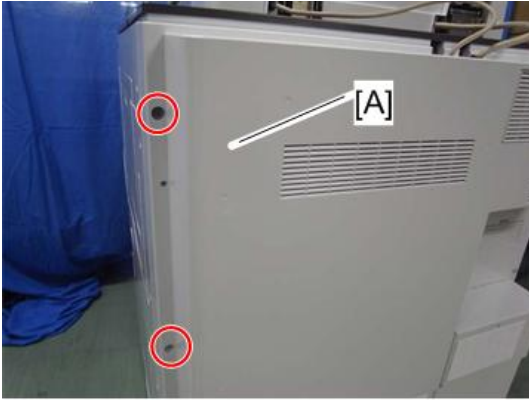
1. Upper rear small cover [A] (🔩 x 2)



2. Slide the upper right cover [A] toward the rear.



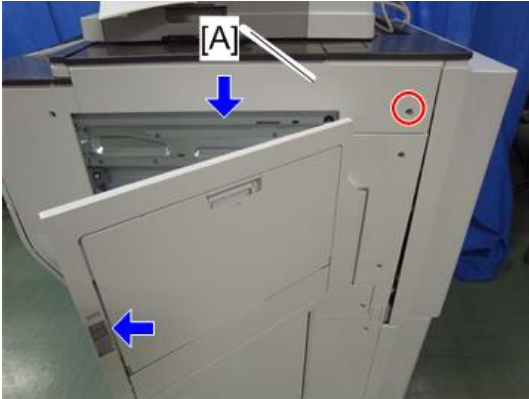
3. Remove the fixing screws on the right side of the rear middle cover [A] (🔩 x 2).



d1352195

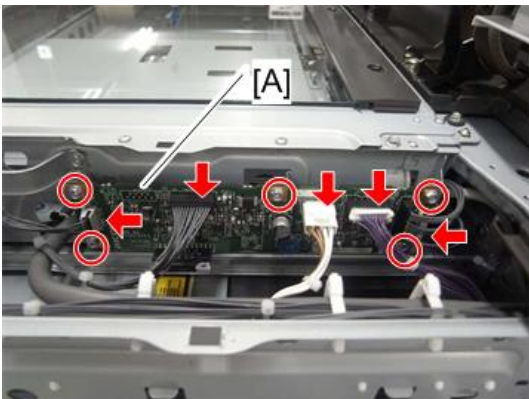
4

4. Open the by-pass tray unit, then remove the right middle cover [A] (🔩 x 1).



d1352196

5. SIO board [A] (🔩 x 5, 📡 x 5)



D1352038

Note

- The 5 screws for the SIO board are accessed from holes in the right frame of the machine.



d1352039

Scanner Unit

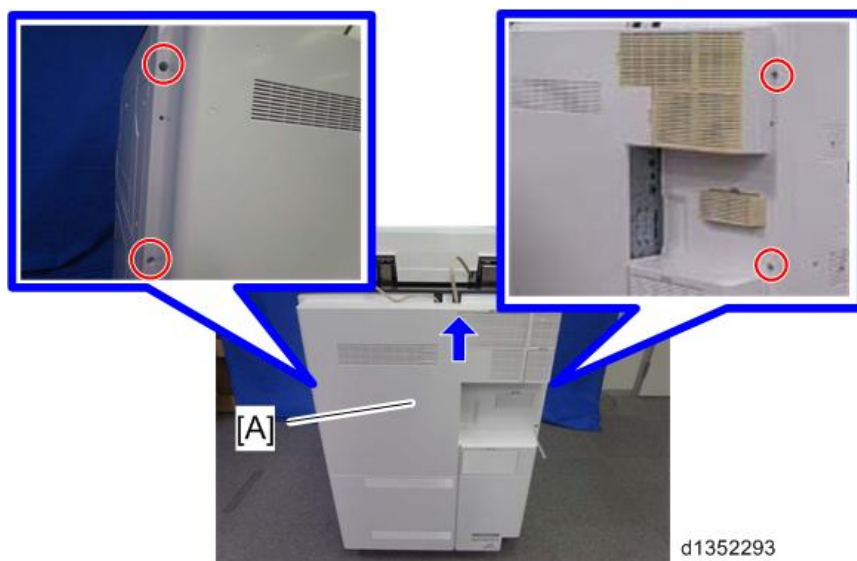
4

1. Upper left cover/ upper right cover (☛ page 542 "Upper Left Cover/ Upper Right Cover")

Note

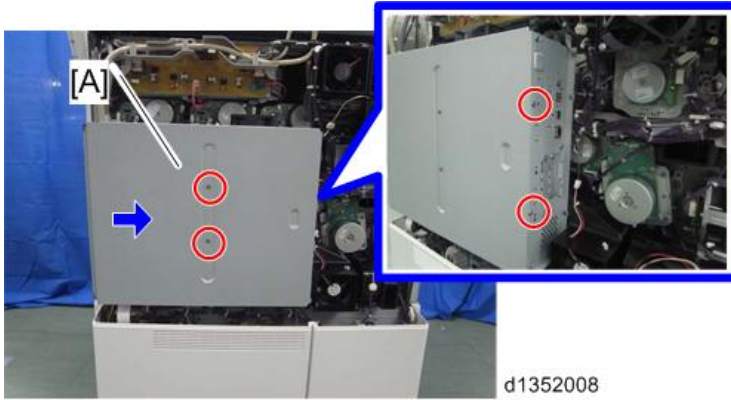
- In the case of D135/D136, also remove the operation panel. (☛ page 551 "Operation Panel")

2. Rear middle cover [A] (🔧 x 4)



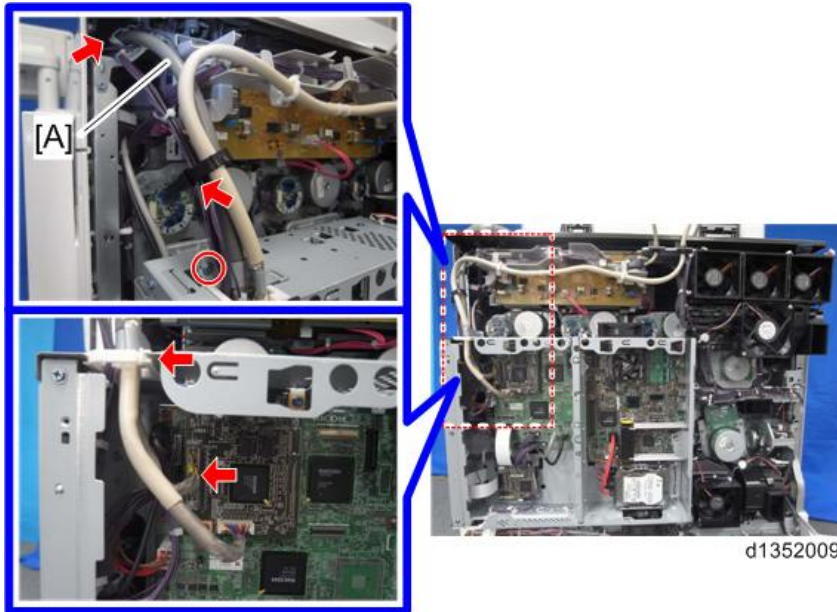
d1352293

3. Slide the controller box cover [A] to the right (🔧 x 4).



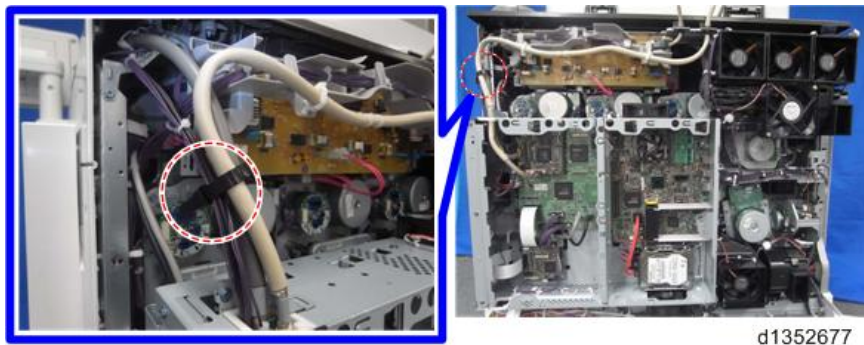
4

4. Disconnect the interface cable [A] from the rear of the machine (🔧 x 1, 🖨️ x 1, 🖨️ x 2, bind x 1).



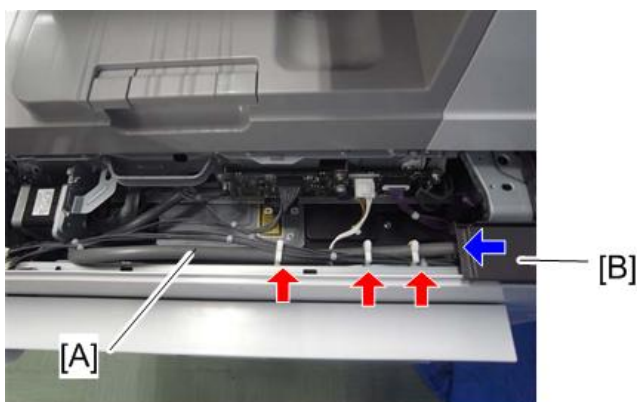
↓ Note

- When connecting the scanner cable, do not forget to attach the bind. As shown in the pictures below, the binding position should be in the middle of the cable.



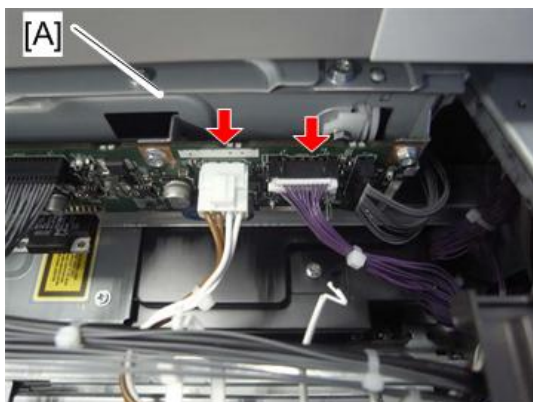
d1352677

5. Remove the interface cable [A] through the right side [B] of the machine (🔧 x 3).



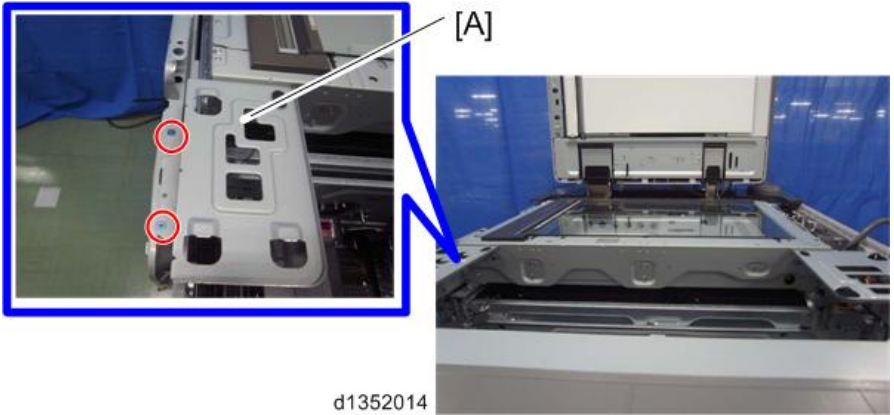
d1352010

6. Disconnect the connector of the scanner unit [A] (🔧 x 2).



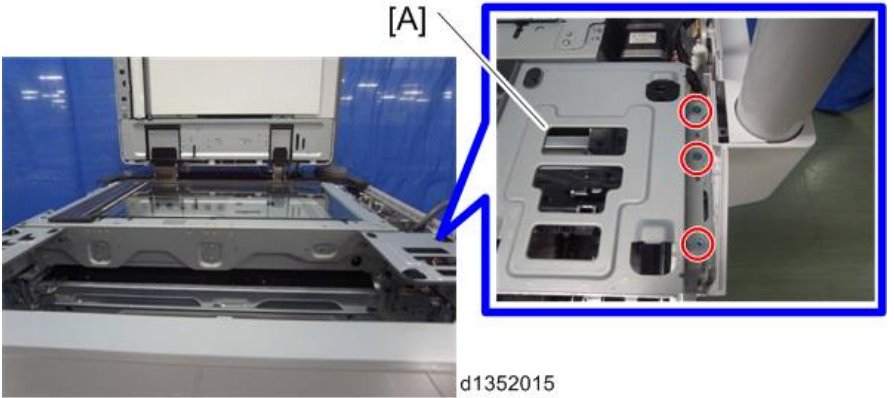
d1352011

7. Fixing screws on the left side stay [A] (🔧 x 2)



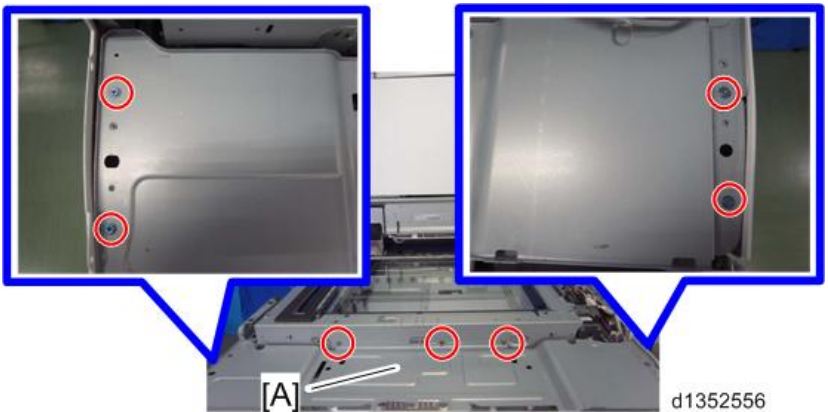
4

8. Fixing screws on the right side stay [A] (🔩 x 3)

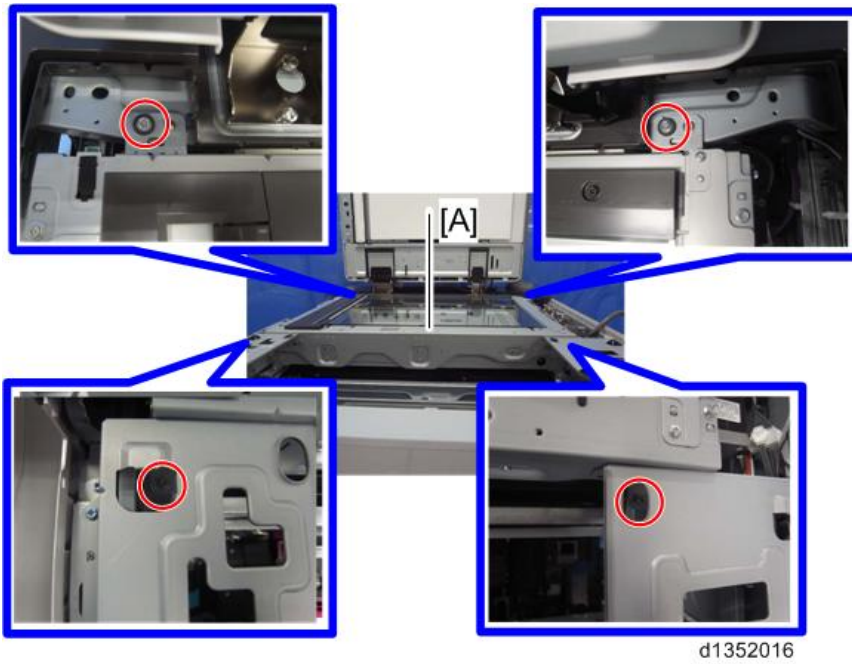


Note

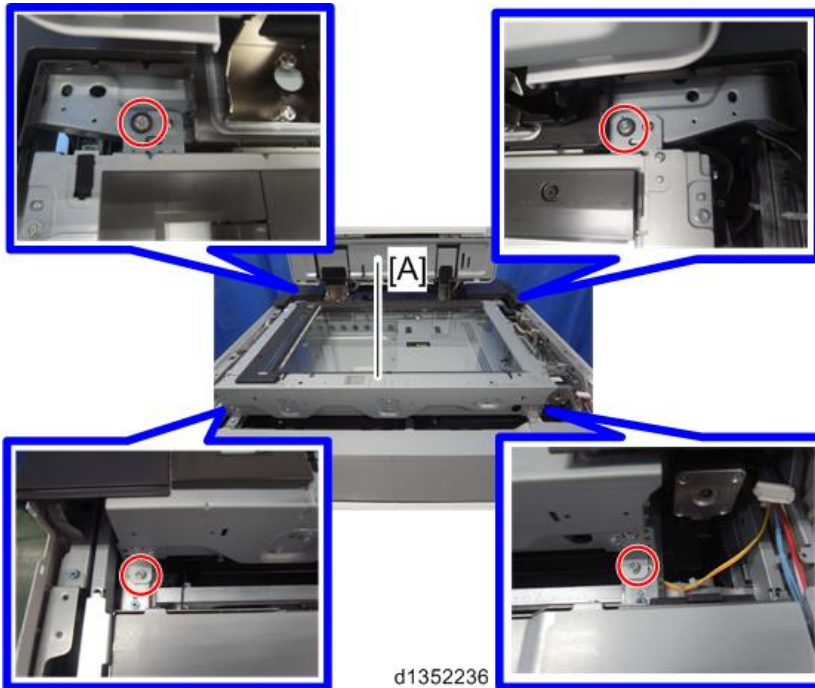
- For steps 7-8 in the procedure described above, in the case of D135/D136, remove the operation panel bracket [A] (🔩 x 7).



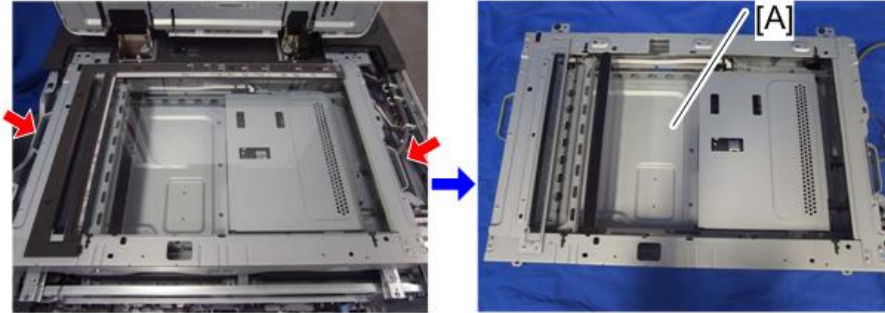
9. D137/D138: Scanner unit [A] (🔩 x 4)



D135/D136: Scanner unit [A] (⌀ x 4)



10. Hold the handles at the left and right, and remove the scanner unit [A] from the machine.



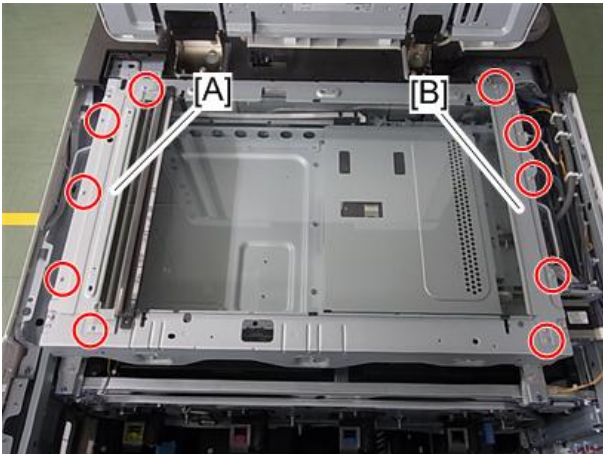
d1352584

4

Scanner Wire

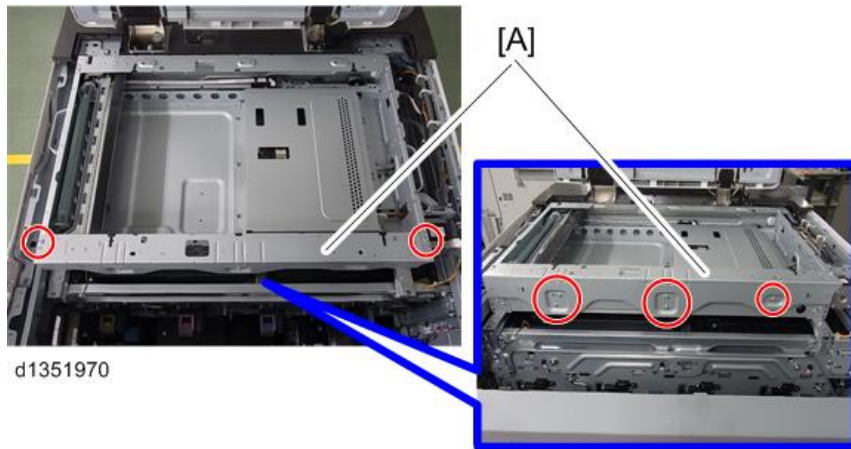
Preparation for Replacing a Scanner Wire

1. Exposure glass (☛ page 638)
2. Left stay [A] and right stay [B] (🔩 x 5 each)



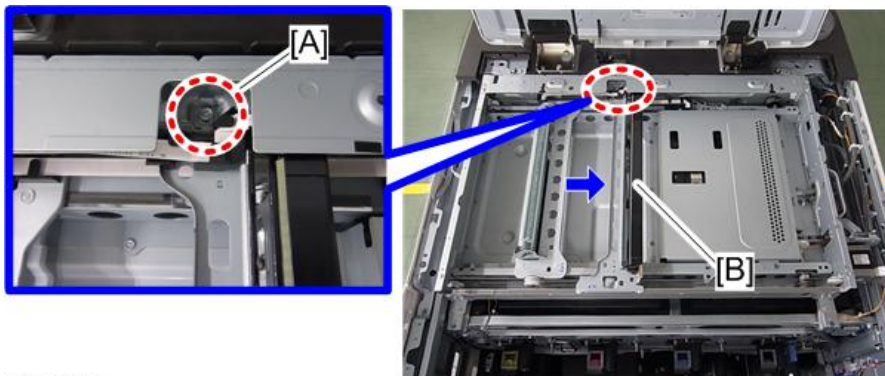
d1351969

3. Front frame [A] (🔩 x 7)

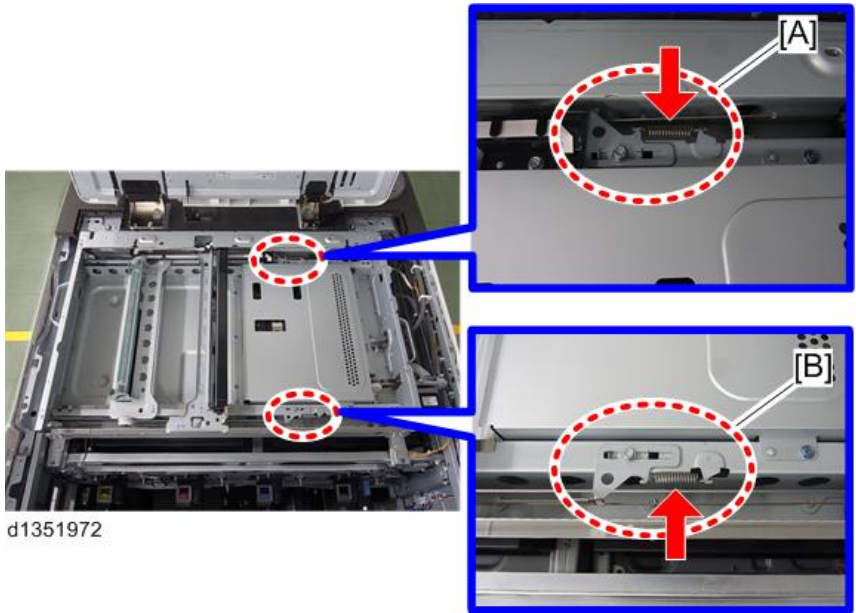


Replacing the Scanner Wire

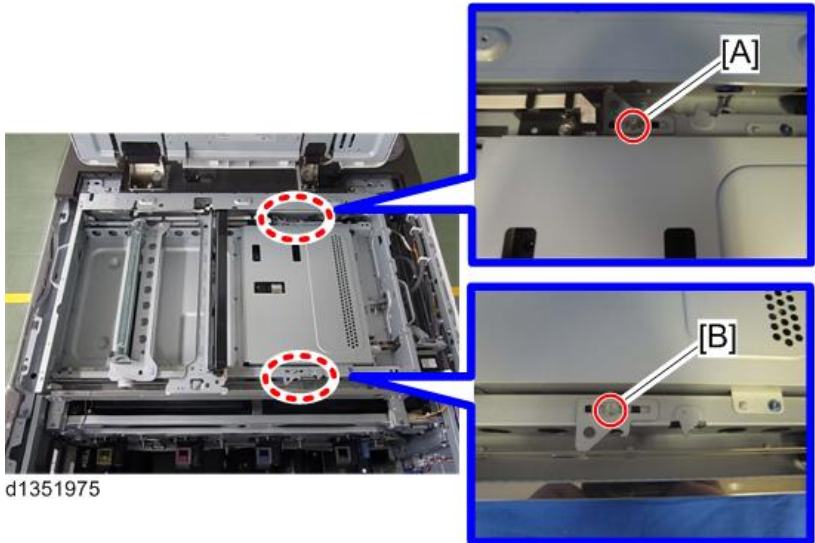
1. Move the 1st scanner carriage [B] to a position where the screw [A] of the bracket can be seen.



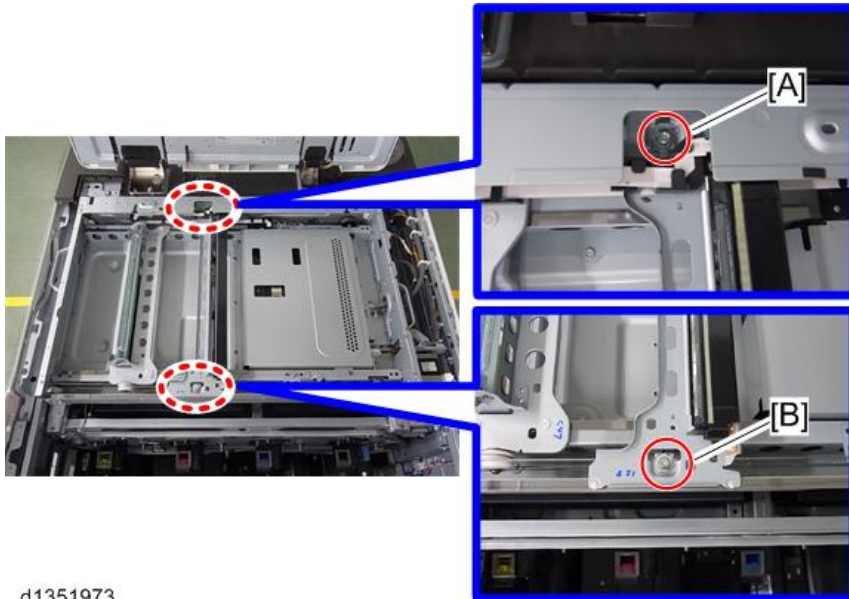
2. Remove the springs of the tension brackets (rear: [A] / front: [B]).



- 3. Loosen the fixing screws of the tension brackets (rear: [A] / front: [B]).

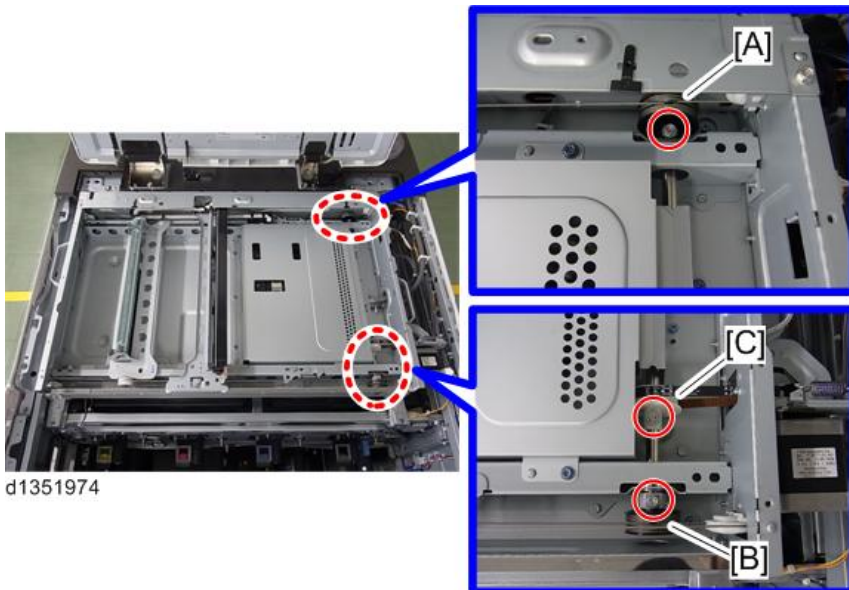


- 4. Remove the retaining brackets (rear: [A] / front [B]) from the wire (🔧 x 1 each).



d1351973

5. Remove the tip and the rear end of the wire (rear / front).
6. Unscrew the wire pulleys (rear: [A] / front [B]) and drive pulley [C]. Remove the wire pulleys from the shaft.



d1351974

7. Remove the rear and front wires.

Preparation for Reassembling the Scanner Wire

1. Pass the wire from the side where there is no projection on the pulley. [A]

2. Place the beads on the middle of the wire in the groove. [B]
3. Attach tape across the pulley to temporarily hold the wires in place. [C]



d1352592

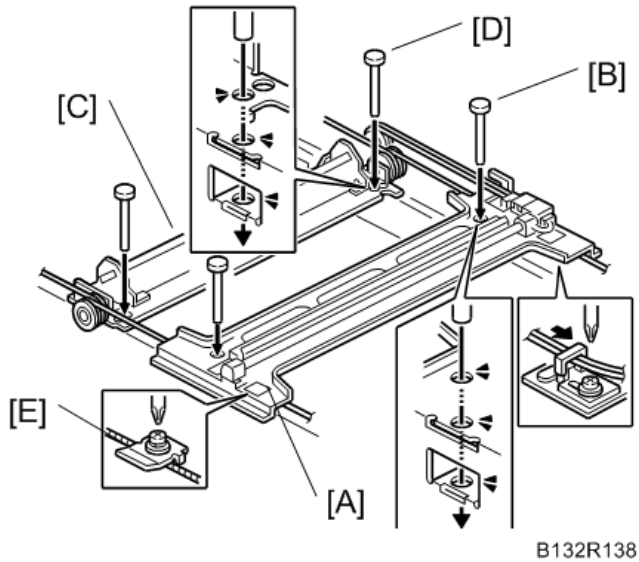
4

Reassembling the Scanner Wire

1. Remove the 1st scanner carriage from the scanner unit.
2. Position the 2nd scanner carriage with the positioning pins (part number: A1849501)
3. Set the wire pulley through the shaft. (Do not tighten the screw of the front side pulley yet.)
4. Turn the wire and remove the tape.
5. Set the spring. (Do not tighten the screw yet.)
6. Tighten the screw of the drive pulley.
7. Remove the positioning pins temporarily. Then move the 2nd carriage to fit in the wire.
8. Set the positioning pins again and tighten screws of the front pulley and tension bracket.

Note

- If the scanner does not move smoothly, and it is possible to set positioning pins, re-adjust using the above procedure.
9. Set the 1st scanner carriage with the positioning pins. Attach the retaining bracket. Then fix the wire and the carriage.



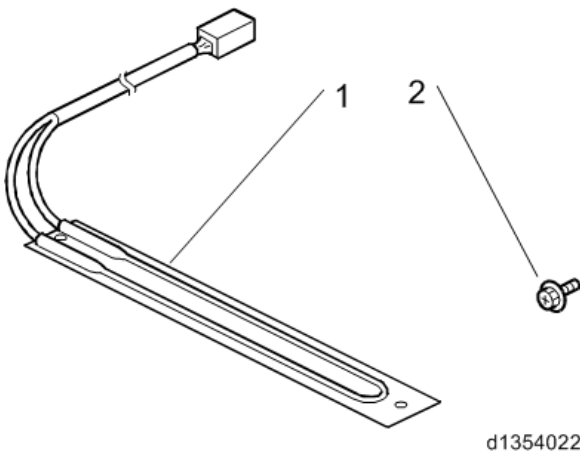
↓ Note

- If replacing anything other than the wire, adjust SP4-010-001 (Sub Scan Registration Adj).

Installing the Scanner Heater

Accessories

Check the accessories against the list below.



No	Description	Q'ty
1	Heater	1

No	Description	Q'ty
2	Tapping Screw - M3x6	2

Note

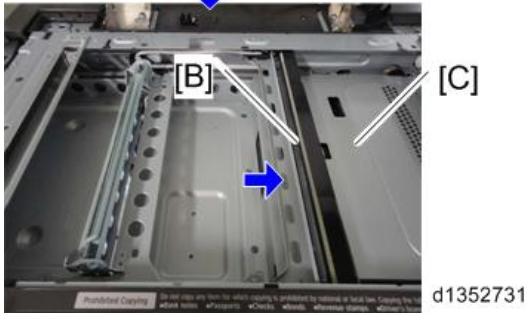
- The part number for the scanner heater is the same across all models except the D135-17. See the table below. Also see D137 RTB 119

Model	Area	Voltage	Part number
D135-17	NA	120 to 127V	B2291678
D135-21	CHN	220 to 240V	D1381688
D135-27	EU	220 to 240V	D1381688
D135-29	AP	220 to 240V	D1381688
D136-17	NA	208 to 240V	D1381688
D136-21	CHN	220 to 240V	D1381688
D136-27	EU	220 to 240V	D1381688
D136-29	AP	220 to 240V	D1381688

Installation

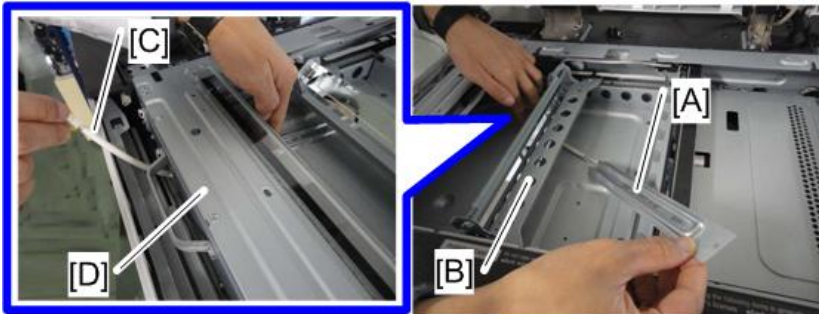
CAUTION

- Unplug the machine power cord before starting the following procedure.
 - Do the following procedure not to damage any harnesses.
 - Check that all harnesses are not damaged nor pinched after installation.
- Exposure Glass (👉 page 638)
 - Left middle cover (👉 page 532)
 - First, turn the gear [A] and move the 1st scanner carriage [B] to the position of the lens cover [C].



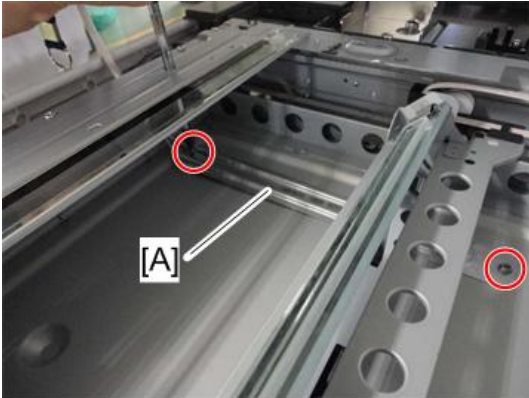
d1352731

4. Pass the scanner heater [A] under the 2nd carriage [B]. Then put the connector [C] from the left side of the scanner unit [D].



d1352732

5. Attach the scanner heater [A] (2 x).



d1352733

4

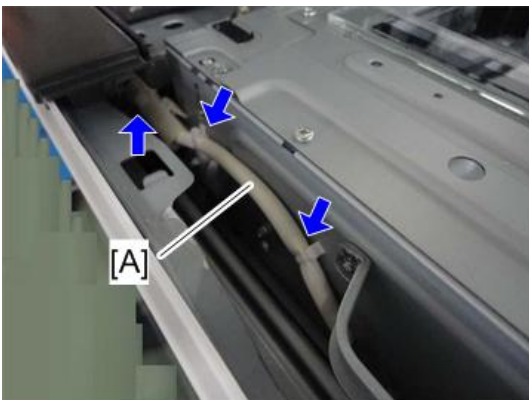
Note

- The screw on the left side of the scanner heater is accessed from the scanner frame.



d1352735

6. Connect the connector [A] of the scanner heater to the machine (🔌 x 1, 🖨️ x 2).



d1352734

Magnification and Registration Adjustment

Sub Scan Magnification Adjustment

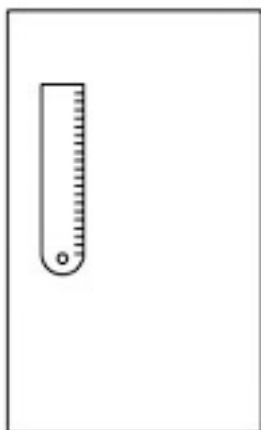
Measuring Tool

150 mm scale

Adjustment Method

Copy the scale and check that the length of the 100 mm scale on the copy is the same as the original, within the standard value ($\pm 0.8\%$) for a 100 mm scale.

It should be measured 10 minutes after the copy has been fed out.



Adjustment Procedure

1. Enter SP mode.
2. Select SP4-008.

If you decrease the adjustment value, this will increase the scanner speed, and the output image is compressed in the feed direction.

If you increase the adjustment value, this will decrease the scanner speed, and the output image is extended in the feed direction.

Sub Scan Registration Adjustment

Measuring Tool

C4 chart

Adjustment Method

Copy the C4 chart. Check whether there is an image in the center of the paper.

Adjustment Procedure

1. Enter SP mode.
2. Select SP4-010.

The image is moved downward by increasing the adjustment value.

The image is moved upward by decreasing the adjustment value.

Main Scan Registration Adjustment

Measuring Tool

C4 chart

Adjustment Method

Copy the C4 chart. Check whether there is an image in the center of the paper.

Adjustment Procedure

1. Enter SP mode.
2. Select SP4-011.

The image is moved to the right by increasing the adjustment value.

The image is moved to the left by decreasing the adjustment value.

Laser Unit

Before You Begin

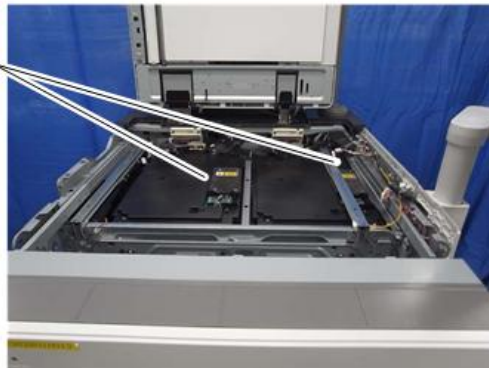
WARNING

- This laser unit employs 80 laser beams produced by a Class III LD with a wavelength of 772 to 792 nm and intensity of 1.4 mW (40 beams). Direct exposure to the eyes could cause permanent blindness.
- Before adjusting or replacing the laser unit, push the main power switch to power the machine off then unplug the machine from the power source. Allow the machine to cool for a few minutes. The polygon motor continues to rotate for approximately one to three minutes after the machine is switched off.
- Do not turn on the power when the laser unit and the polygon cover are not installed. Ensure that after assembly, the polygon cover is completely closed.
- Do not turn on the power when the synchronization detectors are disconnected. Ensure that after assembly, the synchronization detectors are set correctly.

4

Caution Decals

D137/D138, D135/D136



d1352820

D135/D136 only



Laser Unit

Note

- Each laser unit is composed of two laser diode assemblies.

Before Replacement

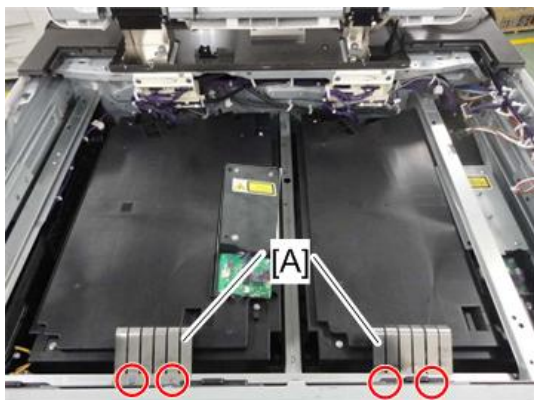
1. Plug in the power cord, and then turn ON the main power switch.
2. Reset the motors for skew adjustment to the zero point with the following SPs:
 - SP2-104-002: set to "0"
 - SP2-104-003: set to "0"
 - SP2-104-004: set to "0"

Note

- If you do not do the above adjustment, MUSIC may not work. This is because one or more of the motors may be at or near the upper or lower limit (± 50). In such a case, if you do not zero the motor positions before MUSIC is done, the range that the motor can move will be restricted and the adjustment may not be done correctly.

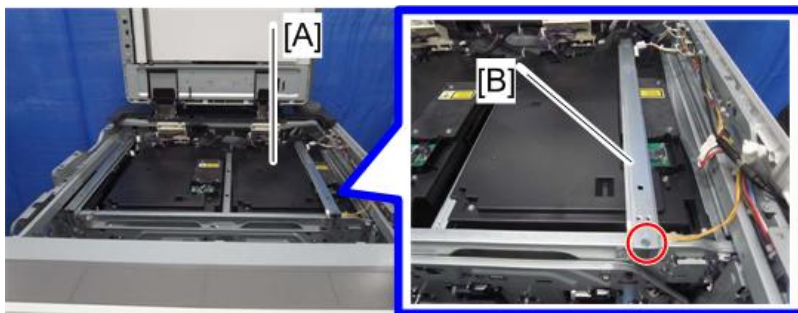
Replacement

1. Scanner unit (🖨️ page 655)
2. Spring plates [A] (🔩 x 4)



d1352702

3. For the Laser unit (CK) [A], remove the stay [B] first. (🔧 x 1)



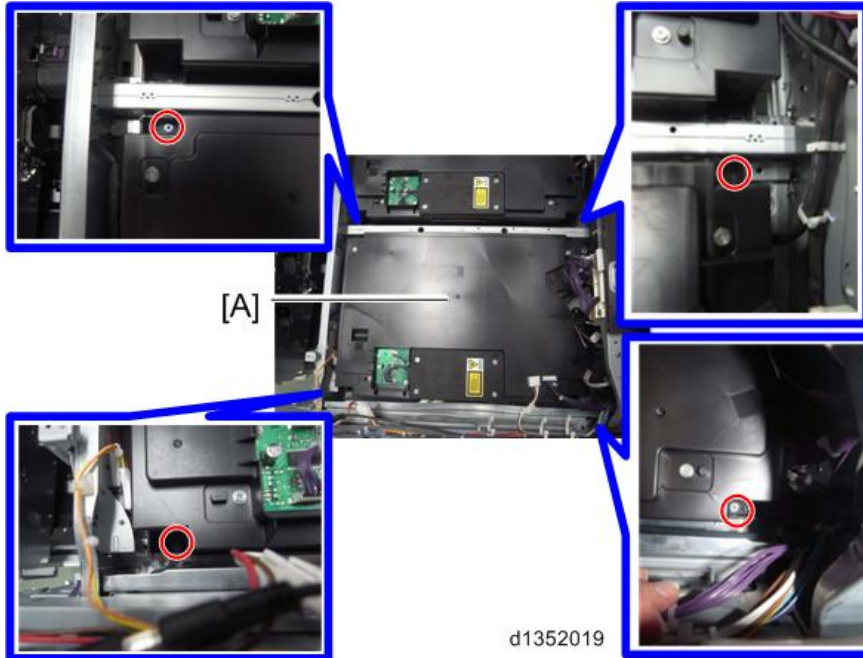
d1352017

4. Remove the connectors from the laser unit [A]. (🔧 x 4; includes a USB connector)
e.g.: CK



d1352018

5. Laser unit [A] (🔧 x 4)
e.g.: CK



4

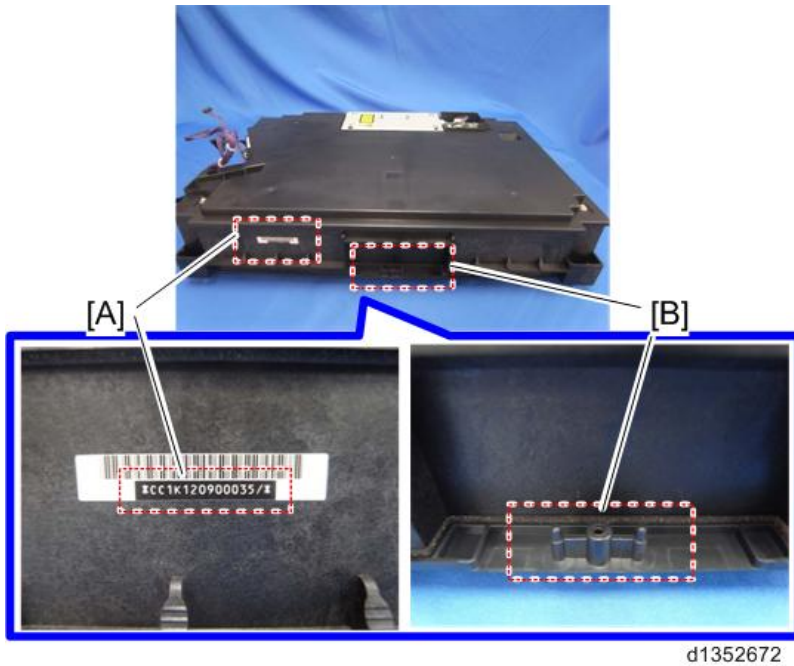
6. Grasp the handles on the left and right, and lift out the laser unit.

How to Distinguish between the CK Laser Unit and YM Laser Unit

CK Laser Unit

Bar code label [A]: White characters on black background

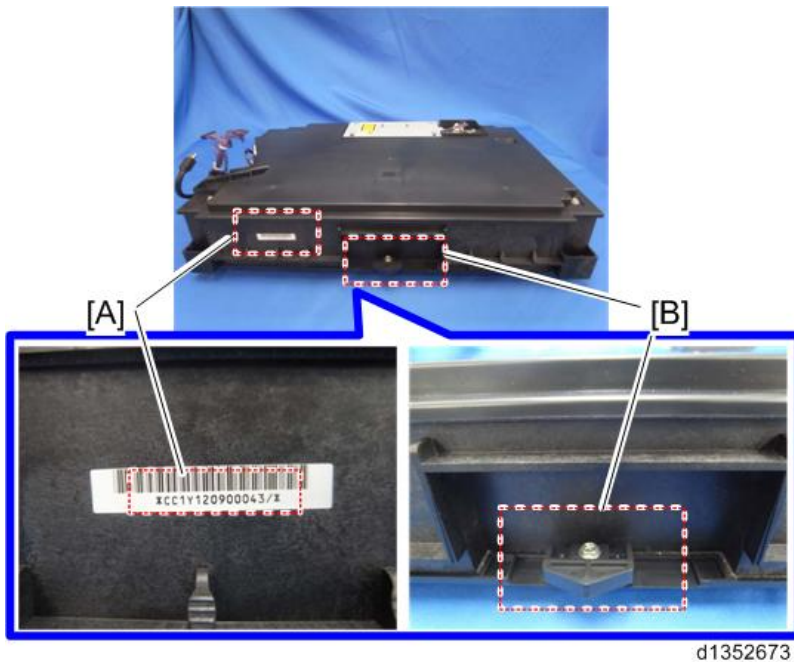
Bottom center [B]: No screws



YM Laser Unit

Bar code label [A]: Black characters on white background

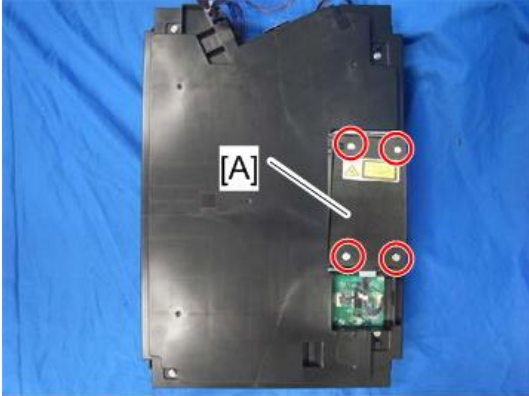
Center bottom [B]: A pentagonal protrusion is screwed in



Notes on Installation of a New Laser Unit

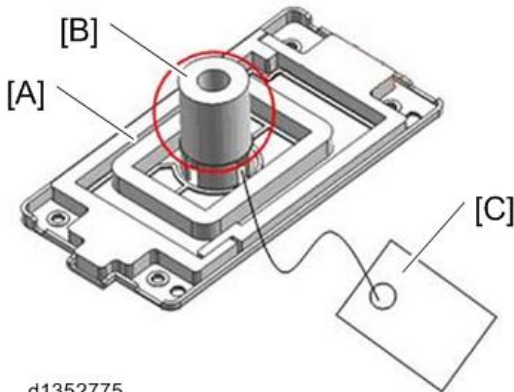
The polygon mirror of the new laser unit is protected by fall prevention materials. Therefore, when installing the unit in the machine, it is necessary to remove the materials

1. Remove the polygon cover [A] (🔩 x 4).



d1352774

2. Turn over the polygon cover [A], remove the fall prevention materials [B] and the red tag [C].



d1352775

3. Attach the polygon cover to the laser unit (🔩 x 4).

Adjustment after Laser Unit Replacement

Do the following steps.

1. Plug in the power cord, and then turn ON the main power switch.
2. Execute the following SPs to download the correction values from the new laser unit.
 - SP2-108-1: Image Parameter-K/C Writing Unit
 - SP2-108-2: Image Parameter-Y/M Writing Unit

Note

- During the download of the correction values, you can turn off the power, or open the door.
 - If an SC or a display of "failure" occurs, you can run the download again after turning the power OFF and ON.
3. Correct the color registration with the User Tools.
[User Tools/Counter/Inquiry]-[Management]-[Color Registration]-[OK]
 4. If necessary, adjust the registration, skew, and magnification. For information about how to adjust, refer to Adjustment in Troubleshooting. (page 1347 "Adjustment")

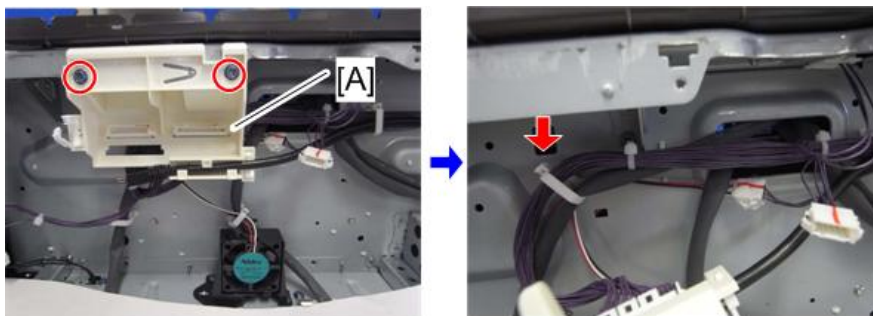
Laser Unit Cooling Fan (Left / Right)

4

1. Laser unit (page 672)

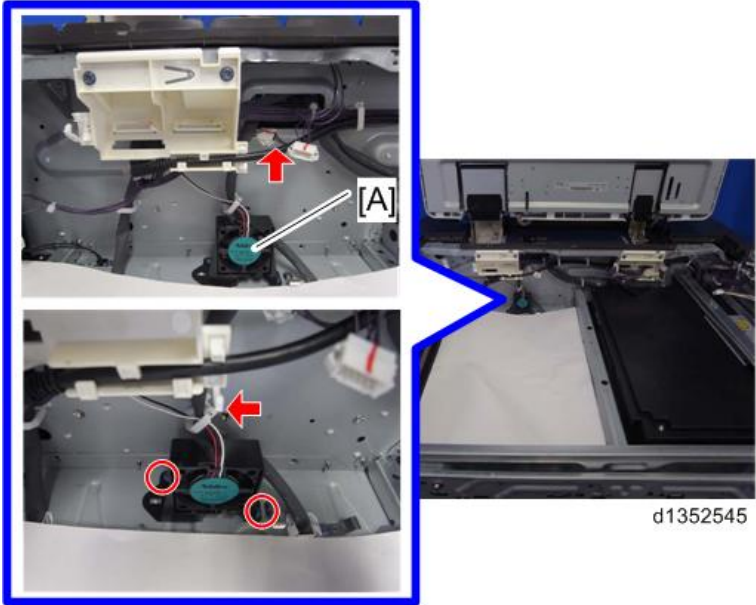
Note

- Remove the laser unit cooling fan (left) after removing the laser unit (YM).
 - Remove the laser unit cooling fan (right) after removing the laser unit (CK).
2. For the laser unit cooling fan (left), first, remove the cover [A] (x 2), and then remove the clamp of the cooling fan cord.

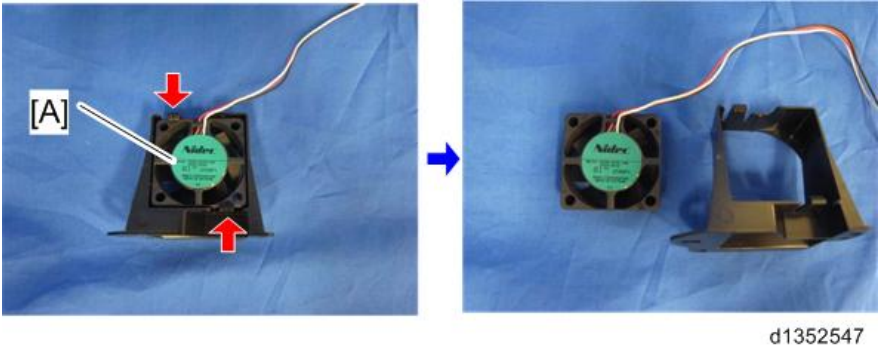


d1352546

3. Laser unit cooling fan along with the bracket (x 2, x 1, x 1)
e.g.: Left

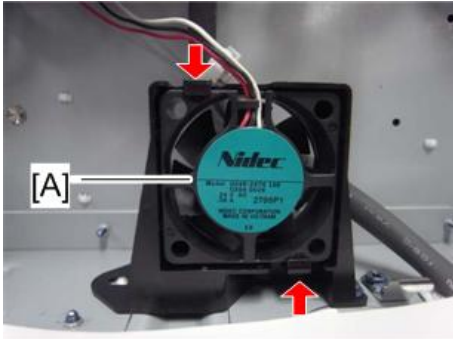


4. Laser unit cooling fan [A] (hook x 2)



Note

- It is also possible to leave the bracket on the machine side, and remove the laser unit cooling fan [A] only.

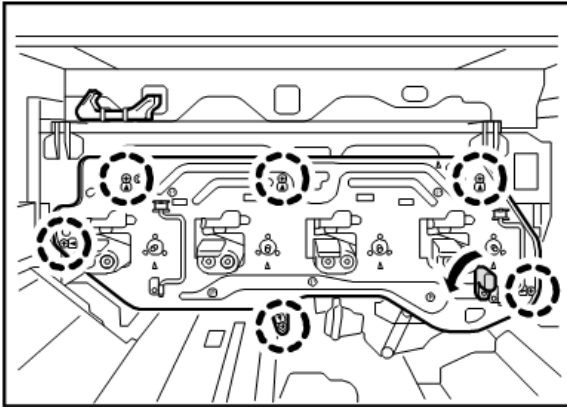


d1352548

PCDU

Faceplate

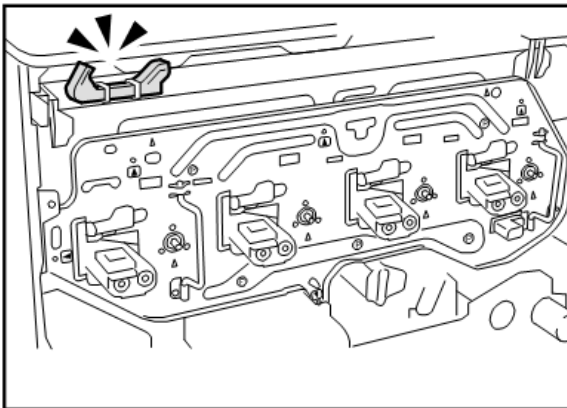
1. Toner supply unit (☛ page 624)
2. Turn the transfer belt release lever counterclockwise and remove the fixing screws of the faceplate (🔩 x 6*).



d1352793

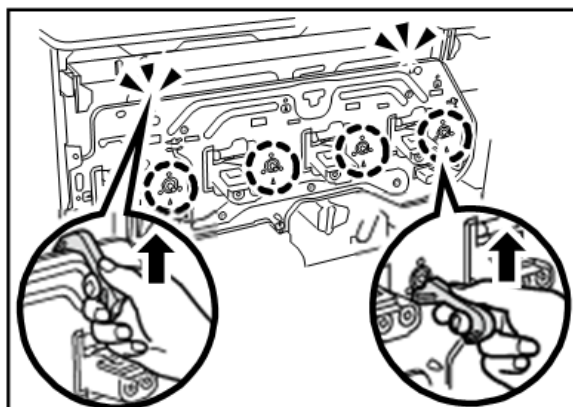
* D137/D138 use TCRU/ORU screws

3. Take off the handles.



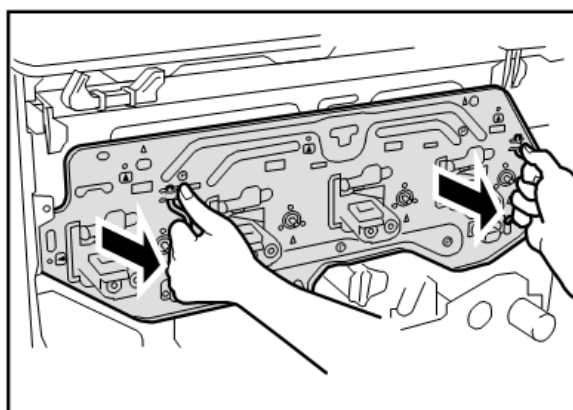
d1352794

4. Pull out the units using the handles in the circled areas as shown below. Pull out little by little over the entire surface uniformly throughout.



d1352795

5. Remove the faceplate with the grips.



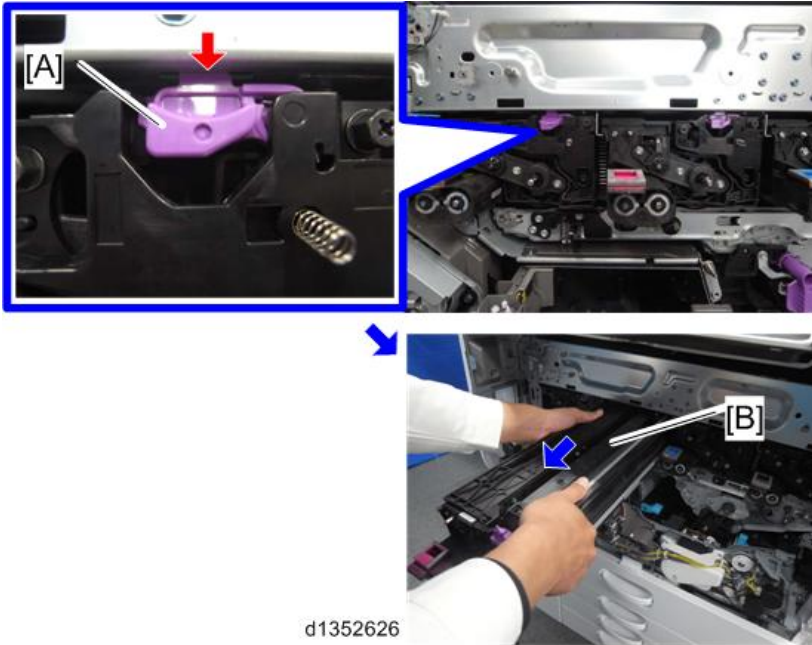
d1352796

★ Important

- Do not close the drawer unit with the faceplate removed, because there is a risk of damage to the paper transfer roller unit.

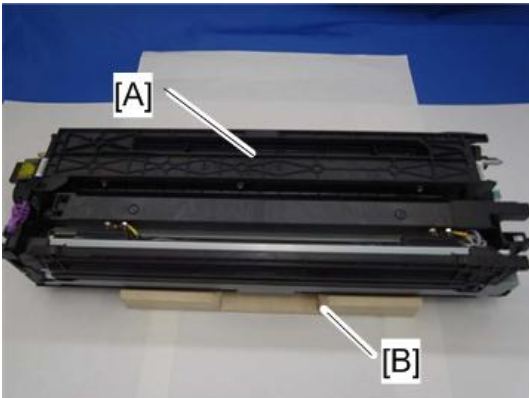
PCDU

1. Faceplate (☞ page 680)
2. Unlock the lever [A] and pull out the PCDU [B] from the machine.



d1352626

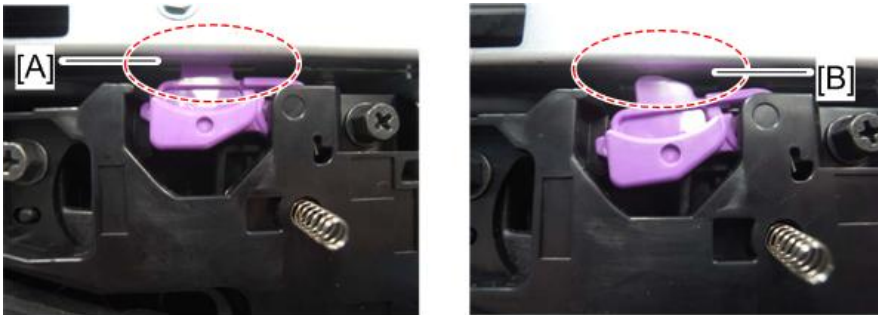
3. Place the PCDU [A] on the cradle [B] that was laid down on paper in advance.



d1352627

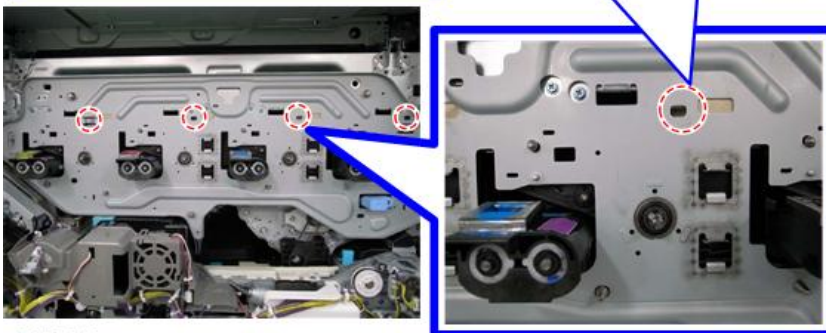
Note

- When installing the PCDU, ensure that the locking lever is fit in the hole of the machine frame.
[A]: The locking lever is properly fit in the hole in the machine frame.
[B]: The locking lever is not properly fit in the hole in the machine frame.



d1352628

- After installing the faceplate, check the status of the locking levers again by looking through the holes as shown below. The levers should be straight, as shown above [A], and not at an angle [B]. However, some force is required to attach the faceplate, and this could knock the levers out of their horizontal alignment.

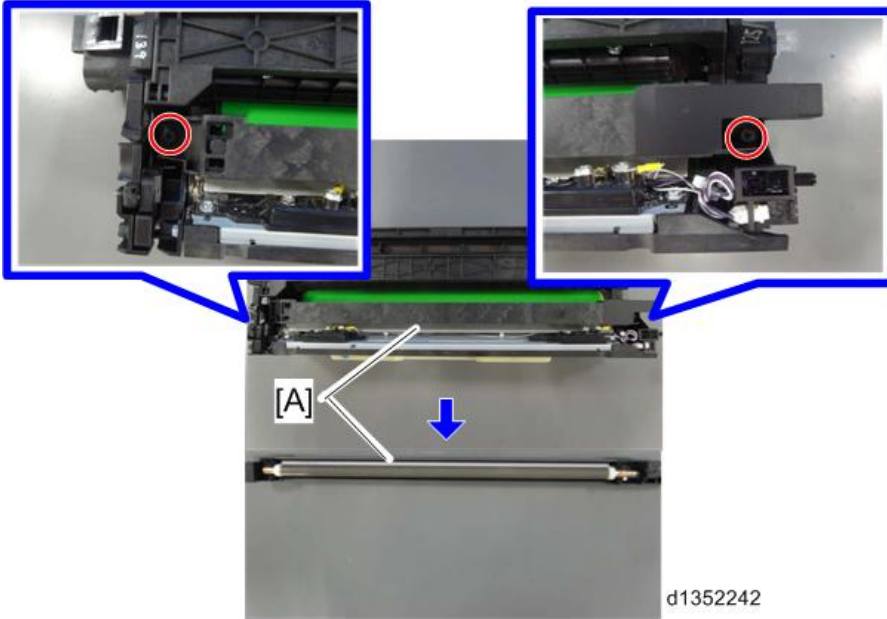


d1352640

- D137/D138: After you take the PCDU out of the machine and put it back, or replace it with a new one, carry out SP3-040-001 to SP3-040-005 (DEMS: Execute).

Charge Roller Unit

1. PCDU (🔧 page 681)
2. Charge roller unit [A] (🔧 x 2*)



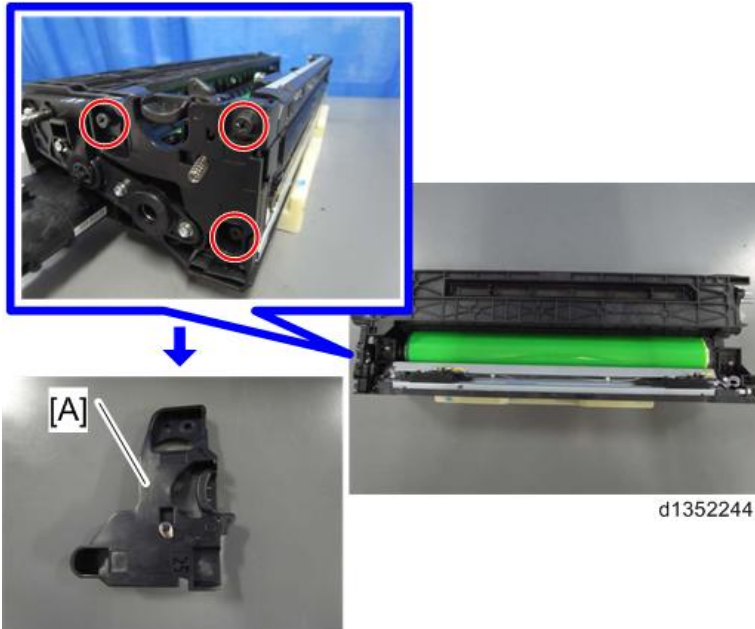
* D137/D138 use TCRU/ORU screws

Note

- After removing the charge roller unit, place it on a clean, flat surface with the roller facing up.

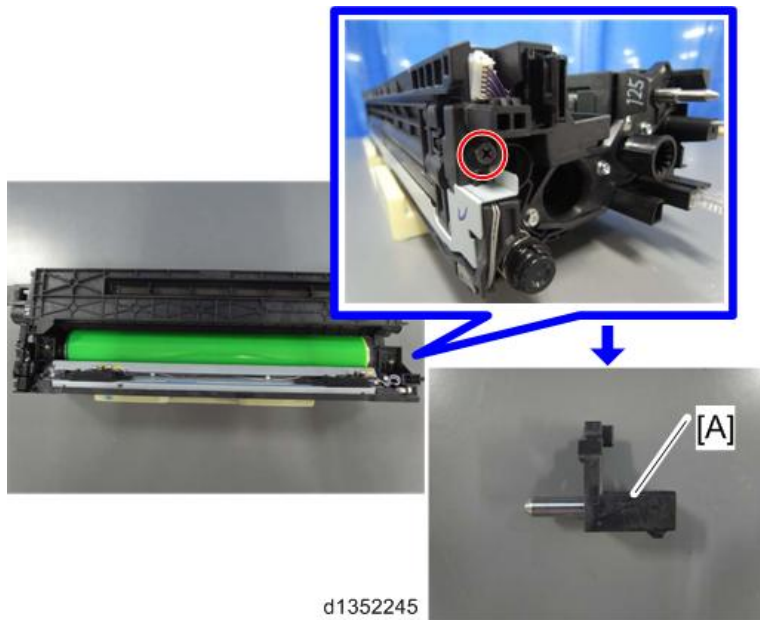
Drum Cleaning Unit Removal

1. PCDU (👉 page 681)
2. Front faceplate [A] (🔩 x 3*)



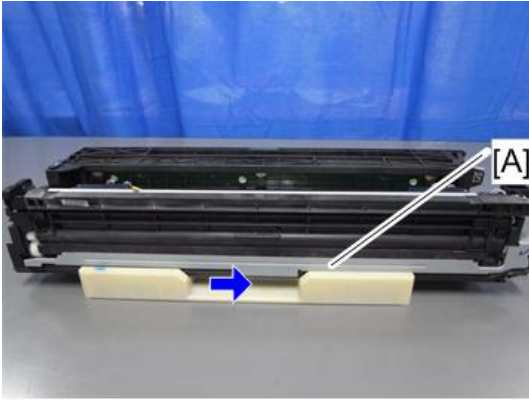
* D137/D138 use TCRU/ORU screws

3. Spopper [A] at the rear (1 x 1*)



* D137/D138 use a TCRU/ORU screw

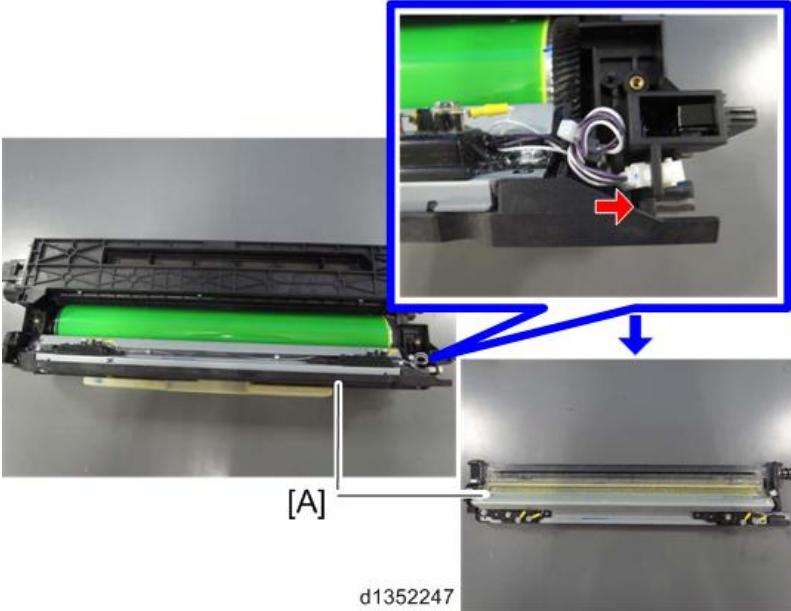
4. Slide the bracket [A] to the rear.



d1352246

4

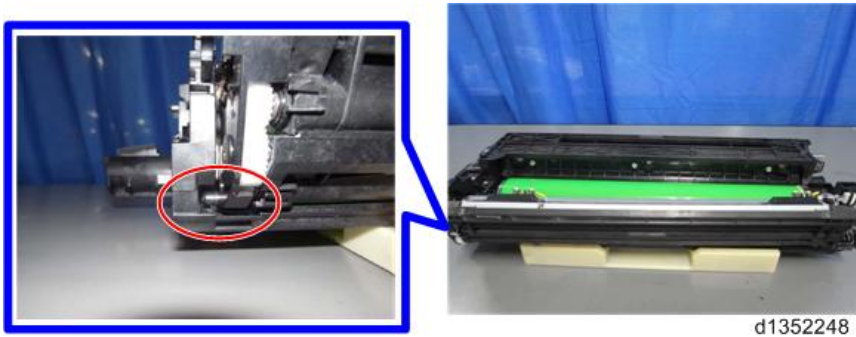
5. Drum cleaning unit [A] (☞ x 1)



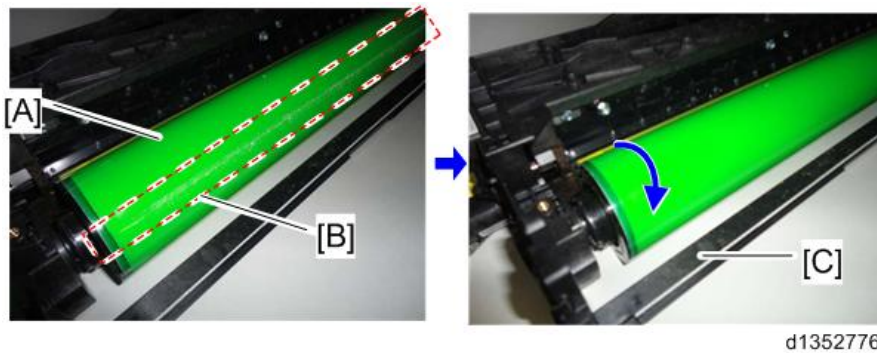
d1352247

↓ Note

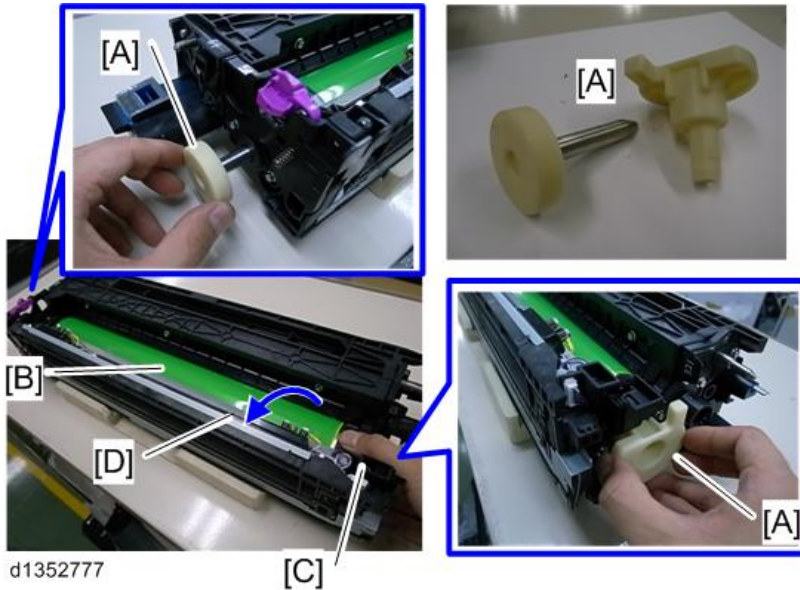
- When installing the drum cleaning unit, ensure that it (the front side) is fit into the grooves of the development unit.



- After removing the cleaning unit, lubricant and toner streaks [B] remain on the surface of the OPC drum [A]. This will cause stains on the charge roller. Therefore, rotate the OPC drum in the direction of the arrow [C] before you install the new drum cleaning unit.



- After replacing the cleaning unit, attach the special tools [A] to the OPC drum (these are shipped with the cleaning unit). With the flange [C], rotate 1-2 times in the direction of the arrow [D].



Notes on Replacing the Drum Cleaning Unit and Drum Cleaning Blade

Do not replace the drum cleaning unit or the drum cleaning blade at the same time as the following parts.

- ITB
- ITB Cleaning Unit
- ITB Cleaning Blade
- ITB Lubricant Bar
- ITB Lubricant Blade

After replacing the drum cleaning unit or the drum cleaning blade, cleaning initial setting is performed automatically. On the other hand, after replacing the above five parts, you need to run SP2-696-001 (Force Apply Lubricant Execute) manually before cleaning initial setting runs. (▶ page 724 "Lubrication after replacement"). This is because, if cleaning initial setting runs automatically before running SP2-696-001 (Force Apply Lubricant Execute) manually, the ITB cleaning blade will be turned up

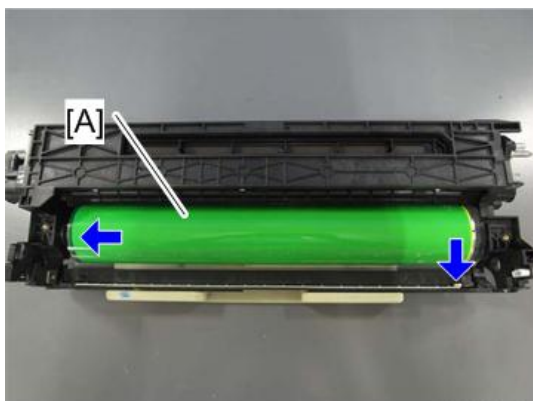
If you need to replace the above five parts at the same time as replacing the drum cleaning unit or the drum cleaning blade, use the following procedure.

1. Clear the counter of the drum cleaning unit or the drum cleaning blade.
2. Replace the drum cleaning unit or the drum cleaning blade. (The cleaning initial setting automatically runs)
3. Clear the counters of the above five parts

4. Replace the above five parts
5. Run SP2-696-001 (Force Apply Lubricant Execute) manually

OPC Drum

1. Charge roller unit (☛ page 683)
2. Drum cleaning unit (☛ page 684)
3. To remove the drum [A], move it to the front side (to the left as shown above), then pull it out from the rear side (the right side as shown above).



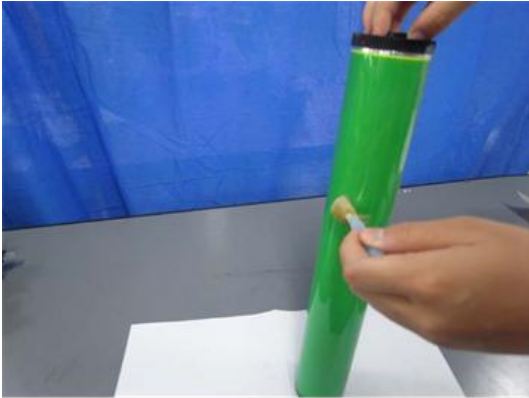
d1352243

↓ Note

- After removing the OPC drum, place it on a clean, flat surface.

Attaching the New OPC Drum

1. When replacing, apply the lubricant powder (D0159501) (zinc stearate) evenly with a brush to the OPC drum.



d1352264

4

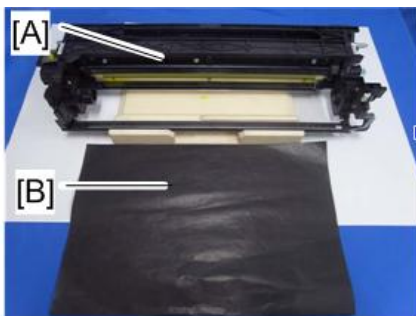
Note

- Use the blower brush (D0747690) when applying lubricant powder (zinc stearate) to the OPC drum.



d135a3512

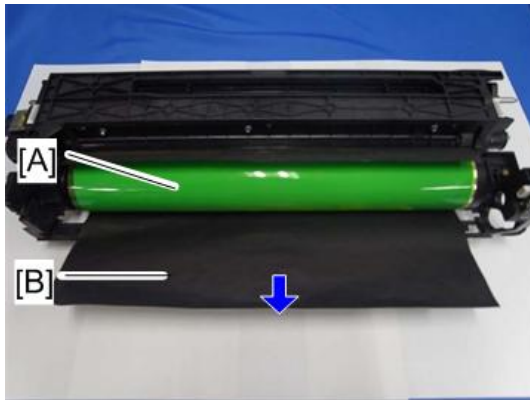
2. Lay the protective sheet (black) [B] that had been wrapped around the new OPC drum on the development unit [A].



d1352753



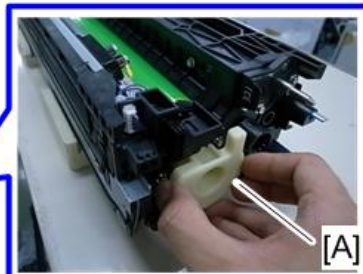
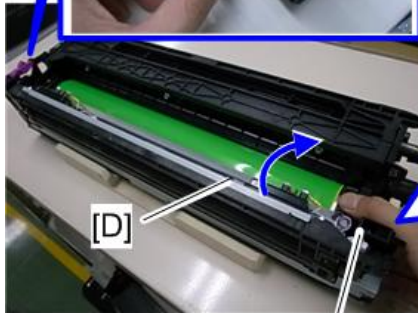
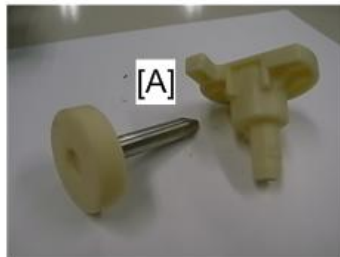
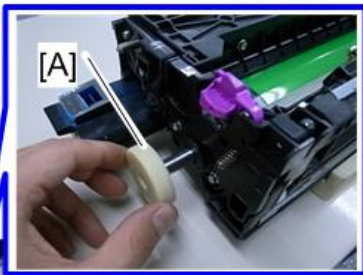
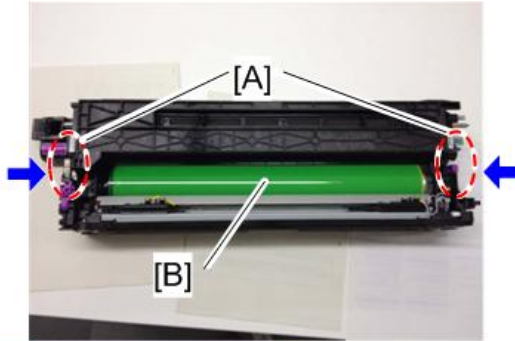
3. Attach the new OPC drum [A] and remove the protective sheet (black) [B] from the bottom.



d1352754

Note

- The surface of a newly replaced drum needs to be lubricated. In the lubrication process where the drum is manually rotated, the two tools [A] function to fix the shaft so that the drum rotates precisely on its axis.
- Attach the tools [A] to the front and rear sides of the drum [B].
- Make sure the tools are inserted all the way in. Hold the flange [C] and rotate the drum in the direction toward the development unit [D].
- The two tools [A] are accessory parts of the machine.



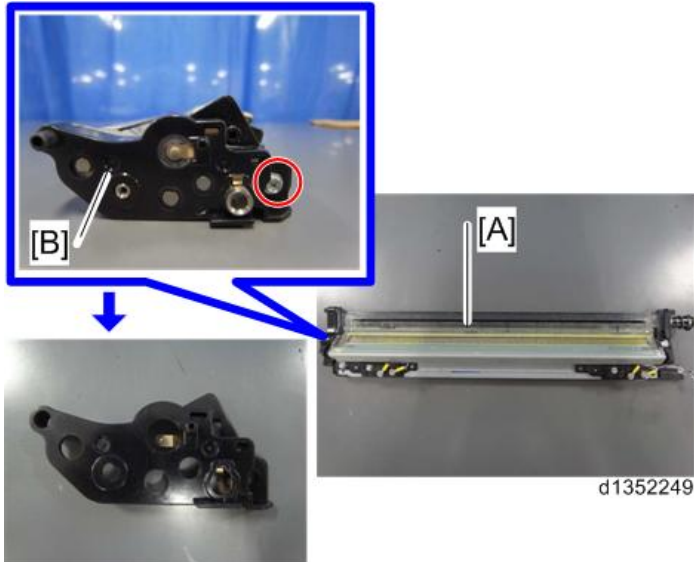
d1353510

[C]

Drum Cleaning Unit Internal Components

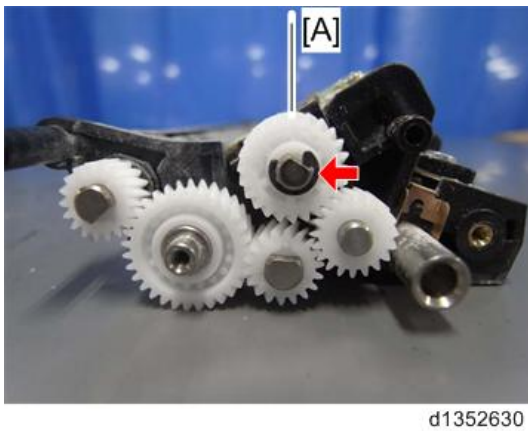
Separation of the Lubrication Unit and Cleaning Unit

1. Drum cleaning unit (☛ page 684)
2. Front cover [B] of the cleaning unit [A] (🔩 x 1)

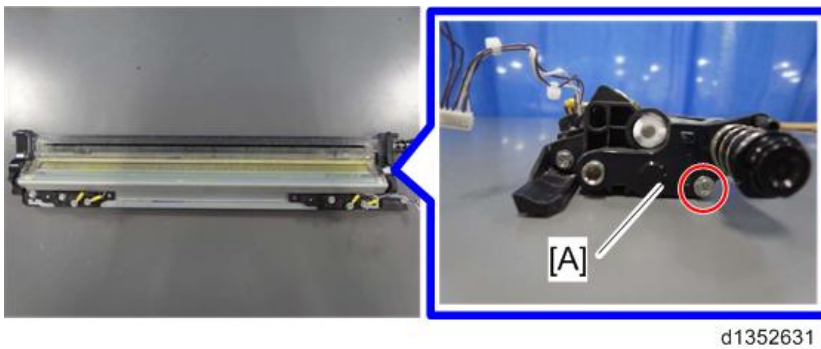


4

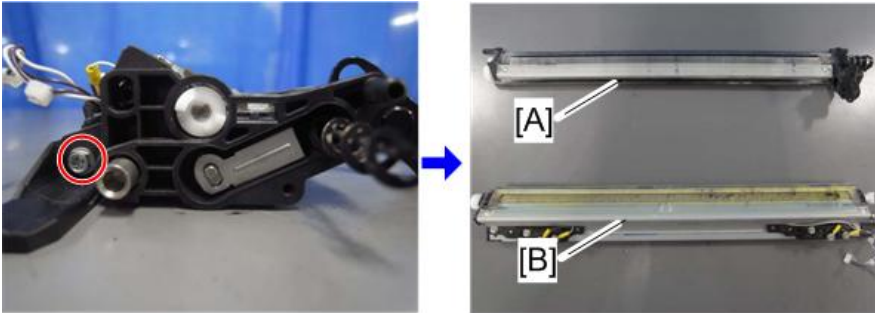
3. Remove the following five gears (gear [A]: \odot x 1).



4. Rear cover [A] (\odot x 1)



5. Remove the fixing screw on the rear side and separate into cleaning unit [A] and lubrication unit [B].

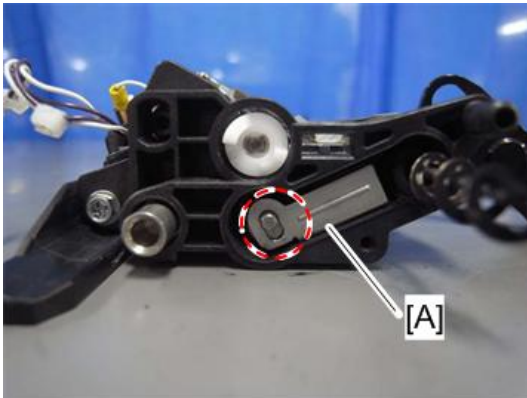


d1352629

4

Note

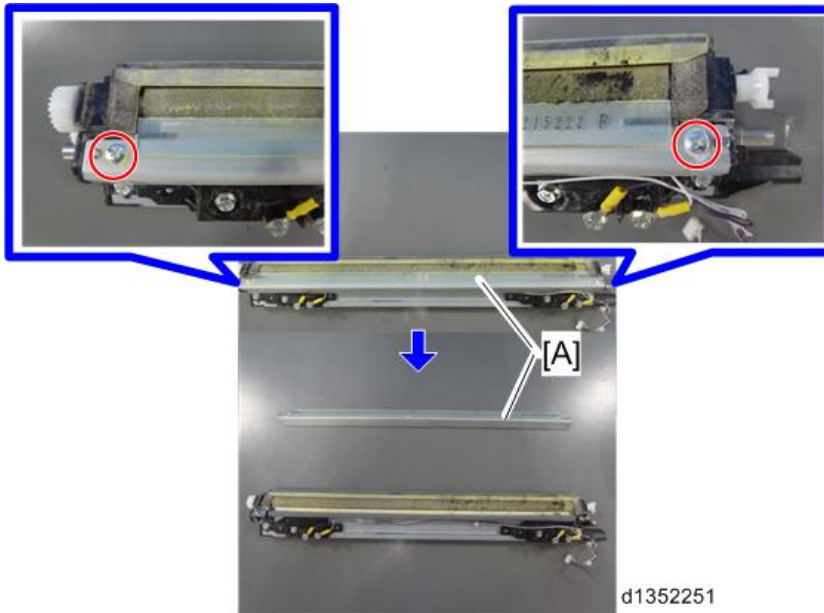
- When installing the cleaning unit and the lubrication unit, ensure that the shaft of the cleaning unit is fit into the hole in the vibration plate [A].



d1352267

Lubrication Unit

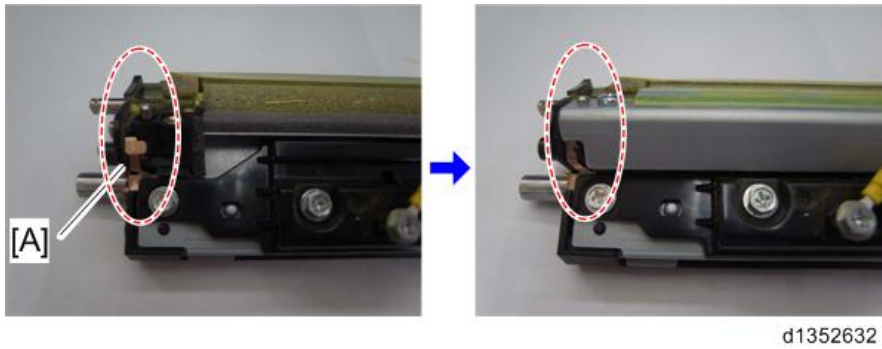
1. Separation of the lubrication unit and cleaning Unit (☞ page 692 "Drum Cleaning Unit Internal Components")
2. Lubricant blade [A] (🔩 x 2)



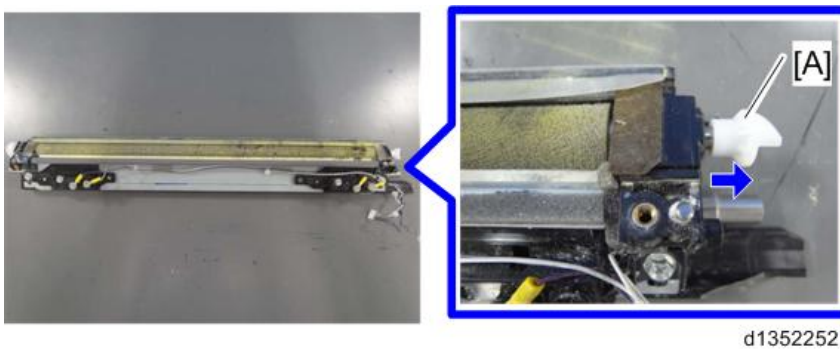
4

↓ **Note**

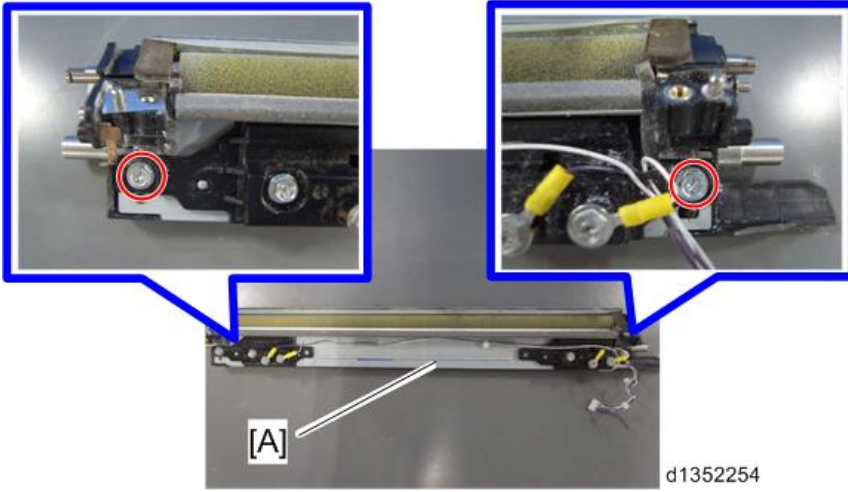
- When assembling, position the lubricant blade on the earth plate [A] of the lubrication unit.



3. Joint at the rear side [A]

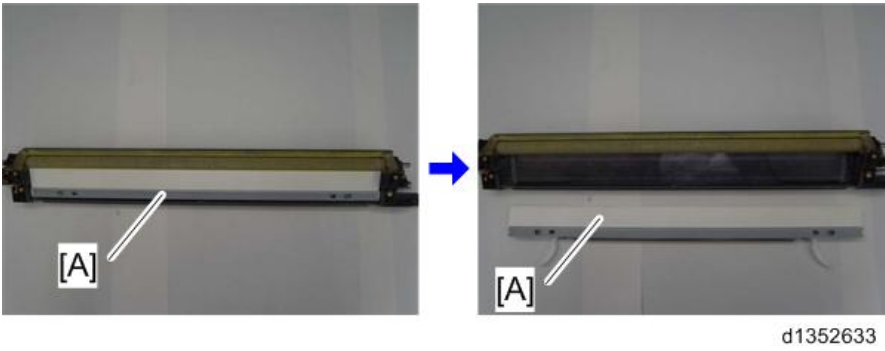


4. Cover [A] (🔩 x 2)

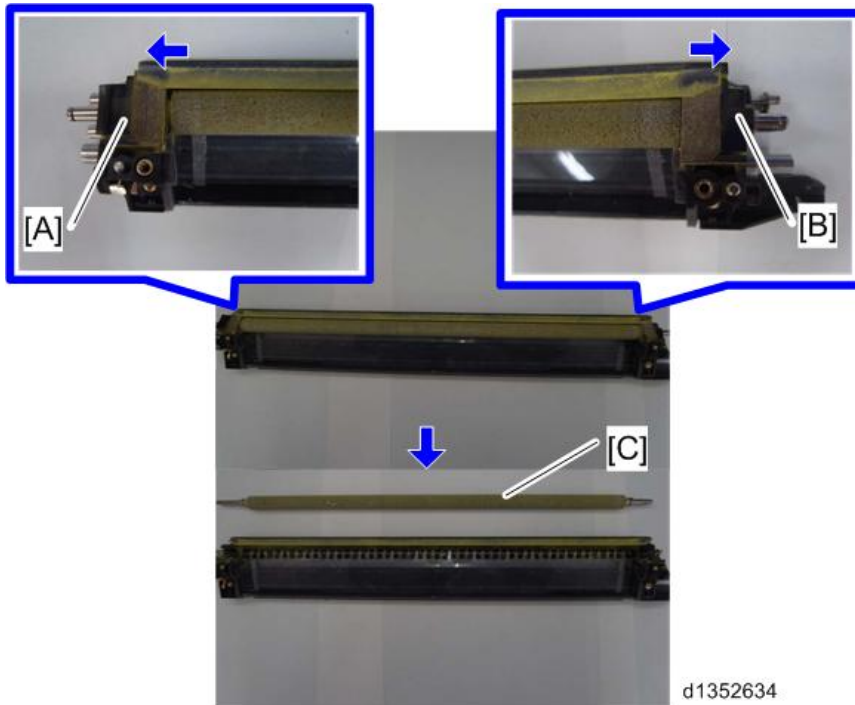


4

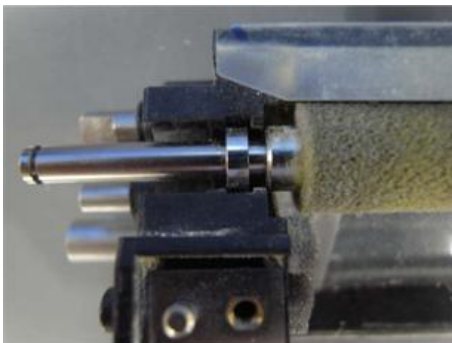
5. Lubricant bar [A]



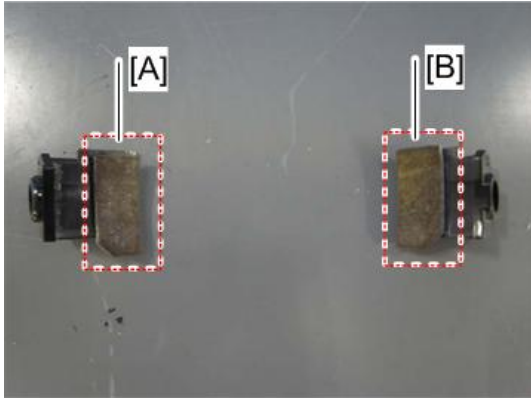
6. Bearing with the side seal (front) [A], bearing with the side seal (rear) [B] and lubrication roller [C]

**Note**

- When installing a new lubricant bar, a new lubrication roller must be installed.
- When installing the lubrication roller, ensure that the roller is fit into the groove of the lubrication unit



7. Remove the side seal (front) [A] and the side seal (rear) [B] from the bearings.

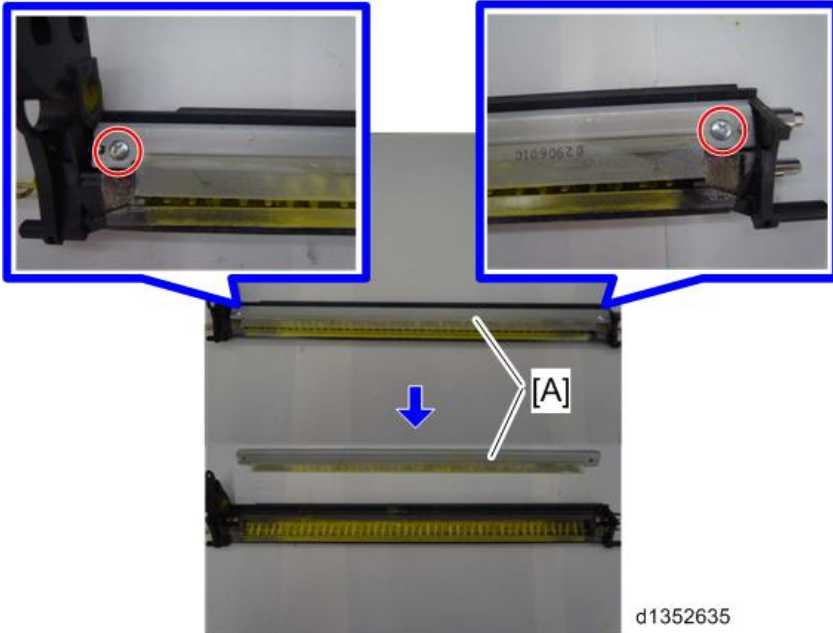


d1352258

4

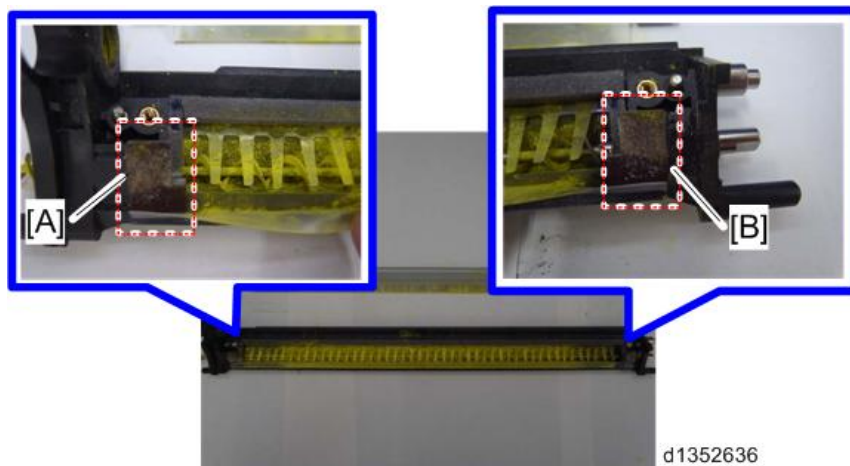
Cleaning Unit

1. Separate the lubrication unit and cleaning unit (☛ page 692 "Drum Cleaning Unit Internal Components")
2. Drum cleaning blade [A] (🔩 x 2)



d1352635

3. Remove the side seal (rear) [A] and the side seal (front) [B] from the cleaning unit.

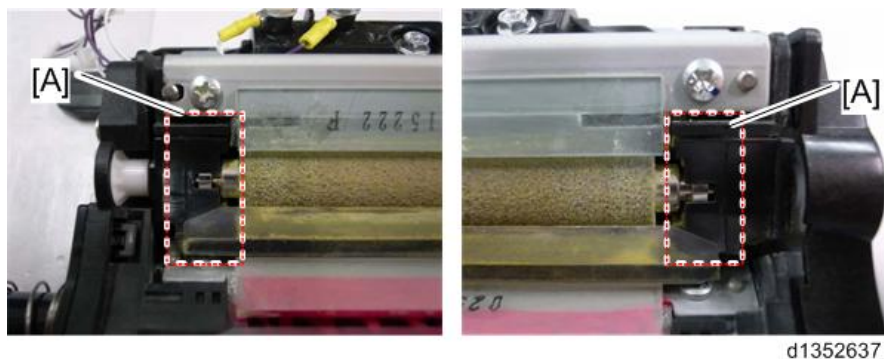


Assembling the Cleaning Unit and Lubrication Unit with New Seals

Note

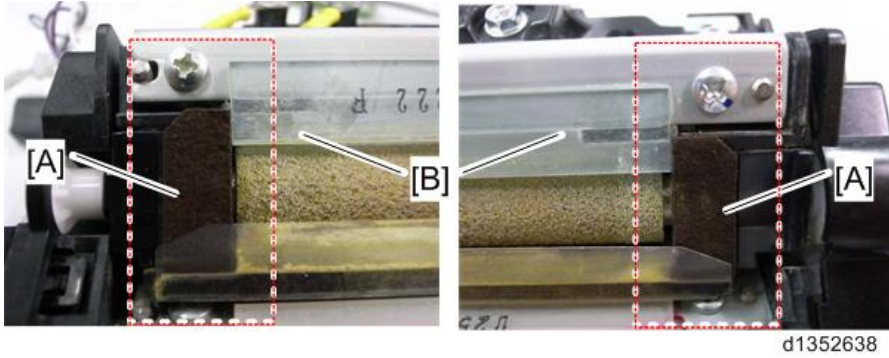
- Replace the cleaning blade, lubrication blade and side seals as a set.
1. Assemble the cleaning unit and the lubrication unit. (☛ page 692 "Drum Cleaning Unit Internal Components")
 2. Clean the area [A] of the cleaning unit and the lubrication unit where the side seals were attached with alcohol and a cloth.

e.g.: cleaning unit

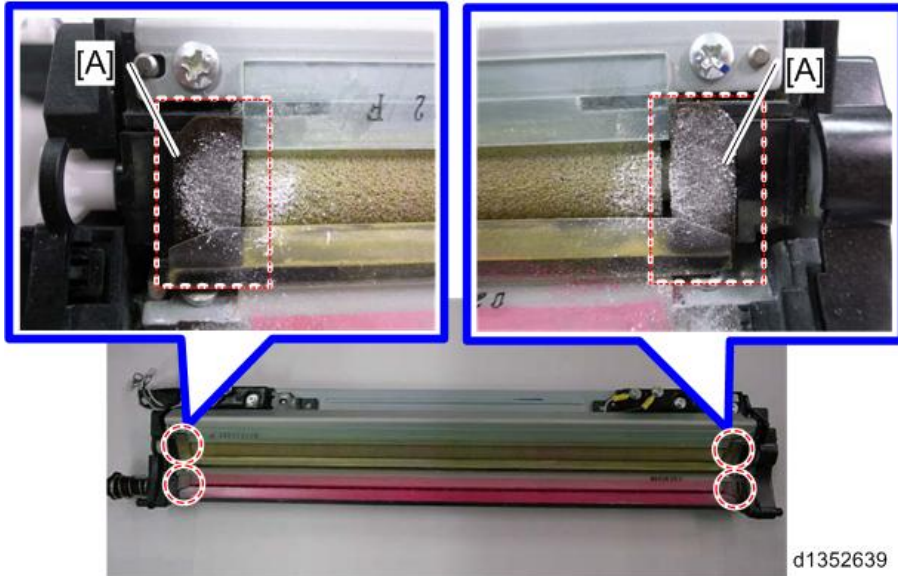


3. Attach new side seals [A] to both sides of the cleaning unit and the lubrication unit. Align the edges of the side seal with the edges of the unit and attach them. Ensure there is no gap between the side seals and the blade [B].

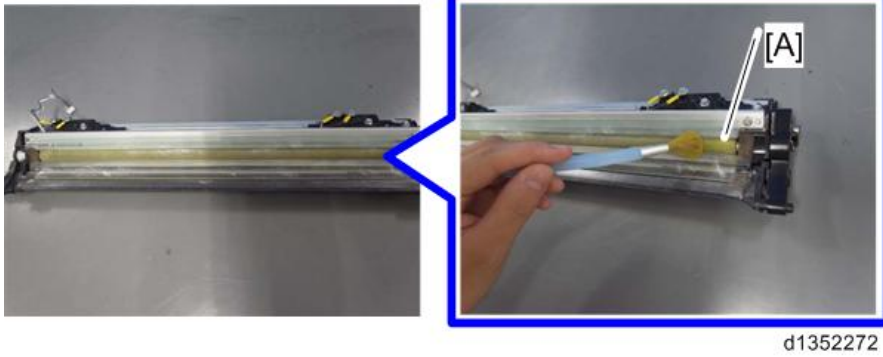
e.g.: cleaning unit



4. After attaching the side seals (x 2 each) on the cleaning unit and the lubrication unit, apply the lubricant powder (D0159501) (zinc stearate) with a brush on the side seals [A].
e.g. (enlarged): cleaning unit



5. Apply the lubricant powder (D0159501) (zinc stearate) and yellow toner (D0159500) at the lubrication roller [A].

**Note**

- Use the blower brush (D0747690) when applying lubricant powder (zinc stearate) and yellow toner in Step 4 and 5.



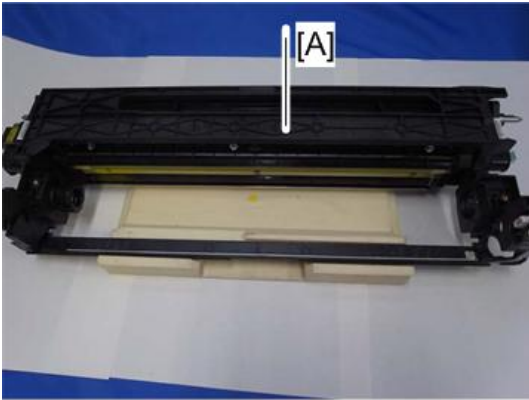
d135a3512

Development Unit

Development Unit

1. PCDU (🔧 page 681)
2. Charge roller unit (🔧 page 683)
3. Drum cleaning unit (🔧 page 684)
4. OPC drum (🔧 page 689)
5. Development unit [A]

4



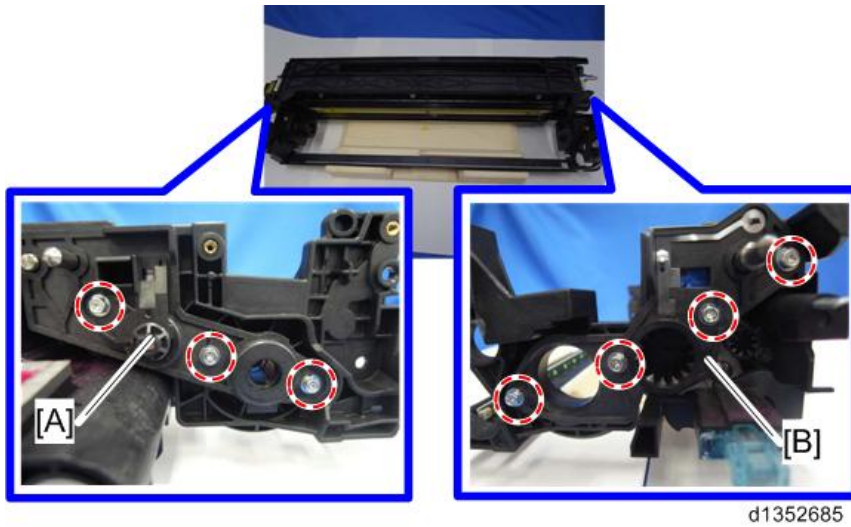
d1352641

↓ Note

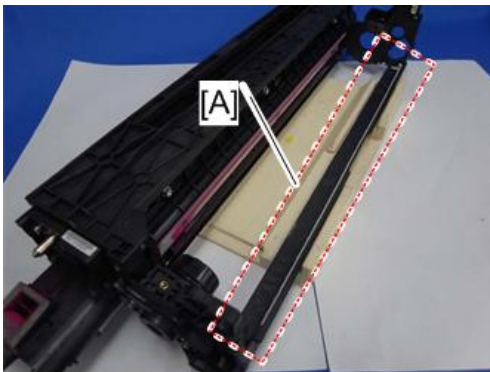
- D137/D138: After you take this part out of the machine and put it back, or replace it with a new one, carry out SP3-040-001 to SP3-040-005 (DEMS: Execute).

★ Important

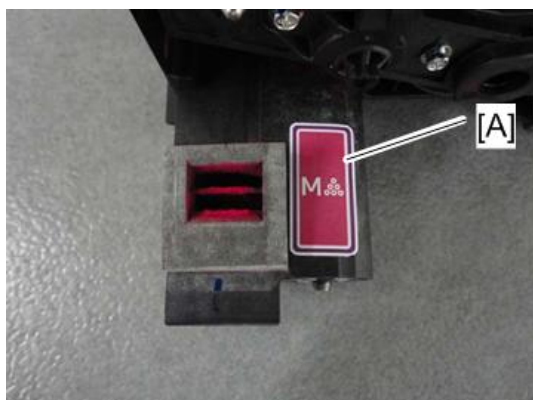
- Since the development unit and face plates (front [A], rear [B]) are integrated, do not remove the following screws.



- When carrying the developing unit, do not hold the frame [A]. The frame may become bent or broken if load is applied to it.



- When installing the new development unit, attach the color identification seals [A] that come with the unit to the supply port.

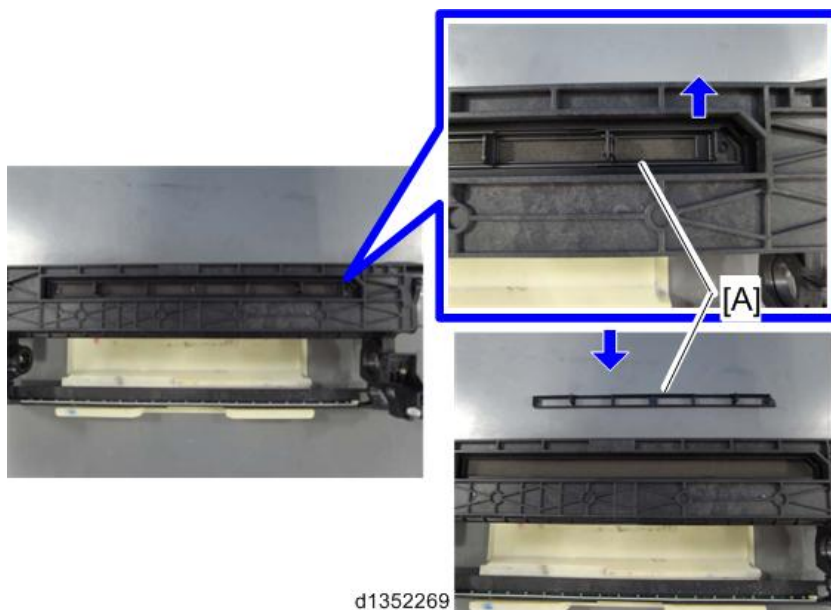


d1352695

4

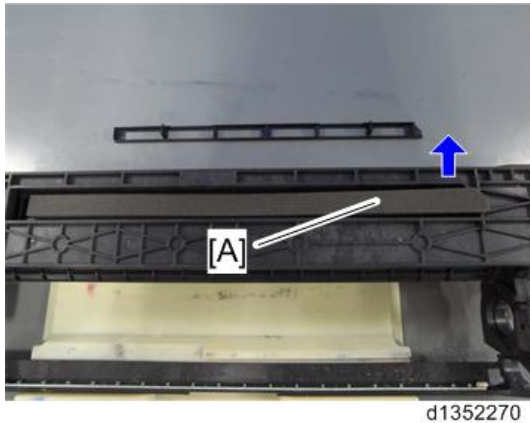
Development Filter

1. Filter cover [A] from the right side.



d1352269

2. Filter cover [A]



Removing Old Developer

General

Replacing the developer without completely removing old developer causes the machine to operate in a condition in which the applied toner density value is lower than the actual value. This happens because the toner density sensor (TD sensor) initialization process (SP3-030-001 to 006), which is performed when replacing the developer, always sets back the toner density readings to the prescribed standard value 7.0% regardless of the actual toner density, e.g. actual toner density could be 8% after replacing with fresh developer but the TD sensor is calibrated to read this as 7%.

Continuous machine operation in this condition and incomplete developer replacement will eventually cause the actual toner density to become too high and result in toner scattering.

This bulletin announces the procedures on how to remove old developer to prevent toner scattering, in two parts.

Following are the expected effects:

- Easier developer removal as a result of improved developer fluidity
- Toner density will come close to the standard 7% after developer replacement even if the dev unit is not completely cleared and contains a slight amount of old developer.

PART 1: Preparations for Developer Removal

1. Before removing the developer, enter the SP mode and check the current toner density.

Table1 Toner density check SP

SP No.	Color
SP 3-200-001	K

SP No.	Color
SP 3-200-002	C
SP 3-200-003	M
SP 3-200-004	Y

If the toner density is $7\% \pm 0.5$, skip the following procedures and go to PART 2.

If the toner density is not $7\% \pm 0.5$ (7.5% or higher), continue this procedure.

2. Refer to the table below and determine the print volume according to the toner density confirmed in the previous step. The actual printing will be done in step 5.

Table2 Print volume based toner density and paper size

Toner Density	A4/LT	A3/DLT
12%	110	55
11%	90	45
10%	70	35
9%	45	23
8%	20	10
7.5%	10	5
7%	0	0

3. Refer to the tables below and change the SP values for toner supply mode and supply rate to "0" for the dev unit(s) requiring the developer replacement.

Table 3-1 Toner Supply Mode

SP No.	Color	Default	Change to
SP 3-400-001	K	4	0
SP 3-400-002	C	4	0
SP 3-400-003	M	4	0
SP 3-400-004	Y	4	0

Note

- The default value "4" supplies toner in DANC (Divided Image Active Noise Control) mode.

- Changed value "0" supplies toner in constant supply mode.

Table 3-2 Toner Supply Rate

SP No.	Color	Default	Change to
SP 3-440-001	K	5	0
SP 3-440-002	C	5	0
SP 3-440-003	M	5	0
SP 3-440-004	Y	5	0

4. Select test pattern "26" from SP2-109-003 and specify the color in SP2-109-005.

Table 4 Test Pattern Settings


SP No.	Settings	
SP 2-109-003	26	Solid
SP 2-109-005	Specify color	

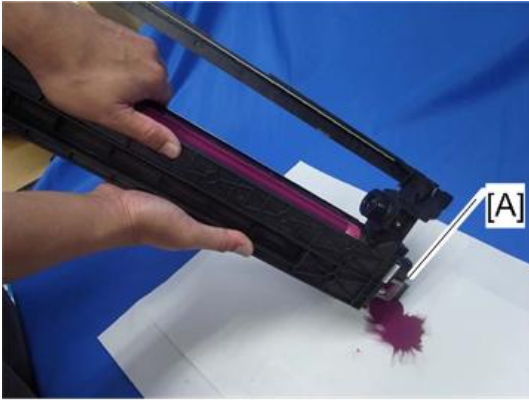
5. Print the test pattern on A4/LT or A3/DLT for the volume determined in step 2.
6. Check the latest toner density in SP3-200-001 to 004. (Table 1)
7. Repeat steps 1 to 5 until you achieve the standard toner density $7\% \pm 0.5$.
8. Set the SP settings for toner supply mode and supply rate (changed in step 3) back to the default values; "4" for toner supply mode and "5%" for supply rate.

★ Important

- **Make sure to set the toner supply mode and supply rate carry back to default. Otherwise, image density will appear light.**
9. Continue with the procedures described in "Part 2".

PART 2: Developer Removal Procedure

1. Development unit ( page 702)
2. Take out the old developer from the supply port [A] into the plastic bag that came with the new developer.



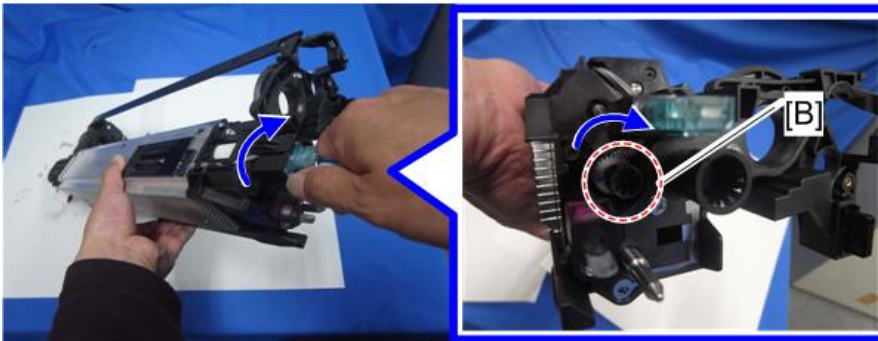
d1353051

4

★ Important

- When carrying the developing unit, do not hold the frame. It may become bent or broken if load is applied to the frame.

3. Remove the old developer while turning the screw [B] clockwise, using the special tool [A].



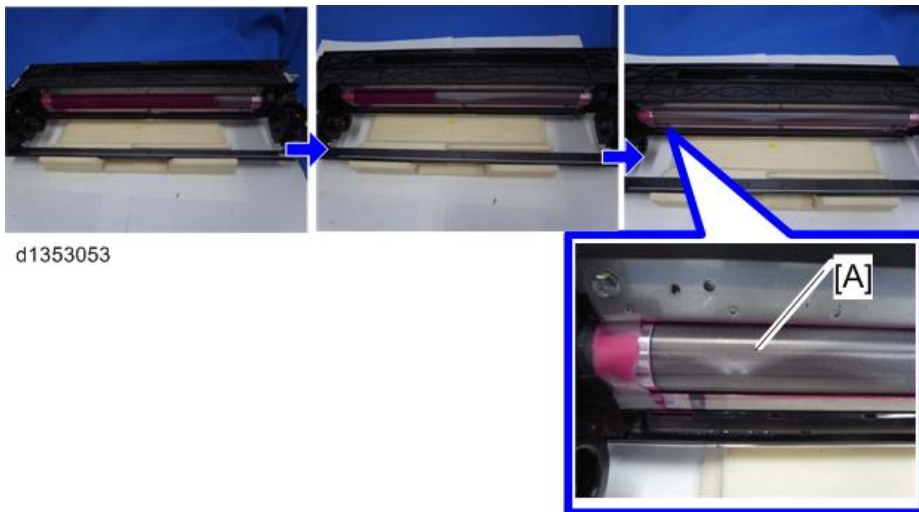
d1352770a

4. When the developer is no longer ejected from the supply port, rotate the development roller [A] counterclockwise



d1352771

5. Repeat until the developer does not come out of the supply port
6. Tilt the development unit towards the development roller. The developer in the unit is gathered at the development roller side.
7. Once again, dump the developer until there is no adhesion around the development roller [A].

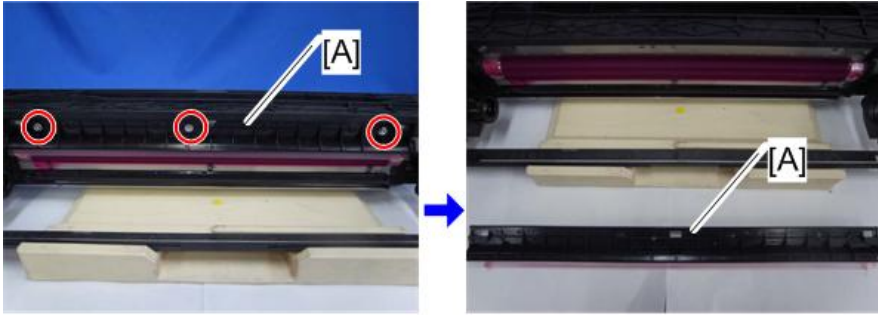


d1353053

8. Turn the development roller clockwise, and make sure that there is no adhesion of the roller around the roller.

Note

- If you are in an environment that can use a vacuum cleaner, remove the development guide plate [A] (2 x 2) and remove the developer attached to the roller with the vacuum cleaner.



d1353050

- If you are in an environment where use of a vacuum cleaner is not possible, make sure that all old developer is removed from the center of the development roller until about 1 cm from the edge [A]. After filling with new developer and there is more old developer than this remaining, a development motor lock may occur.

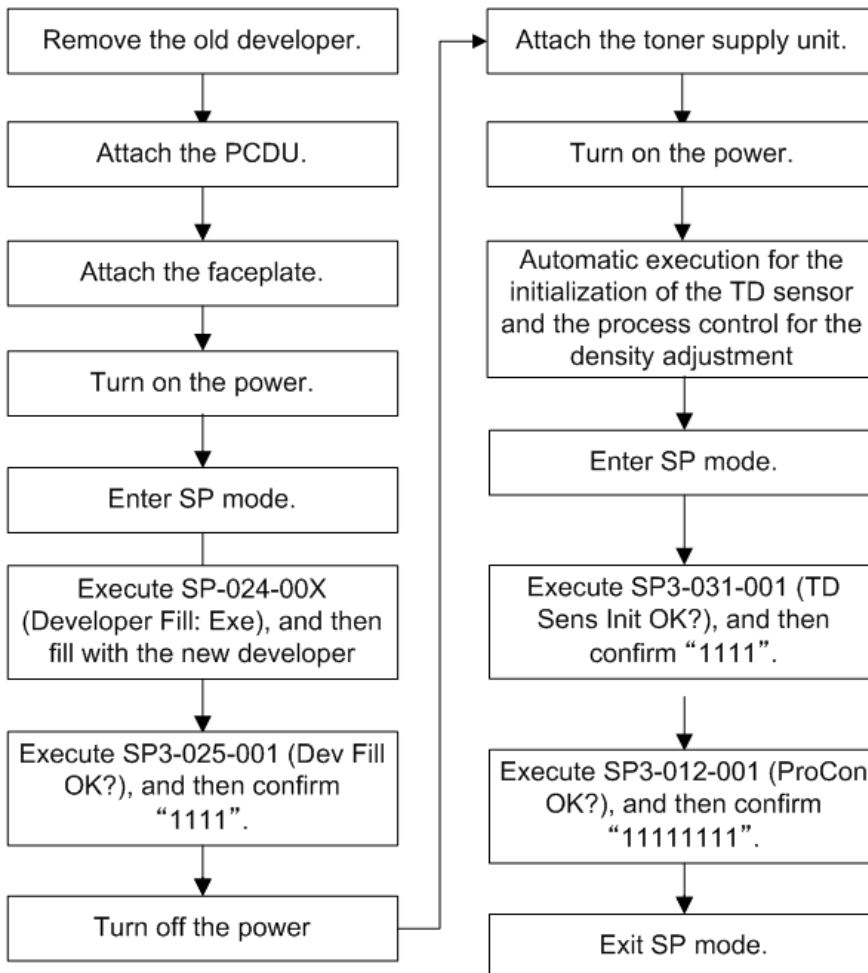


d1352818

Adding New Developer

Before you refill a development unit, remove all the old developer in accordance with the 'Removing Old Developer' procedure described above.

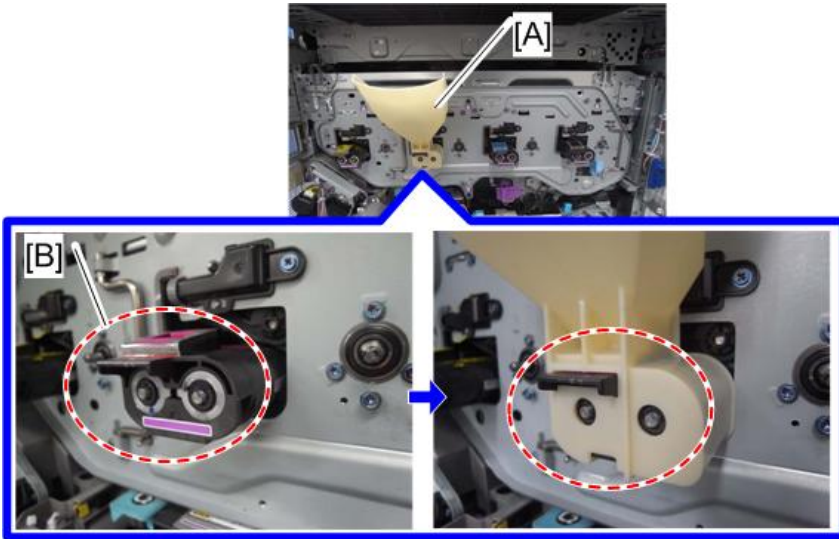
Adding New Developer (Summary)



w_d1353001

Adding New Developer and Adjustment

1. Turn off the power.
2. Toner supply unit (🔧 page 624)
3. Turn on the machine.
4. Attach the funnel [A] to the the supply port [B] of the development unit.



d1352689

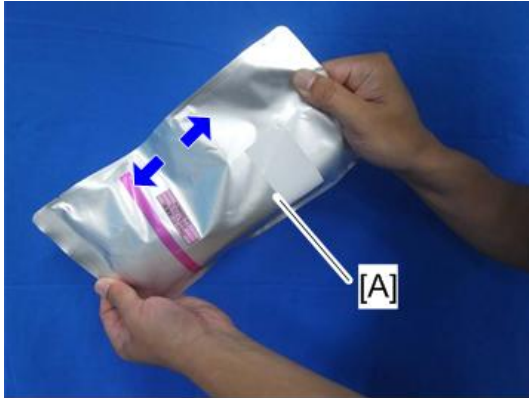
Note

- Protrusion [A] at the bottom of the funnel is the stopper. Make sure that the protrusion is inserted securely into the slot at the back side of the supply port [B] of the development unit.



d1352696

5. Shake the developer pack [A] 5 or 6 times.



d1352693

6. Enter SP mode and execute SP3-024-00x (Developer Fill). See the table below.

4

Filling Developer SP

SP	Description
3-024-001	Developer Fill :Exe Execute: ALL
3-024-002	Developer Fill :Exe Execute: COL
3-024-003	Developer Fill :Exe Execute: K
3-024-004	Developer Fill :Exe Execute: C
3-024-005	Developer Fill :Exe Execute: M
3-024-006	Developer Fill :Exe Execute: Y
3-024-007	Developer Fill :Exe Choose: From Left: YMCK
3-024-008	Developer Fill :Exe Execute: Chosen Color

7. Fill the developer [A] while tapping the funnel. It should finish within 60 seconds. Make sure that the error message "Failed" does not appear.



d1352694

4

★ Important

- Execution time for filling developer is 60 seconds as the default. The time interval for execution can be adjusted. If more time is needed to empty the developer pack, increase the time interval with SP3-024-11 (Developer Fill: Exe Drive Time Upper Limit).
 - If the filling is not completed in time, see the result code table below.
8. After the filling completion message is displayed on the touch panel display, enter SP3-025-001 (Dev Fill OK? From Left:YMCK) to confirm that developer installation succeeded.

You will see a 4-digit number: 1111. Reading from left-to-right each number is a result code for the Y, M, C, K developer execution with SP3-024-00. Refer to the result code table below.

Result code table for filling developer

Code	Meaning	Comment	Conditions	Recovery Procedure
0	No execution	-	-	-

Code	Meaning	Comment	Conditions	Recovery Procedure
1	Succeeded	-	-	<p>Even the results display of SP3025 shows success, developer may remain in the funnel. In this case, implement the following output checks in order to fill the remaining developer.</p> <ul style="list-style-type: none"> • Set to ON "1" at SP5-805-068 (Output Check Used Toner Bottle Motor). • Set to ON "1" at SP5-805-069 (Output Check Toner Discharge Motor). • Set to ON "1" at SP5-805-112, -113, -114 or 115 (Output Check Dev Motor). • After the completion of filling, set the output checks to OFF.
2	No developer exited	Before execution, TD sensor output was above 1.0V (developer present).	When the time expires at the developer is filled with about 150 to 200g	<p>Deal with this in the following order.</p> <ul style="list-style-type: none"> • Turn off the main power. • Carefully remove the funnel for which the developer is remaining. • Remove the PCDU and attach the cap to the supply port. • Tilt the PCDU about 45 degrees to the side of the toner supply unit, closer to the developer supply port side in the vicinity of the TD sensor. • Attach the PCDU. • Attach the funnel that has the developer remaining. • Turn on the main power and run the developer filling with SP3-024. • Make sure that the "1" is the result with SP3-025.

Code	Meaning	Comment	Conditions	Recovery Procedure
2	No developer exited	Before execution, TD sensor output was above 1.0V (developer present).	Removing the developer in EM, if the developer remains in the developing unit	Deal with this in the following order. <ul style="list-style-type: none"> • Turn off the main power. • Remove the PCDU and remove the developer in the PCDU. • Attach the PCDU and the funnel • Enter SP mode and execute SP3-024-00x (Developer Fill). • Fill the developer
3	No developer entered	After execution, TD sensor output was below 1.0V (no developer present).	When the time expires the rest of the developer is less than 150g	<ul style="list-style-type: none"> • Enter SP mode and execute SP3-024-00x (Developer Fill).
4	Used toner bottle full	The used toner bottle was detected full.	If the waste toner bottle is full when filling the developer	<ul style="list-style-type: none"> • Replace the waste toner bottle. • Enter SP mode and execute SP3-024-00x (Developer Fill).
5	Development motor lock	The development motor was not operating.	If the development motor is locked (SC325 to SC328) when filling the developer	<ul style="list-style-type: none"> • Clear the SC325 to SC328. • Enter SP mode and execute SP3-024-00x (Developer Fill).
6	Used toner transport lock	One or both motors locked: Used Toner Transport Motor, Used Toner Bottle Motor.	One or both motors locked: Used Toner Transport Motor, Used Toner Bottle Motor. (SC 486/SC488)	<ul style="list-style-type: none"> • Clear the SC 486/SC488. • Enter SP mode and execute SP3-024-00x (Developer Fill).

Code	Meaning	Comment	Conditions	Recovery Procedure
9	Forced abort	By-pass tray cover opened, waste toner front cover opened, the machine was powered off, or some other event interrupted execution.	When the situation on the left happens when filling the developer	Deal with this in the following order. <ul style="list-style-type: none"> • Enter SP mode and execute SP3-024-00x (Developer Fill). • If the result code is not "1", replace the developer.

9. Remove the funnel and turn off the power.
10. Attach the toner supply unit and turn on the power.

Note

- After turning on the main power switch, initialization for the TD sensor and process control automatically starts.

11. Confirm the initialization results for the TD sensor (SP3-031-00x (Init TD Sensor: Exe Execute)). If the initialization is successful, the result shows "1111".

Note

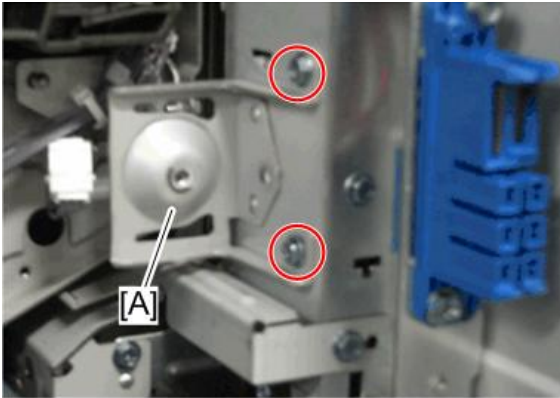
- If "1111" is not displayed, solve along the steps that are described in the troubleshooting.

12. Confirm the initialization results for the process control (SP3-012-001 (ProCon OK? History:Latest)). If the initialization is successful, the result shows "11111111".

Image Transfer Belt Unit

ITB Unit Removal

1. Faceplate (page 680 "Faceplate")
2. ITB Cleaning Unit (page 746 "ITB Cleaning Unit")
3. Bracket [A] (🔧 x2)



d1355230

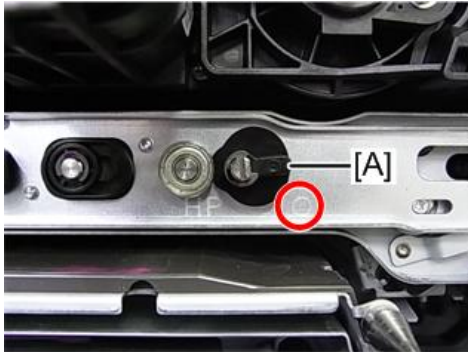
4. Pull the drawer unit. Then pull the ITB Unit [A] out to detach it.



d1355168

⚠ CAUTION

- Make sure that the image transfer rollers do not contact the transfer belt when you remove the ITB unit. You can check it with the lever shown in the picture below. The lever indicates either "HP" or "O" depending on the state of the image transfer rollers.
- **HP:** Image transfer rollers contact the ITB.
- **O:** Imager transfer rollers do not contact the ITB.



d1355170

⚠ CAUTION

- When you remove or install the ITB unit, be sure not to let the transfer belt touch the drawer unit.
- Be sure to place the ITB unit on a flat surface.
- Execute SP2924-004 after you remove and re-install the ITB unit.

4

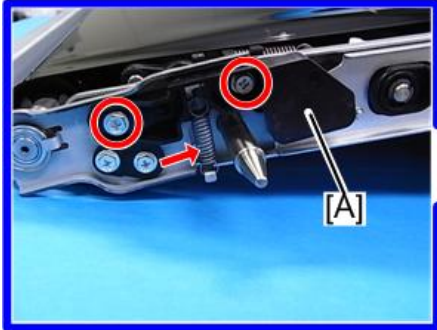
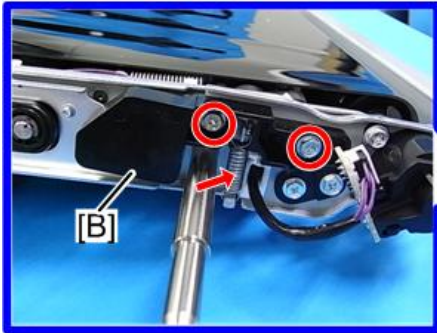
ITB Replacement

Before you start:

- Clear the counter for the ITB in PM counter mode (or use SP mode to turn SP3701-093 or 094 "0 → 1")
- Turn the machine off.

- 1. ITB Unit (page 718 "ITB Unit Removal")**
- 2. Make sure that the image transfer roller lever is in the "HP" state (page 718 "ITB Unit Removal").**

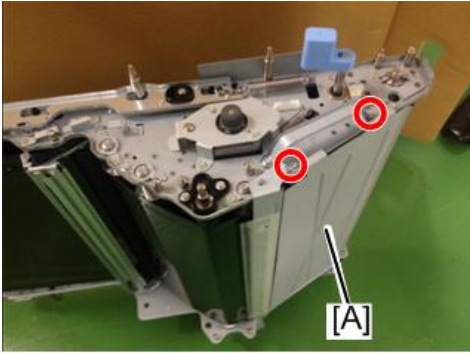
3. Both side brackets [A], [B] (⚙️ x2 each, Spring x2)



d1355041

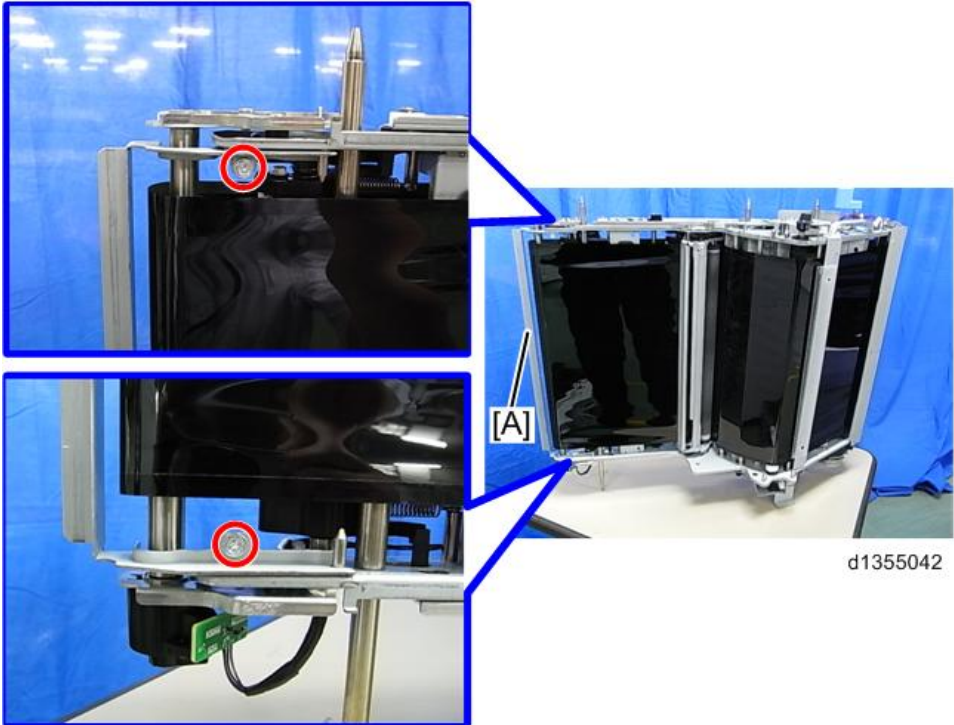
4

4. Anti-toner-scattering cover [A] (⚙️ x2)



d1355111

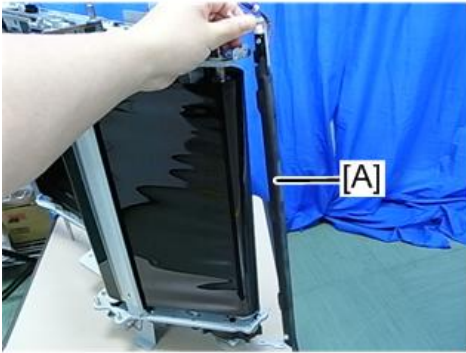
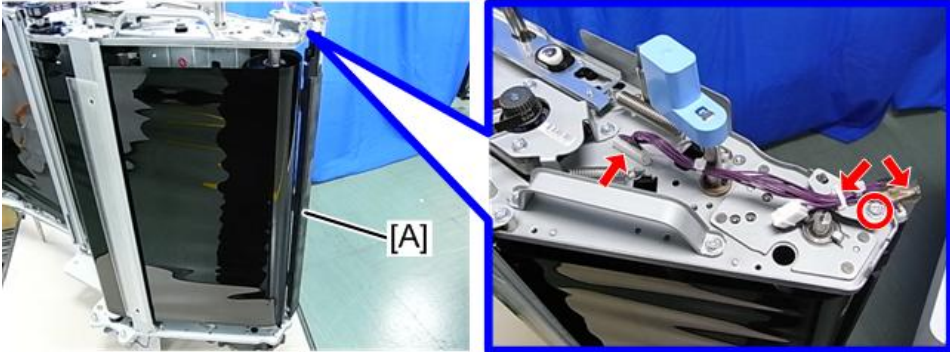
5. Stay [A] on the left side (🔩 x2)



6. Stay [A] on the right side. (🔩 x3)

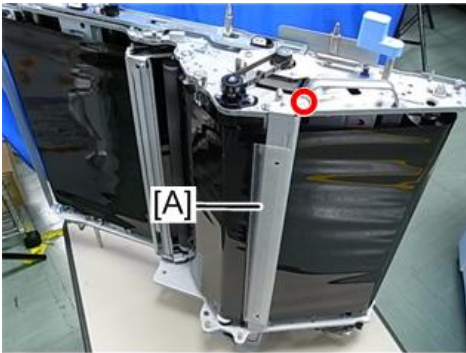


7. Bracket with ID Sensors [A]. (🔩 x1, 📏 x1, 📏 x2)



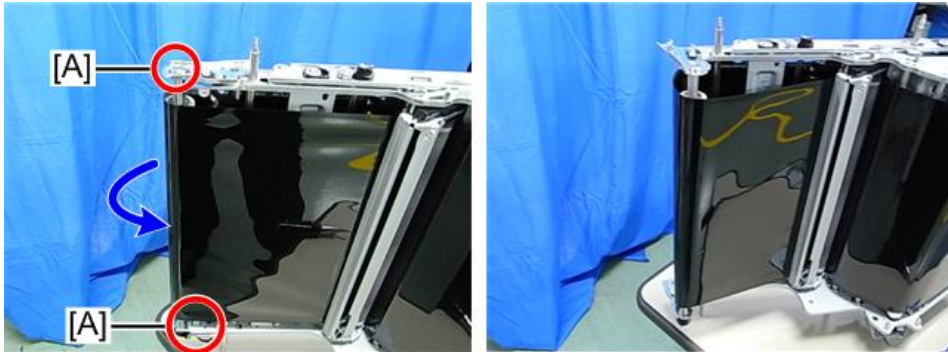
d1355044

8. Center stay [A] (🔩 x1)



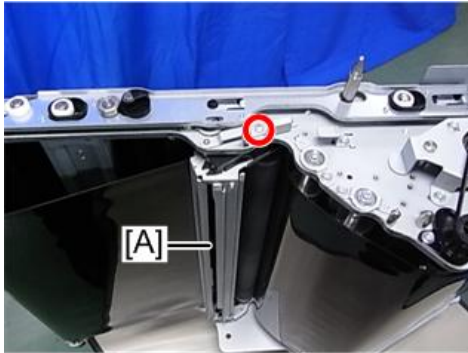
d1355046

9. Hold the frames [A] of the encoder roller and pull them towards you.



d1355047

10. Tension roller [A] (⚙️ x1, Bracket x1)



d1355049

11. Pull the transfer belt [A] upward to remove it.



d155050

⚠️ CAUTION

- Be sure to install the new transfer belt with the number at the rear of the machine (the lower side in the picture below).
- Be sure to attach the new transfer belt without slackness.



d1355051

4

Note

- After the replacement, some procedures need to be done. See “Lubrication after replacement” described below.

Lubrication after replacement

1. Turn on the machine.
2. Enter the SP mode and push the PM parts counter reset button in the PM Parts display.
3. Replace Image Transfer Belt.
4. Attach the toner hopper unit.

Note

- Do not install the belt cleaning fan yet.

5. Attach drawer unit cover.
6. Rotate the blade release lever to move the cleaning blade away from the ITB.
7. Pull out (open) the drawer unit.

- Keep the drawer unit open, and then turn the machine main power ON.

Note

- The automatic adjustment will not be performed when the machine is turned ON, since the drawer unit is pulled out/opened.

- Enter the SP mode and choose SP2-696-001 (Force Apply Lubricant Execute).
- Push [Execute] on the operation panel and then push the drawer unit into the machine.

Note

- When the drawer unit is pushed into the machine, lubrication starts automatically. This operation takes about 3 minutes to complete.

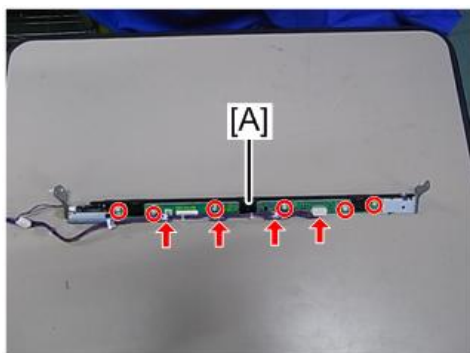
- Turn the machine off when the lubrication finishes (the machine's activity stops).
- Withdraw the drawer unit and rotate the blade release lever in order to make the cleaning blade contact the ITB.
- Re-install the belt cleaning fan. (🔧 x1)
- Push the drawer unit into the machine.
- Turn the machine on.

Note

- The machine will then execute the automatic corrections.

ID/MUSIC Sensors

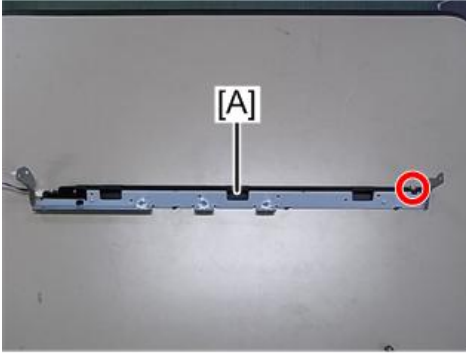
- Bracket with the ID sensor
- Detach the ID sensor board [A] from the bracket. (🔧 x5, 🛠️ x3, 📄 x1)



d1355040

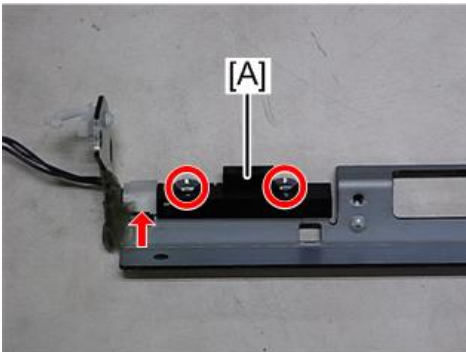
ITB HP Sensor

1. Detach the ID sensor from the bracket. (page 725 "ID/MUSIC Sensors")
2. Cover [A] (🔩 x1, Hook x3)



d1355038

3. ITB HP Sensor [A] (🔩 x2, 📌 x1)

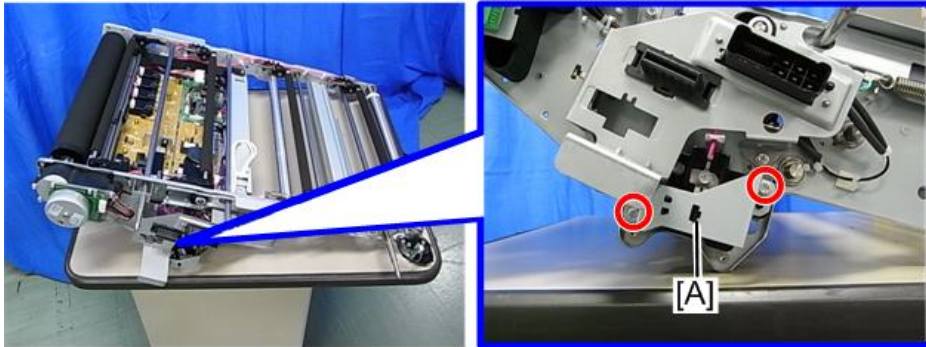


d1355039

PTR Separation Sensor

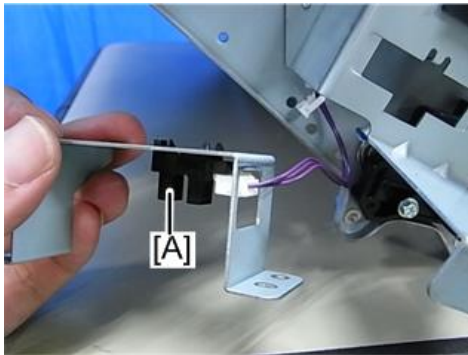
1. Transfer Belt (page 719 "ITB Replacement")

2. Bracket with PTR separation sensor [A] (⚙️ x2)



d1355063

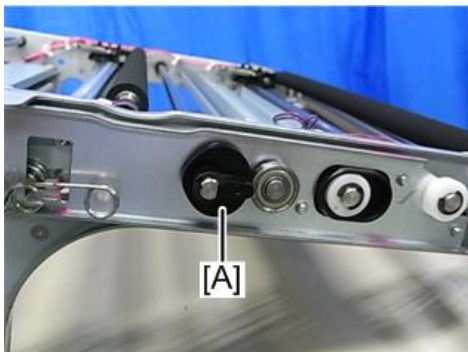
3. Detach the PTR separation sensor [A] from the bracket [A]. (Hook, 🗑️ x1)



4

ITB Lift (YMC) Sensor

1. Transfer Belt (page 719 "ITB Replacement")
2. Rotate the cam [A] and make its widest part point to the bearing ("image transfer roller rises up" state) as shown below.



d1355037

⚠ CAUTION

- Be sure to re-rotate the cam and drop the image transfer roller down after the replacement.

3. ITB Lift (YMC) Sensor (🔌 x1, Hook)



d1355036

4

Image Transfer Roller (K)

1. Transfer Belt (page 719 "ITB Replacement")
2. Raise the lever [A].



d1355027

⚠ CAUTION

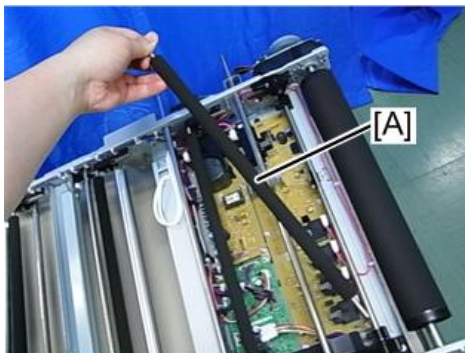
- Be sure to re-rotate the cam and drop the image transfer roller down after the replacement.

3. "⌀ x1" that fixes the image transfer roller (K) [A]



d1355033

4. Slide the image transfer roller (K) [A] towards you and remove it.

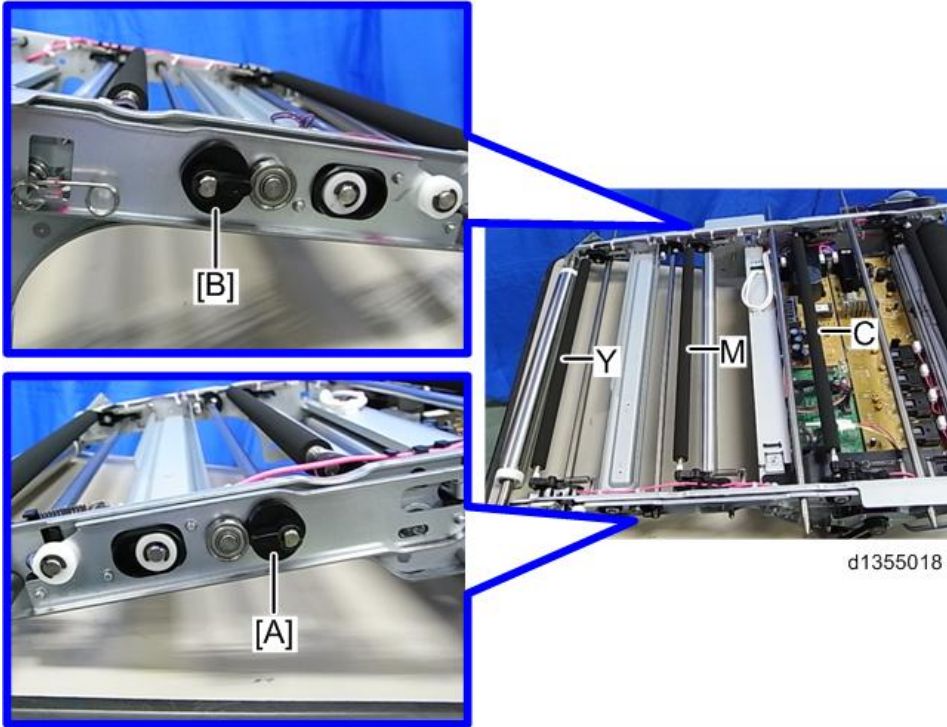


d1355035

Image Transfer Roller (YMC)

1. Transfer Belt (page 719 "ITB Replacement")

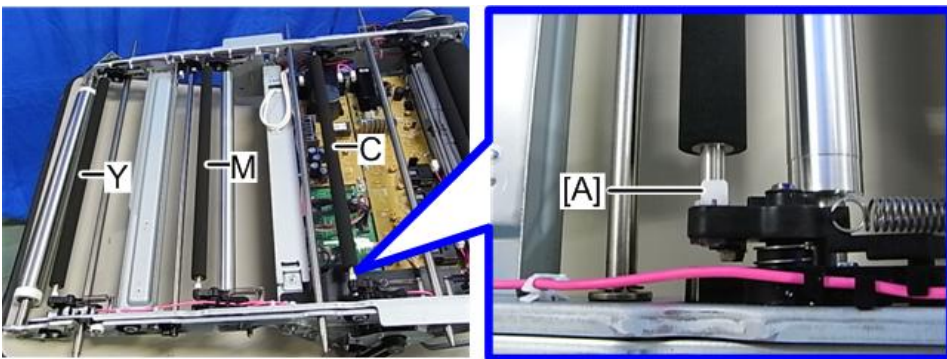
2. Rotate the cams and make the wider parts [A] [B] point to the bearing ("rise up" state).



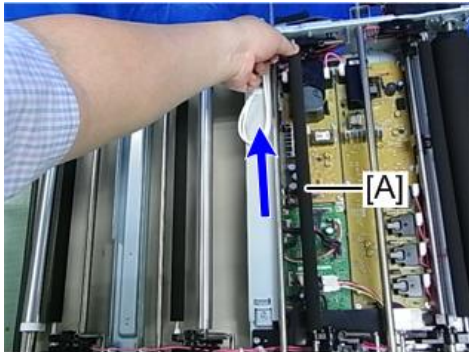
⚠ CAUTION

- Be sure to re-rotate the cam and drop the image transfer roller down after the replacement.

3. "⚙ x1" that fixes the image transfer roller (C) [A]



- Slide the image transfer roller (C) [A] to the rear side and remove it.



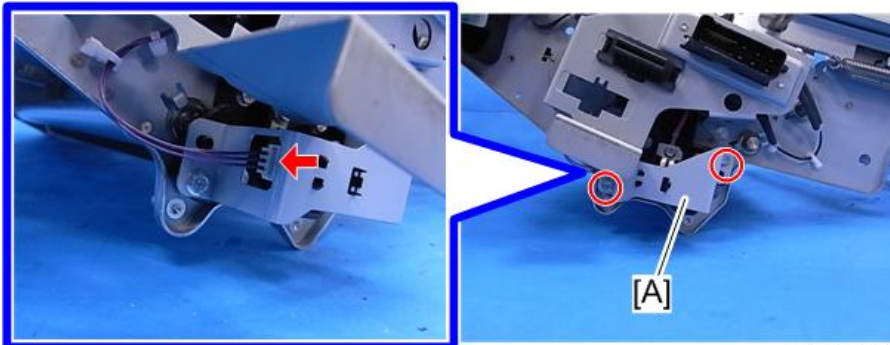
d1355020

- Remove the image transfer roller (M), (Y) as in the previous step.

4

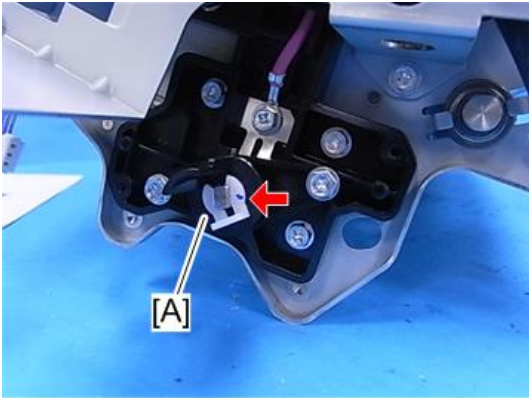
ITB Bias Roller

- Transfer Belt (page 719 "ITB Replacement")
- PTR Separation Sensor Bracket [A] (⚙️ x2, 📏 x 1)



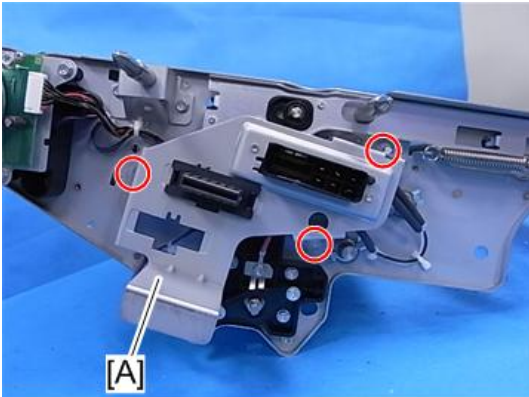
d1355231

3. Actuator [A] (⚙️ x1)



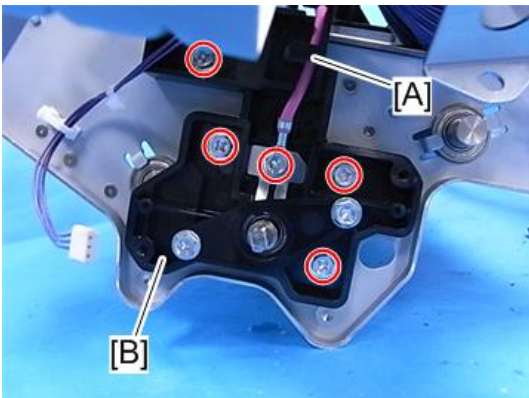
d1355232

4. Separate the drawer bracket [A] from the drawer (🔧 x3).



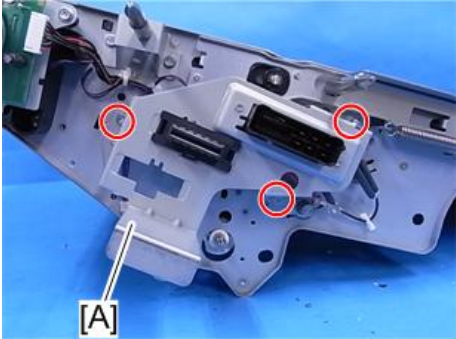
d1355233

5. Harness Guide [A] and Bracket [B] (🔧 x5, Grounding Plate x1)



d1355234

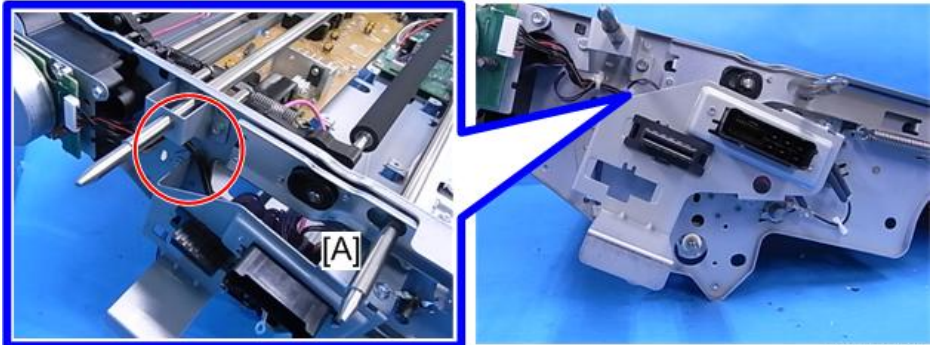
6. Re-attach the drawer bracket [A] (⚙️ x3)



d1355235

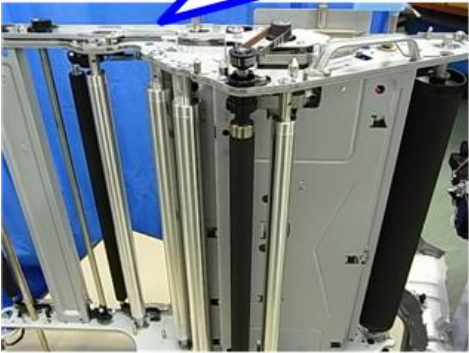
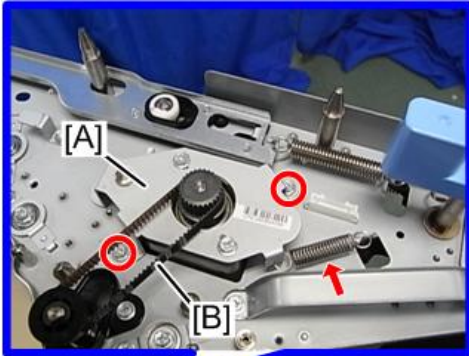
⚠️ Note

- Be sure not to pinch the harness when you re-attach the drawer bracket.



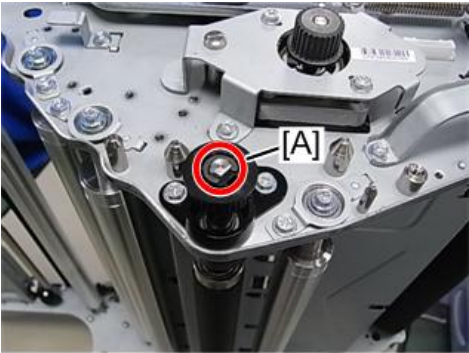
d1355236

7. Loosen the motor bracket [A] (\odot x2, Spring x1). Then remove the belt [B].



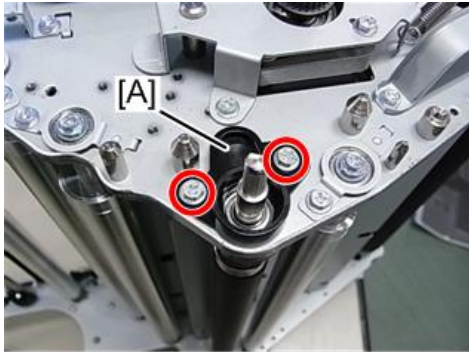
d1355011

8. Pulley [A] (\odot x1)



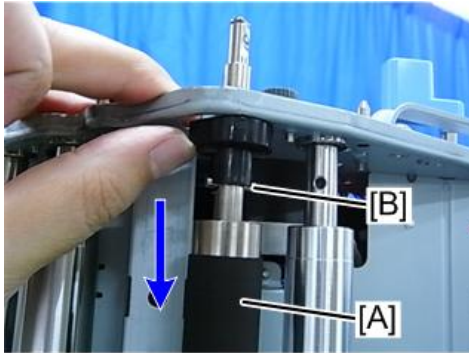
d1355012

9. Bearing Bracket [A] (⌀ x2, Bearing x1)



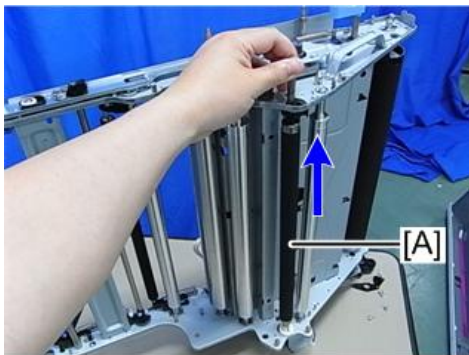
d1355013

10. Drop the ITB bias roller [A] down and remove the parallel pin [B].



d1355014

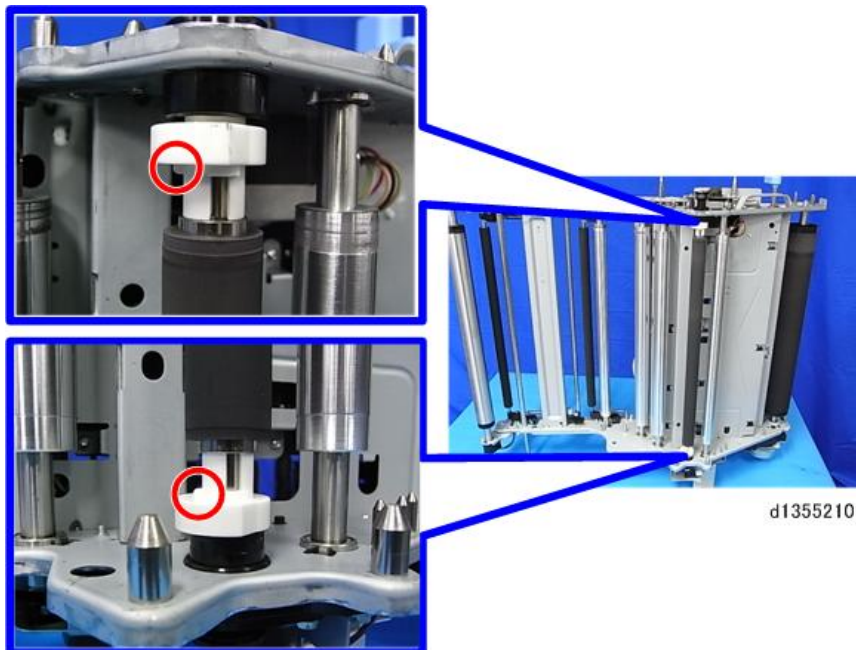
11. Pull the ITB bias roller [A] upward and release its lower end to remove it.



d1355015

↓ Note

- Each side cam of the ITB bias roller must be attached in the correct direction. Re-attach these cams, directing each cam's widest part inward.



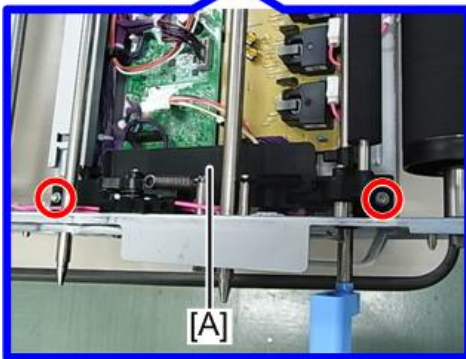
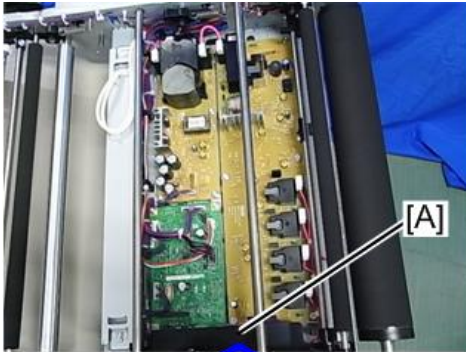
d1355210

4

Transfer Power Pack/ Separation Power Pack

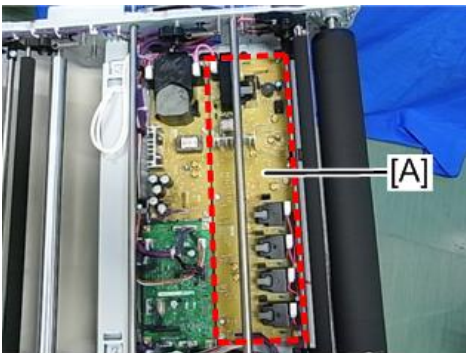
1. Transfer Belt (page 719 "ITB Replacement")

2. Bracket [A] (🔩 x2)



d1355030

3. Transfer Power Pack/ Separation Power Pack [A] (🔩 x6, 📦 all)

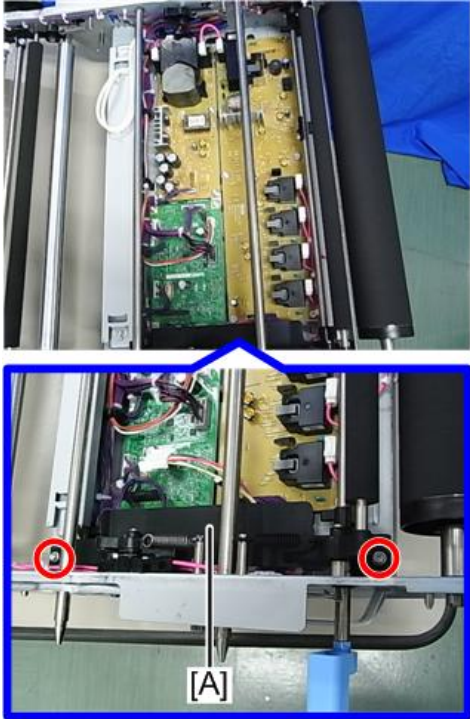


d1355031

TDRB (Transfer Drive Relay Board)

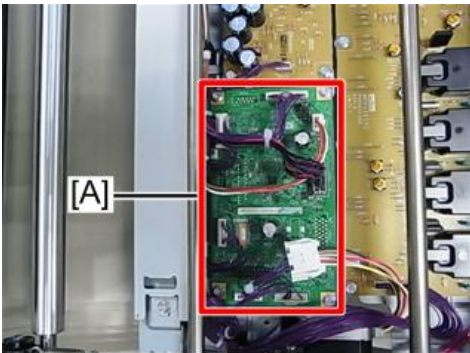
1. Transfer Belt (page 719 "ITB Replacement")
2. Image Transfer Roller (C) (page 729 "Image Transfer Roller (YMC)")

3. Bracket [A] (🔩 x2)



d1355028

4. TDRB [A] (🔩 x4, 📏 all)

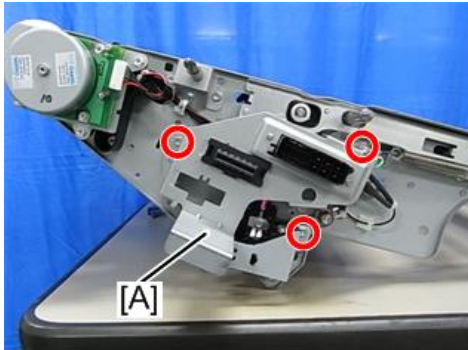


d1355029

Anti-condensation Heater

1. Transfer Belt (page 719 "ITB Replacement")

2. Detach the bracket with the drawer connector [A] from the ITB unit. (⚙️ x3)



d1355021

3. Disconnect the white connector and push the red connector into the back of the ITB frame.



d1355022

4. Detach the heater from the ITB unit. (⚙️ x2)

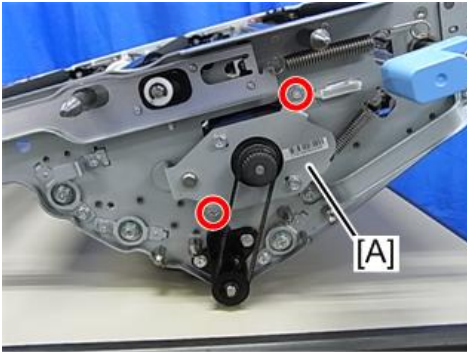


d1355023

PTR Separation Motor

1. ITB Unit (page 718 "ITB Unit Removal")

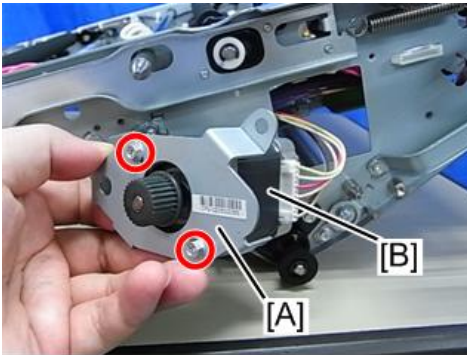
2. Bracket with the PTR separation motor [A] (Spring x1,  x2, Belt x1)



d1355009

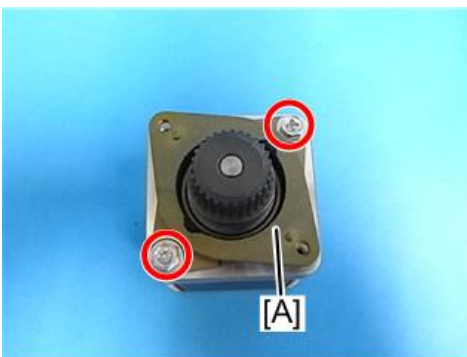
4

3. Separate the bracket [A] and the PTR separation motor [B] ( x2,  x1)



d1355010

4. Detach the vibration-proof pad [A] from the motor. ( x2)

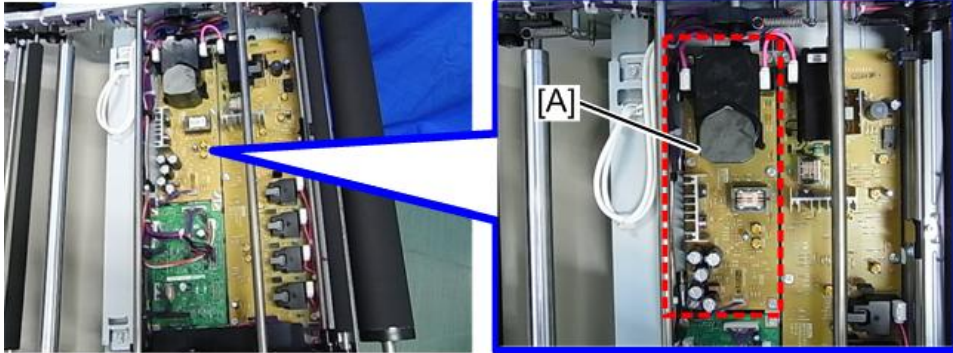


d1355158

AC Transfer Power Pack (D137/D138 Only)

1. Image Transfer Roller (C) (page 729 "Image Transfer Roller (YMC)")

2. AC Transfer Power Pack [A] (🔧 x6, 📦 all)

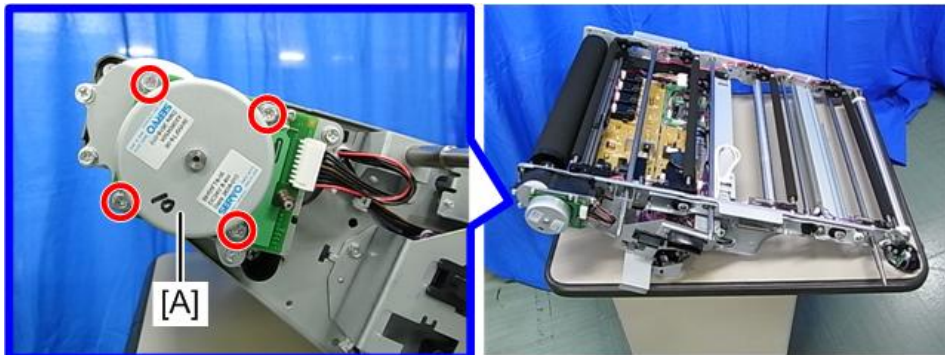


d1355025

4

ITB Motor

1. ITB Unit (page 718 "ITB Unit Removal")
2. ITB Motor [A] (🔧 x4, 📦 x1)

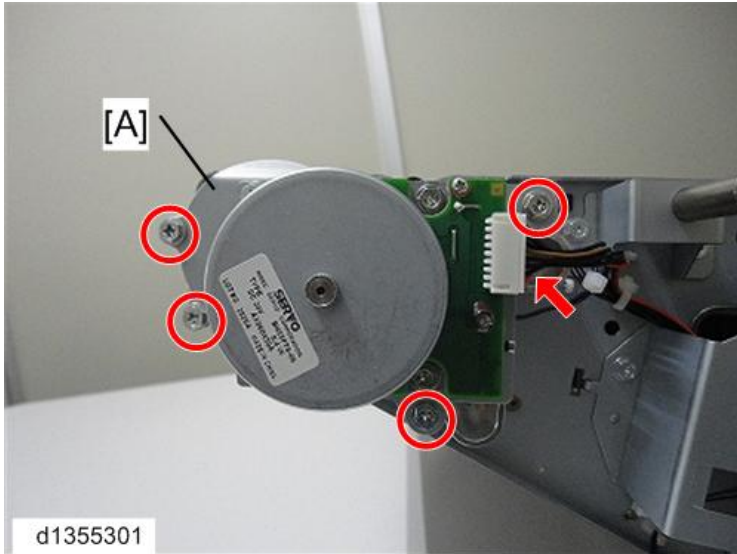


d1355008

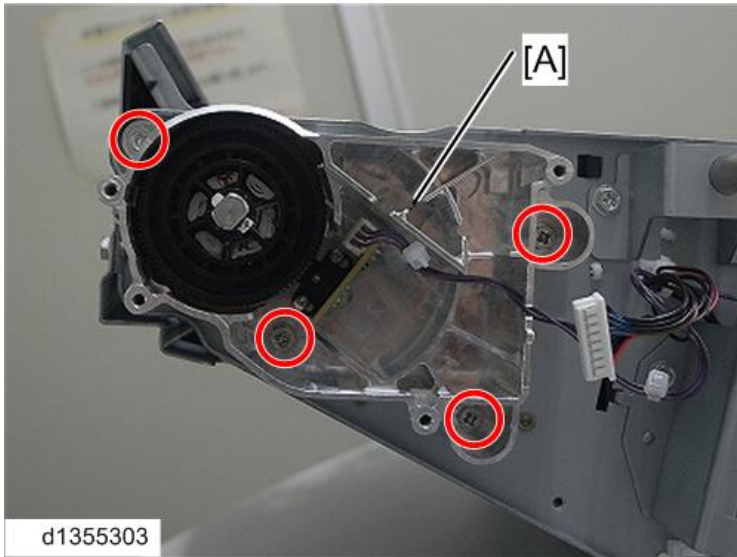
ITB Drive Shaft Gear / Encoder Sensor

1. Transfer Belt (page 719 "ITB Replacement")

2. Motor Bracket [A] (🔩 x4, 📌 x1)



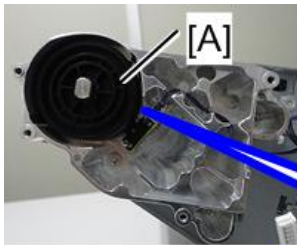
3. Housing [A] (🔩 x4)



⬇️ Note

- Do not remove only the housing [A]. Remove it [A] with the gear.

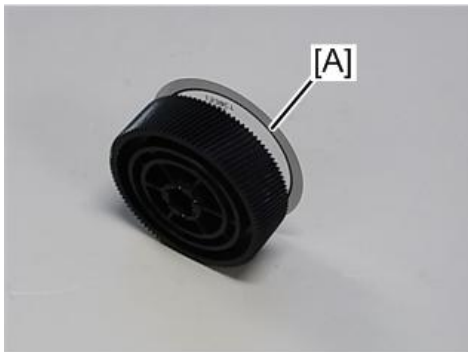
4. Detach the ITB drive shaft gear [A] from the housing



d1355302

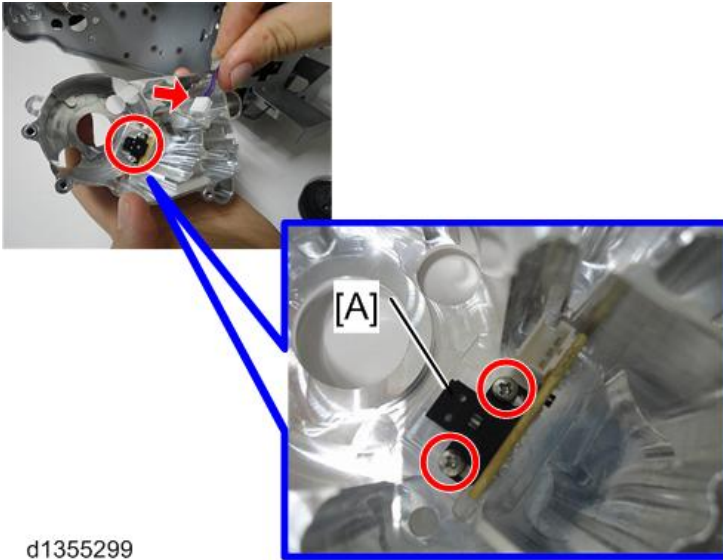
⚠ CAUTION

- Be sure to handle the gear carefully not to break the encoder [A].
- To prevent breaking the encoder [A] when you install the ITB drive shaft gear, remove the ITB drive shaft encoder sensor from the housing first. Then install the ITB drive shaft gear.




d1355006

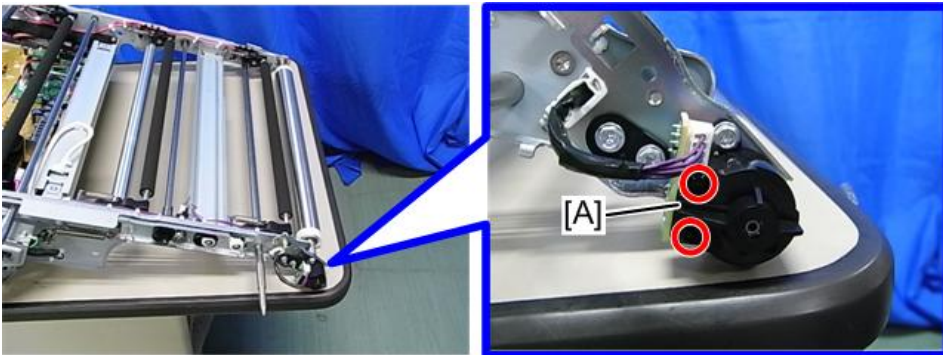
5. Disconnect the harness from the housing to detach the ITB drive shaft encoder sensor [A].



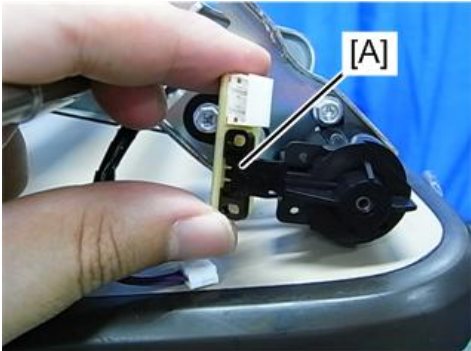
d1355299

ITB Driven Shaft Encoder Sensor

1. ITB Unit (page 718 "ITB Unit Removal")
2. ITB Driven Shaft Encoder Sensor [A] (Pin x2,  x1)



d1355000



d1355001

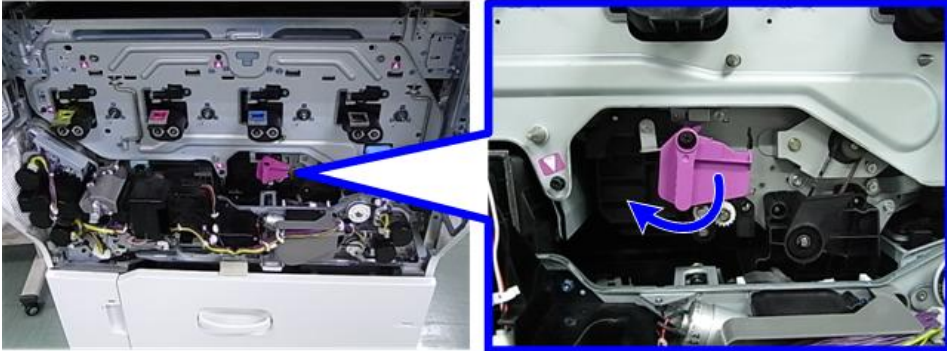
ITB Cleaning Unit

Before you start replacement of the ITB cleaning unit or its components (ITB cleaning blade / Lubricant bar / ITB lubricant blade):

1. Clear the counter for the ITB in PM counter mode (or use SP mode to turn SP3701-093 or 094 "0 → 1")
2. Turn the machine off.

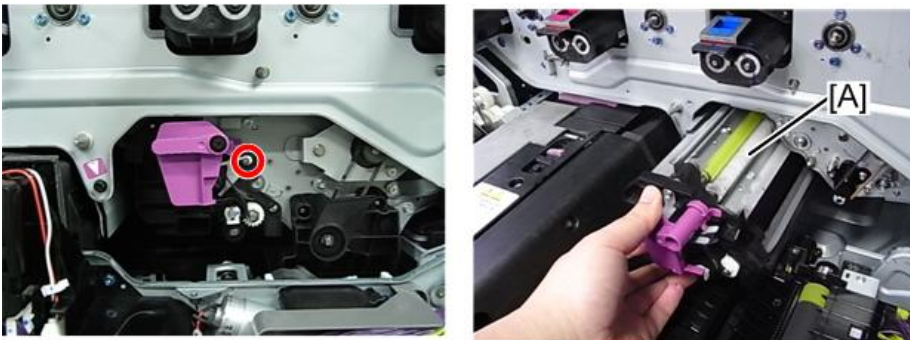
ITB Cleaning Unit

- 4
1. ITB Motor Cooling Fan (page 1004 "ITB Motor Cooling Fan")
 2. Release the lock lever.



d1355054

3. Pull the ITB cleaning unit [A] out. (⚙️ x1)



d1355056

ITB Cleaning Blade

Note

- ITB cleaning blade, ITB lubricant brush and ITB lubricant bar must be replaced together as a set.

1. ITB Cleaning Unit (page 746 "ITB Cleaning Unit")

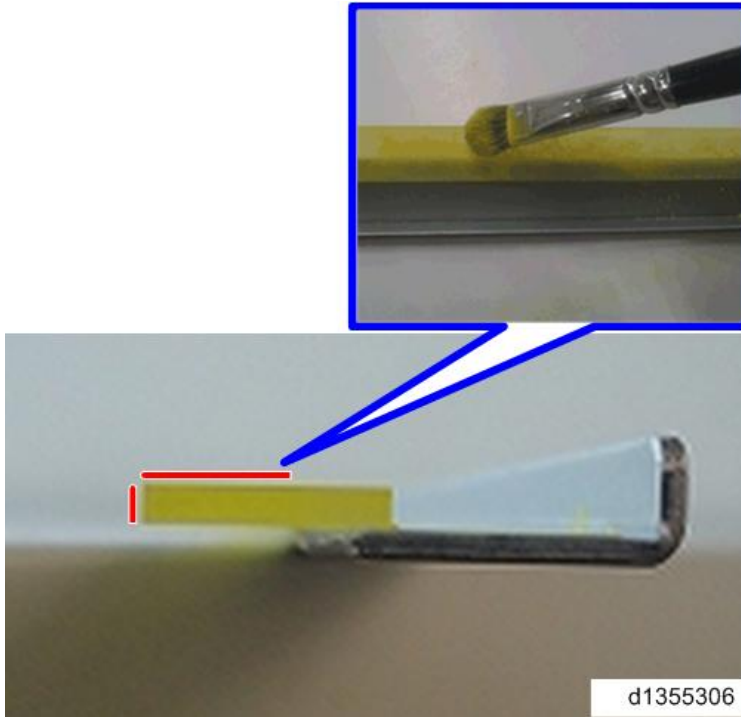
2. ITB Cleaning Blade [A] (x2)



d1355084

Note

- Be sure to use a brush to apply yellow toner (D0149500) evenly on the lined faces of the new ITB blade before the installment as shown below.



- Use the blower brush (D0747690) when applying yellow toner to the new ITB blade.



d135a3512

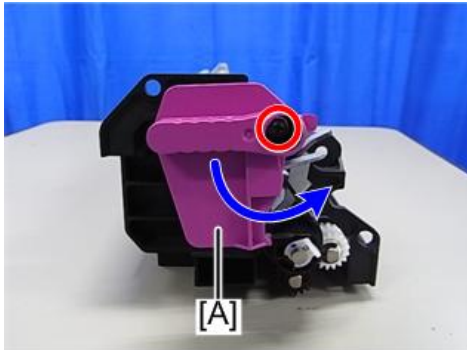
ITB Lubricant Brush

Note

- ITB cleaning blade, ITB lubricant brush and ITB lubricant bar must be replaced together as a set.

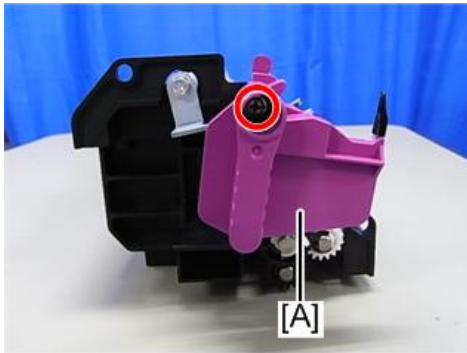
1. ITB Cleaning Unit (page 746 "ITB Cleaning Unit")

2. Rotate the lock lever [A] in the arrowed direction as shown below.



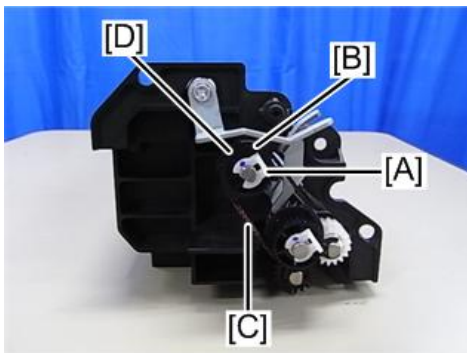
d1355079

3. Lock lever [A] (⚙️ x1)



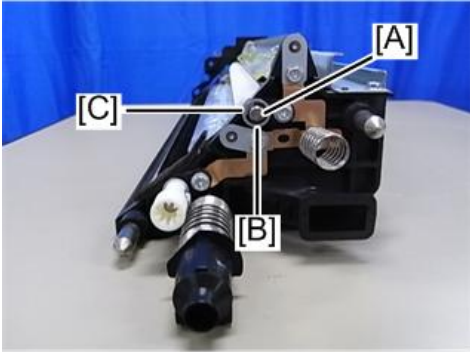
d1355080

4. Snap ring [A] x1, Gear x1 [B], Belt x1 [C], Bearing [D]



d1355081

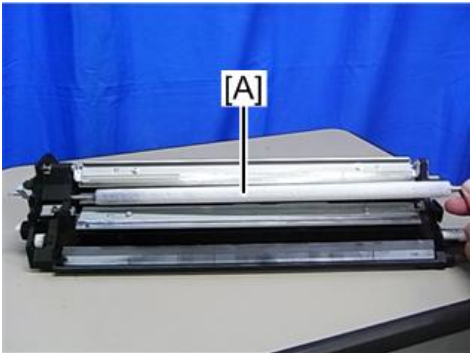
5.  [A] x1, Spacer [B] x1, Bearing [C] x1



d1355082

4

6. ITB Lubricant Brush [A]



d1355083

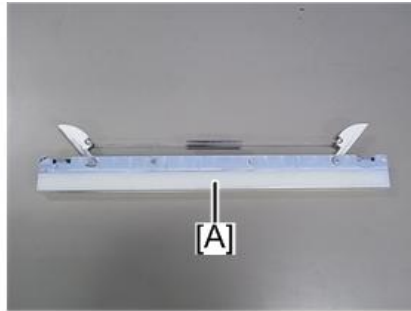
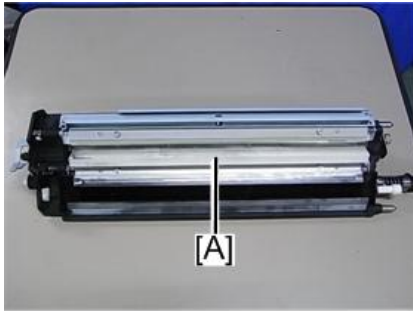
ITB Lubricant Bar

 **Note**

- ITB cleaning blade, ITB lubricant brush and ITB lubricant bar must be replaced together as a set.

1. ITB Lubricant Brush (page 748 "ITB Lubricant Brush")

2. Detach the ITB lubricant bar [A] from the ITB cleaning unit.

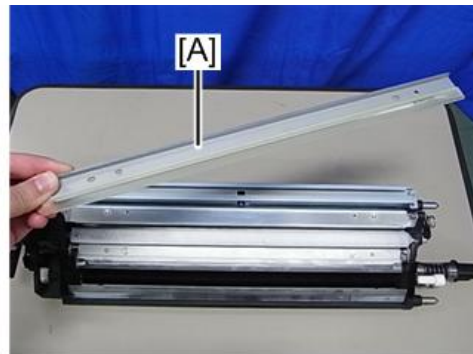
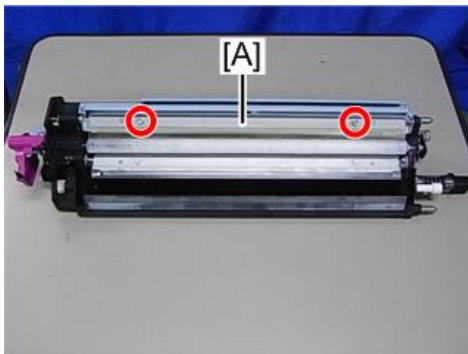


d1355075

ITB Lubricant Blade

4

1. ITB Cleaning Unit (page 746 "ITB Cleaning Unit")
2. ITB Lubricant Blade [A] (⚙️ x2)

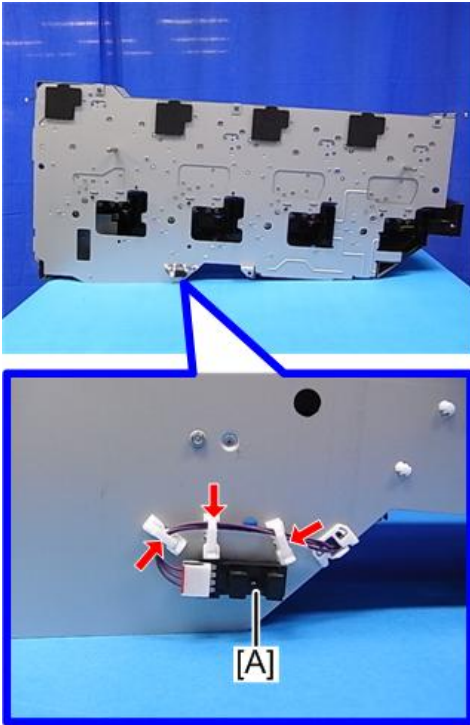


d1355077

ITB Cleaning Unit Set Sensor

1. Toner Supply Unit (page 624 "Toner Supply Unit")

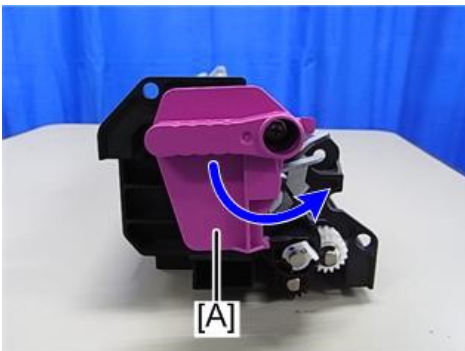
2. ITB Cleaning Unit Set Sensor [A] (🔌 x3, 📌 x1, Hook)



d1355074

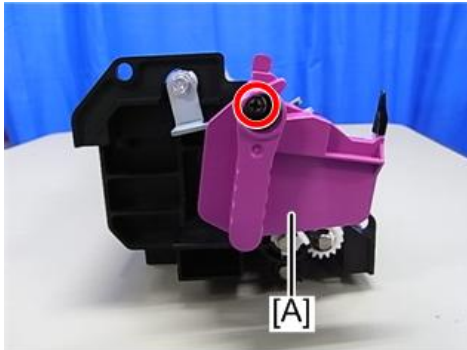
ITB Paper Dust Cleaning Brush Roller

1. ITB Cleaning Unit (page 746 "ITB Cleaning Unit")
2. Rotate the lock lever [A] in the arrowed direction as shown below.



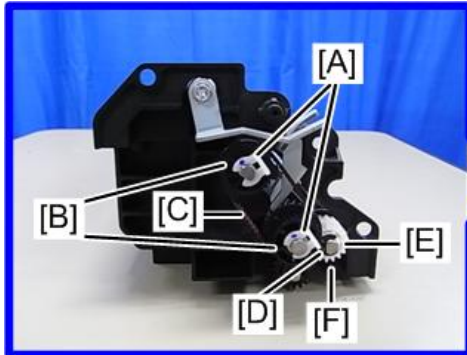
d1355070

3. Lock lever [A] (🔩 x1)



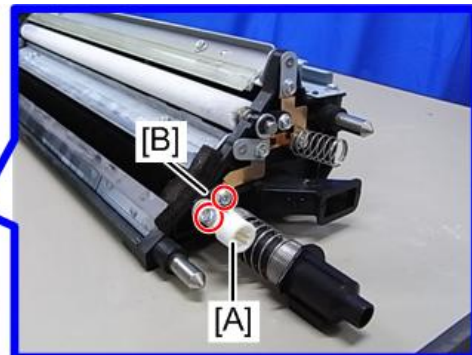
d1355071

4. Snap ring [A] x2, Gear x2 [B], Belt x1 [C], Ⓒ[D] x1, Gear [E] x1, Bearing [F] x1



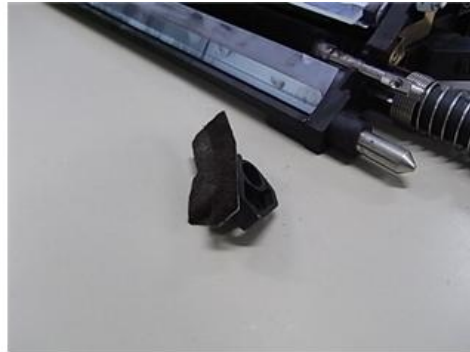
d1355072

5. Coupling [A] (🔩 x1), Bearing [B] (🔩 x1)



d1355078

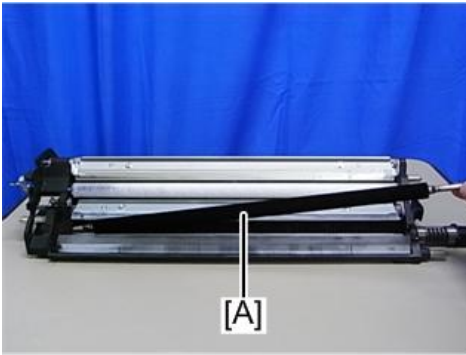
6. Bearing [A] that has a sponge



d1355085

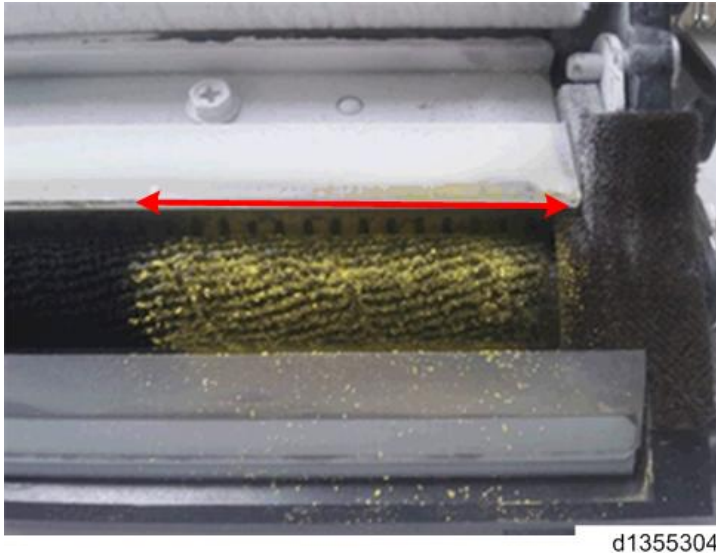
4

7. ITB Paper Dust Cleaning Brush Roller [A]



d1355073

8. Install the new cleaning brush roller and then use a brush to apply zinc stearate (D0149501) and yellow toner (D0149500) in a 40 ~ 50 mm area (shown below) of the installed cleaning brush roller.



Note

- Use the blower brush (D0747690) when applying zinc stearate and yellow toner to the cleaning brush roller.



Lubrication after Replacement

After the replacement of the ITB cleaning unit or its components (ITB cleaning blade / Lubricant bar / ITB lubricant blade), you should follow these steps below to lubricate:

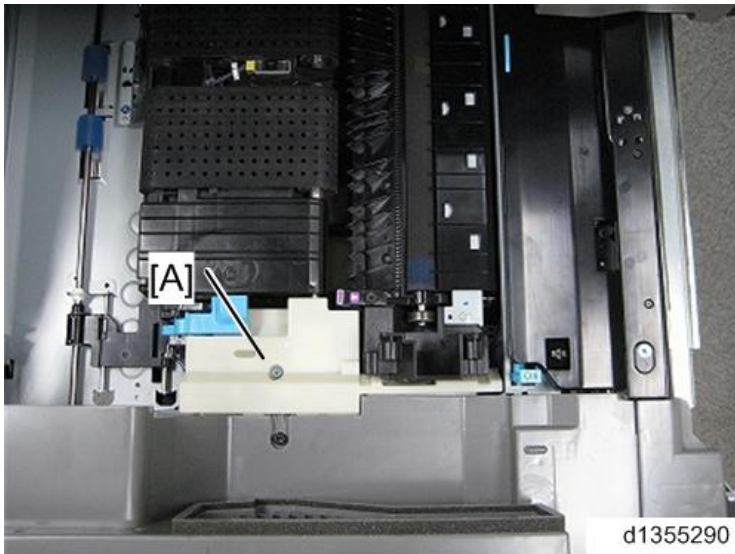
1. Rotate the blade release lever to move the cleaning blade away from the ITB.
2. Turn on the machine, while keeping the drawer unit withdrawn.
3. Enter the SP mode and choose "SP2-696-001 (Force Apply Lubricant Execute).
4. Push [Execute] on the operation panel and then push the drawer unit into the machine.

5. Lubrication starts (the operation takes 3 minutes).
6. Turn the machine off when the lubrication finishes (the machine's activity stops).
7. Withdraw the drawer unit and rotate the blade release lever in order to make the cleaning blade contact the ITB
8. Re-install the belt cleaning fan (🔧 x1).
9. Attach the toner supply unit.
10. Attach the drawer cover and then push the drawer unit in.
11. Turn the machine on. The machine will execute automatic corrections.

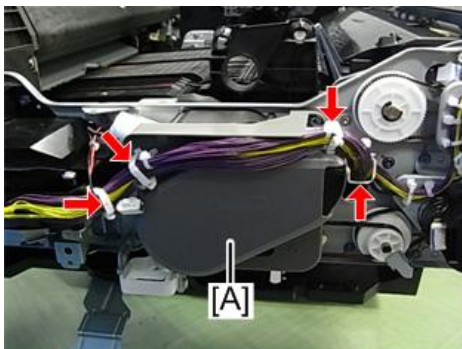
Paper Transfer Roller Unit

Paper Transfer Roller Unit

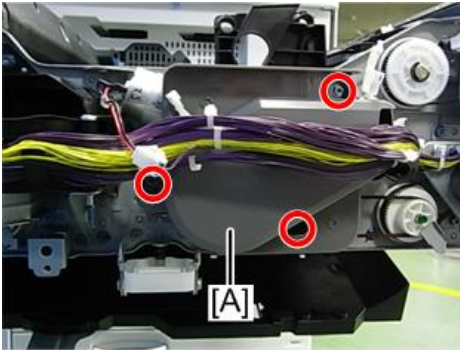
1. Pull the drawer unit out.
2. Drawer Unit Cover (page 594 "Drawer Unit Cover")
3. Cover [A] (🔧 x2, 📏 x1)



4. Remove the harnesses from the inner cover [A] (🔧 x4)



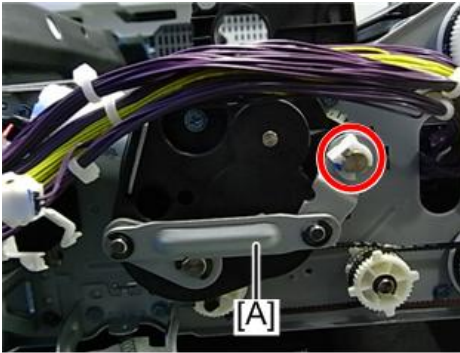
5. Inner Cover [A] (🔩 x3)



d1355066

4

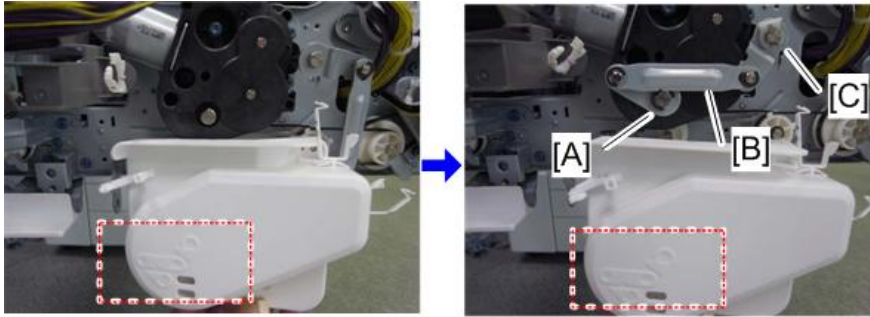
6. Release the link plate [A] (🔩 x1)



d1355067

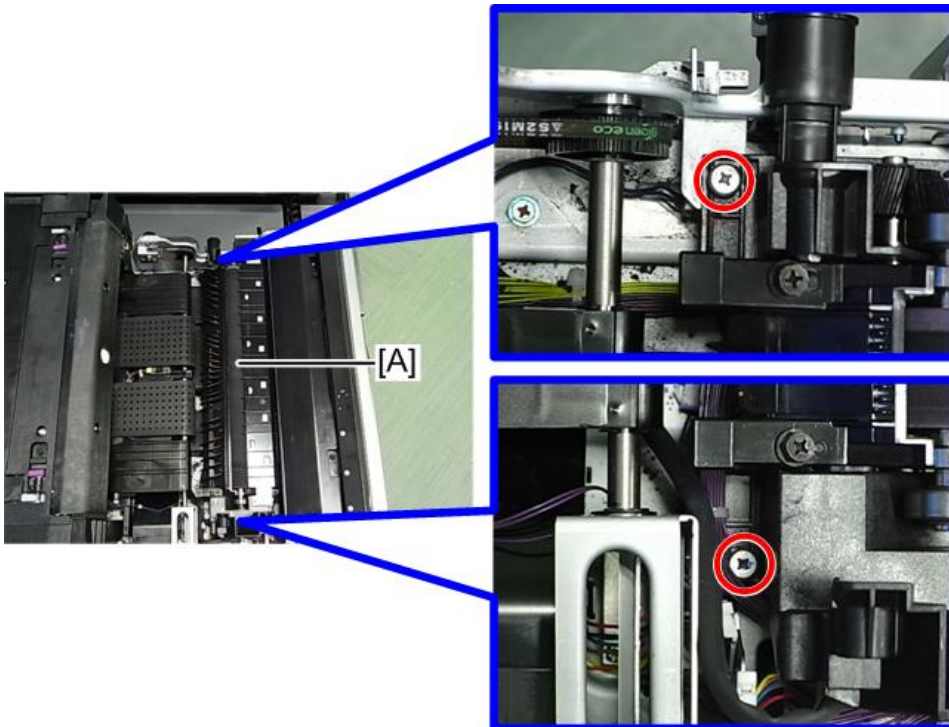
↓ Note

- When mounting the motor block, screw the motor in first. Then, assemble links [A], [B] and [C] as shown below. There is also a diagram embossed on the motor cover to help you to install the links correctly.
- Lock shaft (Cut surface to the upper left) [A]
- Link (Long hole to the right) [B]
- Paper transfer roller shaft (Cut surface to the lower side) [C]



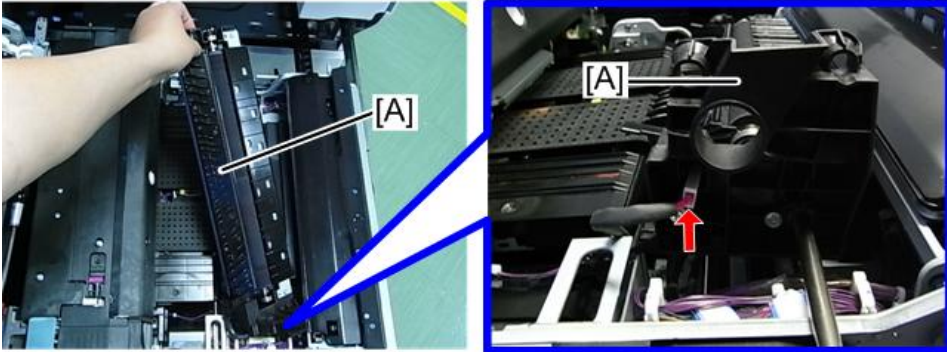
d1352529

7. "Shoulder  x2" on both sides of the paper transfer unit [A]



d1355068

8. Paper Transfer Roller unit [A] (🔧 x1)



d1355069

4

Paper Discharge Plate

1. Pull the drawer unit out.
2. Paper Discharge Plate [A] (🔧 x2)

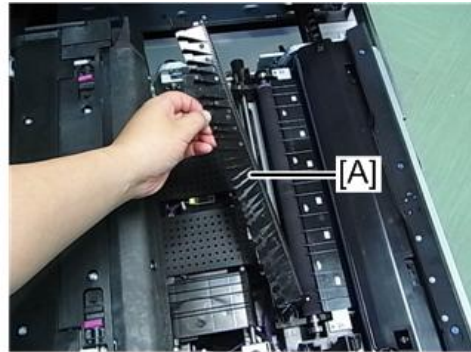
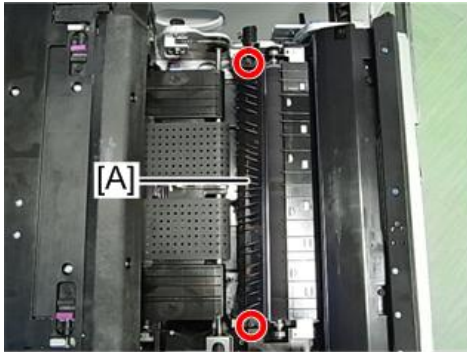


d1355062

Paper Transfer Roller

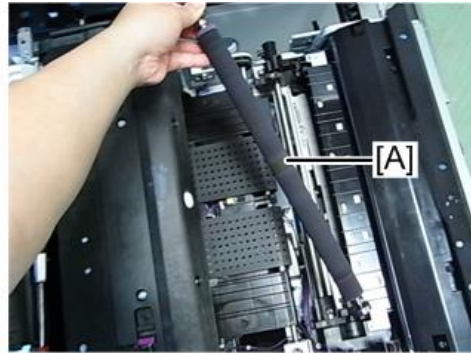
1. Pull the drawer unit out.

2. Paper Discharge Plate [A] (⚙️ x2)



d1355062

3. Lift the paper transfer roller [A] to remove it.



d1355060

Fusing Unit

Screw List

The fusing unit has many types of screws. A screw list is shown below.

In the procedures, the screw types used are shown as (A) ~ (M).

Note

- **Example: Cover [A] (A x2)**
This means "the two screws that fixes cover [A] are A: SCREW:M3X6 listed below".
- If (E x 2), it means "Cover [A] is fixed with two E: HEXAGONAL BOLT:DOUBLE SCREW:M3X10."

A: SCREW:M3X6



B: HEXAGONAL BOLT:W/WASHER:M3X8



C: STEPPED SCREW:M3



D: TCRU/ORU SCREW M4



E: HEXAGONAL BOLT:DOUBLE
SCREW:M3X10



F: STEPPED SCREW:DIA5-M3X3.8



d1355260

G: HEXAGON HEAD BOLT WITH
WASHER:M3X6



d1355252

H: STEPPED SCREW - M3



d1355259

I: TAPPING SCREW:3X10



d1355261

J: SCREW:GUIDE PLATE:ADF



d1355257



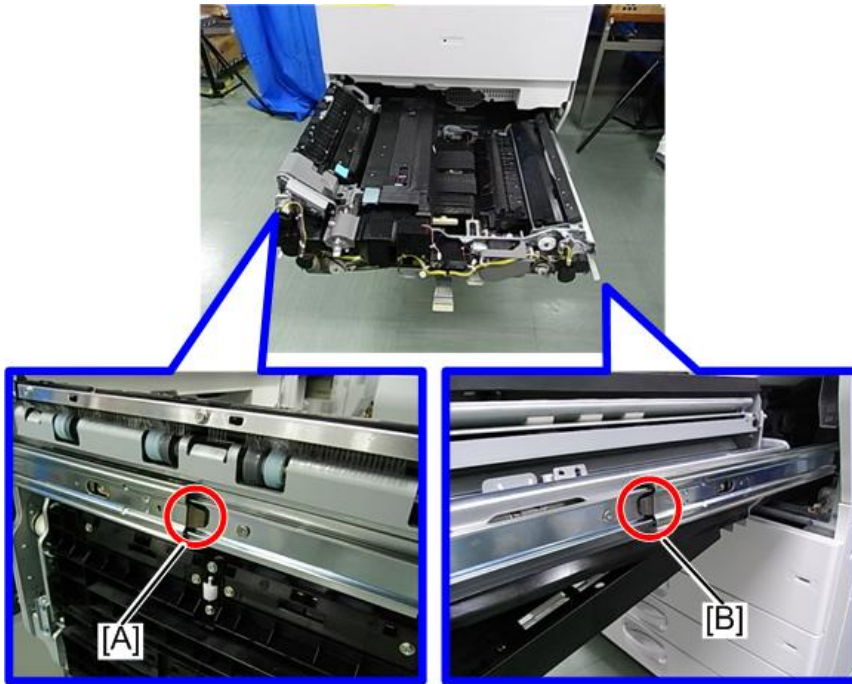
4



Removing the Fusing Unit

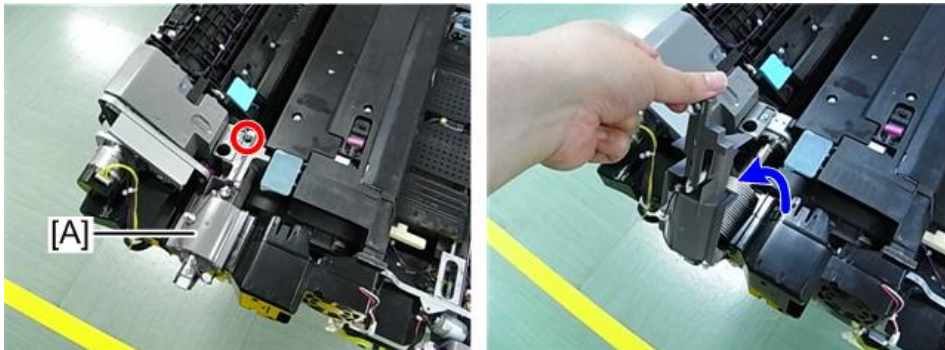
1. Drawer Unit Cover (page 594 "Drawer Unit Cover")

2. Keep pressing in the locks [A] [B] and withdraw the drawer unit fully.



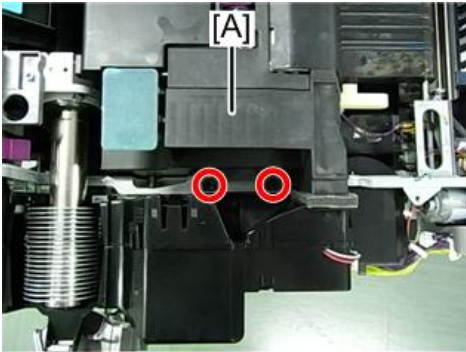
d1355126

3. Open the inner cover [A] (D₇ x1)



d1355127

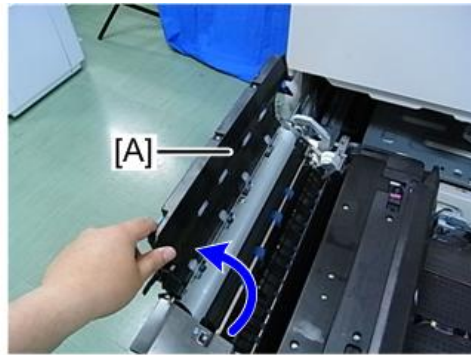
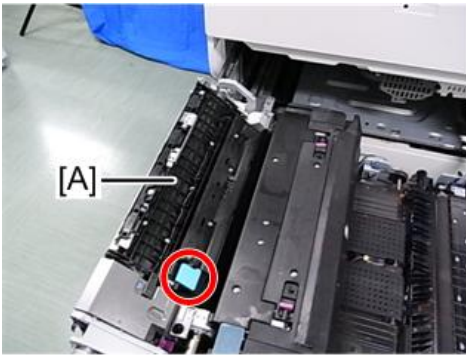
4. "D" x2 on the front side of the fusing unit [A].



d1355129

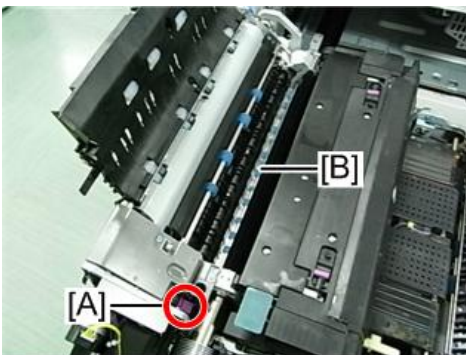
4

5. Open the guide plate [A].



d1355130

6. Raise the lever [A] to lift the inner guide plate [B] up.



d1355132

7. Hold the handgrips to detach the fusing unit [A].

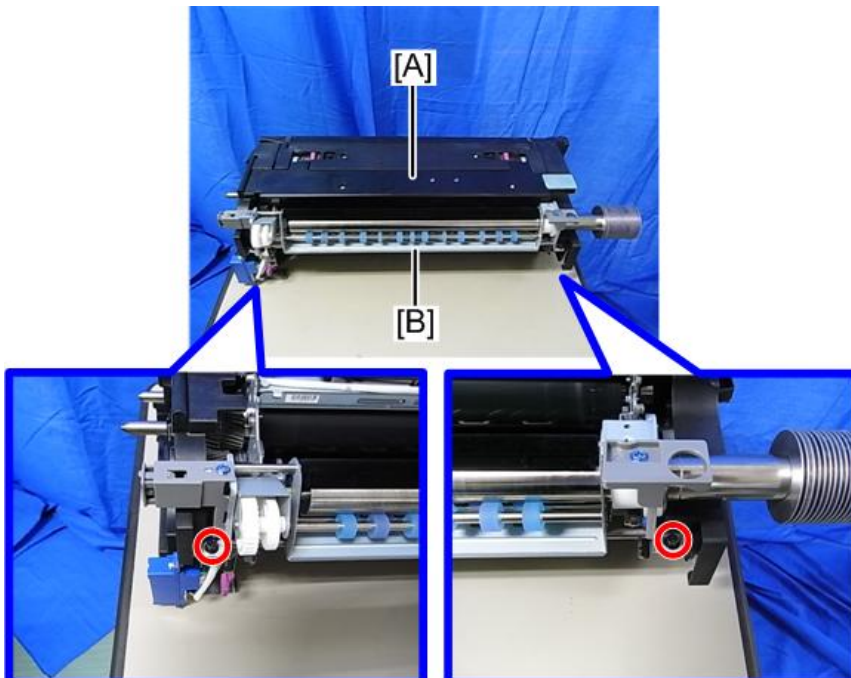


d1355133

4

Fusing Heat Pipe

1. Fusing Unit (page 764 "Removing the Fusing Unit")
2. Open the cover [A] and then remove the fusing heat pipe unit [B]. (D $\frac{1}{2}$ x2)

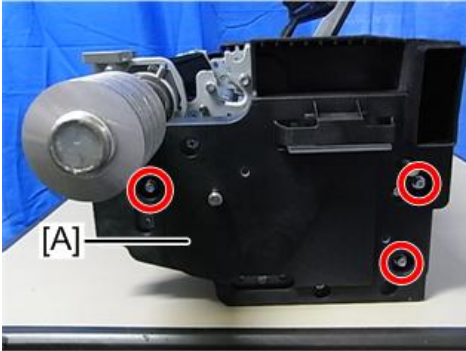


d1355086

Fusing Unit Cover

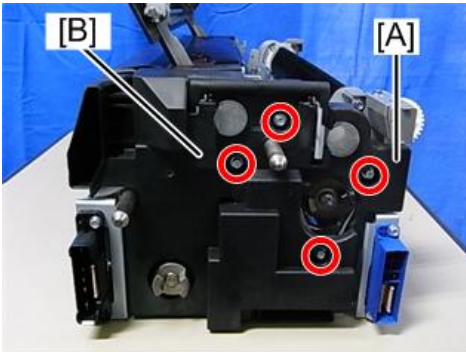
Fusing Front / Rear Cover

1. Fusing Unit (page 764 "Removing the Fusing Unit")
2. Fusing Front Cover [A] (B⁺ x3)



d1355096

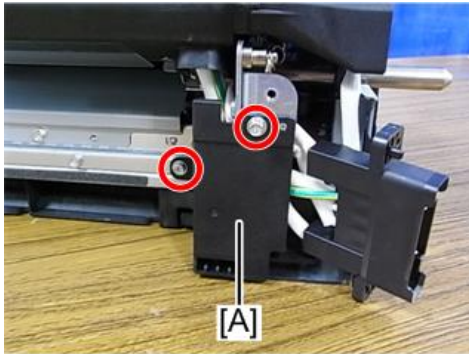
3. Fusing Rear Inner Cover [B] and Fusing Rear Cover [A]. (B⁺ x4)



d1355097

Entrance Drawer Cover


1. Fusing Unit (page 764 "Removing the Fusing Unit")

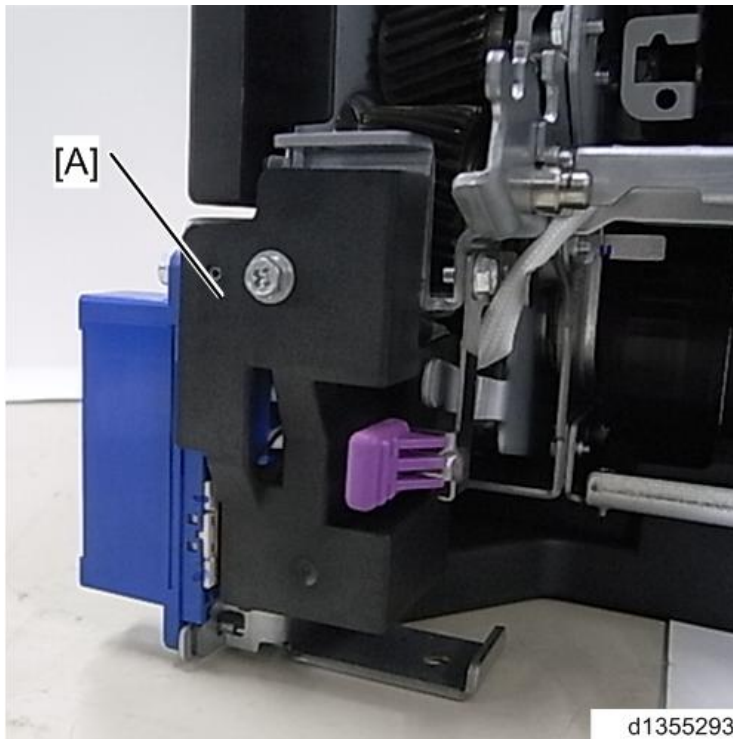
2. Entrance Drawar Cover [A] (B  x2)

d1355202

4


Exit Drawer Cover

1. Fusing Unit (page 764 "Removing the Fusing Unit")
2. Exit Drawer Cover [A] (B  x2)



d1355293



Fusing Upper Cover

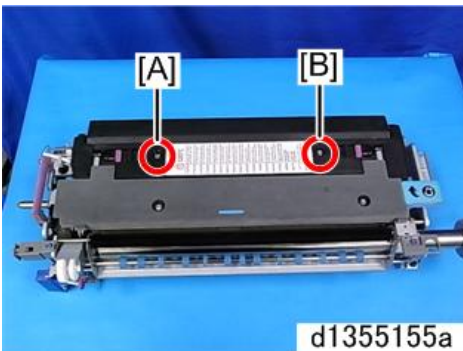
1. Fusing Unit (page 764 "Removing the Fusing Unit")
2. Fusing Upper Cover [A] (G  x2, C  x1)



d1355155

Note

- Two types of screws are used to fasten the fusing upper cover. Refer to the diagram below to check each screw location.
- In the diagram below, [A]:G  (EXAGON HEAD BOLT WITH WASHER:M3X6), [B]:C  (HEXAGONAL BOLT:W/WASHER:M3X8)

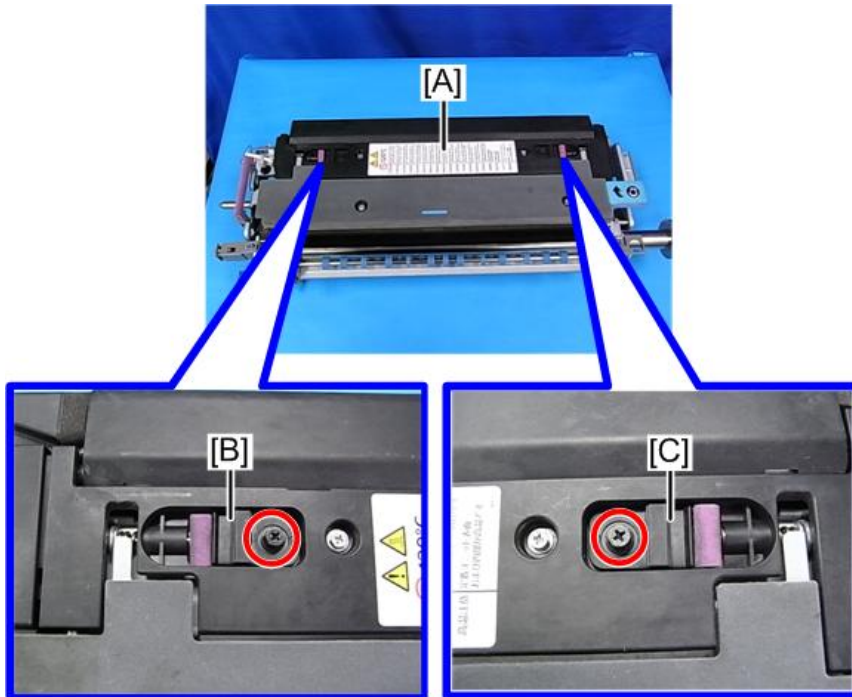


d1355155a

Separation Unit

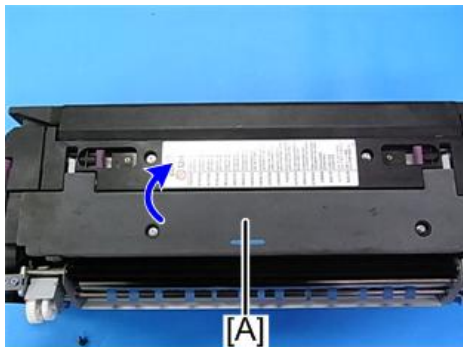
1. Fusing Unit (page 764 "Removing the Fusing Unit")

2. Stoppers [B], [C] on Fusing Upper Cover [A] (M²×2)



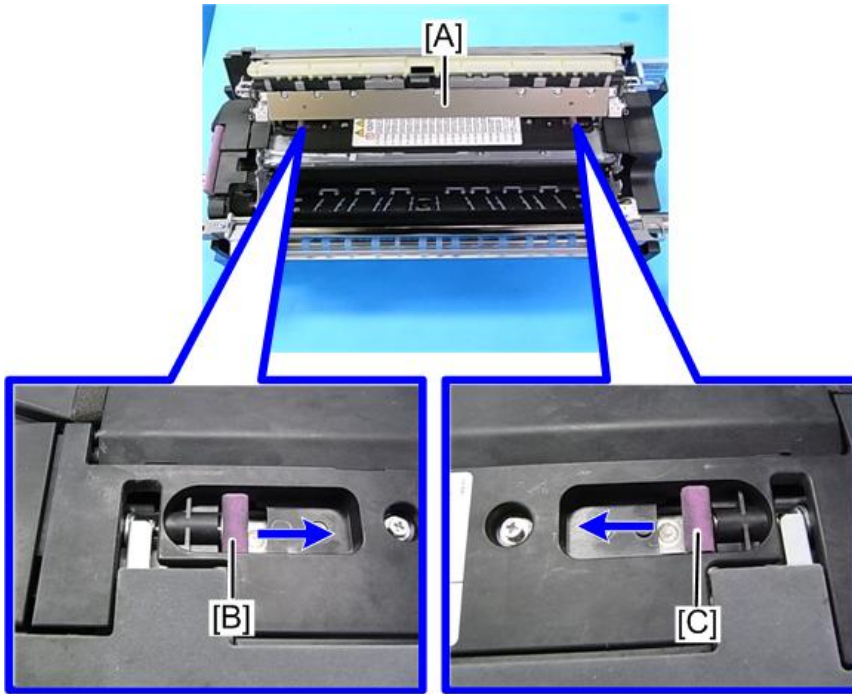
d1355139

3. Open the separation unit [A].



d1355157

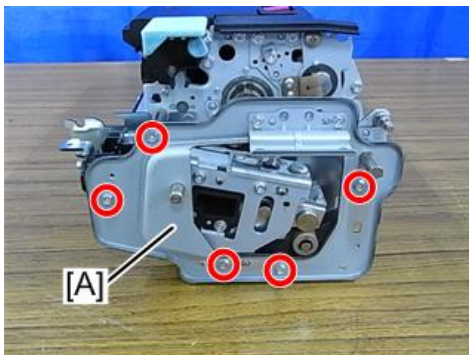
4. Separation Unit [A] (slide pins [B] [C] on both sides as shown below)



d1355156

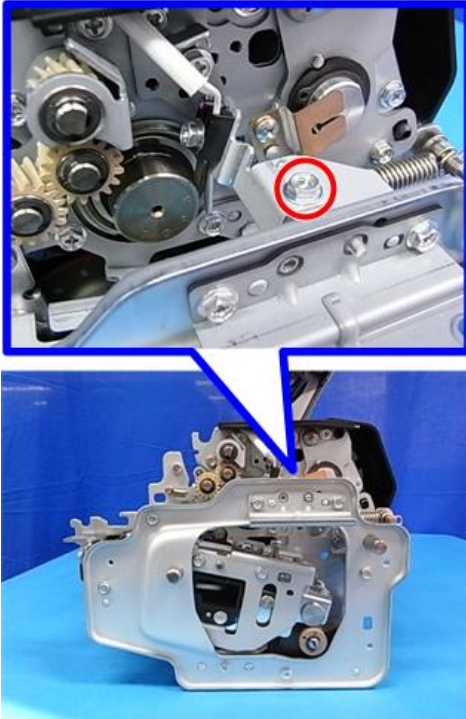
Fusing Unit Plate

1. Fusing Front Cover, Fusing Rear Cover, Entrance Drawer Cover, Exit Entracne Drawer Cover (page 768 "Fusing Unit Cover")
2. Fusing Unit Plate [A] (A¹ x5)



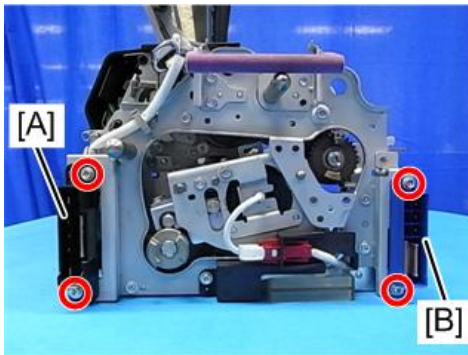
d1355098

In Pro C5100S/Pro C5110, you also need to remove "A¹ x1" shown below.



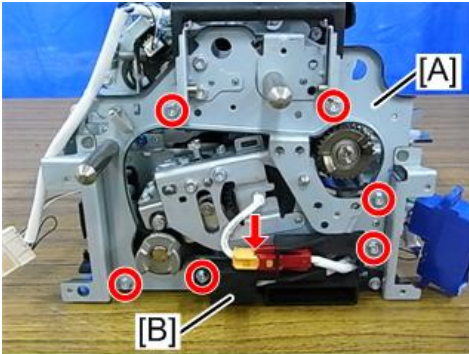
d1355204

3. Drawer Connector [A], [B] (E₇ x4)



d1355099



4. Rear plate [A] (A  x5, B  x1,  x1, Harness Cover [B] x1)

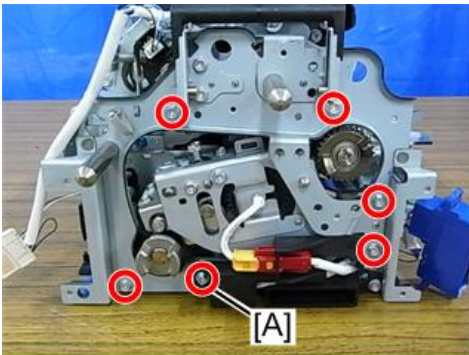


d1355100


4

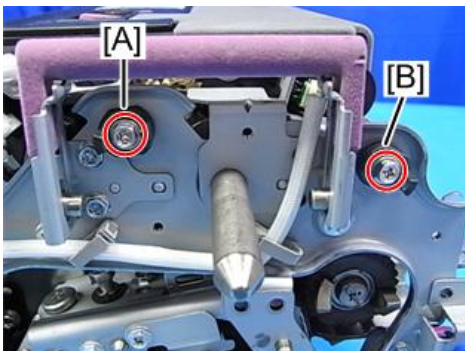
 Note

- Only [A] is B  (HEXAGONAL BOLT:W/WASHER:M3X8). The others are A  (SCREW:M3X6) in the picture below.



d1355100a

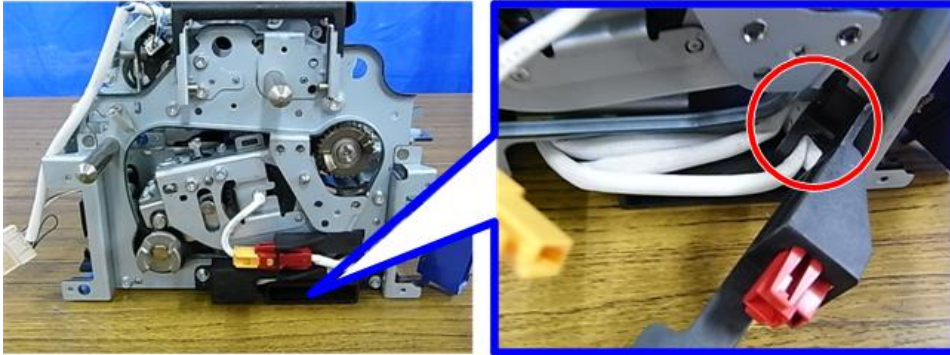
In Pro C5100S/Pro C5110, you also need to remove "A  x2" and the couplings [A], [B] shown below.



d1355205

Note

- When re-attaching the harness cover, hook one of the harnesses on the tab (circled below) that is on the back of the harness cover as shown below.

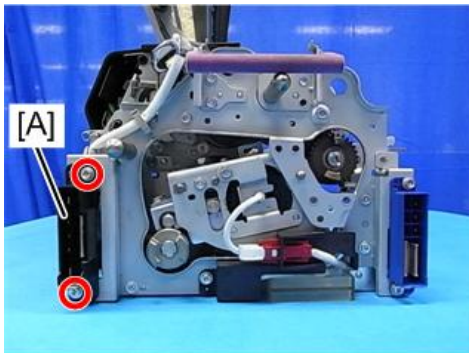


d1355203

4

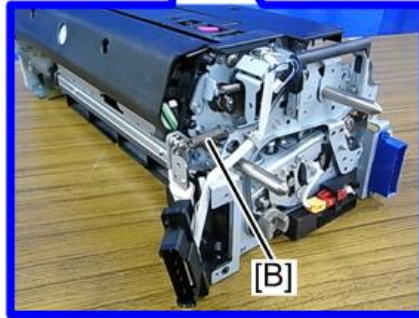
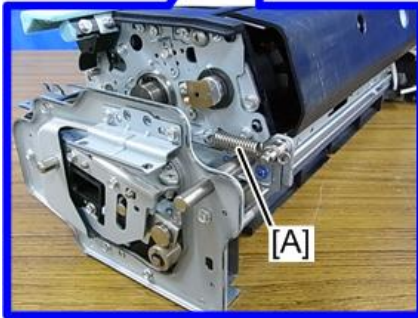
IH Coil Unit

1. Fusing Front Cover, Fusing Rear Cover, Drawer Cover (page 768 "Fusing Unit Cover")
2. Drawer Connector [A] (E₇ x2)



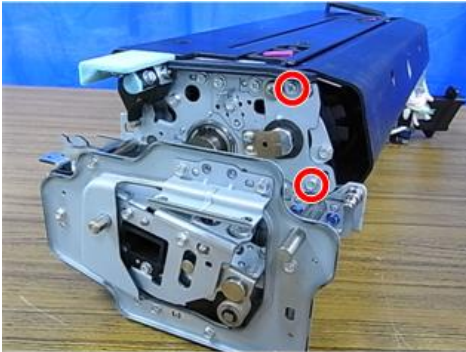
d1355088

3. Spring [A], [B]

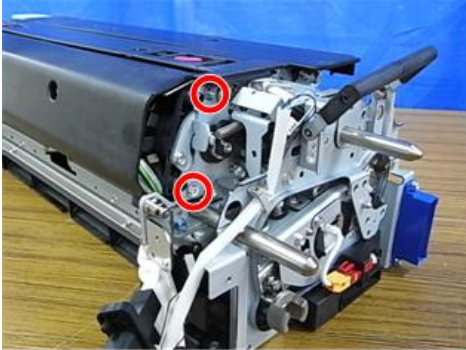


d1355101

4. A x2

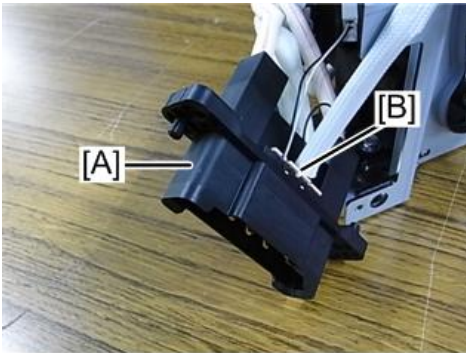


d1355103

5. F  x2

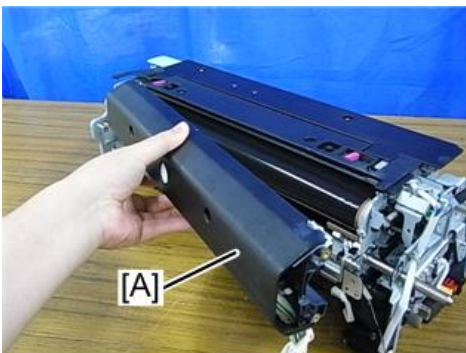
d1355102

RTB 143
Note added after step 5

6. Disconnect the drawer connector [A] and  [B].

d1355104

7. IH Coil Unit [A]

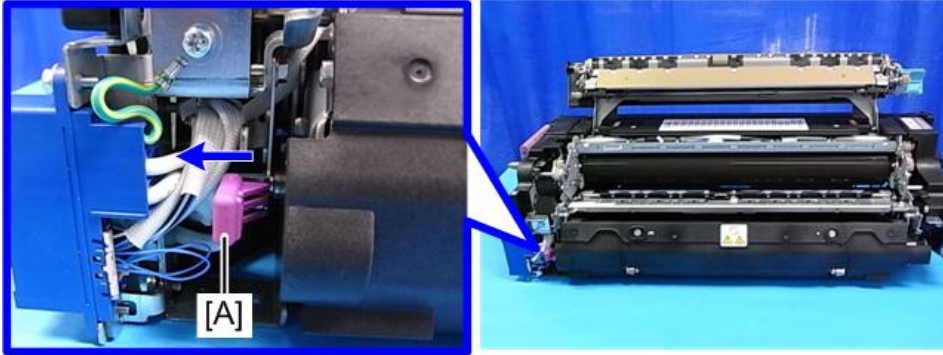


d1355105

Fusing Cleaning Web Unit (D137/D138 Only)

1. Fusing Heat Pipe (page 767 "Fusing Heat Pipe")

2. Push the stopper [A] on the left side of the fusing cleaning web unit in the arrow direction as shown below.



d1355164

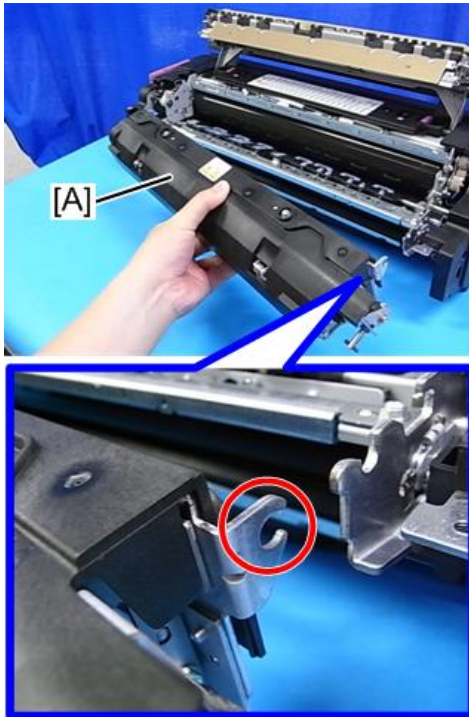
3. Raise the fusing cleaning web unit [A] as shown below to make it upright, and then remove it.



d1355165

Note

- The frame on the right side of the fusing cleaning web unit has a C-cut hole as shown below.

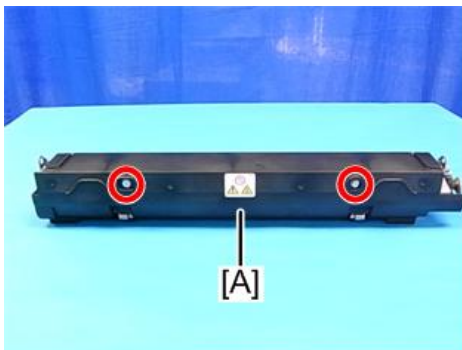


d1355166

4



Fusing Cleaning Web (D137/D138 Only)

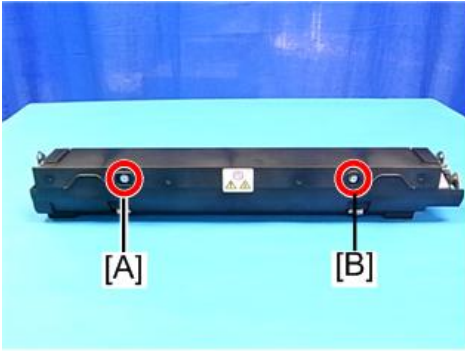
1. Fusing Cleaning Web Unit (page 777 "Fusing Cleaning Web Unit (D137/D138 Only)")
2. Cover [A] (B  x1, C  x1)



d1355167

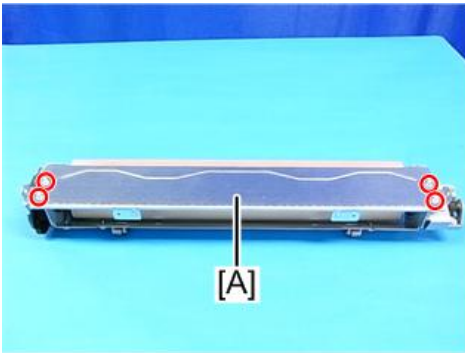
↓ Note

- See the picture below to make sure which screw is used in which location.
- [A]: C  (STEPPED SCREW:M3), [B]: B  (HEXAGONAL BOLT:W/WASHER:M3X8)



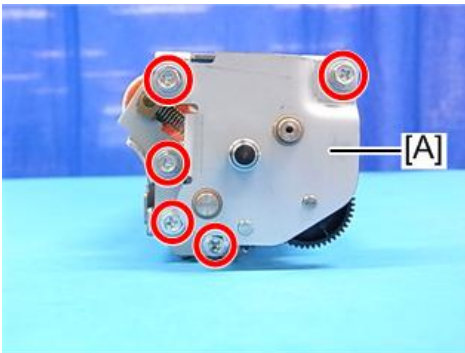
d1355167a

3. Bracket [A] (A  x4)

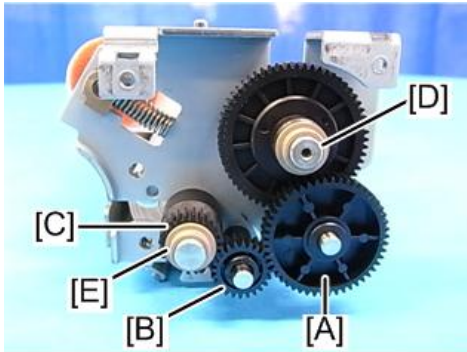


d1355169

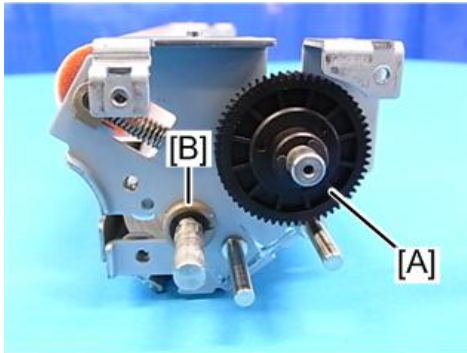
4. Bracket [A] (A  x3), and then the other screws (A  x2).



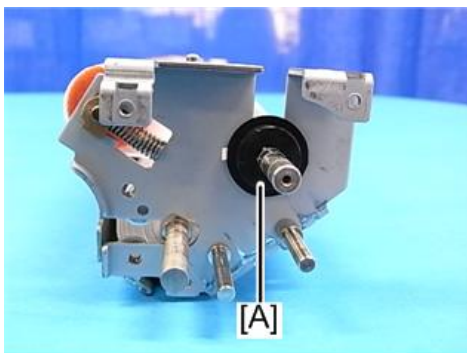
d1355171

5. Gears [A], [B], [C] and Bearings [D], [E]

d1355172

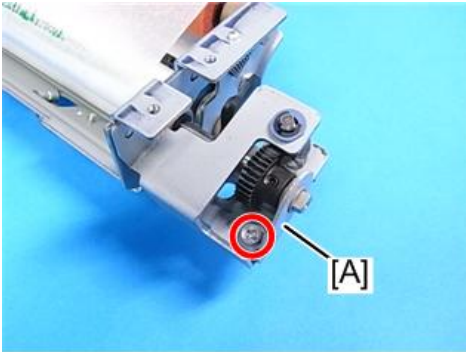
6. Gear [A] (⌚ x1) and Bearing [B] (⌚ x1)

d1355173

7. Bearing [A]

d1355174

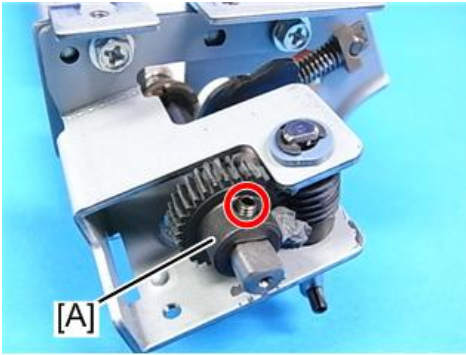
8. Bracket [A] (A  x1)



d1355175

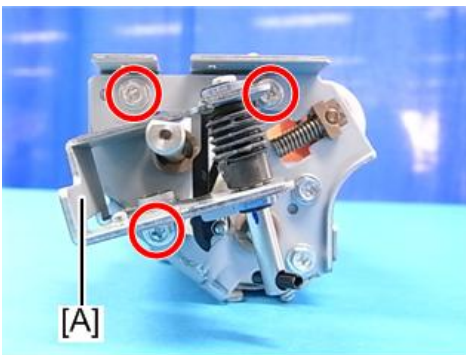
4

9. Gear [A] (loosen Hexagonal Socket  x1)



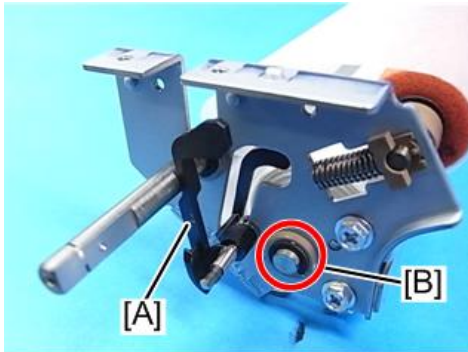
d1355176

10. Bracket [A] (A  x3)



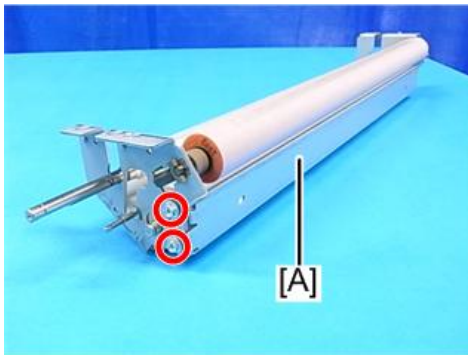
d1355177

11. Feeler [A] (Spring x1) and Bearing [B] (C x1)



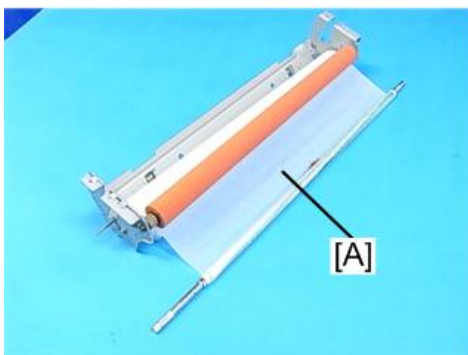
d1355178

12. Stay [A] (A x2)



d1355178

13. Fusing Cleaning Web [A]

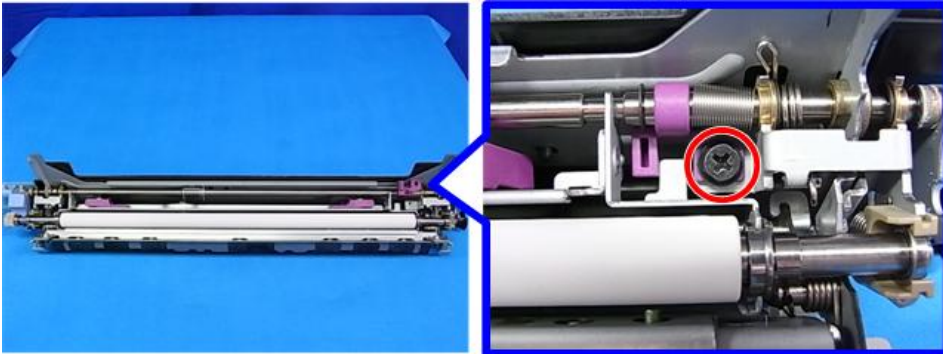


d1355181

Fusing Belt Smoothing Roller (D137/D138 Only)

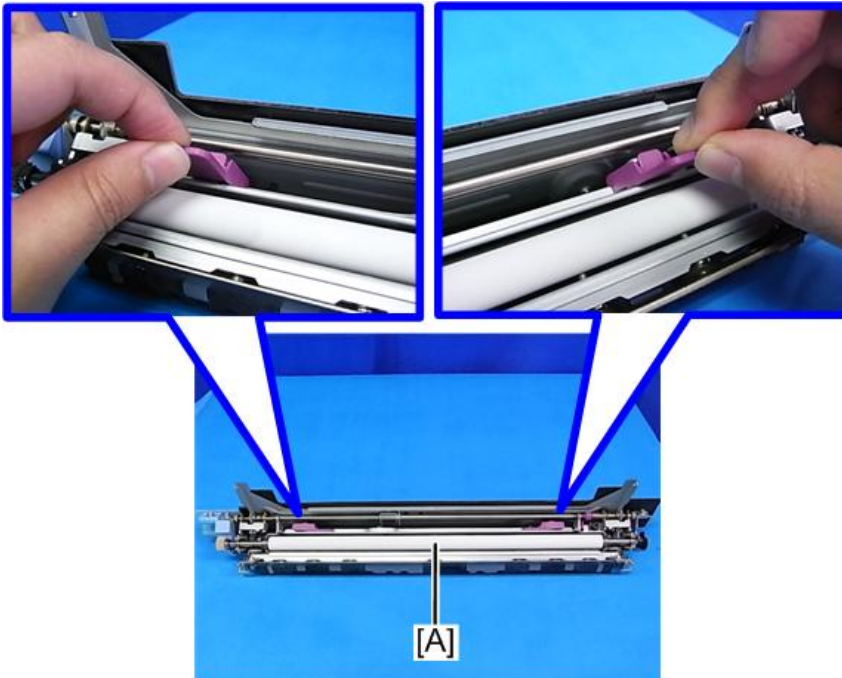
1. Separation Unit (page 768 "Fusing Unit Cover")

2. Remove the screw to release the stopper. (M² x1)



d1355183

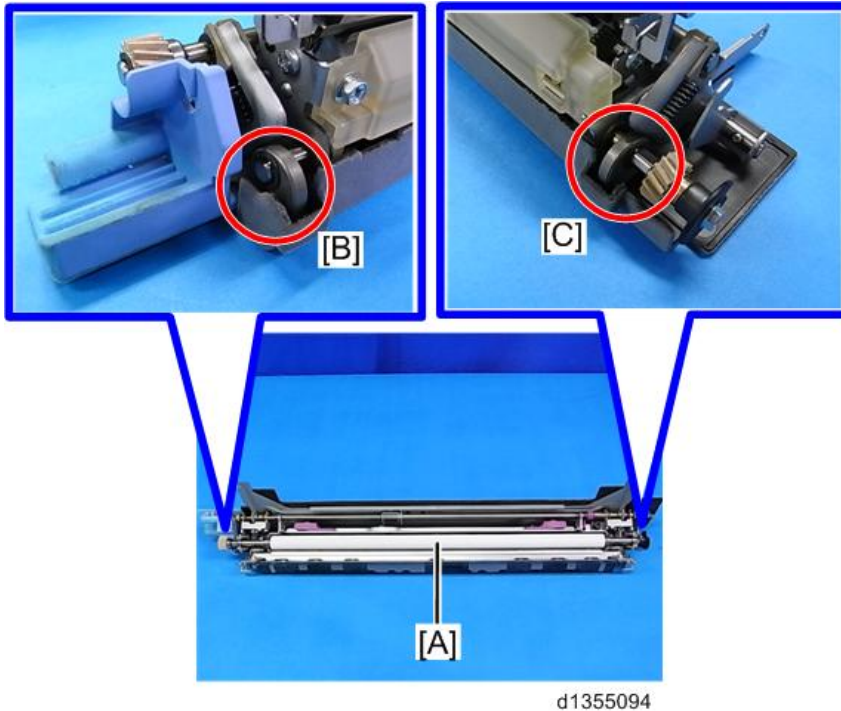
3. Raise the finger grips of the fusing belt smoothing roller [A] to hold them, and then slide and remove the fusing belt smoothing roller [A].




d1355184

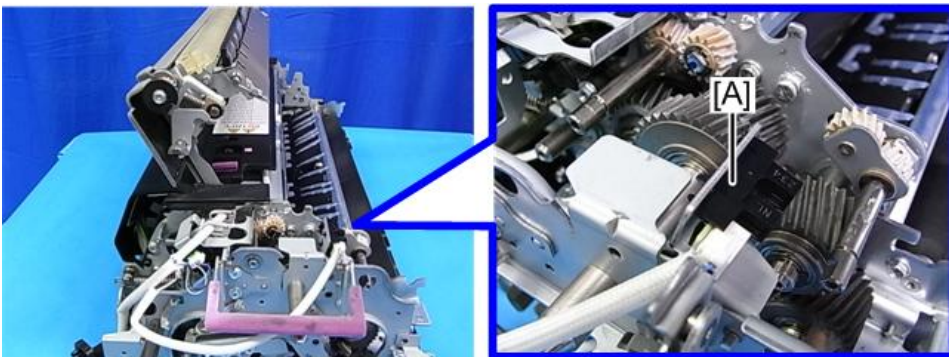
⚠ CAUTION

- Do not touch the side cams [B] [C] of the fusing belt smoothing roller [A]. The rim of the cams is greased.



Fusing Belt Smoothing Roller Contact Sensor (Pro C5100S/Pro C5110S)

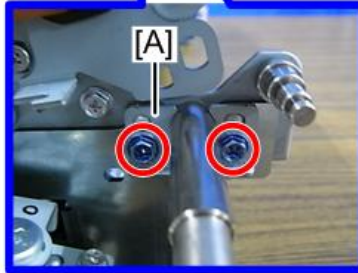
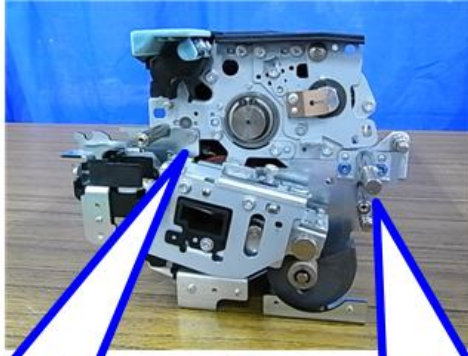
1. Fusing Rear Cover (page 768 "Fusing Unit Cover")
2. Fusing Belt Smoothing Roller Contact Sensor [A] (Hook,  x1)



Separating the Fusing Unit

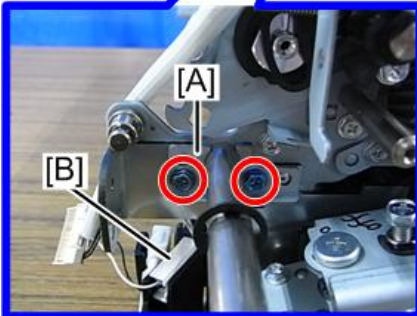
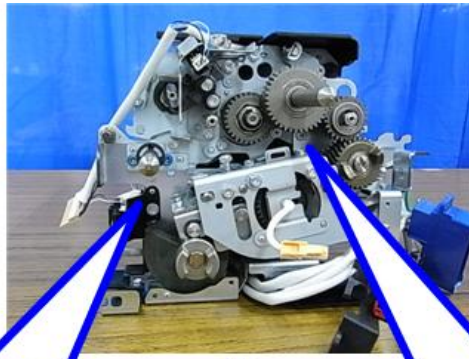
1. Fusing Unit Plate (page 772 "Fusing Unit Plate")

2. "H" x1 and Bracket [A] (I) x2 on the front side



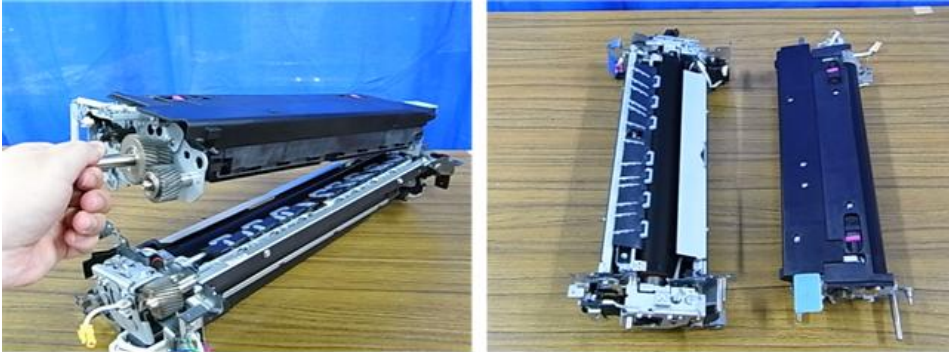
d1355106

3. "H" x1, "I" x2, Bracket [A] on the rear side, and Connector [B]



d1355107

4. Separate the fusing unit into the upper part and the lower part.

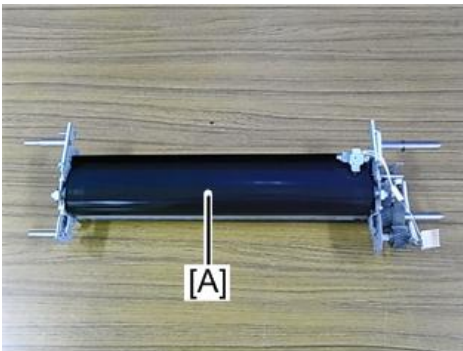


d1355108

4

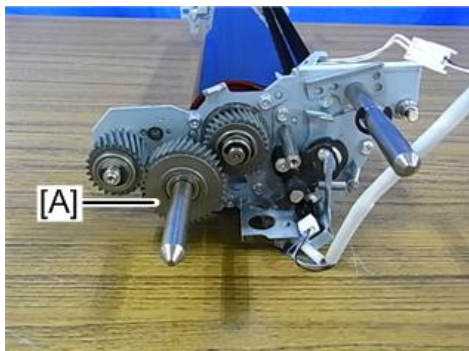
Heating Roller, Fusing Roller, Fusing Belt

1. Separate the fusing unit into the upper part and the lower part. (page 785 "Separating the Fusing Unit")
2. Turn the upper part [A] over.



d1355113

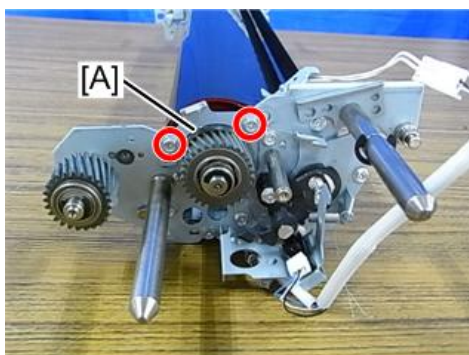
3. Gear [A]



d1355114

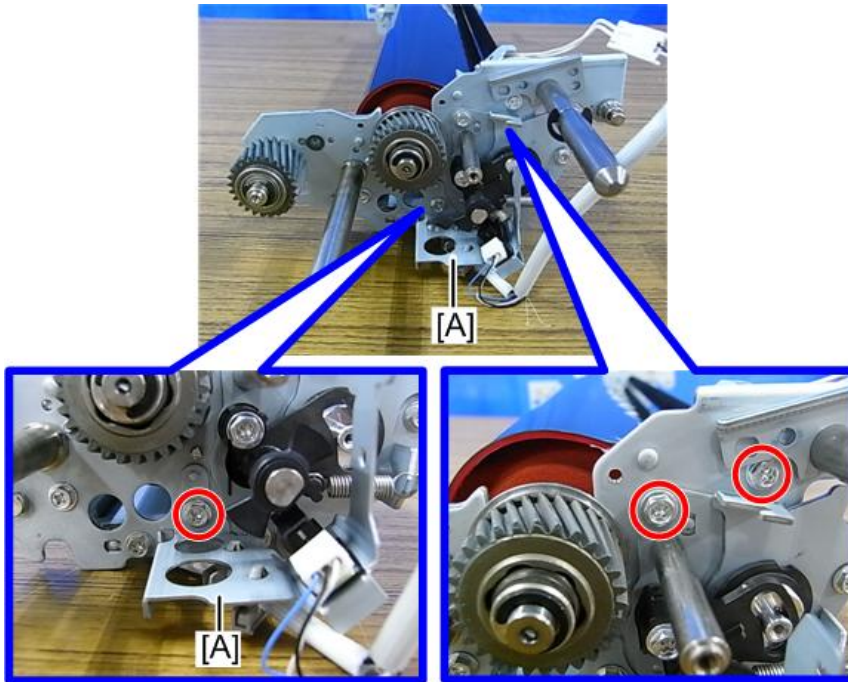
4

4. Bracket [A] (A⁷ x2)



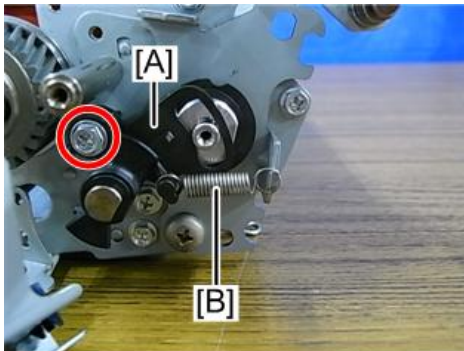
d1355115

5. "A" x2 and Bracket [A] (A x1)



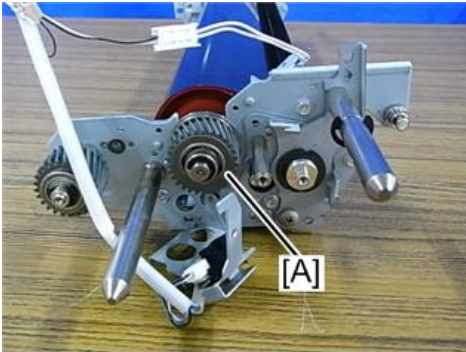
d1355116

6. Rotation Sensor [A] (A x1, Spring [B] x1)



d1355117

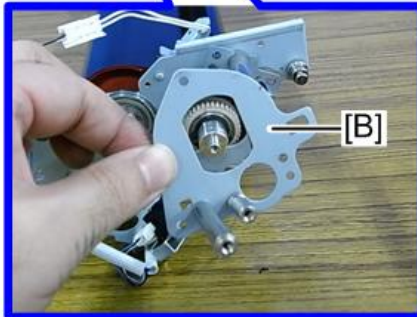
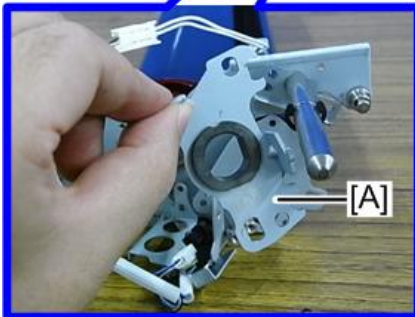
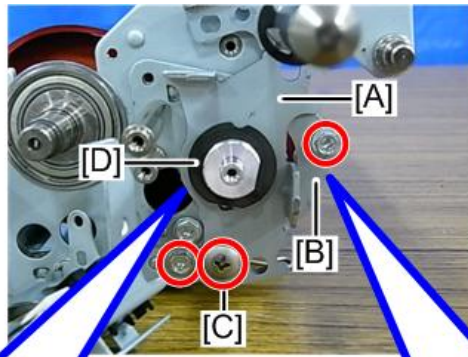
7. Gear [A] (C x1, Washer x1)



d1355206

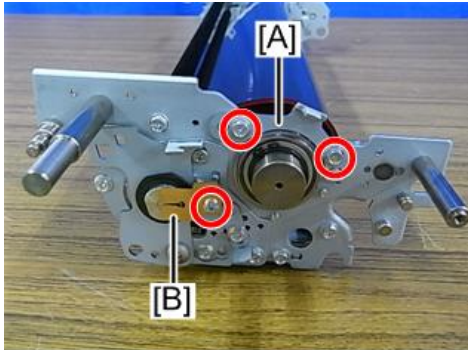
4

8. Brackets [A], [B] (J x1, C x1, C-ring [D] x1, A x2)





d1355118

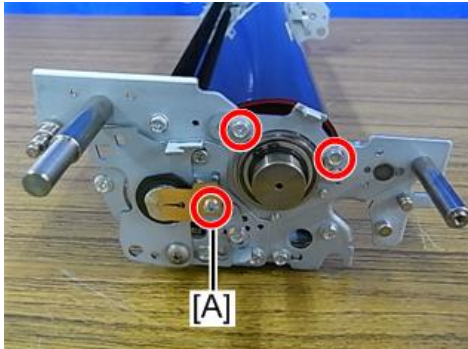
9. Bracket [A] on the front side, and Grounding Plate [B] (A  x2, K  x1)



d1355119

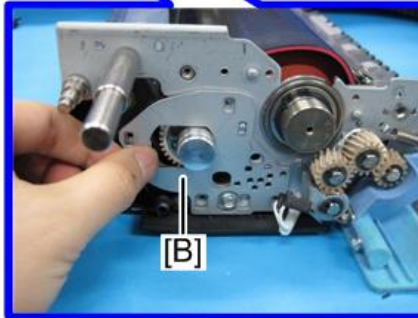
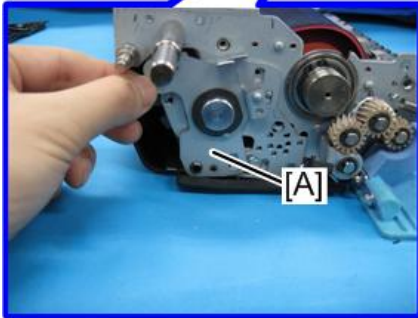
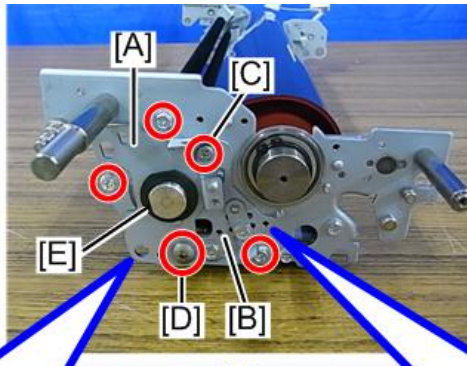
↓ Note

- See the picture below to make sure which screw is used in which location.
- [A]:K  (SCREW:M3X4), Others: A  (SCREW:M3X6)



d1355119a

10. Bracket [A], [B] (L [C] x1, J [D] x1, A [E] x3, C-ring [E] x1)

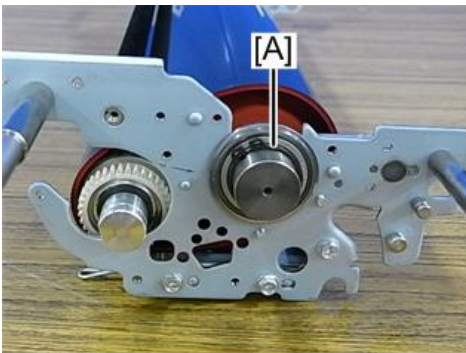


d1355120a

↓ Note

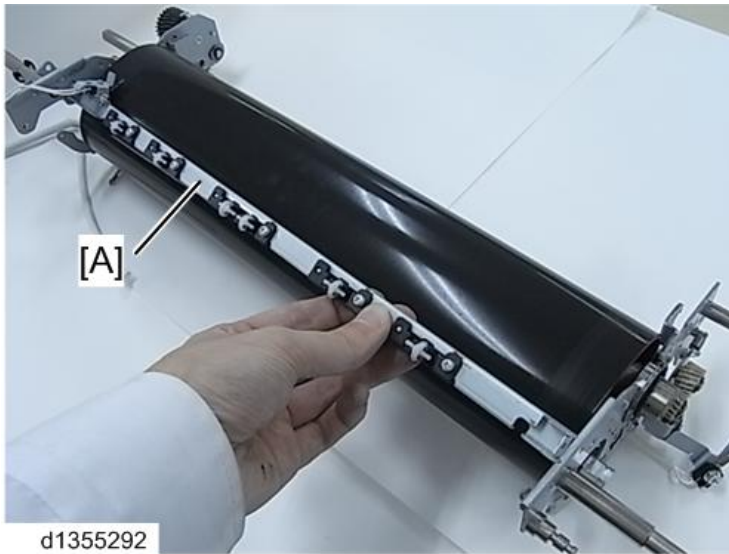
- Detach the bracket [A] and then the bracket [B].

11. C-ring [A] x1

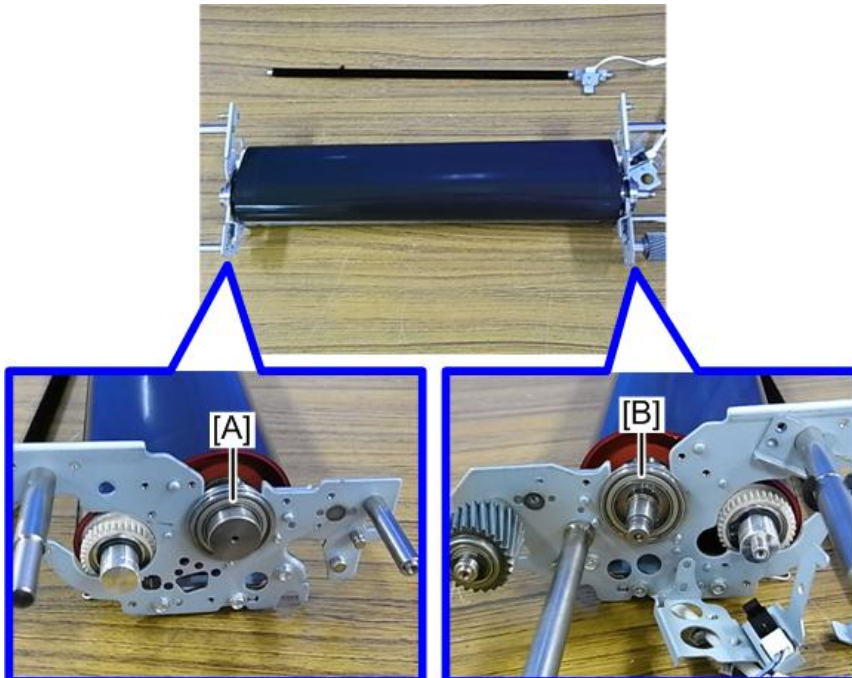


d1355121

12. Entrance Stay [A]

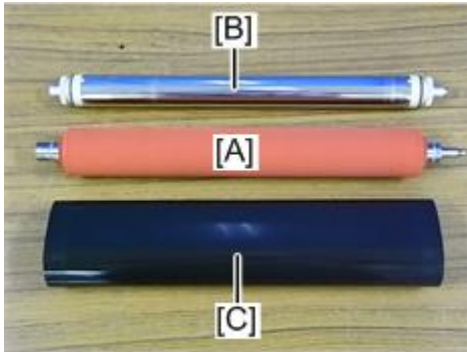


13. Detach the fusing belt unit from both side-frames. (Bearings [A], [B])



d1355123

14. Detach the hot roller [A] and the heating roller [B] from the fusing belt [C].



d1355125

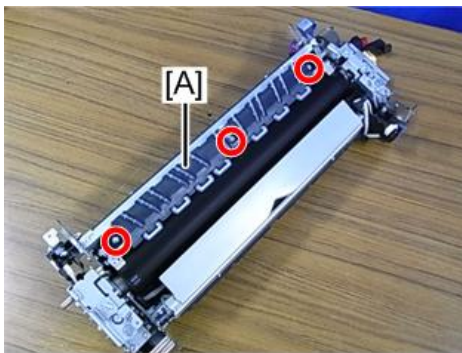
4

↓ Note

- When you detach the rollers and the belt from the frame, hold the ends of the hot roller shaft to lift it. Then move it above the heating roller to detach the whole thing (hot/heating rollers and fusing belt).

Pressure Roller Stripper Plate

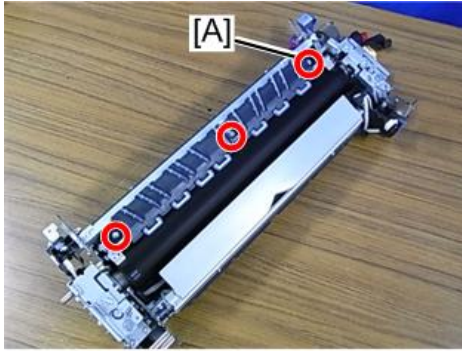
1. Separate the fusing unit into the upper part and the lower part (page 785 "Separating the Fusing Unit")
2. Pressure Roller Stripper Guide Plate [A] (C x2, B x1)



d1355134

↓ Note

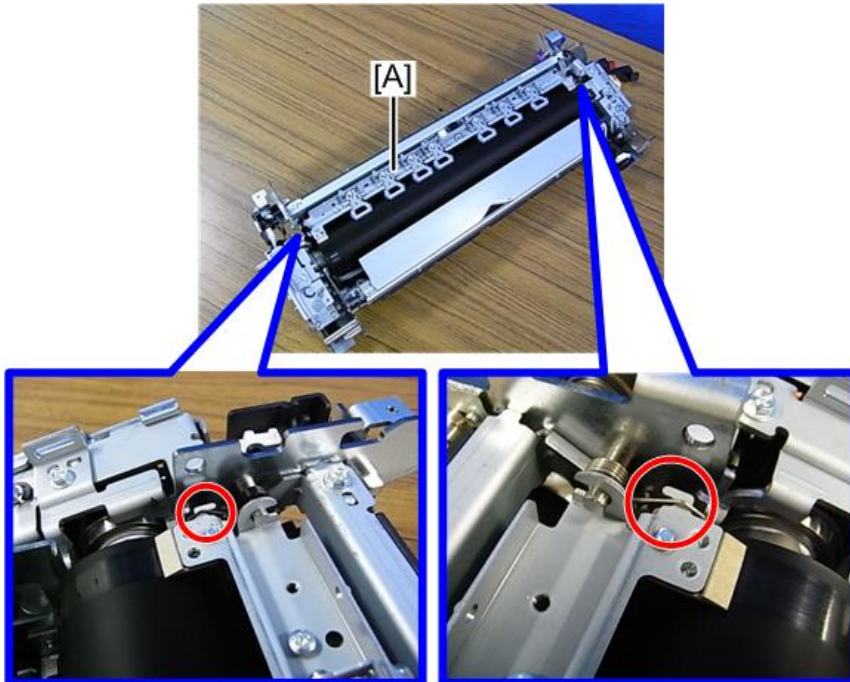
- See the picture below to make sure which screw is used in which location.
- [A]: B (HEXAGONAL BOLT:W/WASHER:M3X8), Others: C (STEPPED SCREW:M3)



d1355134a

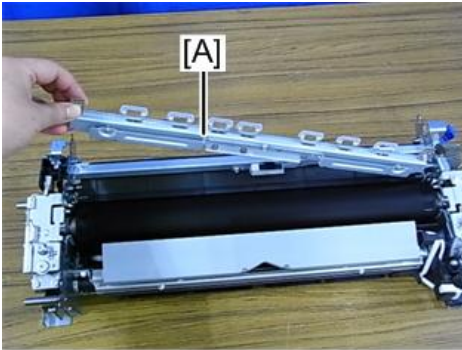
3. Release the springs on both sides of the pressure roller stripper plate [A].

4



d1355135

4. Raise and make the pressure roller stripper plate [A] upright to remove it.



d1355136

4


↓ Note

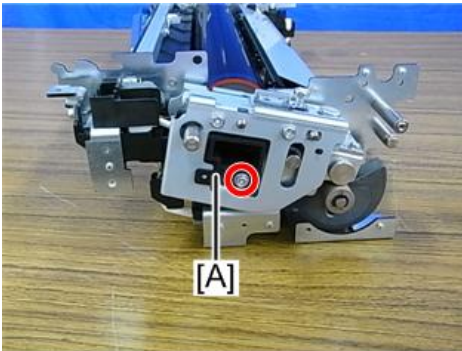
- The frame of the pressure roller stripper plate has C-cut holes.

Fusing Lamp

↓ Note

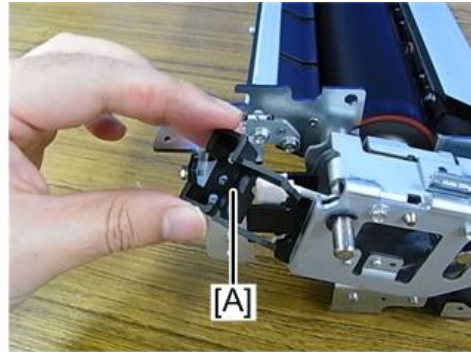
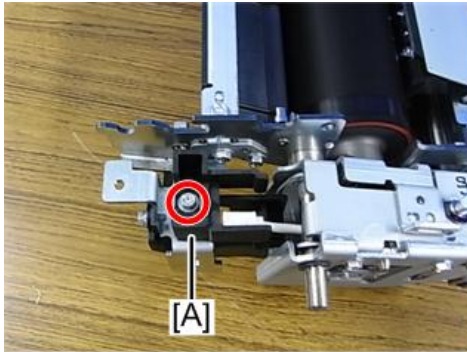
- In the procedure pictures below, the fusing unit is separated. But you need only to remove the fusing unit plate to remove or install the fusing lamp.

1. Fusing Front Cover (page 768 "Fusing Unit Cover")
2. Harness Guide [A] (B  x1)



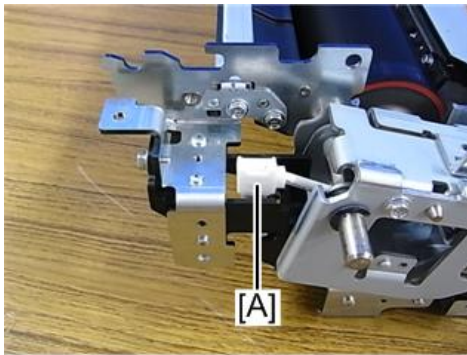
d1355137

3. Harness Guide [A] (B  x1)



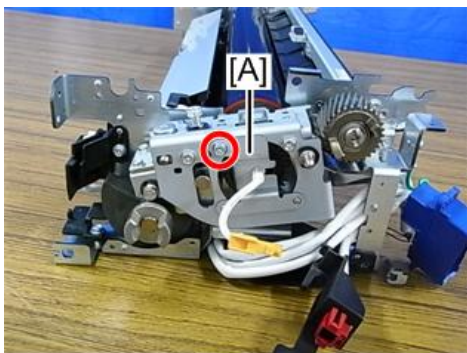
d1355138

4.  [A] x1



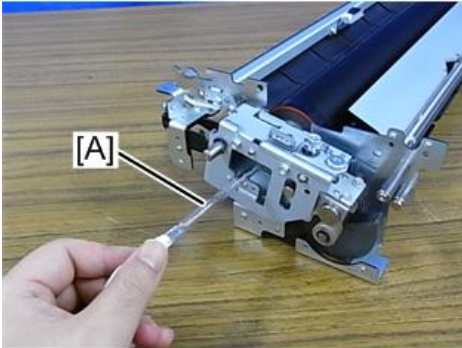
d1355140

5. Bracket [A] (A  x1)



d1355141

6. Fusing Lamp [A]

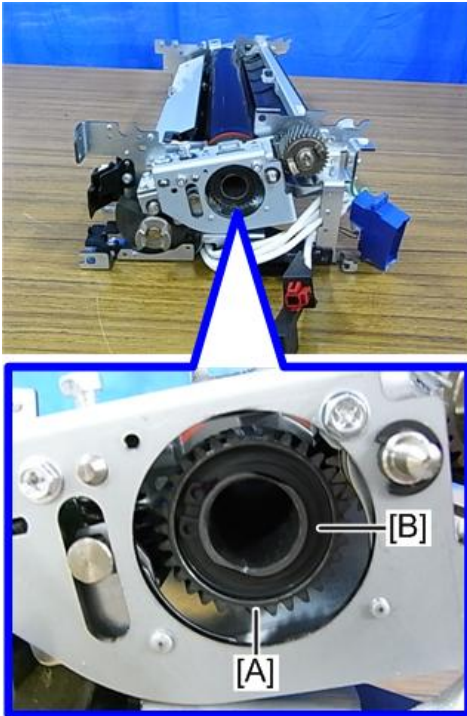


d1355142

4

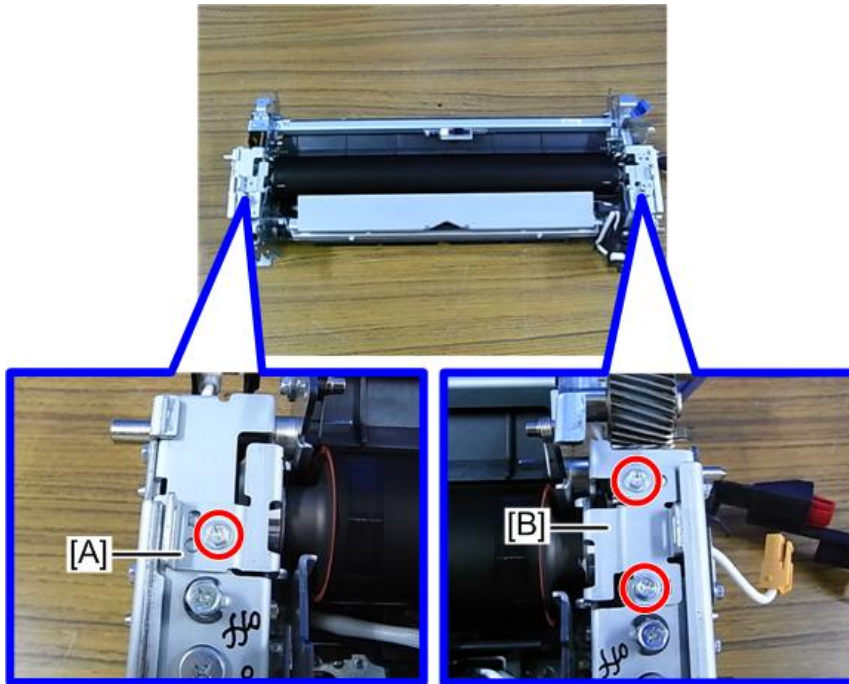
Pressure Roller

1. Separate the fusing unit into the upper part and the lower part. (page 785 "Separating the Fusing Unit")
2. Fusing Lamp (page 796 "Fusing Lamp")
3. Gear [A] (C-ring [B] x1)



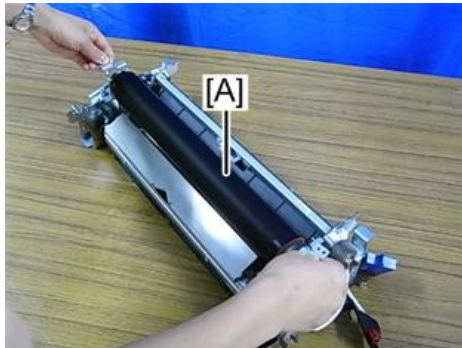
d1355143

4. Detach the pressure roller fixing plates [A], [B] from the lower part. (A \times 3)



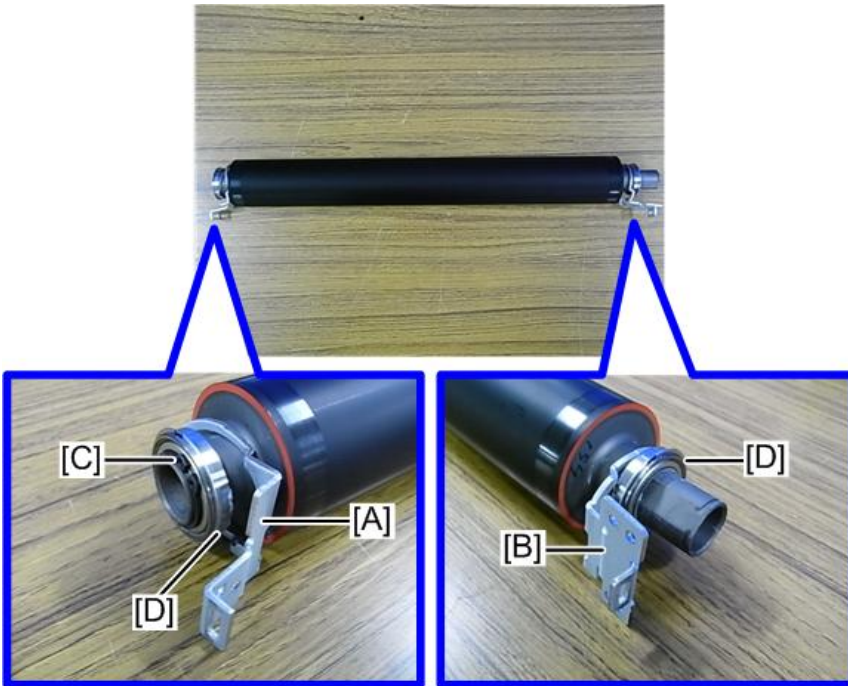
d1355144

5. Pressure Roller [A]



d1355145

6. Pressure Roller Fixing Plates [A], [B] (C-ring [C] x1, Bearing [D] x2)



d1355146

↓ **Note**

- When re-installing the bearings on the pressure roller, pay attention to the direction of the bearings [A] (the brimmed part comes to the outside) as shown below (**Diagram 1**).
- When re-installing the pressure roller on the fusing unit frame, be sure to make the brimmed parts [A] of the bearings come to the outside of the frame [B] as shown below (**Diagram 2**).

Diagram 1

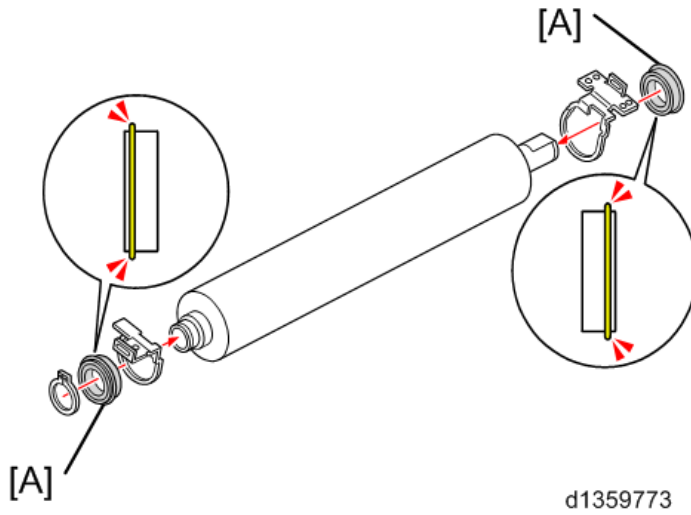
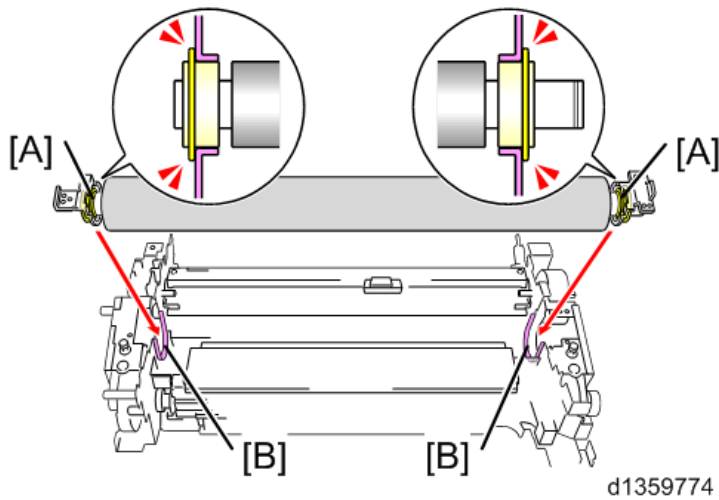


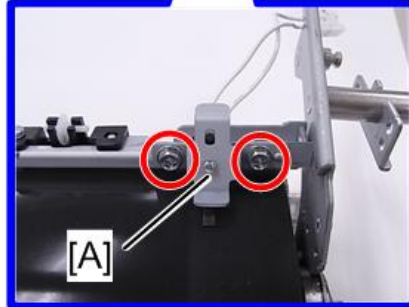
Diagram 2



Thermistor (Fusing Belt)

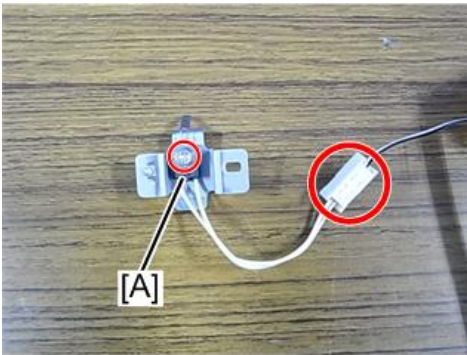
1. Separate the fusing unit into the upper part and the lower part. (page 785 "Separating the Fusing Unit")

2. Bracket with Thermistor [A] (A  x2)



d1355294


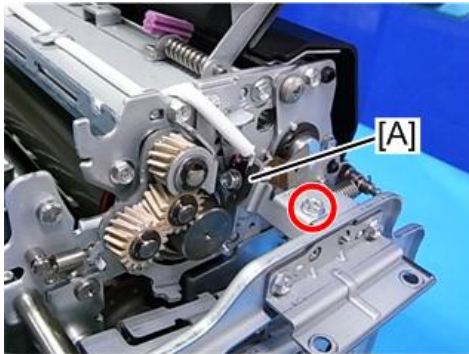
3. Thermistor (Fusing Belt) [A] (E  x1,  x1)



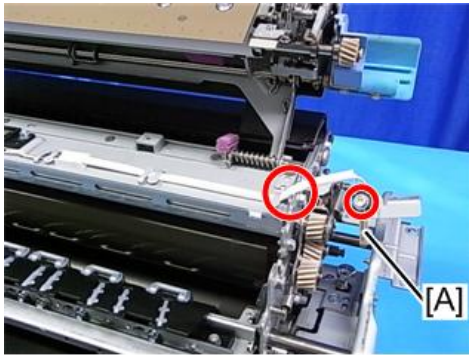
d1355151

Thermistor (Hot Roller Shaft)

1. Fusing Front Cover, Fusing Upper Cover (page 768 "Fusing Unit Cover")

2. Bracket with Thermistor (Hot Roller Shaft) [A] (A  x1)

d1355162

3. Thermistor (Hot Roller Shaft) [A] (E  x1,  x1)

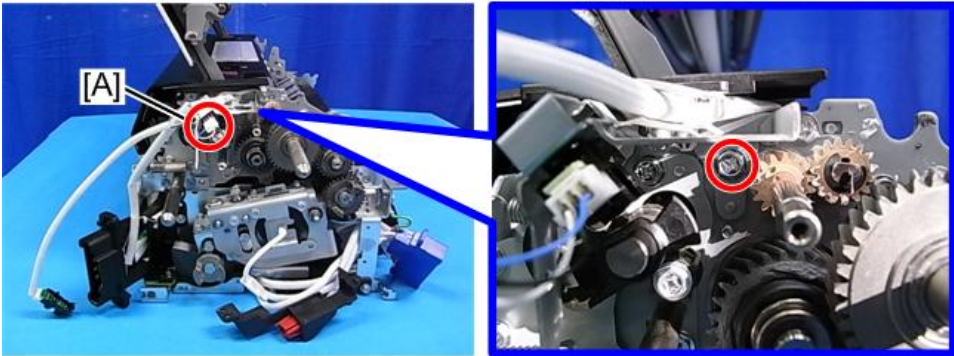
d1355163

4

Heating Roller Rotation Sensor

1. Fusing Rear Cover (page 768 "Fusing Unit Cover")
2. Fusing Unit Plate (page 772 "Fusing Unit Plate")

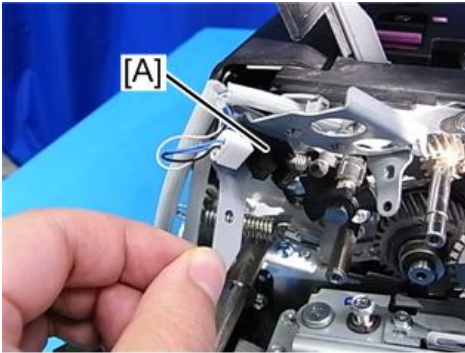
3. Bracket with Heating Roller Rotation Sensor [A] (A  x1)



d1355160

4

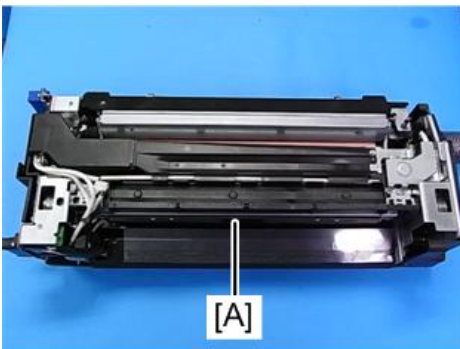
4. Heating Roller Rotation Sensor [A] (Hook,  x1)



d1355161

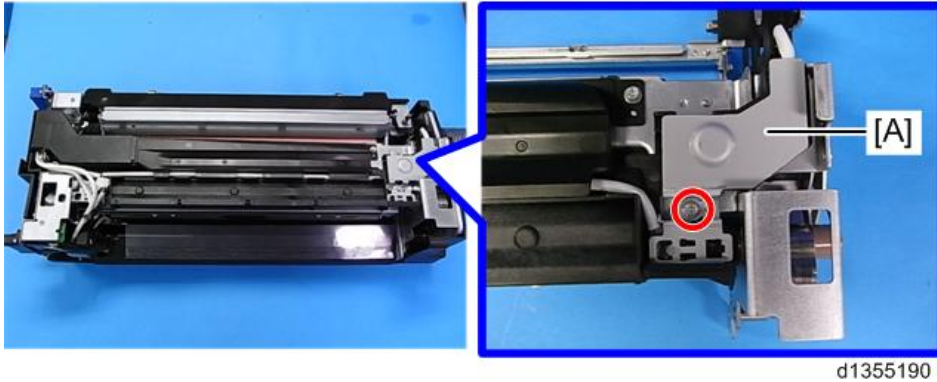
Pressure Roller Sensor (Rear)

1. Fusing Unit (page 764 "Removing the Fusing Unit")
2. Turn the lower part [A] over.

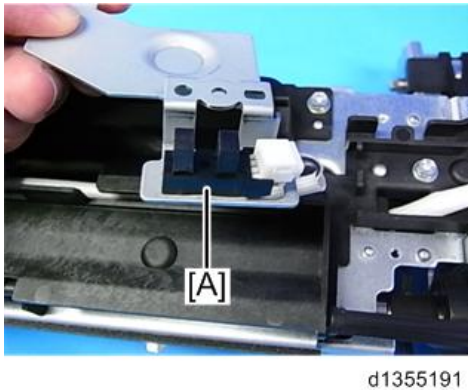


d1355180

3. Bracket [A] with Pressure Roller Sensor (Rear) (A x1)

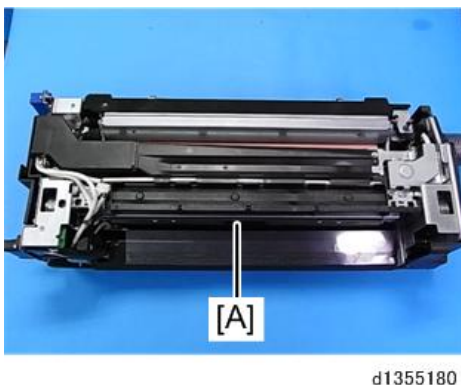


4. Detach the fusing pressure roller sensor (rear) [A] from the bracket. (Hook, x1)

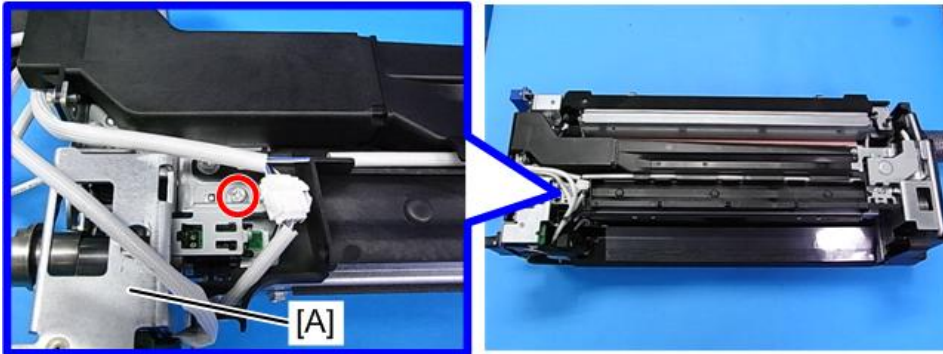


Pressure Roller Sensor (Front)

1. Fusing Unit (page 764 "Removing the Fusing Unit")
2. Turn the lower part [A] over.



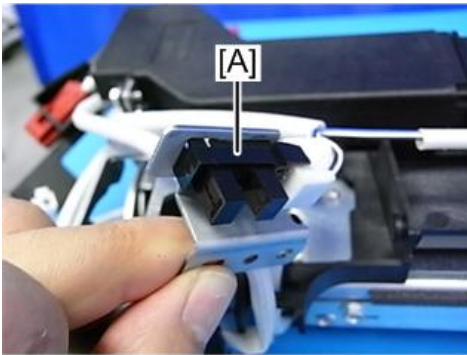
3. Bracket [A] with Pressure Roller Sensor (Front) (A x1)



d1355188

4

4. Detach the pressure roller sensor (front) from the bracket. (Hook,  x1)



d1355189

Hot Roller NC Sensor


1. Fusing Upper Cover (page 768 "Fusing Unit Cover")

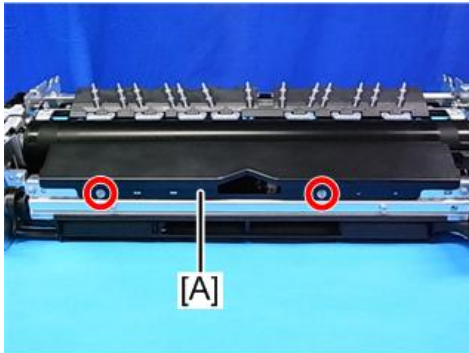
2. Hot Roller NC Sensor [A] ( x2,  x1)



d1355154

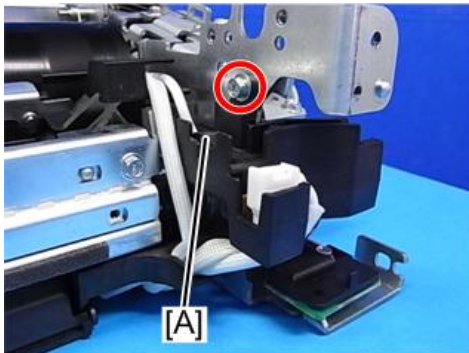
Thermopile (Pressure Roller)

1. Separate the fusing unit into the upper part and the lower part. (page 785 "Separating the Fusing Unit")
2. Bracket [A] (A  x2)



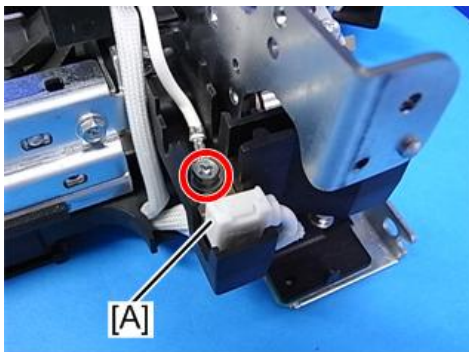
d1355192

3. Harness Guide Cover [A] (B  x1)



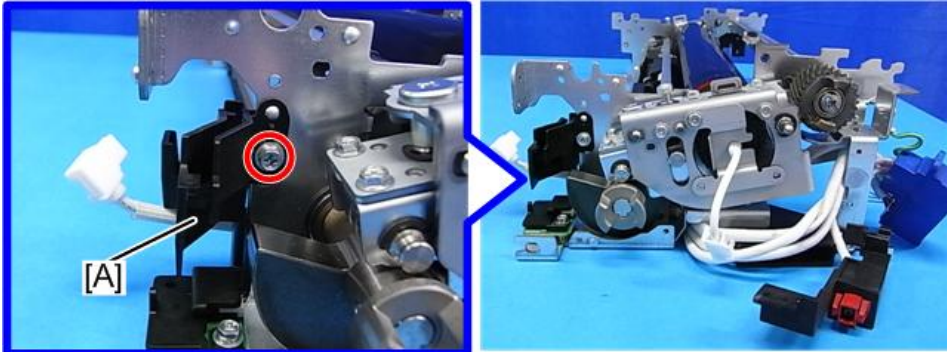
d1355193

4. Grounding Wire (B  x1  [A] x 1)



d1355194

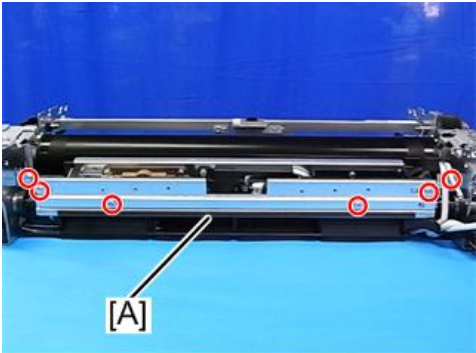
5. Harness Guide [A] (B  x1)



d1355195

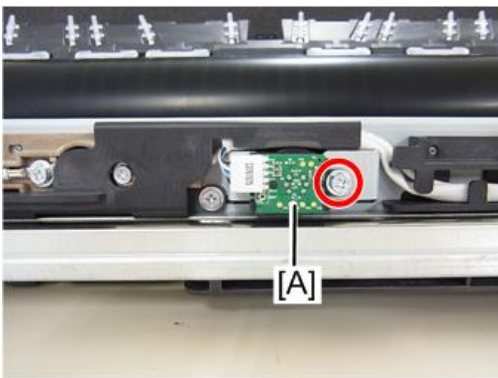
4

6. Bracket [A] (A  x6)



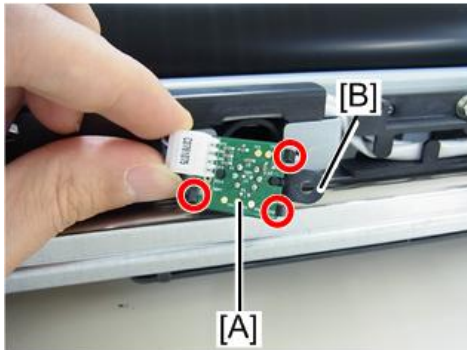
d1355196

7. Bracket [A] with Thermopile (B  x1)



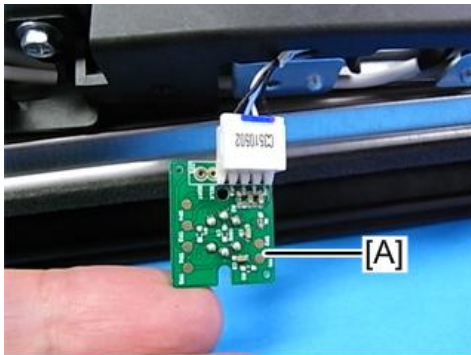
d1355197

8. Thermopile Cover [A] (Hook x3)



d1355198

9. Thermopile [A] (☒ x1)



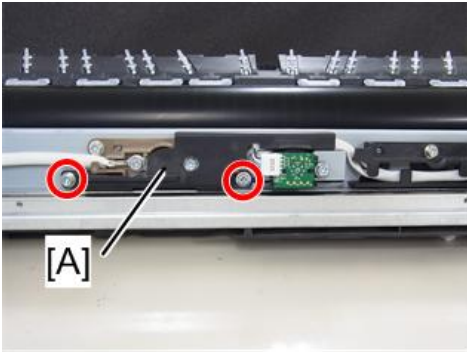
d1355199

4

Thermostat (Pressure Roller)

1. Separate the fusing unit into the upper part and the lower part. (page 785 "Separating the Fusing Unit")
2. See "Thermopile (Pressure Roller) Steps 1 to 7". (page 807 "Thermopile (Pressure Roller)")

3. Harness Guide [A] (G x1, C x1)



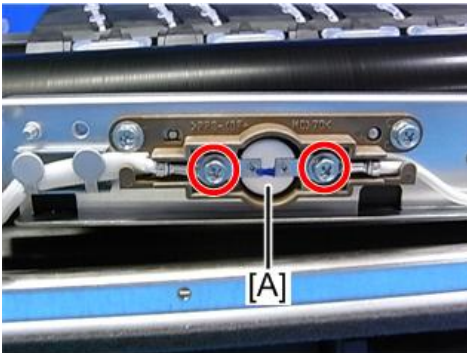
d1355200a

4

↓ Note

- The left side screw is G (HEXAGON HEAD BOLT WITH WASHER:M3X6), the right side screw is C (STEPPED SCREW:M3) in the picture above.

4. Thermostat (Pressure Roller) [A] (B x2)

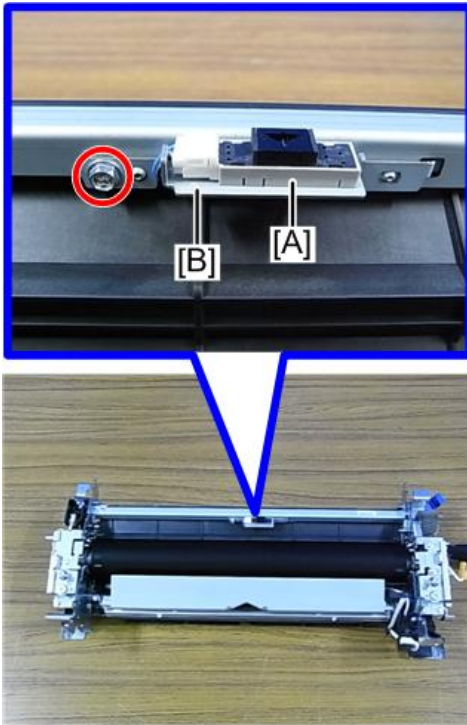


d1355201

Fusing Paper Feed Sensor

1. Separate the fusing unit into the upper part and the lower part (page 785 "Separating the Fusing Unit").
2. Pressure Roller Stripper Plate (page 794 "Pressure Roller Stripper Plate")

3. Detach the fusing paper feed sensor [A] from the bracket [B]. (⚙️ x1)



d1355152

4. Fusing paper feed sensor [A] (⚙️ x1)



d1355153

Adjustment after replacing the fusing paper feed sensor

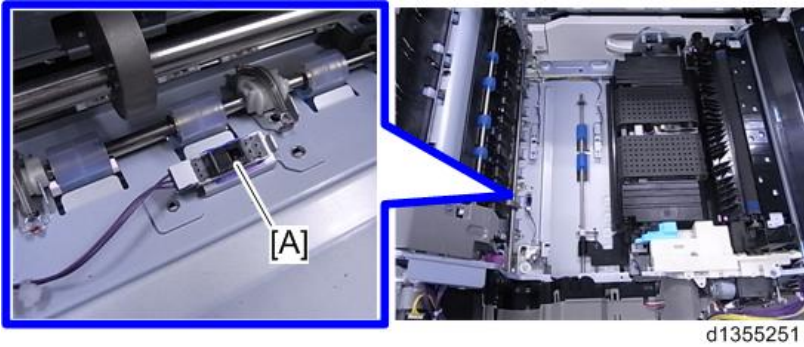
Do the following procedure after replacing the fusing paper feed sensor.

1. Make sure the entire paper path is clear of paper.
2. Close the drawer unit and front right cover.

3. Do SP1-134-001.
4. Confirm the value in SP1-134-002 is in between 200 and 400.
5. Reboot.

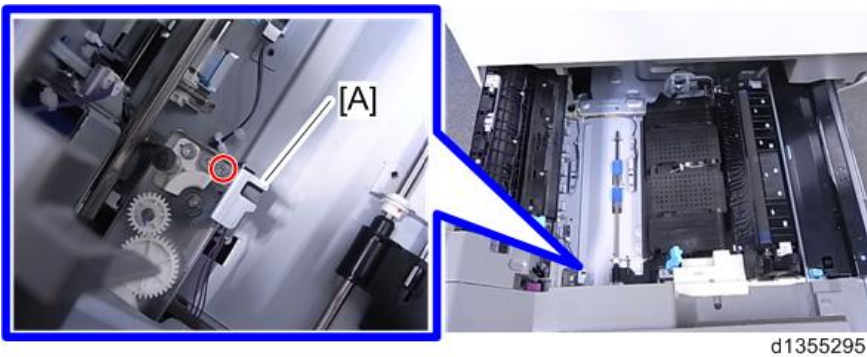
Cleaning Web Set Sensor

1. Fusing Unit (page 764 "Removing the Fusing Unit")
2. Cleaning Web Set Sensor [A] (🔧 x1, Hook)

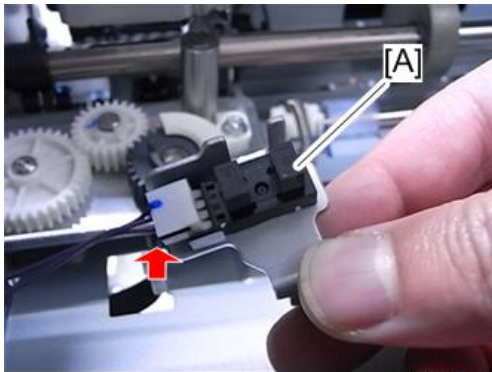


Cleaning Web End Sensor

1. Fusing Unit (page 764 "Removing the Fusing Unit")
2. Bracket [A] with Cleaning Web End Sensor (🔧 x1)



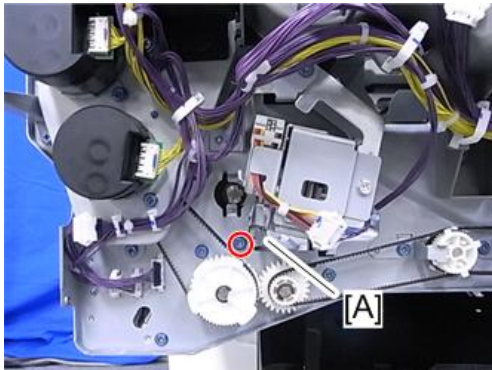
3. Cleaning Web End Sensor [A] (🔧 x1, Hook)



d1355296

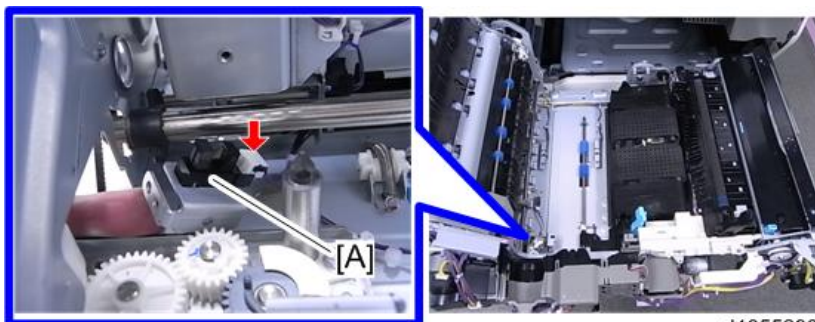
Cleaning Web Contact Sensor

1. Fusing Unit (page 764 "Removing the Fusing Unit")
2. Bracket [A] with Cleaning Web Contact Sensor (🔧 x1)



d1355297

3. Cleaning Web Contact Sensor [A] (🔧 x1, Hook)



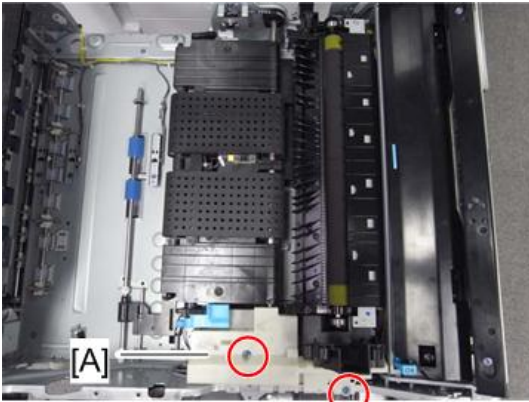
d1355298

Paper Transport Belt Unit

To replace the paper transport belt unit, first remove the fusing unit. (☞ page 764)

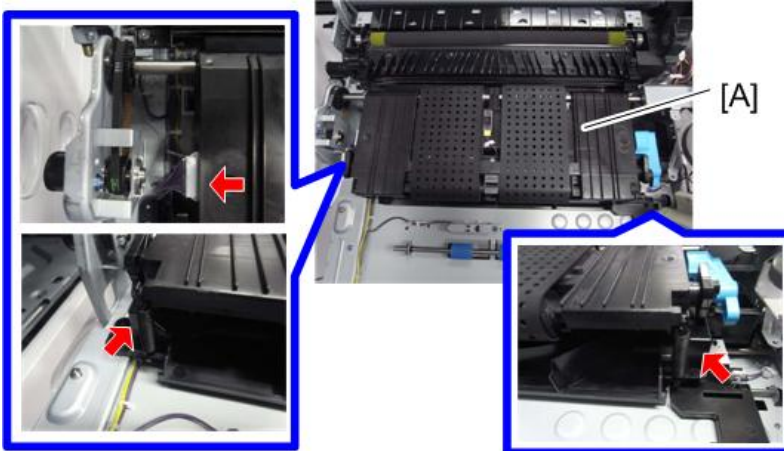
Paper Transport Belt Unit

1. Inner cover [A] (🔩 x 2)



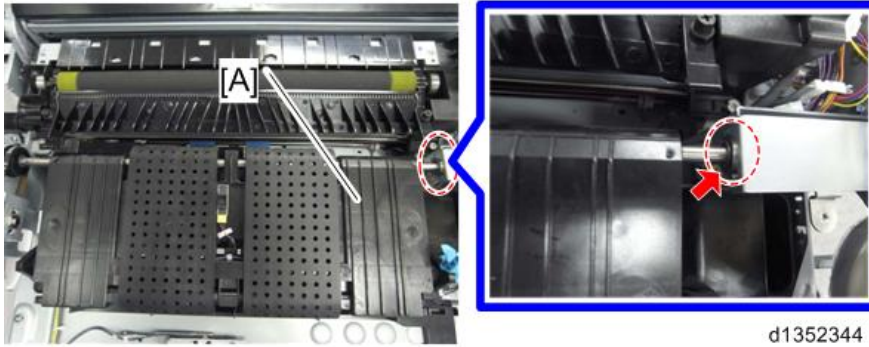
d1352338

2. Remove the springs and connector from the paper transport belt unit [A] (spring x 2, ☞ x 1).



d1352345

3. Paper transport belt unit [A] (☞ x 1)

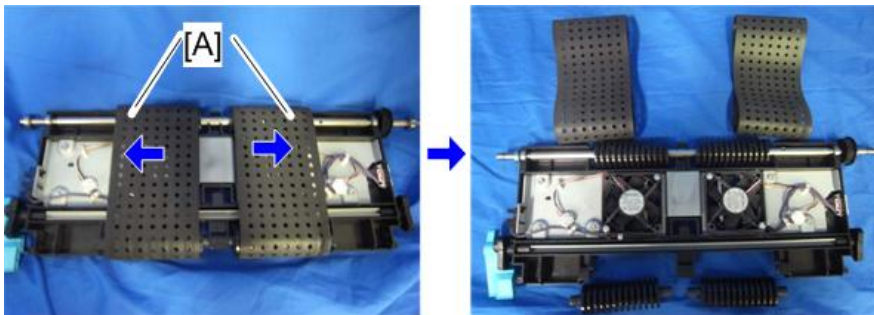


d1352344

Paper Transport Belt

4

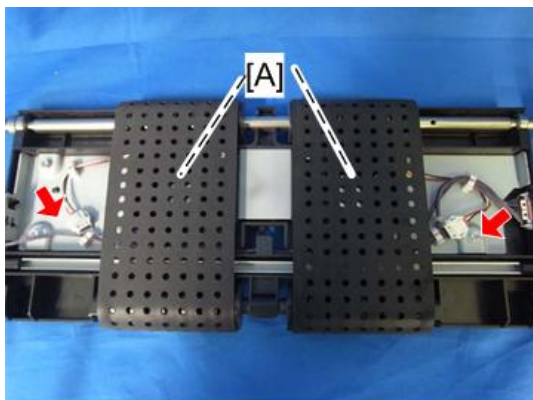
1. Paper transport belt unit (📄 page 814)
2. Slide the paper transport belt [A] (x 2) to the left or right.



d1352341

PTB Fans

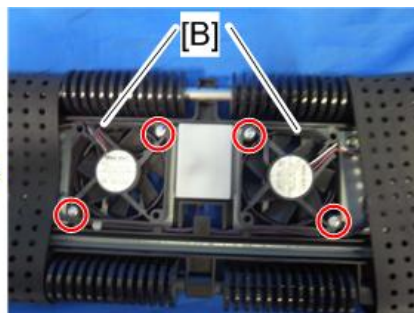
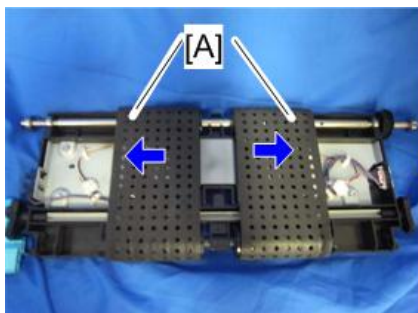
1. Paper transport belt unit (📄 page 814)
2. Disconnect the connectors of the PTB fans (🔌 x 1 each).



d1352342

4

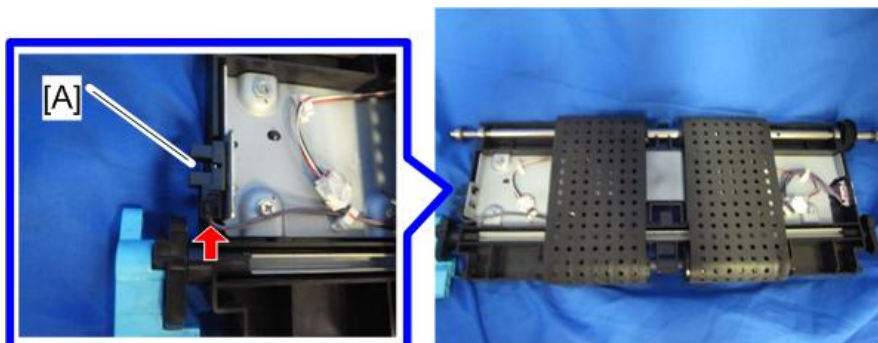
3. After sliding the paper transport belts [A] to the left or right, remove the PTB fans [B] (⚙️ x 2 each).



d1352343

PTB Sensor

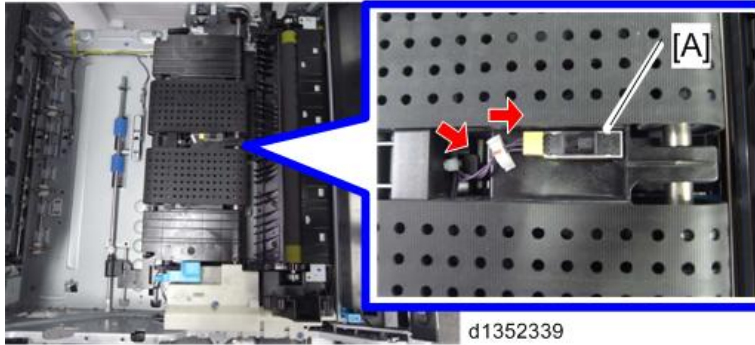
1. Paper transport belt unit (📄 page 814)
2. PTB sensor [A] (🔧 x 1)



d1352340

PTB Unit Set Sensor

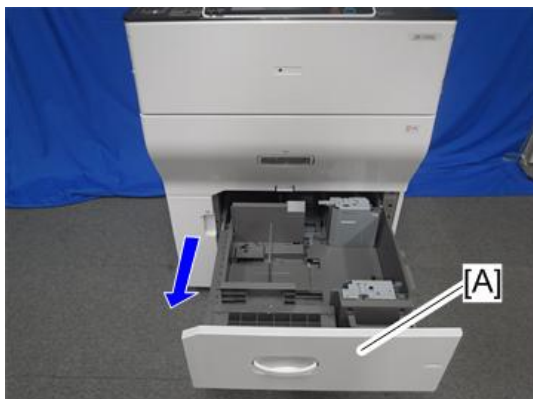
1. Paper transport belt unit (📄 page 814)
2. PTB unit set sensor [A] (📄 x 1, 📄 x 1)



Tandem Tray

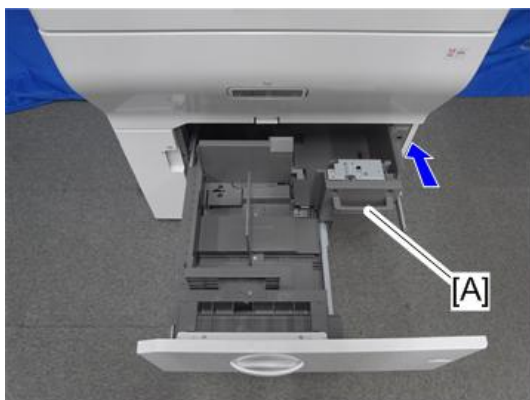
Left Tandem Tray / Right Tandem Tray

1. Pull out paper tray 1 [A].





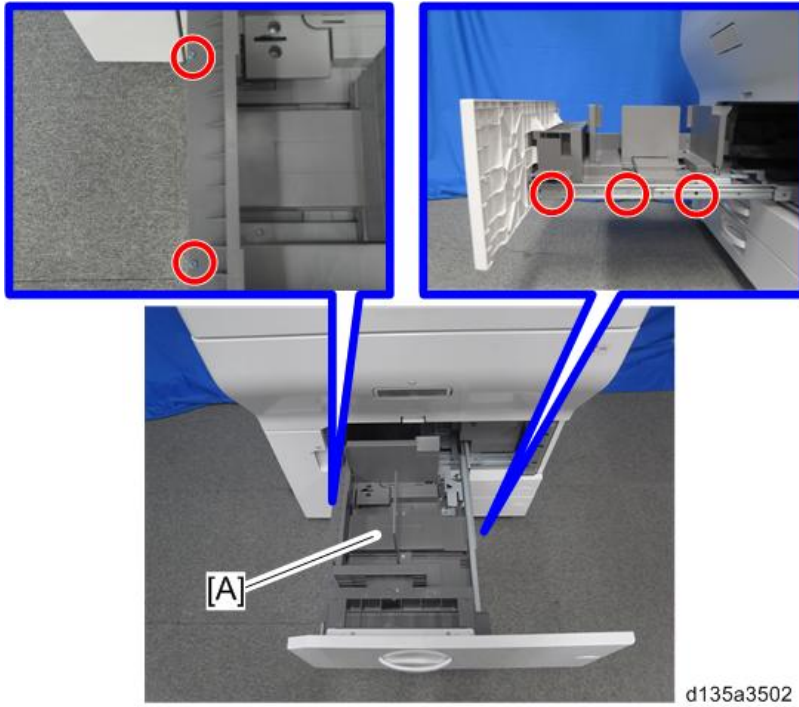
d135a3500

2. Push the right tandem tray [A] into the machine.

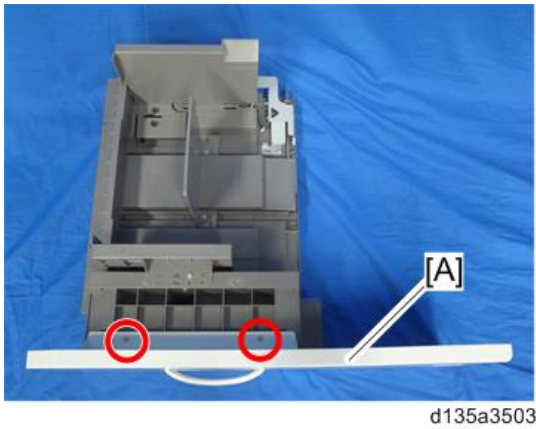


d135a3501

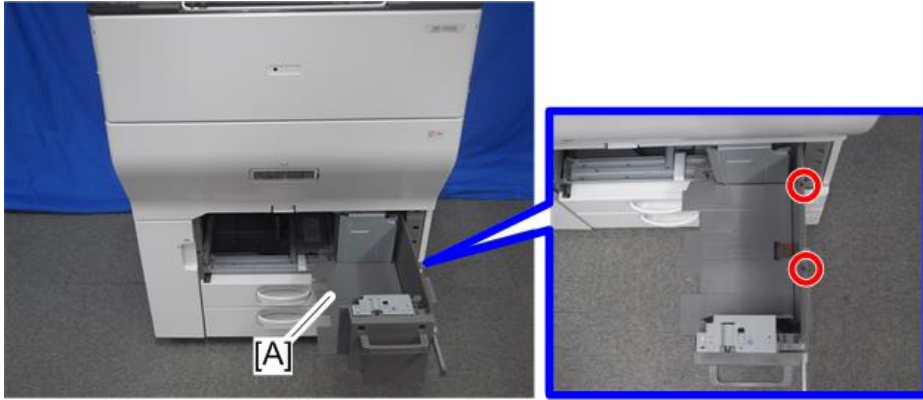
3. Remove the left tandem tray [A] (M3 x 8;  x 2 on the left side, M3 x 10;  x 3 on the right side).



4. Remove the front cover [A] from the left tandem tray (🔧 x 2).



5. Pull out the right tandem tray [A] and remove the screws (TCRU/ORU 🛠️ x2).



d135a3504

Feed Roller, Pick-up Roller and Separation Roller

1. Pull out paper tray 1 [A].




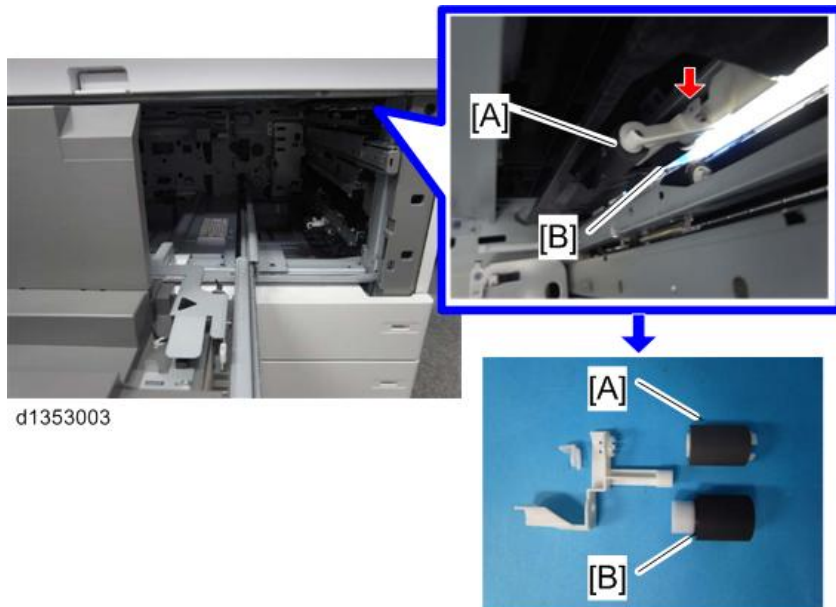
d1353001

2. Right side of the tray [A] (TCRU/ORU  x 2)



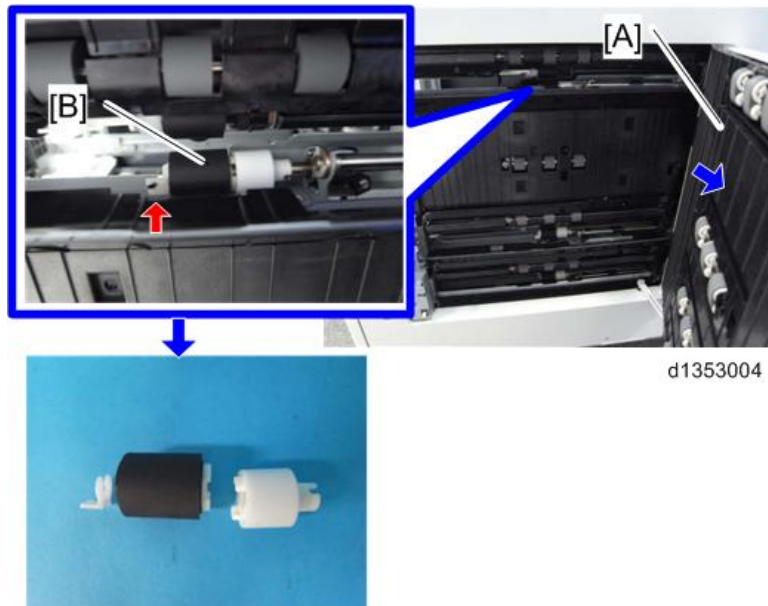
d1353002

3. Pick-up roller [A] and feed roller [B] ( x 1)



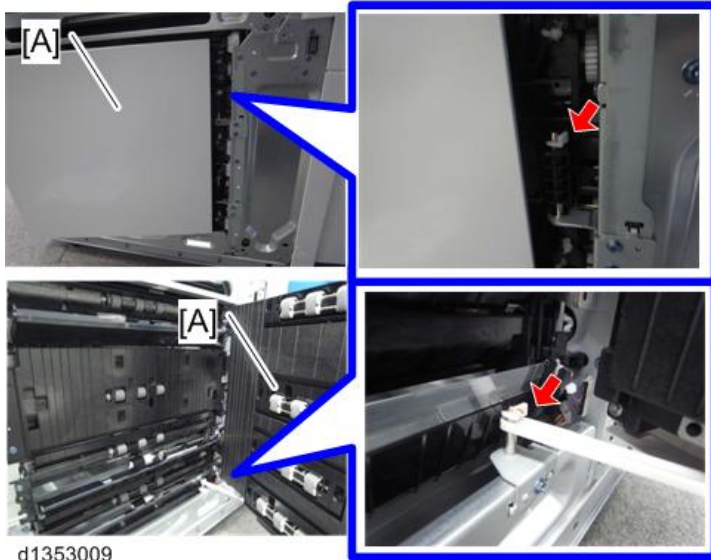
4

4. Open the door of the vertical feed path and remove the separation roller [A] (☞ x 1).



Paper Feed Unit for Tray 1

1. Right lower cover of the machine exterior (☞ page 530)
2. Pull out paper trays 1 and 2.
3. Vertical transport unit [A] (☞ x 2)



d1353009

- 4. Paper guide plate for tray 2 [A] (🔩 x 1)

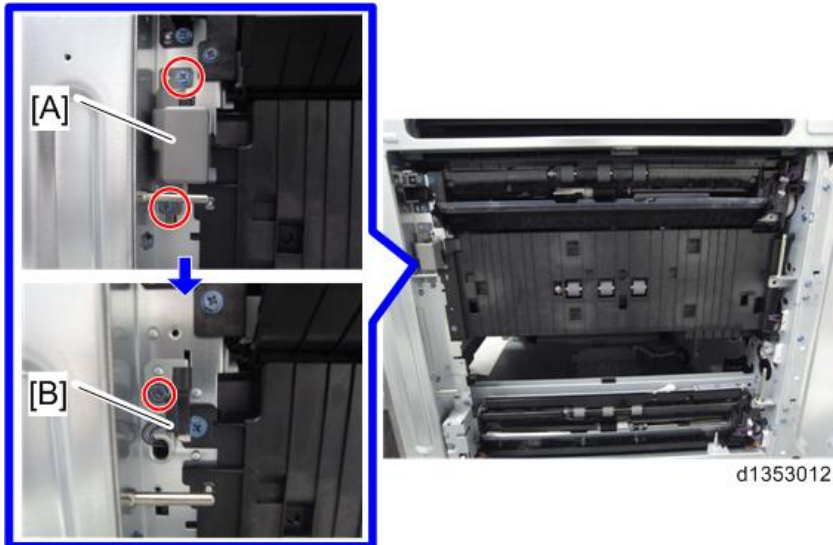


d1353010

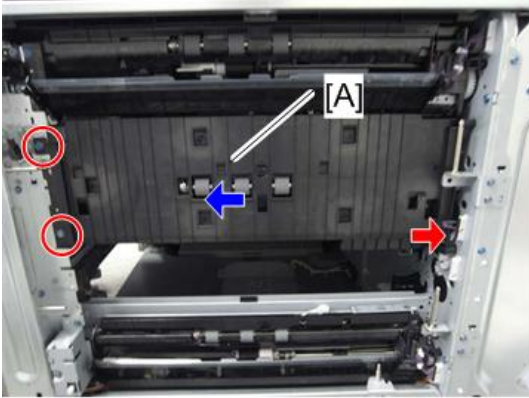
- 5. Paper feed unit for tray 2 [A] (🔩 x 2, 📦 x 1)



6. LED cover [A] (🔩 x 2)
7. Vertical transport LED [B] along with the bracket (🔩 x 1)



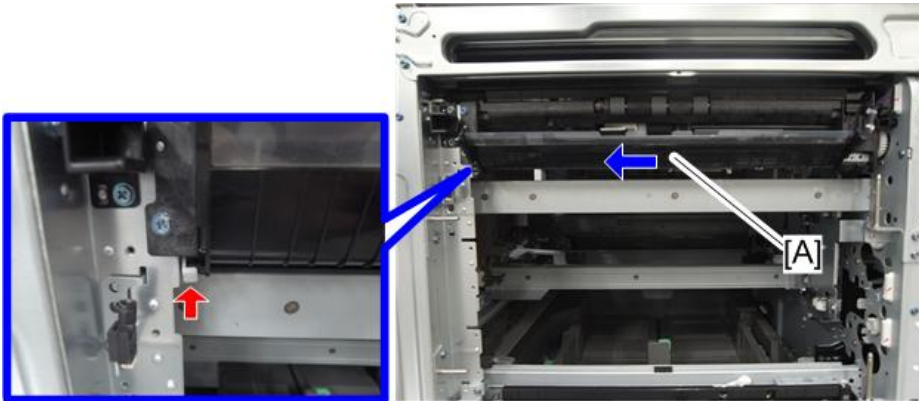
8. Relay cover [A] (🔩 x 2, 📏 x 1)



d1353013

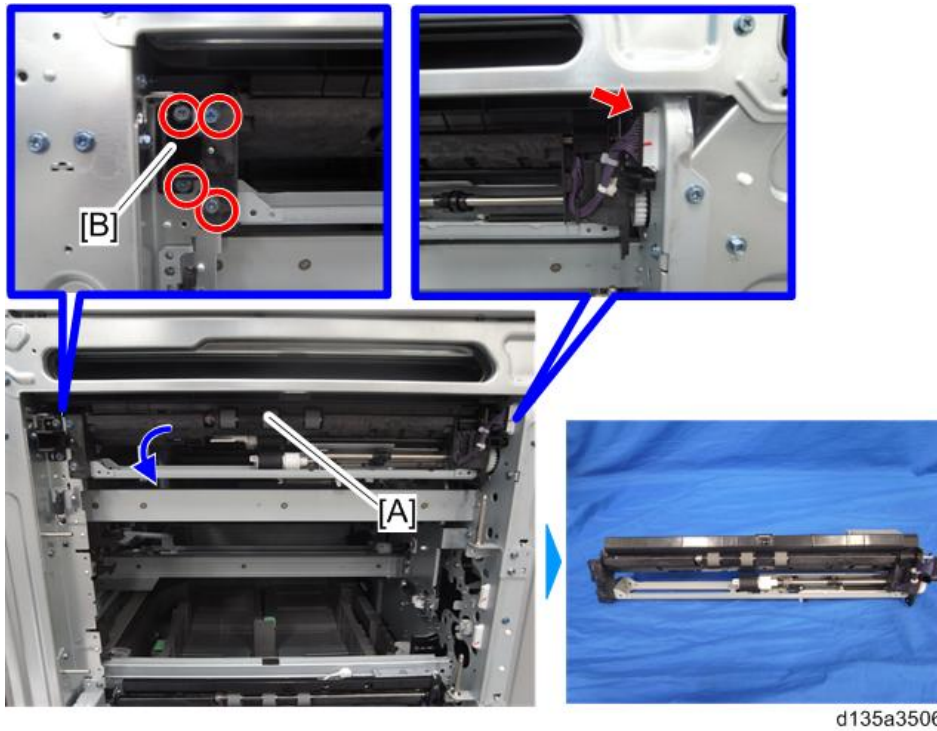
4

9. Paper guide plate for tray 1 [A] (☞ x 1)



d135a3505

10. Pull out the left side of the paper feed unit for tray 1 [A], and then remove it. (☞ x 2, ☞ x 1)
(Remove the bracket [B] in order to remove the paper feed unit for tray 1 easily (☞ x 2))



4

Rear Fence Home Position Sensor / Left Tray Paper Sensor

1. Pull out paper tray 1 [A].



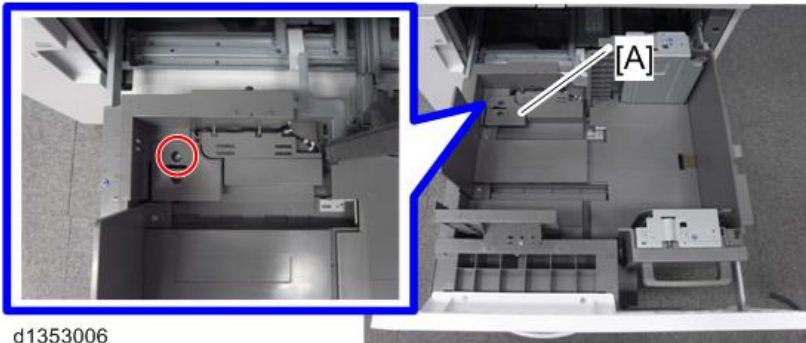
2. Side fence [A] (🔩 x 1)



d1353005

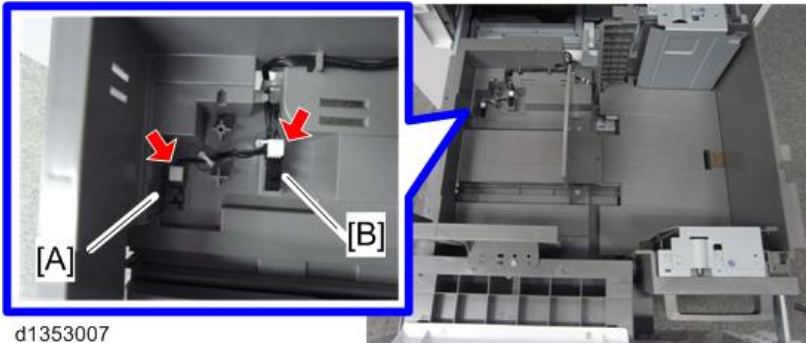
3. Cover [A] (🔩 x 1)

4



d1353006

4. Rear Fence Home Position Sensor [A] / Left Tray Paper Sensor [B] (🔩 x 1 each, 📏 x 1 each)



d1353007

Rear Fence Return Sensor

1. Pull out paper tray 1 [A].





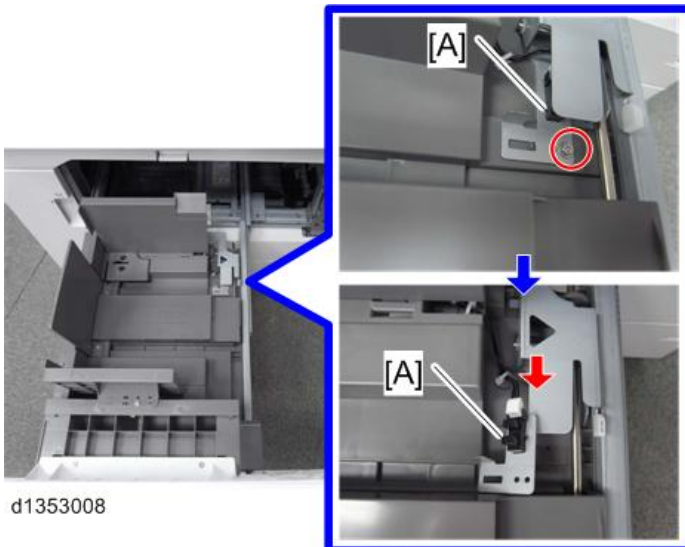
d1353001

2. Right side of the tray [A] (TCRU/ORU  x 2)



d1353002

3. Turn the bracket and remove the rear fence return sensor [A] ( x 1,  x 1).



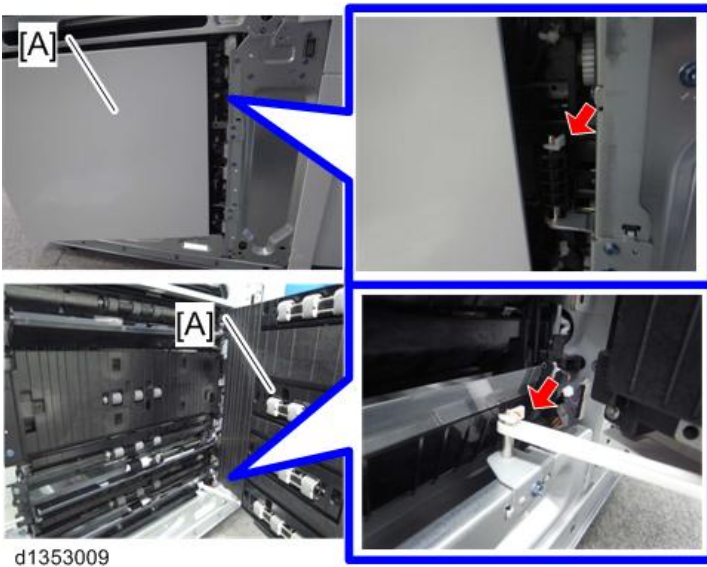
d1353008

Paper Height Sensors 1, 2, 3 / Tray Down Sensor / Right Tray Set Sensor

1. Right lower cover of the machine exterior (☞ page 530)
2. Pull out paper trays 1 and 2.
3. Right side of paper tray 1 [A] (TCRU/ORU ☞ x 2)



4. Vertical transport unit [A] (☞ x 2)



5. Paper guide plate [A] (☞ x 1)



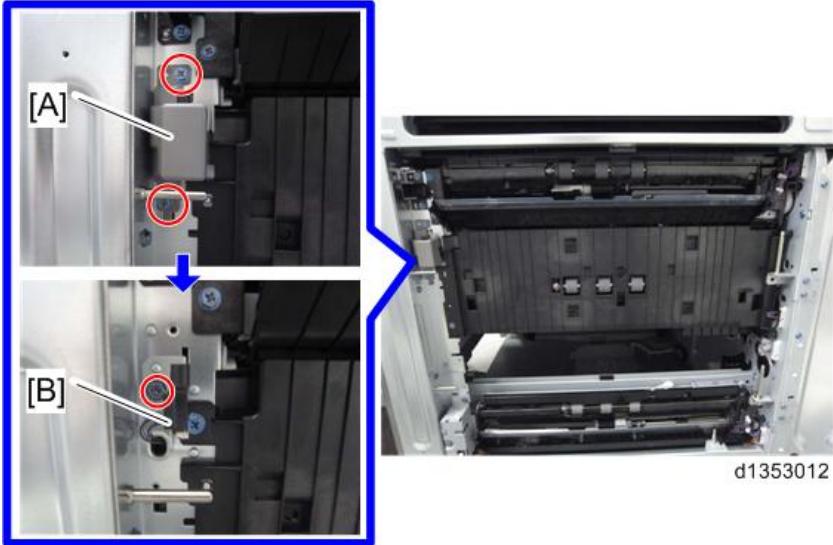
d1353010

6. Paper feed unit for tray 2 [A] (🔩 x 2, 📏 x 1)

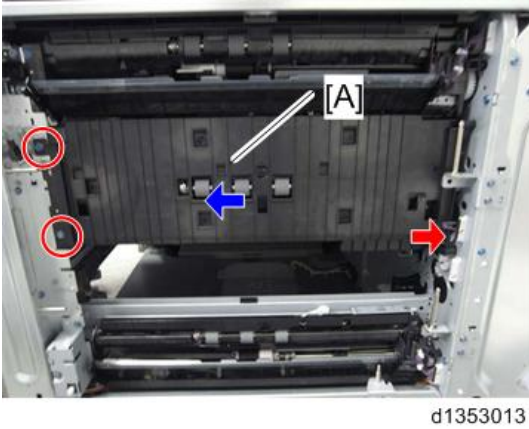


d1353011

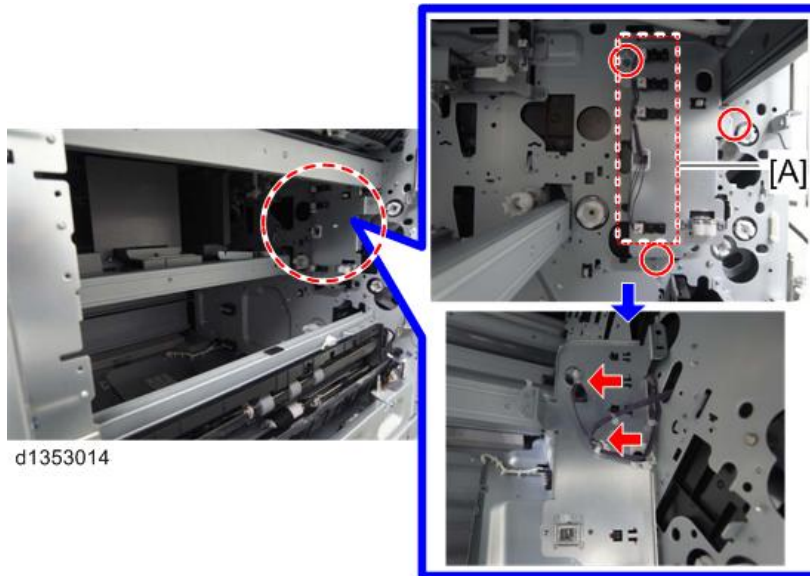
7. LED cover [A] (🔩 x 2)
 8. Vertical transport LED [B] along with the bracket (🔩 x 1)



9. Relay cover [A] (🔩 x 2)

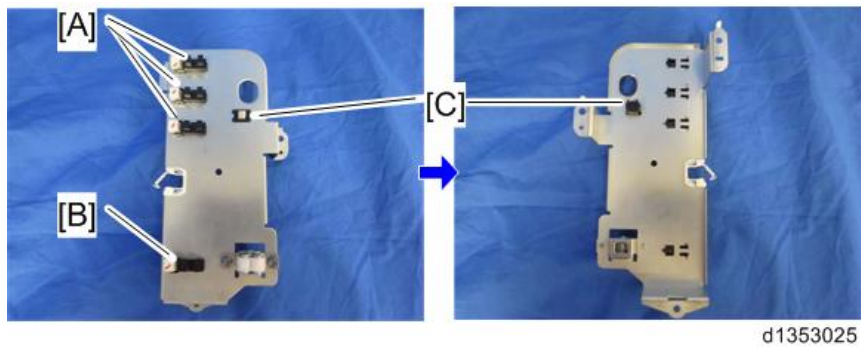


10. 5 sensors [A] along with the bracket, located inside the rear face of the machine (🔩 x 3, 📏 x 1 each (front x 4, back x 1), 📏 x 2 each).



4

11. Paper height sensors 1, 2, 3 [A], tray down sensor [B] and right tray set sensor [C]



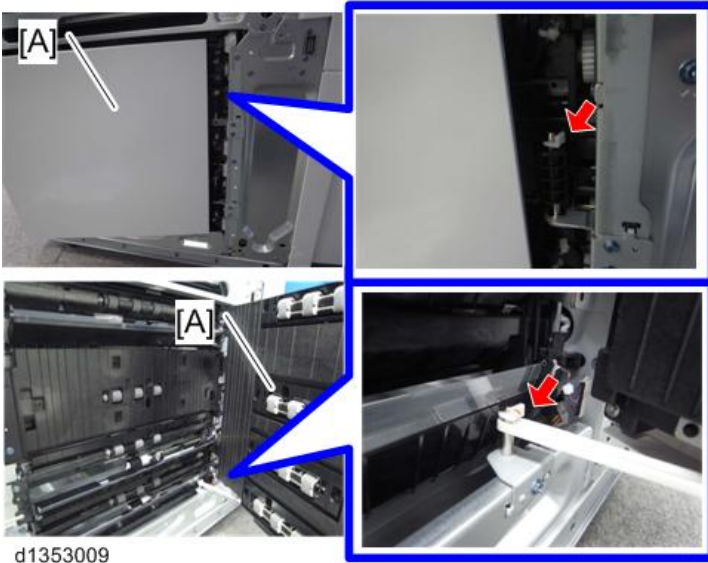
Rear End Fence Closed Sensor

1. Right lower cover of the machine exterior (☛ page 530)
2. Pull out paper trays 1 and 2.
3. Right side of paper tray 1 [A] (TCRU/ORU ☛ x 2)



4. Vertical transport unit [A] (🔧 x 2)

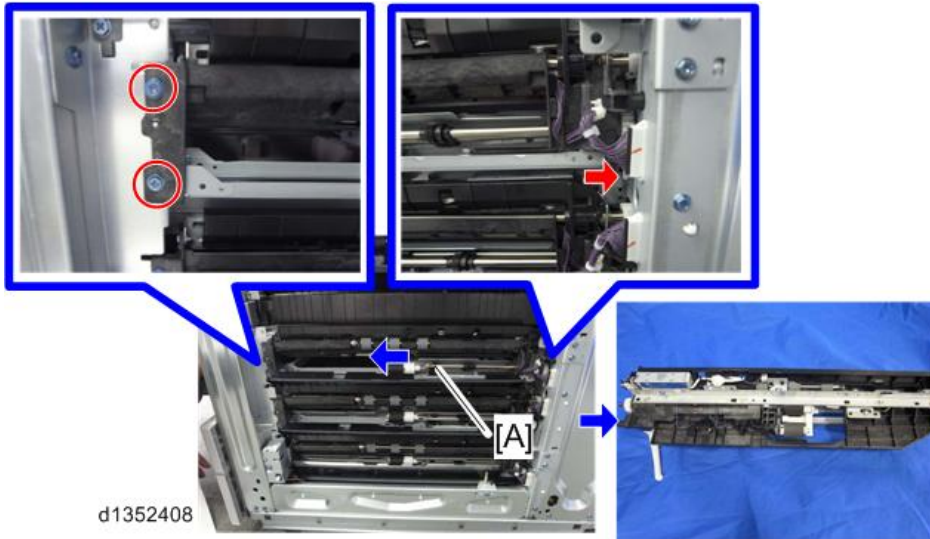
4



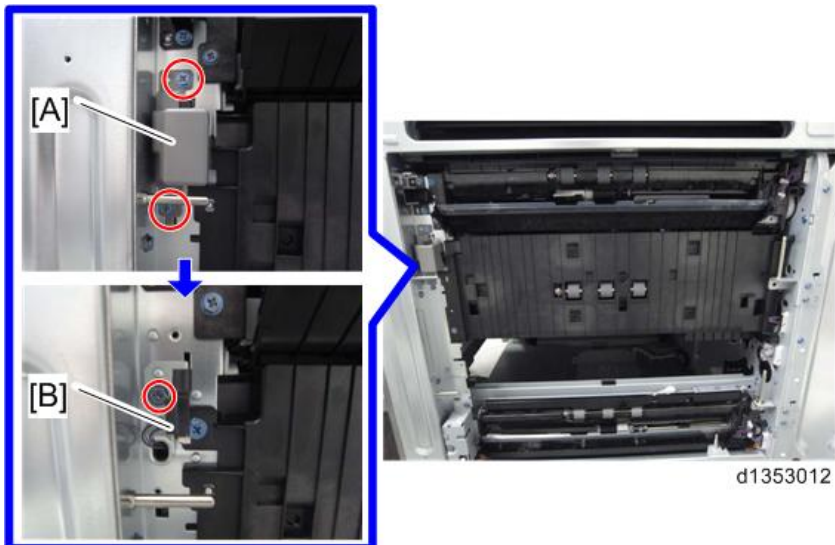
5. Paper guide plate [A] (🔧 x 1)



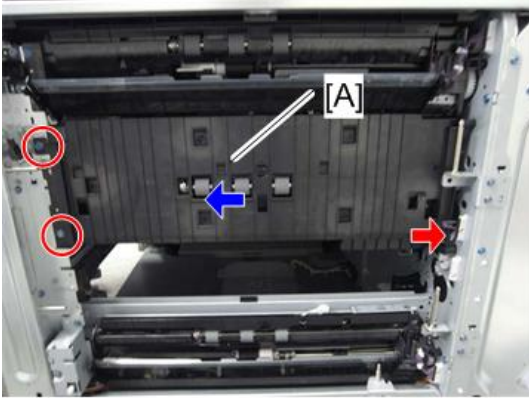
6. Paper feed unit for tray 2 [A] (🔧 x 2, 📄 x 1)



7. LED cover [A] (🔩 x 2)
8. Vertical transport LED [B] along with the bracket (🔩 x 1)



9. Relay cover [A] (🔩 x 2)



d1353013

4

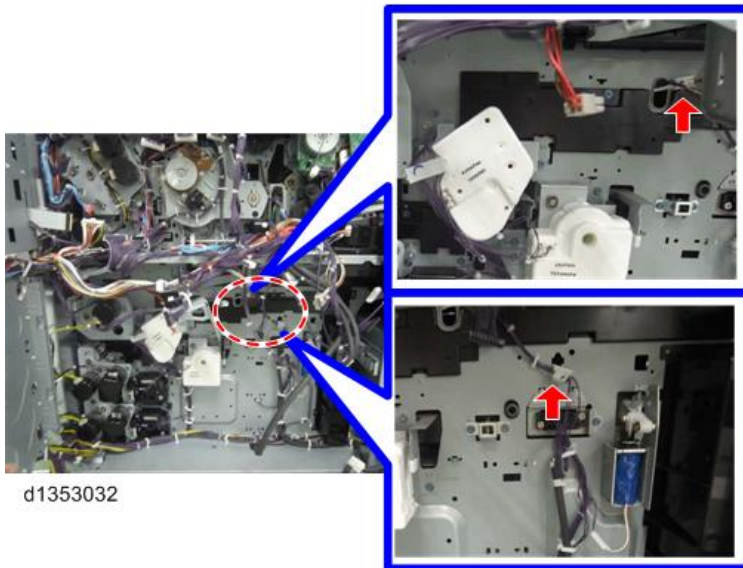
10. Rear End Fence Closed Sensor [A], located inside of the rear face of the machine (🖨 x 1)



d1353026

End Fence Rear Solenoid

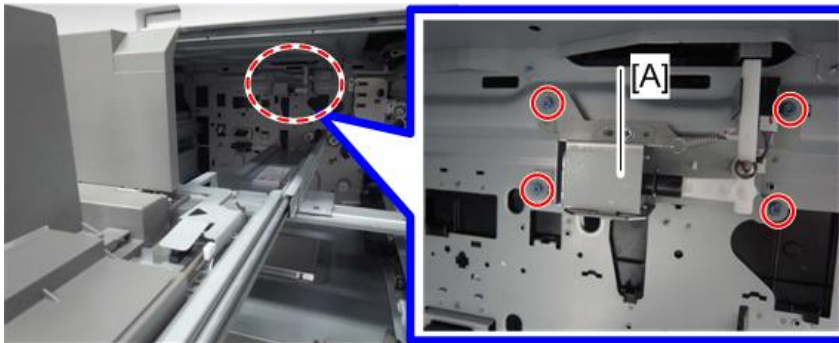
1. PSU1 / PSU2 along with the bracket, located on the back side of the machine (🖨 page 944 "When removing the motors and sensors that are behind the PSU1/PSU2")
2. Disconnect the connectors for the Rear End Fence Closed Sensor and the End Fence Rear Solenoid.



d1353032

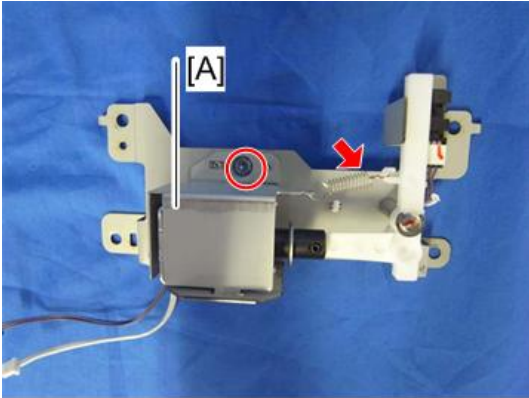
4

3. Relay cover (🔧 page 831 "Rear End Fence Closed Sensor")
4. End fence rear solenoid [A] along with the bracket, located inside the rear face of the machine (🔧 x 4)



d1353027

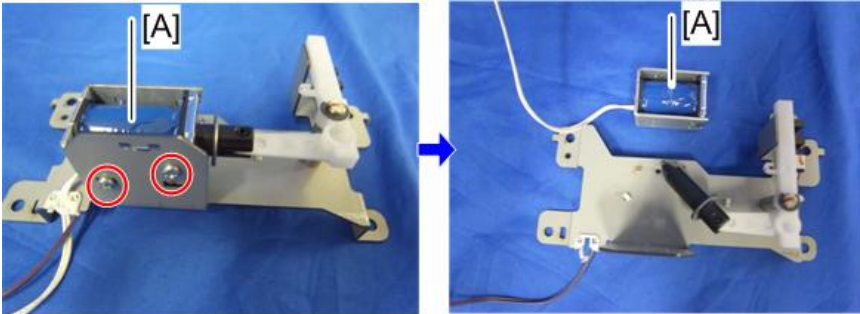
5. Bracket [A] (🔧 x 1, spring x 1)



d1352568

4

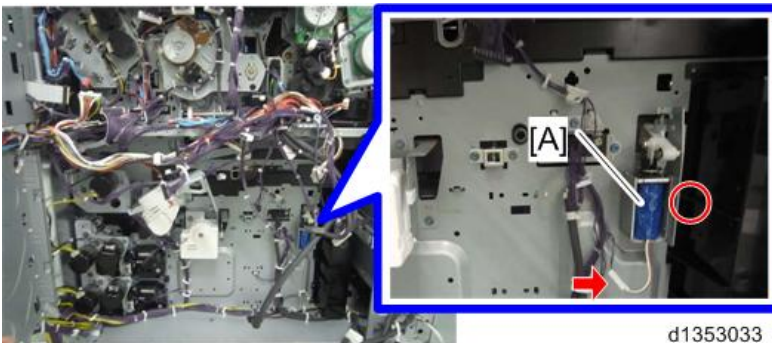
- 6. End fence rear solenoid [A] (⚙ x 2)



d1352569

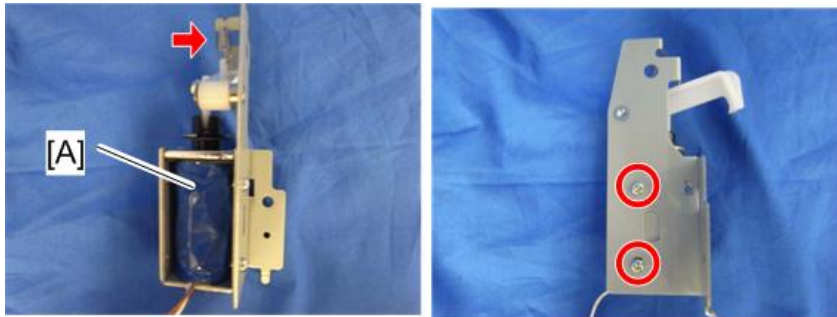
Left Tray Lock Solenoid

- 1. PSU1 / PSU2 along with the bracket, located inside the rear face of the machine (👉 page 944 "When removing the motors and sensors that are behind the PSU1/PSU2")
- 2. Left tray lock solenoid [A] along with the bracket (⚙ x 1, 📁 x 1)



d1353033

- 3. Left tray lock solenoid [A] (⚙ x 2, spring x 1)

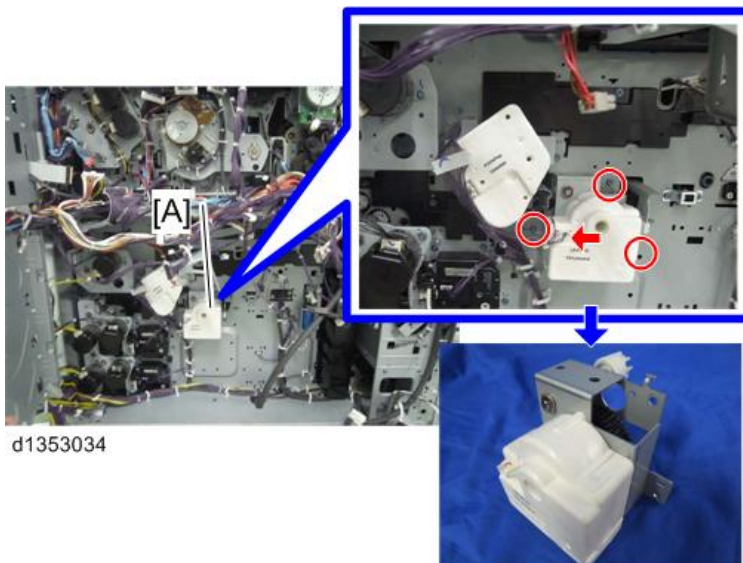


d1352496

Rear Fence Drive Motor

4

1. PFB along with the bracket, located on the back side of the machine (☛ page 941 "When removing the motors that are behind the PFB")
2. PSU1 / PSU2 along with the bracket, located on the back side of the machine (☛ page 944 "When removing the motors and sensors that are behind the PSU1/PSU2")
3. Rear fence drive motor [A] (🔧 x 3, 📦 x 1)

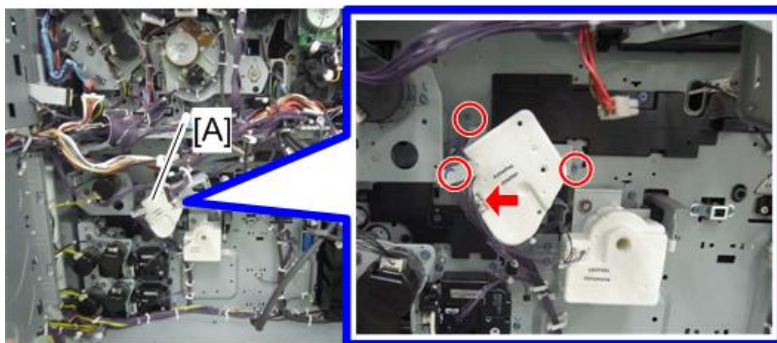


d1353034

1st Tray Lift Motor

1. PFB along with the bracket, located on the back side of the machine (☛ page 941 "When removing the motors that are behind the PFB")

2. PSU1 / PSU2 along with the bracket, located on the back side of the machine (📄 page 944
"When removing the motors and sensors that are behind the PSU1/PSU2")
3. 1st Tray Lift Motor (🔧 x 3, 📄 x 1)

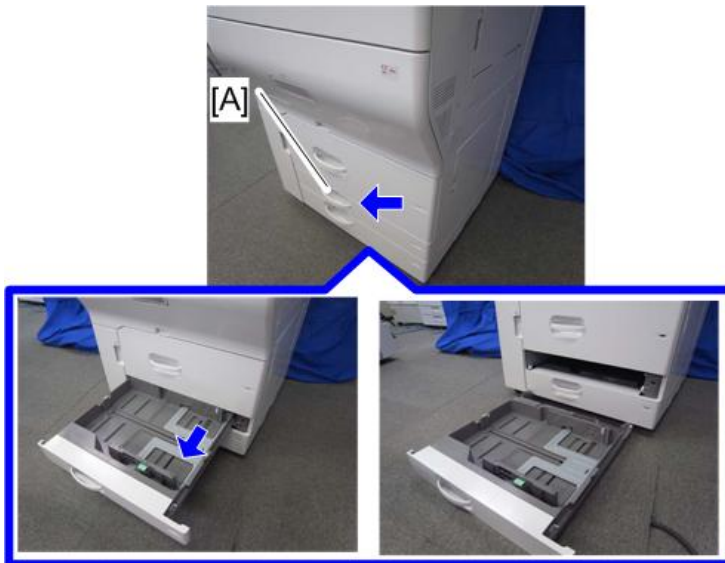


d1353035

Paper Feed Section (Tray 2-3 / Vertical Transport)

Paper Tray

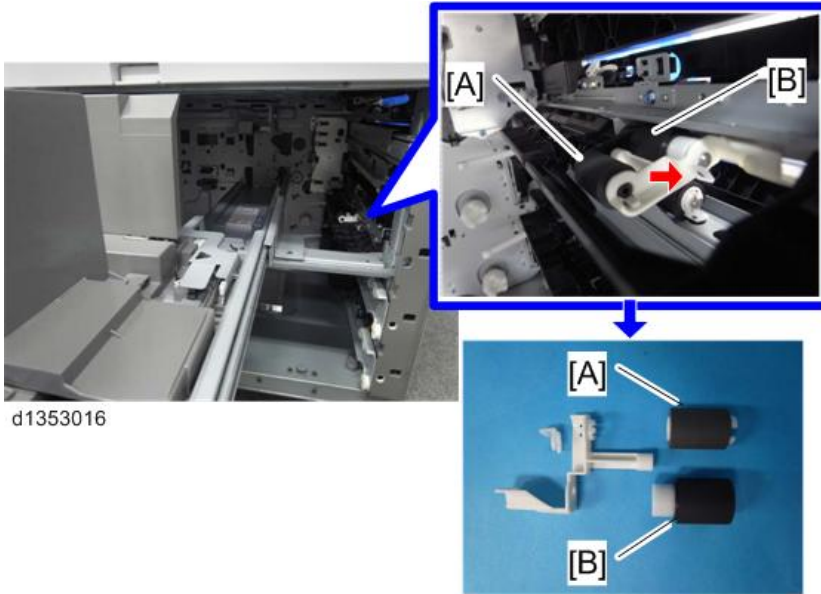
1. Pull out the paper tray [A].



d1353015

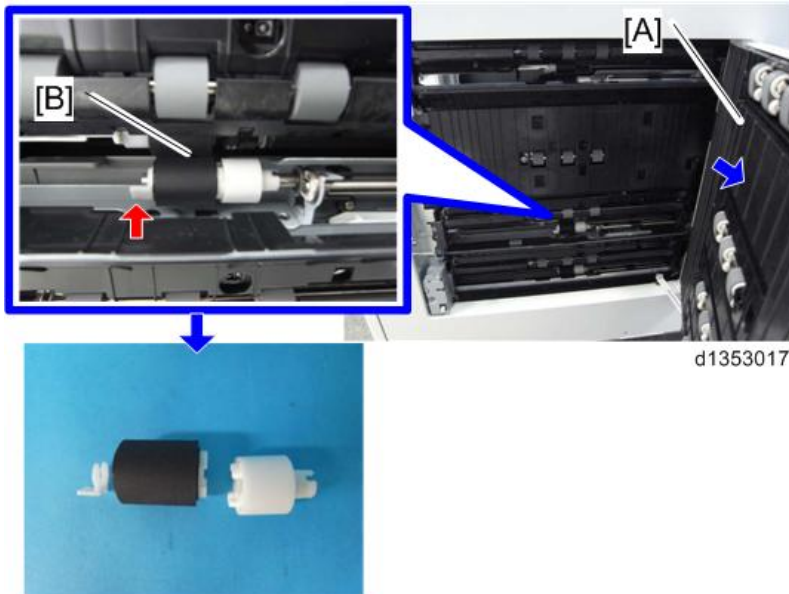
Feed Roller, Pick-up Roller and Separation Roller

1. Pull out the paper tray.
2. Pick-up roller [A] and feed roller [B] (snap-fit x 1)
e.g.: Tray 2



d1353016

- 3. Separation roller [A] (snap-fit x 1)
e.g.: Tray 2

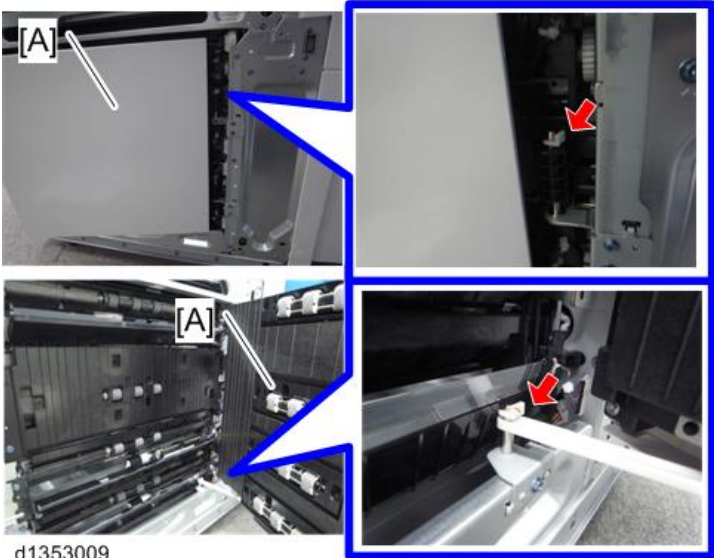


d1353017

Paper Feed Unit

- 1. Right lower cover of the machine exterior (☛ page 530 "Right Lower Cover")
- 2. Pull out paper tray 2 (in the case of the paper feed unit for tray 2).

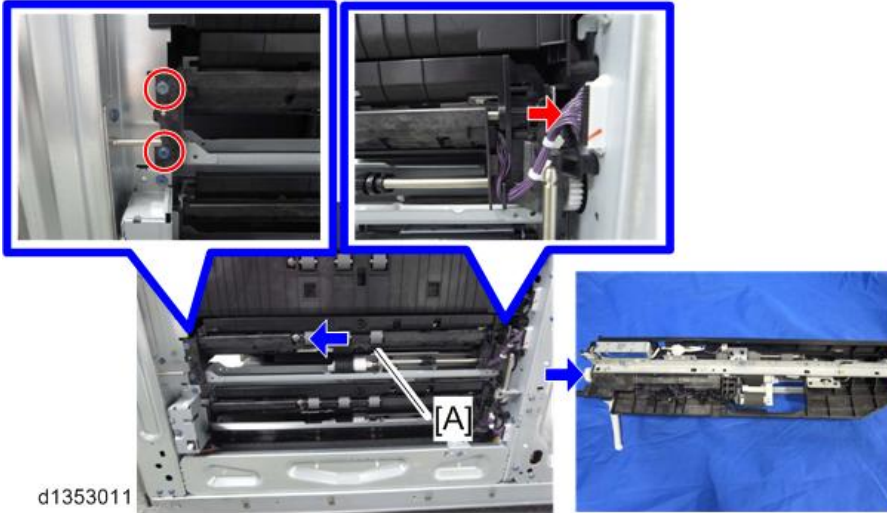
3. Vertical transport unit [A] (snap-fit x 2)



4. Paper guide plate [A] (snap-fit x 1)



5. Paper feed unit for tray 2 [A] (⚙️ x 2, 📄 x 1)

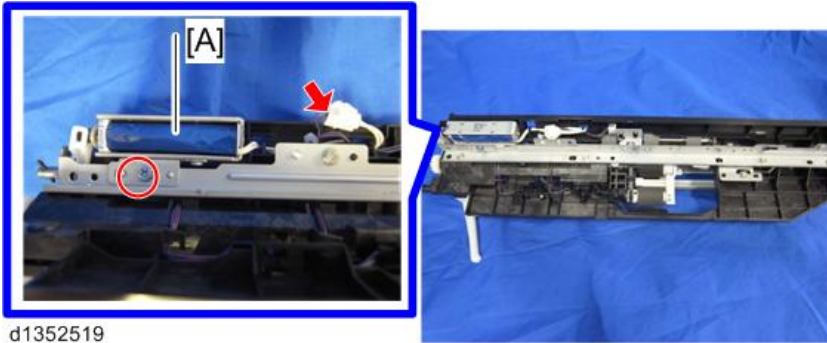


Note

- For tray 3, replace with the same procedure as for tray 2.

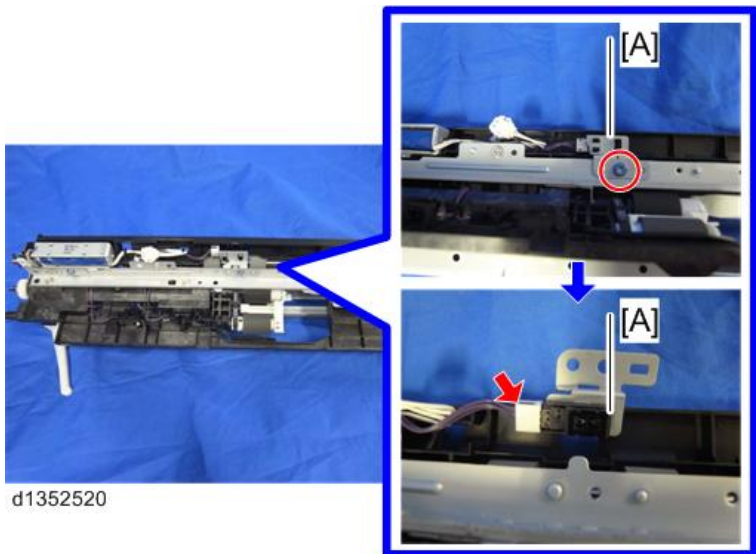
Pick-up Solenoid

1. Paper feed unit (☛ page 840)
2. Pick-up solenoid [A] (🔧 x 1, 📦 x 1)



Transport Sensor

1. Paper feed unit (☛ page 840)
2. Transport sensor [A] (🔧 x 1, 📦 x 1)



Paper Feed Sensor

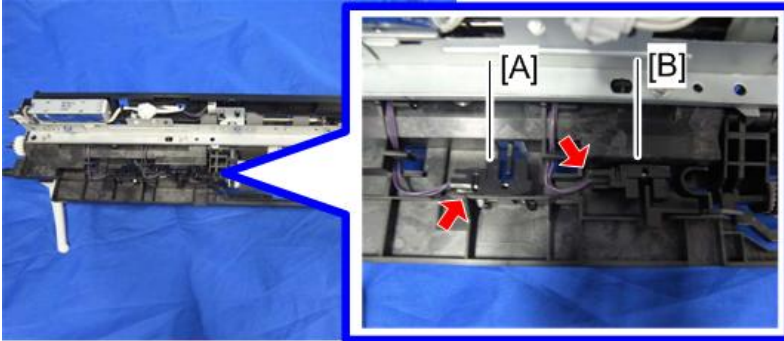
- 1. Paper feed unit (☛ page 840)
- 2. Paper feed sensor [A] (🔧 x 1, 📦 x 1)



Paper Tray Upper Limit Sensor / Paper End Sensor

- 1. Paper feed unit (☛ page 840)

2. Paper tray upper limit sensor [A] and paper end sensor [B] (🔩 x 1 each, 📡 x 1 each)



d1352522

4

Note

- When removing the paper end sensor, remove the hook from the opposite side of the photo above.



d1352523

Vertical Transport LED

1. Open the vertical transport door [A].



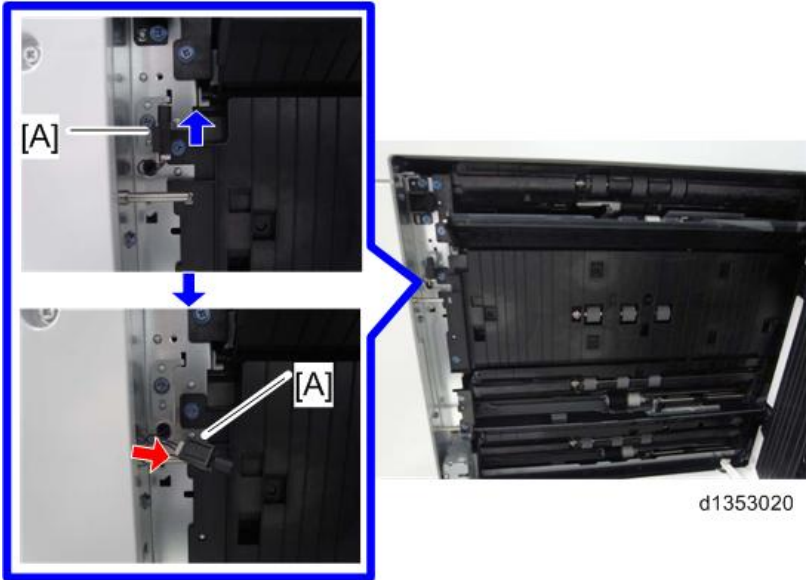
d1353018

2. LED cover [A] (🔩 x 2)



d1353019

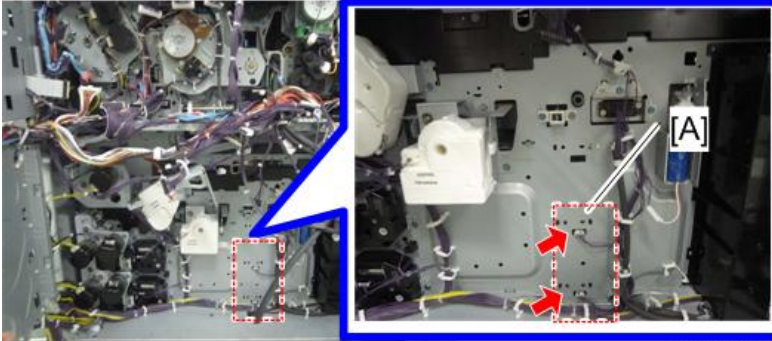
3. Remove the vertical transport LED [A] by lifting it upward (🔧 x 1)



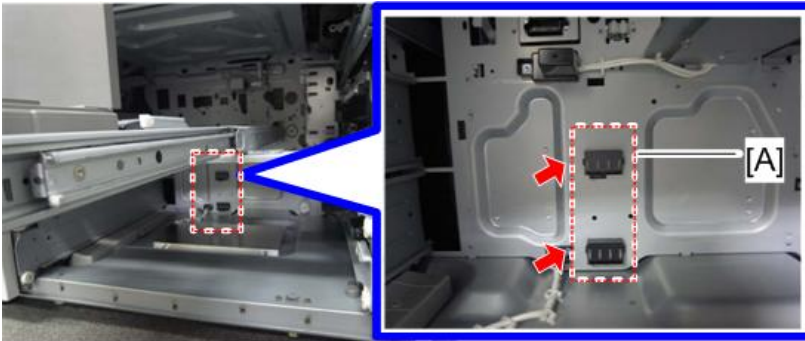
d1353020

Paper Size Sensors

1. PSU1 / PSU2 along with the bracket, located on the back side of the machine (☛ page 944 "When removing the motors and sensors that are behind the PSU1/PSU2")
2. Disconnect two connectors [A] from the paper size sensors.

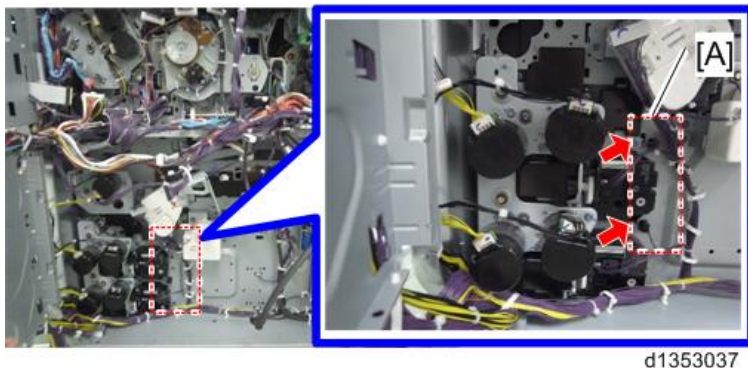


3. Pull out the paper trays from the front side of the machine and remove the two paper size sensors [A].



Paper Tray Set Sensors

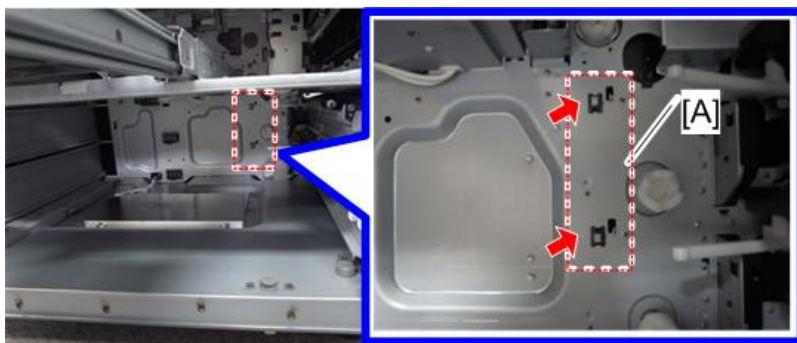
1. PSU1 / PSU2 along with the bracket, located on the back side of the machine (☛ page 944 "When removing the motors and sensors that are behind the PSU1/PSU2")
2. Disconnect two connectors [A] from the paper tray set sensors.



d1353037

3. Pull out the paper trays from the front side of the machine and remove the two paper tray set sensors [A].

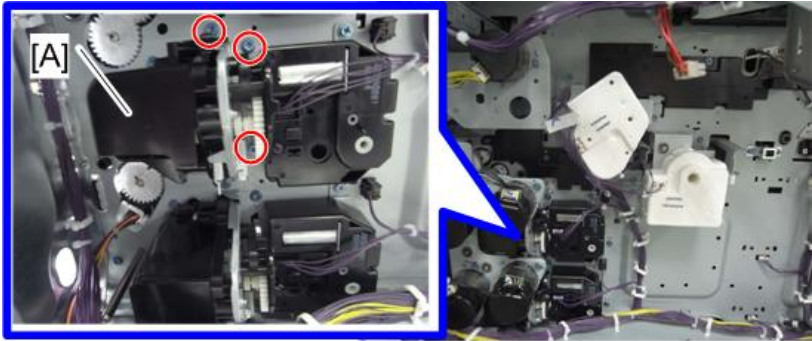
4



d1353022

Paper Tray Lift Motor

1. PFB along with the bracket, located on the back side of the machine (☛ page 941 "When removing the motors that are behind the PFB")
2. PSU1 / PSU2 along with the bracket, located on the back side of the machine (☛ page 944 "When removing the motors and sensors that are behind the PSU1/PSU2")
3. Paper feed motor for paper tray 2 or paper feed motor for paper tray 3 (☛ page 973 "2nd Paper Feed Motor/2nd Transport Motor, 3rd Paper Feed Motor/3rd Transport Motor")
4. Tray pull-in device [A] (🔧 x 3)
e.g.: for paper tray 2



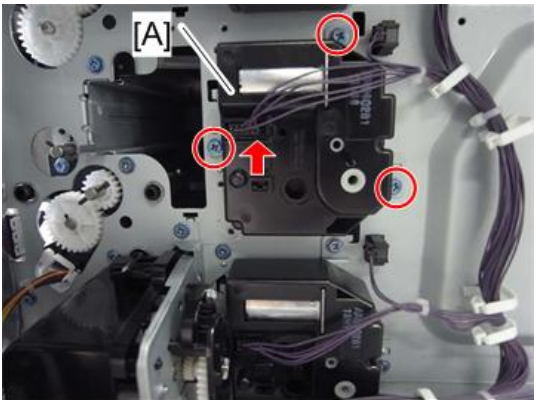
d1353038

Note

- This work must be done while the paper tray is pulled out.

5. Paper tray lift motor [A] (🔧 x 3, 📦 x 1 each)

e.g.: for paper tray 2



d1352504

Note

- For tray 3, replace with the same procedure as for tray 2.

Tray Heater

Upper Tray Heater

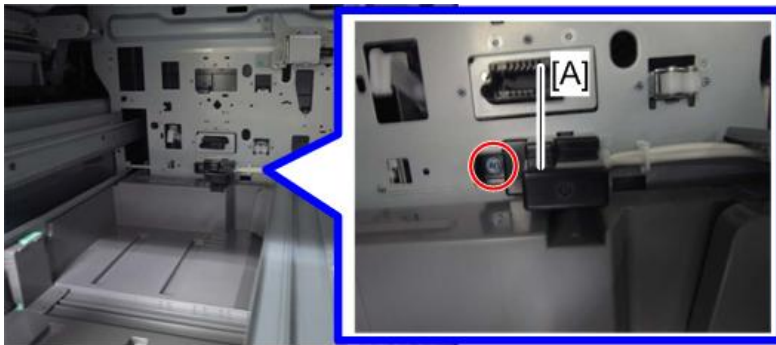
1. Pull out the paper tray.
2. Right side of paper tray 1 [A] (TCRU/ORU 🔧 x 2)



3. Remove the fixing screws of the bracket for the upper tray heater [A] (🔩 x 2).



4. Connector cover [A] (🔩 x 1)

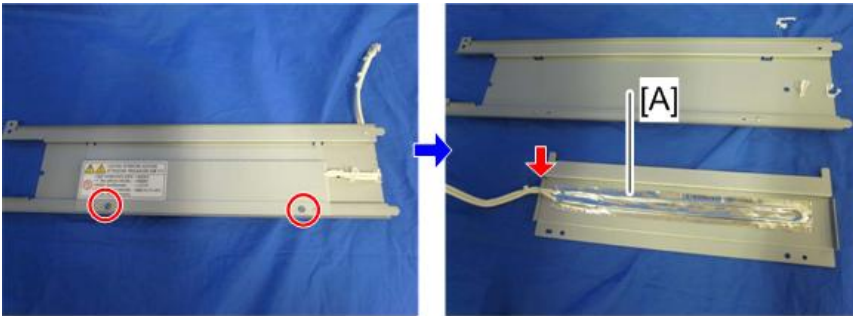


5. Upper tray heater [A] along with the bracket (🔩 x 1, 📏 x 2).



d1353030

6. Upper tray heater [A] (🔧 x 2, 🛠️ x 1).



d1352560

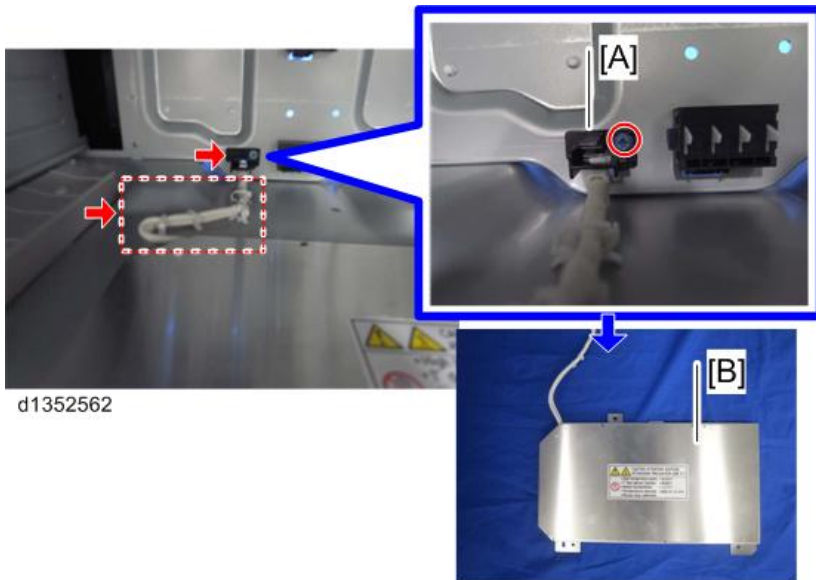
Lower Tray Heater

1. Pull out the paper tray.
2. Remove the fixing screws of the bracket for the lower tray heater [A] (🔧 x 3).



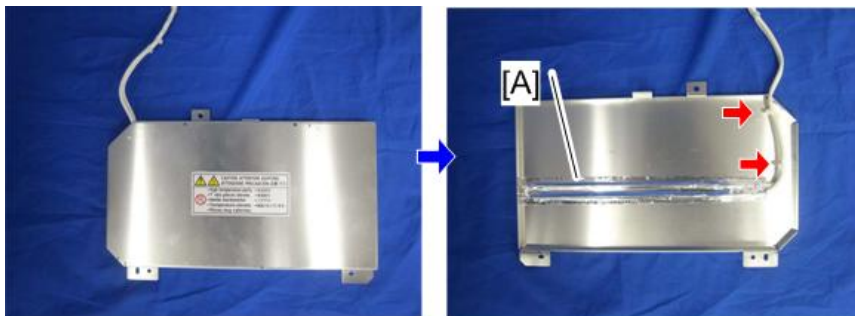
d1353031

3. Connector cover [A] (🔧 x 1)
4. Lower tray heater [B] along with the bracket (🛠️ x 1, 🛠️ x 4).



d1352562

5. Lower tray heater [A] (🔍 x 2)

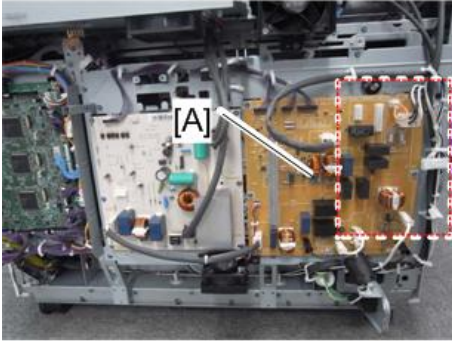


d1352563

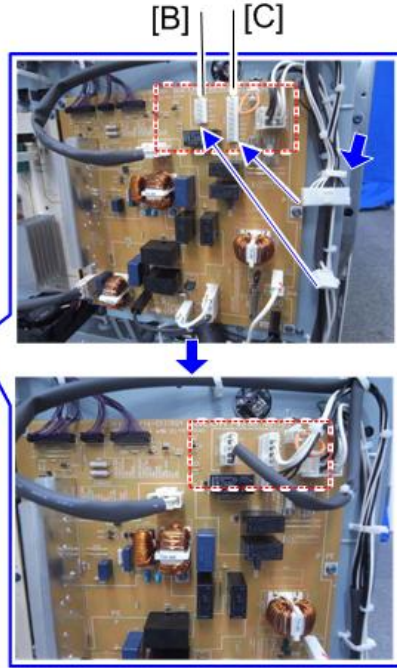
Tray Heater Setting

Turn on the tray heater depending on the needs of the user.

1. Rear lower cover (🔍 page 538)
2. Remove the clamp and connect the connectors to CN402 [B] and CN401 [C] on the AC drive board [A].



d1353059



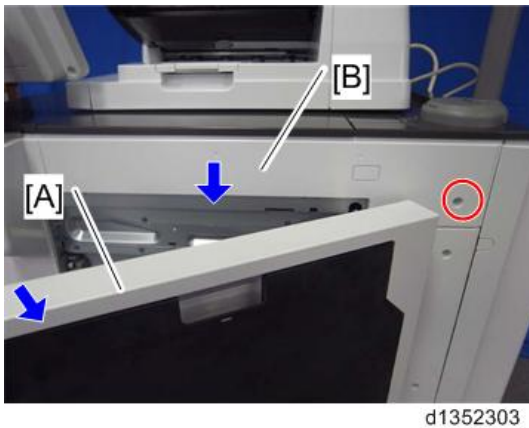
By-pass Tray Unit (D137/D138)

By-pass Tray Unit Removal

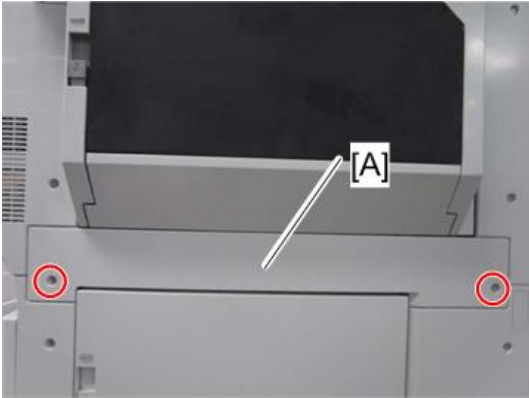
1. In order to easily remove the right middle upper cover [A], remove the fixing screws on the right side of the rear middle cover [B] (🔩 x 2).



2. Open the by-pass tray unit [A]. Remove the right middle upper cover [B] downward (🔩 x 1).



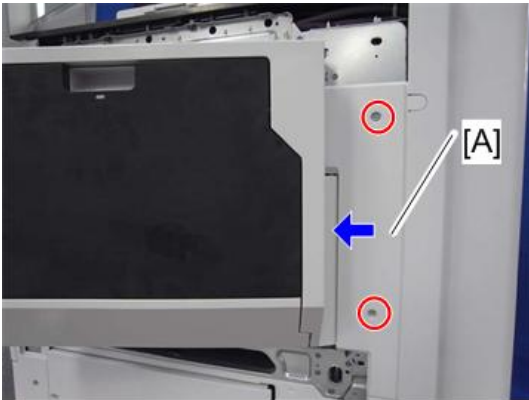
3. LCT cover [A] (🔩 x 2)



d1352595

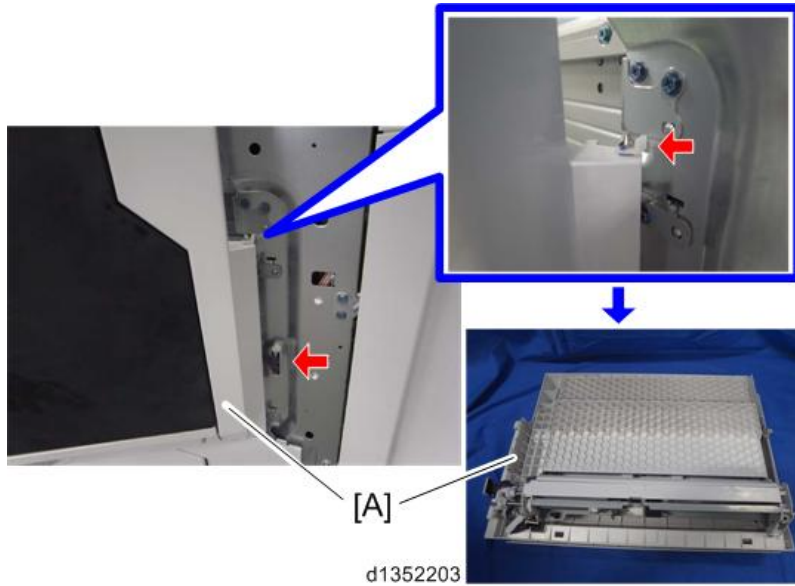
4

4. Slide the right middle rear cover [A] to the left (🔧 x 2)



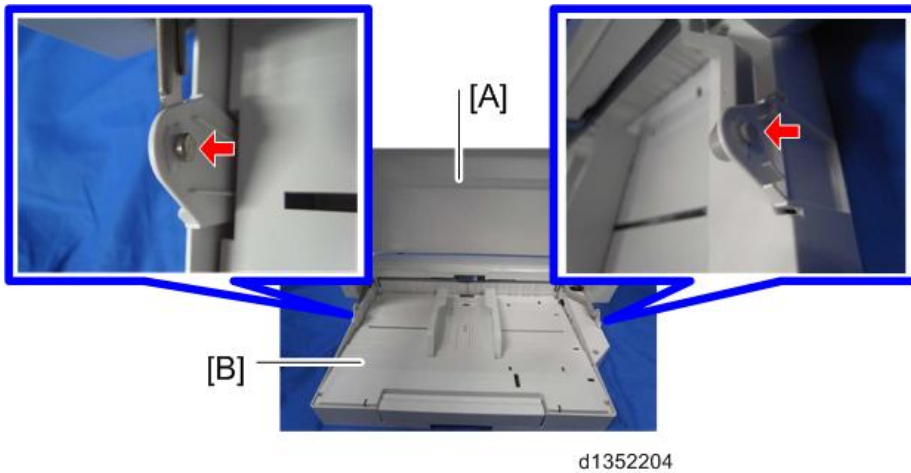
d1352304

5. By-pass Tray Unit [A] (🔧 x 1, 📄 x 1)

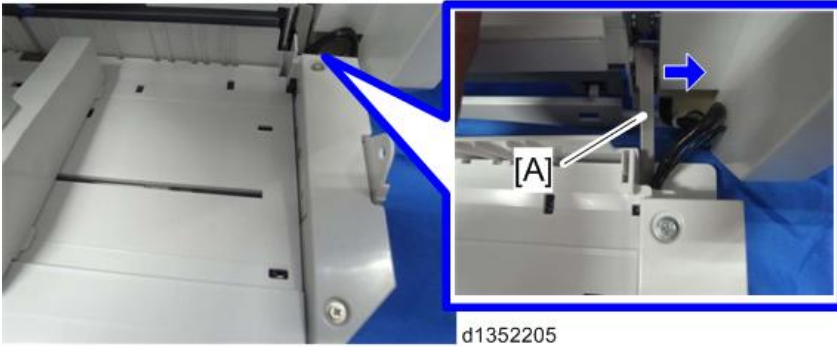


By-pass Tray Unit Separation

1. Separate the paper feed unit [A] and bottom plate [B] of the by-pass tray unit (2).



2. Remove the right arm [A] and separate the paper feed unit and bottom plate of the by-pass tray unit.



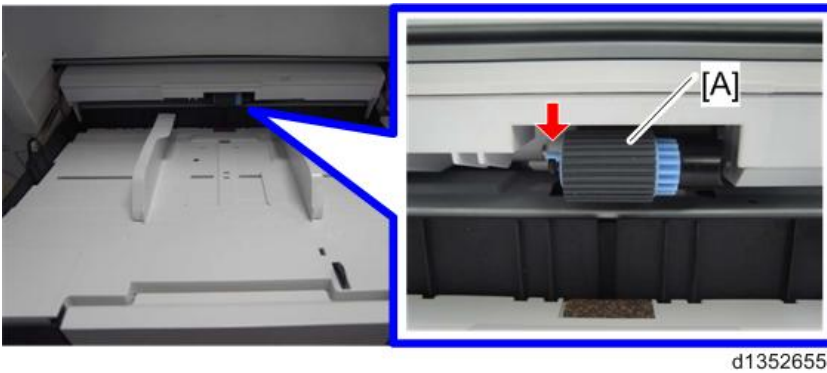
4

By-pass Pick-up Roller / By-pass Feed Roller / By-pass Separation Roller

1. Open the by-pass tray [A].



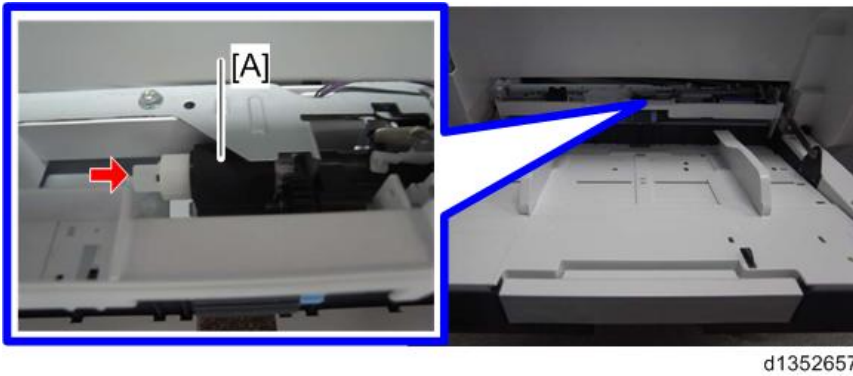
2. By-pass pick-up roller [A] (hook x 1)



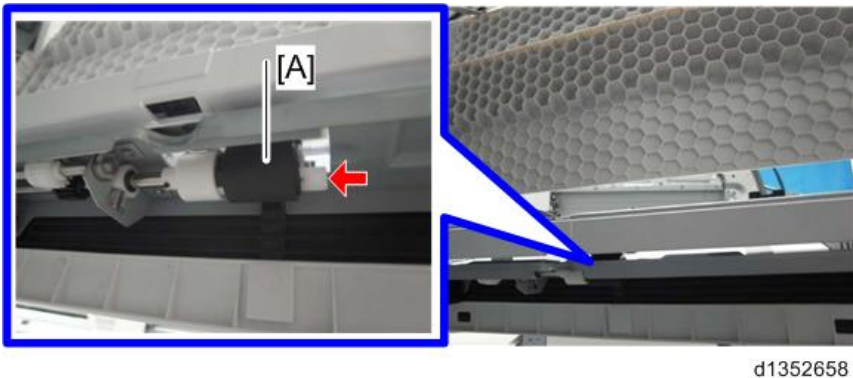
3. Open the by-pass tray unit [A] and remove the paper feed unit cover [B] (⚙️ x 1).



4. By-pass feed roller [A] (🌀 x 1)

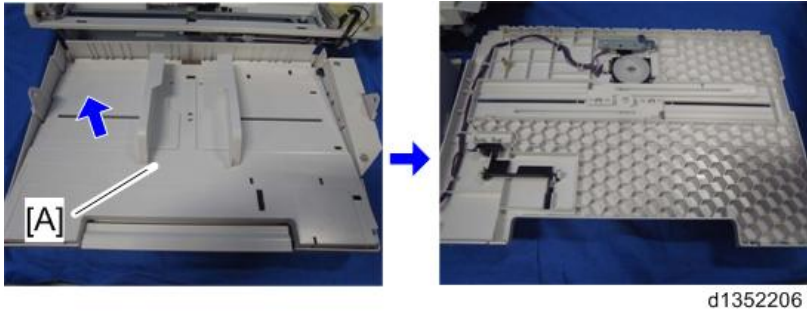


5. By-pass separation roller [A] from the back of the by-pass tray unit (🌀 x 1)

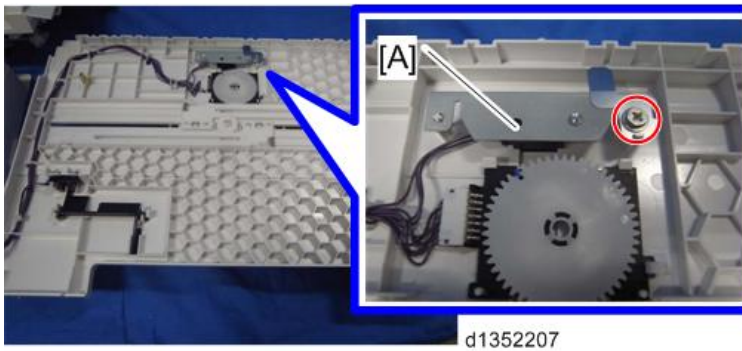


By-pass Tray Paper End Sensor

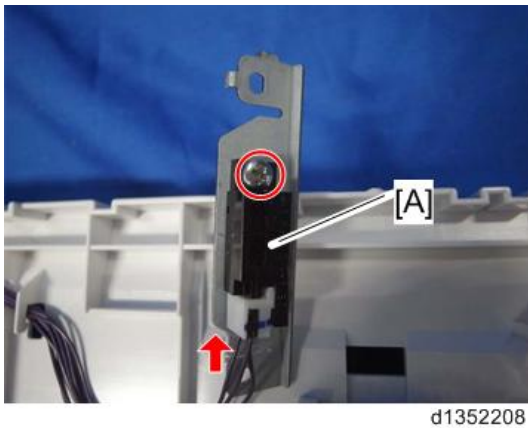
1. Separate the paper feed unit and bottom plate of the by-pass tray unit. (📄 page 853 "By-pass Tray Unit Removal")
2. Remove the bottom plate [A] of the by-pass tray and turn it over.



3. By-pass tray paper end sensor [A] along with the bracket (🔧 x 1)

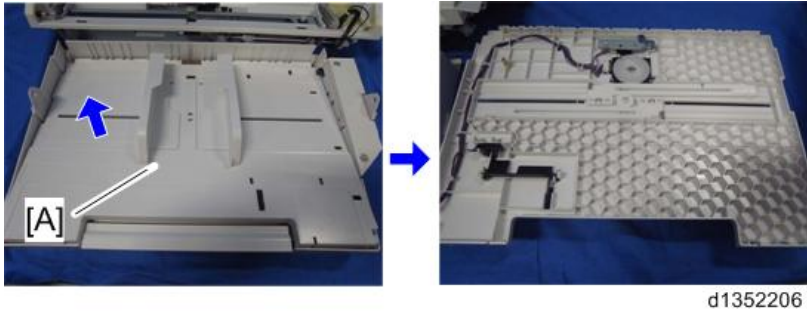



4. By-pass tray paper end sensor [A] (🔧 x 1, 📏 x 1)

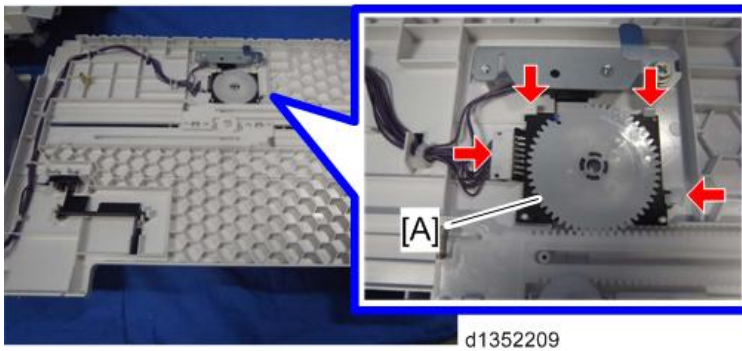


By-pass Paper Width Sensor

1. Separate the paper feed unit and bottom plate of the by-pass tray unit. (📄 page 853 "By-pass Tray Unit Removal")
2. Remove the bottom plate [A] of the by-pass tray and turn it over.




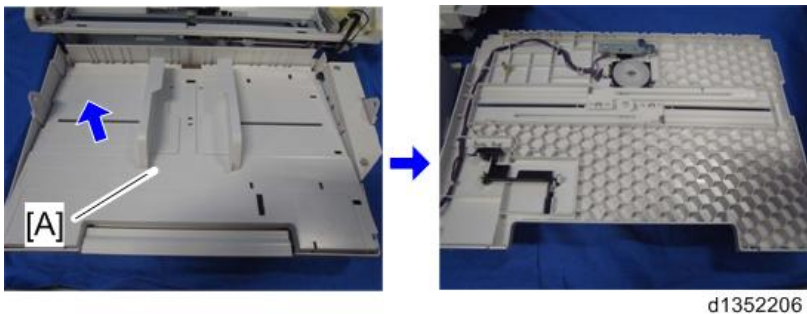
3. By-pass paper width sensor [A] (hook x 3,  x 1)




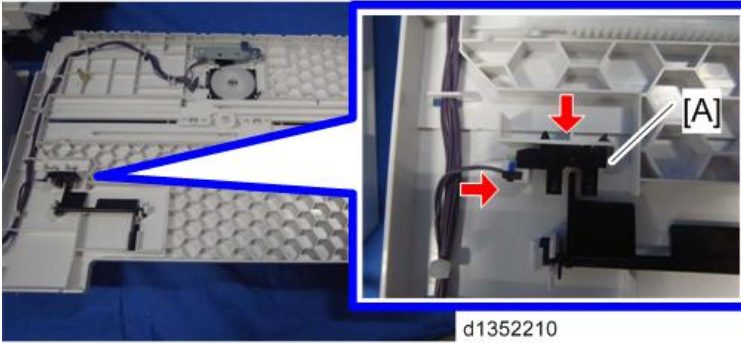
4

By-pass Paper Length Sensor

1. Separate the paper feed unit and bottom plate of the by-pass tray unit. ( page 853 "By-pass Tray Unit Removal")
2. Remove the bottom plate [A] of the by-pass tray and turn it over.



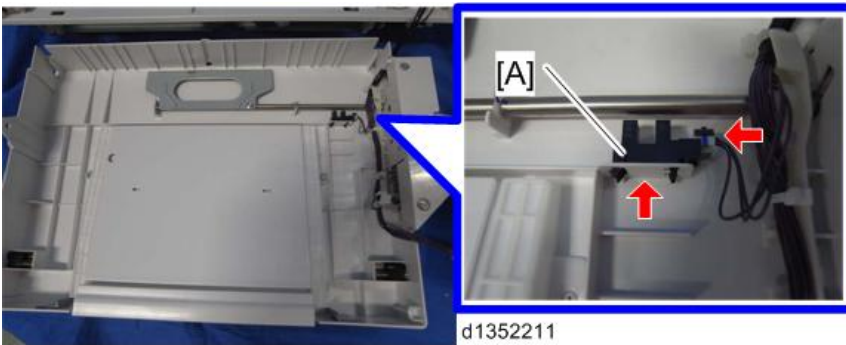
3. By-pass paper length sensor [A] ( x 1, hooks)



4

By-pass Tray Lower Limit Sensor

1. Separate the paper feed unit and bottom plate of the by-pass tray unit. (☞ page 853 "By-pass Tray Unit Removal")
2. By-pass tray lower limit sensor [A] from the bottom plate (🔧 x 1, hooks)

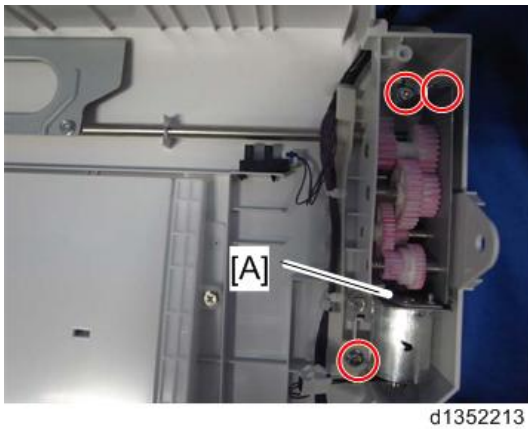


By-pass Tray Lift Motor

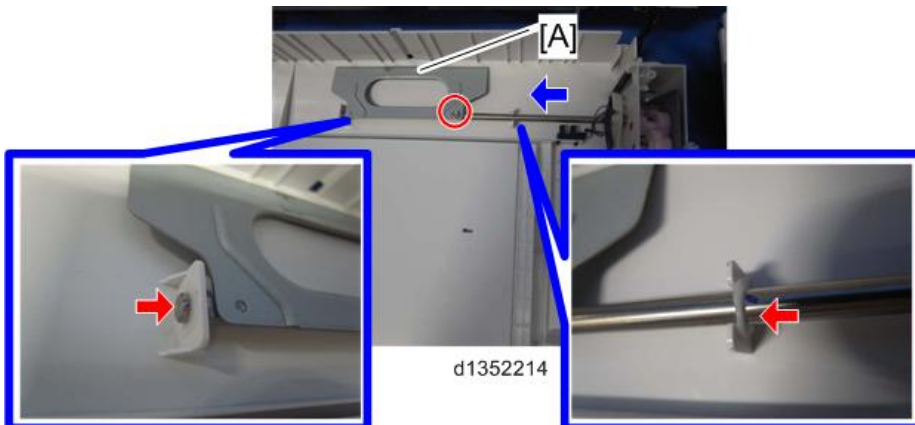
1. Separate the paper feed unit and bottom plate of the by-pass tray unit. (☞ page 853 "By-pass Tray Unit Removal")
2. By-pass tray lift motor cover [A] from the bottom plate (🔧 x 2)



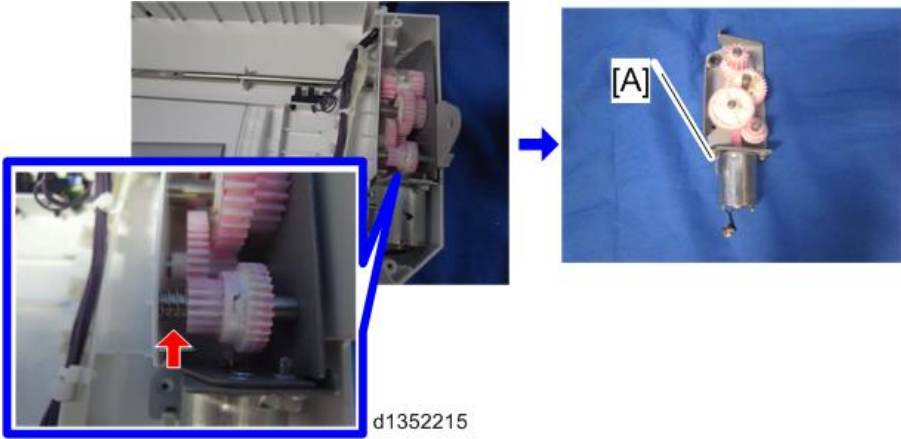
3. Fixing screws of the by-pass tray lift motor block [A] (🔩 x 3)



4. Stay [A] (including the shaft) for lifting the bottom plate (🔩 x 1, 🏹 x 2)



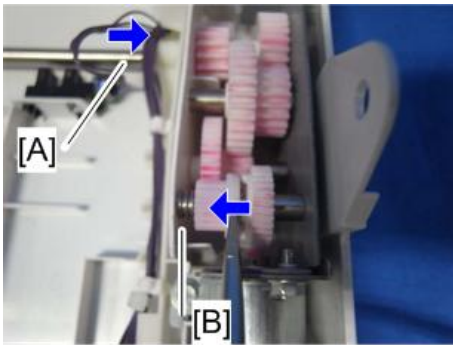
5. By-pass tray lift motor block [A] (spring x 1)



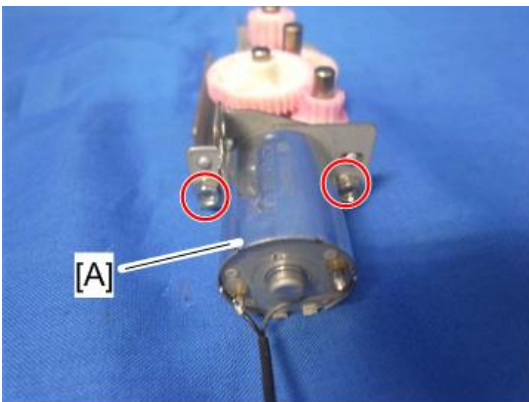
4

Note

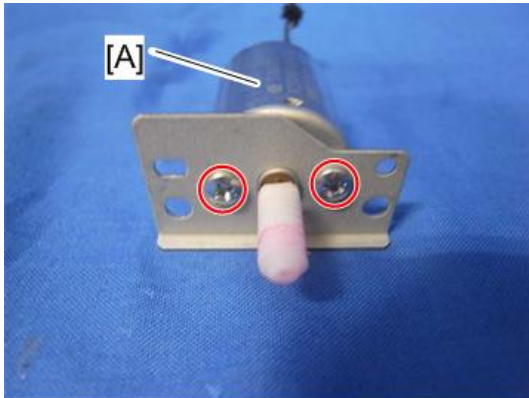
- When reinstalling the motor, press the spring [B] to rotate the gear. It is easy to insert the shaft [A] for lifting the bottom plate.



6. By-pass tray lift motor [A] along with the bracket (⚙ x 2)



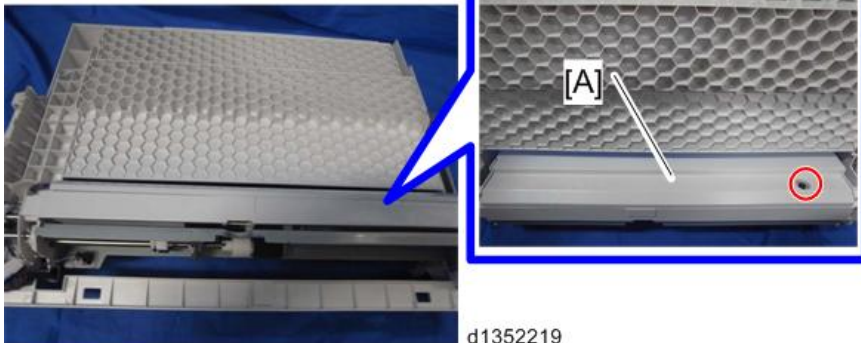
7. By-pass tray lift motor [A] (⚙ x 2)



d1352218

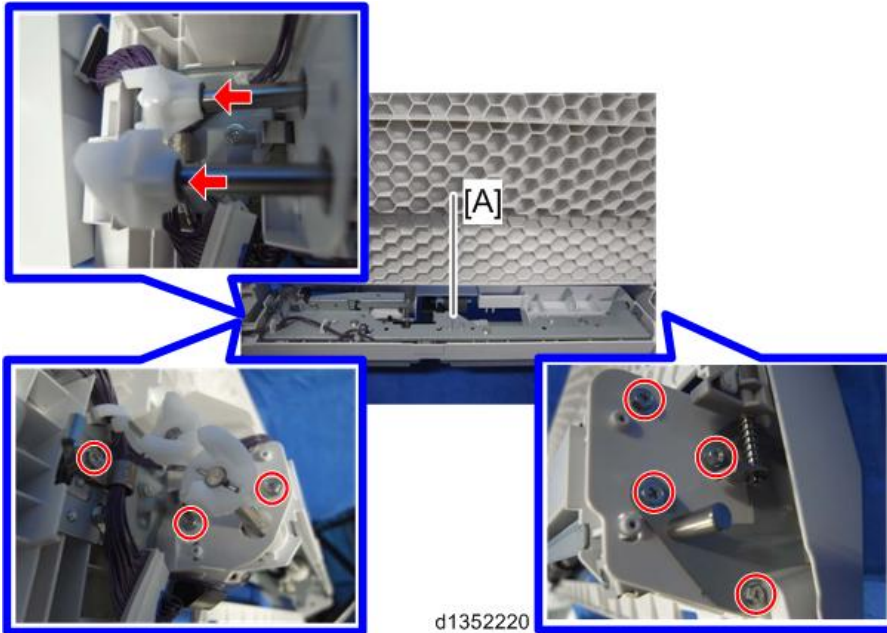
By-pass Tray Upper Limit Sensor / By-pass Paper Feed Sensor

1. Separate the paper feed unit and bottom plate of the by-pass tray unit. (☛ page 853 "By-pass Tray Unit Removal")
2. By-pass paper feed unit cover [A] (🔧 x 1)

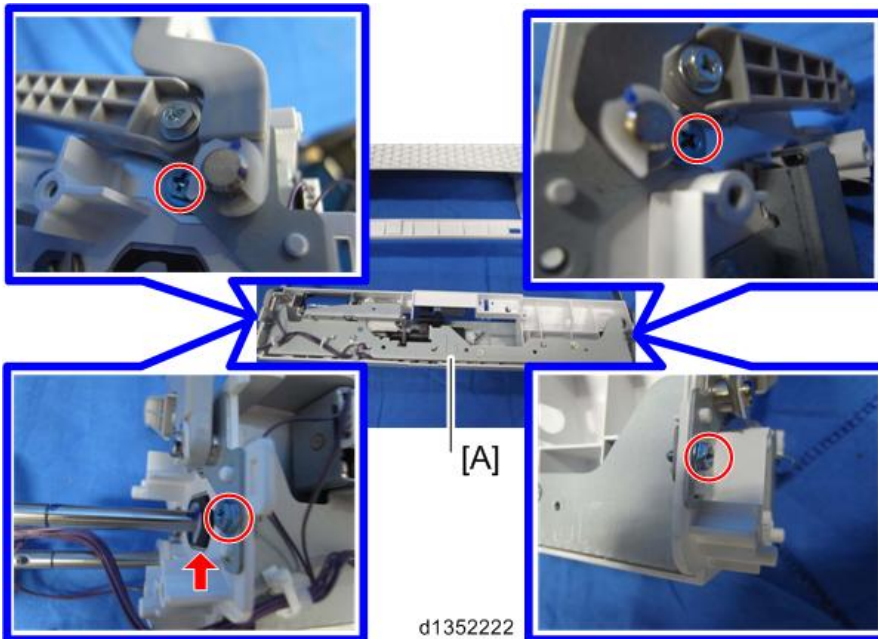


d1352219

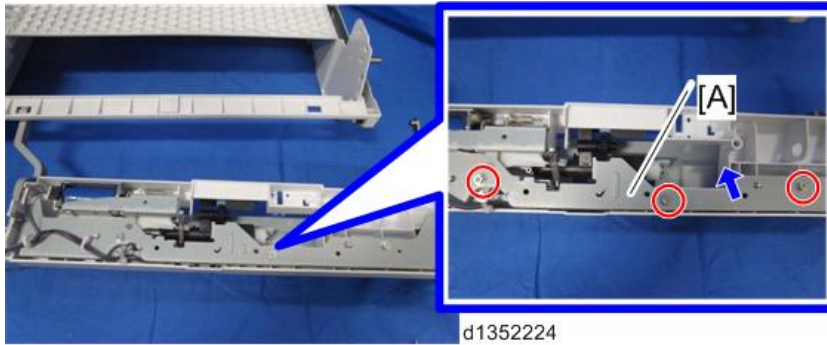
3. Remove the fixing screws (x 7) and joints (x 2) of the by-pass paper feed unit [A] (🔩 x 2)



4. Bracket [A] of the by-pass paper feed unit (⚙ x 4, ⚙ x 1)

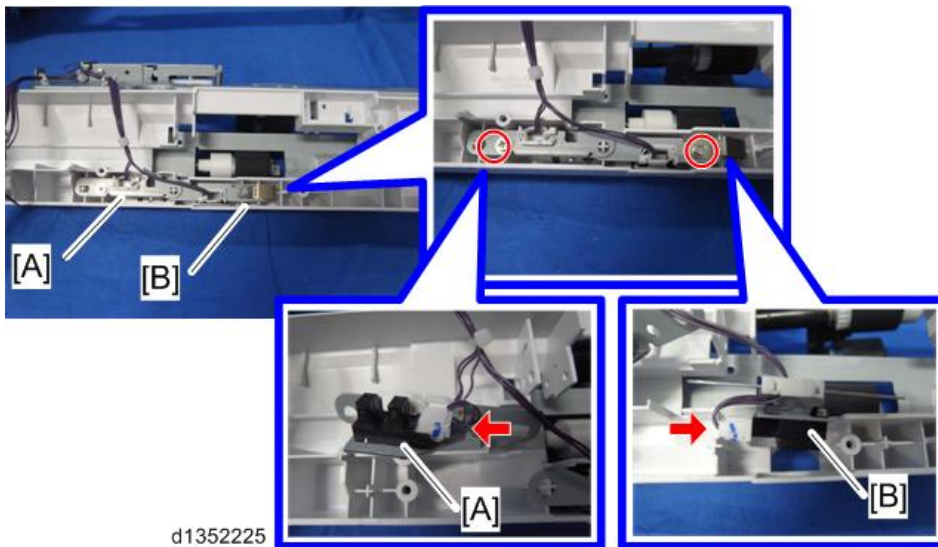


5. Lift the bracket [A] to remove (⚙ x 3).



d1352224

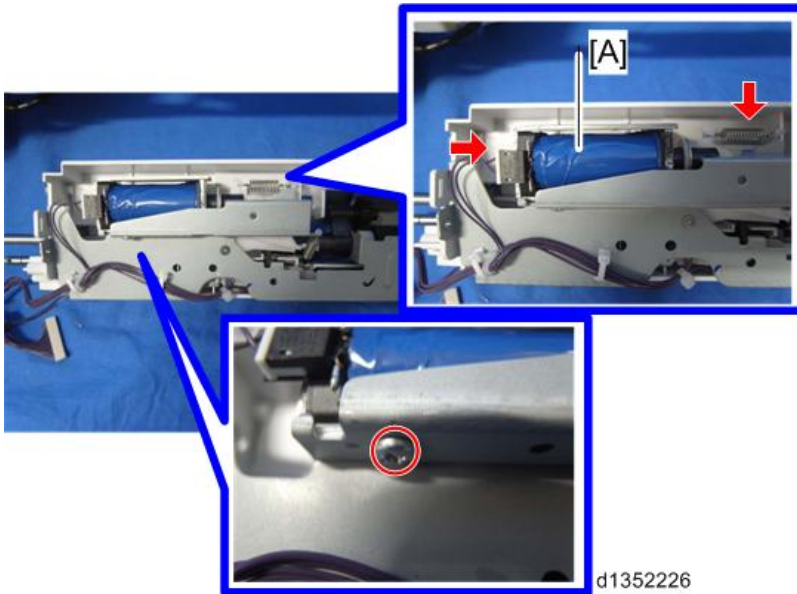
6. By-pass tray upper limit sensor [A] (🔩 x 1, 📡 x 1)
7. By-pass paper feed sensor [B] (🔩 x 1, 📡 x 1)



d1352225

By-pass Pick-up Solenoid

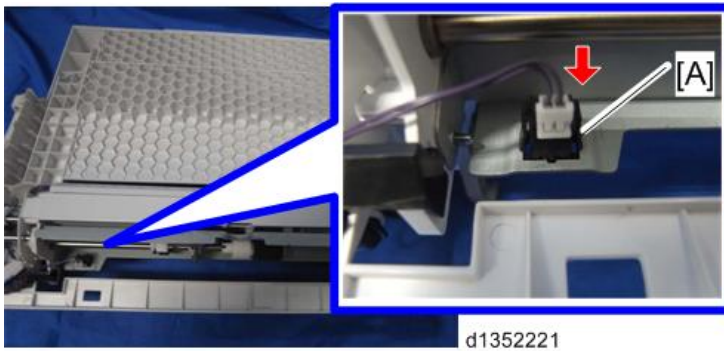
1. Bracket of the by-pass paper feed unit (📖 page 863 "By-pass Tray Upper Limit Sensor / By-pass Paper Feed Sensor")
2. By-pass pick-up solenoid [A] (🔩 x 1, spring x 1, 📡 x 1)



4

By-pass Tray Set Sensor

1. Separate the paper feed unit and bottom plate of the by-pass tray unit. (☞ page 853 "By-pass Tray Unit Removal")
2. By-pass tray set sensor [A] (☞ x 1)

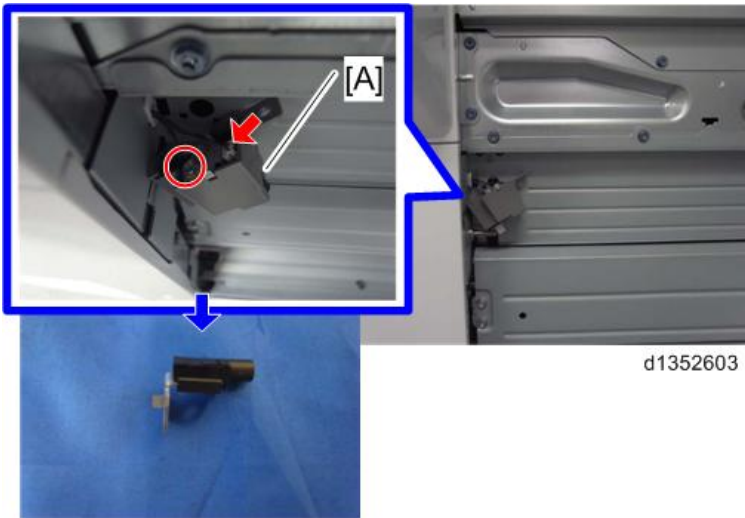


By-pass Tray LED Connector (Red)

1. Open the by-pass tray unit and remove the LED cover [A] (☞ x 1).



2. By-pass tray LED connector (Red) [A] (🔧 x 1, 📏 x 1)



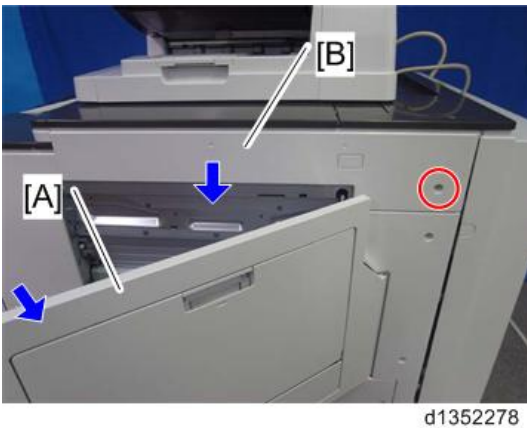
By-pass Tray Unit (D135/D136)

By-pass Tray Unit Removal

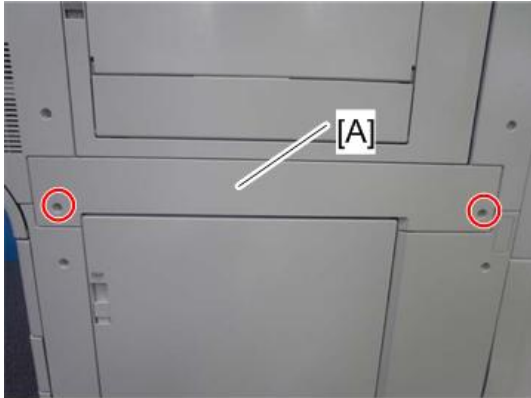
1. In order to easily remove the right middle upper cover [A], remove the fixing screws on the right side of the rear middle cover [B] (🔩 x 2).



2. Open the by-pass tray unit [A]. Remove the right middle upper cover [B] downward (🔩 x 1).

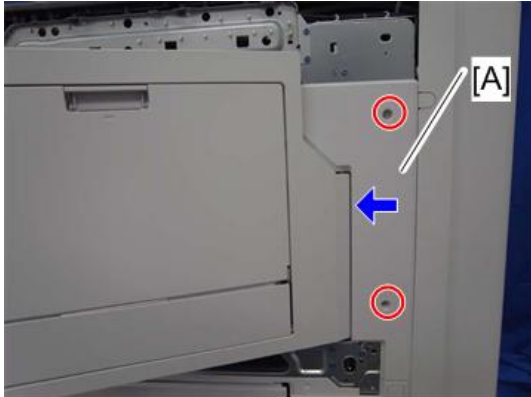


3. LCT cover [A] (🔩 x 2)



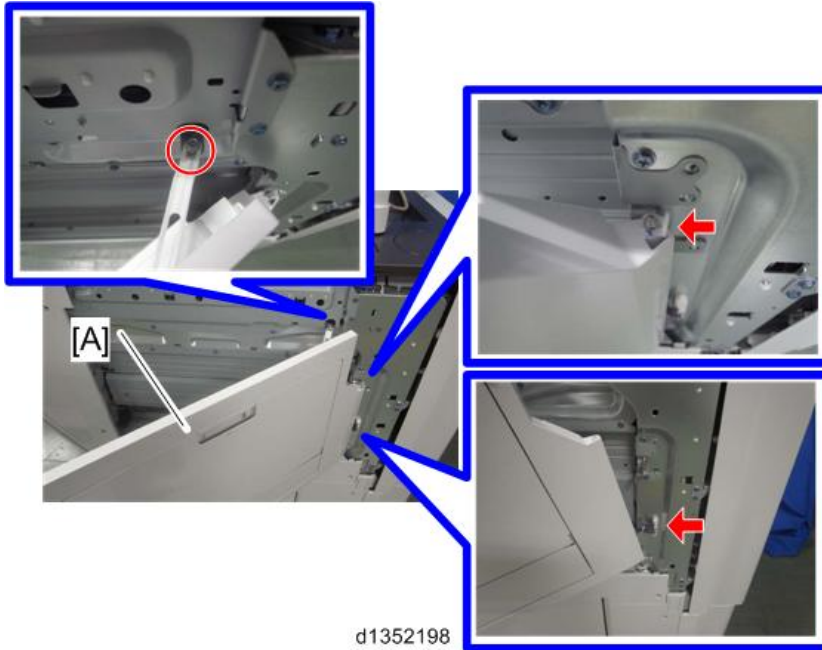
d1352596

4. Slide the right middle rear cover [A] to the left (🔧 x 2)



d1352280

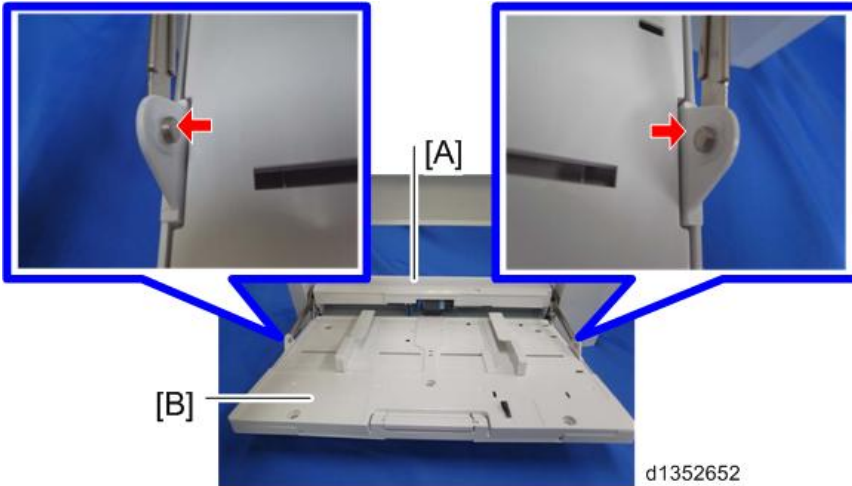
5. By-pass Tray Unit [A] (🔧 x 1, 🛠️ x 1, 📄 x 1)



4

By-pass Tray Unit Separation

1. Separate the paper feed unit [A] and bottom plate [B] of the by-pass tray unit (⌘ x 2).

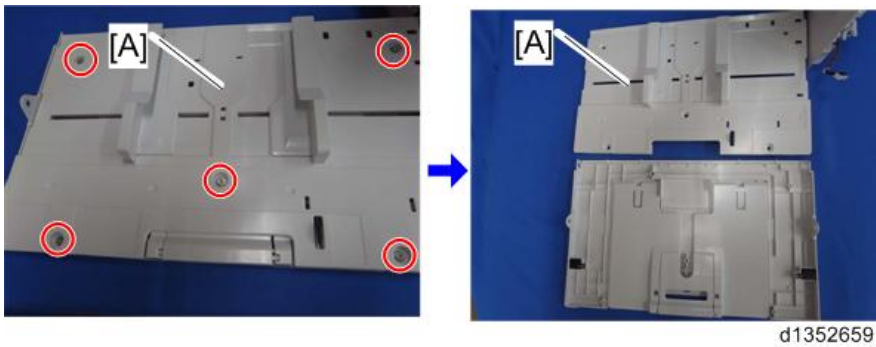


2. Remove the left arm [A] and right arm [B], and then separate the paper feed unit and bottom plate of the by-pass tray unit.

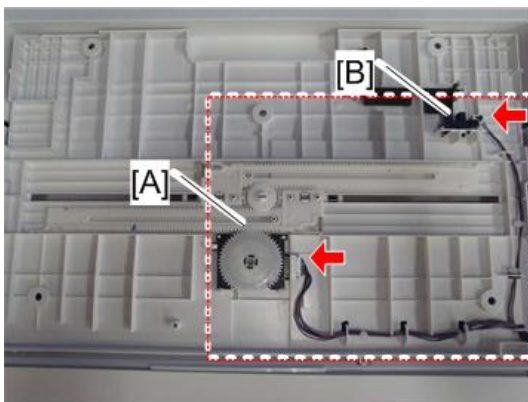


4

3. By-pass tray [A] from the bottom plate (⚙ x 5)



4. Turn over the by-pass tray [A], then disconnect the connectors and clamps of the by-pass paper width sensor [B] / by-pass paper length sensor [C].



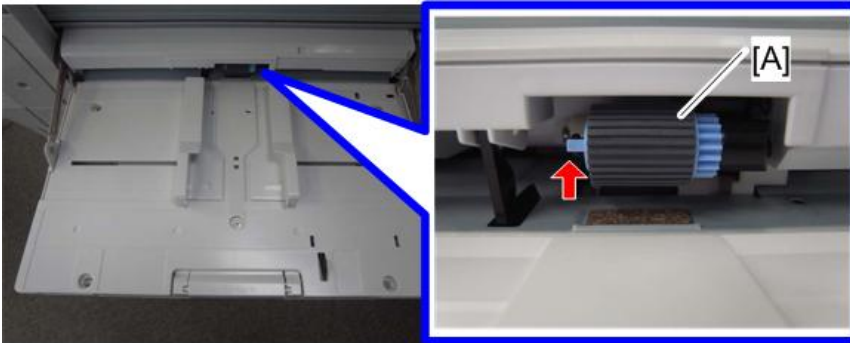
By-pass Pick-up Roller / By-pass Feed Roller / By-pass Separation Roller

1. Open the by-pass tray [A].



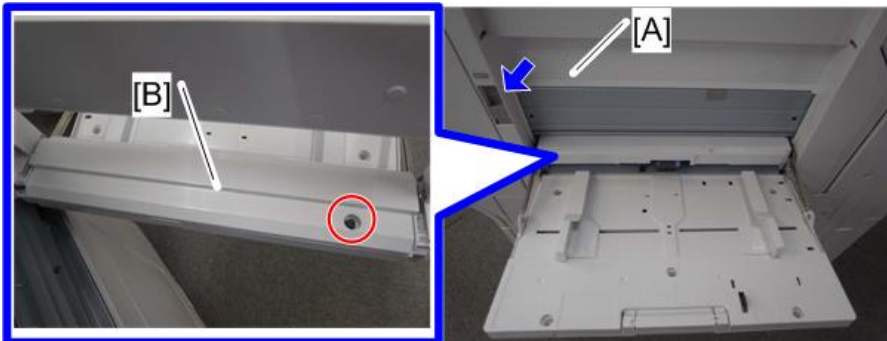
d1352643

2. By-pass pick-up roller [A] (hook x 1).



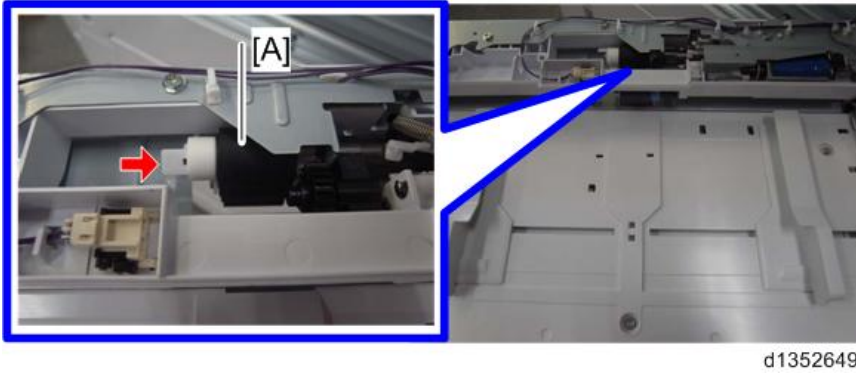
d1352647

3. Open the by-pass tray unit [A] and remove the paper feed unit cover [B] (⚙️ x 1).

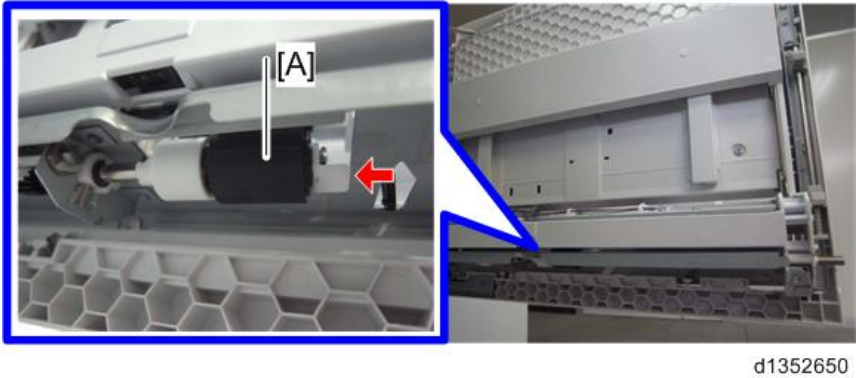


d1352648

4. By-pass feed roller [A] (⚙️ x 1)



5. By-pass separation roller [A] from the back of the by-pass tray unit (🔧 x 1)



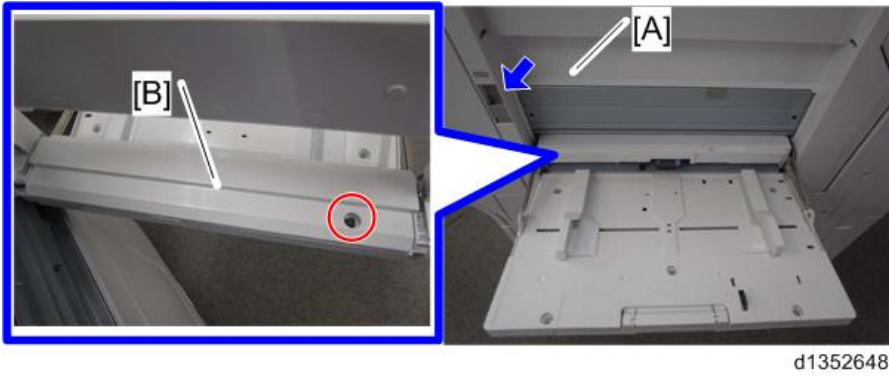
4

By-pass Tray Paper End Sensor

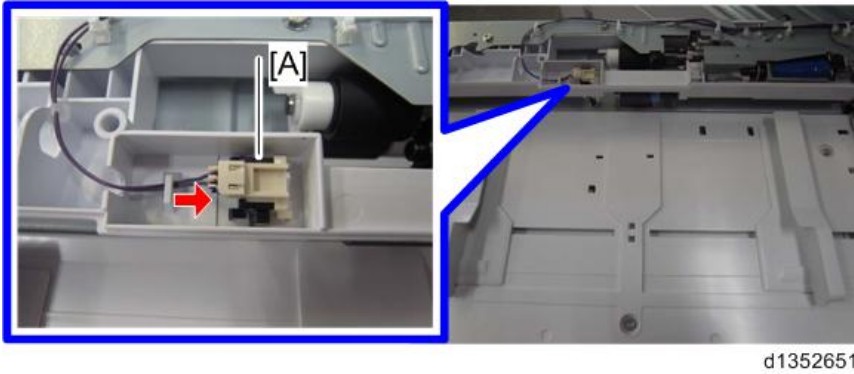
1. Open the by-pass tray [A].



2. Open the by-pass tray unit [A] and remove the paper feed unit cover [B] (🔧 x 1)



3. By-pass tray paper end sensor [A] (☞ x 1)



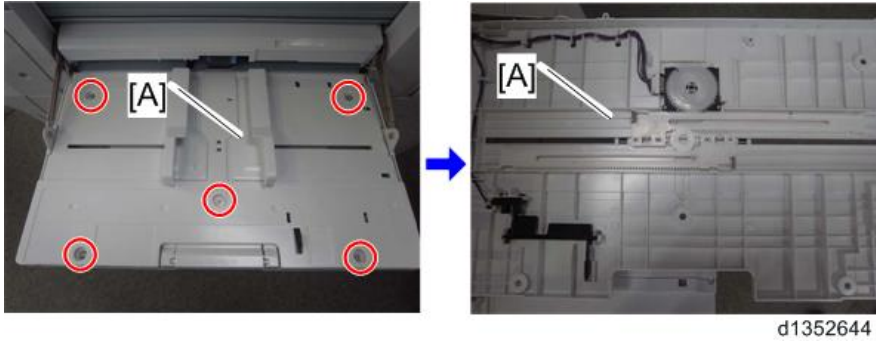
4


By-pass Paper Width Sensor

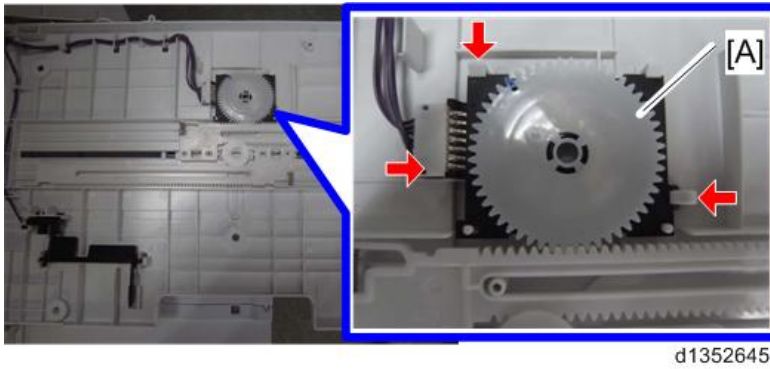
1. Open the by-pass tray [A].



2. Remove the bottom plate [A] of the by-pass tray and turn it over (☞ x 5).



3. By-pass paper width sensor [A] (hook x 2,  x 1)



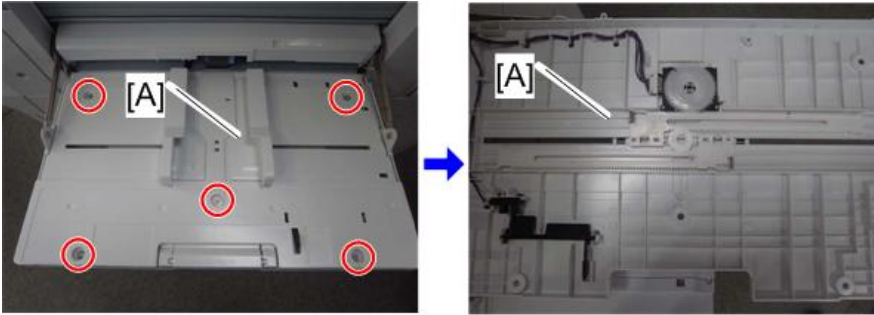
4

By-pass Paper Length Sensor

1. Open the by-pass tray [A].



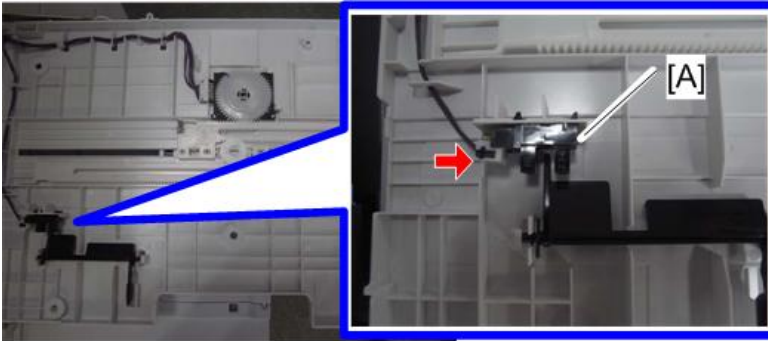
2. Remove the bottom plate [A] of the by-pass tray and turn it over ( x 5).



d1352644

3. By-pass paper length sensor [A] (☒ x 1, hooks)

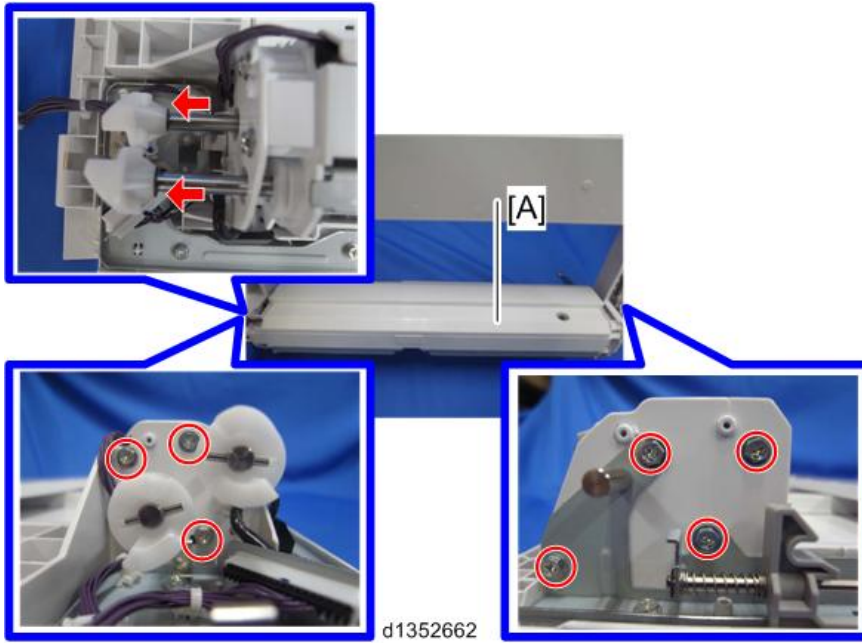
4



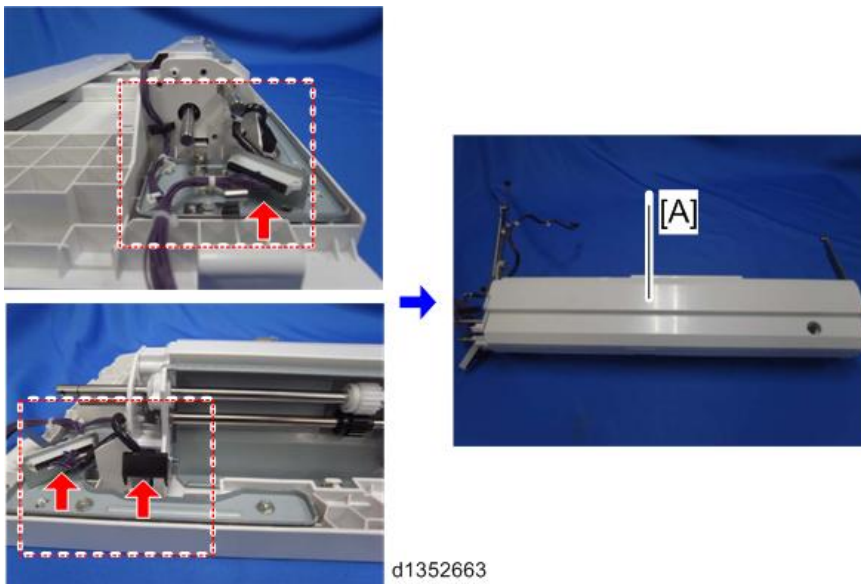
d1352646

By-pass Paper Feed Sensor

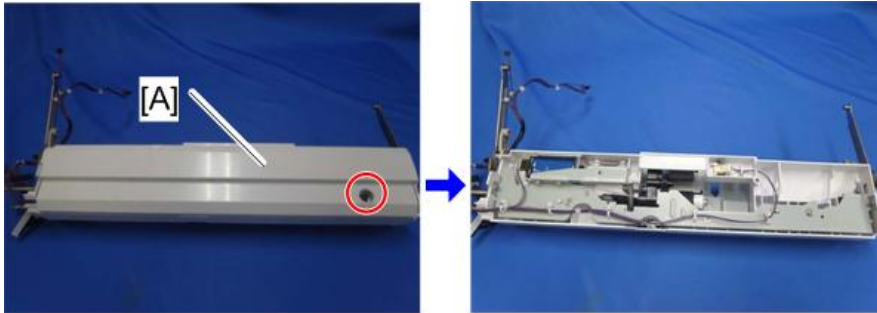
1. Separate the paper feed unit and bottom plate of the by-pass tray unit. (☒ page 868 "By-pass Tray Unit Removal")
2. Remove the fixing screws (x 7) and joints (x 2) of the by-pass paper feed unit [A] (☒ x 2)



3. Remove the connectors and clamps, then take out the paper feed unit [A].

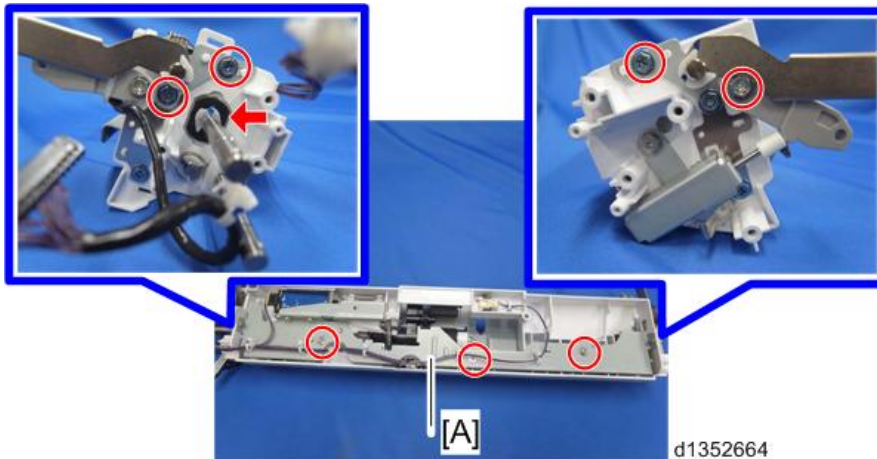


4. By-pass paper feed unit cover [A] (⚙️ x 1)



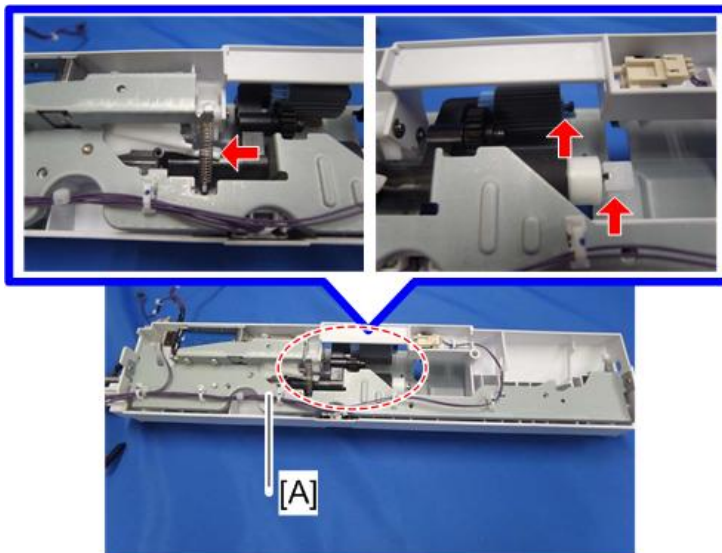
d1352661

5. Bracket [A] of the by-pass paper feed unit (⚙ x 7, ⚙ x 1)





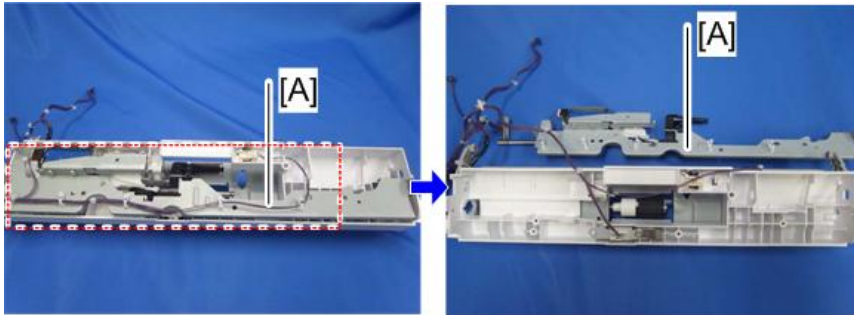
d1352664

6. Bracket [A] for the by-pass paper feed unit (by-pass pick-up roller, by-pass feed roller, spring x 1)





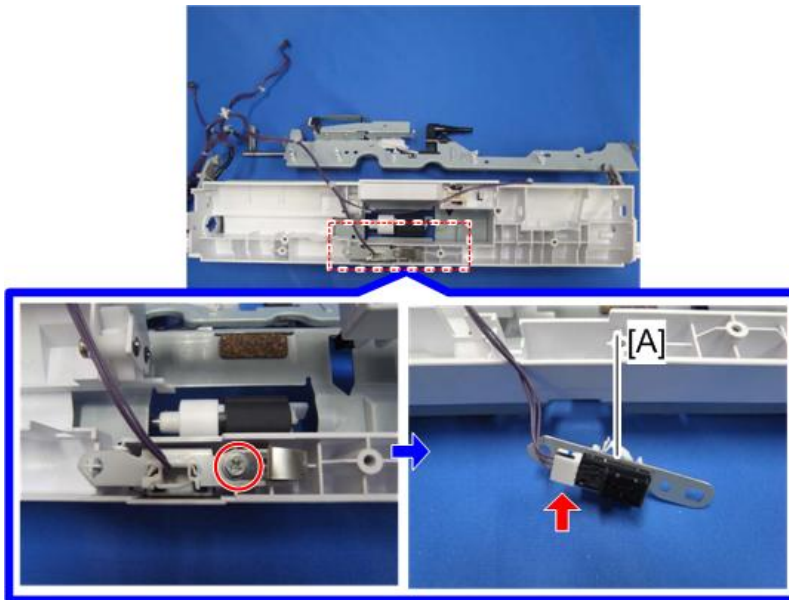
d1352665

7. Lift the bracket [A] to remove (all , all )






d1352666

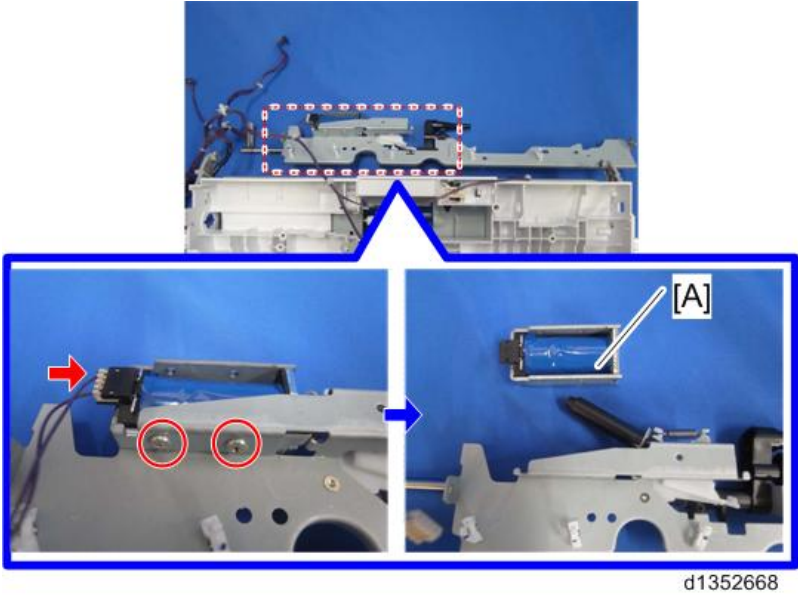
8. By-pass paper feed sensor [A] ( x 1,  x 1)



d1352667

By-pass Pick-up Solenoid

1. Bracket of the by-pass paper feed unit ( page 876 "By-pass Paper Feed Sensor")
2. By-pass pick-up solenoid [A] ( x 2,  x 1)

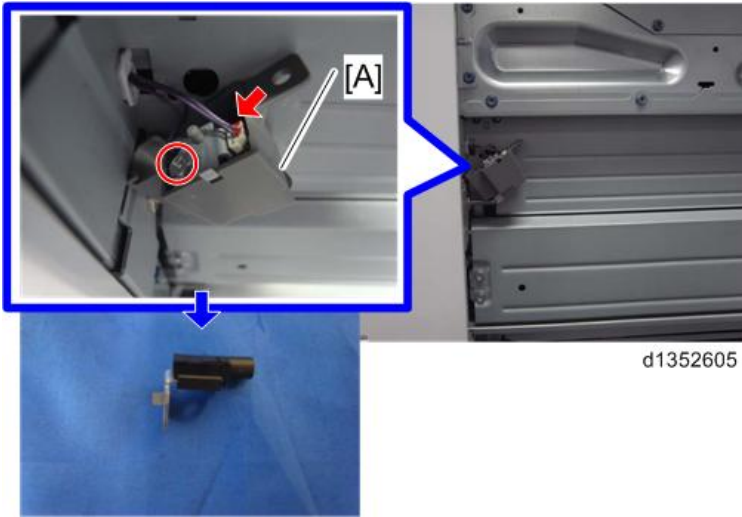


By-pass Tray LED Connector (Red)

1. Open the by-pass tray unit and remove the LED cover [A] (🔧 x 1).



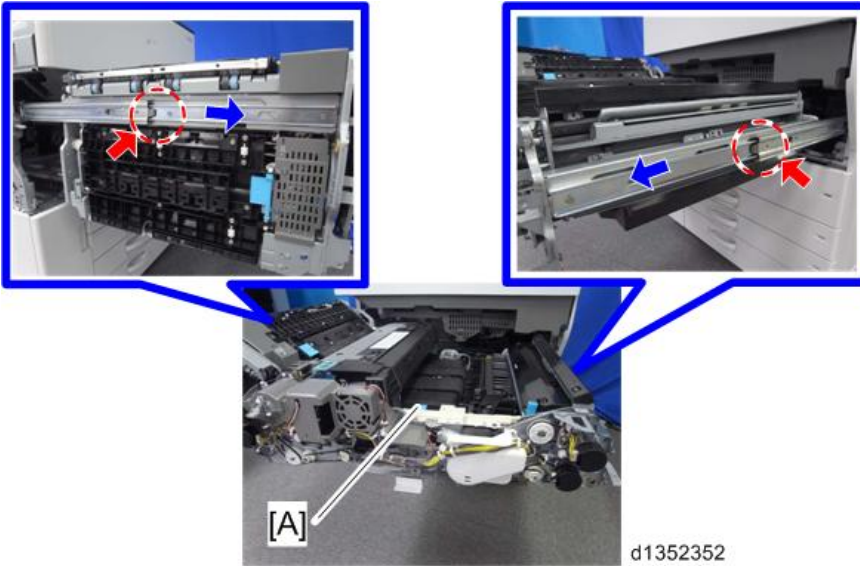
2. By-pass tray LED connector (Red) [A] (🔧 x 1, 📁 x 1)



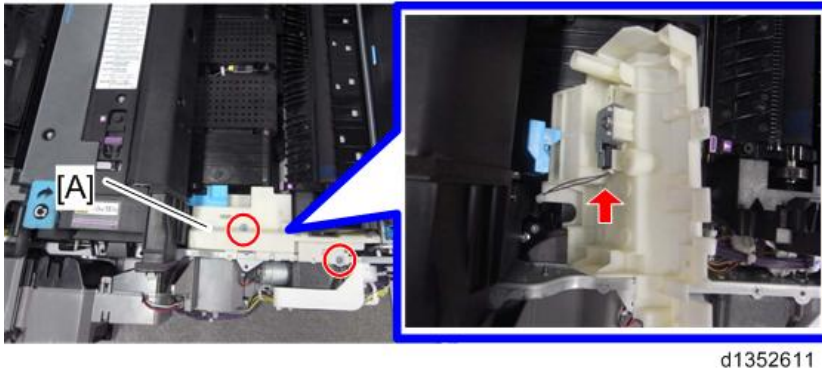
Paper Relay and Registration Section

Registration Unit

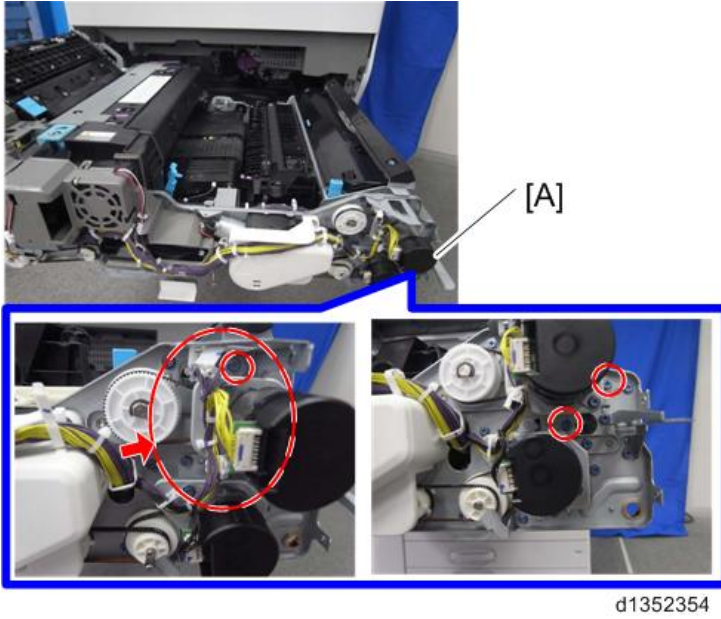
1. Drawer unit cover (🔧 page 594)
2. In order to facilitate the work, press the release lever to fully open the drawer unit [A].



3. Inner cover [A] (🔧 x 2, 📏 x 1)

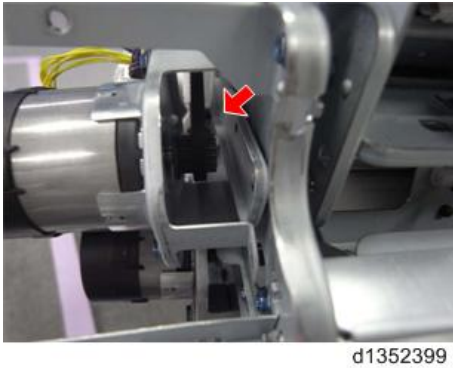


4. Registration motor [A] along with the bracket (🔧 x 3, 📏 x 4, 📏 x 3, timing belt x 1)

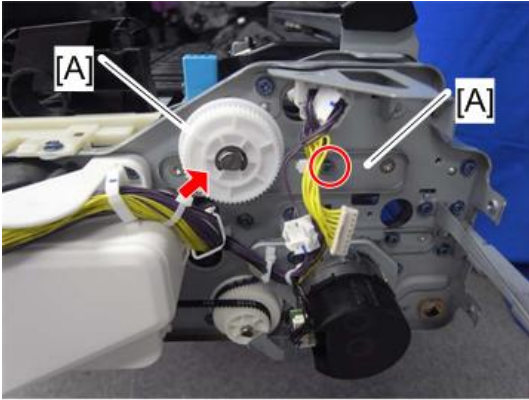


Note

- When installing the motor, attach the timing belt.



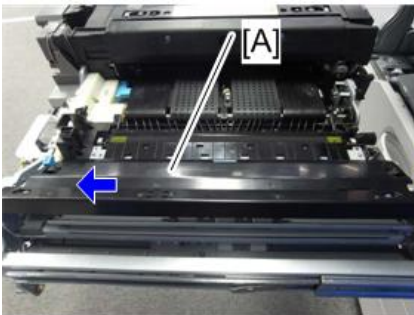
5. Timing pulley [A] and positioning bracket [B] (Ⓒ x 1, Ⓐ x 1)



d1352355

4

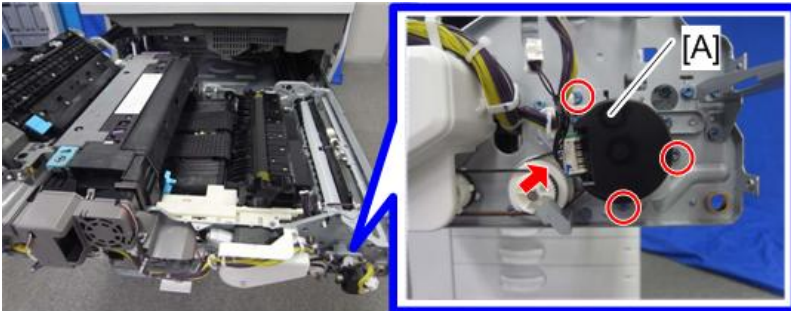
6. Remove the registration unit [A] by sliding it to the left.



d1352356

Relay Unit

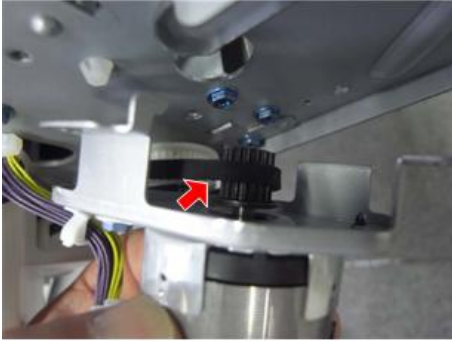
1. Registration unit (☛ page 882)
2. Duplex exit motor [A] along with the bracket (⚙ x 3, timing belt x 1)



d1352360

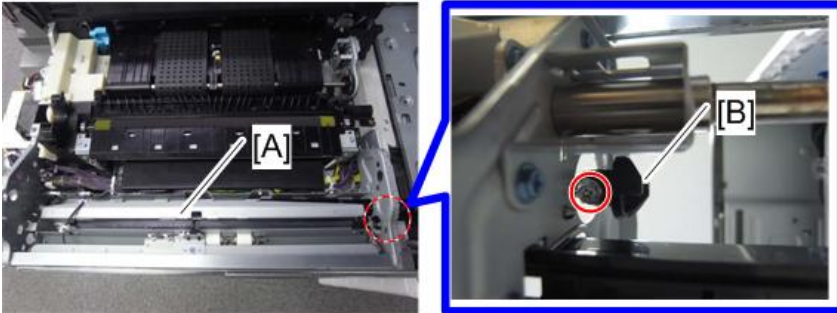
Note

- When installing the motor, attach the timing belt.



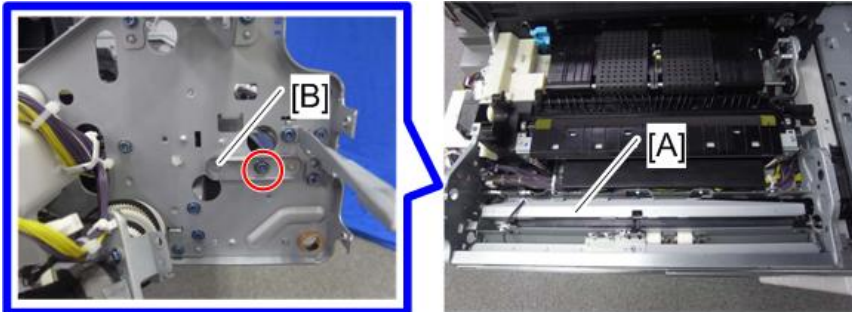
d1352363

3. Joint [B] of the relay unit [A] from the bottom (⚙ x 1)



d1352361

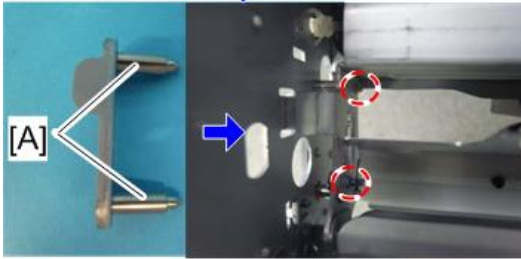
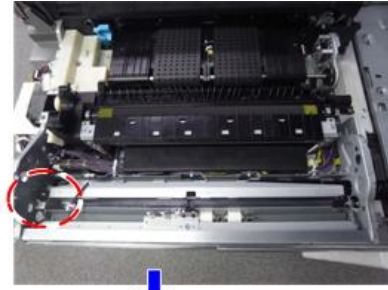
4. Positioning bracket [B] of the relay unit [A] (⚙ x 1)



d1352362

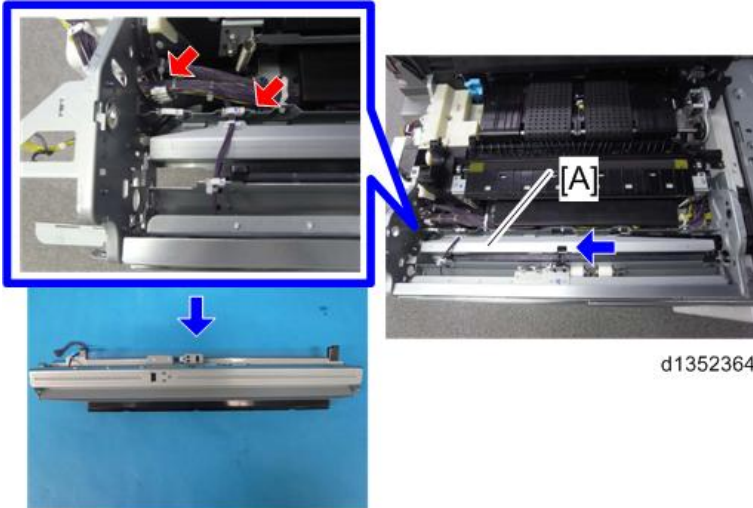
Note

- When installing, the positioning pin [A] must be within the hole in the relay unit.



d1352385

5. Remove the relay unit [A] by sliding it to the left (🖨️ x 1, 🖨️ x 1).



d1352364

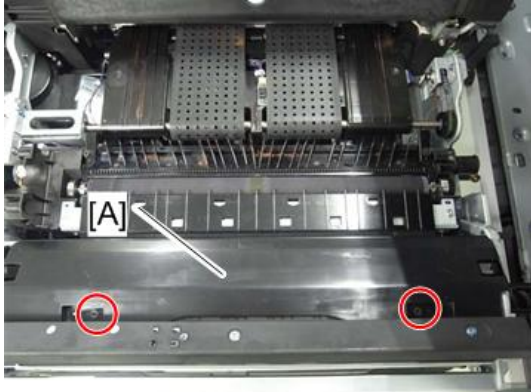
Registration Sensor

1. Open the drawer unit cover [A].



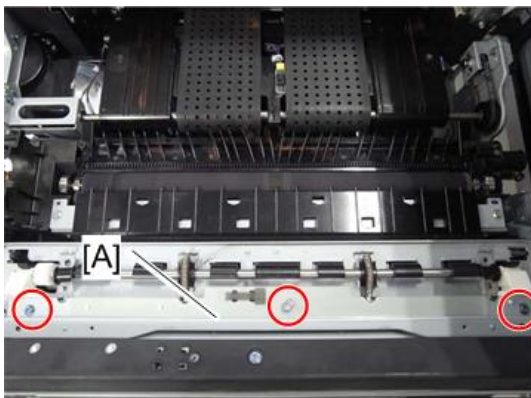
d1352123

2. Registration unit cover [A] (🔩 x 2)



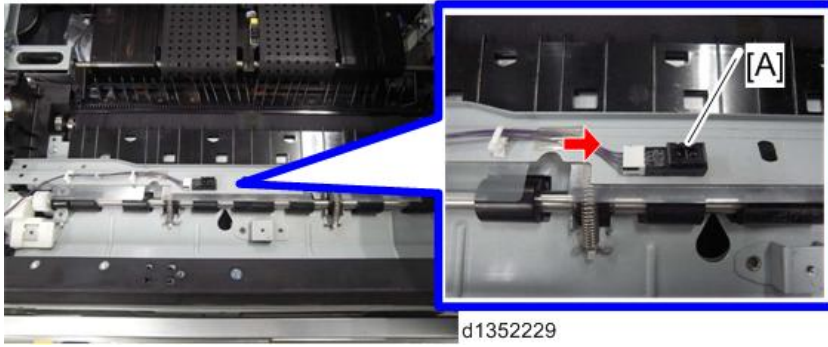
d1352227

3. Bracket [A] (🔩 x 3)



d1352228

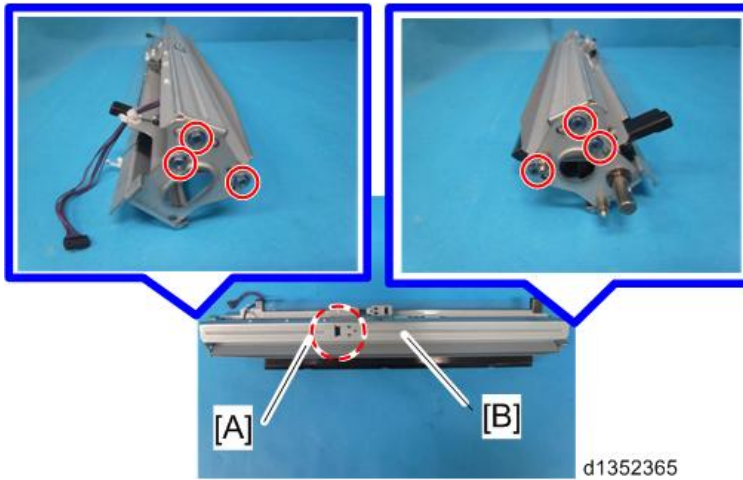
4. Registration sensor [A] (📷 x 1)



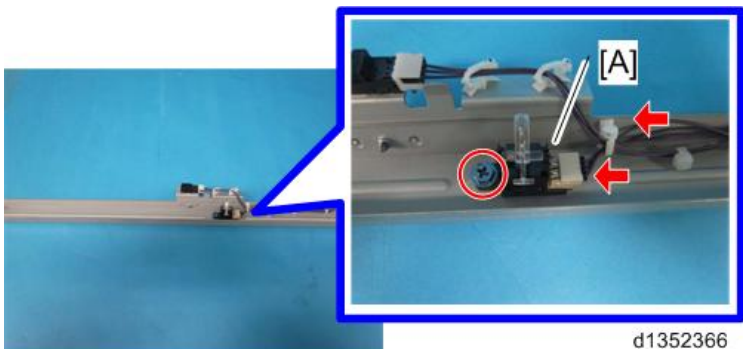
4

Paper Type Sensor

- 1. Relay unit (🔗 page 884)
- 1. Relay unit bracket where the paper type sensor [A] is located (🔗 x 6)



- 2. Paper type sensor [A] (🔗 x 1, 🔗 x 1, 🔗 x 1)



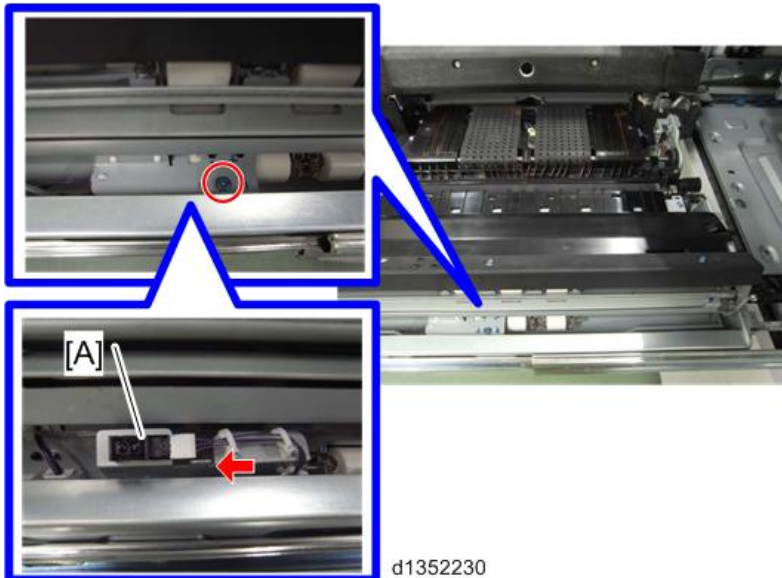
Relay Sensor

1. Open the drawer unit cover [A].



d1352123

2. Relay sensor [A] (📄 x 1, 📄 x 1)



d1352230

By-pass Tray Paper Type Sensor

1. Open the drawer unit cover [A].



d1352123

4

2. Cover [A] (🔩 x 2)



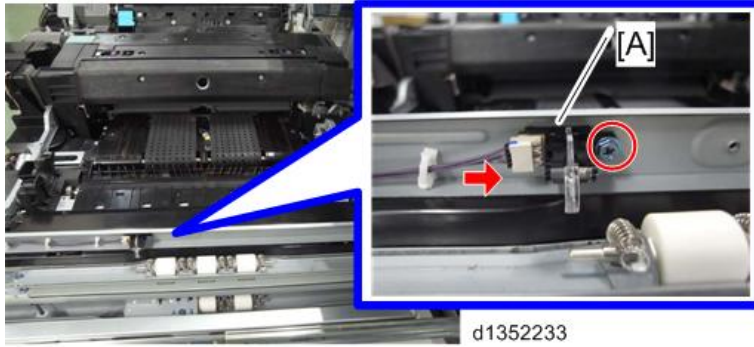
d1352231

3. Bracket [A] (🔩 x 2)



d1352232

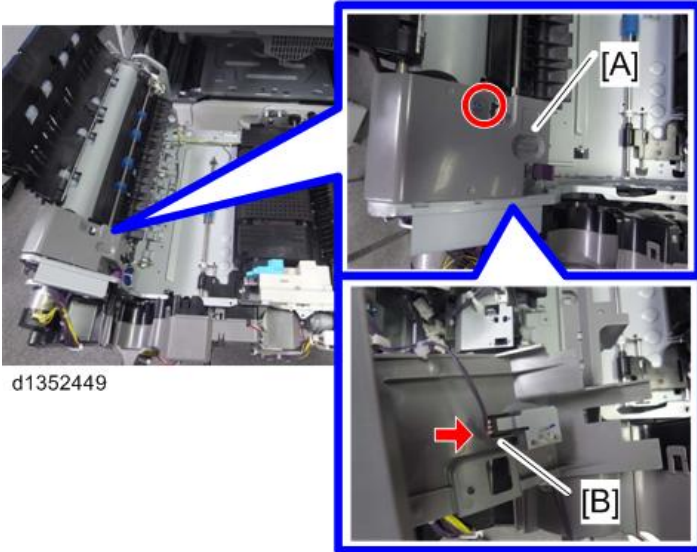
4. Turn over the bracket and remove the by-pass tray paper type sensor [A] (🔩 x 1, 📄 x 1).



Paper Exit and Duplex Unit

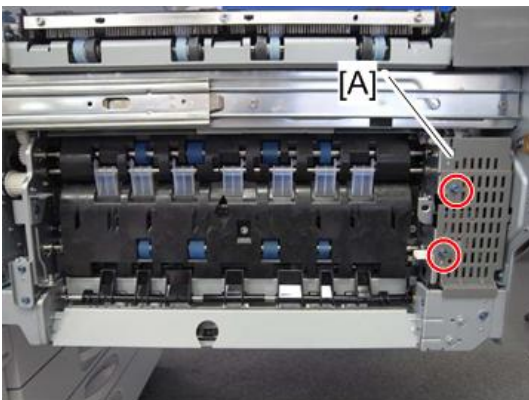
Paper Exit Unit

1. Drawer unit cover (☛ page 594)
2. Fusing unit (☛ page 764)
3. Remove the paper exit inner cover [A] (🔩 x 1) and turn it over, then disconnect the connector [B].



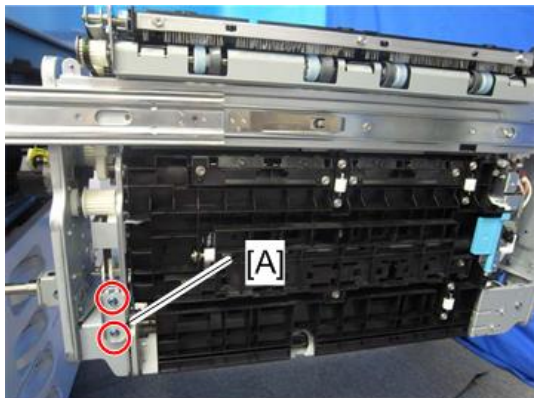
d1352449

4. Cover [A] (🔩 x 2)



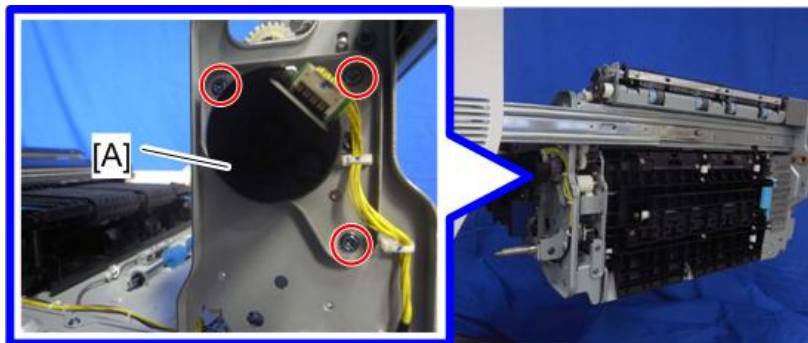
d1352427

5. Connector bracket [A] (🔩 x 2)



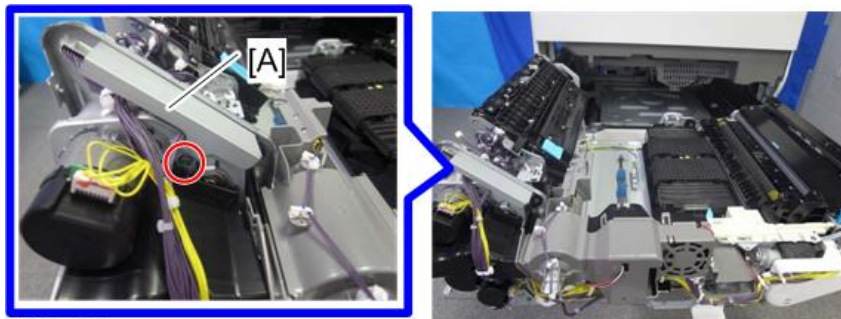
d1352450

6. Inverter exit motor [A] along with the bracket (⚙️ x 3)



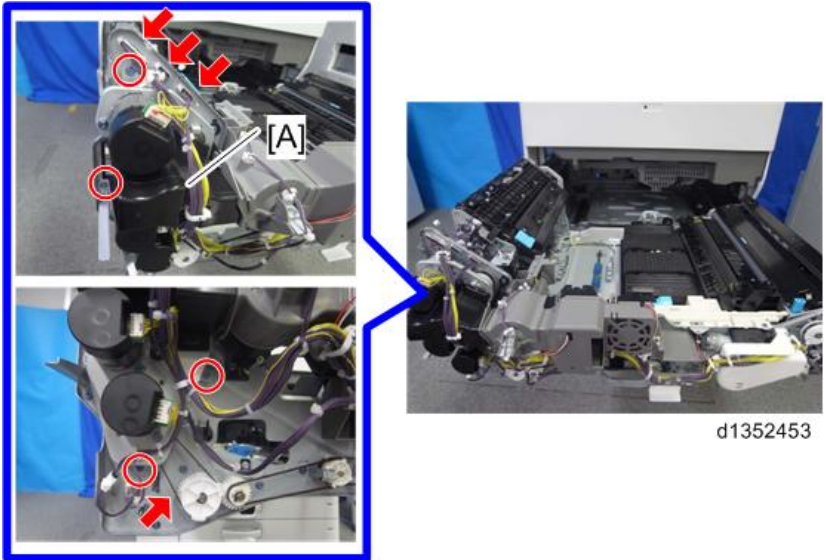
d1352451

7. Harness cover [A] (⚙️ x 1)



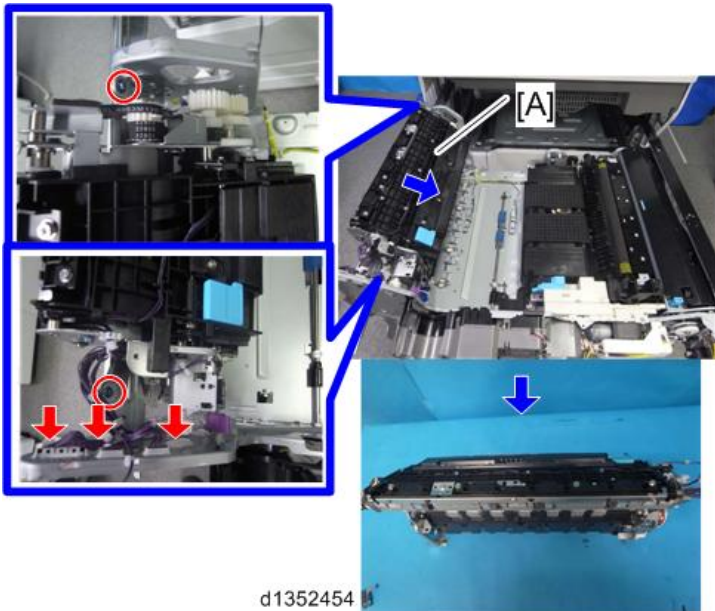
d1352452

8. Motor assembly [A] along with the bracket (⚙️ x 4, 📏 x 3, timing belt x 1)



d1352453

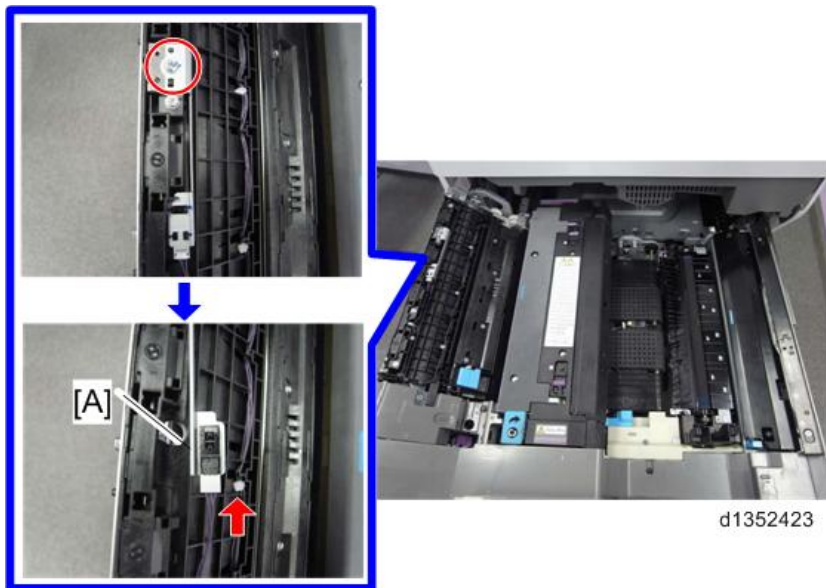
9. Paper exit unit [A] (⚙️ x 2, 📄 x 3)



d1352454

Paper Exit Sensor

1. Open the drawer unit.
2. Paper exit sensor [A] (⚙️ x 1, 📄 x 1)

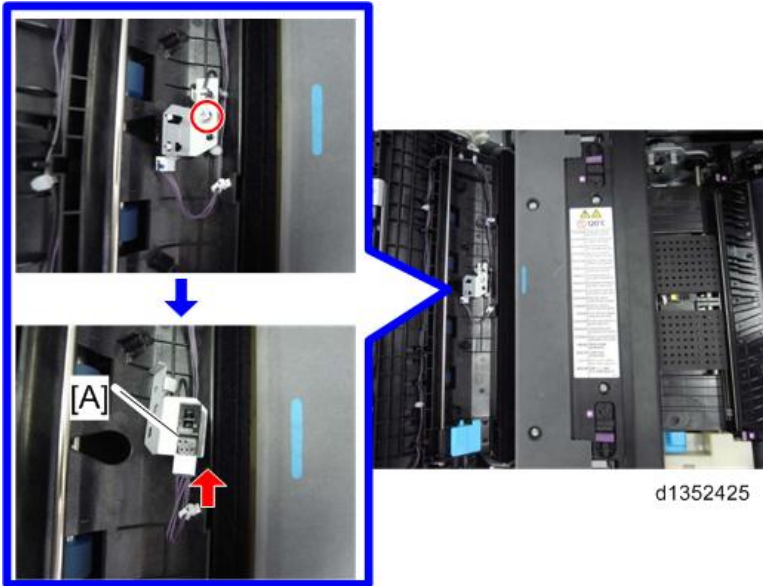


Paper Exit Relay Sensor

1. Open the drawer unit.
2. Guide plate [A] (🔩 x 4)

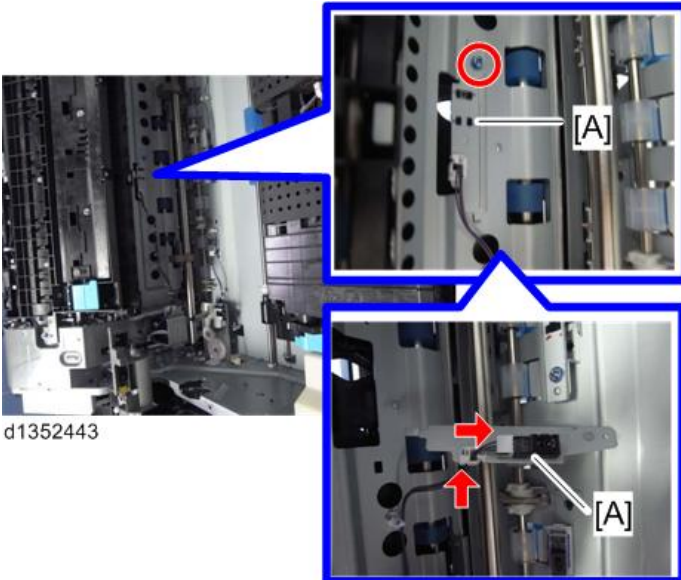


3. Paper exit relay sensor [A] (🔩 x 1, 📄 x 1)



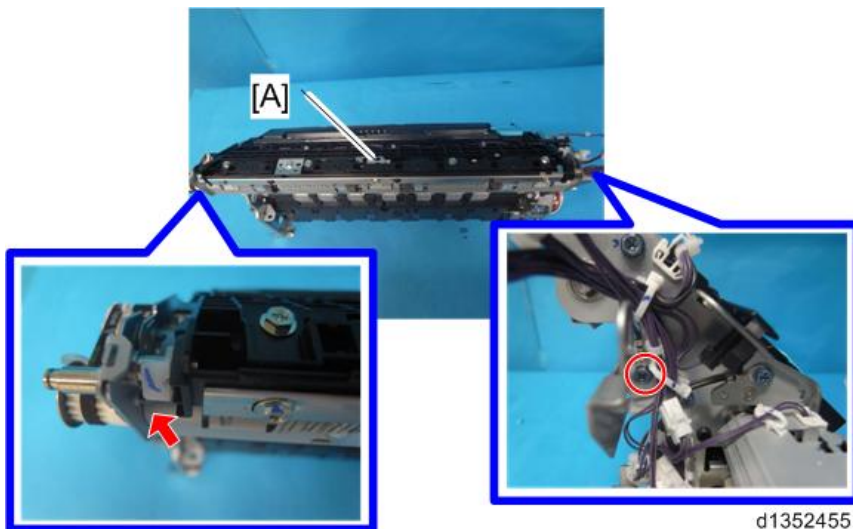
Inverter Exit Sensor

1. Fusing unit (🔌 page 764)
2. Inverter exit sensor [A] (🔌 x 1, 📏 x 1, 📏 x 1)

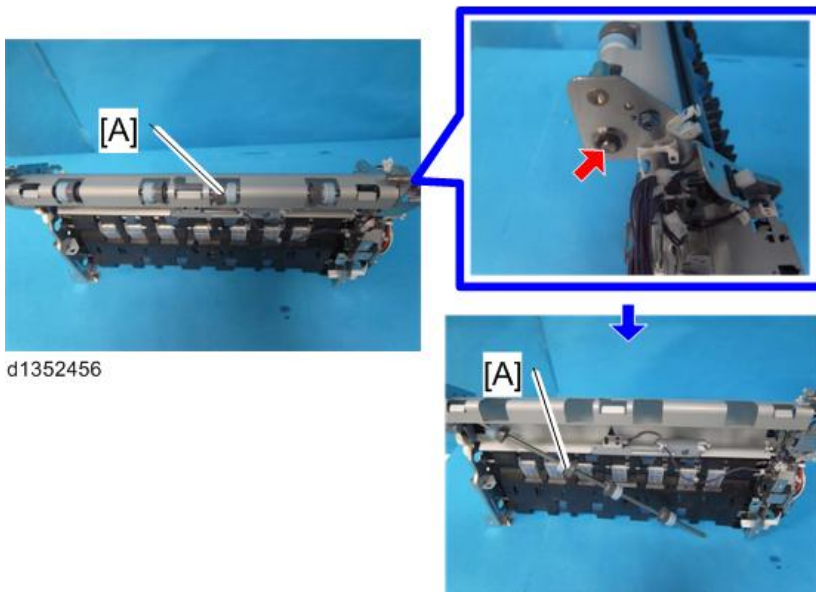


Inverter Feed-in Sensor

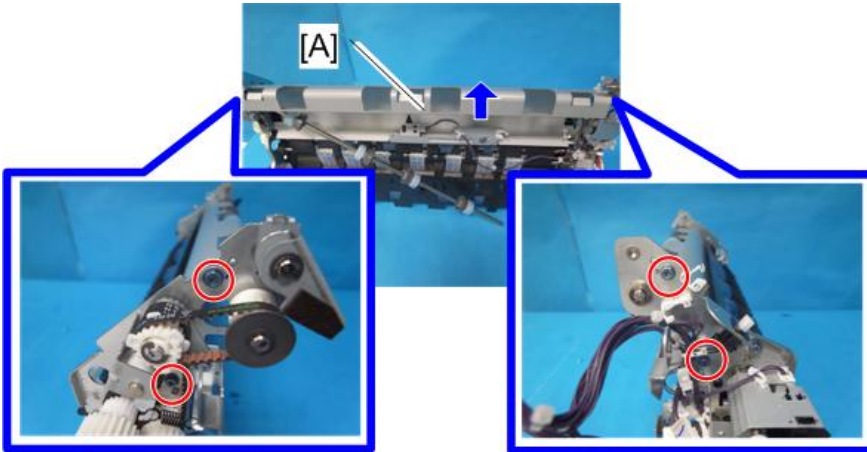
1. Paper exit unit (☛ page 892)
2. Guide plate [A] (🔧 x 1, 📐 x 1)



3. Roller [A] (🌀 x 1)

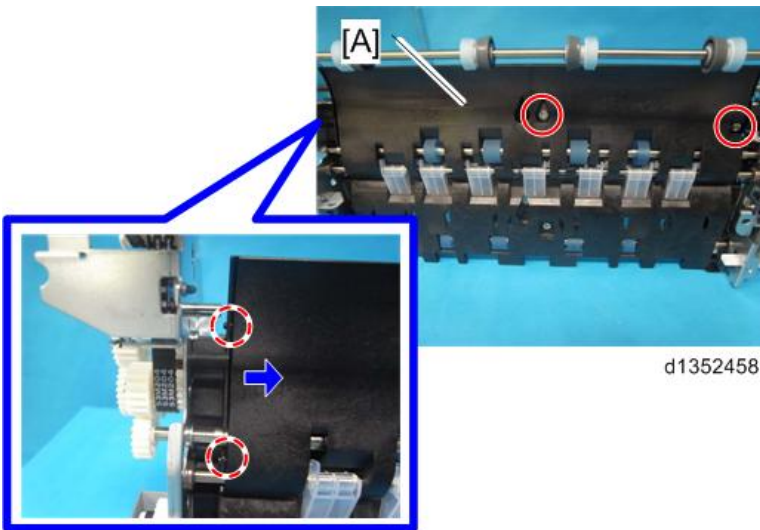


4. Guide plate [A] (🔧 x 4)



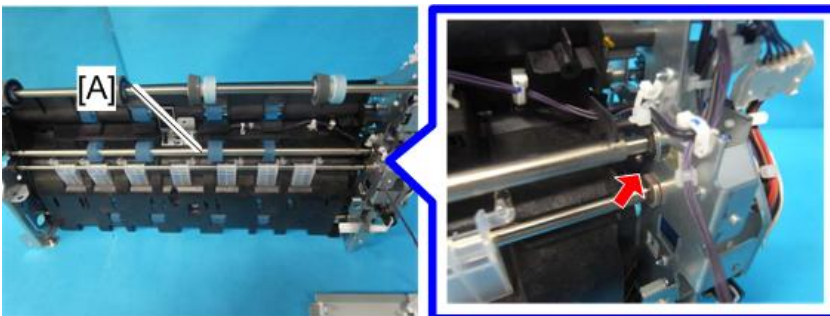
d1352457

5. Remove the guide [A] by sliding it to the right (⚙️ x 2, rib x 2).



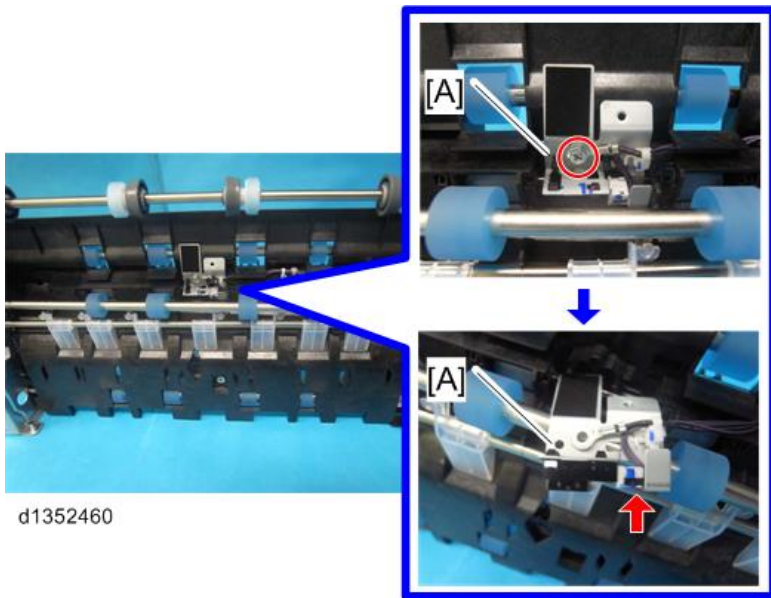
d1352458

6. Right side of the roller [A] (Ⓒ x 1, Bearing x 1)



d1352459

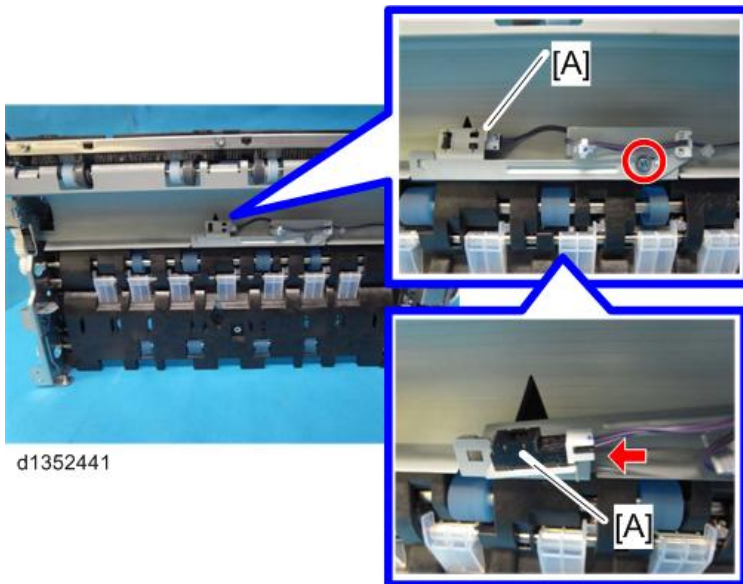
7. Inverter feed-in sensor [A] along with the bracket (⚙️ x 1, 📏 x 1)



d1352460

Inverter Feed-out Sensor

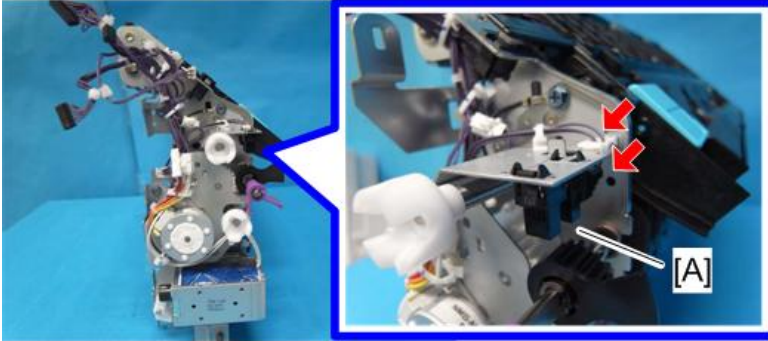
1. Paper exit unit (🖨️ page 892)
2. Inverter feed-out sensor [A] (🔧 x 1, 📄 x 1)



d1352441

Inverter Junction Gate Home Position Sensor

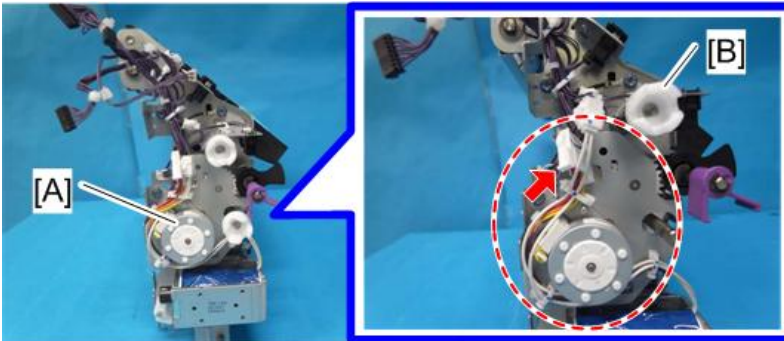
1. Paper exit unit (☛ page 892)
2. Inverter junction gate home position sensor [A] (🔧 x 1)



d1352442

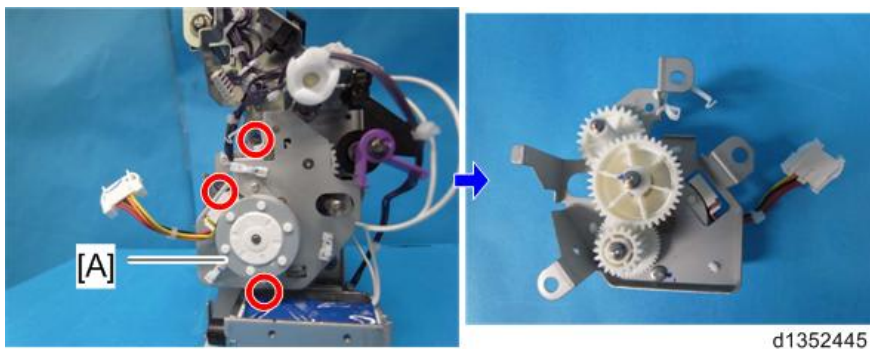
Inverter Junction Gate Motor

1. Paper exit unit (☛ page 892)
2. Before removing the inverter junction gate motor [A] along with the bracket, remove the joint [B] and connectors.

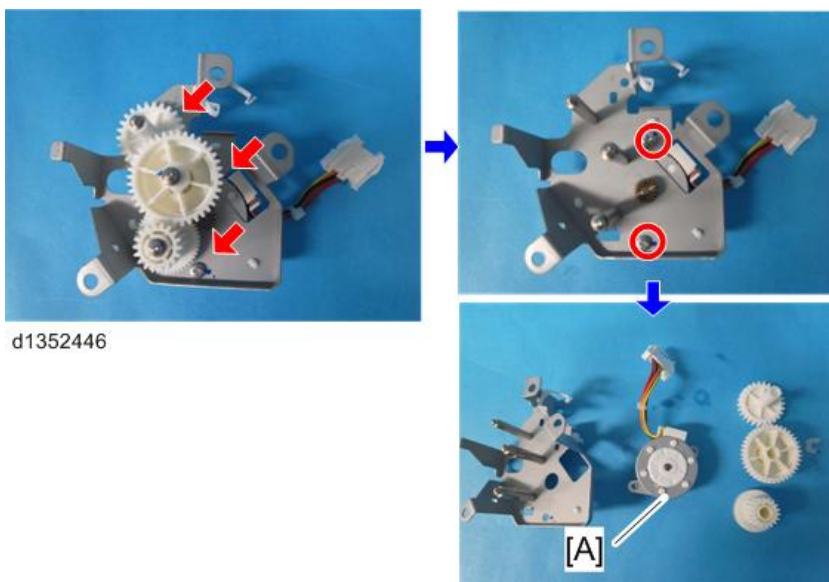


d1352444

3. Inverter junction gate motor [A] along with the bracket (gear x 2, ⚙️ x 3)

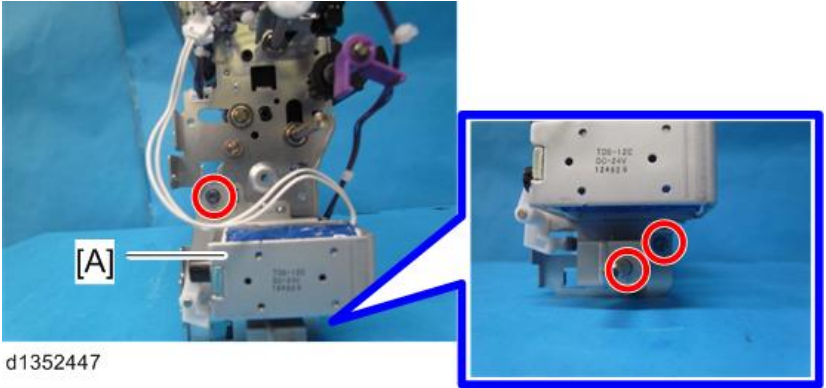


4. Inverter junction gate motor [A] (🔧 x 2)

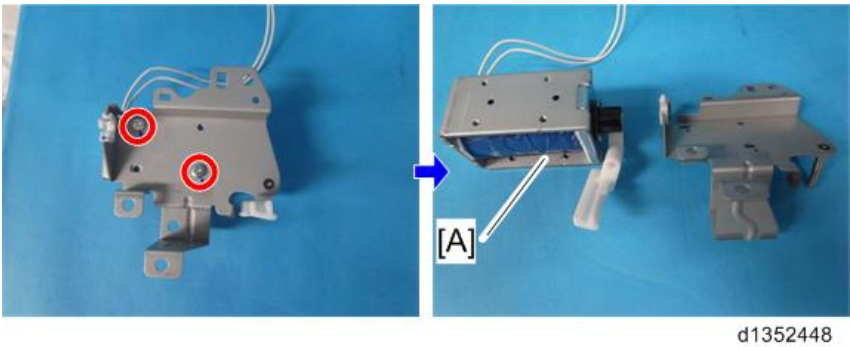


Duplex Inverter Solenoid

1. Inverter junction gate motor (🔧 page 900)
2. Duplex inverter solenoid [A] along with the bracket (🔧 x 3)

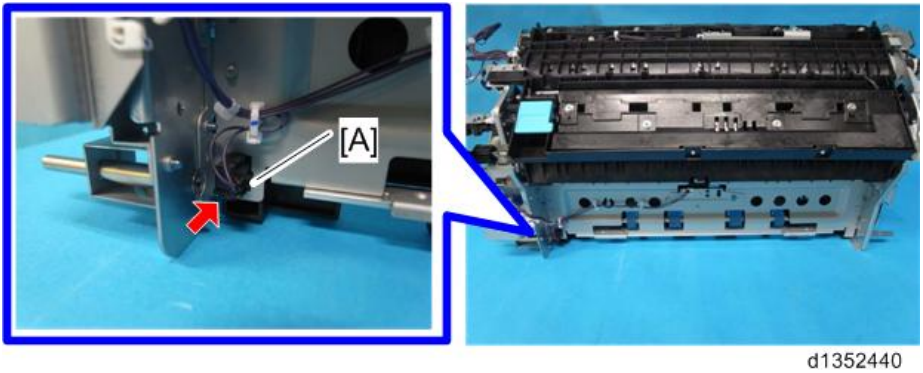


3. Duplex inverter solenoid [A] (x 2)



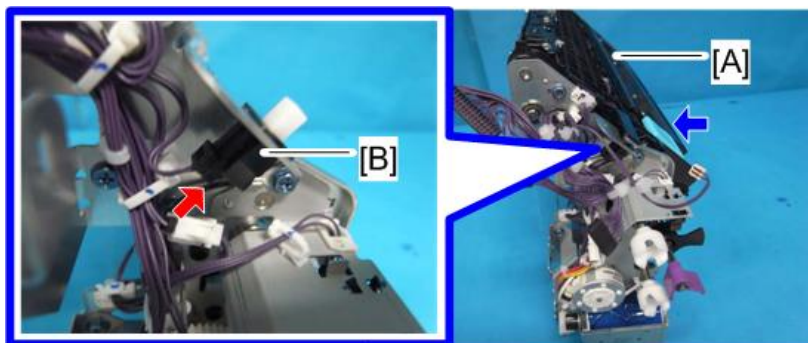
Paper Exit Left Guide Plate Sensor

1. Paper exit unit (page 892)
2. Paper exit left guide plate sensor [A] (x 1)



Paper Exit Upper Guide Plate Sensor

1. Paper exit unit (☞ page 892)
2. Open the paper exit upper guide plate [A] and remove the paper exit upper guide plate sensor [B] (☞ x 1)

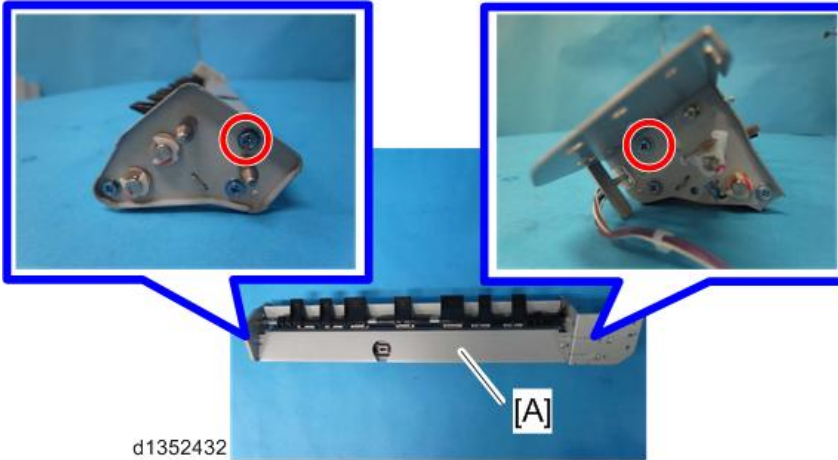


d1352439

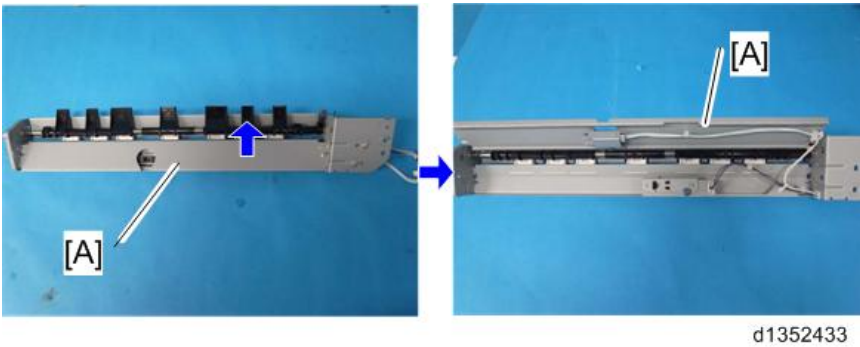
Duplex Unit

Purge Relay Sensor / Duplex Invert Sensor

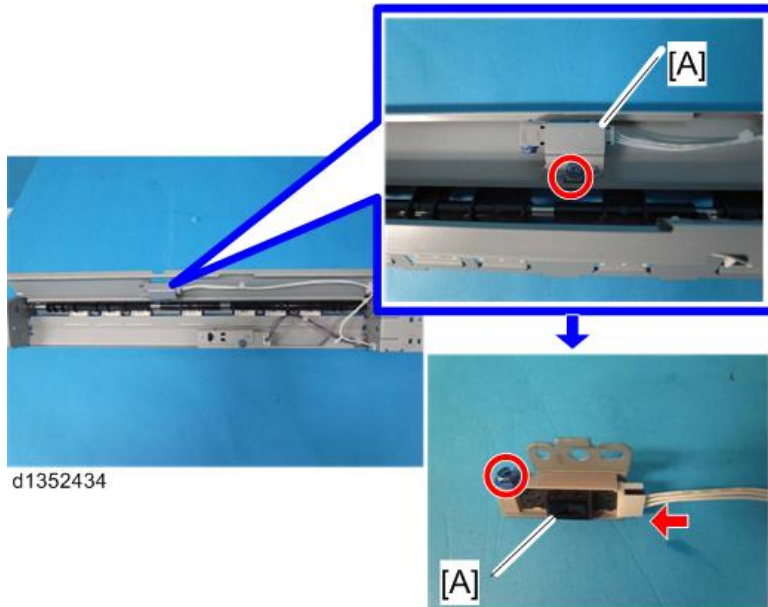
1. Paper purge unit (🔧 page 917)
2. Duplex invert solenoid (🔧 page 905)
3. Remove the fixing screws of the guide plate [A] (🔧 x 2).



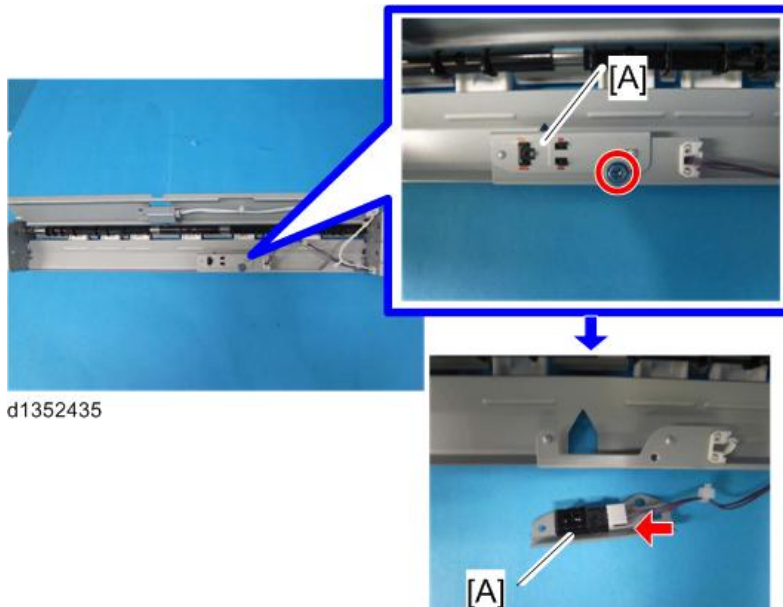
4. Open the guide plate [A].



5. Purge relay sensor [A] along with the bracket (🔧 x 2, 📦 x 1)

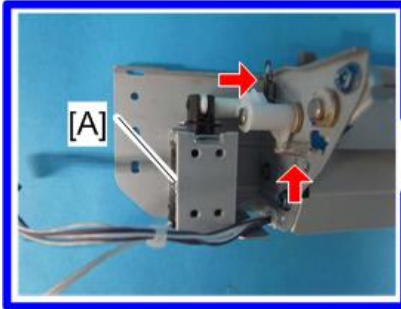


6. Duplex invert sensor [A] along with the bracket (🔧 x 1, 📁 x 1)



Duplex Invert Solenoid

1. Paper purge unit (🔧 page 917)
2. Remove the springs of the duplex invert solenoid [A] (spring x 2).



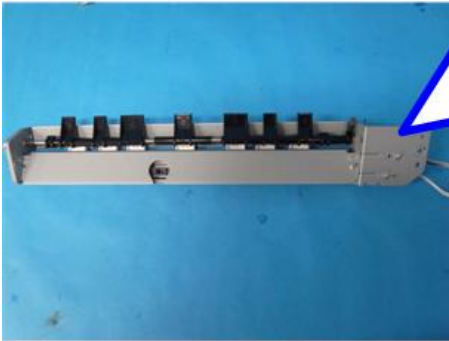
d1352430



3. Duplex invert solenoid [A] (🔧 x 2)

4

RTB 95, D137 RTB 147
The step was modified.

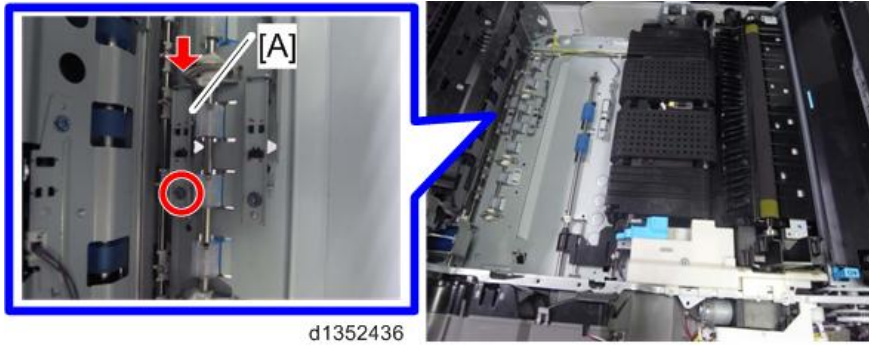


d1352431



Duplex Unit Entrance Sensor

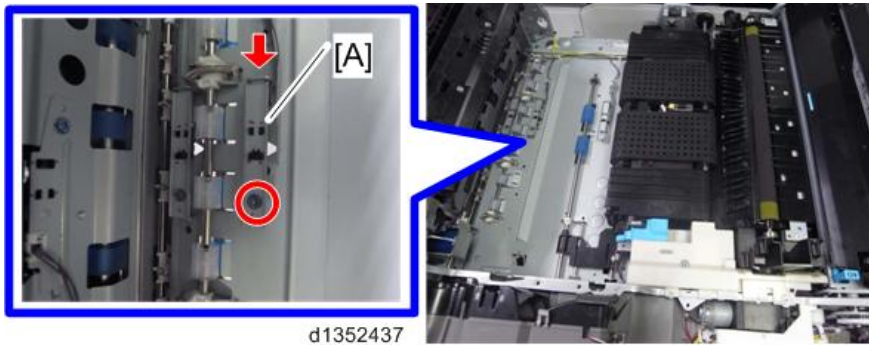
1. Fusing unit (🔧 page 764)
2. Duplex unit entrance sensor [A] (🔧 x 1, 📦 x 1)



Duplex Unit Sensor 1

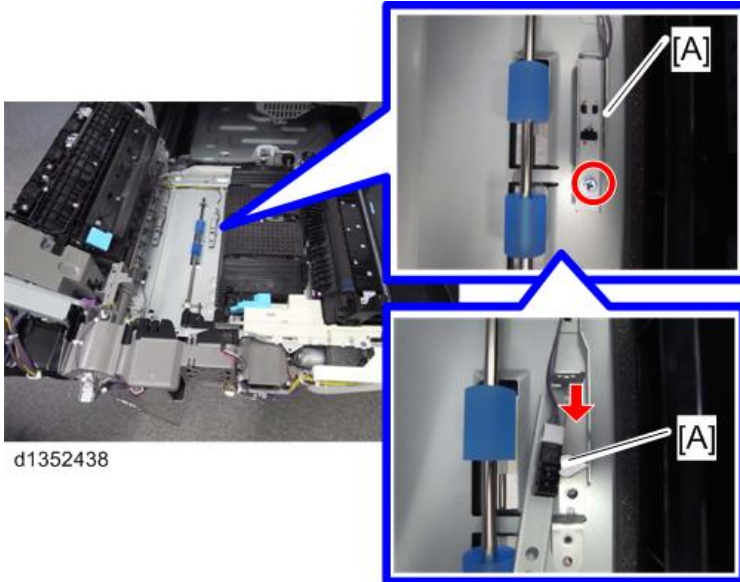
4

1. Fusing unit (🖨️ page 764)
2. Duplex unit sensor 1 [A] (🔩 x 1, 📄 x 1)



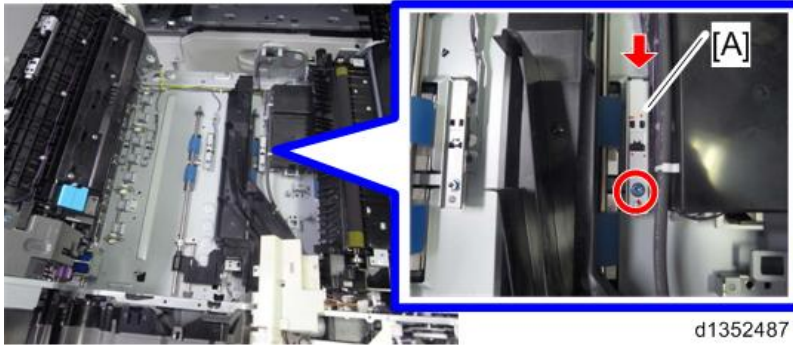
Duplex Unit Sensor 2

1. Fusing unit (🖨️ page 764)
2. Duplex unit sensor 2 [A] (🔩 x 1, 📄 x 1)



Duplex Unit Sensor 3

1. Paper transport belt unit (🔧 page 814)
2. Duplex unit sensor 3 [A] (🔧 x 1, 📄 x 1)



Duplex Unit Sensor 4

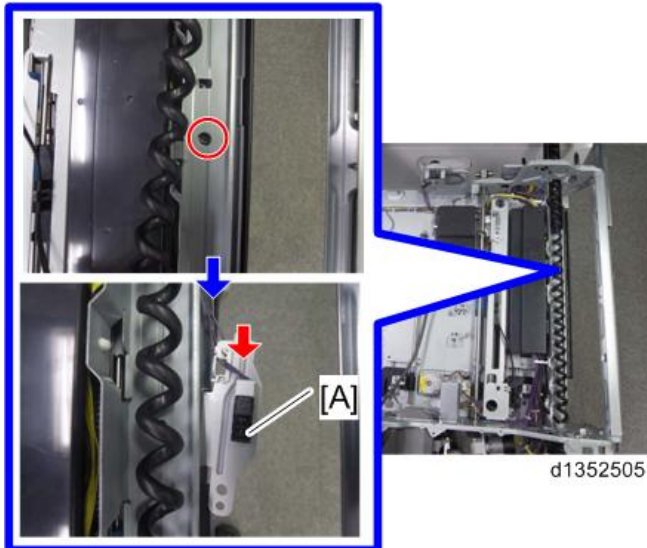
1. Edge detection unit (🔧 page 913)
2. Duplex unit sensor 4 [A] (🔧 x 1, 📄 x 1)



Duplex Exit Sensor

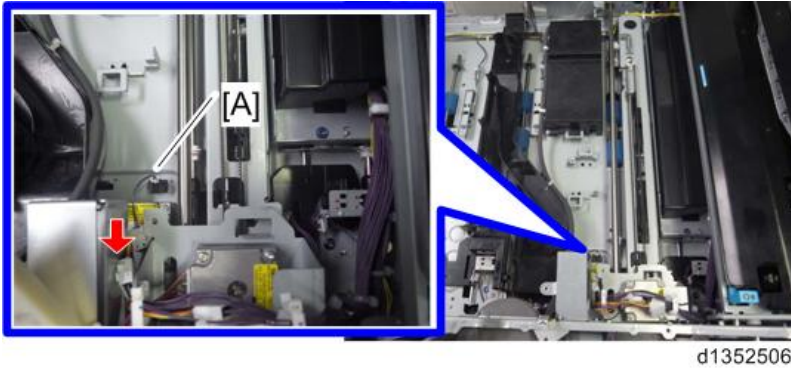
4

1. Relay Unit (🔗 page 884)
2. Duplex exit sensor [A] (🔗 x 1, 📦 x 1)



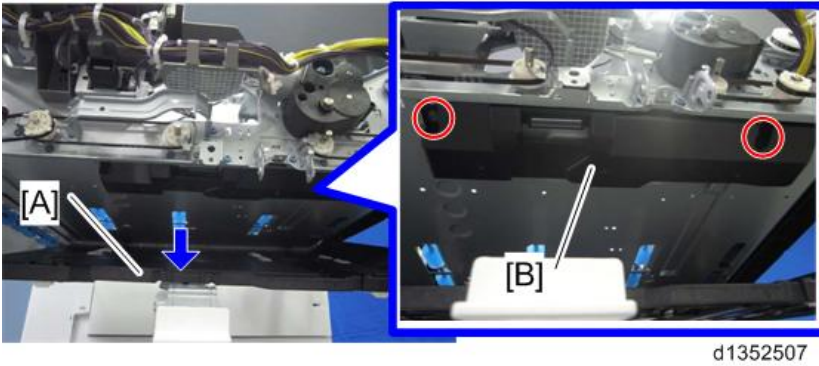
Horizontal Feed Guide Plate Open Sensor

1. Paper transport belt unit (🔗 page 814)
2. Paper transfer roller unit (🔗 page 757)
3. Remove the connector of the horizontal feed guide plate open sensor [A]

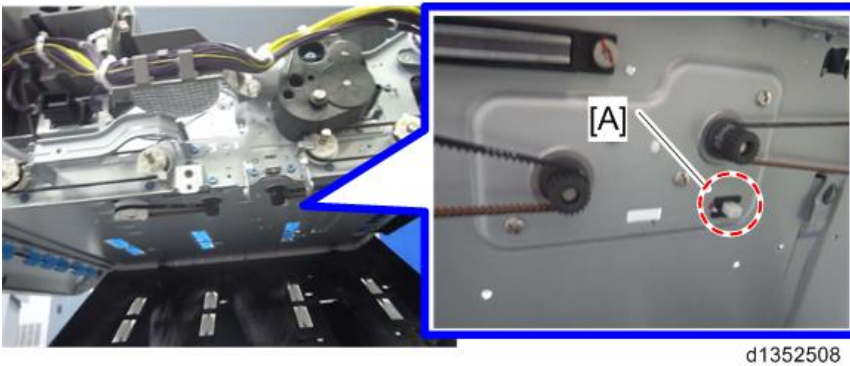


4. Open the horizontal feed guide plate [A] and remove the cover [B] (⚙️ x 2).

4

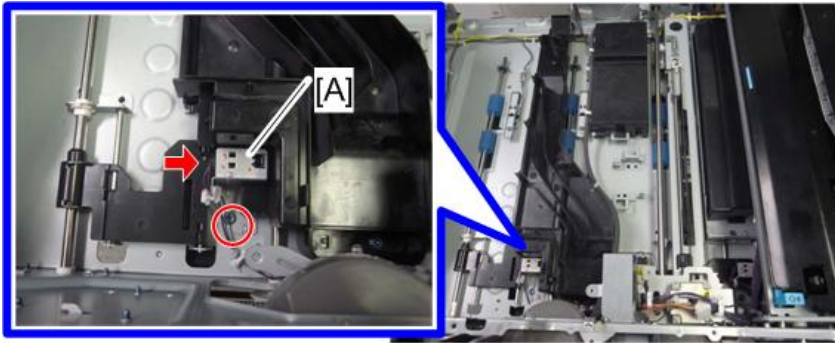


5. Horizontal feed guide plate open sensor [A]



Roller HP Sensor 1

1. Paper transport belt unit (📄 page 814)
2. Roller HP sensor 1 [A] (⚙️ x 1, 📄 x 1)

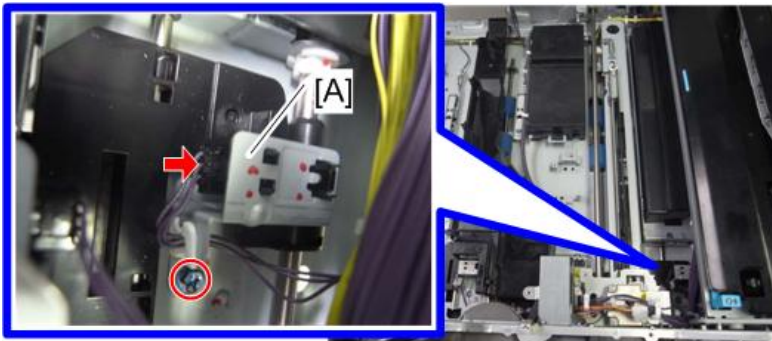


d1352509

Roller HP Sensor 2

4

1. Paper transport belt unit (📖 page 814)
2. Paper transfer roller unit (📖 page 757)
3. Roller HP sensor 2 [A] (🔧 x 1, 📡 x 1)



d1352511

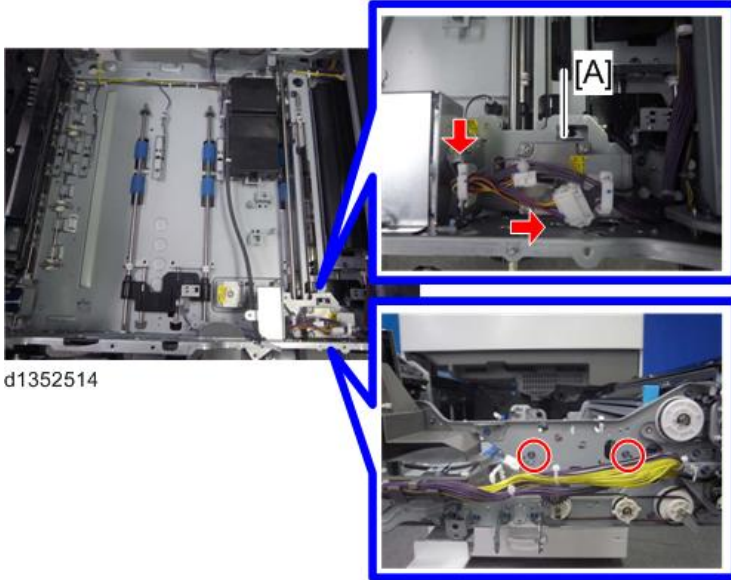
⚠ Note

- Roller HP sensor 2 and sensor shift HP switch are in close proximity. When you connect a harness to the roller HP sensor 2 or sensor shift HP switch after the replacement, be careful not to connect the harness to an incorrect sensor. If you connect the harness to an incorrect sensor, SC515-02 occurs when duplex copying. The SC does not occur when turning on the machine or when making one-sided copies.

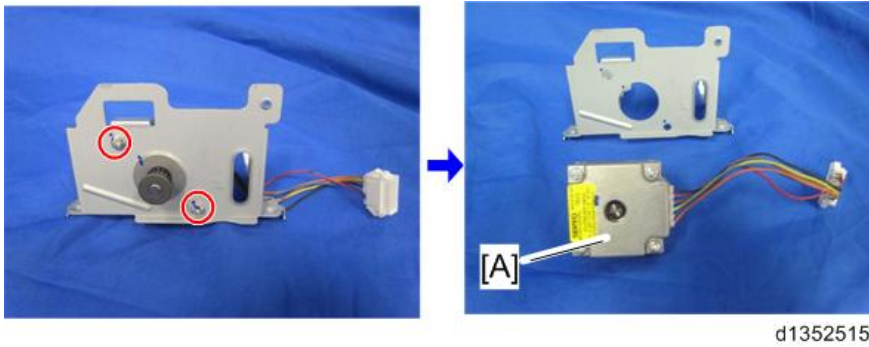
Sensor Shift Motor

1. Paper transport belt unit (📖 page 814)
2. Paper transfer roller unit (📖 page 757)

3. Drawer unit lock motor block (🔌 page 595 "If the Drawer is Locked")
4. Sensor shift motor [A] along with the bracket (🔩 x 2, 📏 x 1, 📏 x 1)



5. Sensor shift motor [A] (🔩 x 2)



⬇️ **Note**

- When installing the motor, attach the timing belt at the edge detection unit.

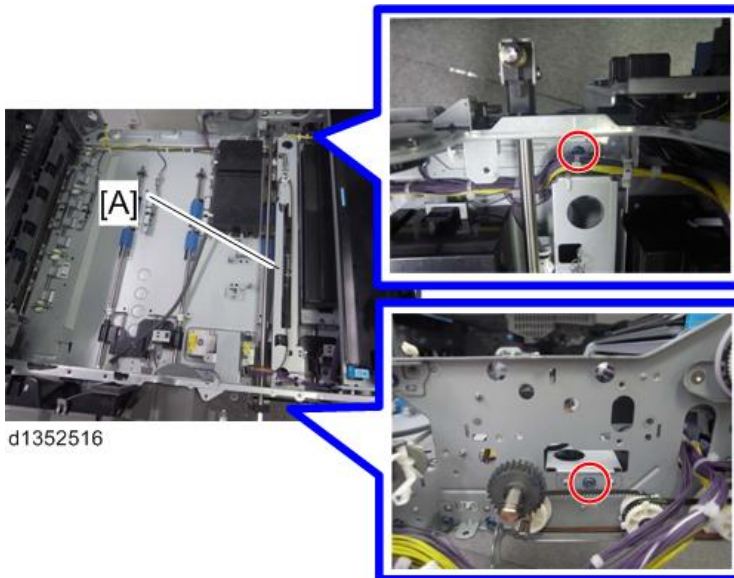


d1352535

Edge Detection Unit

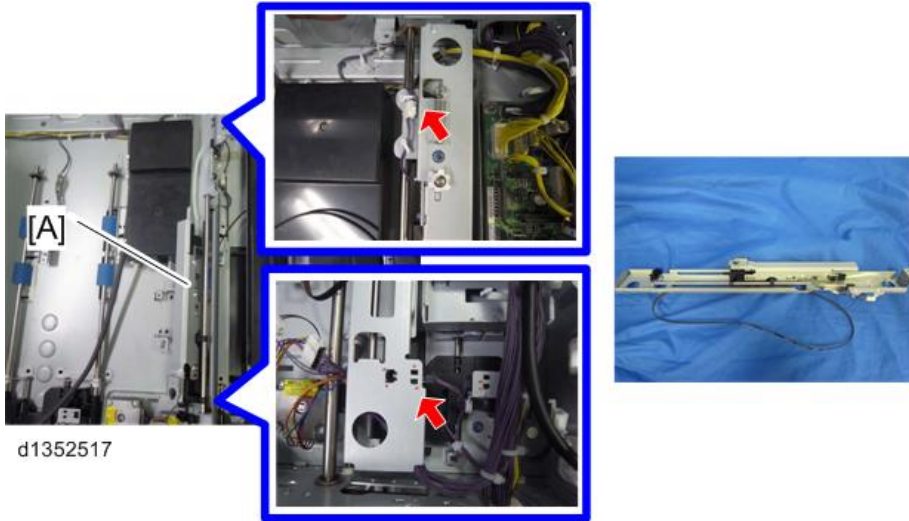
4

1. Sensor shift motor (☛ page 911)
2. Remove the fixing screws of the edge detection unit [A] (☛ x 2).



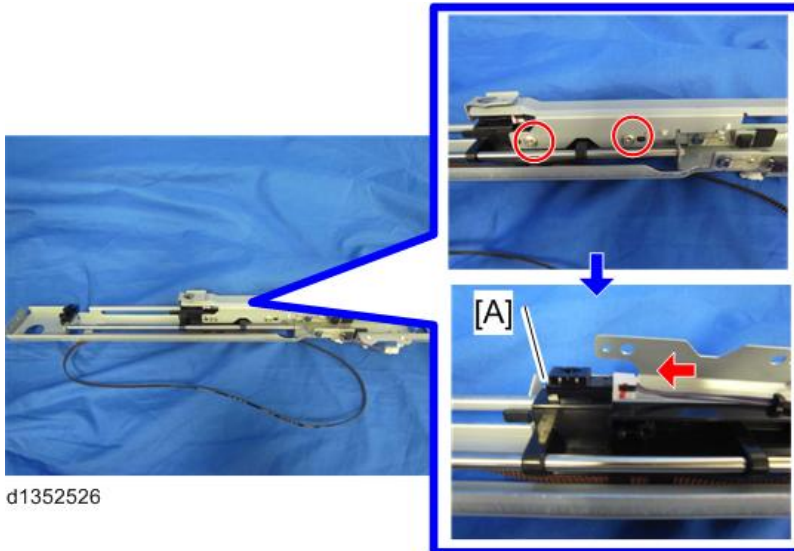
d1352516

3. Edge detection unit [A] (☛ x 2)



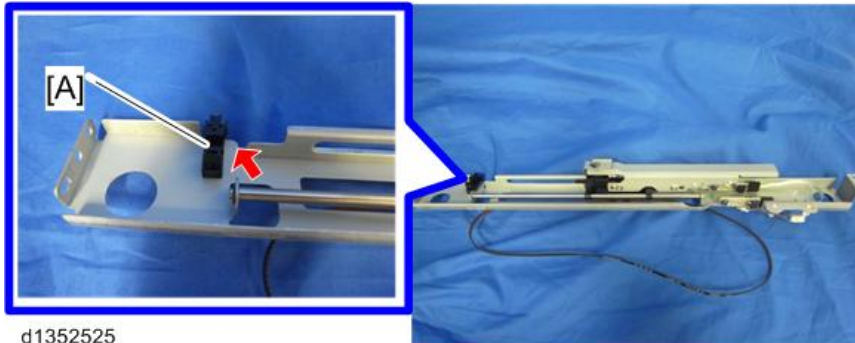
Edge Detection Sensor

1. Edge detection unit (🖱️ page 913)
2. Edge detection sensor [A] (🖱️ x 2, 🖱️ x 1)



Sensor Shift HP Switch

1. Edge detection unit (🖱️ page 913)
2. Sensor shift HP switch [A]



d1352525

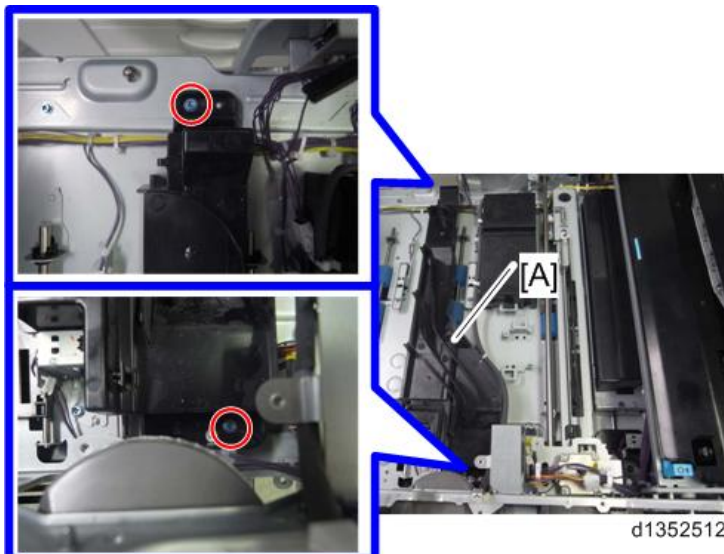
↓ Note

- Roller HP sensor 2 and sensor shift HP switch are in close proximity. When you connect a harness to the roller HP sensor 2 or sensor shift HP switch after the replacement, be careful not to connect the harness to an incorrect sensor. If you connect the harness to an incorrect sensor, SC515-02 occurs when duplex copying. The SC does not occur when turning on the machine or when making one-sided copies.

4

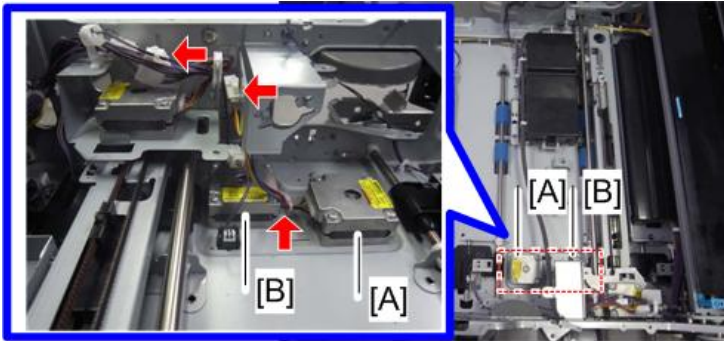
Roller Shift Motor 1 / Roller Shift Motor 2

- Paper transport belt unit (🔧 page 814)
- Paper transfer roller unit (🔧 page 757)
- Cover [A] (🔧 x 2)



d1352512

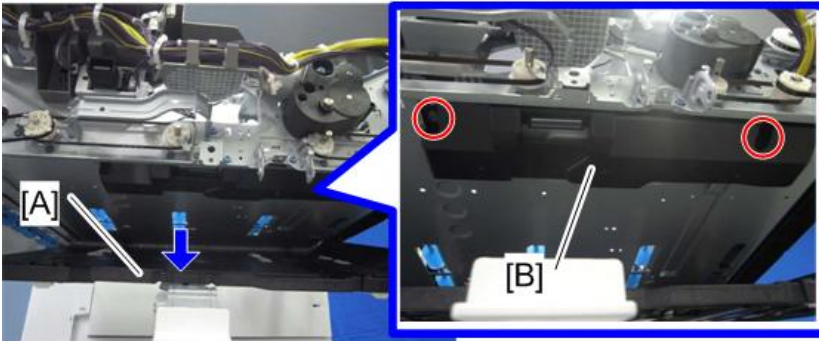
- Disconnect the connectors and clamps at the roller shift motor 1 [A] / roller shift motor 2 [B].



d1352513

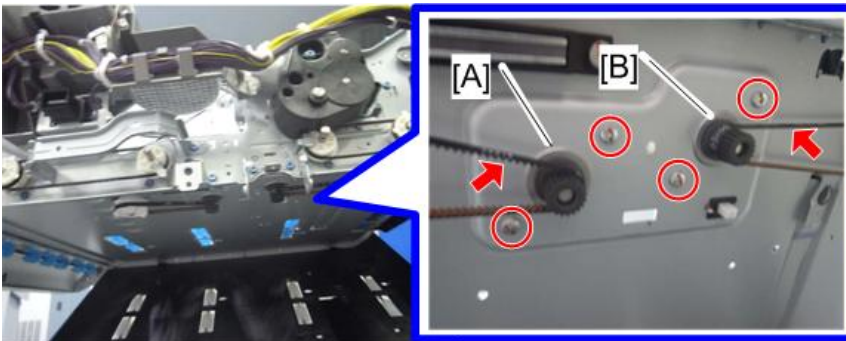
5. Open the horizontal feed guide plate [A] and remove the cover [B] (⚙ x 2).

4



d1352507

6. Roller shift motor 1 [A] / Roller shift motor 2 [B] (⚙ x 2 each, timing belt x 1 each)



d1352510

Paper Purge Unit

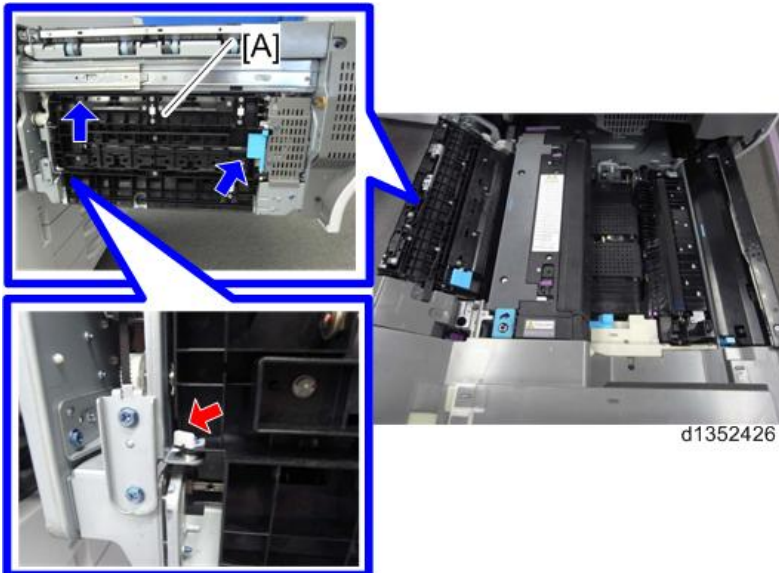
Paper Purge Unit

1. Open the drawer unit [A].



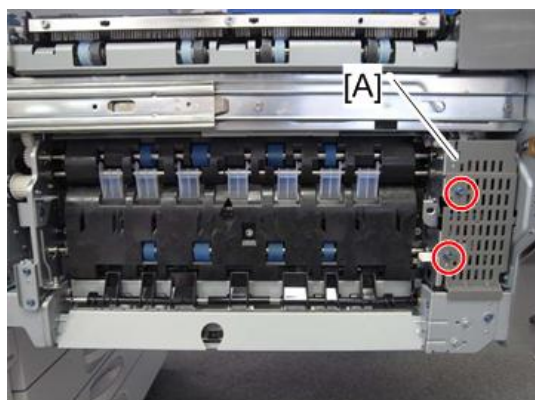
d1352123

2. Open the guide plate [A] and remove it upward (🔑 x 1).



d1352426

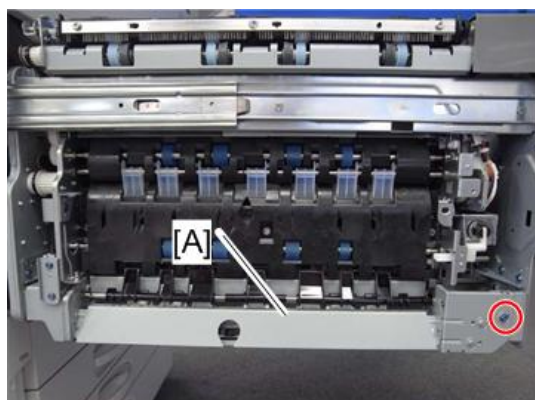
3. Cover [A] (🔩 x 2).



d1352427

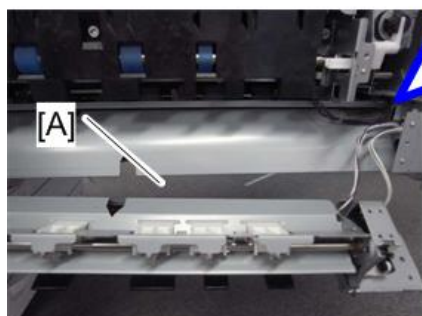
4

4. Remove the fixing screw of the paper purge unit [A] (⌀ x 1).

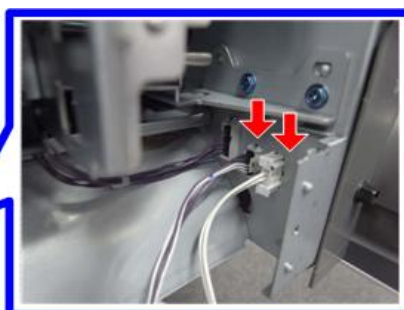


d1352428

5. Paper purge unit [A] (□ x 2)



d1352429

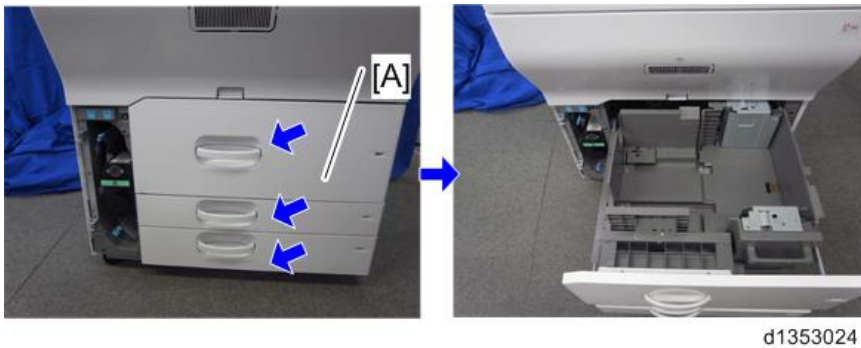


PCB: LSB

1. Left lower cover of the machine exterior (🔧 page 535)
2. Purge door [A] (pin x 2)



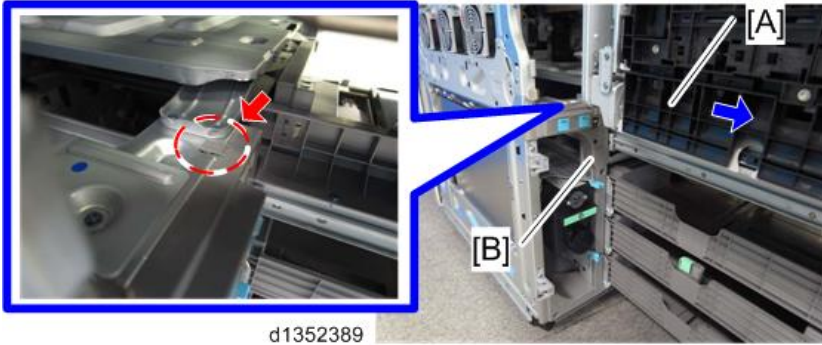
3. Pull out the paper trays [A].



4. Remove the fixing screws of the upper inner cover [A] (🔧 x 3).

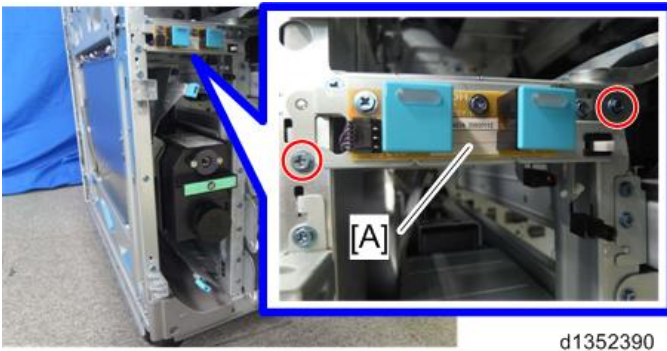


5. Pull out the drawer unit [A] and remove the upper inner cover [B] (hook x 1).

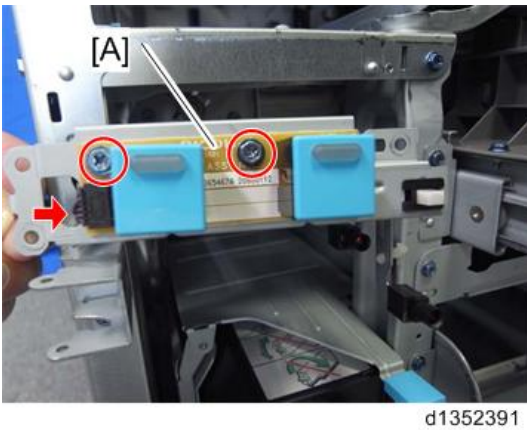


6. LSB [A] along with the bracket (🔩 x 2).

4

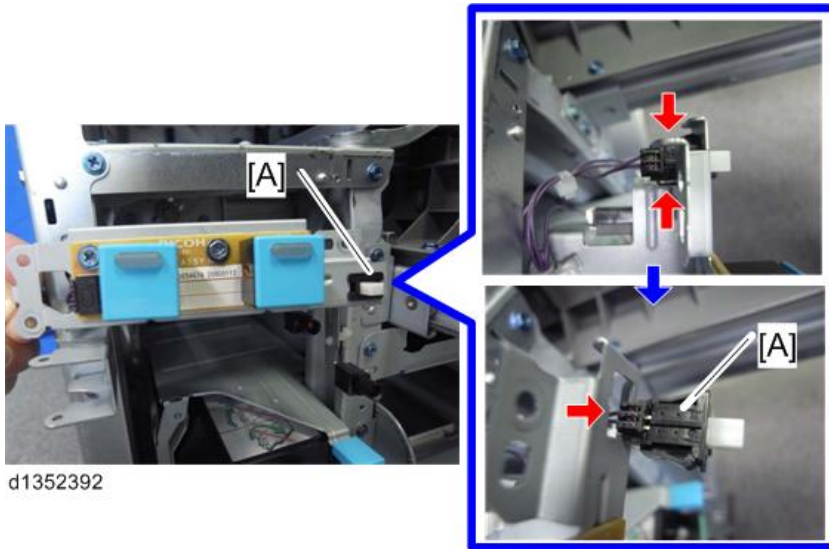


7. LSB [A] (🔩 x 2, 📏 x 1).



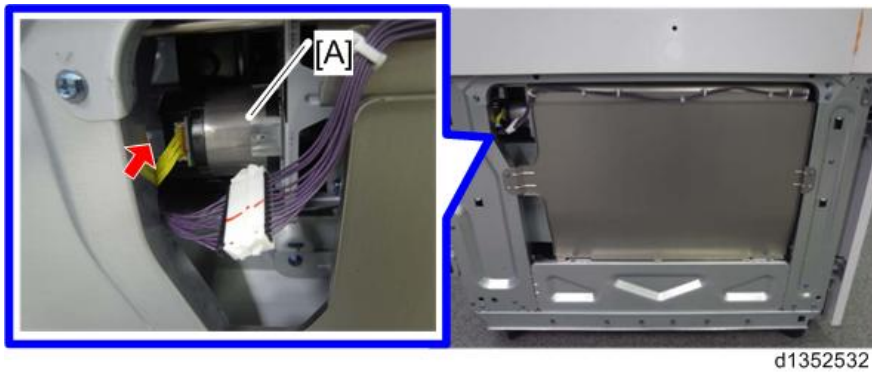
Push Switch

1. LSB [A] along with the bracket (📏 page 919 "PCB: LSB")
2. Hold the sides of the push switch [A], remove by pulling (📏 x 1).

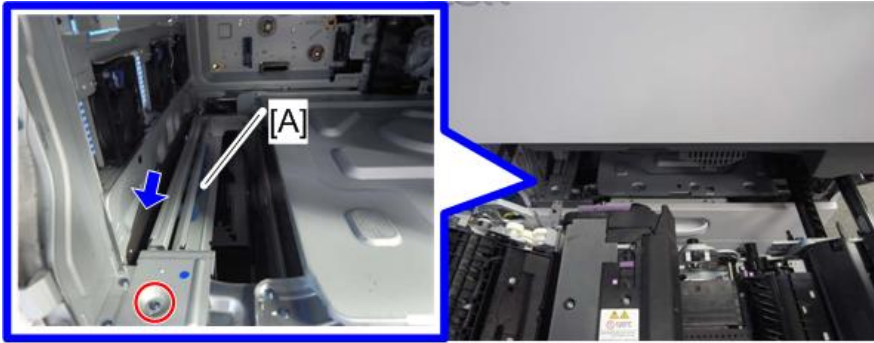


Duplex Inverter Motor

1. Left lower cover of the machine exterior (☞ page 535)
2. Disconnect the connector of the duplex inverter motor [A].



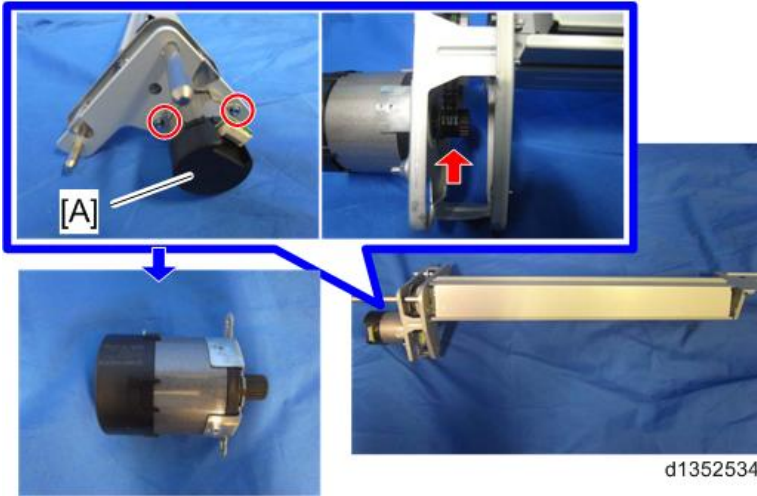
3. Pull out the drawer unit and remove the duplex inverter motor unit [A] (🔧 x 1).



d1352533

4. Duplex inverter motor [A] (⚙️ x 2, 📏 x 1, belt x 1).

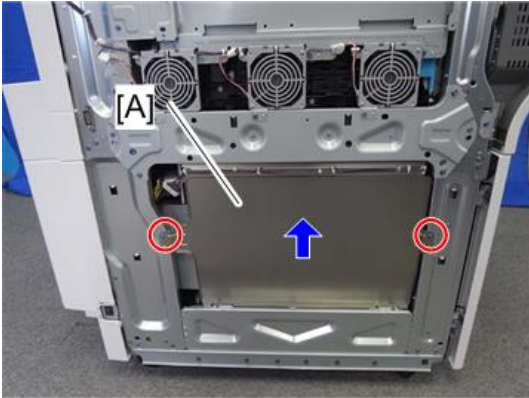
4



d1352534

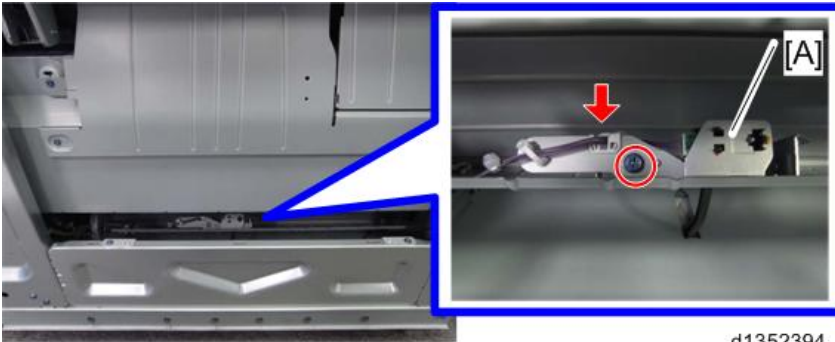
Purged Paper Sensor

1. Left lower cover of the machine exterior (📄 page 535)
2. Guide plate [A] (⚙️ x 2).



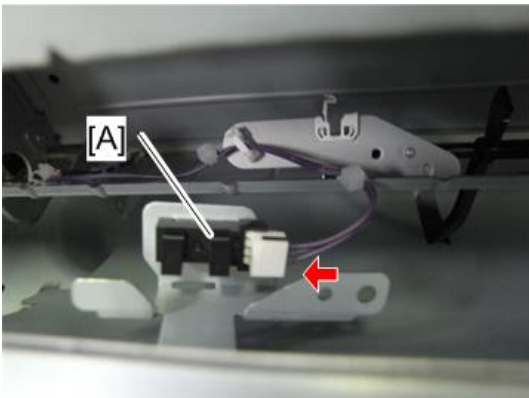
d1352393

3. Purged paper sensor [A] along with the bracket (🔧 x 1, 📦 x 1).



d1352394

4. Turn the bracket and remove the purged paper sensor [A] (📦 x 1).



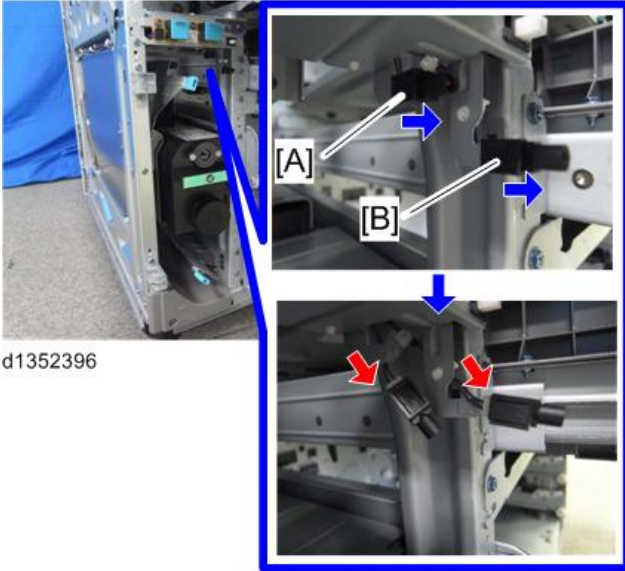
d1352395

LED: Connector: Red

LEDs are mounted at three points in the paper purge unit.

Upper guide plate LED / Purge door LED

1. Upper inner cover (☛ page 919 "PCB: LSB")
2. Remove by pulling the upper guide plate LED [A] and the purge door LED [B] (🔧 x 1 each).



d1352396

Lower guide plate LED

1. Purge door [A] (pin x 2)



d1352386

2. Lower inner cover [A] (🔧 x 1).



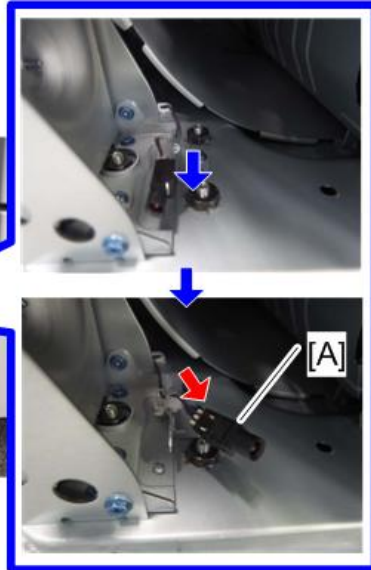
d1352397

3. Remove by pulling the lower guide plate LED [A] (☞ x 1).

4



d1352398

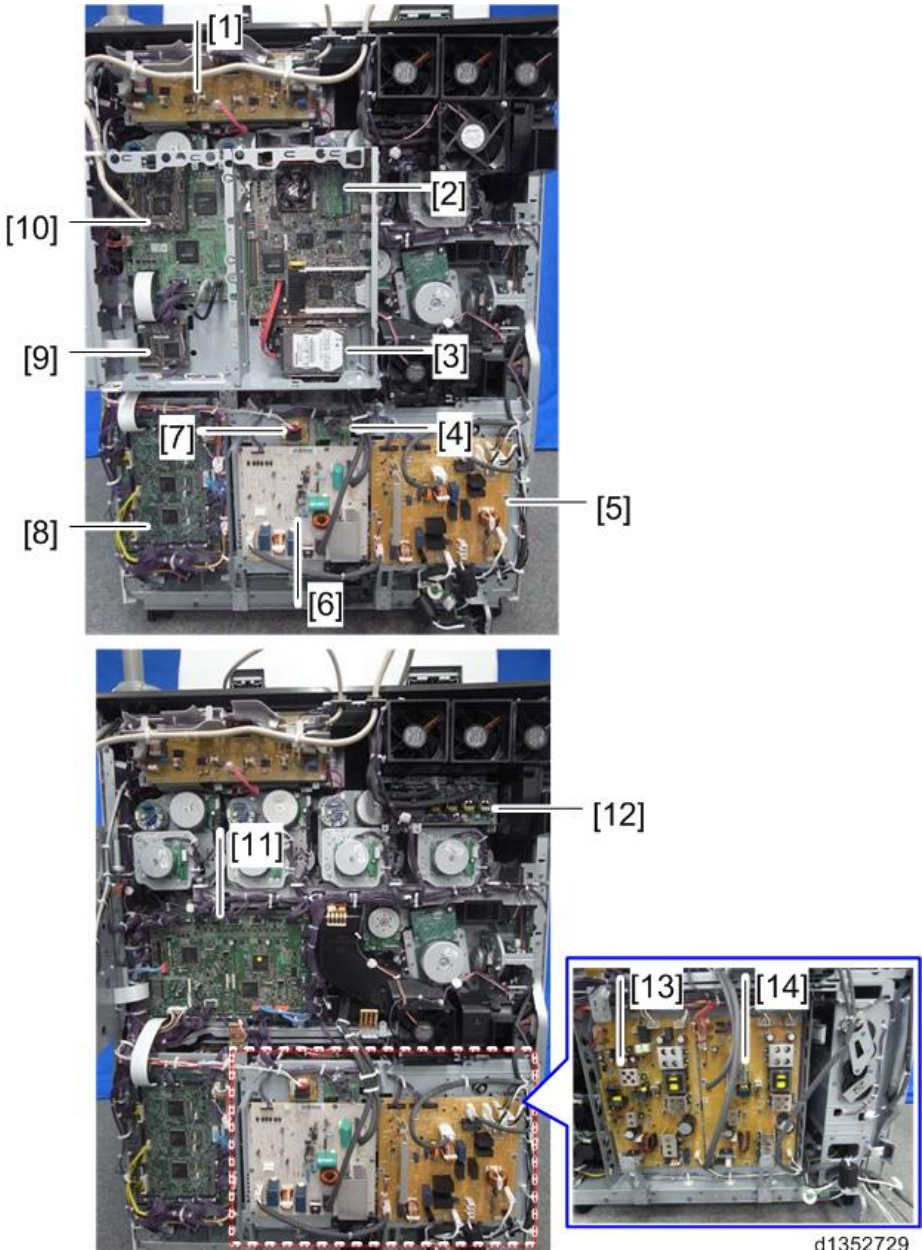


Main Boards / HDD Unit

Layout

To replace the electrical components on the back of the machine, first remove the outer cover. (☛ page 537 "Rear Cover")

4

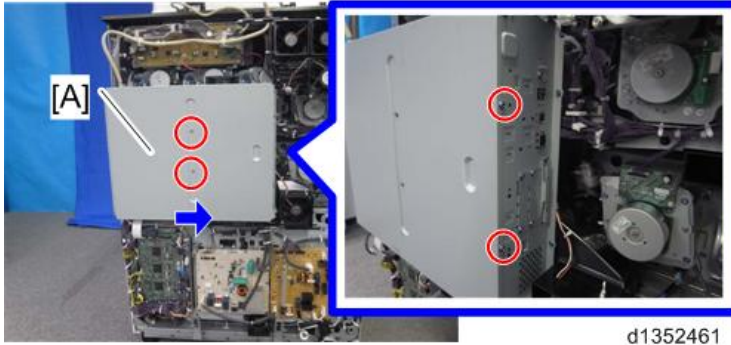


d1352729

No.	Part Name	Replacement procedure	Remarks
1	Combined High-Voltage Power Supply Board (Charge / Development)	 page 947	KC: front side, MC: rear side
2	Controller Board	 page 927	
3	HDD Unit	 page 930	
4	Fusing Web Control Board-Main Machine	 page 949	D137/D138 only
5	AC Drive Board	 page 942	
6	IH Inverter	 page 941	
7	AC Drive Board Relay	 page 949	D137/D138 only
8	PFB	 page 940	
9	BCU	 page 932	
10	IPU	 page 938	
11	IOB	 page 939	Located behind the controller box
12	Potential Sensor Board	 page 946	Located behind the drive exhaust fan
13	PSU1	 page 943	Located behind the AC drive board/IH inverter
14	PSU2	 page 943	Located behind the AC drive board/IH inverter

Controller Board

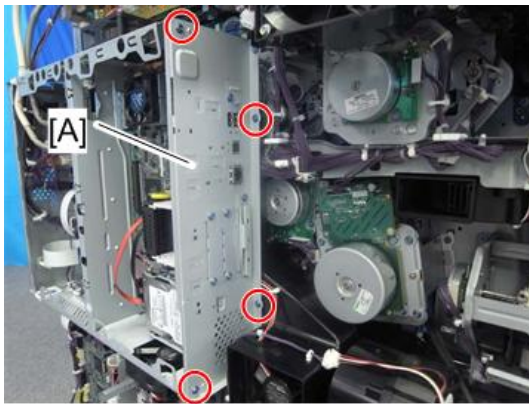
1. Controller box cover [A] ( x 4)



d1352461

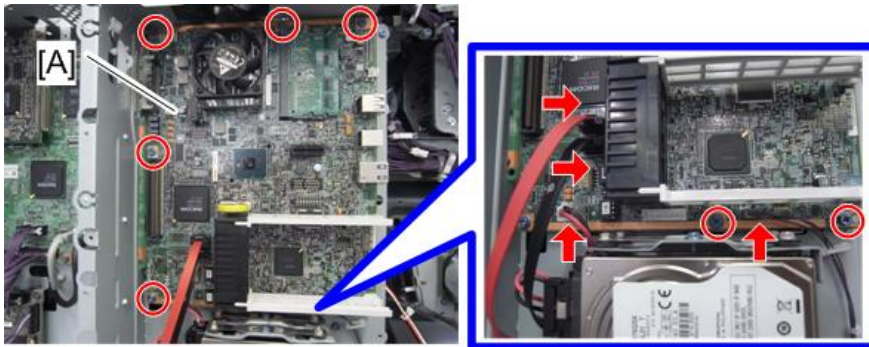
2. Controller panel plate [A] (🔩 x 4)

4



d1352463

3. Controller board [A] (🔩 x 7, 📁 x 4)



d1352472

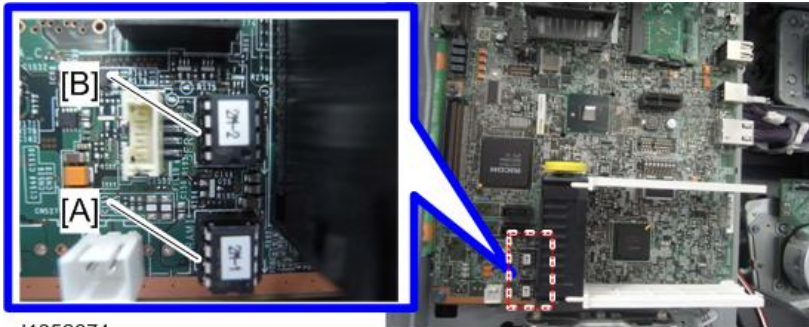
★ Important

- There are two types of controller boards, one for D138/D136 and one for D137/D135. Because there are different part numbers on these two controller boards, when replacing, check the parts catalog to make sure that you install the correct type. If you install the wrong board, the machine will not work.

When installing the New Controller Board

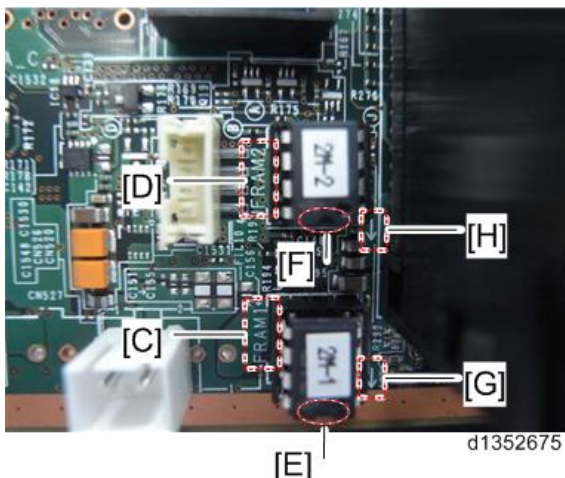
There are two NVRAMs ([A] and [B]) on the controller board. The two NVRAMs are one set. NVRAM [A] is labeled "2M-1", and NVRAM [B] is labeled "2M-2".

When replacing the controller board, remove the NVRAMs from the old controller board. Then install them at the same position on the new controller board. If this is not done, SC195-00 occurs.



d1352674

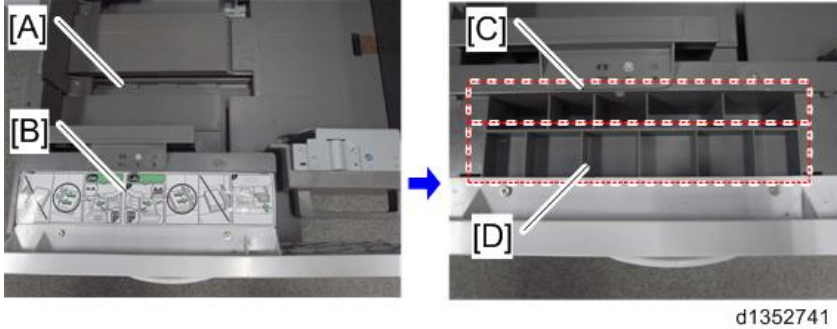
- Install NVRAM (2M-1) in the socket that has "FRAM-1" [C] printed next to it on the controller board. Install so that the indentation [E] on NVRAM (2M-1) is facing the direction of the arrow [G] that is printed on the controller board.
- Install NVRAM (2M-2) in the socket that has "FRAM-2" [D] printed next to it on the controller board. Install so that the indentation [F] on NVRAM (2M-2) is facing the direction of the arrow [H] that is printed on the controller board.
- Note that if you install incorrectly, both the controller board and NVRAMs will be damaged.



d1352675

- When replacing the controller board, first, check which ESA applications have been installed. After replacing the controller board, re-install the ESA applications by following the installation instructions for each application.

- After reinstalling the ESA applications, print the SMC (SP-5-990-024/025 (SMC: SDK/ Application Info)). Then open the tandem tray [A] and remove the paper cassette decal [B]. Store the SMC sheet [C] and the SD card(s) [D] that was used to install the ESA application(s).



4

HDD Unit

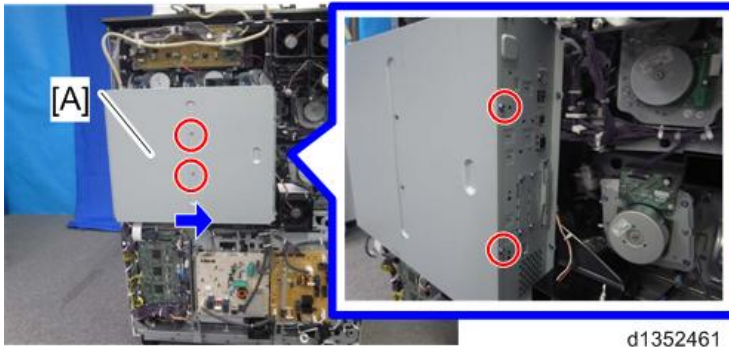
The HDD contains two separate hard disks (160 Gigabytes each x2 = 320 Gigabytes).

Before replacing the HDD unit, copy the address book data to an SD card from the HDD with SP5846-051 if possible.

★ Important

- Never remove an HDD unit from the work site without the consent of the client.
- The two disks are always replaced together as a unit. Never attempt to replace a single disk.

1. Controller box cover [A] (🔧 x 4)



2. HDD unit (🔧 x 3, 📁 x 3)



After Installing the New HDD Unit

4

1. Do SP5-832-001 to format the hard disk.
2. Do SP5-853-001 to copy the preset stamp data from the firmware to the hard disk.
3. Do SP5-846-052 to copy back the address book to the hard disk from the SD card to which you have already copied the address book data if possible.
4. Turn the main power switch off/on.

★ Important

- Make sure the cables are correctly connected on the controller board.
Red cable: Upper socket
Black cable: Lower socket
- If the connections are reversed, the machine will issue an error at startup. If it occurs just reconnect the HDD correctly and start again. The HDD will not be damaged by such an incorrect startup.

Disposal of HDD Unit

- If the customer has any concerns about the security of any information on the HDD, the HDD must remain with the customer for disposal or safe keeping.
- The HDD may contain proprietary or classified (Confidential, Secret) information. Specifically, the HDD contains document server documents and data stored in temporary files created automatically during copy job sorting and jam recovery. Such data is stored on the HDD in a special format so it cannot normally be read but can be recovered with illegal methods.

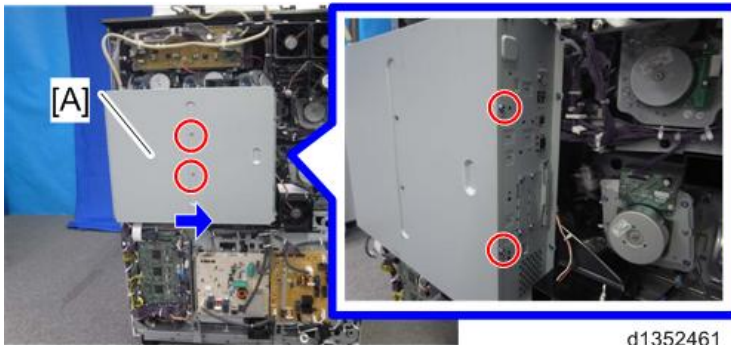
Reinstallation

- Explain to the customer that the following information stored on the HDD is lost when the HDD is replaced: document server documents, fixed stamps, document server address book

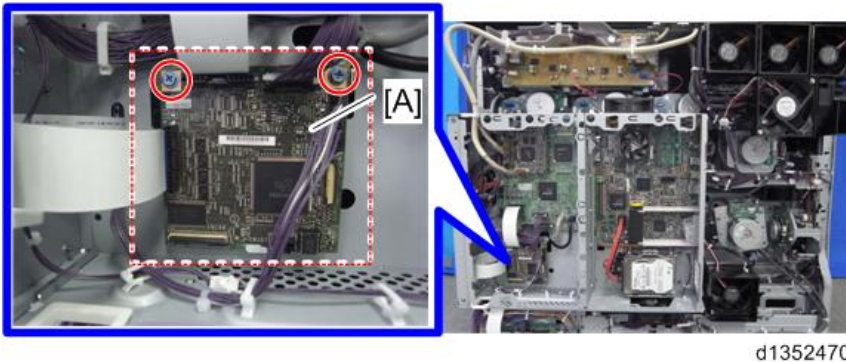
- The address book and document server documents (if needed) must be input again.
- If the customer is using the Data Overwrite Security, the Data Encryption feature or OCR Scanned PDF, these applications must be installed again.

BCU

1. Controller box cover [A] (🔩 x 4)

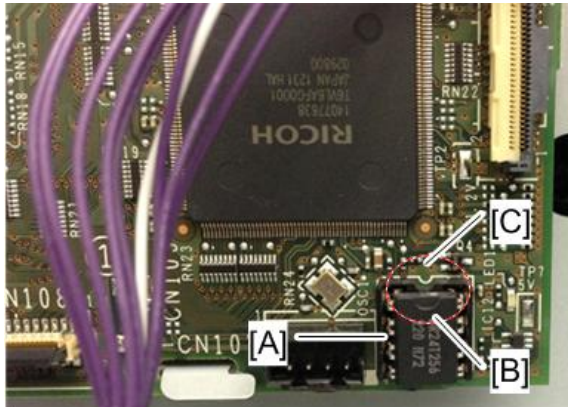


2. BCU [A] (🔩 x 2)



Note

- BCU procured as a service part does not contain the NVRAM (EEPROM) [A].
- When installing a new BCU procured as a service part, make sure to remove the NVRAM from the old BCU and install it on the new BCU.
- Install so that the indentation [B] on the NVRAM corresponds with the mark [C] printed on the BCU. Incorrect installation of the NVRAM will damage both the BCU and NVRAM.
- If you forget to install the NVRAM on the new BCU, the machine will not activate and remain in "Please wait" status even with the main power switch turned on.



d1352861

3. Turn on the main power switch and register the machine serial number onto the new BCU by entering the machine serial number in SP5-811-004 (Machine Serial / Set: BCU).

Note

- Inputting a wrong serial number will cause the machine to display SC995-001 (CPM set error).
4. Select the paper size system in SP5-131-001.
 - 0: DOM (Japan)
 - 1: NA
 - 2: EU
 5. Specify the area code in SP5-807-001.
 - 1: DOM (Japan)
 - 2: NA
 - 3: EU
 - 4: TWN
 - 5: AA
 - 6: CHN

Note

- Setting the wrong area code will cause the machine to display SC995-04 (CPM set error).

NVRAM Replacement Procedure

NVRAM on the Controller Board

1. Make sure that you have the SMC report (factory settings). This report comes with the machine.

2. Print out the SMC data ("ALL") in SP5-990-001.
3. Turn off the main power switch.
4. Insert a blank SD card into slot #2, and then turn on the main power switch.
5. Upload the NVRAM data to the blank SD card in SP5-824-001 (NVRAM Data Upload).

★ Important

- **Make sure to note the following SP settings as they will not be automatically uploaded to the SD card. These settings will be input manually in Step 16.**
 - **SP5-193-001 (External Controller Info. Setting)**
0: No external controller, 1: EFI controller
 - **SP5-895-001 (Application invalidation / Printer)**
0: valid, 1: invalid
 - **SP5-895-002 (Application invalidation / Scanner)**
0: valid, 1: invalid
 - **SP5-985-001 (Device Setting / On Board NIC)**
0: invalid, 1: valid
 - **SP5-985-002 (Device Setting / On Board USB)**
0: invalid, 1: valid

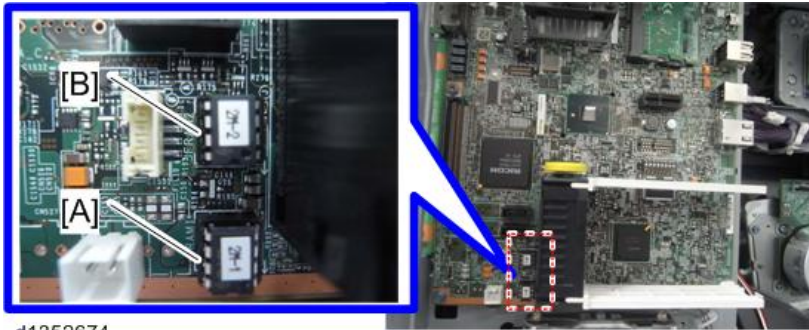
6. Turn off the main power switch, and then unplug the AC power cord.
7. Remove the SD card containing the NVRAM data from slot #2.
8. Insert another blank SD card into slot #2, plug the AC power cord, and then turn on the main power switch.
9. Upload the Address Book Data to the blank SD card in SP5-846-051 (UCS Setting / Back Up All Addr Book).

Procedure for D135/D136 (Office model) only

If the Fax Option is installed on the machine, do the following:

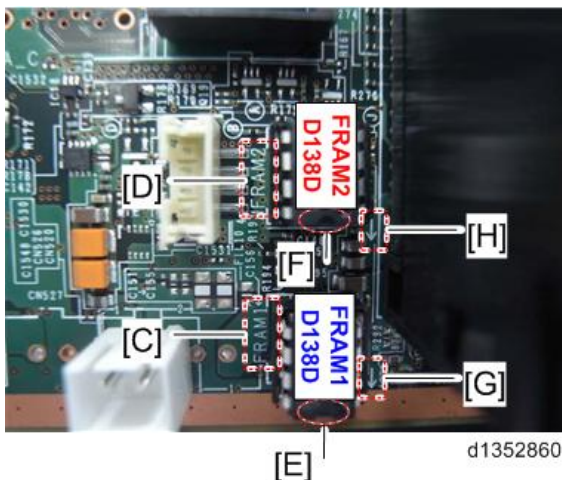
- Print out the "Box Setting List". (User Tools -> Facsimile Features -> General Settings -> Box Setting: Print List)
 - Print out the "Program Special Sender List". (User Tools -> Facsimile Features -> Reception Settings -> Program Special Sender: Print List)
 - Take note of the settings in "User Tools -> Facsimile Features -> Reception Settings".
 - Take note of the settings in "User Tools -> Facsimile Features -> Send Settings".
10. Turn off the main power switch, and then unplug the AC power cord.
 11. Remove the SD card containing the Address Book Data from slot #2.
 12. Replace the two NVRAMs on the Controller Board with the new ones.

- There are two NVRAMs on the controller board as mentioned in page 929. Make sure to replace the two NVRAMs as a set.
- NVRAMs [A] and [B] installed on the Controller Board at the factory are labeled "2M-1" and "2M-2" respectively. NVRAMs procured as service parts are labeled "FRAM1/D138E" and "FRAM2/D138E".



d1352674

- Install NVRAM "FRAM1/D138E" in the socket printed "FRAM-1" [C] on the controller board. Install so that the indentation [E] on the NVRAM faces toward the direction indicated with the arrow [G] printed on the controller board.
- Install NVRAM "FRAM2/D138E" in the socket printed "FRAM-2" [D] on the controller board. Install so that the indentation [E] on the NVRAM faces toward the direction indicated with the arrow [H] printed on the controller board.
- Work carefully to avoid mistake when installing the NVRAM. Incorrect installation will damage both the NVRAM and controller board.



d1352860

13. Plug in the AC power cord, and then turn ON the main power switch.

★ Important

- **DO NOT** insert the SD card containing the NVRAM data that you removed in Step 7 before turning on the main switch.
- **SC995-02 (Defective NVRAM)** will appear when powering on the main power switch, but ignore this SC. **DO NOT** turn off the main power switch. Continue with this procedure.

14. Re-insert the SD card containing the NVRAM data that you removed in Step 7 back into slot #2.
15. Download the old NVRAM data from the SD card onto the new NVRAM in SP5-825-001 (NVRAM Data Download).

↓ Note

- This will take about 2 or 3 minutes.

★ Important

- **After the download completes, message "Completed. You have to reboot."** will appear, but ignore this message and press the "Exit" button. **DO NOT** reboot at this moment.
- **SC870-11 (Address Book Data Error)** will appear in the banner, but **DO NOT** turn off the main power switch. Continue with this procedure.

16. Input the following SP settings according to the notes took in Step 5.
 - SP5-193-001 (External Controller Info. Setting)
 - SP5-895-001 (Application invalidation / Printer)
 - SP5-895-002 (Application invalidation / Scanner)
 - SP5-985-001 (Device Setting / On Board NIC)
 - SP5-985-002 (Device Setting / On Board USB)

Message "Completed. You have to reboot." will appear after inputting each of the above SP settings, but ignore this message and press the "Exit" button. **DO NOT** reboot at this moment.

17. Turn off the main power switch. This will take about 3 minutes. Wait until the machine power is turned off completely, and then remove the SD card from slot #2.
18. Turn on the main power switch.
19. Insert the SD card containing the Address Book Data removed in Step 11 into slot #2.
20. Execute SP5-846-052 (UCS Setting / Restore All Addr Book) to download the Address Book Data on to the new NVRAM.

↓ Note

- SP5-846-052 will fail, if the settings in SP5-193-001, SP5-985-001 and SP5-985-002 input in Step 16 are incorrect.

Message "Completed. You have to reboot." will appear if SP5-846-052 results in success.

21. Turn off the main power switch and remove the SD card from slot #2.
22. Turn on the main power switch.

Procedure for D135/D136 (Office model) only

Confirm the "Reception Settings" and "Send Settings" correspond with the notes took in Step 9.
Correct the settings, if they are wrong.

23. Print out the SMC data ("ALL") in SP5-990-001, and make sure that it matches with the SMC data printed out in Step 2 (except for the total counter value).

 **Note**

- The total counter value is reset to "0" when the NVRAM is replaced.

24. Do the self-check Process Control.
25. Do ACC for the copier application program.
26. Do ACC for the printer application program.

NVRAM (EEPROM) on the BCU

Before performing the following procedure, contact your supervisor to obtain information on how to input the machine serial number in the new NVRAM.

1. Make sure that you have the SMC report (factory settings). This report comes with the machine.
2. Print out the SMC data (SP5-990-001).
3. Turn off the main power switch.
4. Install an SD card into SD card slot #2 and then, turn on the main power switch.
5. Copy the NVRAM data to an SD card (SP5-824-001).
6. Turn off the main power switch, and then unplug the power cord.
7. Replace the NVRAM on the BCU and put back the covers.
8. Plug in the power cord, and then turn on the main power switch.

Select the paper-size system in SP5-131-001 (Paper Size Type Selection).

0: DOM (JAPAN)

1: NA

2: EU

9. Specify the area code in SP5-807-001.

1: DOM (JAPAN)

2: NA

3: EU

4: TWN

5: AA

6: CHN

Note

- Setting the wrong area code will cause the system to display SC995-04(CPM Set Error).

10. Input the machine serial number according to the procedure instructed by your supervisor.

Note

- Inputting an incorrect serial number will cause the system to display SC195-00 (Serial Number Set Error).

11. Turn the main power switch off and on.

12. Copy the data from the SD card to the NVRAM (SP5-825-001).

13. Turn off the main power switch, and then remove the SD card from SD card slot #2.

14. Turn on the main power switch.

15. Specify the SP and UP mode settings, if necessary.

16. Do the self-check Process Control.

17. Do ACC for the copier application program.

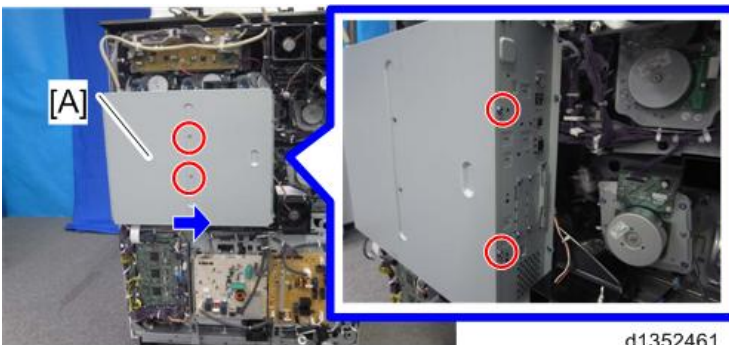
18. Do ACC for the printer application program.

Note

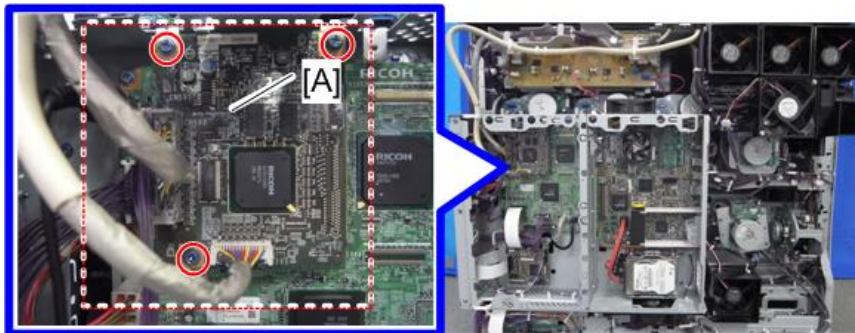
- If the message "SD card for restoration is required." appears after the NVRAM replacement, restore the encryption key.

IPU

1. Controller box cover [A] (🔧 x 4)

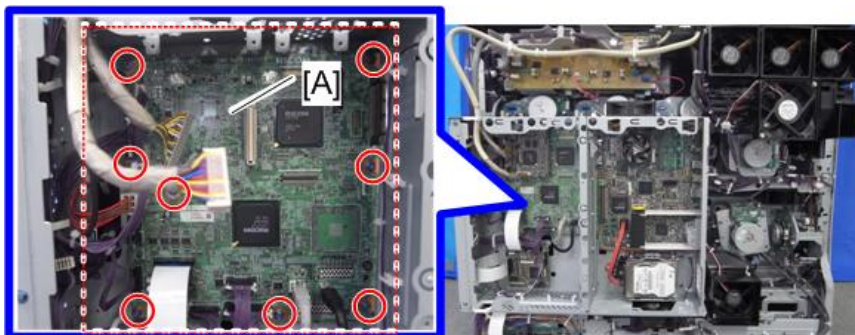


2. IPU_Sub [A] (🔧 x 3)



d1352468

3. IPU_Main [A] (⚙️ x 3)



d1352469

4

IOB

1. Remove the retaining bracket [A] of the controller box which is located at the rear of the machine (⚙️ x 2).



d1352462

2. Open the controller box [A] (⚙️ x 2).



d1352145

3. IOB [A] (⚙ x 2, all ⚙s)

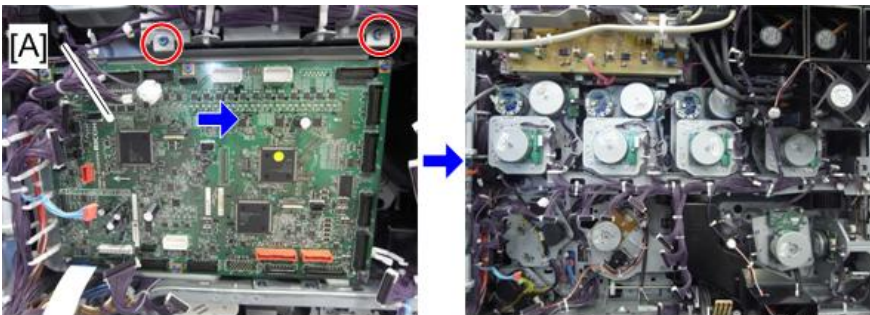
4



d1352464

When removing the motors that are behind the IOB

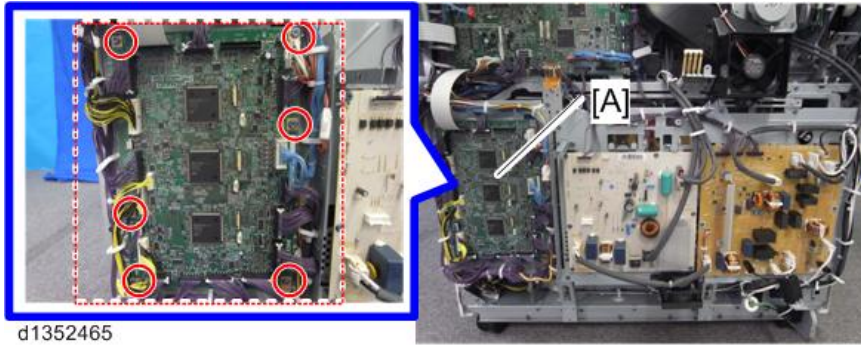
1. Disconnect all connectors on the IOB.
2. Remove the IOB [A] along with the bracket by sliding it to the right (⚙ x 2).



d1352530

PFB

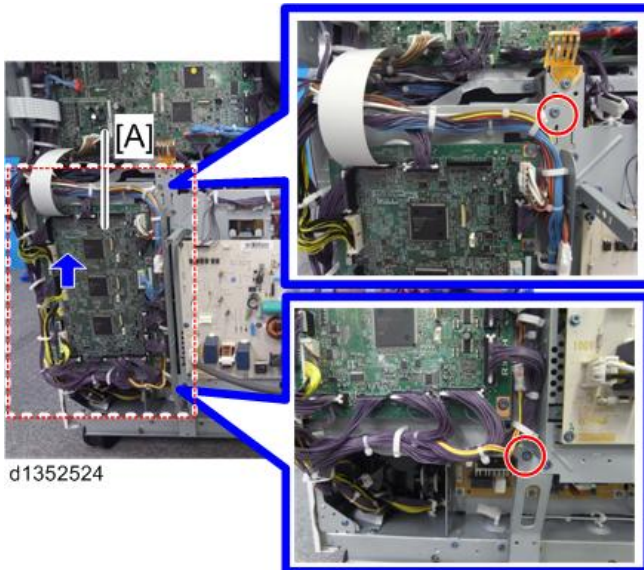
1. PFB [A] (⚙ x 6, all ⚙s)



When removing the motors that are behind the PFB

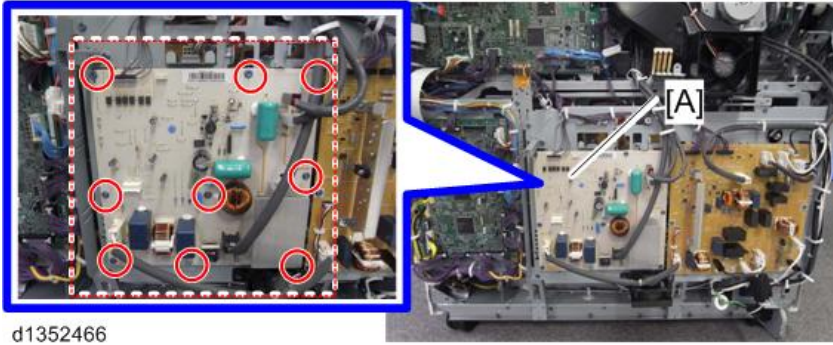
4

1. Disconnect all connectors on the PFB.
2. Remove the PFB [A] along with the bracket by sliding it upwards (⚙ x 2).



IH Inverter

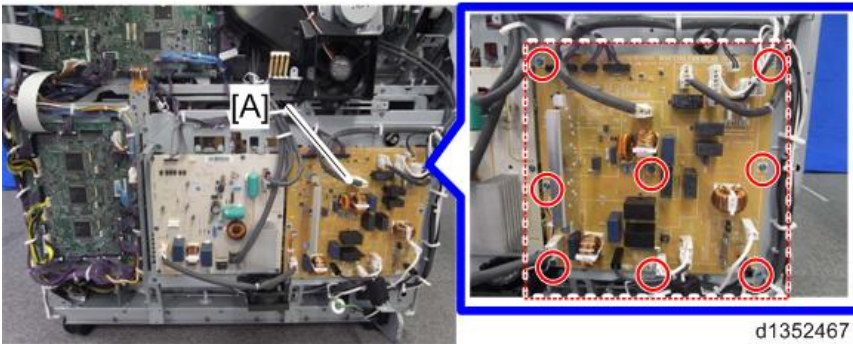
1. IH inverter [A] (⚙ x 9, all ⚙ s)



4

AC Drive Board

1. AC drive board [A] (⚙ x 8, all ⚙s)

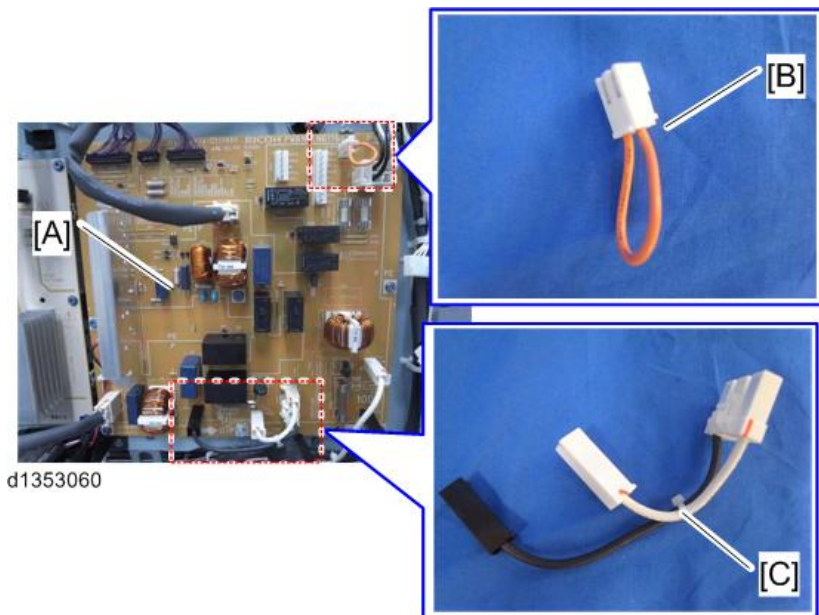


Notes on Replacing the AC Drive Board

Depending on the model and the destination, it is necessary to remove a connector or harness from the old board and install it on the new board.

D135 for NA

1. Remove the jumper harness [B] at CN405 and the connector [C] at CN420/T113/T114 on the old AC drive board [A].



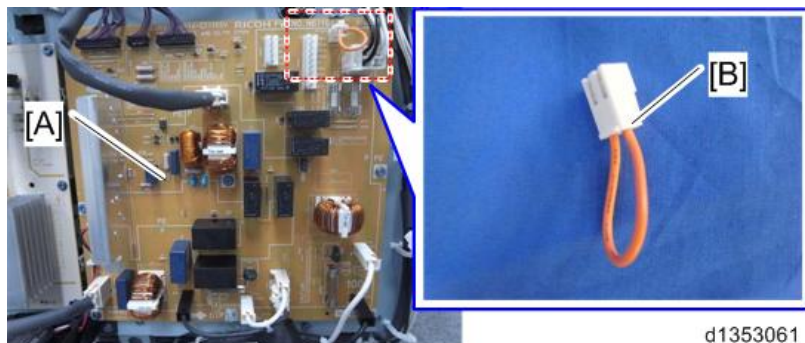
d1353060

4

2. Install the jumper harness and the connector on the new AC drive board.

D135 for EU/AP/CHN

1. Remove the the jumper harness [B] at CN405 on the old AC drive board [A].

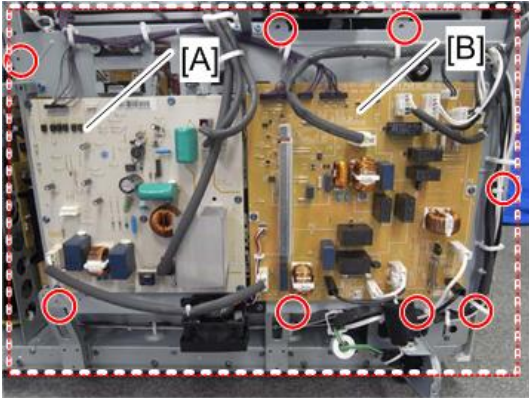


d1353061

2. Install the jumper harness on the new AC drive board.

PSU1 / PSU2

1. IH Inverter [A] and AC drive board [B] along with the bracket (🔩 x 8, all 📏s)

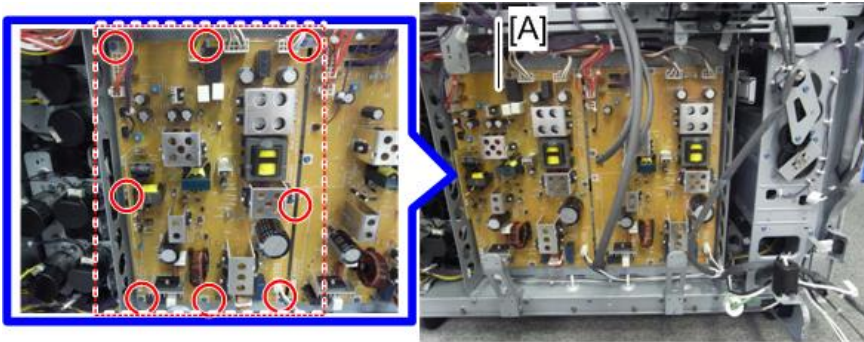


RTB 151
Caution when handling these boards

d1352477

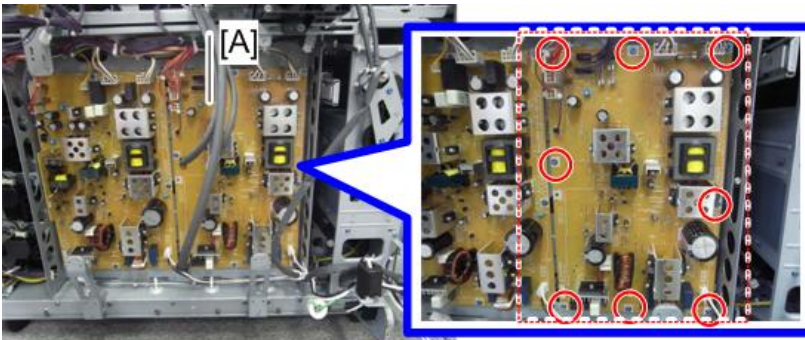
4

2. PSU1 [A] (⚙ x 8, all ⚙s)



d1352476

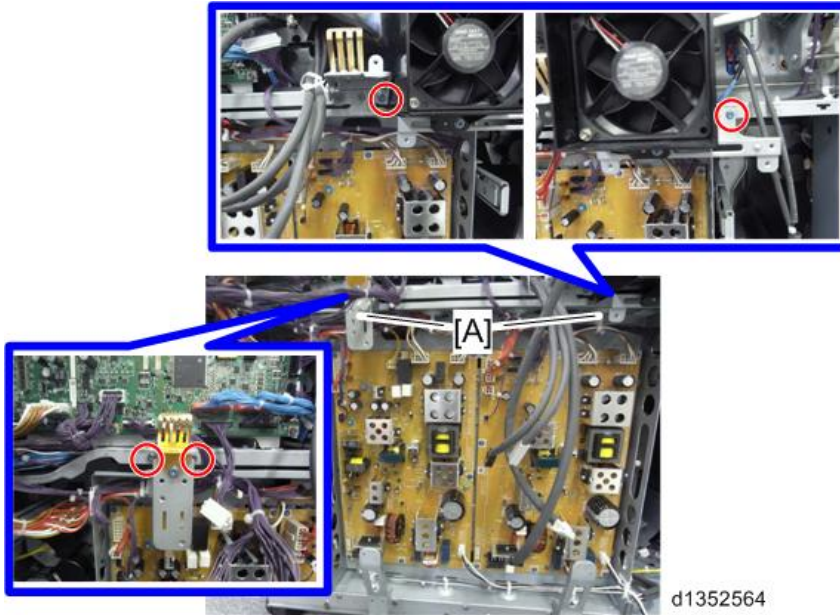
3. PSU2 [A] (⚙ x 8, all ⚙s)



d1352478

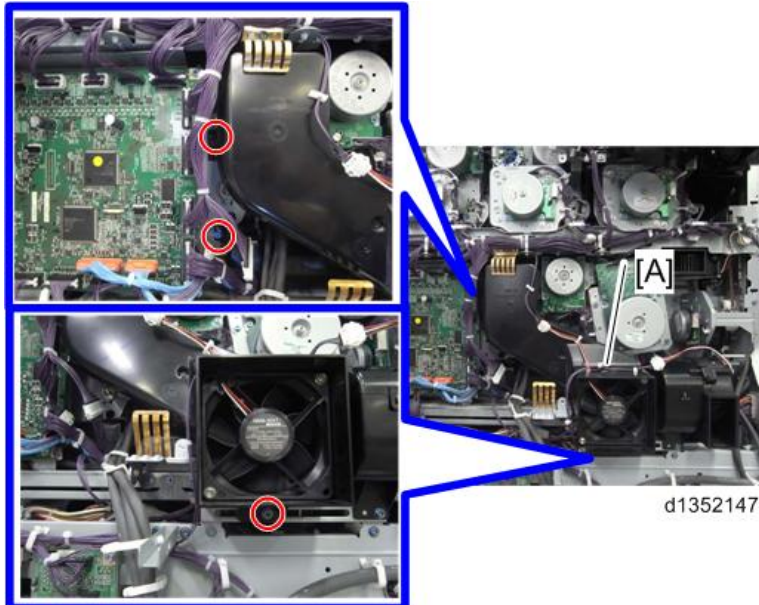
When removing the motors and sensors that are behind the PSU1/PSU2

1. Disconnect all connectors on the PSU1/PSU2.
2. Remove the upper stays (right and left) [A] (⚙ x 4).

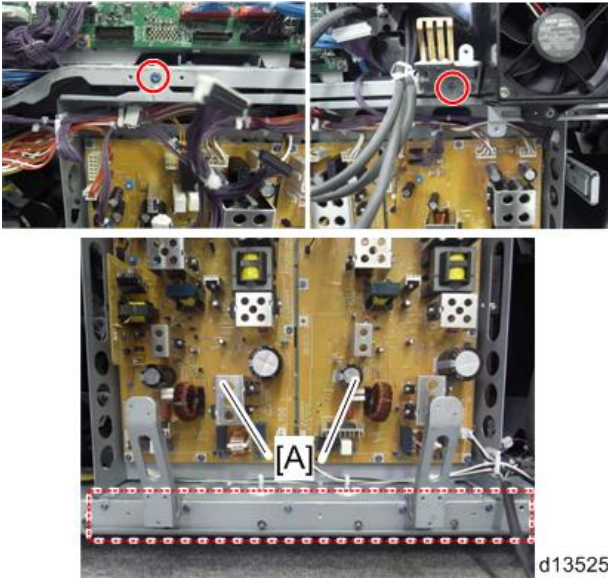


4

3. Remove the fixing screws of the PTR fusing exhaust fan [A] (🔩 x 3).



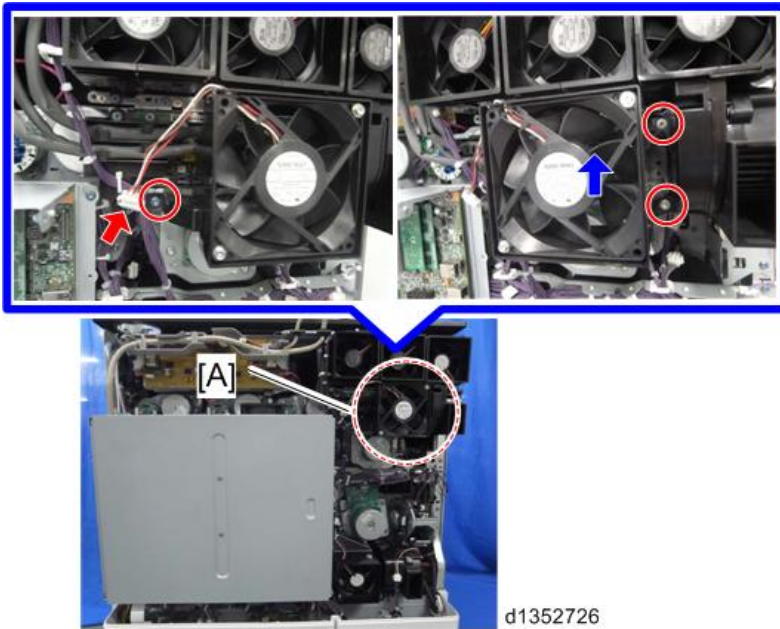
4. Remove the PSU1/PSU2 [A] along with the bracket (upper side: 🔩 x 2, lower side: 🔩 x 7).



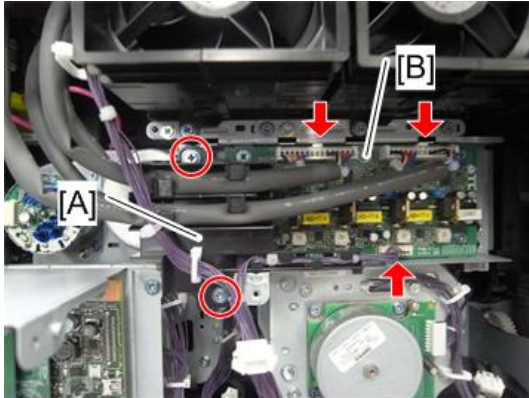
4

Potential Sensor Board

1. Slide the drive exhaust fan [A] upward along with the duct (🔧 x 3, 📏 x 1).

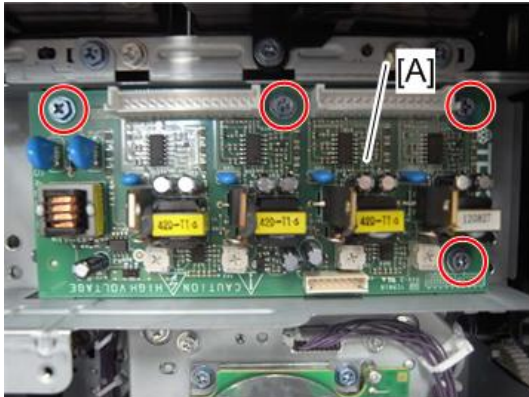


2. Harness guide [A] and the connectors of the potential sensor board (🔧 x 2, 📏 x 3).



d1352727

3. Potential sensor board (🔩 x 4)

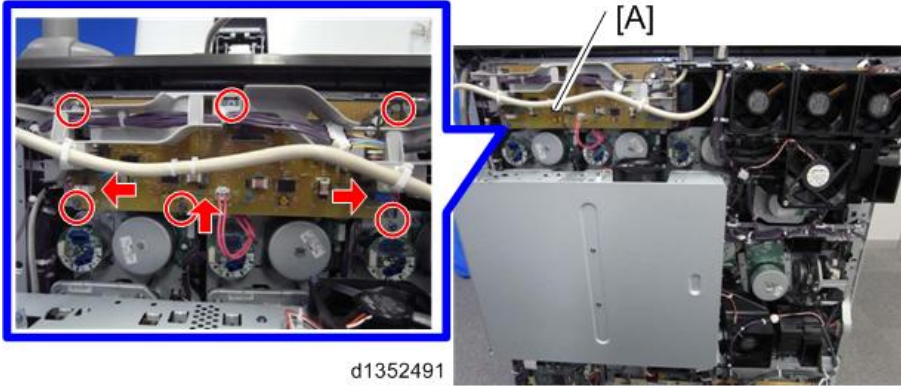


d1352728

Combined High-Voltage Power Supply Board (Charge / Development) (KCMY)

Combined High-Voltage Power Supply Board (KC)

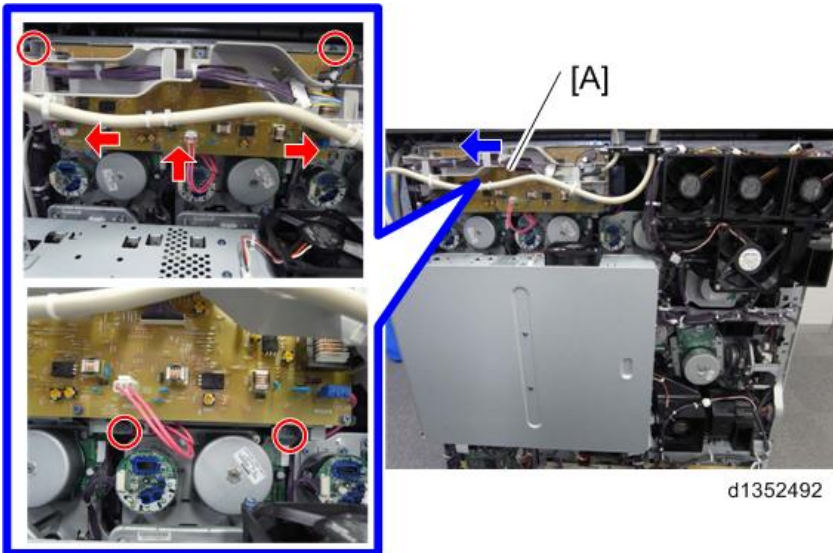
1. Combined high-voltage power supply board (KC) [A] (🔩 x 6, 📏 x 3)



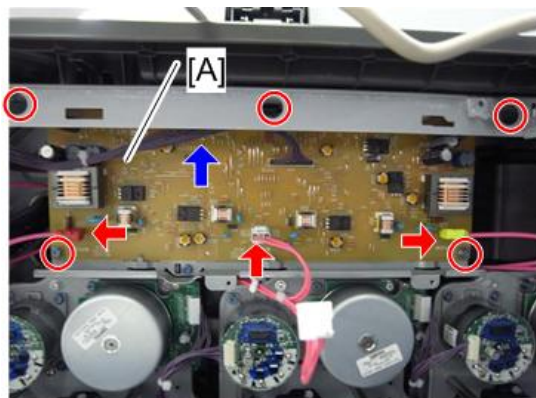
4

Combined High-Voltage Power Supply Board (MY)

1. Remove the combined high-voltage power supply board (KC) [A] along with the bracket by sliding it toward the left (⚙️ x 4, 🛠️ x 3)



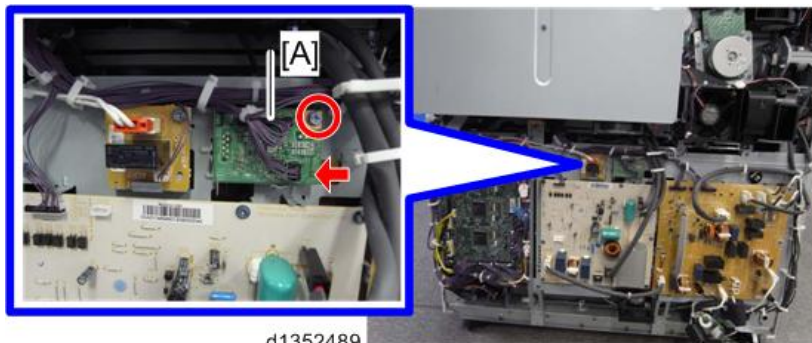
2. Remove the combined high-voltage power supply board (MY) [A] by sliding it upwards (⚙️ x 5, 🛠️ x 3).



d1352493

Fusing Web Control Board-Main Machine (D137/D138 only)

1. Fusing web control board -main machine [A] (🔧 x 1, 📏 x 1)



d1352489

AC Drive Board Relay (D137/D138 only)

1. AC drive board relay [A] (🔧 x 1, 📏 x 1)



d1352490

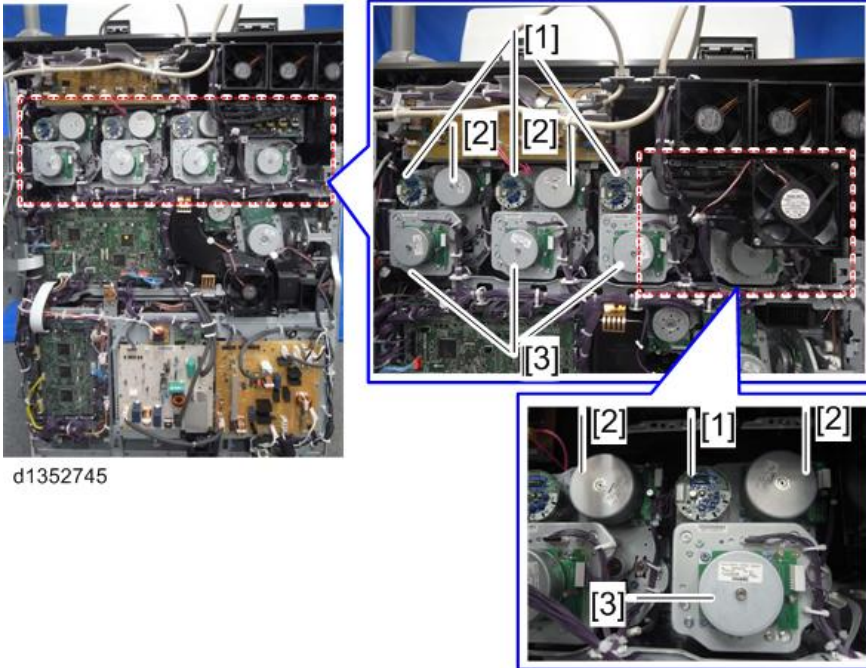
Motors and Sensors

Layout (Motor)

Rear of the Machine (Top)

To replace the motors and sensors on the back of the machine, first remove the outer cover. (☛ page 537 "Rear Cover")

4

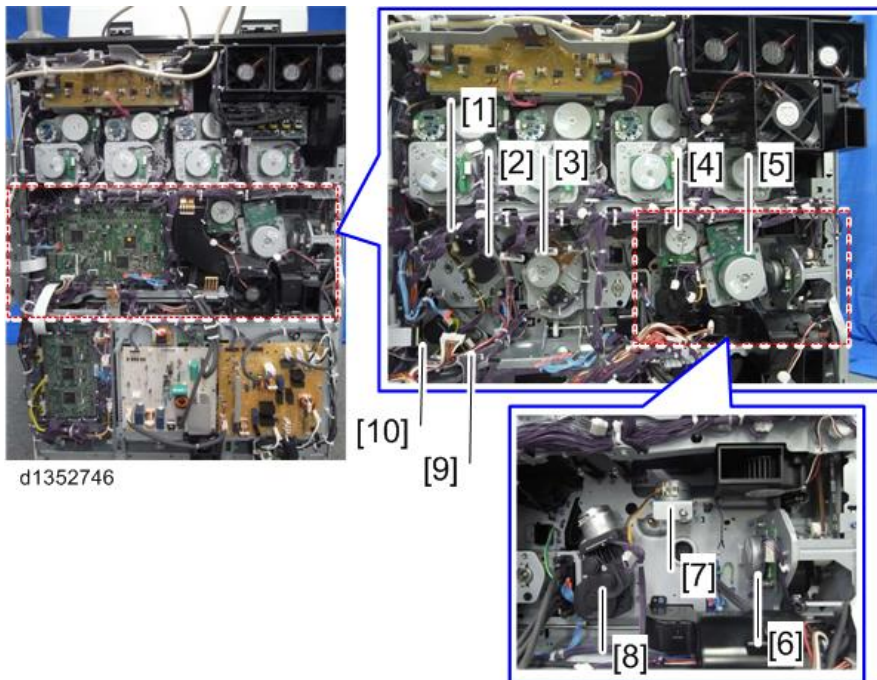


No.	Part Name	Replacement procedure	Remarks
1	Drum Cleaning Motor (KCMY)	☛ page 960	K, C, M, Y from the left Y is located behind the potential sensor board.
2	Development Motor (KCMY)	☛ page 963	K, C, M, Y from the left M and Y are located behind the potential sensor board.







No.	Part Name	Replacement procedure	Remarks
3	Drum Motor (KCMY)	☛ page 954	K, C, M, Y from the left Y is located behind the potential sensor board.

Rear of the Machine (Middle)


To replace the motors and sensors on the back of the machine, first remove the outer cover. (☛ page 537 "Rear Cover")

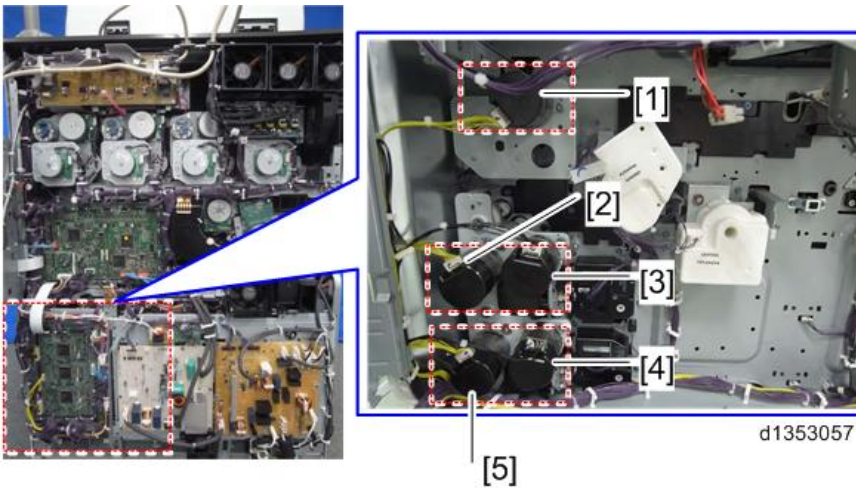




No.	Part Name	Replacement procedure	Remarks
1	By-pass Feed Motor	☛ page 966	Located behind the IOB
2	Relay Motor	☛ page 966	Located behind the IOB
3	PTR Motor	☛ page 968	Located behind the IOB
4	Fusing Belt Smoothing Roller Drive Motor	☛ page 984	D137/ D138 only

No.	Part Name	Replacement procedure	Remarks
5	Fusing Drive Motor	 page 974	
6	Waste Toner Collection Motor	 page 976	
7	Fusing Belt Smoothing Roller Contact Motor	 page 986	D137/ D138 only Located behind the fusing drive motor
8	Fusing Release Motor	 page 981	Located behind the duct of the PTR fusing exhaust fan
9	1st Paper Feed Motor	 page 970	Located behind the IOB
10	1st Transport Motor	 page 970	Located behind the IOB

Rear of the Machine (Bottom)

To replace the motors and sensors on the back of the machine, first remove the outer cover. ( page 537 "Rear Cover")



No.	Part Name	Replacement procedure	Remarks
1	Vertical Transport Motor	 page 971	Located behind the PFB
2	2nd Transport Motor	 page 973	Located behind the PFB

No.	Part Name	Replacement procedure	Remarks
3	2nd Paper Feed Motor	☛ page 973	Located behind the PFB
4	3rd Paper Feed Motor	☛ page 973	Located behind the PFB
5	3rd Transport Motor	☛ page 973	Located behind the PFB

Drawer Unit (Front)

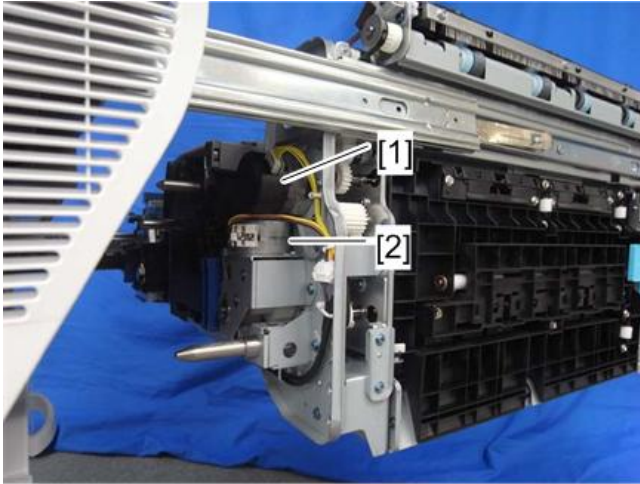
To replace the motors on the front of the drawer unit, first remove the drawer unit cover. (☛ page 537 "Rear Cover")



d1352742

No.	Part Name	Replacement procedure	Remarks
1	Exit Motor	☛ page 612	
2	Duplex Inverter Entrance Motor	☛ page 612	
3	Duplex Transport Motor	☛ page 614	
4	Registration Motor	☛ page 611	
5	Duplex Exit Motor	☛ page 615	
6	Cleaning Web Motor	☛ page 616	D137/ D138 only

Drawer Unit (Rear)



d1352743

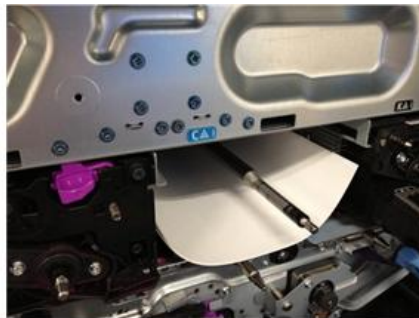
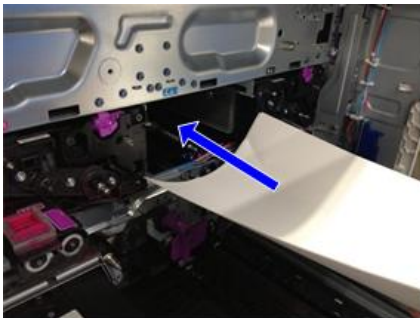
4

No.	Part Name	Replacement procedure	Remarks
1	Exit Inverter Motor	☛ page 613	
2	Cleaning Web Contact Motor	☛ page 617	D137/ D138 only

Drum Motor (KCMY) / Drum Encoder Sensor (KCMY)

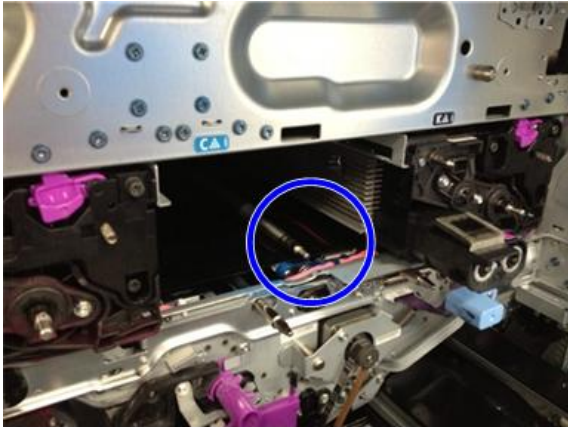
⚠ CAUTION

- Insert a sheet of paper as shown below when removing the drum motor in Step 6.



d1359950

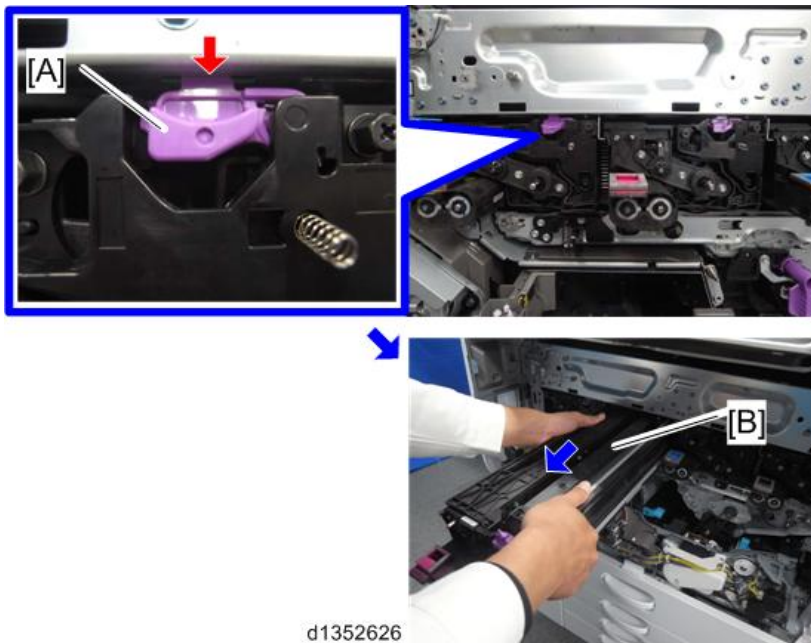
- This will prevent the grease coated to the tip of the drum shaft from contacting the ITB unit.



d1359951

4

1. Toner Supply Unit (🔧 page 624)
2. Faceplate (🔧 page 680)
3. Unlock the lever [A] and pull out the PCDU [B] from the machine.



d1352626

4. Remove the retaining bracket [A] of the controller box which is located at the rear of the machine (🔧 x 2).



d1352462

5. Open the controller box [A] (⚙️ x 2).

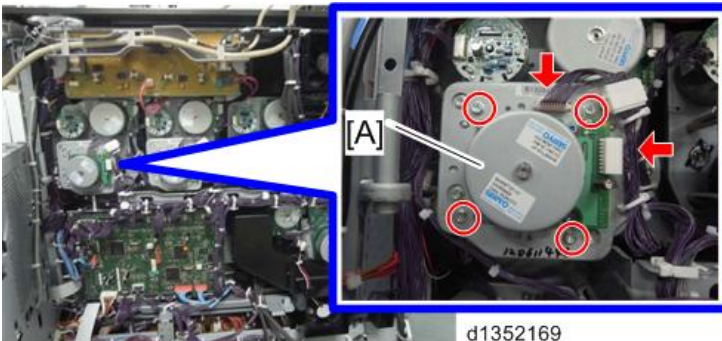
4



d1352145

6. Drum motor as a unit [A] (⚙️ x 4, 📏 x 2).

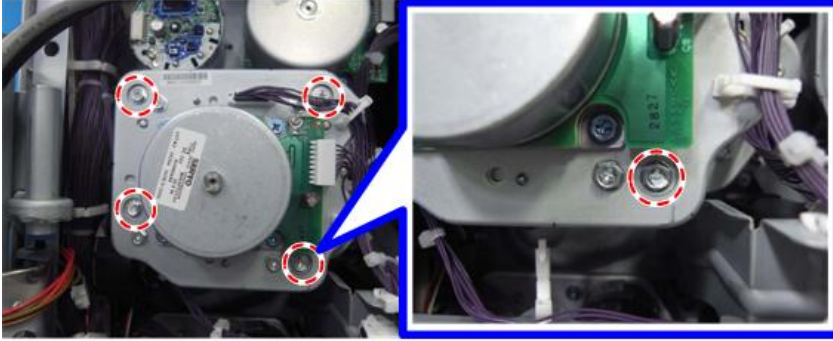
e.g.: K



d1352169

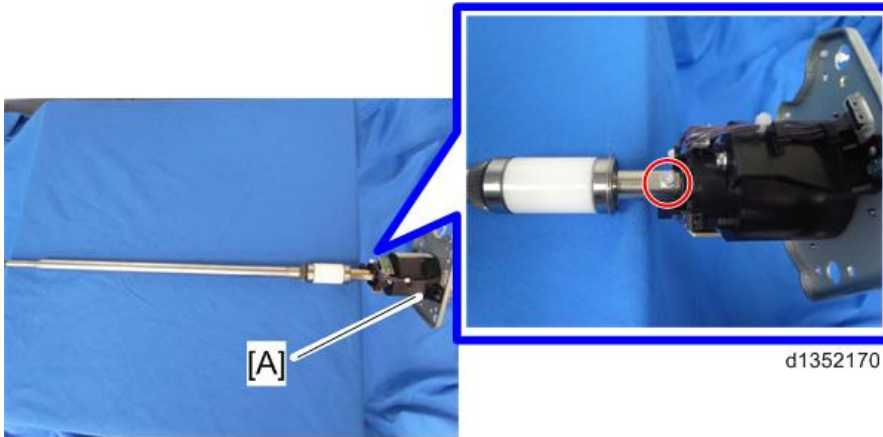
Note

- The following four screws located on the outside of the bracket were positioned on the bracket with a special jig. Do not loosen or remove these screws. If their position is shifted, the drum shaft will become eccentric, and this may cause abnormal images.



d1352473

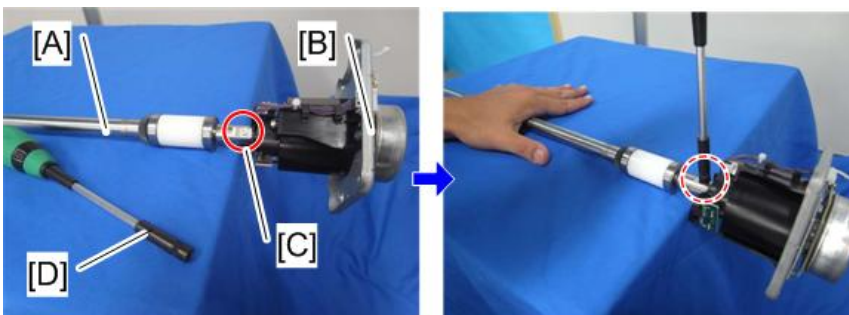
7. Drum motor [A] (x 1).



d1352170

↓ Note

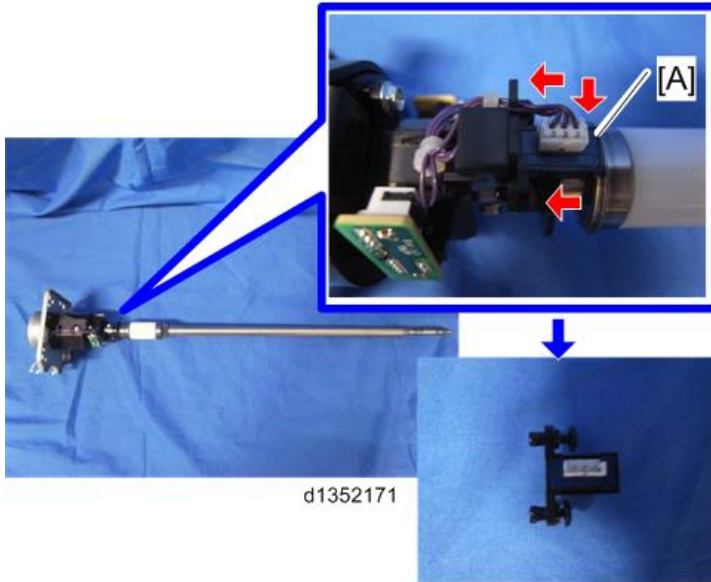
- Removing or assembling the drum shaft and motor
- The binding portion of the drum shaft [A] and the motor [B] must be maintained in a horizontal state so that excessive load is not put on the drum shaft. In order to avoid deformation of the fixing screw [C], use a box-type driver [D].



d1352670

- In the Pro version, there is a HP sensor and feeler mechanism on the drum motor. If you forget the feeler, the machine does not work, an SC (SC421-01(K) / SC421-02(C) / SC421-03(M) / SC421-04(Y)) occurs.

8. Drum encoder sensor [A] (🔧 x 1, rivet x 2).

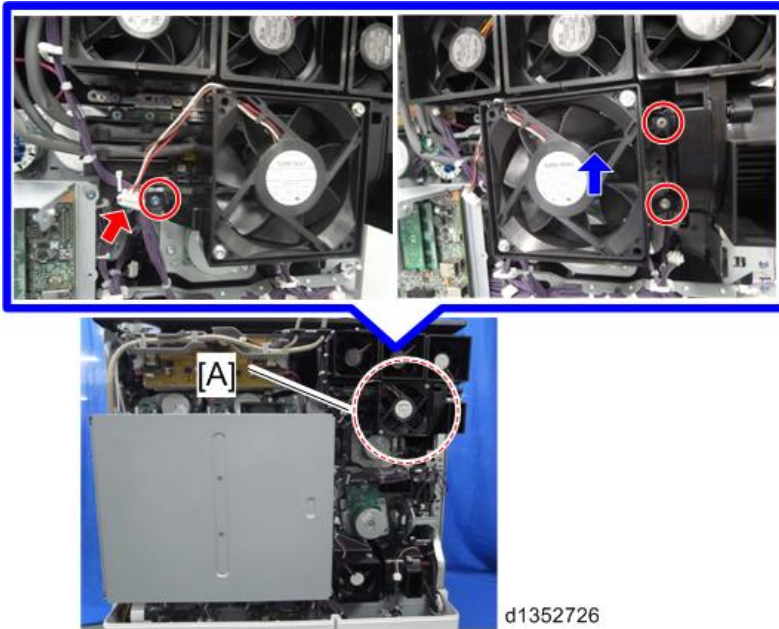


Note

- The procedures for C and M are the same as for K.
- For Y, it is necessary to remove the drive exhaust fan and potential sensor board before you can do step 6 above. (🔧 page 958 "Removing the Drive Exhaust Fan and the Potential Sensor Board")

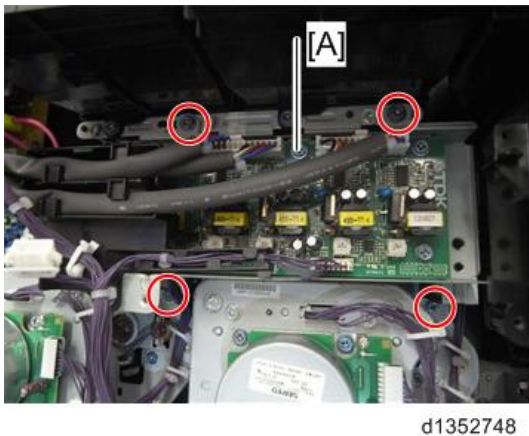
Removing the Drive Exhaust Fan and the Potential Sensor Board

1. Slide the drive exhaust fan [A] upward along with the duct (🔧 x 3, 📏 x 1).



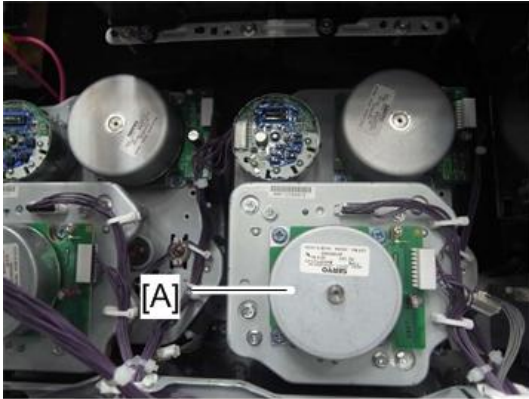
4

2. Potential sensor board along with the bracket (⚙ x 4)



↓ Note

- Access to the drum motor (Y) [A] is possible.

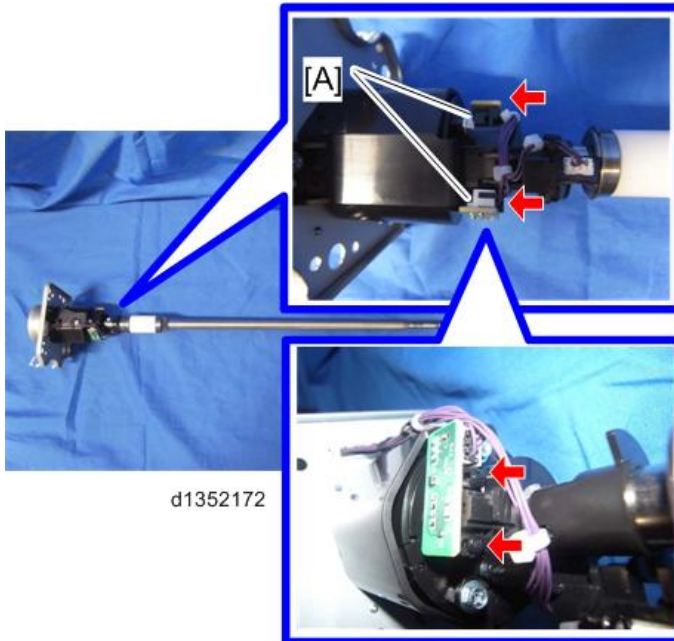


d1352749

4

Drum HP Sensor (D137/D138 only)

1. Drum motor (☛ page 954)
2. Drum HP Sensors (x 2) [A] (☛ x 2 each, rivet x 2 each)



d1352172

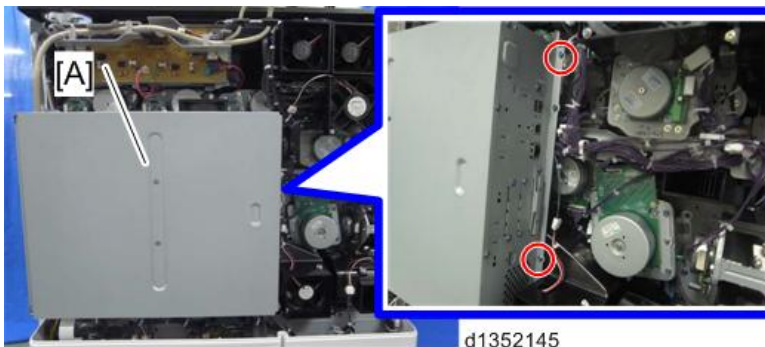
Drum Cleaning Motor (KCMY)

1. Remove the retaining bracket [A] of the controller box which is located at the rear of the machine (☛ x 2).



d1352462

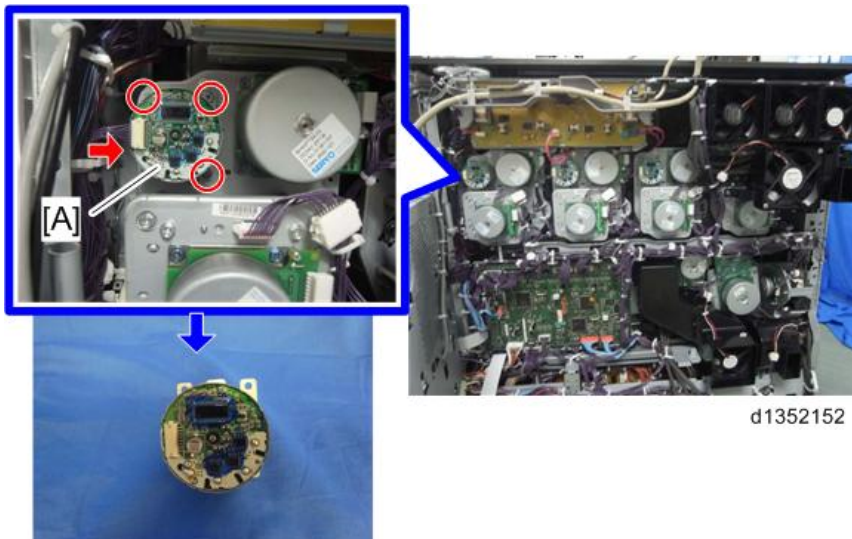
2. Open the controller box [A] (🔧 x 2).



d1352145

3. Vertical transport LED [B] along with the bracket (🔧 x 3, 📏 x 1).

e.g.: K



d1352152

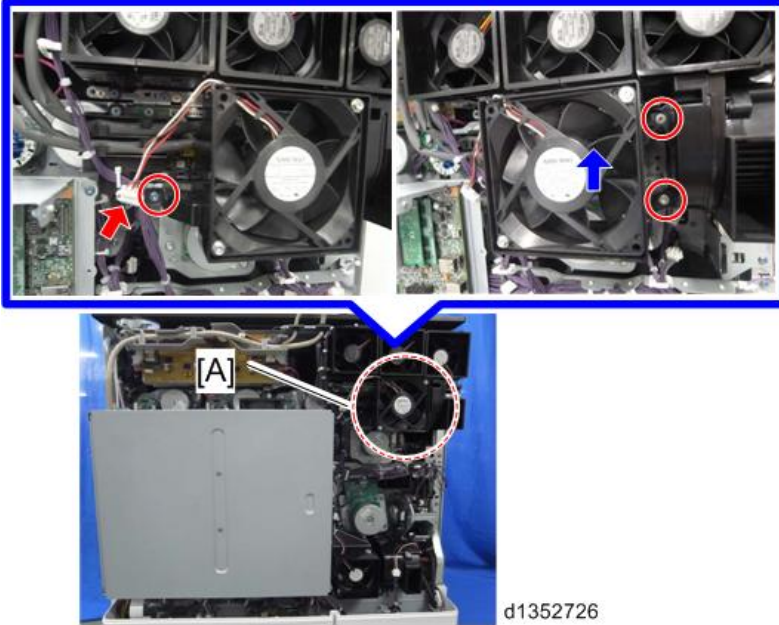
⬇️ **Note**

- The procedures for C and M are the same as for K.

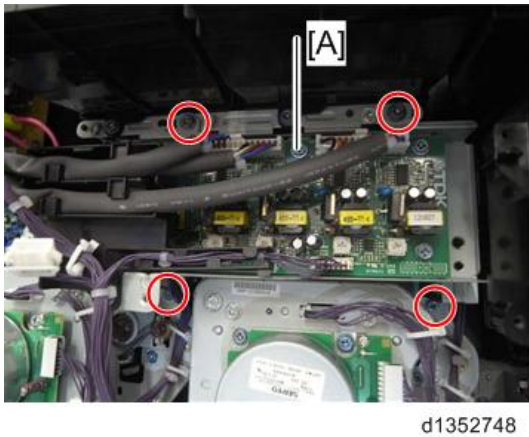
- For Y, it is necessary to remove the drive exhaust fan and potential sensor board before you can do step 3 above. (☛ page 962 "Removing the Drive Exhaust Fan and the Potential Sensor Board")

Removing the Drive Exhaust Fan and the Potential Sensor Board

1. Slide the drive exhaust fan [A] upward along with the duct (🔧 x 3, 📏 x 1).

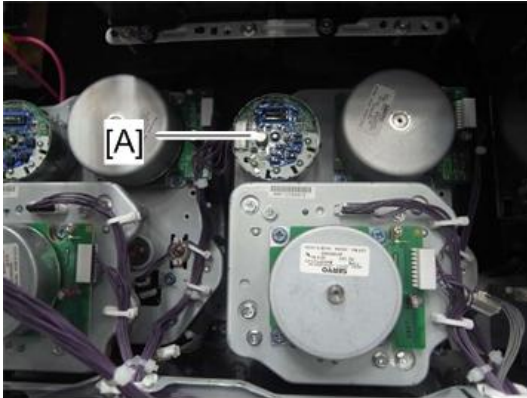


2. Potential sensor board along with the bracket (🔧 x 4)



⬇ **Note**

- Access to the drum cleaning motor (Y) [A] is possible.



d1352750

4

Development Motor (KCMY)

1. Remove the retaining bracket [A] of the controller box which is located at the rear of the machine (🔩 x 2).



d1352462

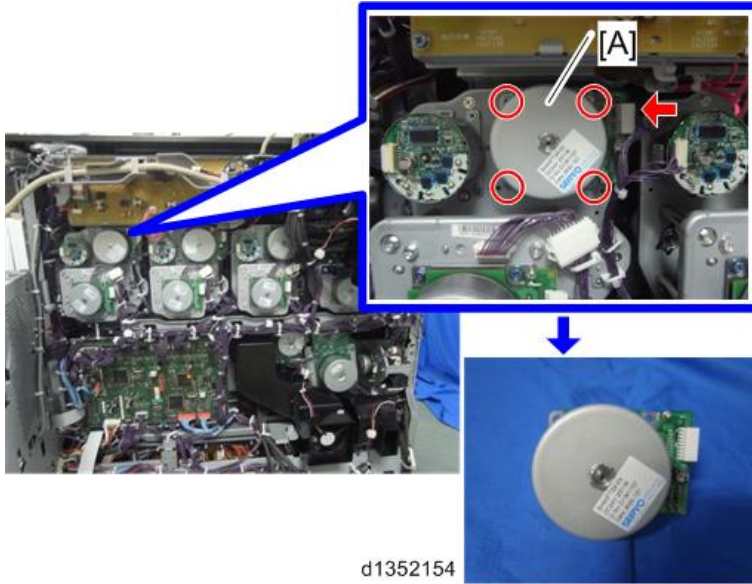
2. Open the controller box [A] (🔩 x 2).



d1352145

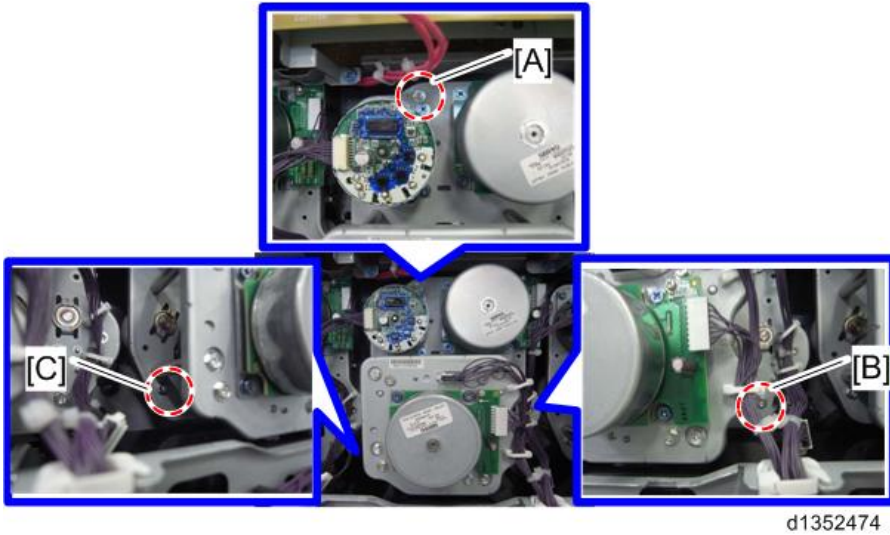
3. Development motor [A] (🔩 x 4, 📦 x 1).

e.g.: K



Note

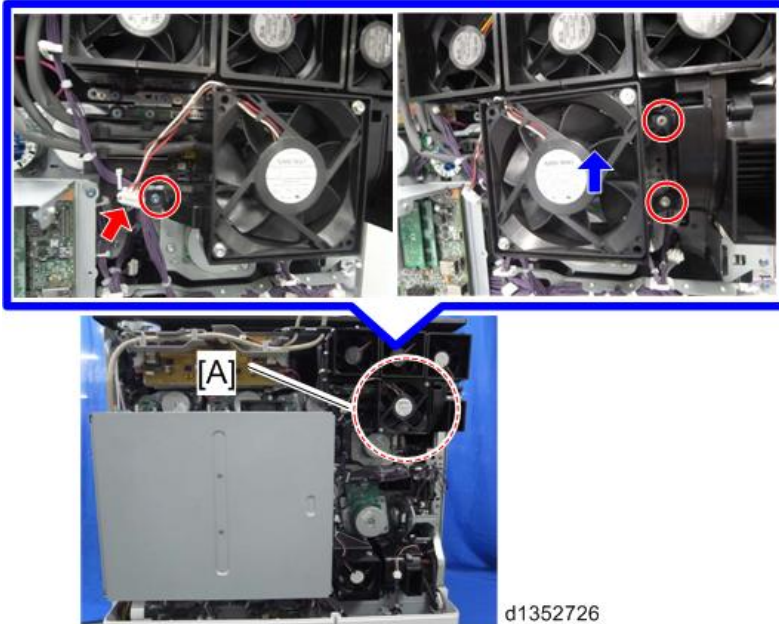
- Do not loosen or remove screws [A], [B] and [C] in the photograph below. These screws are positioned with a special jig. Loosening the screws will affect the driving of the development unit and leads to the occurrence of an abnormal image.



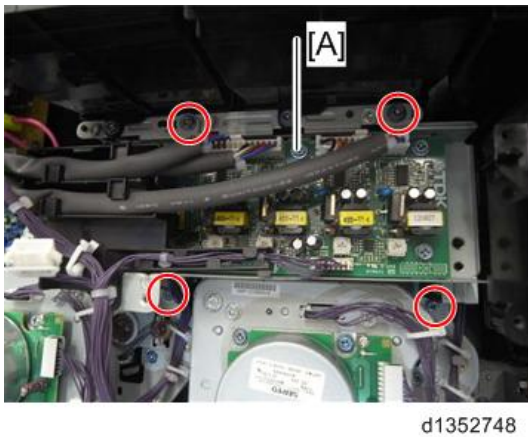
- The procedures for C and M are the same as for K.
- For M and Y, it is necessary to remove the drive exhaust fan and potential sensor board before you can do step 3 above. (☛ page 965 "Removing the Drive Exhaust Fan and the Potential Sensor Board")

Removing the Drive Exhaust Fan and the Potential Sensor Board

1. Slide the drive exhaust fan [A] upward along with the duct (🔧 x 3, 📦 x 1).

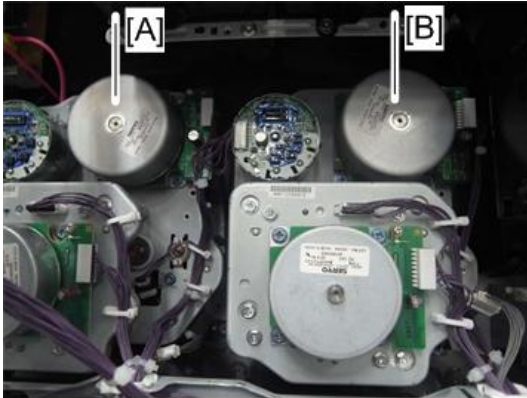


2. Potential sensor board along with the bracket (🔧 x 4)



⬇ Note

- Access to the development motor (M) [A] and development motor (Y) [B] is possible.



d1352751

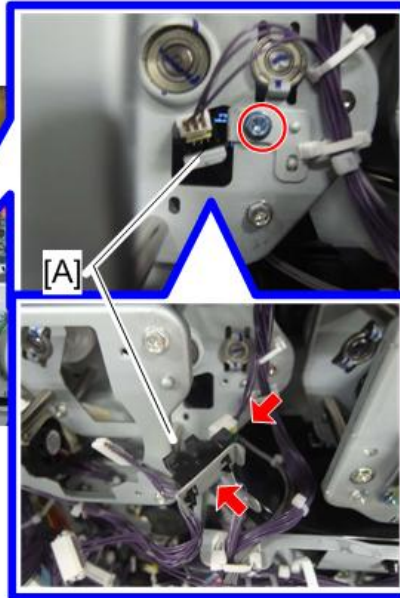
4

Development Roller HP Sensor (KCMY)

1. Drum motor (🔧 page 954)
2. Development Roller HP Sensor [A] (🔧 x 1, 📏 x 1)

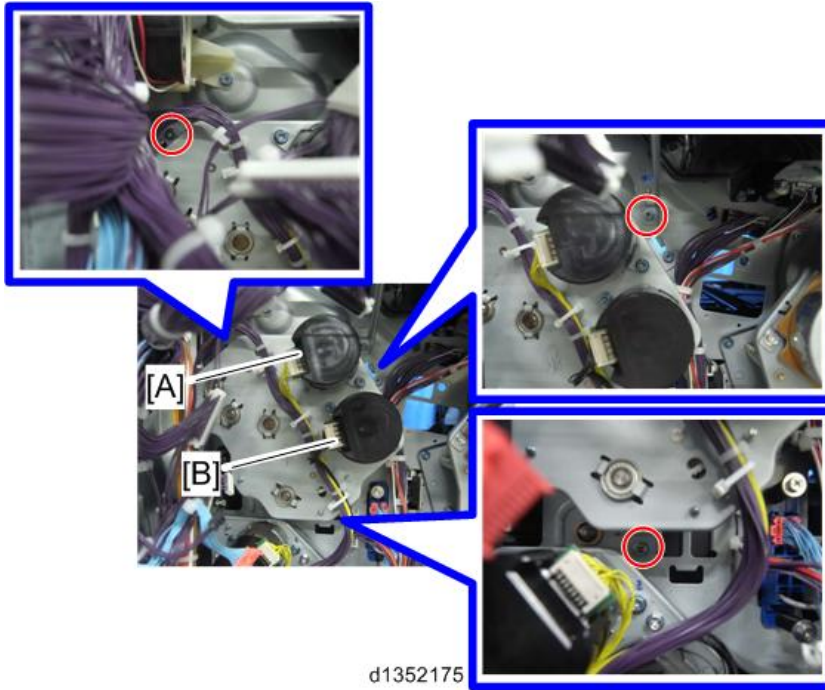
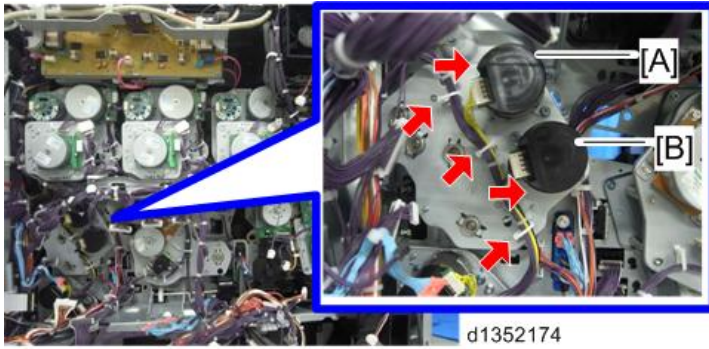


d1352173

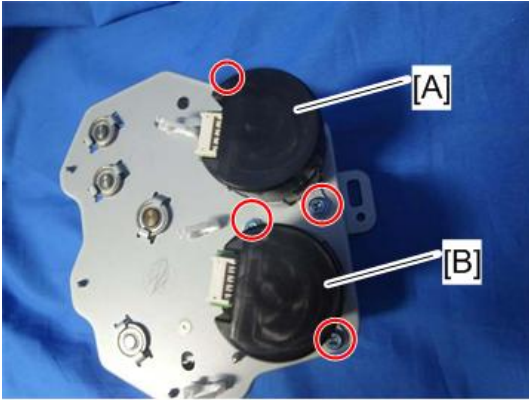


By-pass Feed Motor/Relay Motor

1. IOB along with the bracket, located on the back side of the machine (🔧 page 940 "When removing the motors that are behind the IOB")
2. By-pass feed motor [A] and relay motor [B] along with the bracket (🔧 x 3, 📏 x 1 each, 📏 x 3)



3. By-pass feed motor [A] and relay motor [B] (2 x 2, each)



d1352176

4

Note

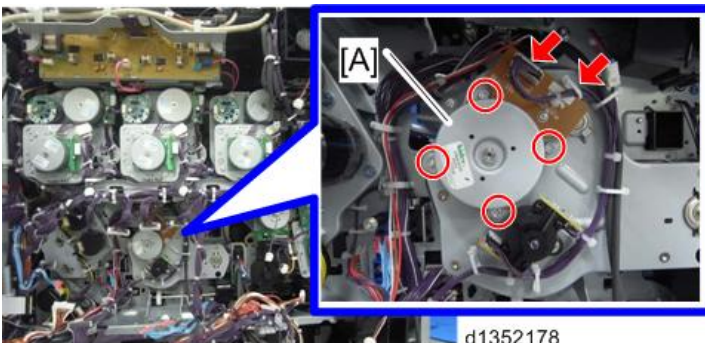
- When installing motors, attach the timing belt.



d1352177

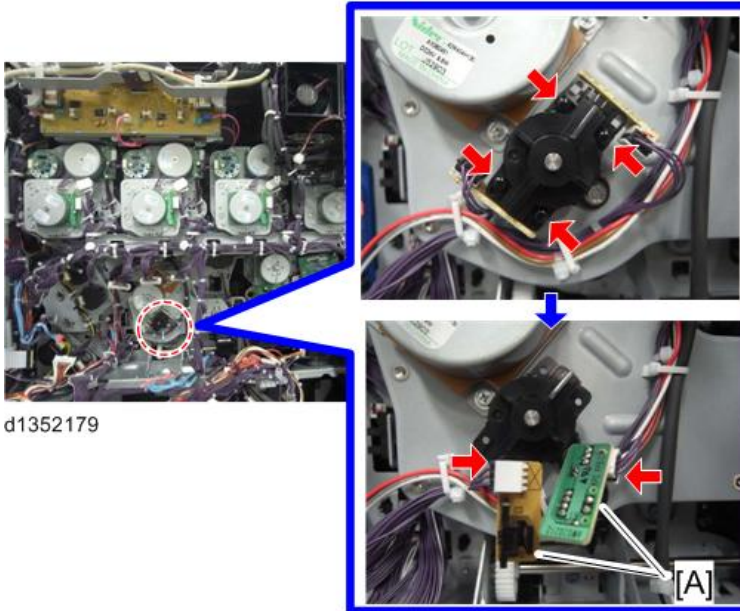
PTR Motor / PTR Encoder Sensor

1. IOB along with the bracket, located on the back side of the machine (see page 940 "When removing the motors that are behind the IOB")
2. PTR motor [A] (🔧 x4, 📏 x 1, 📏 x 1)

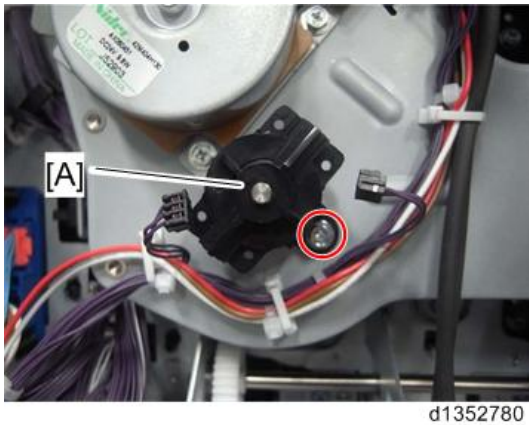


d1352178

3. PTR encoder sensors (x 2) [A] (rivet x 2 each,  x 1 each)

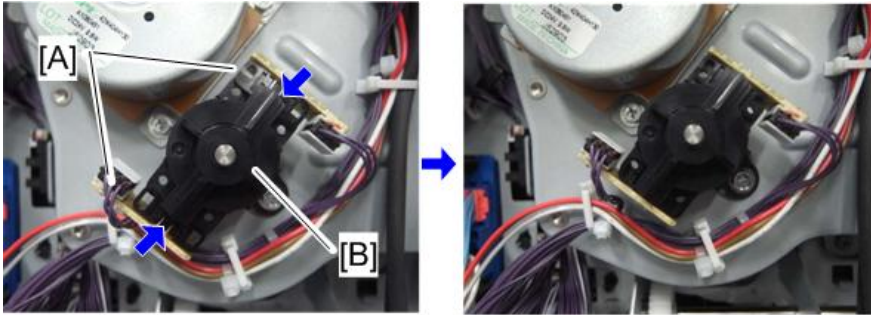


4. PTR encoder sensor cover [A] ( x1)



Note

- When installing the PTR encoder sensor, put the sensor [A] on the cover [B] and fasten the sensor with rivets.



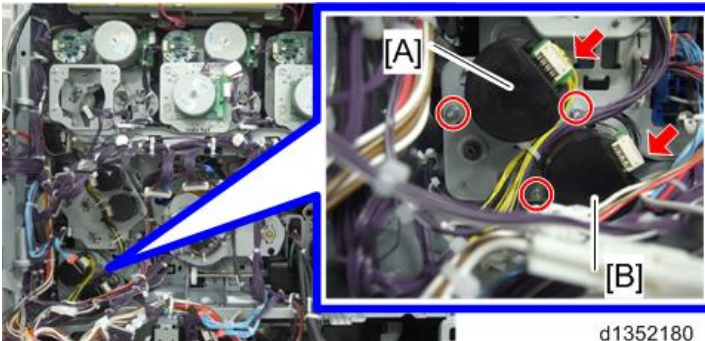
d1352779

4

Paper Feed Motor/Transport Motor

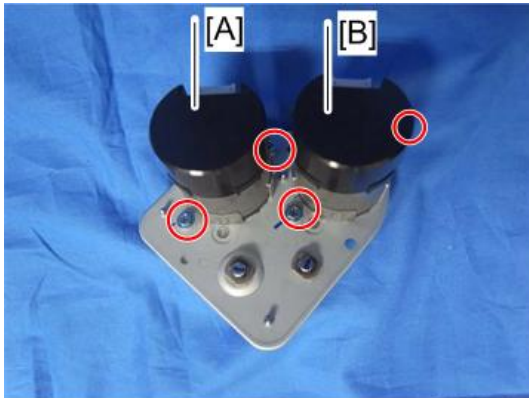
1st Paper Feed Motor/1st Transport Motor

1. IOB along with the bracket, located on the back side of the machine (☛ page 940 "When removing the motors that are behind the IOB")
2. 1st paper feed motor [A] and 1st transport motor [B] along with the bracket (🔩 x 3, 📌 x 1 each)



d1352180

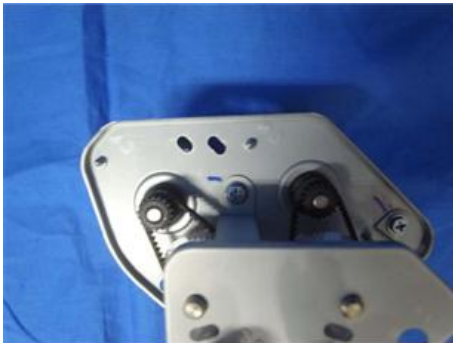
3. 1st paper feed motor [A] and 1st transport motor [B] (🔩 x 2 each)



d1352181

↓ Note

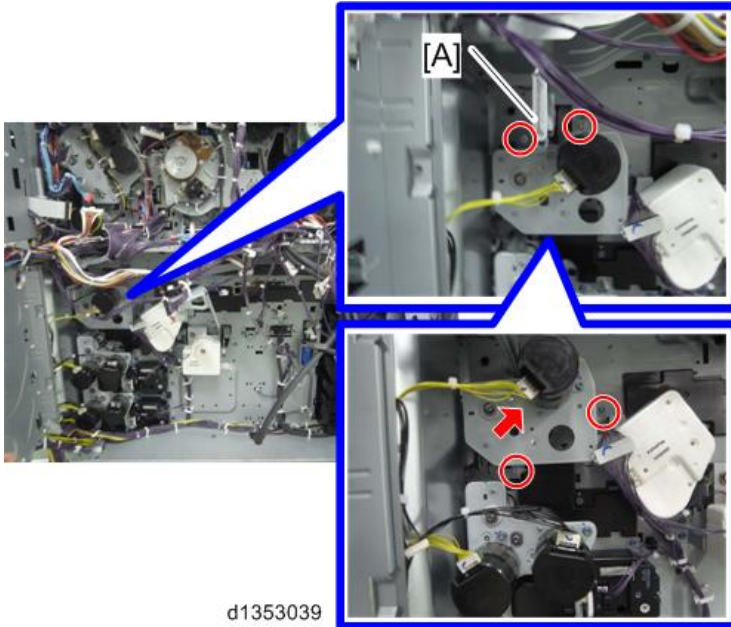
- When installing motors, attach the timing belt.



d1352182

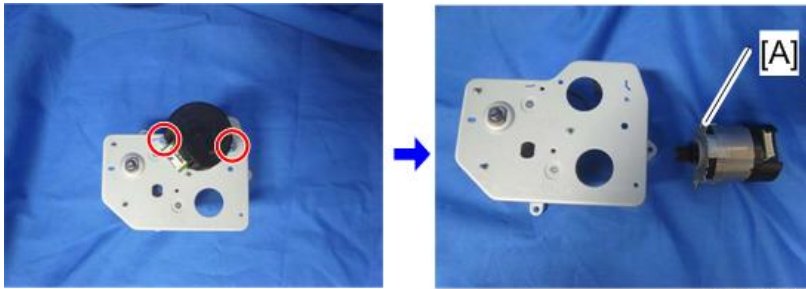
Vertical Transport Motor

1. PFB along with the bracket, located on the back side of the machine (☛ page 941 "When removing the motors that are behind the PFB")
2. Vertical transport motor [A] along with the bracket (🔩 x 4, 📏 x 1)



d1353039

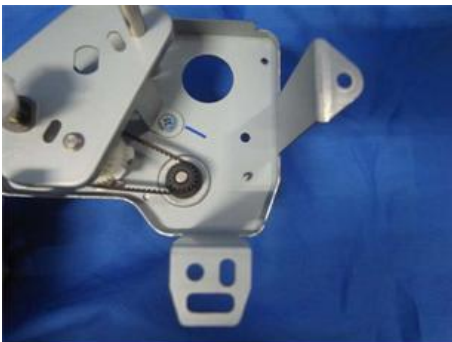
3. Vertical transport motor [A] (⚙ x 2)



d1353040

⚠ Note

- When installing motors, attach the timing belt.

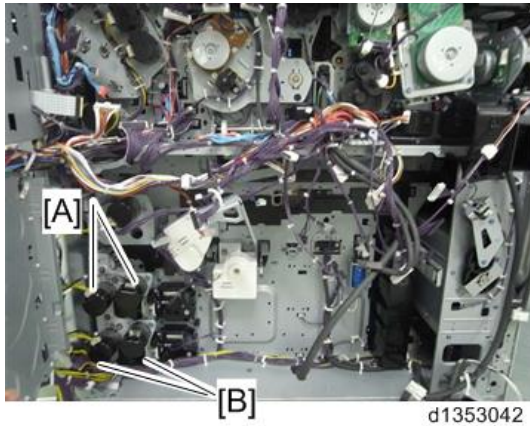


d1353041

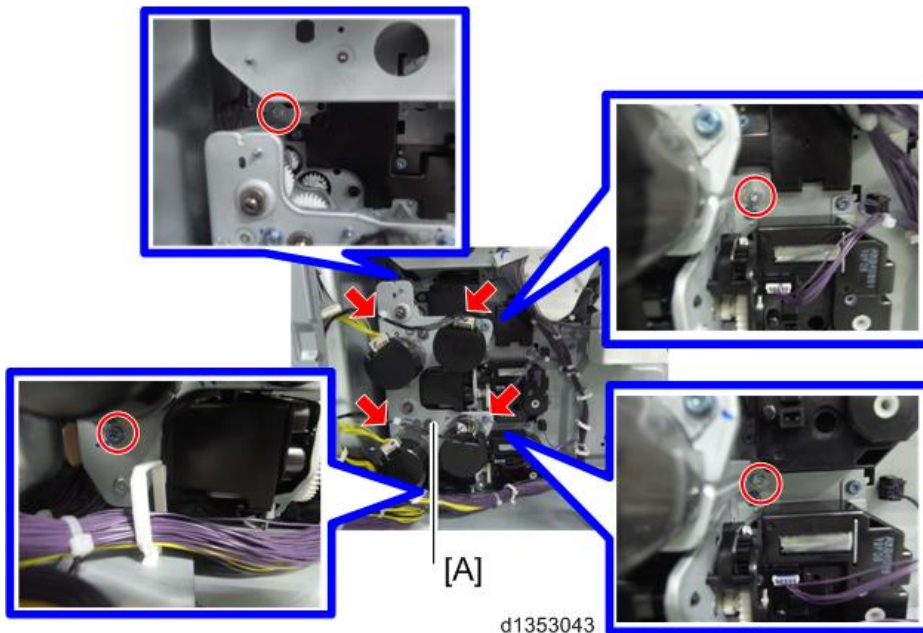
2nd Paper Feed Motor/2nd Transport Motor, 3rd Paper Feed Motor/3rd Transport Motor

1. PFB along with the bracket, located on the back side of the machine (☞ page 941 "When removing the motors that are behind the PFB")

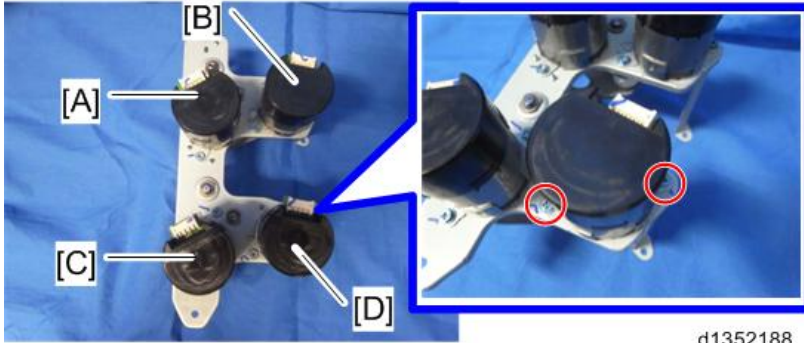
2nd paper feed motor/2nd transport motor [A] and 3rd paper feed motor/3rd transport motor [B] are attached to one bracket.



2. Paper feed motors and transport motors (x 4) [A] along with the bracket (⚙️ x 4, 📌 x 1 each)



3. 2nd transport motor [A], 2nd paper feed motor [B], 3rd transport motor [C] and 3rd paper feed motor [D] (⚙️ x 2 each)



d1352188

Note

- When installing motors, attach the timing belt.

4



d1352189

Fusing Drive Motor

1. Remove the retaining bracket [A] of the controller box which is located at the rear of the machine (⚙ x 2).






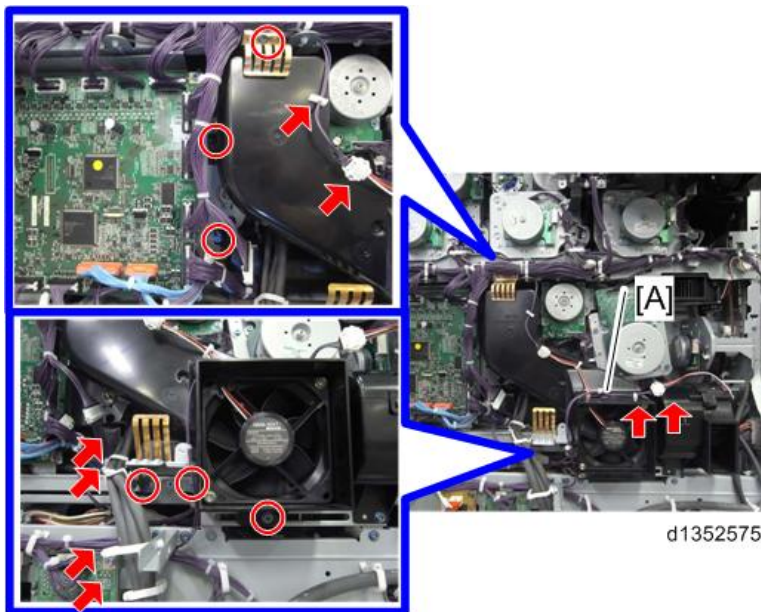
d1352462

2. Open the controller box [A] (⚙ x 2).



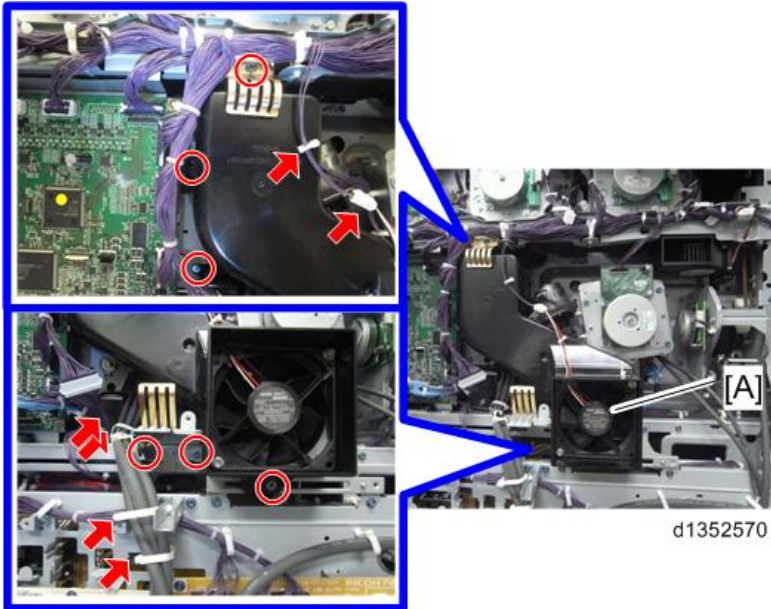
d1352145

3. PTR fusing exhaust fan and the grounding plate [A] along with the duct
 D137/D138:  x 6,  x 2,  x 6

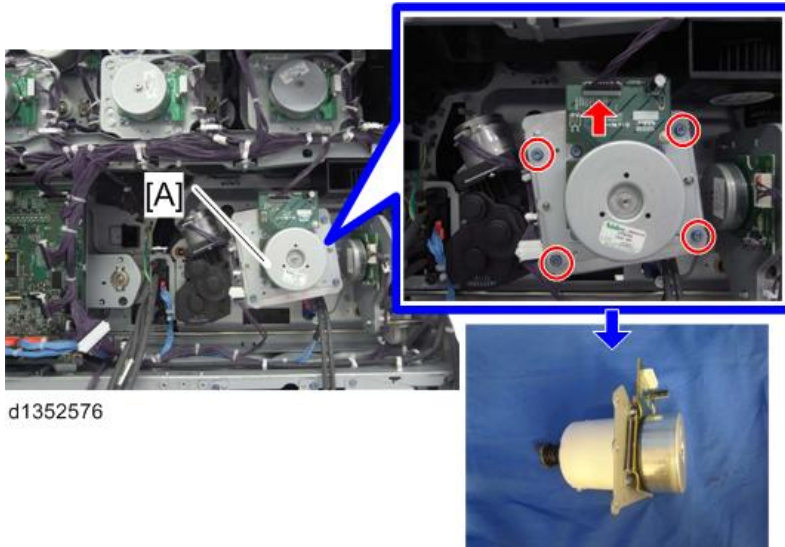


d1352575

D135/D136:  x 6,  x 1,  x 5



4. Fusing drive motor [A] (⚙ x 4, ⚙ x 1).



Waste Toner Collection Motor

Removing the Waste Toner Collection Motor

1. Remove the retaining bracket [A] of the controller box which is located at the rear of the machine (⚙ x 2).



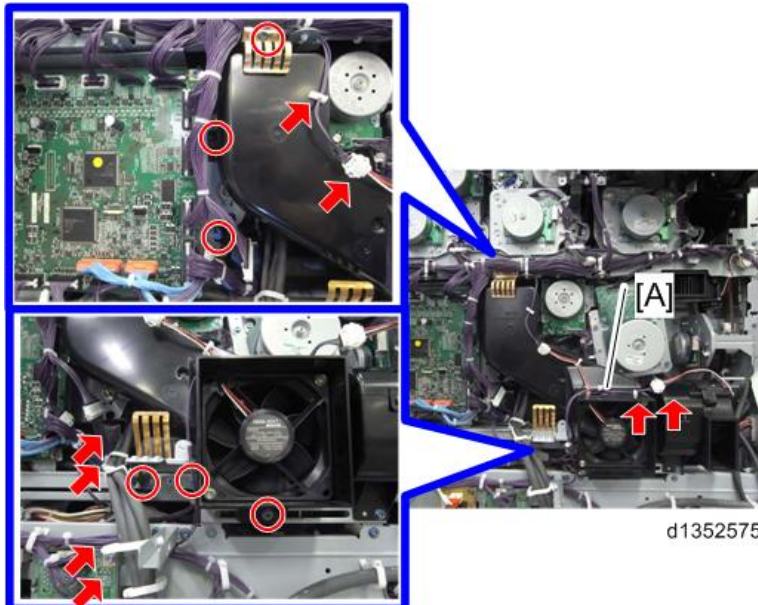
d1352462

2. Open the controller box [A] (⚙️ x 2).



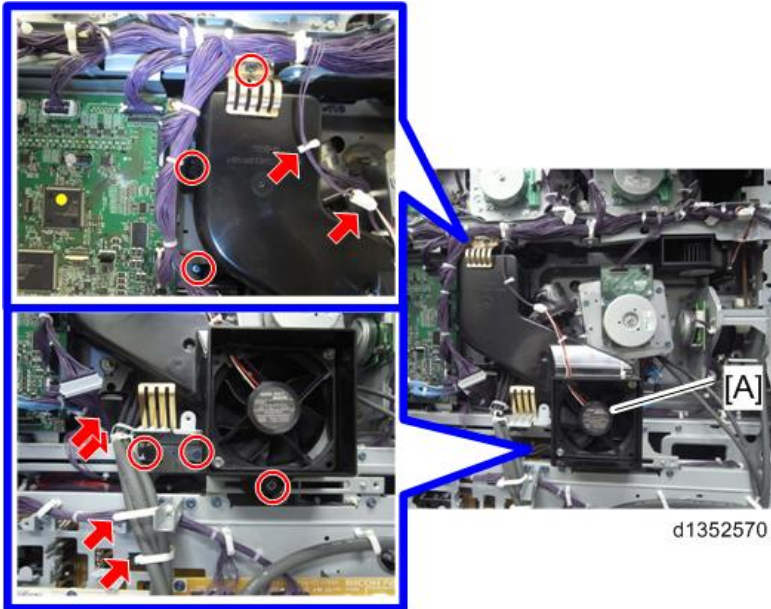
d1352145

3. PTR fusing exhaust fan and the grounding plate [A] along with the duct
D137/D138: ⚙️ x 6, 🛠️ x 2, 🛠️ x 6

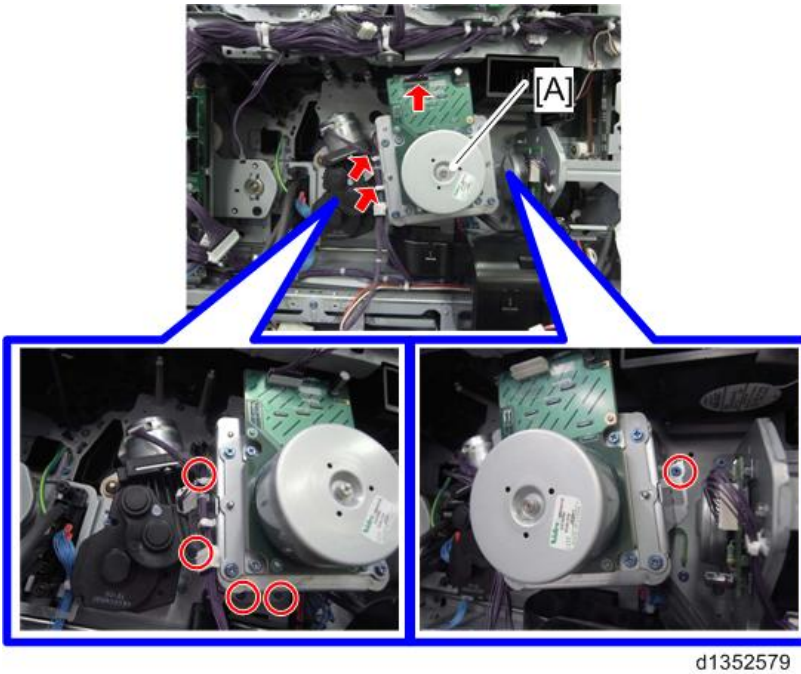


d1352575

- D135/D136: ⚙️ x 6, 🛠️ x 1, 🛠️ x 5



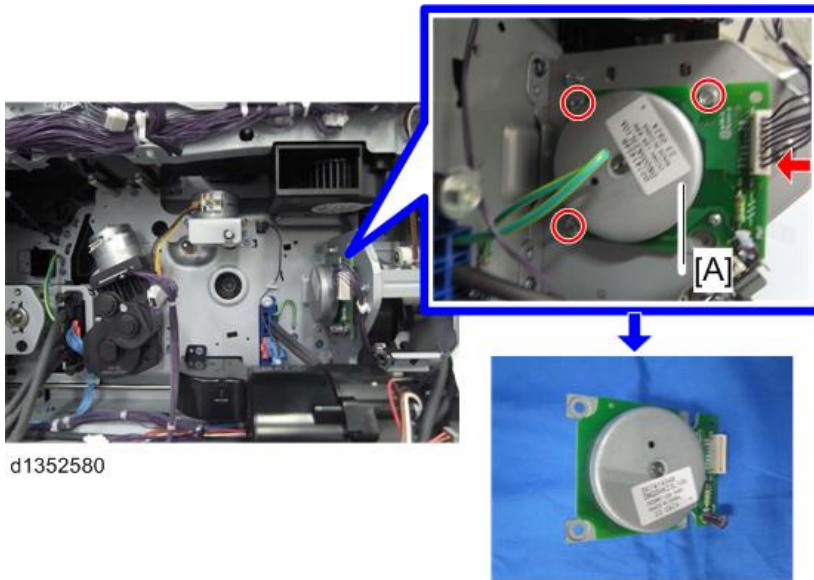
4. Fusing drive motor [A] along with the bracket (🔩 x 5, 🛠️ x 1, 🛠️ x 2).



↓ **Note**

- For D137/D138, in order to remove the fusing drive motor along with the bracket, you must remove the bracket of the fusing belt smoothing roller drive motor. (📄 page 979 "Removing the Fusing Belt Smoothing Roller Drive Motor and the Bracket")

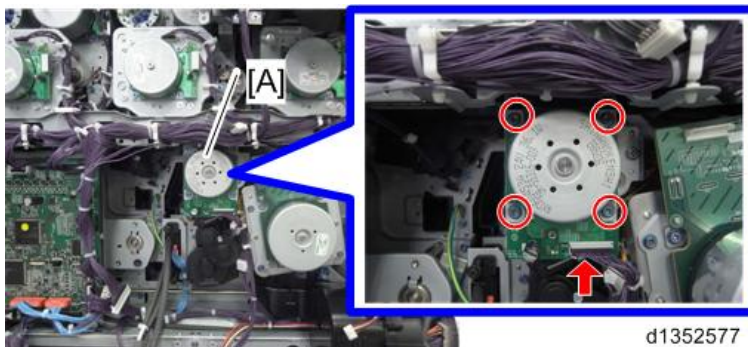
5. Waste toner collection motor [A] (⚙️ x 3, 📡 x 1)



4

Removing the Fusing Belt Smoothing Roller Drive Motor and the Bracket


1. Fusing belt smoothing roller drive motor [A] (⚙️ x 4, 📡 x 1)




2. The bracket [A] of the fusing belt release roller drive motor (⚙️ x 3).



Note

- Access to the bracket [A] of the fusing drive motor is possible. 

Waste Toner Lock Sensor

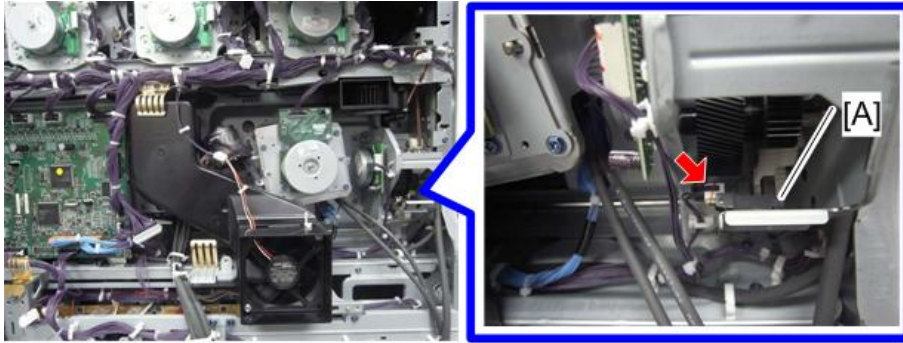
1. Remove the retaining bracket [A] of the controller box which is located at the rear of the machine ( x 2).



2. Open the controller box [A] ( x 2).



3. Waste toner lock sensor [A] ( x 1)



d1352573

Fusing Release Motor

4

1. Remove the retaining bracket [A] of the controller box which is located at the rear of the machine (⚙️ x 2).



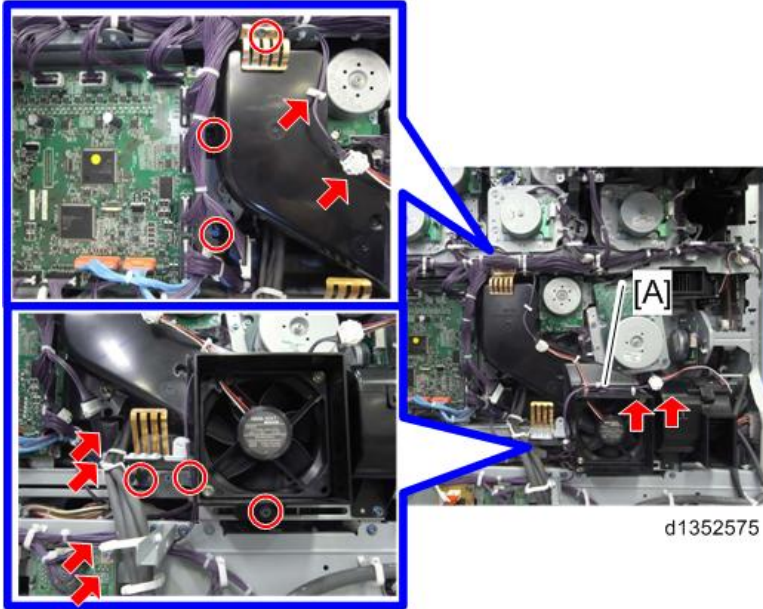
d1352462

2. Open the controller box [A] (⚙️ x 2).

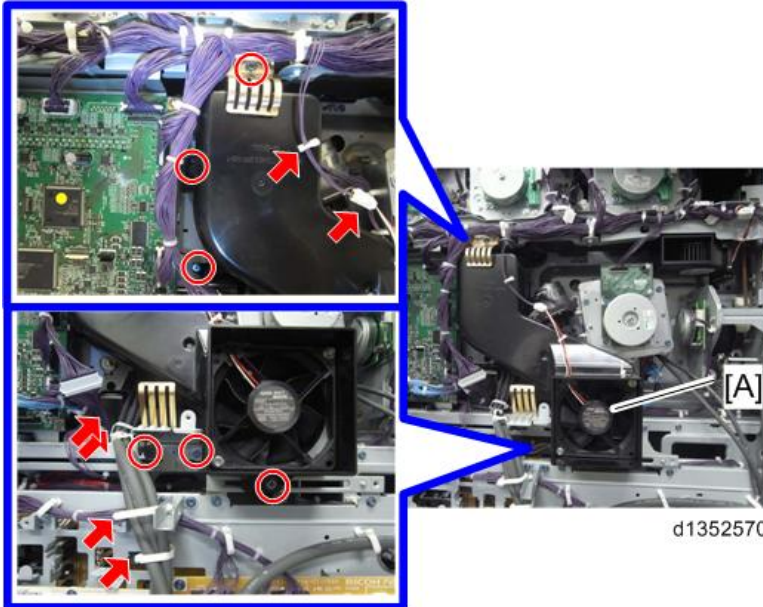


d1352145

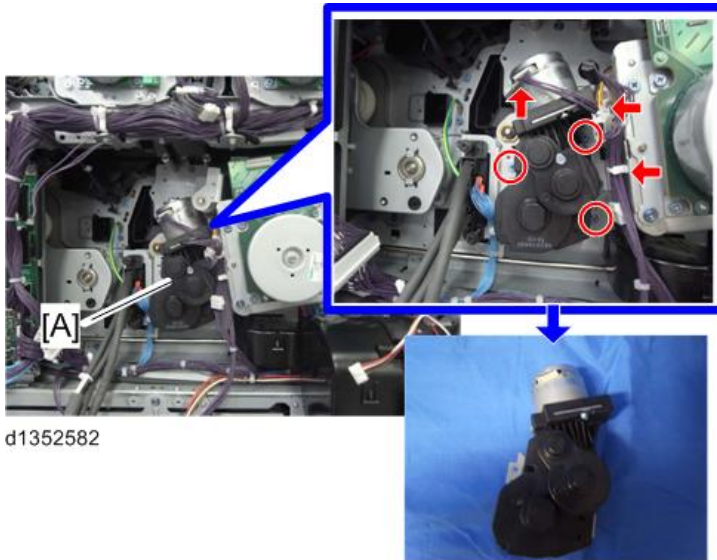
3. PTR fusing exhaust fan and the grounding plate [A] along with the duct
D137/D138: ⚙️ x 6, 📏 x 2, 📏 x 6



D135/D136:  x 6,  x 1,  x 5



4. Fusing release motor [A] ( x 3,  x 1)



d1352582

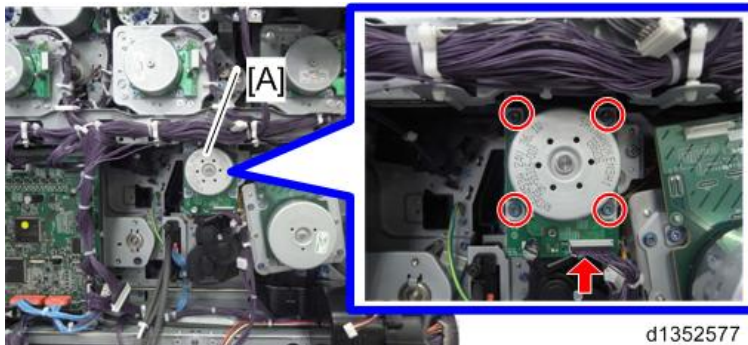
4

Note

- For D137/D138, in order to remove the fusing release motor, you must remove the bracket of the fusing belt smoothing roller drive motor. (☞ page 983 "Removing the Fusing Belt Smoothing Roller Drive Motor and the Bracket")

Removing the Fusing Belt Smoothing Roller Drive Motor and the Bracket

1. Fusing belt smoothing roller drive motor [A] (🔩 x 4, 📌 x 1)



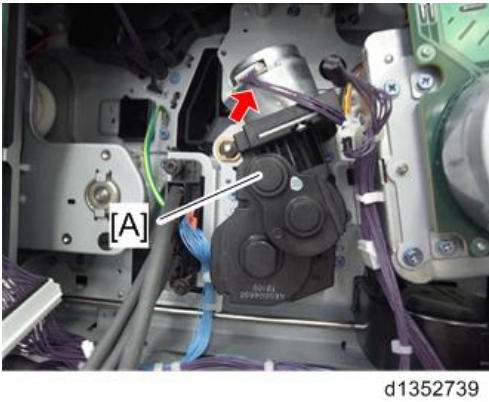
d1352577

2. The bracket [A] of the fusing belt release roller drive motor (🔩 x 3).



Note

- Access to the fusing release motor is possible.



Fusing Belt Smoothing Roller Drive Motor (D137/D138 only)

1. Remove the retaining bracket [A] of the controller box which is located at the rear of the machine (⚙️ x 2).

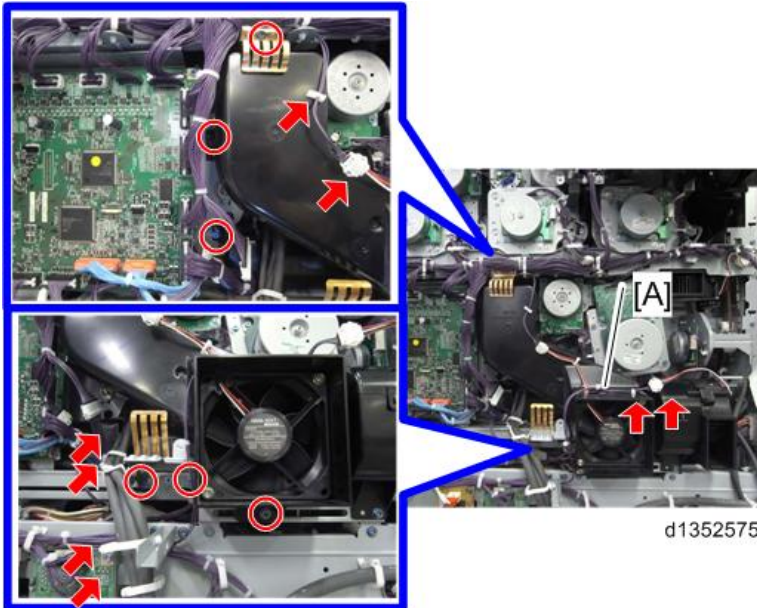


2. Open the controller box [A] (⚙️ x 2).



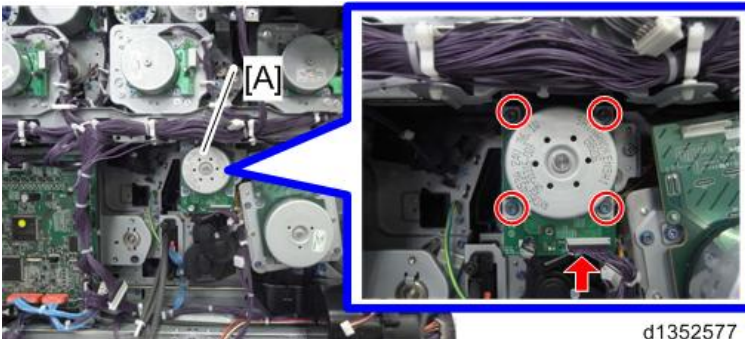
d1352145

3. PTR fusing exhaust fan and the grounding plate [A] along with the duct (🔧 x 6, 📏 x 2, 📦 x 6)



d1352575

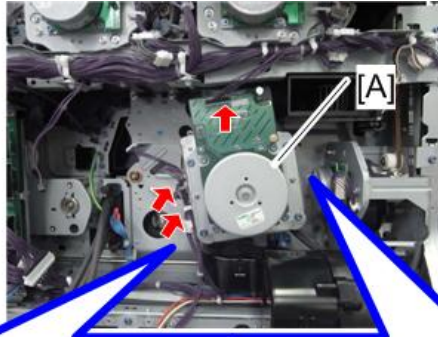
4. Fusing belt smoothing roller drive motor [A] (🔧 x 4, 📏 x 1)



d1352577

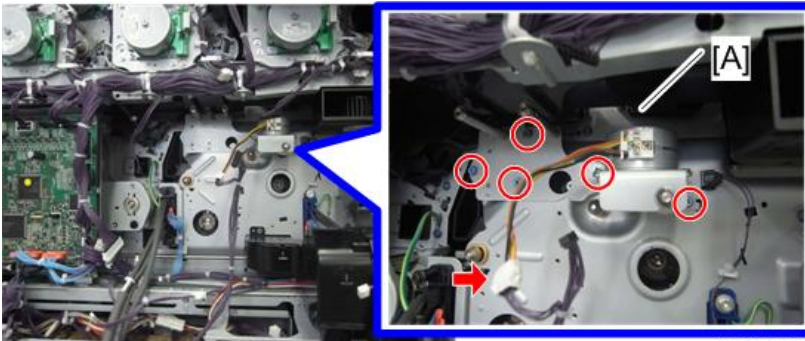
Fusing Belt Smoothing Roller Contact Motor (D137/D138 only)

1. Fusing Release Motor (🔧 page 981)
2. Fusing drive motor [A] along with the bracket (🔧 x 5, 📏 x 1, 📏 x 2)



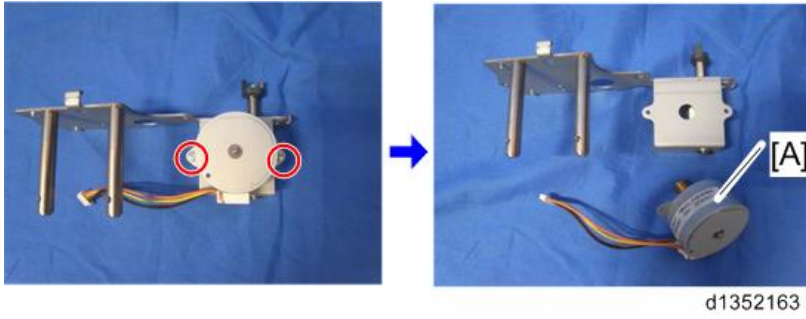
d1352581

3. Fusing belt release roller contact motor [A] along with the bracket (🔧 x 5, 📏 x 1)



d1352162

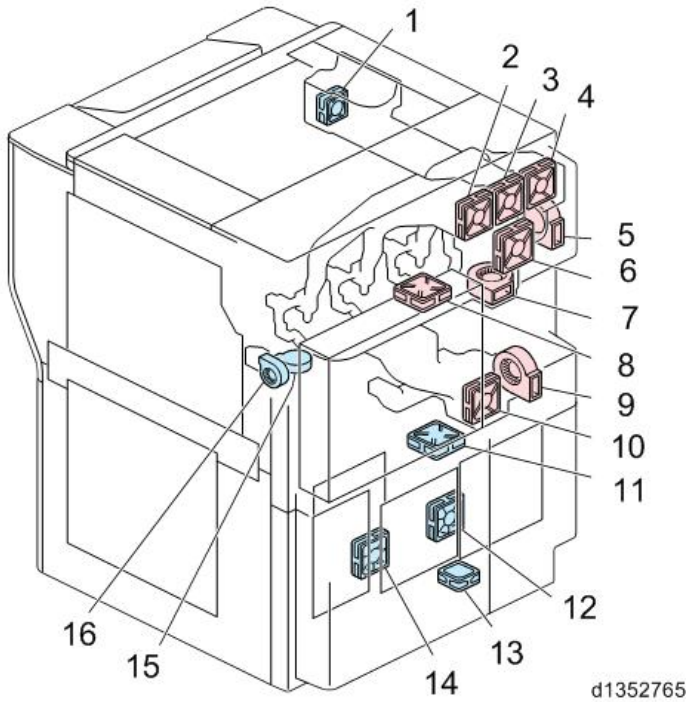
4. Fusing belt release roller contact motor [A] (🔧 x 2)

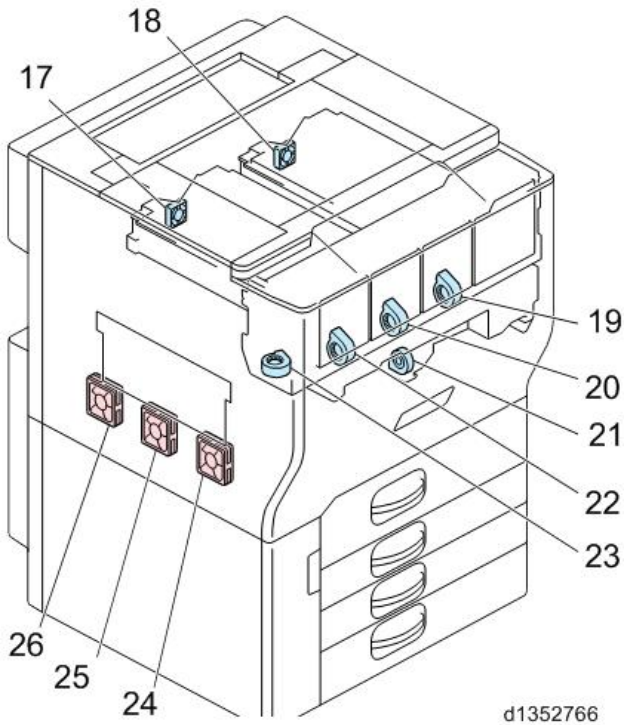


Fans and Filters

Layout (Fans)

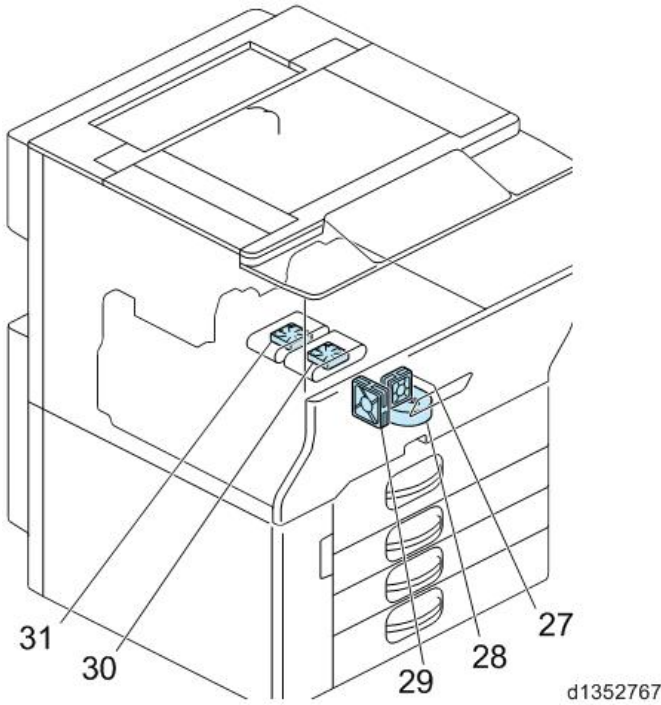
Main Machine (Rear)



Main Machine (Front)













d1352766

Drawer (Inside)

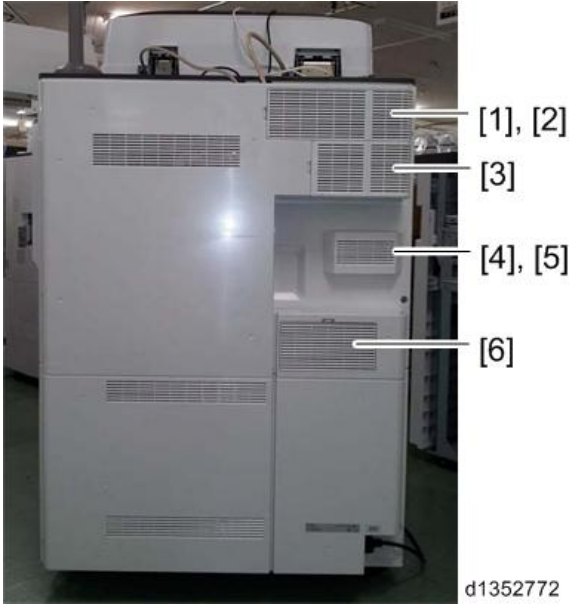


4







No.	Part Name	Replacement procedure	Remarks
1	Heat Pipe Panel Intake Fan	☛ page 1001	
2	Development Exhaust Fan (Right)	☛ page 994	
3	Development Exhaust Fan (Left)	☛ page 994	
4	Heat Pipe Panel Exhaust Fan	☛ page 1000	
5	Fusing Exit Exhaust Fan	☛ page 998	
6	Drive Exhaust Fan	☛ page 998	
7	Ozone Exhaust Fan	☛ page 1005	
8	Controller Exhaust Fan	☛ page 992	
9	Fusing Pressure Roller Exhaust Fan	☛ page 998	D137/D138 only
10	PTR Fusing Exhaust Fan	☛ page 1003	
11	Controller Intake Fan	☛ page 993	

No.	Part Name	Replacement procedure	Remarks
12	PSU Fan (Left)	 page 1010	
13	IH Coil Power Cooling Fan	 page 1007	
14	PSU Fan (Right)	 page 1010	
15	ITB Motor Cooling Fan	 page 1004	
16	ID Sensor Cleaning Fan	 page 1009	
17	Laser Unit Cooling Fan (Left)	 page 677	
18	Laser Unit Cooling Fan (Right)	 page 677	
19	Development Intake Fan (K)	 page 996	
20	Development Intake Fan (C)	 page 996	
21	ITB Cleaning Intake Fan	 page 1008	
22	Development Intake Fan (M)	 page 996	
23	Development Intake Fan (Y)	 page 996	
24	Duplex Exhaust Fan (Front)	 page 1006	
25	Duplex Exhaust Fan (Middle)	 page 1006	
26	Duplex Exhaust Fan (Rear)	 page 1006	
27	IH Coil Cooling Fan	 page 1007	
28	Fusing Pressure Roller Intake Fan	 page 621	D137/D138 only
29	Fusing Heat Pipe Cooling Fan	 page 618	
30	PTB Fan (Front)	 page 815	
31	PTB Fan (Rear)	 page 815	




Layout (Filters)

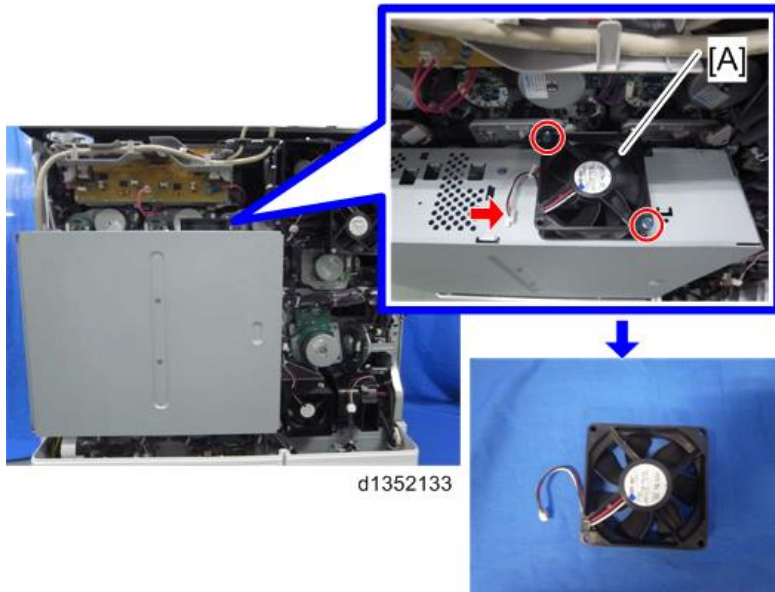


4

No.	Part Name	Replacement procedure	Remarks
1	Dust Filter (Large)	 page 1012	
2	Ozone Filter (Large)	 page 1013	
3	Deodorizing Filter (Small)	 page 1011	
4	Dust Filter (Small)	 page 1012	
5	Ozone Filter (Small)	 page 1013	
6	Deodorizing Filter (Large)	 page 1011	

Controller Exhaust Fan

1. Rear middle cover ( page 537)
2. Controller exhaust fan [A] ( x 2,  x 1)



Controller Intake Fan

1. Rear middle cover (🔧 page 537)
2. Remove the retaining bracket [A] of the controller box which is located at the rear of the machine (🔧 x 2).

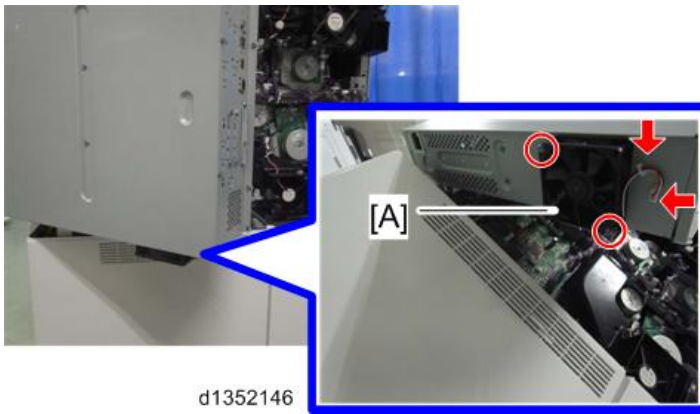


3. Open the controller box [A] (🔧 x 2).



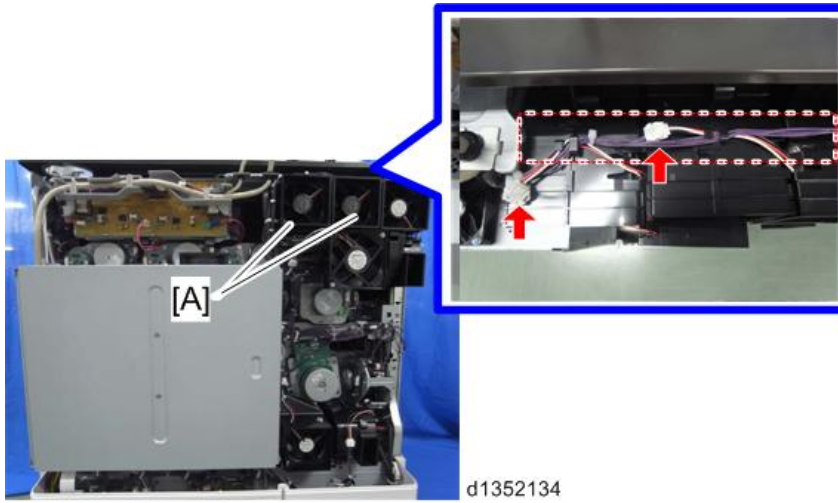
4. Controller intake fan [A] (🔧 x 1, 📡 x 1)

4

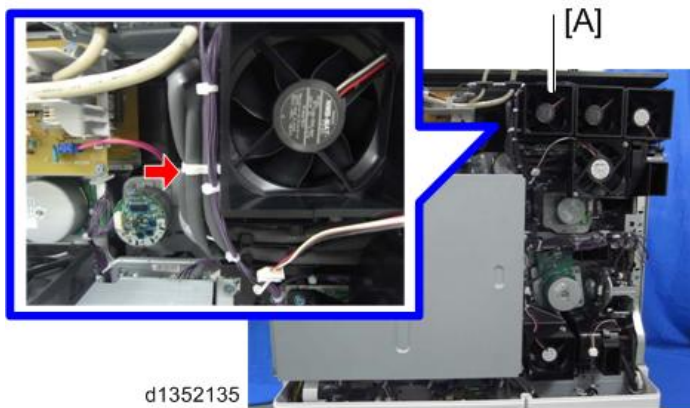


Development Exhaust Fans (Right / Left)

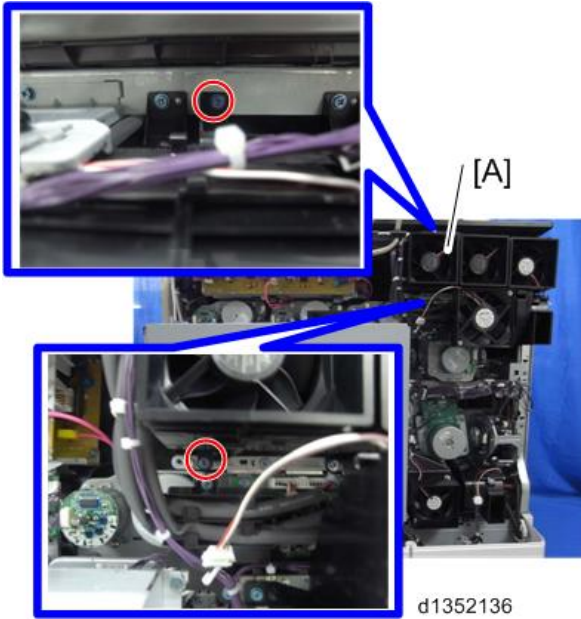
1. Rear middle cover (🔧 page 537)
2. Disconnect the harness to remove the development exhaust fans [A] along with the duct (📡 x 1 each)



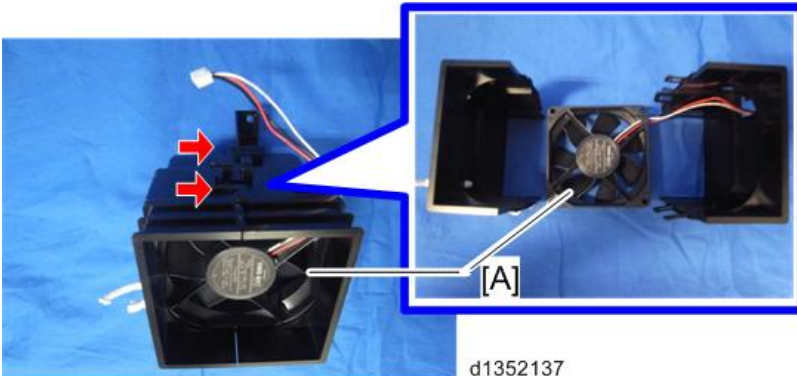
3. Disconnect the left clamp to remove the development exhaust fan (right) [A] (🔧 x 1).



4. Development exhaust fans (Right / Left) [A] along with the duct (🔧 x 2 each)
e.g.: Development exhaust fan (right)

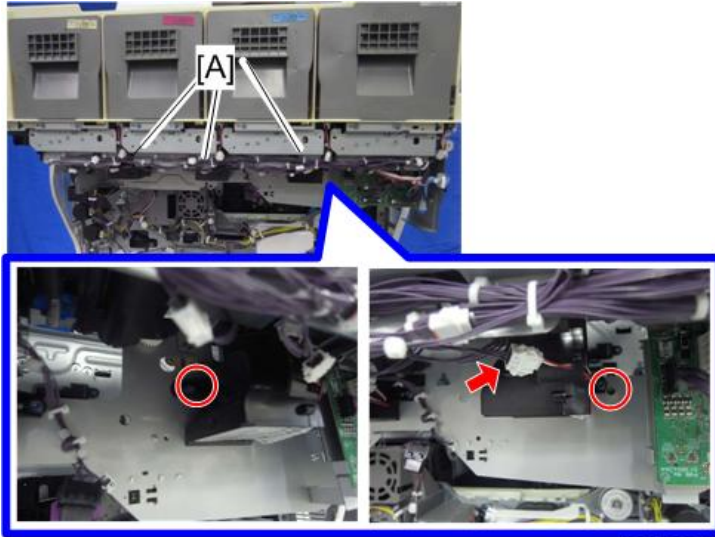


5. Remove the hooks and take out the development exhaust fans (right / left) [A]
e.g.: Development exhaust fan (right)



Development Intake Fans (KCMY)

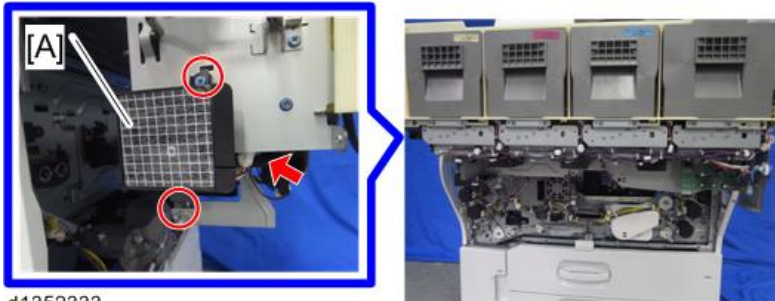
1. Toner supply unit inner cover (📄 page 628)
2. Development intake fans (KCM) [A] (🔧 x 2 each, 📄 x 1 each)



d1352331

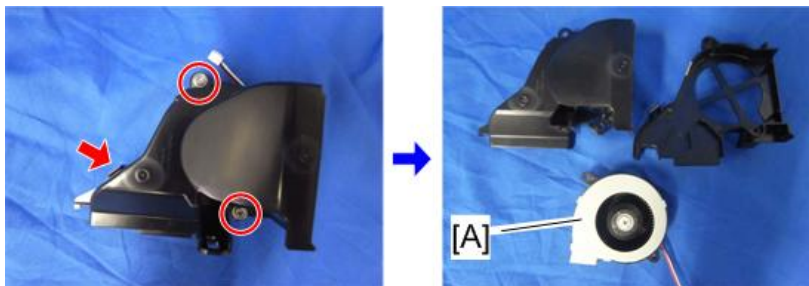
Note

- Development intake fan (Y) [A] from the right side (🔧 x 2, 📏 x 1)



d1352333

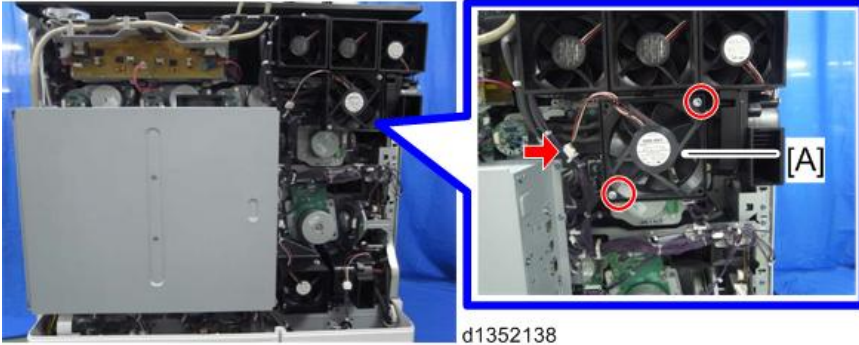
3. Development intake fan (🔧 x2, hook x 1)



d1352332

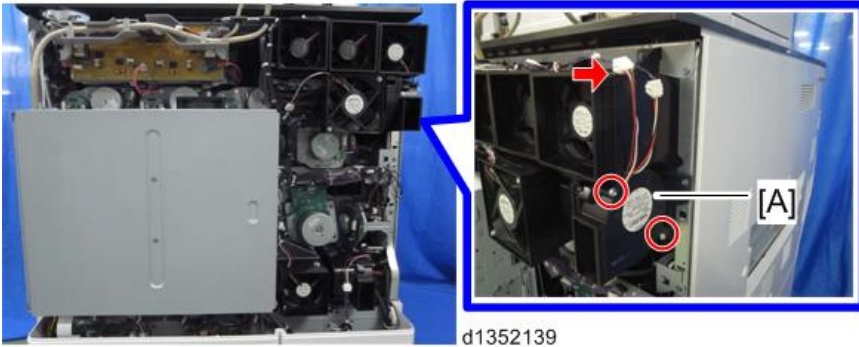
Drive Exhaust Fan

1. Rear middle cover (🔑 page 537)
2. Drive exhaust fan [A] (🔧 x 2, 📏 x 1)



Fusing Exit Exhaust Fan

1. Rear middle cover (🔑 page 537)
2. Fusing exit exhaust fan [A] (🔧 x 2, 📏 x 1)



Fusing Pressure Roller Exhaust Fan (D137/D138 only)

1. Rear middle cover (🔑 page 537)
2. Rear lower cover (🔑 page 538)
3. Remove the retaining bracket [A] of the controller box which is located at the rear of the machine (🔧 x 2).



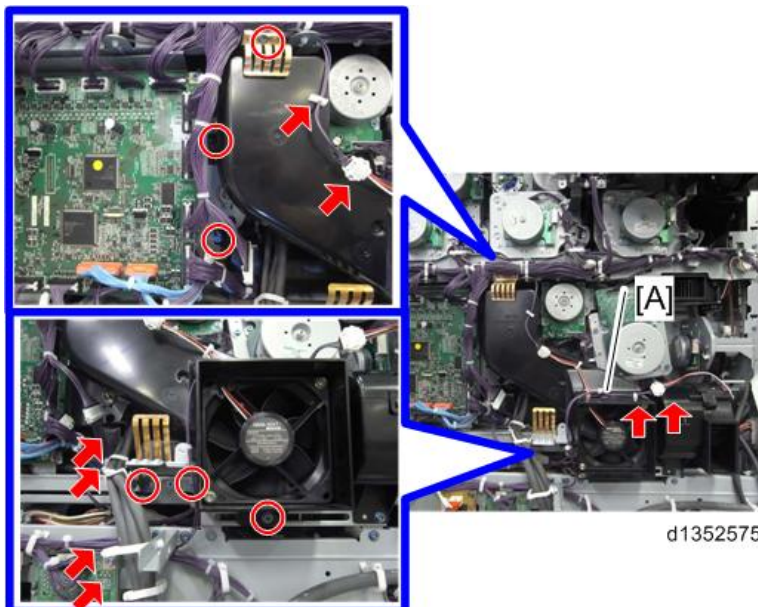
d1352462

4. Open the controller box [A] (🔧 x 2).



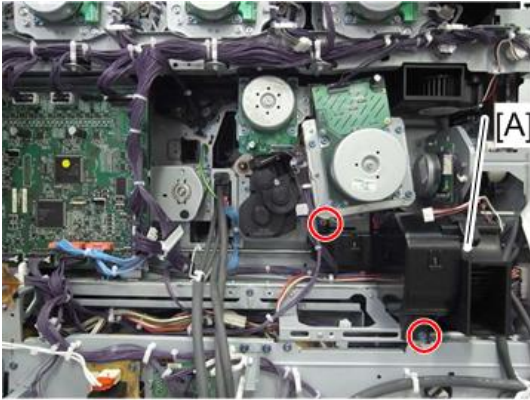
d1352145

5. Remove the PTR fusing exhaust fan [A] and the grounding plate along with the duct (🔧 x 6, 📏 x 2, 📏 x 6).



d1352575

6. Fusing pressure roller exhaust fan [A] along with the duct (🔧 x 2, 📏 x 1)



d1352148

4

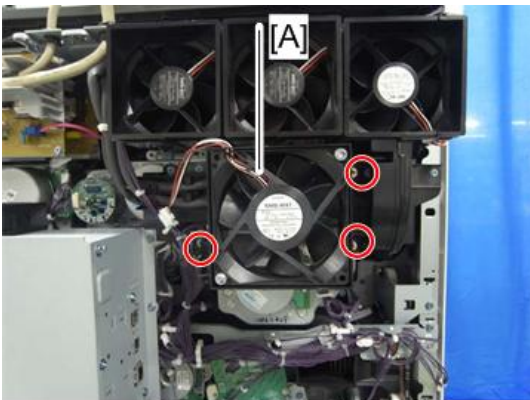
7. Fusing pressure roller exhaust fan [A] (🔧 x 2, 📏 x 1)



d1352149

Heat Pipe Panel Exhaust Fan

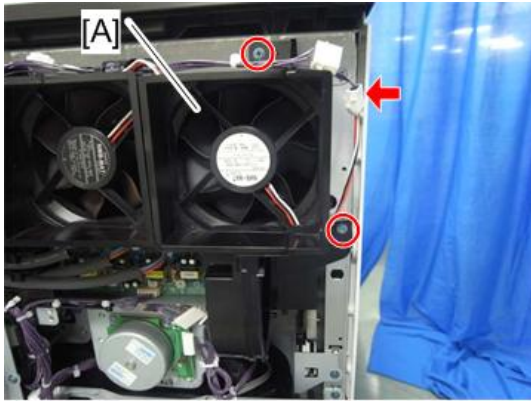
1. Rear middle cover (🔧 page 537)
2. Drive exhaust fan [A] along with the duct (🔧 x 3)



d1352141

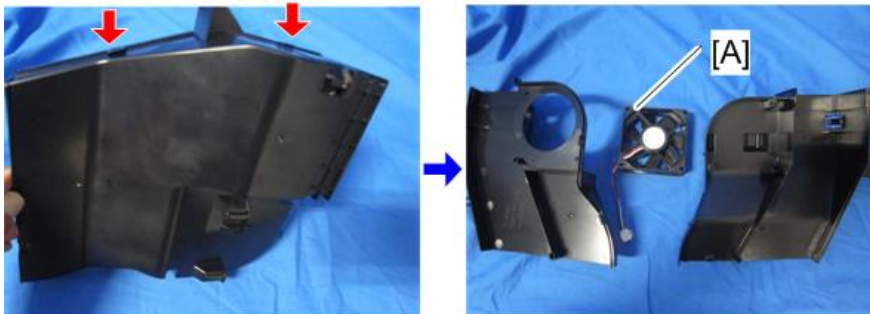
3. Fusing exit exhaust fan (🔧 page 998)

4. Heat pipe panel exhaust fan [A] along with the duct (🔧 x 2, 📏 x 1)



d1352142

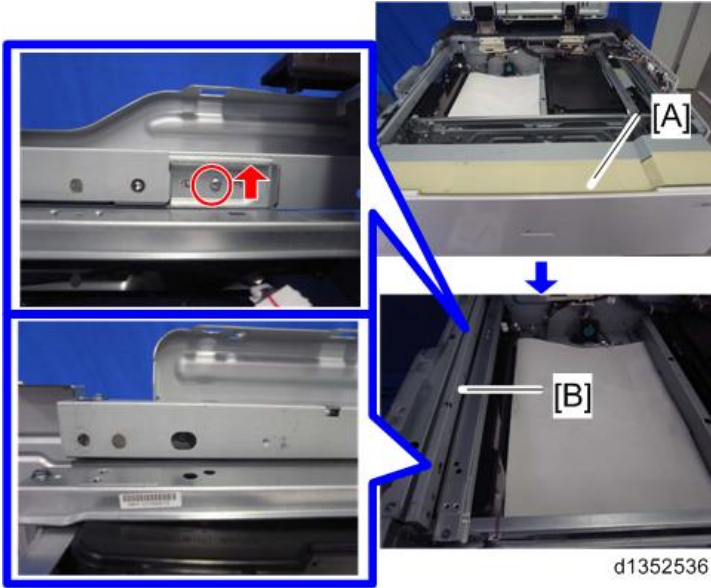
5. Remove the hooks and take out the heat pipe panel exhaust fan [A].



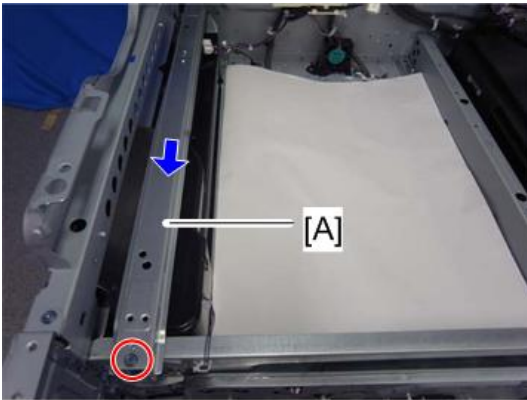
d1352143

Heat Pipe Panel Intake Fan

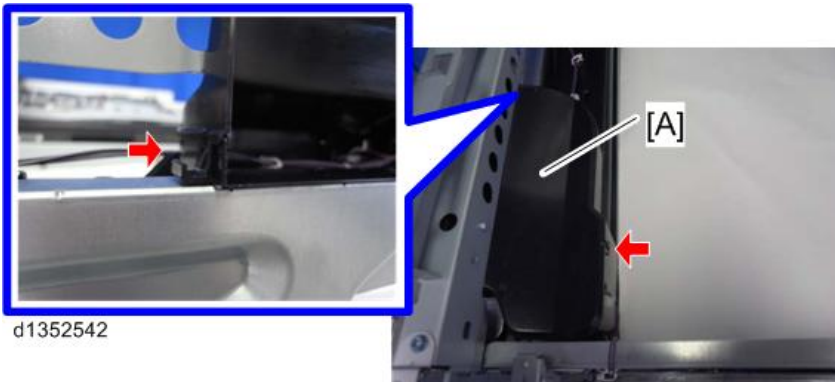
1. Left middle cover (🔧 page 532)
2. PCDU (🔧 page 681)
3. Remove the toner supply unit [A] and remove the left slide stay [B] (🔧 x 2).



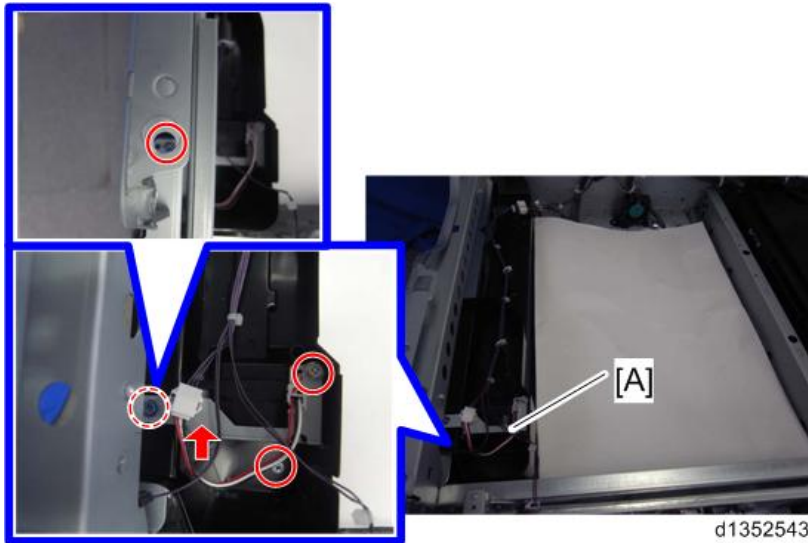
4. Stay [A] (hook x 1)



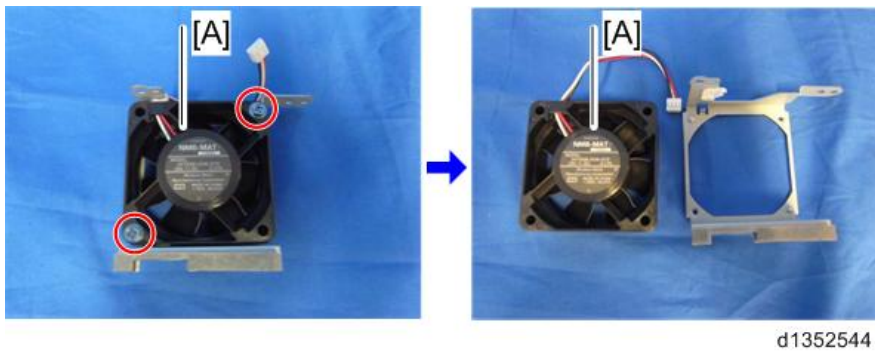
5. Duct [A] (hook x 2)



6. Heat pipe panel intake fan [A] along with the bracket (🔩 x 3, 📏 x 1)

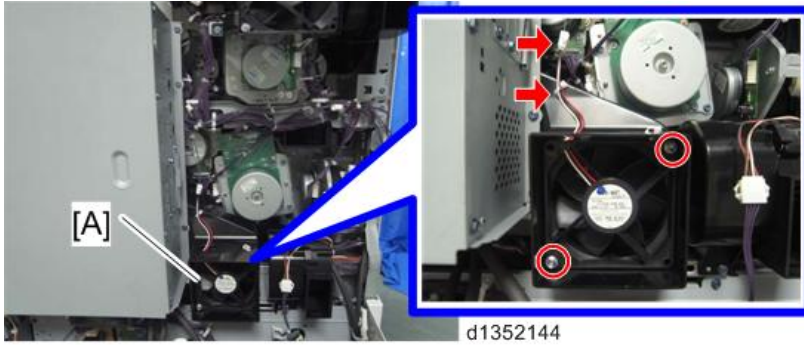


7. Heat pipe panel intake fan [A] (🔩 x 2)



PTR Fusing Exhaust Fan

1. Rear middle cover (📄 page 537)
2. PTR fusing exhaust fan [A] (🔩 x 2, 📏 x 1, 📏 x 1)



4

ITB Motor Cooling Fan

1. Rear middle cover (🔧 page 537)
2. Remove the retaining bracket [A] of the controller box which is located at the rear of the machine (🔧 x 2).



3. Open the controller box [A] (🔧 x 2).



4. ITB motor cooling fan [A] along with the bracket (🔧 x 2, 📏 x 1)



5. ITB motor cooling fan [A] (🔧 x 2, 🛠️ x 1)



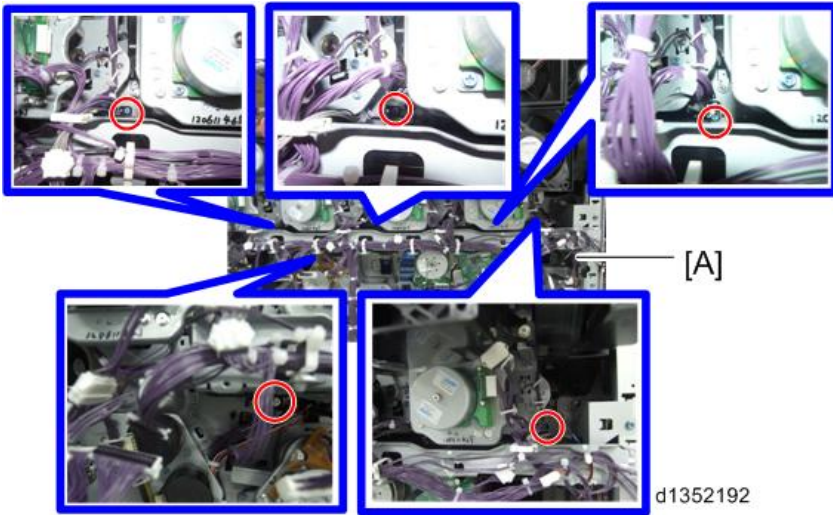
4

Ozone Exhaust Fan

1. Frame [A] (🔧 x 1, all 🛠️s, all 🛠️s)

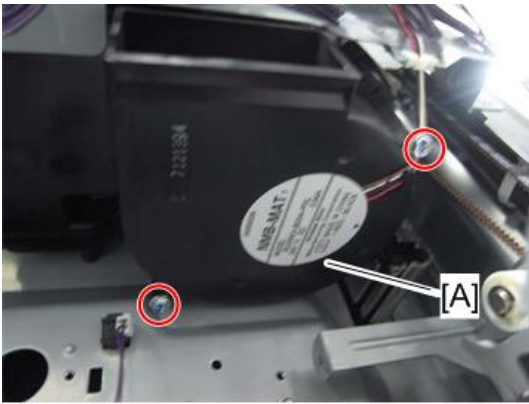


2. Ozone exhaust fan [A] along with the duct (🔧 x 5)



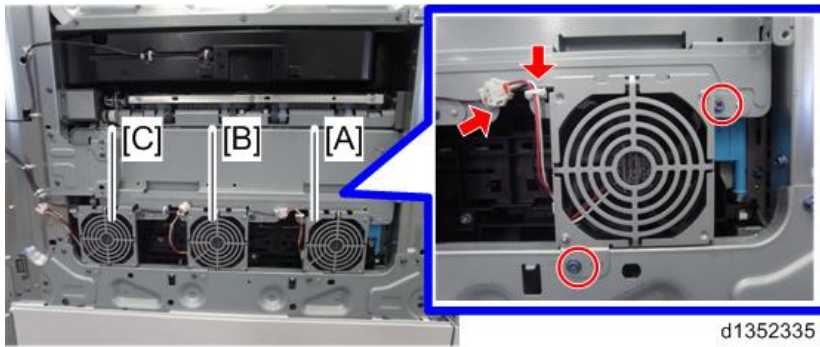
4

3. Ozone exhaust fan [A] (🔩 x 2, 🛠️ x 1)



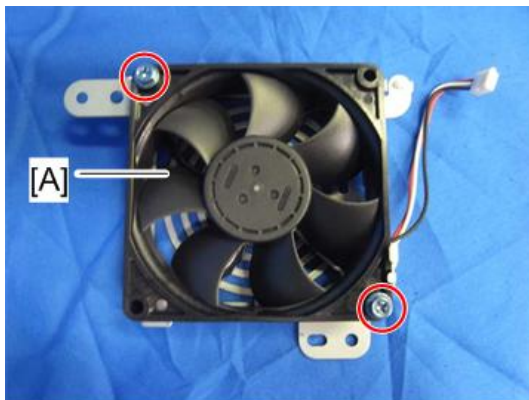
Duplex Exhaust Fans (Front / Middle / Rear)

1. Left middle cover (🔩 page 532)
2. Duplex exhaust fan (front) [A], duplex exhaust fan (middle) [B] and duplex exhaust fan (rear) [C] along with the duct (🔩 x 2, 🛠️ x 1, 🛠️ x 1)



d1352335

3. Duplex exhaust fans [A] (hook x 2)

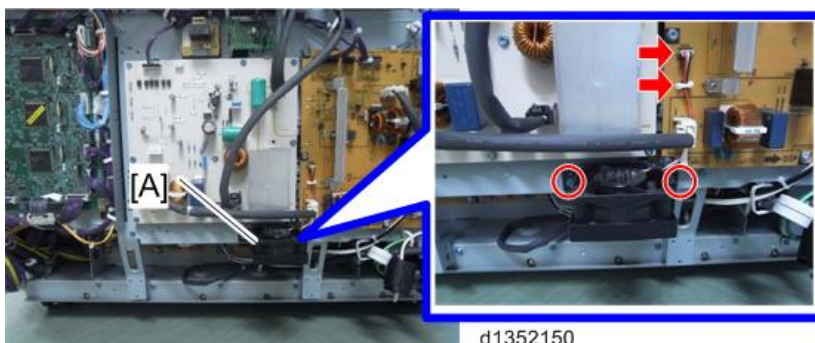


d1352336

4

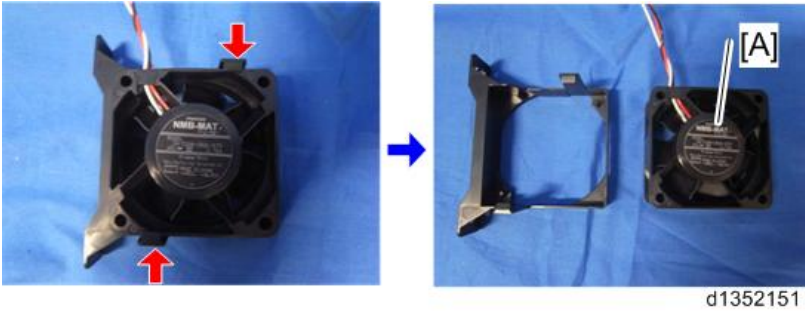
IH Coil Power Cooling Fan

1. Rear middle cover (🔧 page 537)
2. Rear lower cover (🔧 page 538)
3. IH coil power cooling fan [A] along with the bracket (hook x 2, screw x 1, screw x 1)



d1352150

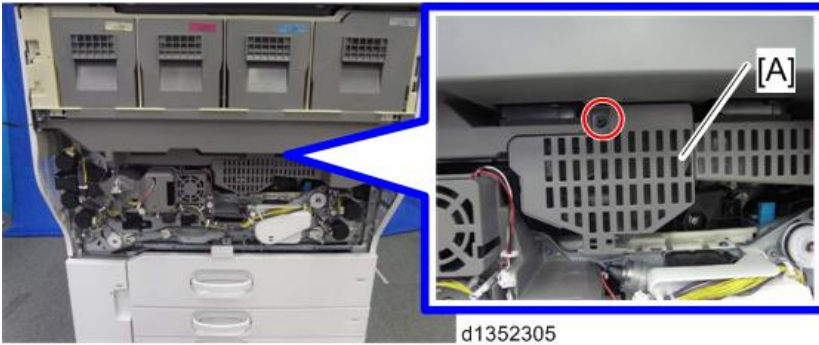
4. IH coil power cooling fan [A] (hook x 2)



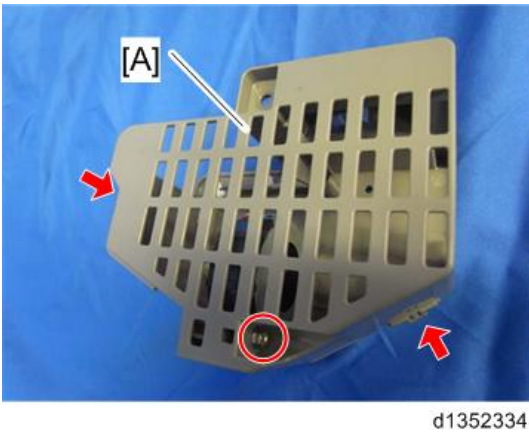
ITB Cleaning Intake Fan

4

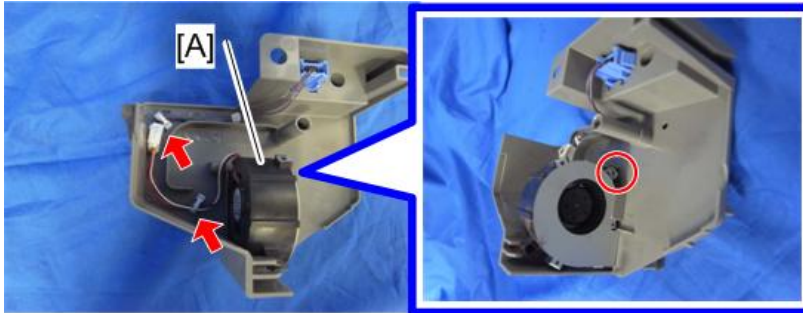
1. Drawer unit cover (☛ page 594)
2. ITB cleaning intake fan [A] along with the duct (☛ x 1)



3. Cover [A] (☛ x 1, hook x 2)



4. ITB cleaning intake fan [A] (☛ x 1, ☛ x 1, ☛ x 1)

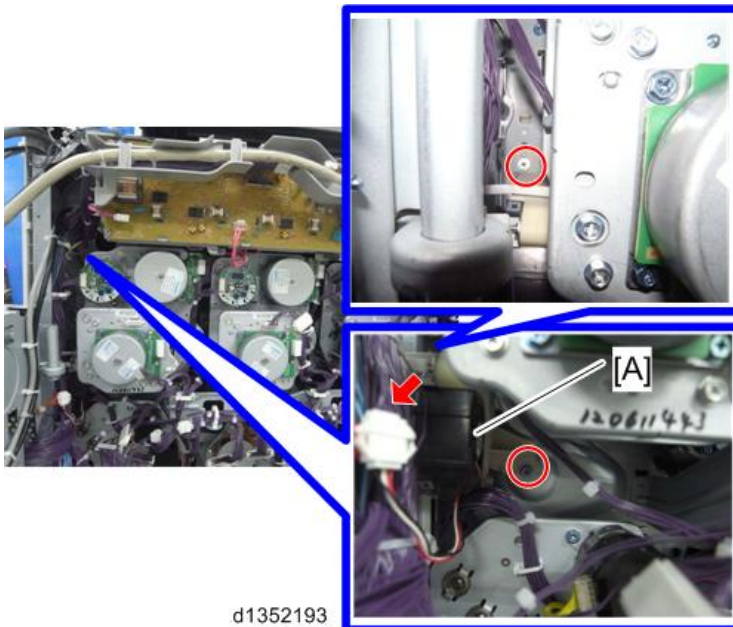


d1352593

ID Sensor Cleaning Fan

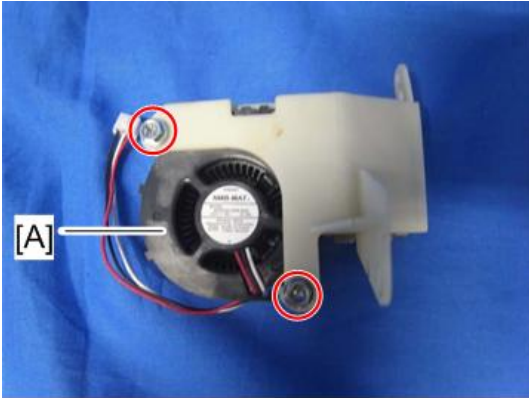
4

1. Rear middle cover (☛ page 537)
2. ID sensor cleaning fan [A] along with the bracket (🔩 x 2, 📦 x 1)



d1352193

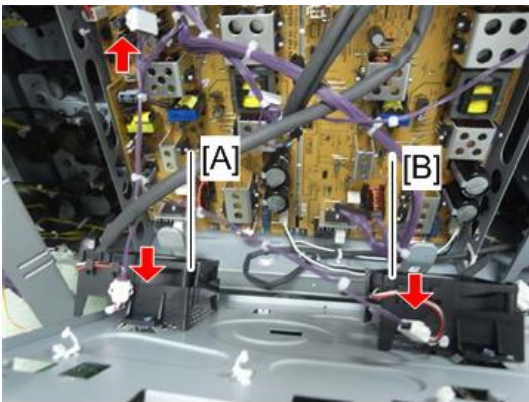
3. ID sensor cleaning fan [A] (🔩 x 2)



d1352194

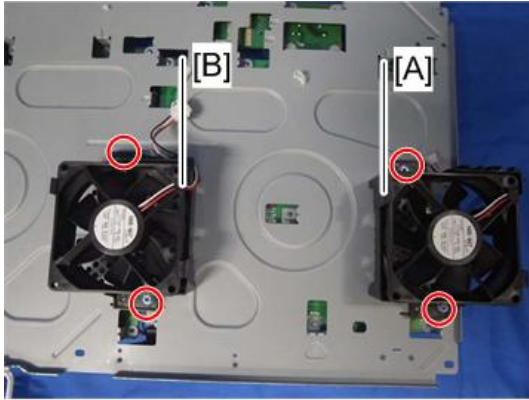
PSU Fans (Right / Left)

1. PSU 1 (👉 page 943)
2. Disconnect the connectors (x 3) of the PSU fan (right) [A] and PSU fan (left) [B] at the back of the PSU 1.



d1352166

3. PSU fan (right) [A] and PSU fan (left) [B] (🔧 x 2 each)



d1352167

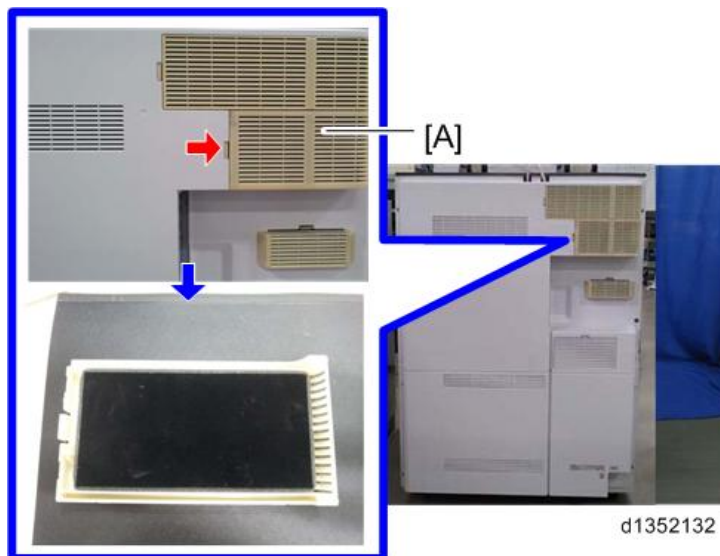
Deodorizing Filters (Large / Small)

1. Deodorizing filter (large) [A]



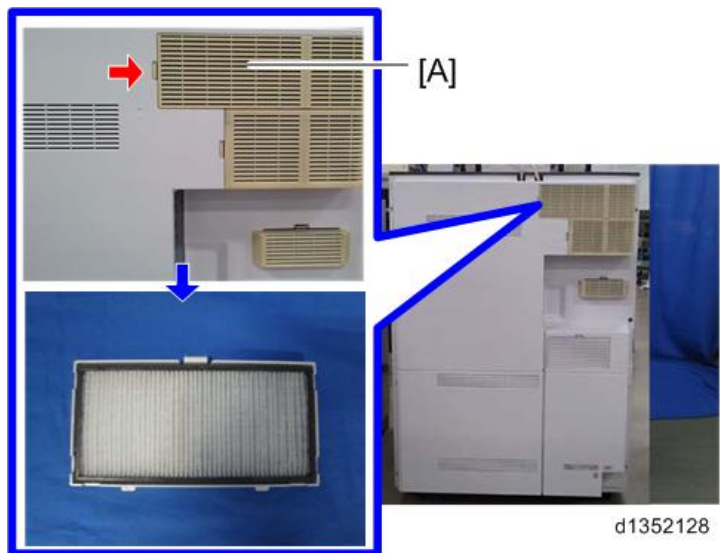
d1352131

2. Deodorizing filter (small) [A]

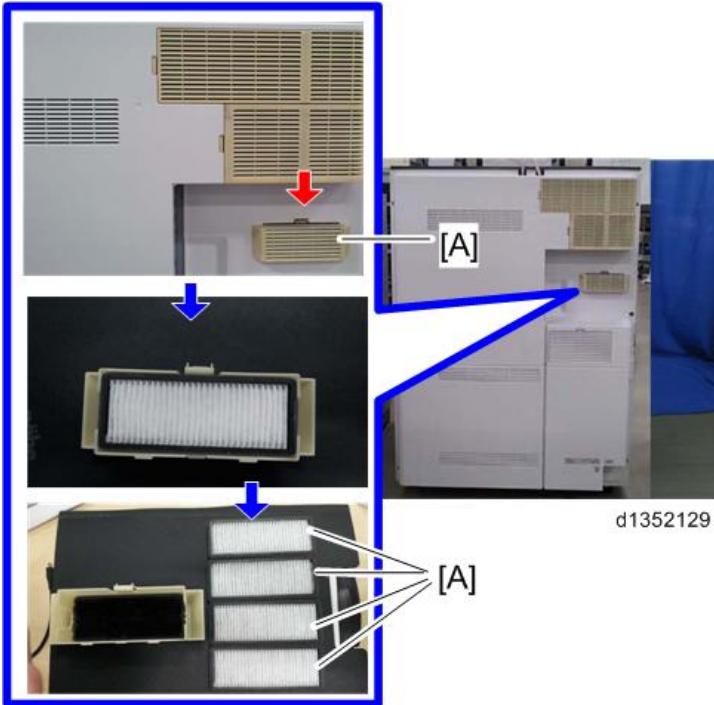


Dust Filters (Large / Small)

1. Dust filter (large) [A]

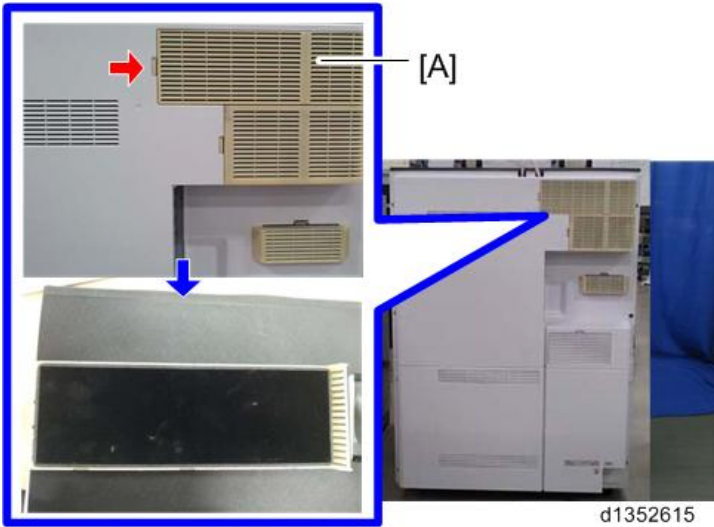


2. Dust filter (small) [A]

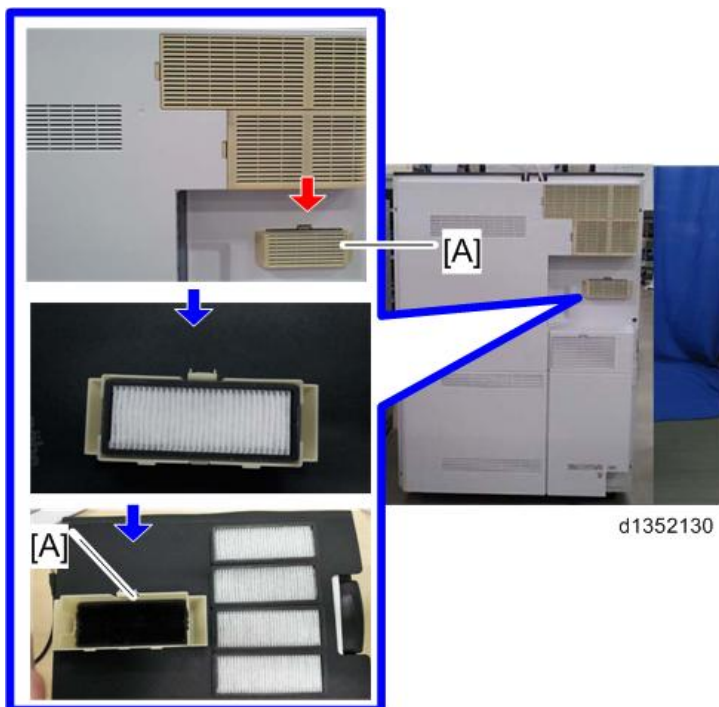


Ozone Filters (Large / Small)

1. Ozone filter (large) [A]



2. Ozone filter (small) [A]



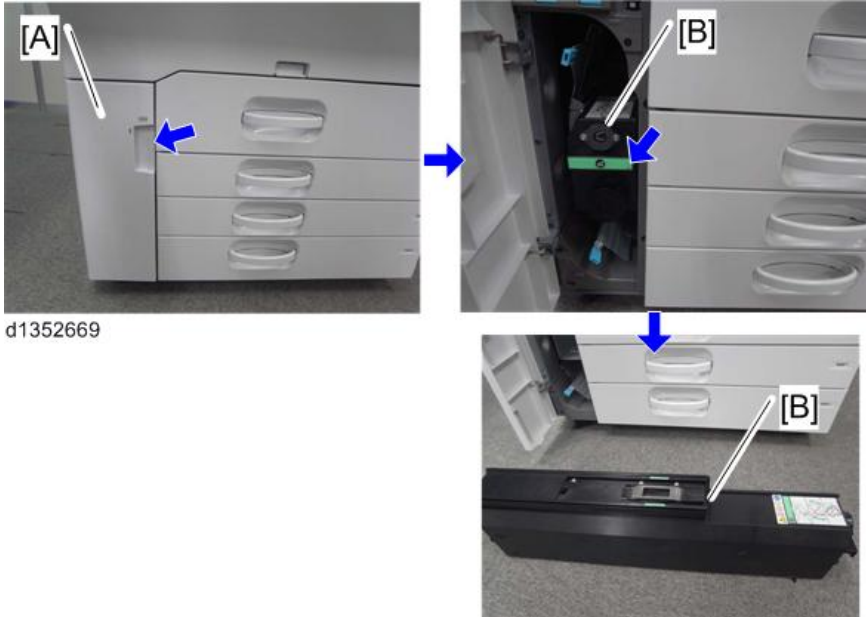
d1352130

Waste Toner Collection

D137 RTB 94
Procedure
modified

Waste Toner Bottle

1. Open the waste toner bottle door [A] and take out the waste toner bottle [B], holding the bottle at the decal location.



d1352669

⚠ CAUTION

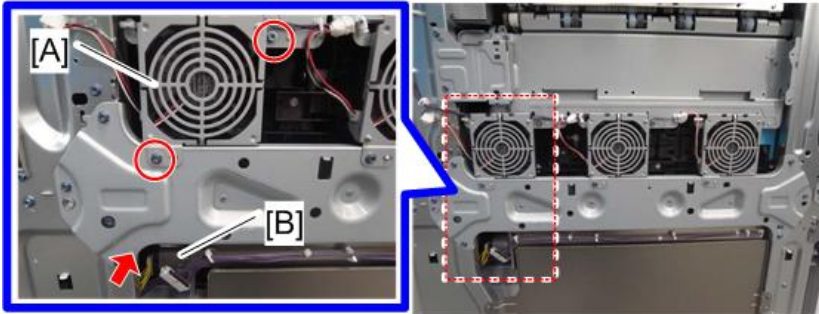
- To prevent the waste toner from spilling from the rear side [A], do not incline the bottle to the rear direction when replacing the waste toner bottle.



d1352817

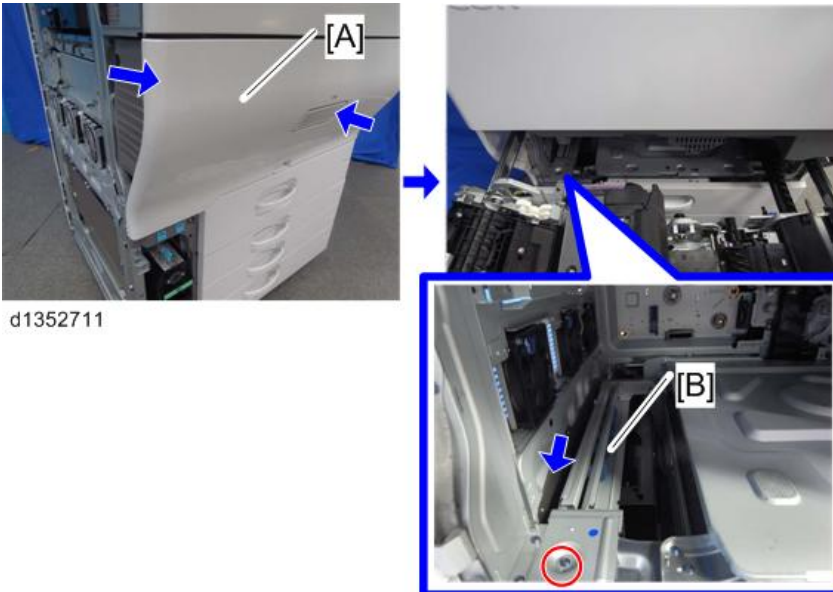
Waste Toner Bottle Unit

1. Left cover (☛ page 532)
2. Rear cover (☛ page 537)
3. Remove the fixing screws (x 2) of the duplex exhaust fan (rear) [A] and disconnect the connector of the duplex inverter motor [B].



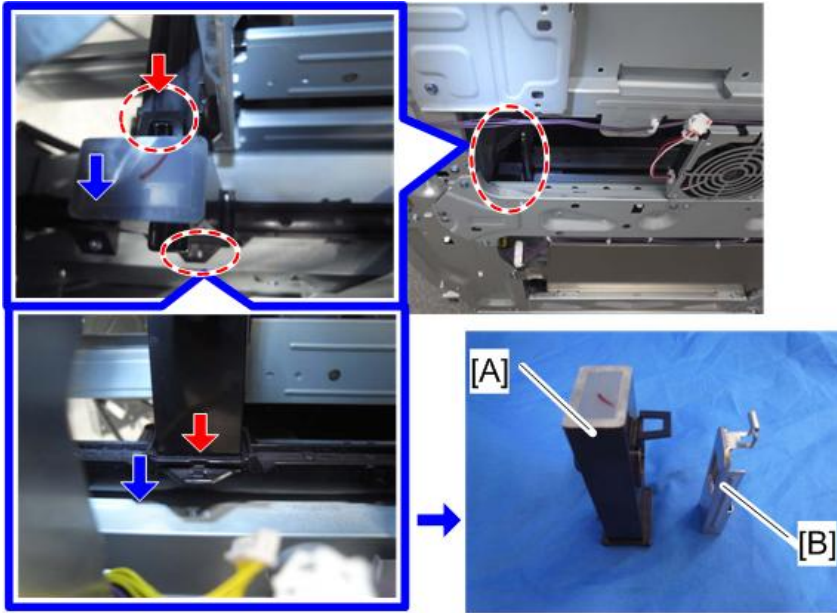
d1352712

4. Open the drawer unit [A] and remove the duplex inverter motor unit [B].



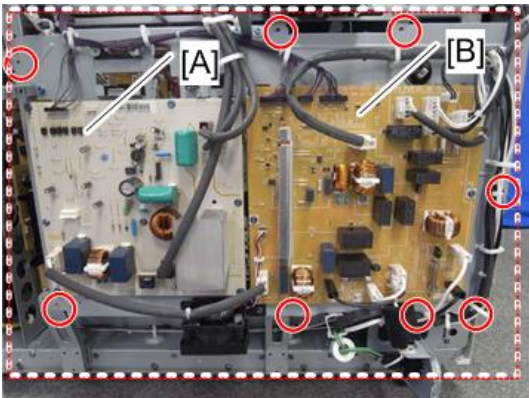
d1352711

5. Pull out the relay duct [A] with swinging plate [B].



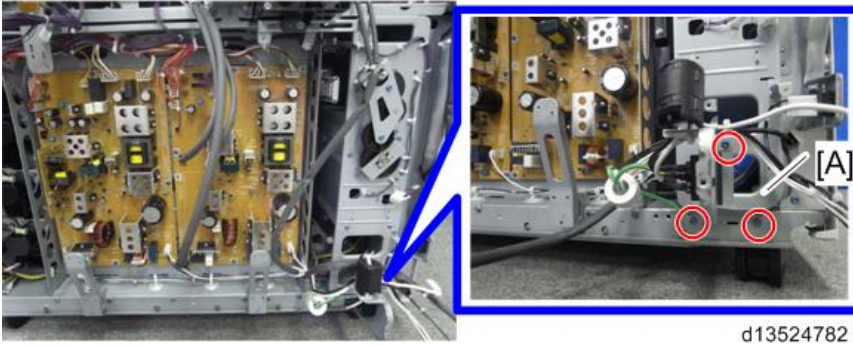
d1352713

6. IH inverter [A] and AC drive board [B] along with the bracket (🔩 x 8, all ⚙️s, all 📡s)



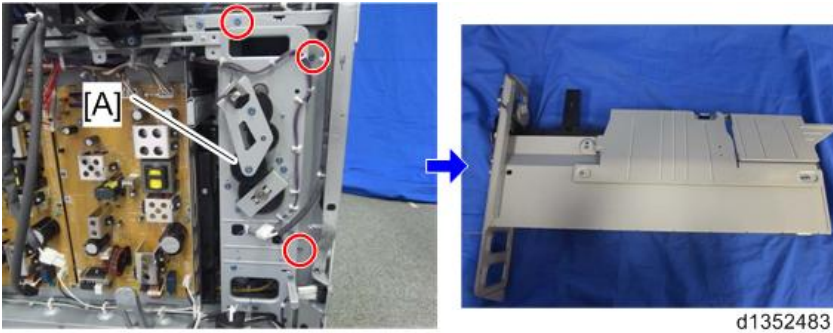
d1352477

7. Bracket [A] (🔩 x 3)



8. Waste toner bottle unit [A]

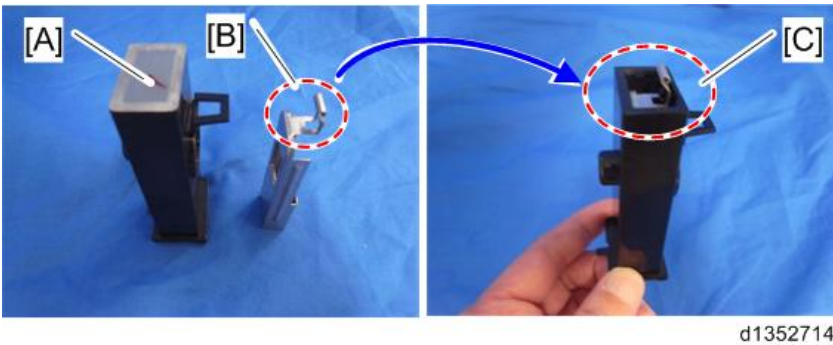
4



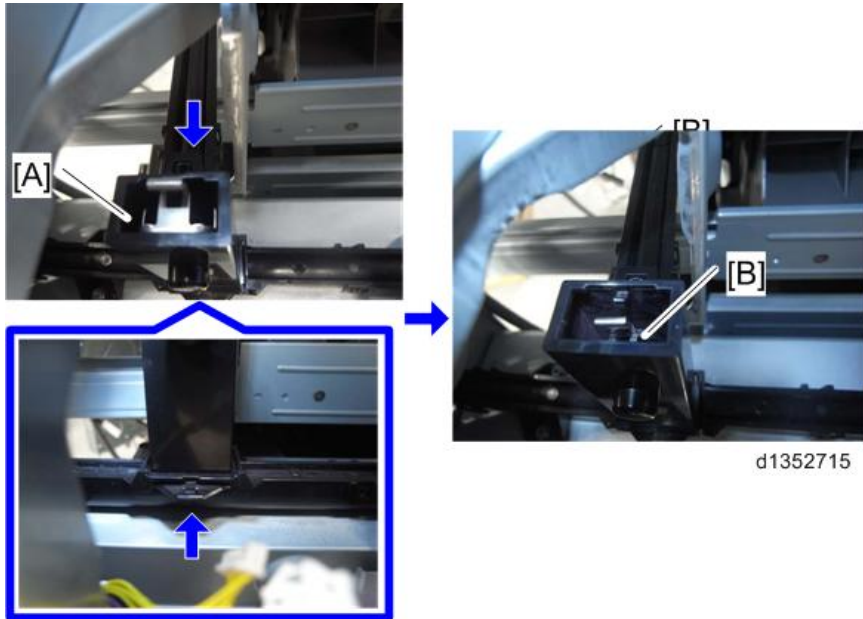
Installing the Relay Duct

Install the relay duct and swinging plate using the following procedure.

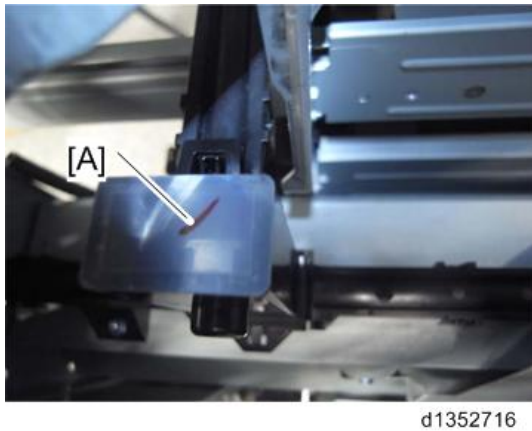
1. Remove the relay duct seal [A] and hook the cutout [B] onto the relay duct [C].



2. Attach the relay duct [A] to the waste toner bottle unit and drop the swinging plate [B] in the unit.

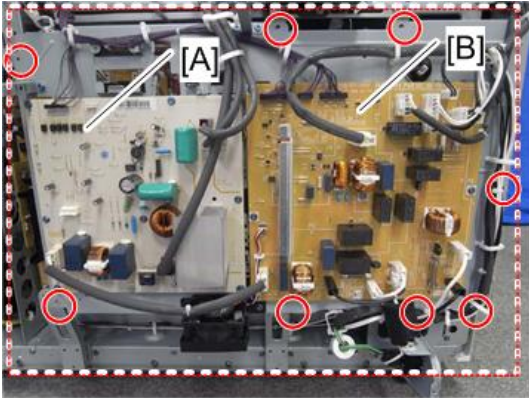


3. Clean the attachment surface with alcohol and attach a seal [A].



Waste Toner Bottle Motor Sensor

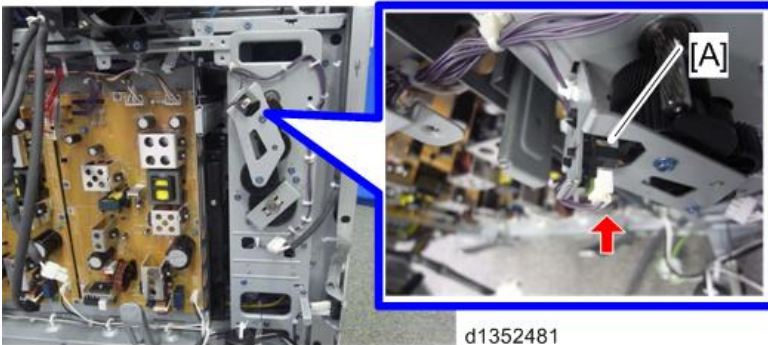
1. Rear middle cover and rear lower cover (🔧 page 537 "Rear Cover")
2. IH inverter [A] and AC drive board [B] along with the bracket (🔧 x 8, all 📏s, all 📏s)



d1352477

4

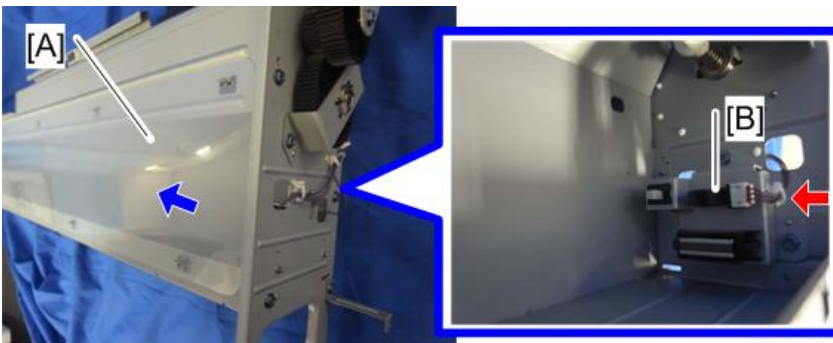
3. Waste toner bottle motor sensor [A] (🔧 x 1)



d1352481

Waste Toner Full Sensor

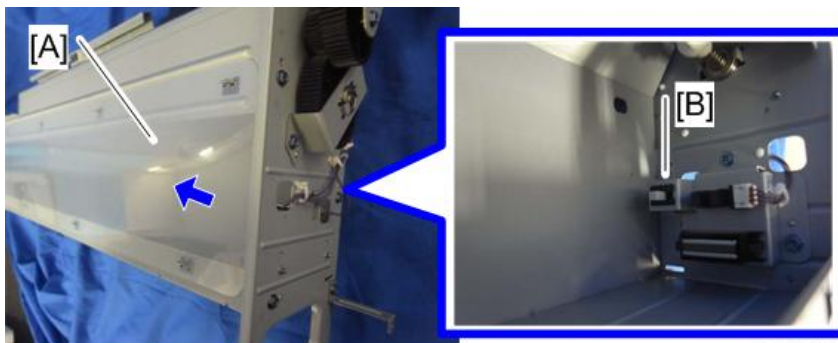
1. Waste toner bottle unit (🔧 page 1016)
2. Remove the cover [A] and remove the waste toner full sensor [B] (🔧 x 1).



d1352484

Waste Toner Bottle Set Sensor

1. Waste toner bottle unit (☛ page 1016)
2. Remove the cover [A] and remove the waste toner bottle set sensor [B].

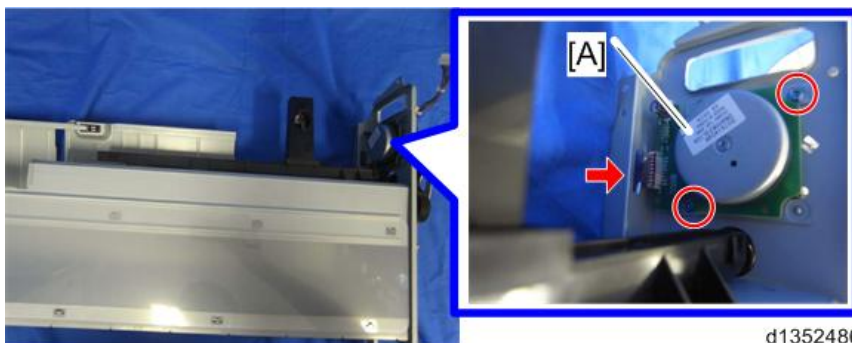


d1352485

4

Waste Toner Transport Motor

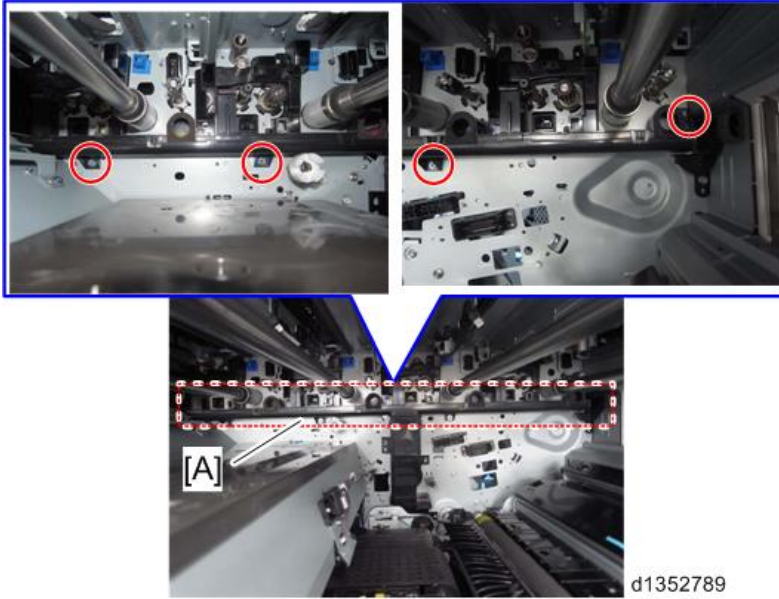
1. Waste toner bottle unit (☛ page 1016)
2. Waste toner transport motor [A] (⚙️ x 2, ⚙️ x 1)



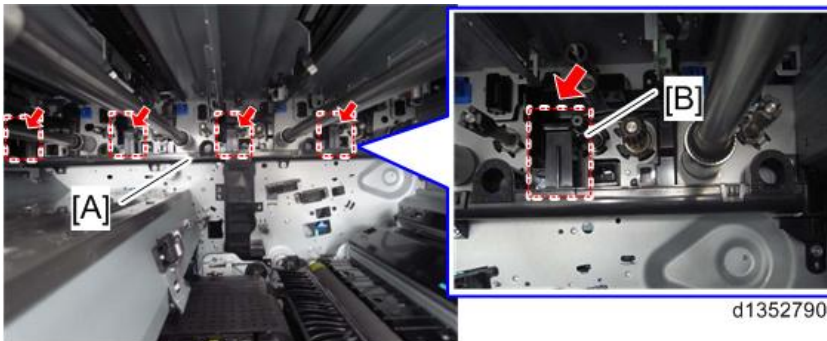
d1352486

Waste Toner Upper Transport

1. PCDU (four colors) (☛ page 681)
2. ITB unit (☛ page 718)
3. Close the drawer unit.
4. Remove the fixing screws of the waste toner upper transport [A] (⚙️ x 4)

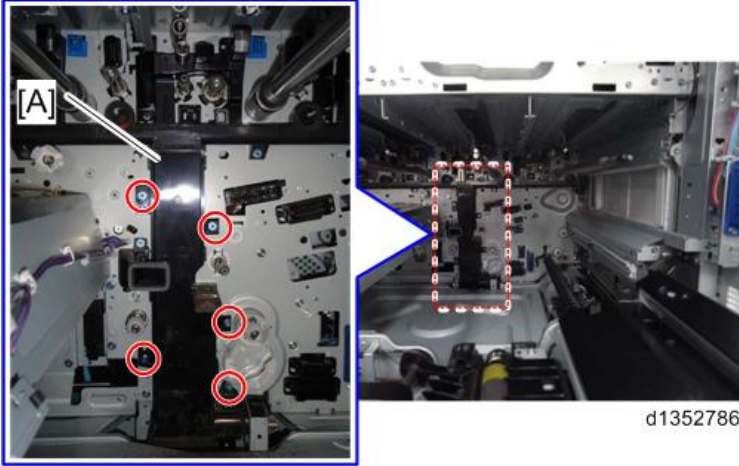


5. Remove the hooks of K [B], M, C and Y in that order, then remove the waste toner upper transport [A].

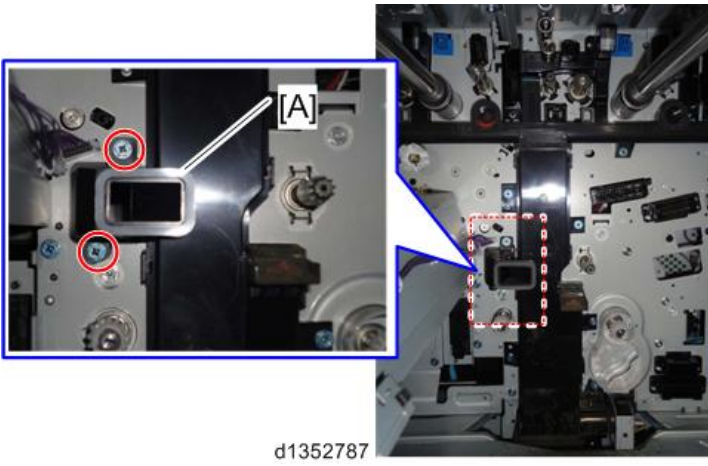


Waste Toner Vertical Transport

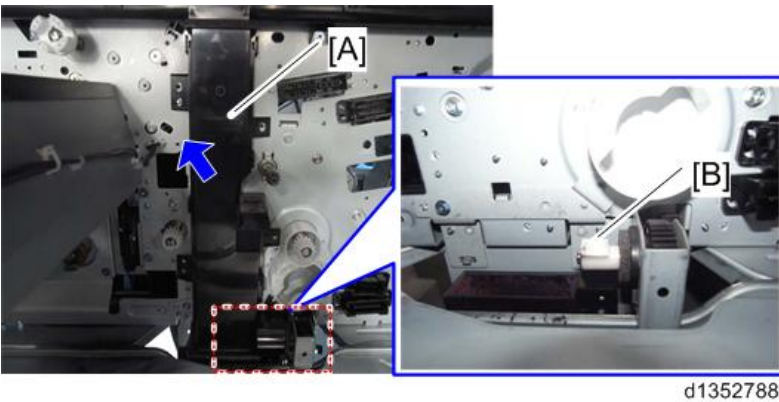
1. PCDU (four colors) (🔧 page 681)
2. ITB unit (🔧 page 718)
3. Remove the fixing screws of the waste toner vertical transport [A] (🔧 x 5)



4. Duct [A]



5. Because of the cam [B] at the bottom, remove the waste toner vertical transport [A] in the upper-left direction.



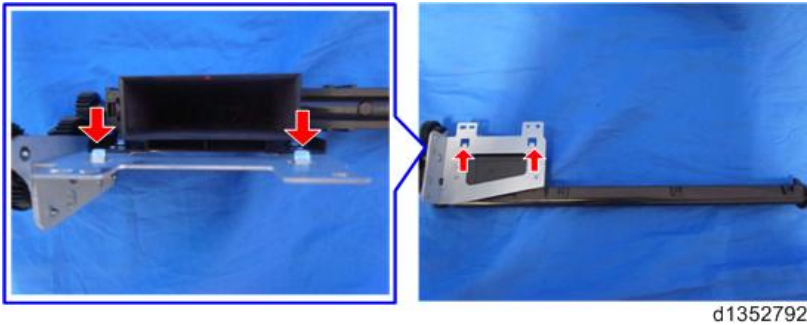
Waste Toner Lower Transport

1. PSU1/PSU2 along with the bracket (☛ page 944 "When removing the motors and sensors that are behind the PSU1/PSU2")
2. Relay duct with swinging plate (☛ page 1016 "Waste Toner Bottle Unit")
3. Waste toner lower transport [A] (🔧 x 2)



Note






- Check the position of the hooks in the photo below before removing.





- When installing, first install the waste toner lower transport, then install the relay duct with swinging plate. (☛ page 1018 "Installing the Relay Duct")

Adjustment after Replacement

The following items need to be adjusted after replacement of parts.

Part	Implementation items	References
ADF	<ul style="list-style-type: none"> • CIS RGB Adjustment (SP4-712/713/714) • ADF Adjustment Side-to-Side Registration (SP6-006-001/002) • ADF Adjustment L-Edge Regist (1-Pass) (SP6-006-010/011) • DF Magnification Adj.(SP6-017) 	 page 560 "Adjustment after Replacing the ADF"
Lens Block	<ul style="list-style-type: none"> • Main Scan Registration Adjustment (SP4-011-001) • Sub Scan Registration Adjustment (SP4-010-001) • Sub Scan Magnification Adjustment (SP4-008-001) 	 page 669 "Magnification and Registration Adjustment"
Scanner Drive Motor	<ul style="list-style-type: none"> • Sub Scan Magnification Adjustment (SP4-008-001) 	 page 669 "Magnification and Registration Adjustment"
Scanner Wire	<ul style="list-style-type: none"> • Make a test copy. Make sure there is no deviation in registration and magnification. If there is a deviation, adjust the SPs for registration and magnification. 	 page 669 "Magnification and Registration Adjustment"
Laser Unit	<ul style="list-style-type: none"> • Image Parameters (SP2-108-001/002) • Color Registration (User Tools) 	 page 676 "Adjustment after Laser Unit Replacement"

Part	Implementation items	References
PCDU Drum Unit Development Unit Development Filter Drum Cleaning Unit Lubricant Blade Drum Cleaning Blade Lubrication Roller Charge Roller Unit	<ul style="list-style-type: none"> DEMS: Execute (SP3-040-001/002/003/004/005) 	
Image Transfer Belt Unit Transfer Belt	<ul style="list-style-type: none"> Force Apply Lubricant Execute (SP2-696-001) 	 page 724 "Lubrication after replacement"
ITB Cleaning Unit ITB Cleaning Blade ITB Lubricant Bar ITB Lubricant Blade	<ul style="list-style-type: none"> Force Apply Lubricant Execute (SP2-696-001) 	 page 755 "Lubrication after Replacement"

5. Troubleshooting

Service Call 101-195

SC100 (Engine: Scanning)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC101-01	D	Lamp Error (Scanning)
		The white level peak did not reach the prescribed threshold when the white plate was scanned.
		<ul style="list-style-type: none"> • LED defective • IDB (LED driver) defective • SBU defective • IPU defective • Power/signal harness defective • Condensation in scanner unit • Mirrors or lenses dirty or positioned incorrectly • White plate dirty or installed incorrectly
		<ul style="list-style-type: none"> • Cycle the machine off/on. • Reconnect the power/signal harness. • Reattach/clean the mirrors/lenses. • Reattach/clean the white plate. • Replace the LED board. • Replace the IDB board. • Replace the SIO board. • Replace the SBU board. • Replace the IPU board. • Replace the power/signal harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC101-02	D	Lamp Error (LED illumination adjustment)
		LED error was detected.
		<ul style="list-style-type: none"> • LED defective • IDB (LED driver) defective • Power/signal harness defective
		<ul style="list-style-type: none"> • Cycle the machine off/on. • Reconnect the power/signal harness. • Replace the LED board. • Replace the IDB board. • Replace the SIO board. • Replace the power/signal harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC102-00	D	LED Illumination Adjustment Error
		The white level peak reached the prescribed threshold when the white plate was scanned after a specified number of adjustments.
		<ul style="list-style-type: none"> • LED defective • IDB (LED driver) defective • SBU defective • IPU defective • Power/signal harness defective
		<ul style="list-style-type: none"> • Cycle the machine off/on. • Reconnect the power/signal harness. • Replace the IDB board. • Replace the SIO board. • Replace the SBU board. • Replace the IPU board. • Replace the power/signal harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC120-00	D	Scanner Home Position Error 1
		<p>The scanner home position sensor does not go OFF.</p> <p>Details:</p> <p>Error detection timing</p> <ul style="list-style-type: none"> • During homing (when the machine is turned ON or when it returns from energy save mode) • During an automatic adjustment (when the machine is turned ON or when it returns from energy save mode) • During a scan from the ADF or exposure glass. <p>After an error occurs</p> <ul style="list-style-type: none"> • Stop process, Operation panel display, LED indication, Logging • Scanner is not usable (Copier/Scanner/Document Server applications) • Printer is usable.
		<ul style="list-style-type: none"> • Scanner motor driver defective • Scanner motor defective • Scanner HP sensor defective • Harness defective • Timing belt, pulley, wire, or carriage not installed correctly
		Replace the part.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC121-00	D	Scanner Home Position Error 2
		<p>The scanner home position sensor does not go ON.</p> <p>Details:</p> <p>Error detection timing</p> <ul style="list-style-type: none"> • During homing • During an automatic adjustment • During a scan from the ADF or exposure glass. <p>After an error occurs</p> <ul style="list-style-type: none"> • Stop process, Operation panel display, LED indication, Logging • Scanner is not usable (Copier/Scanner/Document Server applications). • Printer is usable.
		<ul style="list-style-type: none"> • Scanner motor driver defective • Scanner motor defective • Scanner HP sensor defective • Harness defective • Timing belt, pulley, wire, or carriage not installed correctly
		Replace the part.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC141-00	D	Black level detection error
		The black level cannot be adjusted within the target during auto gain control.
		<ul style="list-style-type: none"> • SBU defective • IPU defective • Power/signal harness defective
		<ul style="list-style-type: none"> • Cycle the machine off/on. • Reconnect the power/signal harness. • Replace the SBU board. • Replace the IPU board. • Replace the power/signal harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC142-00	D	White level detection error
		<ul style="list-style-type: none"> • The white level cannot be adjusted to the second target level within the target during auto gain control.
		<ul style="list-style-type: none"> • SBU defective • LED defective • IDB (LED driver) defective • IPU defective • Power/signal harness defective • Scanner drive error • Condensation in scanner unit • Mirrors or lenses dirty or positioned incorrectly • White plate dirty or installed incorrectly
		<ul style="list-style-type: none"> • Cycle the machine off/on. • Reconnect the power/signal harness. • Reattach/clean the mirrors/lenses. • Reattach/clean the white plate. • Replace the SBU board. • Replace the LED board. • Replace the IDB board. • Replace the IPU board. • Replace the SIO board. • Replace the power/signal harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC144-00	D	SBU Communication Error
		<ul style="list-style-type: none"> • Connection to SBU cannot be confirmed. (Connection detection error) • Cannot communicate with the SBU, or the communication result is abnormal.
		<ul style="list-style-type: none"> • SBU defective • The other side of the communication (BCU, IPU etc.) defective • Power/signal harness defective
		<ul style="list-style-type: none"> • Cycle the machine off/on. • Reconnect the power/signal harness. • Replace the SBU board. • Replace the IPU board. • Replace the BCU board. • Replace the power/signal harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC161-01	D	IPU Error (LSYNC abnormal)
		An error occurred during the self-diagnostic test performed every time the machine is turned on, or returns to full operation from energy save mode.
		<ul style="list-style-type: none"> • IPU (BiCU, iCTL) board defective (ASIC-LEO connection failure, LSYNC abnormal, etc.) • Cable between SBU and IPU (or BiCU) defective
		<ul style="list-style-type: none"> • Replace the IPU (or BiCU) board. • Check the cable between SBU and IPU (or BiCU)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC161-02	D	IPU error (Ri response abnormal)
		The machine detects an error during an access to the Ri.
		IPU (BiCU, iCTL) board defective (Ri response abnormal, etc.)
		Replace the IPU (or BiCU) board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC165-00	D	Copy data security unit error
		<ul style="list-style-type: none"> The copy data security option is enabled in the User Tools but the option board is detected as missing or defective. The copy data security option was detected as defective when the machine was turned on or returned from energy save mode.
		<ul style="list-style-type: none"> Copy data security unit board not installed correctly Copy data security unit board defective
		<ul style="list-style-type: none"> Reinstall the copy data security unit board. Replace the copy data security unit board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC185-00	D	CIS transmission error
		The data read from the ASIC register on the CIS were not as expected. Details: <ul style="list-style-type: none"> Occurs when a serial communication error between the CIS board and the DF board is detected. Occurs also when an error is detected during initialization of the ASIC on the CIS. This can happen during initialization and feeding. The first and second consecutive occurrences of each constitute jams. The third occurrence constitutes an SC.
		<ul style="list-style-type: none"> Connector or harness between DF board and CIS board is disconnected or defective ASIC on the CIS is defective Boot failure of ASIC on the CIS
		<ul style="list-style-type: none"> Reconnect the power/signal harness. Replace the CIS and CIPB. Replace the ADF main control board. Replace the power/signal harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC186-00	D	CIS LED error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>During initialization:</p> <ul style="list-style-type: none"> • The ratio between the average values of leading-edge area and rear-edge area is out of specification. • Shading data peak value is below specification. <p>During scanning:</p> <ul style="list-style-type: none"> • Shading data peak value is below specification. <p>Details:</p> <p>During initialization:</p> <ul style="list-style-type: none"> • Occurs when one out of two CIS LEDs is malfunctioning, causing the difference between the average values of leading-edge area and rear-edge area to be large (CIS LED error detection). • Occurs when both of the CIS LEDs are malfunctioning (unlit), causing the shading data peak value to be extremely low (CIS white level adjustment). <p>During scanning:</p> <ul style="list-style-type: none"> • Occurs when both of the CIS LEDs are malfunctioning (unlit), causing the shading data peak value to be extremely low (CIS scan control, gray balance adjustment/confirmation). • The first and second consecutive occurrences of each constitute initial/feed jams. The third occurrence constitutes an SC.
		<p>During initialization:</p> <ul style="list-style-type: none"> • One or two out of two CIS LEDs are defective <p>During scanning:</p> <ul style="list-style-type: none"> • Both of the CIS LEDs are defective. <hr/> <ul style="list-style-type: none"> • Reconnect the power/signal harness. • Replace the CIS and CIPB. • Replace the CIS background white roller. • Replace the power/signal harness. • Replace the ADF main control board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC187-00	D	CIS black level error
		The black level scanned by CIS is abnormal. Details: <ul style="list-style-type: none"> Occurs when abnormality is detected in the process of black level generation – detection. The first and second consecutive occurrences constitute initial jams. The third occurrence constitutes an SC.
		CIS defective
		Replace the CIS unit of ADF.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC188-00	D	CIS white level error
		<ul style="list-style-type: none"> The shading data peak value read out from the CIS is abnormal. The shading data peak value is not within the specified range from the target value. (The target value is set with SP4-784-001/SP4-785-001/SP4-786-001.) Details: <ul style="list-style-type: none"> Occurs when abnormality is detected in the process of CIS shading data peak detection. The first and second consecutive occurrences constitute initial jams. The third occurrence constitutes an SC.
		CIS defective
		<ul style="list-style-type: none"> Reconnect the power/signal harness. Replace the CIS and CIPB. Replace the CIS background white roller. Replace the power/signal harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC189-00	D	CIS gray balance adjustment error
		The difference between gray balance adjustment target value and the value scanned from the GS20 chart was out of specification upon execution of gray balance adjustment confirmation (SP4-705-002). Details: <ul style="list-style-type: none"> Occurs when gray balance adjustment fails. The first occurrence constitutes an SC (not an initial jam).
		CIS defective
		Replace the adjustment chart. (Degradation due to scratches and smudges)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC195-00	D	Machine serial number error
		Comparison of the product identification code in the machine serial number (11 digits).
		The product identification code in the machine serial number (11 digits) does not match.
		Re-enter the machine serial number.

Service Call 202-286

SC200 (Engine: Image Writing)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC202-01	D	Polygon Motor: ON Timeout Error: Bk
SC202-03	D	Polygon Motor: ON Timeout Error: Ma
		<p>After the polygon motor turned on, or within 10 sec. after the rpm's changed, the motor did not enter READY status.</p> <ul style="list-style-type: none"> • The interface harness to the polygon motor driver damaged or not connected correctly. • Polygon motor or polygon motor driver defective • Polygon motor drive pulse cannot be output correctly. (Polygon controller) • XSCRDY signal observation failing (Polygon controller) <ul style="list-style-type: none"> • Cycle the machine off/on. • Replace the laser unit. • Replace the polygon harness. • Replace the IPU board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC203-01	D	Polygon Motor: OFF Timeout Error: Bk
SC203-03	D	Polygon Motor: OFF Timeout Error: Ma

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>The XSCRDY signal (polygon ready) never becomes inactive (H) after the polygon motor went OFF.</p> <ul style="list-style-type: none"> • The interface harness to the polygon motor driver damaged or not connected correctly. • Polygon motor or polygon motor driver defective • Polygon motor drive pulse cannot be output correctly. (Polygon controller) • XSCRDY signal observation failing (Polygon controller)
		<ul style="list-style-type: none"> • Cycle the machine off/on. • Replace the laser unit. • Replace the polygon harness. • Replace the IPU board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC204-01	D	Polygon Motor: XSCRDY Signal Error: Bk
SC204-03	D	Polygon Motor: XSCRDY Signal Error: Ma
		<p>During polygon motor rotation, the XSCRDY signal was inactive (H) for longer than one rotation of the polygon.</p> <p>Details:</p> <ul style="list-style-type: none"> • Occurs when the PATMOS polygon error determination register detects that the XSCRDY signal was inactive (H) for longer than one rotation of the polygon (7 cycles of PMCLK). • The PATMOS polygon error determination register detects that the XSCRDY signal was inactive (H) for longer than one rotation of the polygon, and then refers to SCERR2.
		<ul style="list-style-type: none"> • Polygon motor or polygon motor driver defective • The interface harness to the polygon motor driver damaged or not connected correctly.
		<ul style="list-style-type: none"> • Cycle the machine off/on. • Replace the laser unit. • Replace the polygon harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC210-01	C	Trailing Edge Beam Error: Bk
SC210-02	C	Trailing Edge Beam Error: Cy
SC210-03	C	Trailing Edge Beam Error: Ma
SC210-04	C	Trailing Edge Beam Error: Ye
		<p>When the main scan magnification rate was measured, the value measured between 2 points was out of specification.</p> <p>Details:</p> <ul style="list-style-type: none"> • When a trailing edge beam detection error flag is asserted to VTEC status register. • The CPU detected an error flag when measuring the main scan magnification rate.
		<ul style="list-style-type: none"> • The interface harness to the beam detection unit damaged or not connected correctly. • Beam detection board defective • Beam does not enter photodetector.. • Abnormality around VTEC • LDB defective • BCU defective • Large main scan magnification rate
		<ul style="list-style-type: none"> • Cycle the machine off/on. • Replace the laser unit. • Replace the IPU board. • Replace the BCU board. • Correct the main scan magnification SP* <ul style="list-style-type: none"> * SP2-184-006 through 009 = 269600 SP2-102-001,007 = 123 SP2-102-016 through 025 = 0 <p>Adjust SP2-184-006 through 009 while checking the images until the values of SP2-102-001,007 become 123 ± 30.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC220-01	D	Leading Edge: LD1 synchronization detection error: Bk
SC220-02	D	Leading Edge: LD1 synchronization detection error: Cy
SC220-03	D	Leading Edge: LD1 synchronization detection error: Ma
SC220-04	D	Leading Edge: LD1 synchronization detection error: Ye
		<p>The leading edge LD1 synchronization detection signal of the corresponding color was not output within 100 ms while the polygon mirror motor was operating at normal speed.</p> <p>Details:</p> <ul style="list-style-type: none"> • When a synchronization detection error flag is asserted to VTEC status register. • After the polygon turned on, the CPU monitored for error flags in 100 ms cycles and detected an error flag. <hr/> <ul style="list-style-type: none"> • The interface harness to the synchronization detection unit damaged or not connected correctly. • Synchronization detection board defective • Beam does not enter photodetector.. • Abnormality around VTEC • LDB defective • BCU defective • Large main scan magnification rate <hr/> <ul style="list-style-type: none"> • Cycle the machine off/on. • Replace the laser unit. • Replace the IPU board. • Replace the BCU board. • Correct the main scan magnification SP* <ul style="list-style-type: none"> * SP2-184-006 through 009 = 269600 SP2-102-001,007 = 123 SP2-102-016 through 025 = 0 • Adjust SP2-184-006 through 009 while checking the images until the values of SP2-102-001,007 become 123 ± 30.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC230-01	D	FGATE ON error: Bk
SC230-02	D	FGATE ON error: Cy
SC230-03	D	FGATE ON error: Ma
SC230-04	D	FGATE ON error: Ye
		<p>The FGATE signal did not turn ON within 200 msec after the writing process of the corresponding color started.</p> <p>Details:</p> <p>The PFGATE register of PATMOS not asserted within 200 msec after the writing process started.</p>
		<ul style="list-style-type: none"> • PATMOS defective • Image processing ASIC defective • BCU, controller board not connected correctly or defective • Harness between IPU and LDB defective
		<ul style="list-style-type: none"> • Cycle the machine off/on. • Replace the IPU board. • Replace the BCU board. • Replace the controller board. • Replace the LDB harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC231-01	D	FGATE OFF error: Bk
SC231-02	D	FGATE OFF error: Cy
SC231-03	D	FGATE OFF error: Ma
SC231-04	D	FGATE OFF error: Ye

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>The FGATE signal did not turn OFF within 200 msec after the writing process of the corresponding color ended. The FGATE signal did not turn OFF when the next job of the corresponding color started.</p> <p>Details:</p> <ul style="list-style-type: none"> • The PFGATE register of PATMOS not negated within 200 msec after the writing process ended. • The PFGATE register of PATMOS still asserted from the previous job when the next writing process started.
		<ul style="list-style-type: none"> • PATMOS defective • Image processing ASIC defective
		<ul style="list-style-type: none"> • Cycle the machine off/on. • Replace the IPU board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC240-01	D	LD error: Bk
SC240-03	D	LD error: Ma

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>When two errors were detected consecutively while monitoring the VTEC for LD error registers in 350msec intervals after LD initialization.</p> <p>Details:</p> <p>The VTEC LD error flag was detected twice consecutively when the LD turned on after initialization.</p>
		<ul style="list-style-type: none"> • LD degradation (LD broken, shift of output characteristics etc.) • LD driver defective • VTEC defective • The interface harness damaged or not connected correctly. • Large main scan magnification rate
		<ul style="list-style-type: none"> • Cycle the main power off/on. • Replace the IPU board. • Replace the laser unit. • Replace the LD unit. • Replace the harness. • Correct the main scan magnification SP* <p>* SP2-184-006 through 009 = 269600 SP2-102-001,007 = 123 SP2-102-016 through 025 = 0</p> <p>Adjust SP2-184-006 through 009 while checking the images until the values of SP2-102-001,007 become 123 ± 30.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC260-01	C	Laser Thermistor Error: Bk
SC260-03	C	Laser Thermistor Error: Ma

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<ul style="list-style-type: none"> The reading of the thermistor in the laser unit was less than 10 °C (50 °F), indicating that the thermistor has disconnected. The reading of the thermistor in the CK or YM laser unit was more than 80 °C (176 °F), indicating that the thermistor has shorted out. <p>Details: When the thermistor voltage is out of range (-10 to 80 °C) after the machine was turned on.</p>
		<ul style="list-style-type: none"> Thermistor defective Harness defective BCU defective
		<ul style="list-style-type: none"> Cycle the machine off/on. Replace the laser unit. Replace the harness of laser unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC265-02	C	Skew correction error: Cy
SC265-03	C	Skew correction error: Ma
SC265-04	C	Skew correction error: Ye
		The skew control pulse total is not within range.
		<ul style="list-style-type: none"> Skew motor defective Harness defective Optical system defective
		<ul style="list-style-type: none"> Cycle the machine off/on. Replace the laser unit. Replace the harness of laser unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC270-01	D	LD ASIC communication error: Bk
SC270-03	D	LD ASIC communication error: Ma

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>On startup: Written to and read the same register but the values were different.</p> <p>VTEC: Monitored the parity and retried three times.</p> <p>Details:</p> <ul style="list-style-type: none"> • On startup: Data 0x5A5A and 0xA5A5 are written to a predetermined register. Then the register is read and the read data is compared to the are compared • VTEC: Monitors parity during communication. If it does not match, retries up to three times. The second retry constitutes an SC. <hr/> <ul style="list-style-type: none"> • VTEC defective • HORUS defective • BCU defective • IPU defective • Harness defective <hr/> <ul style="list-style-type: none"> • Cycle the machine off/on. • Replace the laser unit. • Replace the IPU board. • Replace the BCU board. • Replace the LDB harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC270-10	D	LD ASIC communication error: Others
		On startup: "Door open" status was cleared but did not change to "Door closed" status. Details: On startup: After clearing PATMOS "Door open" status, checks the status of the door after "Door open" determination period. Failure to detect "Door closed" status constitutes an SC.
		<ul style="list-style-type: none"> • PATMOS defective • HORUS defective • BCU defective • IPU defective • Harness defective • Interlock defective
		<ul style="list-style-type: none"> • Cycle the machine off/on. • Replace the laser unit. • Replace the IPU board. • Replace the BCU board. • Replace the LDB harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC274-01	D	Image transfer error: Bk
SC274-03	D	Image transfer error: Ma

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<ul style="list-style-type: none"> • On detection of lane abnormality • On detection of elastic buffer overflow/underflow • On detection of STP error • On detection of END error <p>Details:</p> <ul style="list-style-type: none"> • When DES status is detected as abnormal.
		<ul style="list-style-type: none"> • IPU defective • Harness defective • LDB defective • GAVD defective
		<ul style="list-style-type: none"> • Cycle the machine off/on. • Replace the laser unit. • Replace the IPU board. • Replace the BCU board. • Replace the LDB harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC276-01	D	Microcomputer communication error: Bk
SC276-03	D	Microcomputer communication error: Ma
		<p>APC microcomputer does not respond.</p> <p>Details:</p> <ul style="list-style-type: none"> • Detected an abnormality concerning GAVD interruption.
		<ul style="list-style-type: none"> • LDB defective
		<ul style="list-style-type: none"> • Cycle the machine off/on. • Replace the laser unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC285-00	D	MUSIC error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>The results of MUSIC pattern reading failed 4 times while the machine is turned ON.</p> <p>Details:</p> <ul style="list-style-type: none"> • When MUSIC fails 4 times while the machine is turned ON. (The count is cleared when the machine is turned OFF e.g. when entering sleep mode.) • TM sensor sampling error • Sensor LED adjustment error • Patch number error • Transfer belt flaw error • Main registration error • Sub registration error • Main scan magnification ratio error • Main scan magnification ratio deviation error
		<ul style="list-style-type: none"> • Belt flawed or smudged • Sensor smudged or defective • Pattern density deflection
		<ul style="list-style-type: none"> • Cycle the machine off/on. • Replace the TM sensor. • Replace the belt. • Process control • Cleaning

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC286-01	C	LD shutter open error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		Detected an erratic movement during closing or opening.
		<ul style="list-style-type: none"> • Shutter motor movement error • Sensor defective • Links broken
		<ul style="list-style-type: none"> • Cycle the machine off/on.(In case of a malfunction) • Replace the laser unit. (In case of defective parts)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC286-02	D	LD shutter close error
		Detected an erratic movement during opening.
		<ul style="list-style-type: none"> • Shutter motor movement error • Sensor defective • Links broken
		<ul style="list-style-type: none"> • Cycle the machine off/on.(In case of a malfunction) • Replace the laser unit. (In case of defective parts)

SC286-02
RTB 157

Service Call 300-398

SC300 (Engine: Charge, Development)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC300-01	D	Charge Roller Power Pack Output Error (K)
SC300-02	D	Charge Roller Power Pack Output Error (C)
SC300-03	D	Charge Roller Power Pack Output Error (M)
SC300-04	D	Charge Roller Power Pack Output Error (Y)
		<p>The interrupt that checks the status of the PCU power pack every 10 ms detected SC signals 15 times consecutively.</p> <p>Details:</p> <p>In case of an overcurrent, the Charge Roller Power Pack outputs SC signals. The machine monitors it, and issues an SC when an error occurs.</p> <ul style="list-style-type: none"> • High voltage harness shorted. • Leakage around the charge roller caused by a conductive object. <ul style="list-style-type: none"> • Remove the cause of leakage.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC312-01	D	Charge FB Voltage Error (K)
SC312-02	D	Charge FB Voltage Error (C)
SC312-03	D	Charge FB Voltage Error (M)
SC312-04	D	Charge FB Voltage Error (Y)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>On plotter startup, the charge FB (feed-back) voltage was 0.3V or less for 15 consecutive readings.</p> <p>Details:</p> <p>SC issued when electric current does not pass after charge bias is applied, which can be caused when a harness is disconnected or damaged, or when the charge roller or the drum is not installed.</p>
		<ul style="list-style-type: none"> • High-voltage harness damaged or not connected correctly. • Charge roller or drum not installed
		<ul style="list-style-type: none"> • Fix the problem.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC320-01	D	Development Power Pack Output Error (K)
SC320-02	D	Development Power Pack Output Error (C)
SC320-03	D	Development Power Pack Output Error (M)
SC320-04	D	Development Power Pack Output Error (Y)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>When SC signals are detected 25 times consecutively in 20ms intervals (500 msec).</p> <p>Details:</p> <p>When the development power pack is shorted, the development power pack detects it by means of an SC signal (HIGH level). The IOB monitors the SC signals as explained above.</p> <hr/> <ul style="list-style-type: none"> • Development power pack shorted <hr/> <p>Disconnect the high voltage cable from the output terminal of the development power pack of the corresponding color, and check the following points.</p> <ul style="list-style-type: none"> • PWM: Check the signal of the corresponding color. • If the signal is fixed to HIGH during photocopying process, replace the harness or the IOB. • Check the output of the development power pack of the corresponding color. <p style="padding-left: 40px;">If the output is fixed to HIGH during photocopying process, replace the power pack.</p> <p>If the output is normal during photocopying process, test the resistance between the high-voltage cable and the ground. If resistance is "0" or nearly "0", replace the high-voltage harness or PCU.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC325-00	D	Development motor: Bk: Lock
		<p>Error detected by the TDCU.</p> <p>If a command sent from the TDCU indicates an error, the engine issues an SC.</p> <p>ASAP command: Motor lock detection setting value (engine to TDCU): 0x5B</p> <p>ASAP command: SC detection notification (TDCU to engine): 0x56_0x08</p> <p>Details:</p> <p>When the motor is on, each lock signal is checked every 100 milliseconds. If the High status is detected 20 times consecutively, the machine determines that the motor is not running correctly. The machine issues an SC and stops the motor.</p>
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Harness broken • IOB defective • Unit torque increased.
		<ul style="list-style-type: none"> • Replace the motor. • Reconnect the connector. • Replace the harness. • Replace the IOB. • Replace the unit. • Replace the driven unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC326-00	D	Development motor: C: Lock
		<p>Error detected by the TDCU.</p> <p>If a command sent from the TDCU indicates an error, the engine issues an SC.</p> <p>ASAP command: Motor lock detection setting value (engine to TDCU): 0x5B</p> <p>ASAP command: SC detection notification (TDCU to engine): 0x56_0x02</p> <p>Details:</p> <p>When the motor is on, each lock signal is checked every 100 milliseconds. If the High status is detected 20 times consecutively, the machine determines that the motor is not running correctly. The machine issues an SC and stops the motor.</p>
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Harness broken • IOB defective • Unit torque increased.
		<ul style="list-style-type: none"> • Replace the motor. • Reconnect the connector. • Replace the harness. • Replace the IOB. • Replace the unit. • Replace the driven unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC327-00	D	Development motor: M: Lock
		<p>Error detected by the TDCU.</p> <p>If a command sent from the TDCU indicates an error, the engine issues an SC.</p> <p>ASAP command: Motor lock detection setting value (engine to TDCU): 0x5B</p> <p>ASAP command: SC detection notification (TDCU to engine): 0x56_0x04</p> <p>Details:</p> <p>When the motor is on, each lock signal is checked every 100 milliseconds. If the High status is detected 20 times consecutively, the machine determines that the motor is not running correctly. The machine issues an SC and stops the motor.</p>
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Harness broken • IOB defective • Unit torque increased.
		<ul style="list-style-type: none"> • Replace the motor. • Reconnect the connector. • Replace the harness. • Replace the IOB. • Replace the unit. • Replace the driven unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC328-00	D	Development motor: Y: Lock
		<p>Error detected by the TDCU.</p> <p>If a command sent from the TDCU indicates an error, the engine issues an SC.</p> <p>ASAP command: Motor lock detection setting value (engine to TDCU): 0x5B</p> <p>ASAP command: SC detection notification (TDCU to engine): 0x56_0x01</p> <p>Details:</p> <p>When the motor is on, each lock signal is checked every 100 milliseconds. If the High status is detected 20 times consecutively, the machine determines that the motor is not running correctly. The machine issues an SC and stops the motor.</p>
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Harness broken • IOB defective • Unit torque increased.
		<ul style="list-style-type: none"> • Replace the motor. • Reconnect the connector. • Replace the harness. • Replace the IOB. • Replace the unit. • Replace the driven unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC332-01	D	Toner supply motor error (K)
SC332-02	D	Toner supply motor error (C)
SC332-03	D	Toner supply motor error (M)
SC332-04	D	Toner supply motor error (Y)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>Detected a lock signal which indicates overcurrent in the toner supply bottle motor.</p> <p>Details:</p> <p>The lock signal is generated when the toner supply bottle motor current exceeds 500 mA.</p> <p>When a toner supply bottle motor is on, it is checked every 100 milliseconds for lock signals. The following steps are executed every second.</p> <ul style="list-style-type: none"> • If the lock signal was detected 9 times in 10 samplings, the lock counter increases by one. When the lock counter value is 23 or larger, the SC is issued. • If the lock signal was detected 8 times or less in 10 samplings, the lock counter is cleared. • If the samplings end before reaching the tenth time (due to bottle replacement etc.), the lock counter value is kept as is. Sampling starts again the next time the motor runs. • The lock counter is cleared when the machine is turned off (also when the machine enters sleep mode, in which the plotter is turned off) or when an SC is issued.
		<ul style="list-style-type: none"> • Toner bottle not set correctly or the torque is large. • Toner bottle broken or defective • Motor defective
		<ul style="list-style-type: none"> • Toner bottle not set correctly, toner bottle broken, or large torque: After the machine stops, ask the user to remove the toner bottle, shake it and set it again. Then cycle the machine off/on to return from SC status. • Toner bottle broken or defective: Ask the user to remove the toner bottle and set a normal bottle. Then cycle the machine off/on to return from SC status. • Motor defective: Turn off the machine and replace the motor. Then cycle the machine off/on to return from SC status.
SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC336-01	D	Developer Set Error (K)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC336-02	D	Developer Set Error (C)
SC336-03	D	Developer Set Error (M)
SC336-04	D	Developer Set Error (Y)
		<p>When the TD sensor control voltage (Vtcnt) is 4.3V, the TD sensor output (Vt) is less than 0.7V.</p> <p>Details:</p> <p>When executing TD sensor initialization (SP3-030), the machine checks the development unit for the presence of developer. If the error condition is detected at this point, the machine determines that there is no developer and issues the SC.</p> <ul style="list-style-type: none"> • There is an extremely low amount of developer. • Check the developer.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC348-01	D	Toner supply error (K)
SC348-02	D	Toner supply error (C)
SC348-03	D	Toner supply error (M)
SC348-04	D	Toner supply error (Y)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>K:</p> <p>Amount of toner on the ID sensor pattern printed and read between sheets (SP3-300-001) is less than the lower threshold (SP3-301-023) and accumulated toner clutch ON time (SP3-301-041) is greater than the upper threshold (SP3-301-031).</p> <p>CMY:</p> <p>Amount of toner on the ID sensor pattern printed and read between sheets (SP3-300-002 to 004) is less than the lower threshold (SP3-301-024) and accumulated toner clutch ON time (SP3-301-042 to 044) is greater than the upper threshold (SP3-301-031).</p> <p>Details:</p> <p>This SC is issued when the toner end sensor continues detecting the presence of toner falsely.</p>
		<ul style="list-style-type: none"> • Toner end sensor cleaner spring broken • Toner end sensor cleaner spring not set correctly • Toner end sensor defective
		<ul style="list-style-type: none"> • Replace the toner supply unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC351-01	C	Development sleeve home position signal detection error (K)
SC351-02	C	Development sleeve home position signal detection error (C)
SC351-03	C	Development sleeve home position signal detection error (M)
SC351-04	C	Development sleeve home position signal detection error (Y)
		<p>Cannot detect the home position signal within specified time.</p>
		<ul style="list-style-type: none"> • Home position sensor defective/loose connection/harness damaged/Connector disconnected • Home position sensor smudged
		<ul style="list-style-type: none"> • Check if the home position sensor connector is connected correctly. • Check the home position sensor for abnormality. • Replace the home position sensor if it is abnormal. • Check the sensor for smudges. Blow it with air and check again.

SC300 (Engine: Development)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC360-01	D	TD sensor adjustment error (K)
SC360-02	D	TD sensor adjustment error (C)
SC360-03	D	TD sensor adjustment error (M)
SC360-04	D	TD sensor adjustment error (Y)
		<p>During TD sensor initialization, the TD sensor output voltage (Vt) cannot be adjusted to the target range (target value $\pm 0.2V$).</p> <p>Details:</p> <p>TD sensor initialization adjusts the TD sensor control voltage (Vtcnt) in order to adjust the TD sensor output voltage (Vt) to target value $\pm 0.2V$.</p> <p>Adjustment flow:</p> <ol style="list-style-type: none"> Developer presence detection Developer not detected. OK: Proceeds to Vtcnt adjustment. NG: SC336-0X TD sensor calibration (Fluctuate Vtcnt and measure Vt) TD sensor calibration result judgment OK: TD sensor calibration succeeded. NG: SC360-0X <ul style="list-style-type: none"> TD sensor defective Loose connection Harness broken Developer is not new <ul style="list-style-type: none"> Replace the TD sensor. Replace the development unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC361-01	D	TD sensor output error: Upper Limit (K)
SC361-02	D	TD sensor output error: Upper Limit (C)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC361-03	D	TD sensor output error: Upper Limit (M)
SC361-04	D	TD sensor output error: Upper Limit (Y)
		The TD sensor output (Vt) (SP3-210-001 to 004) exceeded 4.7 V 20 times consecutively.
		<ul style="list-style-type: none"> • Toner density extremely low
		<ul style="list-style-type: none"> • Check the toner supply system.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC362-01	D	TD sensor output error: Lower limit (K)
SC362-02	D	TD sensor output error: Lower limit (C)
SC362-03	D	TD sensor output error: Lower limit (M)
SC362-04	D	TD sensor output error: Lower limit (Y)
		The TD sensor output (Vt) (SP3-210-001 to 004) fell below 0.5 V 10 times consecutively.
		<ul style="list-style-type: none"> • TD sensor not connected correctly • TD sensor defective
		<ul style="list-style-type: none"> • Check the TD sensor connection. • Check the home position sensor for abnormality. • Replace the TD sensor if it is abnormal.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC370-01	D	ID sensor calibration error (F)
SC370-02	D	ID sensor calibration error (C)
SC370-03	D	ID sensor calibration error (R)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>The voltage reading during process control for Vsg_reg was not within the correct range (4.0 ± 0.5 V).</p> <p>Details:</p> <p>Vsg_reg is the voltage reading of the light reflected directly from the bare surface of the ITB. ID sensor calibration adjusts the LED current so that Vsg_reg becomes 4.0 ± 0.5 V.</p> <p>Adjustment flow:</p> <ol style="list-style-type: none"> Vsg_reg confirmation If Vsg_reg is smaller than 0.5V, SC371-0X is issued and process control ends. ID sensor calibration Fluctuates the LED current and measures Vsg_reg. LED current upper limit check OK: Proceeds to Vsg upper/lower limit check NG: SC372-0X is issued; proceeds to Vsg upper/lower limit check Vsg upper/lower limit check OK: Process control continued NG: SC370-0X is issued and process control ends. <ul style="list-style-type: none"> ITB deformed, out of position or damaged Check the ITB. Fix the ITB if it is deformed, out of position, etc.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC371-01	D	ID sensor output error (F)
SC371-02	D	ID sensor output error (C)
SC371-03	D	ID sensor output error (R)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		The ID sensor voltage reading of the light reflected directly (Vsg_reg) is below 0.5 V.
		<ul style="list-style-type: none"> • ID sensor connector disconnected/loose connection • ID sensor defective
		<ul style="list-style-type: none"> • Check if the ID sensor connector is connected. Connect it if disconnected. • Replace the ID sensor if defective.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC372-01	C	ID sensor LED current upper limit error (F)
SC372-02	C	ID sensor LED current upper limit error (C)
SC372-03	C	ID sensor LED current upper limit error (R)
		The ID sensor LED current exceeds the upper limit (SP3-320-015)
		<ul style="list-style-type: none"> • ID sensor smudged • ID sensor deteriorated • ITB deteriorated (smudges, filming)
		<ul style="list-style-type: none"> • Check the ID sensor window. Wipe it with a damp cloth if dirty (never use dry cloth). • If the ID sensor is deteriorated, replace it. • If the ITB is smudged, check the ITB unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC373-01	D	ID Sensor Pattern Density High Error (K)
SC373-02	D	ID Sensor Pattern Density High Error (C)
SC373-03	D	ID Sensor Pattern Density High Error (M)
SC373-04	D	ID Sensor Pattern Density High Error (Y)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>K:</p> <p>The density of the Black reading in the ID sensor patterns created between pages (SP3-300-001) is greater than the threshold value set by SP3-301-021.</p> <p>CMY:</p> <p>The density of the Cyan/Magenta/Yellow reading in the ID sensor patterns created between pages (SP3-300-002 to 004) is greater than the threshold value set by SP3-301-022.</p>
		<ul style="list-style-type: none"> Excessive toner supply
		<ul style="list-style-type: none"> Replace the toner supply unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC374-01	D	ID Sensor Pattern Density Low Error (K)
SC374-02	D	ID Sensor Pattern Density Low Error (C)
SC374-03	D	ID Sensor Pattern Density Low Error (M)
SC374-04	D	ID Sensor Pattern Density Low Error (Y)
		<p>K:</p> <p>The density of the Black reading in the ID sensor patterns created between pages (SP3-300-001) was less than the threshold value set by SP3-301-023 three times consecutively.</p> <p>CMY:</p> <p>The density of the Cyan reading in the ID sensor patterns created between pages (SP3-300-002 to 004) is less than the threshold value set by SP3301-24 three times consecutively.</p>
		<ul style="list-style-type: none"> Abnormal development bias (Continuity fault) Image transfer error
		<ul style="list-style-type: none"> Check development bias continuity. Check the image transfer unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC381-01	D	Potential sensor output high error (K)
SC381-02	D	Potential sensor output high error (C)
SC381-03	D	Potential sensor output high error (M)
SC381-04	D	Potential sensor output high error (Y)
		<p>Vd(700) greater than 800[-V]</p> <p>Details:</p> <p>In Vd detection, which is done at the beginning of process control, the measured potential (Vd) is converted to the potential when -700 V is applied to the drum (Vd700) and used to check the potential sensor.</p> <p>Potential sensor dirty (foreign object, such as toner, entering the probe window) / potential sensor probe connector disconnected / potential sensor probe defective.</p> <ul style="list-style-type: none"> • Use a blower brush to clean the window of the potential sensor probe, then check the sensor again. • Disconnect and reconnect the potential sensor probe connector, then check the sensor again. • Disconnect and reconnect the harness connecting the potential sensor board and potential sensor probe, then check the sensor again. • If this does not solve the problem, replace the potential sensor probe.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC382-01	D	Potential sensor output low error (K)
SC382-02	D	Potential sensor output low error (C)
SC382-03	D	Potential sensor output low error (M)
SC382-04	D	Potential sensor output low error (Y)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>Vd(700) lesser than 500[-V]</p> <p>Details:</p> <p>In Vd detection, which is done at the beginning of process control, the measured potential (Vd) is converted to the potential when -700 V is applied to the drum (Vd700) and used to check the potential sensor.</p> <ul style="list-style-type: none"> • Potential sensor probe connector disconnected • Potential sensor probe defective <ul style="list-style-type: none"> • Disconnect and reconnect the harness connecting the IOB and potential sensor board, then check the sensor again. • If this does not solve the problem, replace the potential sensor probe.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC395-01	D	Drum motor (K) Lock: Encoder 1 error
SC395-02	D	Drum motor (K) Lock: Encoder 2 error
SC395-03	D	Drum motor (K) Lock: Encoder 1/2 error
SC395-04	D	Drum motor (K) Lock: Hole error
SC395-05	D	Drum motor (K) Lock: Overload error
SC396-01	D	Drum motor (C) Lock: Encoder 1 error
SC396-02	D	Drum motor (C) Lock: Encoder 2 error
SC396-03	D	Drum motor (C) Lock: Encoder 1/2 error
SC396-04	D	Drum motor (C) Lock: Hole error
SC396-05	D	Drum motor (C) Lock: Overload error
SC397-01	D	Drum motor (M) Lock: Encoder 1 error
SC397-02	D	Drum motor (M) Lock: Encoder 2 error
SC397-03	D	Drum motor (M) Lock: Encoder 1/2 error
SC397-04	D	Drum motor (M) Lock: Hole error
SC397-05	D	Drum motor (M) Lock: Overload error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC398-01	D	Drum motor (Y) Lock: Encoder 1 error
SC398-02	D	Drum motor (Y) Lock: Encoder 2 error
SC398-03	D	Drum motor (Y) Lock: Encoder 1/2 error
SC398-04	D	Drum motor (Y) Lock: Hole error
SC398-05	D	Drum motor (Y) Lock: Overload error
		<p>Error detected by the TDCU.</p> <p>If a command sent from the TDCU indicates an error, the engine issues an SC.</p> <p>ASAP command: Motor lock detection setting value (engine to TDCU): 0x5B</p> <p>See table below for ASAP commands notifying SC detection.</p> <p>Details:</p> <p>TDCU Motor lock signal criteria:</p> <ul style="list-style-type: none"> • Drum motor <ul style="list-style-type: none"> High if the motor speed is not within the range of target value $\pm 6.25\%$. Low if the motor speed is within the range of target value $\pm 6.25\%$. • ITB drive motor, PTR Motor <ul style="list-style-type: none"> High if the motor speed is not within the range of target value $\pm 6.25\%$. Low if the motor speed is within the range of target value $\pm 6.25\%$.
		<p>Target value:</p> <p>If the default motor speed was adjusted using the SP, the adjusted value is used as the target value.</p> <p>Specification:</p> <ul style="list-style-type: none"> • When the motor is on, each lock signal is checked every 100 milliseconds. If the High status is detected 20 times consecutively, the machine determines that the motor is not running correctly. The machine issues an SC and stops the motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<ul style="list-style-type: none"> • Motor defective, connector disconnected, harness broken, IOB defective, unit torque increased. • Black drum sensor smudged, black drum sensor defective, black drum sensor connector not set correctly, harness broken
		<ul style="list-style-type: none"> • Replace the motor / reconnect the connector / replace the harness / replace the IOB / replace the unit / replace the driven unit. • Clean the sensor / replace the sensor. • Reconnect the sensor connector. • Check the sensor harness.

5

ASAP Command: SC detection notification (TDCU to Engine): (SC395-01 to SC398-05)

SC No.	ASAP Command: SC detection notification
SC395-01	0x55_0x08_0x01 0x55_0x08_0x02 0x55_0x08_0x03 0x55_0x08_0x04
SC395-02	0x55_0x08_0x05 0x55_0x08_0x0a 0x55_0x08_0x0f 0x55_0x08_0x14

SC No.	ASAP Command: SC detection notification
SC395-03	0x55_0x08_0x06 0x55_0x08_0x07 0x55_0x08_0x08 0x55_0x08_0x09 0x55_0x08_0x0b 0x55_0x08_0x0c 0x55_0x08_0x0d 0x55_0x08_0x0e 0x55_0x08_0x10 0x55_0x08_0x11 0x55_0x08_0x12 0x55_0x08_0x13 0x55_0x08_0x15 0x55_0x08_0x16 0x55_0x08_0x17 0x55_0x08_0x18
SC395-04	0x55_0x02_0x29 0x55_0x02_0x2a 0x55_0x02_0x2b 0x55_0x02_0x2c
SC395-05	0x55_0x02_0x34
SC396-01	0x55_0x02_0x01 0x55_0x02_0x02 0x55_0x02_0x03 0x55_0x02_0x04
SC396-02	0x55_0x02_0x05 0x55_0x02_0x0a 0x55_0x02_0x0f 0x55_0x02_0x14

SC No.	ASAP Command: SC detection notification
SC396-03	0x55_0x02_0x06 0x55_0x02_0x07 0x55_0x02_0x08 0x55_0x02_0x09 0x55_0x02_0x0b 0x55_0x02_0x0c 0x55_0x02_0x0d 0x55_0x02_0x0e 0x55_0x02_0x10 0x55_0x02_0x11 0x55_0x02_0x12 0x55_0x02_0x13 0x55_0x02_0x15 0x55_0x02_0x16 0x55_0x02_0x17 0x55_0x02_0x18
SC396-04	0x55_0x02_0x29 0x55_0x02_0x2a 0x55_0x02_0x2b 0x55_0x02_0x2c
SC396-05	0x55_0x02_0x34
SC397-01	0x55_0x04_0x01 0x55_0x04_0x02 0x55_0x04_0x03 0x55_0x04_0x04
SC397-02	0x55_0x04_0x05 0x55_0x04_0x0a 0x55_0x04_0x0f 0x55_0x04_0x14

SC No.	ASAP Command: SC detection notification
SC397-03	0x55_0x04_0x06 0x55_0x04_0x07 0x55_0x04_0x08 0x55_0x04_0x09 0x55_0x04_0x0b 0x55_0x04_0x0c 0x55_0x04_0x0d 0x55_0x04_0x0e 0x55_0x04_0x10 0x55_0x04_0x11 0x55_0x04_0x12 0x55_0x04_0x13 0x55_0x04_0x15 0x55_0x04_0x16 0x55_0x04_0x17 0x55_0x04_0x18
SC397-04	0x55_0x04_0x29 0x55_0x04_0x2a 0x55_0x04_0x2b 0x55_0x04_0x2c
SC397-05	0x55_0x04_0x34
SC398-01	0x55_0x01_0x01 0x55_0x01_0x02 0x55_0x01_0x03 0x55_0x01_0x04
SC398-02	0x55_0x01_0x05 0x55_0x01_0x0a 0x55_0x01_0x0f 0x55_0x01_0x14

SC No.	ASAP Command: SC detection notification
SC398-03	0x55_0x01_0x06 0x55_0x01_0x07 0x55_0x01_0x08 0x55_0x01_0x09 0x55_0x01_0x0b 0x55_0x01_0x0c 0x55_0x01_0x0d 0x55_0x01_0x0e 0x55_0x01_0x10 0x55_0x01_0x11 0x55_0x01_0x12 0x55_0x01_0x13 0x55_0x01_0x15 0x55_0x01_0x16 0x55_0x01_0x17 0x55_0x01_0x18
SC398-04	0x55_0x01_0x29 0x55_0x01_0x2a 0x55_0x01_0x2b 0x55_0x01_0x2c
SC398-05	0x55_0x01_0x34

Service Call 400-498

SC400 (Engine: Around the Drum)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC400-01	D	Development Gamma High Error (K)
SC400-02	D	Development Gamma High Error (C)
SC400-03	D	Development Gamma High Error (M)
SC400-04	D	Development Gamma High Error (Y)
		<p>Development gamma > 3.0</p> <p>Details:</p> <p>This SC is issued when the development gamma measured during process control was greater than 3.0</p> <ul style="list-style-type: none"> • Toner density too high • Condensation <ul style="list-style-type: none"> • Replace the developer. • If condensation has formed, wait a while and repeat process control.

5

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC401-01	D	Development Gamma Low Error (K)
SC401-02	D	Development Gamma Low Error (C)
SC401-03	D	Development Gamma Low Error (M)
SC401-04	D	Development Gamma Low Error (Y)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>Development gamma > 3.0</p> <p>Details:</p> <p>This SC is issued when the development gamma measured during process control was smaller than 3.0</p>
		<ul style="list-style-type: none"> • Toner density error • The dustproof glass is dirty. • Transfer power pack defective • PCDU set error
		<ul style="list-style-type: none"> • Check the toner supply system. • Clean the dustproof glass. • Replace the transfer power pack. • Check if the PCDU is installed correctly by looking at the locking levers. (☛ page 681 "PCDU")

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC402-51	D	Development gamma calculation error: Insufficient data (K)
SC402-52	D	Development gamma calculation error: Insufficient data (C)
SC402-53	D	Development gamma calculation error: Insufficient data (M)
SC402-54	D	Development gamma calculation error: Insufficient data (KY
		<p>The number of valid data that can be used for development gamma calculation is smaller than 2.</p>
		<ul style="list-style-type: none"> • Toner density error • Condensation
		<ul style="list-style-type: none"> • Replace the developer. • If condensation has formed, wait a while and repeat process control.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC402-61	D	Development gamma calculation error: LD unlit (K)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC402-62	D	Development gamma calculation error: LD unlit (C)
SC402-63	D	Development gamma calculation error: LD unlit (M)
SC402-64	D	Development gamma calculation error: LD unlit (Y)
		<p>Unable to draw gradation pattern</p> <p>Details:</p> <p>This SC is issued when the potential sensor fails to detect the gradation pattern created during process control.</p> <ul style="list-style-type: none"> • LD unlit • Check the LD system and electric components.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC403-01	C	Development Start Voltage (Vk) High Error (K)
SC403-02	C	Development Start Voltage (Vk) High Error (C)
SC403-03	C	Development Start Voltage (Vk) High Error (M)
SC403-04	C	Development Start Voltage (Vk) High Error (Y)
		<p>Development Start Voltage (Vk) > 300 [-V]</p> <p>Details:</p> <p>This SC is issued when the development start voltage measured during process control exceeded 300[-V].</p> <ul style="list-style-type: none"> • Toner density error • Replace the developer.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC404-01	C	Development Start Voltage (Vk) Low Error (K)
SC404-02	C	Development Start Voltage (Vk) Low Error (C)
SC404-03	C	Development Start Voltage (Vk) Low Error (M)
SC404-04	C	Development Start Voltage (Vk) Low Error (Y)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>Development Start Voltage (Vk) < 300 [-V]</p> <p>Details:</p> <p>This SC is issued when the development start voltage measured during process control was smaller than 300[-V].</p>
		<ul style="list-style-type: none"> • Toner density error • Condensation
		<ul style="list-style-type: none"> • Replace the developer. • If condensation has formed, wait a while and repeat process control.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC410-01	C	Residual Voltage (Vr) Detection Error (K)
SC410-02	C	Residual Voltage (Vr) Detection Error (C)
SC410-03	C	Residual Voltage (Vr) Detection Error (M)
SC410-04	C	Residual Voltage (Vr) Detection Error (Y)
		<p>Residual Voltage (Vr) > 200[-V]</p> <p>Details:</p> <p>This SC is issued when the residual voltage measured during process control exceeded 200 [-V].</p>
		<ul style="list-style-type: none"> • Toner density error • Condensation
		<ul style="list-style-type: none"> • Replace the developer. • If condensation has formed, wait a while and repeat process control.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC411-01	C	Charge potential (Vd) Adjustment Error (K)
SC411-02	C	Charge potential (Vd) Adjustment Error (C)
SC411-03	C	Charge potential (Vd) Adjustment Error (M)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC411-04	C	Charge potential (Vd) Adjustment Error (Y)
		Failed to adjust the DC charge bias to the target range: $Vd^* \pm 8V$. Details: This SC is issued when the machine fails to adjust the DC charge bias to the target range: $Vd^* \pm 8V$ during process control.
		<ul style="list-style-type: none"> • Charge roller dirty
		<ul style="list-style-type: none"> • Replace the charge roller.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC412-01	C	LD input current (Vpl) Adjustment Error (K)
SC412-02	C	LD input current (Vpl) Adjustment Error (C)
SC412-03	C	LD input current (Vpl) Adjustment Error (M)
SC412-04	C	LD input current (Vpl) Adjustment Error (Y)
		Failed to adjust the LD power to the target range: $Vpl^* \pm 5V$. Details: This SC is issued when the machine fails to adjust the LD power to the target range: $Vpl^* \pm 5V$ during process control.
		<ul style="list-style-type: none"> • OPC drum deteriorated (Filming etc.) • Charge roller dirty
		<ul style="list-style-type: none"> • Replace the OPC drum. • Replace the charge roller.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC421-01	C	OPC home position signal detection error (K)
SC421-02	C	OPC home position signal detection error (C)
SC421-03	C	OPC home position signal detection error (M)
SC421-04	C	OPC home position signal detection error (Y)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		Failed to detect the home position signal within specified time.
		<ul style="list-style-type: none"> • Home position sensor defective/Loose connection/Harness broken/Connector disconnected • Home position sensor smudged
		<ul style="list-style-type: none"> • Check the home position sensor connector. • Check the home position sensor harness. • Replace the home position sensor if it is found to be defective. • Check the sensor for smudges. Blow it with air and check again.

5

SC300/400 (Engine: Transfer/Separation, Cleaning etc.)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC390-00	C	Black drum drive FF control error.
		<p>Error detected by the TDCU.</p> <p>If a command sent from the TDCU indicates an error, the engine issues an SC.</p> <p>ASAP command: 0x58_0x08</p>
		<ul style="list-style-type: none"> • Black drum motor defective • Black sensor connector disconnected or harness broken • Black drum encoder sensor defective • Black drum encoder smudged or defective
		<ul style="list-style-type: none"> • Replace the black drum encoder sensor. • Replace the black drum encoder. • Replace the black drum drive unit. • Replace the black drum motor. • Reconnect the connector or replace the harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC391-00	C	Cyan drum drive FF control error.
		Error detected by the TDCU. If a command sent from the TDCU indicates an error, the engine issues an SC. ASAP command: 0x58_0x02
		<ul style="list-style-type: none"> • Cyan drum motor defective • Cyan sensor connector disconnected or harness broken • Cyan drum encoder sensor defective • Cyan drum encoder smudged or defective
		<ul style="list-style-type: none"> • Replace the cyan drum encoder sensor. • Replace the cyan drum encoder. • Replace the cyan drum drive unit. • Replace the cyan drum motor. • Reconnect the connector or replace the harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC392-00	C	Magenta drum drive FF control error.
		Error detected by the TDCU. If a command sent from the TDCU indicates an error, the engine issues an SC. ASAP command: 0x58_0x04
		<ul style="list-style-type: none"> • Magenta drum motor defective • Magenta sensor connector disconnected or harness broken • Magenta drum encoder sensor defective • Magenta drum encoder smudged or defective
		<ul style="list-style-type: none"> • Replace the magenta drum encoder sensor. • Replace the magenta drum encoder. • Replace the magenta drum drive unit. • Replace the magenta drum motor. • Reconnect the connector or replace the harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC393-00	C	Yellow drum drive FF control error.
		Error detected by the TDCU. If a command sent from the TDCU indicates an error, the engine issues an SC. ASAP command: 0x58_0x01
		<ul style="list-style-type: none"> • Yellow drum motor defective • Yellow sensor connector disconnected or harness broken • Yellow drum encoder sensor defective • Yellow drum encoder smudged or defective
		<ul style="list-style-type: none"> • Replace the yellow drum encoder sensor. • Replace the yellow drum encoder. • Replace the yellow drum drive unit. • Replace the yellow drum motor. • Reconnect the connector or replace the harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC440-01	D	Image Transfer Power Pack Voltage Leak (K)
SC440-02	D	Image Transfer Power Pack Voltage Leak (C)
SC440-03	D	Image Transfer Power Pack Voltage Leak (M)
SC440-04	D	Image Transfer Power Pack Voltage Leak (Y)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>An interrupt checks the status of the power pack every 10 ms. This SC is issued if a problem exists with 50 consecutive samplings (500 ms).</p> <p>Details:</p> <p>SC issued when the image transfer power pack output current is leaking. The IOB checks for SC signals as described above.</p> <ul style="list-style-type: none"> Image transfer power pack output current is leaking. <p>Remove the high voltage cable from the output terminal of the image transfer power pack and check the following items.</p> <ul style="list-style-type: none"> PWM signal check If signal is fixed during image transfer, replace the cable or the IOB. Image transfer power pack output check If output is fixed during image transfer, replace the power pack. If output is normal during image transfer, replace the high voltage cable, ITB or the transfer roller.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC440-11	D	Image Transfer Power Pack Error (low output) (K)
SC440-12	D	Image Transfer Power Pack Error (low output) (C)
SC440-13	D	Image Transfer Power Pack Error (low output) (M)
SC440-14	D	Image Transfer Power Pack Error (low output) (Y)
		<p>The transfer roller resistance level was "R-3" (detected voltage was lower than 0.1kV).</p> <ul style="list-style-type: none"> Image transfer power pack defective Problem with input harness to the image transfer power pack (loose connection, harness broken, or connector disconnected). <ul style="list-style-type: none"> Fix or replace the image transfer power pack. Check the input harness and connector of the image transfer power pack.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC442-00	D	ITB Lift Error
		<p>Even though the ITB lift motor rotates, the ITB lift sensor failed to detect the specified sensor feeler status within specified time.</p> <p>Details:</p> <ul style="list-style-type: none"> • During home-positioning (operation for fixing the separated status) (separation movement) The sensor failed to detect the transition from "feeler present" to "feeler absent" (separation movement) within 2000 msec from the start of ITB lift motor rotation. • During normal contact/separation movement (printing/process control/MUSIC/forced toner consumption) Contact movement: The sensor failed to detect the transition from "feeler absent" to "feeler present" (contact) within 2000 msec from the start of ITB lift motor rotation. Separation movement: The sensor failed to detect the transition from "feeler present" to "feeler absent" (separation) within 2000 msec from the start of ITB lift motor rotation.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<ul style="list-style-type: none"> • During contact/separation movement under special conditions (paper jam, paper end etc.) <p>Separation movement: The sensor failed to detect the transition from "feeler present" to "feeler absent" (separation) within 2000 msec from the start of ITB lift motor rotation.</p> <p>Detection timing: During contact/separation movement Detection interval: 2msec or more</p>
		<ul style="list-style-type: none"> • Sensor smudged • Motor/sensor defective • Harness broken or problem with connection (such as a disconnected connector)
		<ul style="list-style-type: none"> • If smudged: cleaning • If defective or broken: replacement • Problem with connection: reconnection

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC443-01	C	Image transfer roller end-of-life (K)
SC443-02	C	Image transfer roller end-of-life (C)
SC443-03	C	Image transfer roller end-of-life (M)
SC443-04	C	Image transfer roller end-of-life (Y)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		Resistance level of the image transfer roller was "R+3" during image transfer voltage detection.
		<ul style="list-style-type: none"> Image transfer roller resistance increased through time (Roller end-of-life) Connection fault between the image transfer power pack and the image transfer roller (High voltage harness broken, connector disconnected, or contact failure of image transfer roller bushes, etc.) Image transfer power pack defective
		<ul style="list-style-type: none"> Replace the image transfer roller. Reconnect or replace the high voltage harness or the unit. Fix or replace the image transfer power pack.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		ITB unit control error: driven shaft FB
		Error detected by the TDCU. If a command sent from the TDCU indicates an error, the engine issues an SC. ASAP command: 0x58_0x40
SC445-01	C	<ul style="list-style-type: none"> ITB motor defective ITB unit set error Connector disconnected or harness broken Driven shaft encoder sensor defective Driven shaft encoder smudged or damaged
		<ul style="list-style-type: none"> Replace the ITB unit. Replace the ITB motor. Set the ITB unit again. Replace the driven shaft encoder. Reconnect the connectors Replace the harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC445-02	C	ITB unit control error: driven shaft eccentricity correction control
		<p>Error detected by the TDCU.</p> <p>If a command sent from the TDCU indicates an error, the engine issues an SC.</p> <p>ASAP command: 0x58_0x20</p>
		<ul style="list-style-type: none"> • ITB motor defective • ITB unit set error • Connector disconnected or harness broken • Driven shaft encoder sensor defective • Driven shaft encoder smudged or damaged • Drive shaft encoder sensor defective • Drive shaft encoder smudged or damaged
		<ul style="list-style-type: none"> • Replace the ITB unit. • Replace the ITB motor. • Set the ITB unit again. • Replace the driven shaft encoder sensor. • Replace the driven shaft encoder. • Replace the drive shaft encoder sensor. • Replace the drive shaft encoder. • Reconnect the connectors or replace the harness. • Replace the ITB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC445-03	C	ITB unit control error: dancing control

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>Error detected by the TDCU.</p> <p>If a command sent from the TDCU indicates an error, the engine issues an SC.</p> <p>ASAP command: 0x58_0x10</p>
		<ul style="list-style-type: none"> • ITB motor defective • ITB unit set error • Connector disconnected or harness broken • Driven shaft encoder sensor defective • Driven shaft encoder smudged or damaged • Drive shaft encoder sensor defective • Drive shaft encoder smudged or damaged
		<ul style="list-style-type: none"> • Replace the ITB unit. • Replace the ITB motor. • Set the ITB unit again. • Replace the driven shaft encoder sensor. • Replace the driven shaft encoder. • Replace the drive shaft encoder sensor. • Replace the drive shaft encoder. • Reconnect the connectors or replace the harness. • Replace the ITB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC446-01	D	ITB: Lock: Encoder 1 error
SC446-02	D	ITB: Lock: Encoder 2 error
SC446-03	D	ITB: Lock: Encoder 1/2 error
SC446-04	D	ITB: Lock: Hole error
SC446-05	D	ITB: Lock: Overload error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>Error detected by the TDCU.</p> <p>If a command sent from the TDCU indicates an error, the engine issues an SC.</p> <p>ASAP command: Motor lock detection setting value (engine to TDCU): 0x5B</p> <p>See table below for ASAP commands notifying SC detection.</p> <p>Details:</p> <p>TDCU Motor lock signal criteria:</p> <ul style="list-style-type: none"> • Drum motor <ul style="list-style-type: none"> High if the motor speed is not within the range of target value \pm 6.25%. Low if the motor speed is within the range of target value \pm 6.25%. • ITB drive motor, PTR Motor <ul style="list-style-type: none"> High if the motor speed is not within the range of target value \pm 6.25%. Low if the motor speed is within the range of target value \pm 6.25%. <p>Target value:</p> <p>If the default motor speed was adjusted using the SP, the adjusted value is used as the target value.</p> <p>Specification:</p> <p>When the motor is on, each lock signal is checked every 100 milliseconds. If the High status is detected 20 times consecutively, the machine determines that the motor is not running correctly. The machine issues an SC and stops the motor.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<ul style="list-style-type: none"> • Motor defective, connector disconnected, harness broken, IOB defective, unit torque increased. • ITB drive R sensor smudged, ITB driven R sensor smudged, ITB drive R sensor defective, ITB drive R sensor defective • ITB drive R sensor connector not set correctly, ITB driven R sensor connector not set correctly, harness broken
		<ul style="list-style-type: none"> • Replace the motor / reconnect the connector / replace the harness / replace the IOB / replace the unit / replace the driven unit. • Clean the sensor / replace the sensor. • Reconnect the sensor connector. • Check the sensor harness.

ASAP Command: SC detection notification (TDCU to Engine): (SC446-01 to SC446-05)

SC No.	ASAP Command: SC detection notification
SC446-01	0x55_0x40_0x01 0x55_0x40_0x02 0x55_0x40_0x03 0x55_0x40_0x04
SC446-02	0x55_0x40_0x05 0x55_0x40_0x0a 0x55_0x40_0x0f 0x55_0x40_0x14

SC No.	ASAP Command: SC detection notification
SC446-03	0x55_0x40_0x06 0x55_0x40_0x07 0x55_0x40_0x08 0x55_0x40_0x09 0x55_0x40_0x0b 0x55_0x40_0x0c 0x55_0x40_0x0d 0x55_0x40_0x0e 0x55_0x40_0x10 0x55_0x40_0x11 0x55_0x40_0x12 0x55_0x40_0x13 0x55_0x40_0x15 0x55_0x40_0x16 0x55_0x40_0x17 0x55_0x40_0x18
SC446-04	0x55_0x40_0x29 0x55_0x40_0x2a 0x55_0x40_0x2b 0x55_0x40_0x2c
SC446-05	0x55_0x40_0x34

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC450-01	D	ITB Power Pack error (leak): DC
SC450-02	D	ITB Power Pack error (leak): AC

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>An interrupt checks the status of the power pack every 10 ms. This SC is issued if a problem exists with 50 consecutive samplings (500 ms).</p> <p>Details:</p> <p>SC issued when the ITB power pack output current is leaking.</p> <p>The IOB checks for SC signals as described above. Distinguished between DC and AC.</p>
		<ul style="list-style-type: none"> ITB power pack output current is leaking.
		<p>Remove the high voltage cable from the output terminal of the ITB power pack and check the following items.</p> <ul style="list-style-type: none"> PWM signal check If signal is fixed during image transfer, replace the cable or the IOB. ITB power pack output check If output is fixed during image transfer, replace the power pack. If output is normal during image transfer, replace the high voltage cable, ITB or the transfer roller.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC450-11	D	ITB Power Pack Error (low output)
		The ITB roller resistance level was "R-3" (detected voltage was lower than 0.1kV).
		<ul style="list-style-type: none"> ITB power pack defective Problem with input harness to the ITB power pack (loose connection, harness broken, or connector disconnected).
		<ul style="list-style-type: none"> Fix or replace the ITB power pack. Check the input harness and connector of the ITB power pack.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC452-00	D	PTR Lift Error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution		
		<p>Even though the PTR lift motor rotates, the PTR lift sensor failed to detect the specified sensor feeler status within specified time.</p> <p>Details:</p> <ul style="list-style-type: none"> • During home-positioning (operation for fixing the separated status) (separation movement) The sensor failed to detect the transition from "feeler present" to "feeler absent" (separation) within 2000 msec from the start of PTR lift motor rotation. • During normal contact/separation movement (printing/process control/MUSIC/forced toner consumption) Contact movement: The sensor failed to detect the transition from "feeler absent" to "feeler present" (contact) within 2000 msec from the start of PTR lift motor rotation. Separation movement: The sensor failed to detect the transition from "feeler present" to "feeler absent" (separation) within 2000 msec from the start of PTR lift motor rotation. 		
		<ul style="list-style-type: none"> • During contact/separation movement under special conditions (paper jam, paper end etc.) Separation movement: The sensor failed to detect the transition from "feeler present" to "feeler absent" (separation) within 2000 msec from the start of PTR lift motor rotation. <p>Detection timing: During contact/separation movement Detection interval: 2msec or less</p> <table border="1"> <tr> <td> <ul style="list-style-type: none"> • Sensor smudged • Motor/sensor defective • Harness broken or problem with connection (such as a disconnected connector) </td> </tr> </table> <table border="1"> <tr> <td> <ul style="list-style-type: none"> • If smudged: cleaning • If defective or broken: replacement • Problem with connection: reconnection </td> </tr> </table>	<ul style="list-style-type: none"> • Sensor smudged • Motor/sensor defective • Harness broken or problem with connection (such as a disconnected connector) 	<ul style="list-style-type: none"> • If smudged: cleaning • If defective or broken: replacement • Problem with connection: reconnection
<ul style="list-style-type: none"> • Sensor smudged • Motor/sensor defective • Harness broken or problem with connection (such as a disconnected connector) 				
<ul style="list-style-type: none"> • If smudged: cleaning • If defective or broken: replacement • Problem with connection: reconnection 				

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC453-00	C	Paper Transfer Roller end-of-life
		The paper transfer roller resistance level was "R+3".
		<ul style="list-style-type: none"> • Paper transfer roller resistance increased through time (Roller end-of-life) • Connection fault between the paper transfer power pack and the paper transfer roller (High voltage harness broken, connector disconnected, or contact failure of paper transfer roller bushes, etc.) • Paper transfer power pack defective
		<ul style="list-style-type: none"> • Replace the paper transfer roller. • Reconnect or replace the high voltage harness or the unit. • Fix or replace the paper transfer power pack.

SC460
D135 RTB 48
D135 RTB 116
D137 RTB 64

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC460-00	D	Separation Power Pack Error (Leak)
		An interrupt checks the status of the power pack every 10 ms. This SC is issued if a problem exists with 50 consecutive samplings (500 ms). Details: SC issued when the separation power pack output current is leaking. The IOB checks for SC signals as described above.
		<ul style="list-style-type: none"> Image transfer power pack AC output is leaking.
		<p>Check if the drawer unit is closed correctly using the following procedure.</p> <ol style="list-style-type: none"> Turn off the machine power and pull out the drawer unit. Close the drawer unit completely and turn on the machine power. Make two or three copies and confirm the error message has disappeared. <p>Remove the high voltage cable from the output terminal of the separation power pack and check the following items.</p> <ul style="list-style-type: none"> PWM signal check If signal is fixed during image transfer, replace the cable or the IOB. Separation power pack output check If output is fixed during image transfer, replace the power pack. If output is normal during image transfer, replace the high voltage cable or the quenching needle.

5

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC465-01	D	PTR motor: Lock: Encoder 1 error
SC465-02	D	PTR motor (K) Lock: Encoder 2 error
SC465-03	D	PTR motor (K) Lock: Encoder 1/2 error
SC465-04	D	PTR motor (K) Lock: Hole error
SC465-05	D	PTR motor (K) Lock: Overload error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>Error detected by the TDCU.</p> <p>If a command sent from the TDCU indicates an error, the engine issues an SC.</p> <p>ASAP command: Motor lock detection setting value (engine to TDCU): 0x5B</p> <p>See table below for ASAP commands notifying SC detection.</p> <p>Details:</p> <p>TDCU Motor lock signal criteria:</p> <ul style="list-style-type: none"> • Drum motor <ul style="list-style-type: none"> High if the motor speed is not within the range of target value $\pm 6.25\%$. Low if the motor speed is within the range of target value $\pm 6.25\%$. • ITB drive motor, PTR Motor <ul style="list-style-type: none"> High if the motor speed is not within the range of target value $\pm 6.25\%$. Low if the motor speed is within the range of target value $\pm 6.25\%$. <p>Target value:</p> <p>If the default motor speed was adjusted using the SP, the adjusted value is used as the target value.</p> <p>Specification:</p> <p>When the motor is on, each lock signal is checked every 100 milliseconds. If the High status is detected 20 times consecutively, the machine determines that the motor is not running correctly. The machine issues an SC and stops the motor.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<ul style="list-style-type: none"> • Motor defective, connector disconnected, harness broken, IOB defective, unit torque increased. • PTR sensor smudged or defective • PTR sensor connector not set correctly, harness broken
		<ul style="list-style-type: none"> • Replace the motor / reconnect the connector / replace the harness / replace the IOB / replace the unit / replace the driven unit. • Clean the sensor / replace the sensor. • Reconnect the sensor connector. • Check the sensor harness.

ASAP Command: SC detection notification (TDCU to Engine): (SC465-01 to SC465-05)

5

SC No.	ASAP Command: SC detection notification
SC465-01	0x55_0x80_0x01 0x55_0x80_0x02 0x55_0x80_0x03 0x55_0x80_0x04
SC465-02	0x55_0x80_0x05 0x55_0x80_0x0a 0x55_0x80_0x0f 0x55_0x80_0x14

SC No.	ASAP Command: SC detection notification
SC465-03	0x55_0x80_0x06 0x55_0x80_0x07 0x55_0x80_0x08 0x55_0x80_0x09 0x55_0x80_0x0b 0x55_0x80_0x0c 0x55_0x80_0x0d 0x55_0x80_0x0e 0x55_0x80_0x10 0x55_0x80_0x11 0x55_0x80_0x12 0x55_0x80_0x13 0x55_0x80_0x15 0x55_0x80_0x16 0x55_0x80_0x17 0x55_0x80_0x18
SC446-04	0x55_0x80_0x29 0x55_0x80_0x2a 0x55_0x80_0x2b 0x55_0x80_0x2c
SC446-05	0x55_0x80_0x34

SC480
D137 RTB 72

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC480-00	D	Drum cleaning motor: Bk: Lock
		<p>Error detected by the TDCU.</p> <p>If a command sent from the TDCU indicates an error, the engine issues an SC.</p> <p>ASAP command: Motor lock detection setting value (engine to TDCU): 0x5B</p> <p>ASAP command: SC detection notification (TDCU to engine): 0x57_0x08</p> <p>Details:</p> <p>When the motor is on, each lock signal is checked every 100 milliseconds. If the High status is detected 20 times consecutively, the machine determines that the motor is not running correctly. The machine issues an SC and stops the motor.</p>
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Harness broken • IOB defective • Unit torque increased.
		<ul style="list-style-type: none"> • Replace the motor. • Reconnect the connector. • Replace the harness. • Replace the IOB. • Replace the unit. • Replace the driven unit.

SC481
D137 RTB 72

5

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC481-00	D	Drum cleaning motor: C: Lock
		<p>Error detected by the TDCU.</p> <p>If a command sent from the TDCU indicates an error, the engine issues an SC.</p> <p>ASAP command: Motor lock detection setting value (engine to TDCU): 0x5B</p> <p>ASAP command: SC detection notification (TDCU to engine): 0x57_0x02</p> <p>Details:</p> <p>When the motor is on, each lock signal is checked every 100 milliseconds. If the High status is detected 20 times consecutively, the machine determines that the motor is not running correctly. The machine issues an SC and stops the motor.</p>
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Harness broken • IOB defective • Unit torque increased.
		<ul style="list-style-type: none"> • Replace the motor. • Reconnect the connector. • Replace the harness. • Replace the IOB. • Replace the unit. • Replace the driven unit.

SC482
D137 RTB 72

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC482-00	D	Drum cleaning motor: M: Lock
		<p>Error detected by the TDCU.</p> <p>If a command sent from the TDCU indicates an error, the engine issues an SC.</p> <p>ASAP command: Motor lock detection setting value (engine to TDCU): 0x5B</p> <p>ASAP command: SC detection notification (TDCU to engine): 0x57_0x04</p> <p>Details:</p> <p>When the motor is on, each lock signal is checked every 100 milliseconds. If the High status is detected 20 times consecutively, the machine determines that the motor is not running correctly. The machine issues an SC and stops the motor.</p>
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Harness broken • IOB defective • Unit torque increased.
		<ul style="list-style-type: none"> • Replace the motor. • Reconnect the connector. • Replace the harness. • Replace the IOB. • Replace the unit. • Replace the driven unit.

SC483
D137 RTB 72

5

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC483-00	D	Drum cleaning motor: Y: Lock
		<p>Error detected by the TDCU.</p> <p>If a command sent from the TDCU indicates an error, the engine issues an SC.</p> <p>ASAP command: Motor lock detection setting value (engine to TDCU): 0x5B</p> <p>ASAP command: SC detection notification (TDCU to engine): 0x57_0x01</p> <p>Details:</p> <p>When the motor is on, each lock signal is checked every 100 milliseconds. If the High status is detected 20 times consecutively, the machine determines that the motor is not running correctly. The machine issues an SC and stops the motor.</p>
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Harness broken • IOB defective • Unit torque increased.
		<ul style="list-style-type: none"> • Replace the motor. • Reconnect the connector. • Replace the harness. • Replace the IOB. • Replace the unit. • Replace the driven unit.

SC486
D135 RTB 135
D137 RTB 173

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC486-00	D	Bottle Waste Toner Lock Detection Error
		Signals sent from the bottle waste toner motor lock sensor were either ON or OFF 50 times consecutively.
		<ul style="list-style-type: none"> Physical obstruction is blocking waste toner transport path Bottle waste toner motor defective Sensor defective Harness broken Connection fault
		<ul style="list-style-type: none"> Physical obstruction is blocking waste toner transport path: Replace or clean the waste toner transport section. Bottle waste toner motor defective: Replace the motor. Sensor defective: Replace the sensor. Harness broken: Replace the harness. Connection fault: Reconnect it.

5

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC488-00	D	Machine Waste Toner Lock Detection Error
		The intervals of signals sent from the machine waste toner lock sensor (normally 64.68msec) became either less than 30msec or more than 81 msec.
		<ul style="list-style-type: none"> Physical obstruction is blocking waste toner transport path Machine waste toner motor defective Sensor defective Harness broken Connection fault
		<ul style="list-style-type: none"> Physical obstruction is blocking waste toner transport path: Replace or clean the waste toner transport section. Sensor defective or harness broken: Replace parts. Connection fault: Reconnect it.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC496-00	C	MUSIC Sensor Error
		<p>MUSIC failed while power was on.</p> <p>Details:</p> <ul style="list-style-type: none"> • TM sensor sampling error • Sensor LED adjustment abnormal • Number of patches abnormal • ITB scratched • Main scan registration abnormal • Sub scan registration abnormal • Main scan magnification abnormal • Main scan magnification error diffusion abnormal
		<ul style="list-style-type: none"> • ITB scratched or smudged • Sensor smudged or defective • Pattern density abnormal
		<ul style="list-style-type: none"> • Cycle the machine off/on. • Replace the TM sensor. • Replace the ITB. • Process control • Cleaning

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC497-00	C	Temperature/Humidity Sensor Error (PCU)
		<p>One of the following occurred.</p> <ul style="list-style-type: none"> • The temperature sensor output was less than 0.5V or more than 2.8V for three seconds (one second x 3), indicating a problem with the temperature sensor. • The humidity sensor output was more than 2.4V for three seconds (one second x 3), indicating a problem with the humidity sensor. <p>Details: Detection is repeated after power off/on. If either of temperature/humidity sensors works correctly, the working sensor will be used even after the SC is issued. The machine continues working with the assumption that the temperature is 23 degrees centigrade (if there is a problem with the temperature sensor) and/or the humidity is 50% (if there is a problem with the humidity sensor).</p>
		<ul style="list-style-type: none"> • Connector disconnected or harness broken • Sensor defective
		<ul style="list-style-type: none"> • Connector disconnected or harness broken: Revert connection. • Sensor defective: Replace the sensor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC498-00	C	Temperature/Humidity Sensor Error (Main)
		<p>One of the following occurred.</p> <ul style="list-style-type: none"> • The temperature sensor output was less than 0.5V or more than 2.8V for three seconds (one second x 3), indicating a problem with the temperature sensor. • The humidity sensor output was more than 2.4V for three seconds (one second x 3), indicating a problem with the humidity sensor. <p>Details: Detection is repeated after power off/on. If either of temperature/humidity sensors works correctly, the working sensor will be used even after the SC is issued. The machine continues working with the assumption that the temperature is 23 degrees centigrade (if there is a problem with the temperature sensor) and/or the humidity is 50% (if there is a problem with the humidity sensor)</p>
		<ul style="list-style-type: none"> • Connector disconnected or harness broken • Sensor defective
		<ul style="list-style-type: none"> • Connector disconnected or harness broken: Revert connection. • Sensor defective: Replace the sensor.

Service Call 501-595

SC500 (Engine: Paper transport 1: Paper Feed, Duplex, Transport)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC501-01	B	1st Tray Lift Error (A3 extended tray)
		<p>1st tray lift motor lift error was detected.</p> <p>If detected for the first or second time: User is instructed to set paper again.</p> <p>If detected for the third time: SC displayed (only the corresponding tray)</p> <p>The count of detections is reset when successful operation is detected and at power off/on.</p>
		<ul style="list-style-type: none"> • 1st tray lift motor disconnected/harness broken/defective • 1st tray lift sensor disconnected/defective/smudged • Paper end sensor disconnected/defective/smudged • Paper overloaded • Foreign object (such as a piece of paper) is stuck between the paper tray and the tray lift motor. • Paper set incorrectly.
		<ul style="list-style-type: none"> • Load paper again. • Check the harness of the tray lift sensor,/reconnect the sensor connector/clean the sensor/replace the sensor/replace the 1st tray. • Check the harness of the paper end sensor/reconnect the sensor connector/clean the sensor/replace the sensor. • Replace the 1st tray lift motor/reconnect the connector/replace the harness/replace the PFB/Replace the right tray (of the tandem tray)/replace the driven unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC501-02	B	1st Tray Lowering Error (A3 extended tray)
		<p>1st tray lift motor lower error was detected.</p> <p>If detected for the first to fourth time: User is instructed to set paper again.</p> <p>If detected for the fifth time: SC displayed (only the corresponding tray)</p> <p>The count of detections is reset when successful operation is detected and at power off/on</p>
		<ul style="list-style-type: none"> • 1st tray lift motor disconnected/harness broken/defective • 1st tray lift sensor disconnected/defective/smudged • Paper end sensor disconnected/defective/smudged • Paper overloaded • Foreign object (such as a piece of paper) is stuck between the paper tray and the tray lift motor. • Paper set incorrectly.
		<ul style="list-style-type: none"> • Load paper again. • Check the harness of the tray lift sensor,/reconnect the sensor connector/clean the sensor/replace the sensor/replace the 1st tray. • Check the harness of the paper end sensor/reconnect the sensor connector/clean the sensor/replace the sensor. • Replace the 1st tray lift motor/reconnect the connector/replace the harness/replace the PFB/Replace the right tray (of the tandem tray)/replace the driven unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC501-11	B	1 st Tray Lift Error (Tandem tray/tandem LCT)
		<p>1 st tray lift motor lift error was detected.</p> <p>If detected for the first or second time: User is instructed to set paper again.</p> <p>If detected for the third time: SC displayed (only the corresponding tray)</p> <p>The count of detections is reset when successful operation is detected and at power off/on.</p>
		<ul style="list-style-type: none"> • 1 st tray lift motor disconnected/harness broken/defective • 1 st tray lift sensor disconnected/defective/smudged • Paper end sensor disconnected/defective/smudged • Paper overloaded • Foreign object (such as a piece of paper) is stuck between the paper tray and the tray lift motor. • Paper set incorrectly.
		<ul style="list-style-type: none"> • Load paper again. • Check the harness of the tray lift sensor,/reconnect the sensor connector/clean the sensor/replace the sensor/replace the 1 st tray. • Check the harness of the paper end sensor/reconnect the sensor connector/clean the sensor/replace the sensor. • Replace the 1 st tray lift motor/reconnect the connector/replace the harness/replace the PFB/Replace the right tray (of the tandem tray)/replace the driven unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC501-12	B	1st Tray Lowering Error (Tandem tray/Tandem LCT)
		<p>1st tray lift motor lower error was detected.</p> <p>If detected for the first to fourth time: User is instructed to set paper again.</p> <p>If detected for the fifth time: SC displayed (only the corresponding tray)</p> <p>The count of detections is reset when successful operation is detected and at power off/on</p>
		<ul style="list-style-type: none"> • 1st tray lift motor disconnected/harness broken/defective • 1st tray lift sensor disconnected/defective/smudged • Paper end sensor disconnected/defective/smudged • Paper overloaded • Foreign object (such as a piece of paper) is stuck between the paper tray and the tray lift motor. • Paper set incorrectly.
		<ul style="list-style-type: none"> • Load paper again. • Check the harness of the tray lift sensor,/reconnect the sensor connector/clean the sensor/replace the sensor/replace the 1st tray. • Check the harness of the paper end sensor/reconnect the sensor connector/clean the sensor/replace the sensor. • Replace the 1st tray lift motor/reconnect the connector/replace the harness/replace the PFB/Replace the right tray (of the tandem tray)/replace the driven unit.

SC501-13
D135 RTB 76

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC501-13	B	1st Tray Lower Limit Error (Tandem tray/Tandem LCT)
		<p>1st tray lift motor lower limit error was detected.</p> <p>If detected for the first or second time: User is instructed to set paper again.</p> <p>If detected for the third time: SC displayed (only the corresponding tray)</p> <p>The count of detections is reset when successful operation is detected and at power off/on.</p>
		<ul style="list-style-type: none"> • 1st tray lift motor disconnected/harness broken/defective • 1st tray lift sensor disconnected/defective/smudged • Paper end sensor disconnected/defective/smudged • Paper overloaded • Foreign object (such as a piece of paper) is stuck between the paper tray and the tray lift motor. • Paper set incorrectly.
		<ul style="list-style-type: none"> • Load paper again. • Check the harness of the tray lift sensor,/reconnect the sensor connector/clean the sensor/replace the sensor/replace the 1st tray. • Check the harness of the paper end sensor/reconnect the sensor connector/clean the sensor/replace the sensor. • Replace the 1st tray lift motor/reconnect the connector/replace the harness/replace the PFB/Replace the right tray (of the tandem tray)/replace the driven unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC501-14	C	Tandem Transport Fence Error
		<p>Transport motor return error detected.</p> <p>Transport motor home position error detected.</p> <p>If detected for the first or second time: User is instructed to set paper again.</p> <p>If detected for the third time: User is instructed to set paper again and SC is recorded but not displayed.</p> <p>The count of detections is reset when successful operation is detected and at power off/on.</p>
		<ul style="list-style-type: none"> • Transport motor disconnected/defective • Return sensor disconnected/defective/smudged • Home position sensor disconnected/defective/smudged • Paper overloaded • Foreign object (such as a piece of paper) is stuck between the paper tray and the transport motor. • Paper set incorrectly.
		<ul style="list-style-type: none"> • Replace the transport motor/reconnect the connector/replace the harness/replace the PFB/Replace the left tray/replace the driven unit. • Check the harness of the return sensor/reconnect the sensor connector/clean the sensor/replace the sensor. • Check the harness of the home position sensor/reconnect the sensor connector/clean the sensor/replace the sensor. • Load paper again.

SC502
D135 RTB 52

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC502-01	B	2nd Tray Lift Error
		<p>2nd tray lift motor lift error was detected.</p> <p>If detected for the first or second time: User is instructed to set paper again.</p> <p>If detected for the third time: SC displayed (only the corresponding tray)</p> <p>The count of detections is reset when successful operation is detected and at power off/on.</p>
		<ul style="list-style-type: none"> • 2nd tray lift motor disconnected/harness broken/defective • 2nd tray lift sensor disconnected/defective/smudged • Paper overloaded • Foreign object (such as a piece of paper) is stuck between the paper tray and the tray lift motor. • Paper set incorrectly.
		<ul style="list-style-type: none"> • Load paper again. • Check the harness of the tray lift sensor,/reconnect the sensor connector/clean the sensor/replace the 2nd tray. • Replace the 2nd tray lift motor/reconnect the connector/replace the harness/replace the PFB/Replace the 2nd tray/replace the driven unit.

SC502
D135 RTB 52

5

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC502-02	B	2nd Tray Lowering Error
		Tray lift motor lower error was detected. If detected for the first to fourth time: User is instructed to set paper again. If detected for the fifth time: SC displayed (only the corresponding tray) The count of detections is reset when successful operation is detected and at power off/on
		<ul style="list-style-type: none"> • 2nd tray lift motor disconnected/harness broken/defective • 2nd tray lift sensor disconnected/defective/smudged • Paper overloaded • Foreign object (such as a piece of paper) is stuck between the paper tray and the tray lift motor. • Paper set incorrectly.
		<ul style="list-style-type: none"> • Load paper again. • Check the harness of the tray lift sensor,/reconnect the sensor connector/clean the sensor/replace the 2nd tray. • Replace the 2nd tray lift motor/reconnect the connector/replace the harness/replace the PFB/Replace the 2nd tray/replace the driven unit.

SC503
D135 RTB 52

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC503-01	B	3rd Tray Lift Error
		<p>3rd tray lift motor lift error was detected.</p> <p>If detected for the first or second time: User is instructed to set paper again.</p> <p>If detected for the third time: SC displayed (only the corresponding tray)</p> <p>The count of detections is reset when successful operation is detected and at power off/on.</p>
		<ul style="list-style-type: none">• 3rd tray lift motor disconnected/harness broken/defective• 3rd tray lift sensor disconnected/defective/smudged• Paper overloaded• Foreign object (such as a piece of paper) is stuck between the paper tray and the tray lift motor.• Paper set incorrectly.
		<ul style="list-style-type: none">• Load paper again.• Check the harness of the tray lift sensor,/reconnect the sensor connector/clean the sensor/replace the 3rd tray.• Replace the 3rd tray lift motor/reconnect the connector/replace the harness/replace the PFB/Replace the 3rd tray/replace the driven unit.

SC503
D135 RTB 52

5

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC503-02	B	3rd Tray Lowering Error
		<p>Tray lift motor lower error was detected.</p> <p>If detected for the first to fourth time: User is instructed to set paper again.</p> <p>If detected for the fifth time: SC displayed (only the corresponding tray)</p> <p>The count of detections is reset when successful operation is detected and at power off/on</p>
		<ul style="list-style-type: none"> • 3rd tray lift motor disconnected/harness broken/defective • 3rd tray lift sensor disconnected/defective/smudged • Paper overloaded • Foreign object (such as a piece of paper) is stuck between the paper tray and the tray lift motor. • Paper set incorrectly.
		<ul style="list-style-type: none"> • Load paper again. • Check the harness of the tray lift sensor,/reconnect the sensor connector/clean the sensor/replace the 3rd tray. • Replace the 3rd tray lift motor/reconnect the connector/replace the harness/replace the PFB/Replace the 3rd tray/replace the driven unit.

SC504
D135 RTB 52

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC505-01	B	LCT Tray Error (Lift Sensor Error): D709
		The following status was detected 5 times consecutively: The upper limit sensor did not become on before pick-up solenoid is on at the start of tray initialization.
		<ul style="list-style-type: none"> • Pick-up solenoid defective/connector disconnected • Upper limit sensor defective/connector disconnected • Related harness broken • PCB defective
		<ul style="list-style-type: none"> • Replace or reconnect the pick-up solenoid. • Replace or reconnect the lift sensor. • Replace the corresponding harness. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC505-02	B	LCT Tray Error (Lift Timeout): D709
		During Tray initialization, the tray bottom plate was lifted but the upper limit sensor did not detect it after a specified time (30 seconds).
		<ul style="list-style-type: none"> • Upper limit motor defective/connector disconnected • Upper limit sensor defective/connector disconnected • Related harness broken • PCB defective
		<ul style="list-style-type: none"> • Replace or reconnect the lift motor. • Replace or reconnect the upper limit sensor. • Replace the corresponding harness. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC505-03	B	LCT Tray Error (Lowering Timeout): D709
		<ul style="list-style-type: none"> • During Tray initialization, the tray bottom plate was lowered for position check but the upper limit sensor was still on or none of lower limit sensor and paper sensors 1 to 4 became on after a specified time (30 seconds). • When paper has run out or when the lowering switch was pressed, the tray bottom plate was lowered but neither the lift sensor nor the lower limit sensor became on after a specified time (30 seconds).
		<ul style="list-style-type: none"> • Lift motor defective/connector disconnected • Upper limit sensor defective/connector disconnected • Lift sensor defective/connector disconnected • Lower limit sensor defective/connector disconnected • Either of paper sensors 1 to 4 defective/connector disconnected • Related harness broken • PCB defective
		<ul style="list-style-type: none"> • Replace or reconnect the lift motor. • Replace or reconnect the upper limit sensor. • Replace or reconnect the lift sensor. • Replace or reconnect the lower limit sensor. • Replace or reconnect the paper sensors 1 to 4. • Replace the corresponding harness. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC505-04	B	LCT Tray Error (Paper Overload Error): D709
		During tray initialization, the upper limit sensor and the lower limit sensor were both on for 5 times consecutively.
		<ul style="list-style-type: none"> • Paper overloaded. • Upper limit sensor defective/connector disconnected • Lower limit sensor defective/connector disconnected • Related harness broken • PCB defective
		<ul style="list-style-type: none"> • Reduce loaded paper. • Replace or reconnect the upper limit sensor. • Replace or reconnect the lower limit sensor. • Replace the corresponding harness. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC505-11	B	LCT Tray Error (Upper Limit Detection Error): D710
		At the start of tray initialization, the upper limit sensor was detected as being off for 5 times before the pick-up solenoid was on.
		<ul style="list-style-type: none"> • Pick-up solenoid defective/connector disconnected • Upper limit sensor defective/connector disconnected • Related harness broken • PCB defective
		<ul style="list-style-type: none"> • Replace or reconnect the pick-up solenoid. • Replace or reconnect the upper limit sensor. • Replace the corresponding harness. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC505-12	B	LCT Tray Error (Lift timeout): D710
		During Tray initialization, the tray bottom plate was lifted but the upper limit sensor did not detect it after a specified time (27 seconds).
		<ul style="list-style-type: none"> • Lift motor defective/connector disconnected • Upper limit sensor defective/connector disconnected • Related harness broken • PCB defective
		<ul style="list-style-type: none"> • Replace or reconnect the lift motor. • Replace or reconnect the upper limit sensor. • Replace the corresponding harness. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC505-16	B	LCT Tray Error (front blower fan error): D710
		Started LD signal check one second after LCT front blower fan became on and detected H level (abnormal) for 700 ms consecutively.
		<ul style="list-style-type: none"> • Front blower fan defective/connector disconnected • Related harness broken • PCB defective
		<ul style="list-style-type: none"> • Replace or reconnect the front blower fan. • Replace the corresponding harness. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC505-17	B	LCT Tray Error (rear blower fan error): D710
		Started LD signal check one second after LCT rear blower fan became on and detected H level (abnormal) for 700 ms consecutively.
		<ul style="list-style-type: none">• Rear blower fan defective/connector disconnected• Related harness broken• PCB defective
		<ul style="list-style-type: none">• Replace or reconnect the rear blower fan.• Replace the corresponding harness.• Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC509-01	B	Bypass tray lift error
		<p>The bottom plate started CW but the tray upper limit sensor did not become blocked within 3 seconds.</p> <p>If detected for the first or second time: User is instructed to set paper again.</p> <p>If detected for the third time: SC displayed</p> <p>The count of detections is reset when successful operation is detected and at power off/on.</p>
		<ul style="list-style-type: none"> • Bypass tray upper limit sensor defective/disconnected/harness broken • Bypass tray bottom plate lift motor defective/disconnected/harness broken • Circuit board (PFB) error • Bypass tray bottom plate/bottom plate drive unit does not move e.g. because physical obstacle (broken piece of the unit, etc.) is blocking operation.
		<ul style="list-style-type: none"> • Bypass tray bottom plate lift motor and bypass tray bottom plate upper limit sensor check/cleaning/replacement/harness reconnection/harness replacement • Check or replace the circuit board (PFB). • Check and/or replace the bypass tray bottom plate and bottom plate lift drive unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC509-02	B	Bypass tray lowering error
		<p>The bottom plate started CCW but the tray upper limit sensor did not become non-blocked within 1.5 seconds.</p> <p>If detected for the first or second time: User is instructed to set paper again.</p> <p>If detected for the third time: SC displayed</p> <p>The count of detections is reset when successful operation is detected and at power off/on.</p>
		<ul style="list-style-type: none"> • Bypass tray upper limit sensor defective/disconnected/harness broken • Bypass tray bottom plate lift motor defective/disconnected/harness broken • Circuit board (PFB) error • Bypass tray bottom plate/bottom plate drive unit does not move e.g. because physical obstacle (broken piece of the unit, etc.) is blocking operation.
		<ul style="list-style-type: none"> • Bypass tray bottom plate lift motor and bypass tray bottom plate upper limit sensor check/cleaning/replacement/harness reconnection/harness replacement • Check or replace the circuit board (PFB). • Check and/or replace the bypass tray bottom plate and bottom plate lift drive unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC509-03	B	Bypass tray lower limit error
		<p>The bottom plate started CCW but the tray lower limit sensor did not become blocked within 3 seconds.</p> <p>If detected for the first or second time: User is instructed to set paper again.</p> <p>If detected for the third time: SC displayed</p> <p>The count of detections is reset when successful operation is detected and at power off/on.</p>
		<ul style="list-style-type: none"> • Bypass tray lower limit sensor defective/disconnected/harness broken • Bypass tray bottom plate lift motor defective/disconnected/harness broken • Circuit board (PFB) error • Bypass tray bottom plate/bottom plate drive unit does not move e.g. because physical obstacle (broken piece of the unit, etc.) is blocking operation.
		<ul style="list-style-type: none"> • Bypass tray bottom plate lift motor and bypass tray bottom plate lower limit sensor check/cleaning/replacement/harness reconnection/harness replacement • Check or replace the circuit board (PFB). • Check and/or replace the bypass tray bottom plate and bottom plate lift drive unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC509-04	B	Bypass tray Paper Set Error
		<p>Both the upper limit sensor and the lower limit sensor were on when the machine attempted to adjust the bottom plate position before starting paper feed (at Job-In).</p> <p>If detected for the first to fourth time: User is instructed to set paper again.</p> <p>If detected for the fifth time: SC displayed (only the corresponding tray)</p> <p>The count of detections is reset when successful operation is detected and at power off/on.</p>
		<ul style="list-style-type: none"> • Bypass tray upper limit sensor defective/disconnected/harness broken • Circuit board (PFB) error • Paper overloaded
		<ul style="list-style-type: none"> • Bypass tray upper limit sensor and lower limit sensor check/cleaning/replacement/harness reconnection/harness replacement • Check or replace the circuit board (PFB). • Check the paper capacity.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC520-02	C	Exit Motor: Lock
SC520-03	C	Duplex Inverter Entrance Motor: Lock
SC520-04	C	Exit Inverter Motor: Lock
		<p>The motor error notification register is always monitored at 500 ms intervals. When a register indicates an error five times consecutively, the motor is assumed to be malfunctioning.</p>
		<ul style="list-style-type: none"> • Motor defective/connector disconnected • Harness broken/IOB defective • Encoder defective • Unit torque increased.
		<ul style="list-style-type: none"> • Replace the motor or connector. • Replace the harness or IOB. • Replace the unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC521-01	C	Duplex Inverter Motor: Lock
SC521-02	C	Duplex Transport Motor: Lock
SC521-03	C	Duplex Exit Motor: Lock
		<p>The motor error notification register is always monitored at 500 ms intervals. When a register indicates an error five times consecutively, the motor is assumed to be malfunctioning.</p> <ul style="list-style-type: none"> • Motor defective/connector disconnected • Harness broken/IOB defective • Encoder defective • Unit torque increased. <ul style="list-style-type: none"> • Replace the motor or connector. • Replace the harness or IOB. • Replace the unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC522-01	C	1st Paper Feed Motor: Lock
SC522-03	C	2nd Paper Feed Motor: Lock
SC522-04	C	3rd Paper Feed Motor: Lock
		<p>The motor error notification register is always monitored at 500 ms intervals. When a register indicates an error five times consecutively, the motor is assumed to be malfunctioning.</p> <ul style="list-style-type: none"> • Motor defective/connector disconnected • Harness broken/IOB defective • Encoder defective • Unit torque increased. <ul style="list-style-type: none"> • Replace the motor or connector. • Replace the harness or IOB. • Replace the unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC523-01	C	1st Transport Motor: Lock
SC523-02	C	2nd Transport Motor: Lock
SC523-03	C	3rd Transport Motor: Lock
SC523-04	C	4th Transport Motor: Lock
		<p>The motor error notification register is always monitored at 500 ms intervals. When a register indicates an error five times consecutively, the motor is assumed to be malfunctioning.</p> <ul style="list-style-type: none"> • Motor defective/connector disconnected • Harness broken/IOB defective • Encoder defective • Unit torque increased. <ul style="list-style-type: none"> • Replace the motor or connector. • Replace the harness or IOB. • Replace the unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC524-01	C	Relay Motor: Lock
SC524-02	C	Registration Motor: Lock
SC524-03	C	Bypass Tray Feed Motor: Lock
		<p>The motor error notification register is always monitored at 500 ms intervals. When a register indicates an error five times consecutively, the motor is assumed to be malfunctioning.</p> <ul style="list-style-type: none"> • Motor defective/connector disconnected • Harness broken/IOB defective • Encoder defective • Unit torque increased. <ul style="list-style-type: none"> • Replace the motor or connector. • Replace the harness or IOB. • Replace the unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC525-01	D	Drawer Unit Lock Motor Error
		Sensor signal did not change for 3000 msec while the drawer lock motor was running.
		<ul style="list-style-type: none"> • Drawer unit lock motor defective • Drawer unit lock sensor defective • Connector disconnected • Harness broken • Circuit board defective
		<ul style="list-style-type: none"> • Replace the drawer unit lock motor. • Replace the drawer unit lock sensor. • Reconnect the connector. • Replace the harness. • Replace the circuit board.

SC525-02
D135 RTB 45
D137 RTB 67

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC525-02	D	Drawer Unit Handle Sensor Error
		The drawer unit handle sensor was non-blocked for 90 seconds or longer.
		<ul style="list-style-type: none"> • Drawer unit handle sensor defective • Connector disconnected • Harness broken • Circuit board defective
		<ul style="list-style-type: none"> • Replace the drawer unit handle sensor. • Reconnect the connector. • Replace the harness. • Replace the circuit board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC526-01	D	Transport Motor 1 Rotation Error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC526-02	D	Transport Motor 2 Rotation Error
		2 seconds after motor startup, the motor lock error signal (LOCK signal) was detected for 1200 msec or more.
		<ul style="list-style-type: none"> • Motor defective • Harness broken • Circuit board defective
		<ul style="list-style-type: none"> • Replace the motor. • Reconnect the connector.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC527-01	D	Cooling Fan Alarm 1
SC527-02	D	Cooling Fan Alarm 2
SC527-03	D	Cooling Fan Alarm 3
SC527-04	D	Cooling Fan Alarm
SC527-05	D	Exhaust Fan Alarm 1
SC527-06	D	Exhaust Fan Alarm 2
SC527-07	D	Exhaust Fan Alarm 3
SC527-08	D	Exhaust Fan Alarm 4

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC530-01	D	Fusing Pressure Roller Intake Fan Lock (D137/D138 only)
SC530-02	D	Fusing Pressure Roller Exhaust Fan Lock (D137/D138 only)
SC530-03	D	Heat Pipe Panel Intake Fan Lock
SC530-04	D	Heat Pipe Panel Exhaust Fan Lock
SC530-05	D	Fusing Exit Exhaust Fan Lock
SC530-06	D	ITB Cleaning Intake Fan Lock
SC530-07	D	IH Coil Cooling Fan Lock

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC530-08	D	PTR Fusing Exhaust Fan Lock
SC530-09	D	IH Coil Power Cooling Fan Lock
SC531-01	D	Development Intake Fan/Y Lock
SC531-02	D	Development Intake Fan/M Lock
SC531-03	D	Development Intake Fan/C Lock
SC531-04	D	Development Intake Fan/K Lock
SC531-05	D	Development Exhaust Fan/Right Lock
SC531-06	D	Development Exhaust Fan/Left Lock
SC532-02	D	Controller Exhaust Fan Lock
SC532-03	D	PSU Fan/Right Lock
SC532-04	D	PSU Fan/Left Lock
SC533-01	D	Laser Unit Cooling Fan/Right Lock
SC533-02	D	Laser Unit Cooling Fan/Left Lock
SC534-01	D	Duplex Exhaust Fan/Front Lock
SC534-02	D	Duplex Exhaust Fan/Rear Lock
SC534-03	D	Duplex Exhaust Fan/Middle Lock
SC535-02	D	Drive Exhaust Fan Lock
SC536-01	D	Paper cooling pipe fan lock
SC537-01	D	Ozone Exhaust Fan Lock
SC538-01	D	ID Sensor Cleaning Fan Lock
SC539-01	D	Paper Transport Belt Fan/Front Lock
SC539-02	D	Paper Transport Belt Fan/Rear Lock

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>When a motor is on, the lock sensor is checked every 100 milliseconds. If lock signal is missing 51 times consecutively, the machine determines that the motor is not running correctly.</p>
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Harness broken • IOB defective
		<ul style="list-style-type: none"> • Replace the motor. • Reconnect the connector. • Replace the harness. • Replace the IOB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		Y Development Temperature Detection Error
		<p>Temperature Sensor Output Error: 0.35V or lower (100 degrees centigrade or higher) or 3.07V or higher (-30 degrees centigrade or lower).</p> <p>Details:</p> <p>In case of a Temperature Sensor Output Error: 0.35V or lower (100 degrees centigrade or higher) or 3.07V or higher (-30 degrees centigrade or lower), the machine determines the sensor is malfunctioning and assumes that the temperature is 100 degrees centigrade.</p> <p>If the sensor is determined as malfunctioning 3 times consecutively (3 outputs, each of which is an average of 6 readings), the machine issues the SC and no longer use the sensor, using the assumed temperature "100 degrees centigrade" instead.</p> <p>However, the sensor is used again after power off/on.</p>
		<ul style="list-style-type: none"> • Connector disconnected or harness broken • Sensor defective
		<ul style="list-style-type: none"> • Connector disconnected or harness broken: Revert connection. • Sensor defective: Replace the sensor.
SC587-00	D	

SC500 (Engine: Paper Transport 2: Fusing, etc.)

SC540
RTB 203

5

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC540-00	A	Fusing Motor: Lock
		<p>The IOB detects the fusing motor lock error (rotation speed out of specification).</p> <p>Vodka assignment: GPIO29DATA[7]</p> <p>Details:</p> <p>When the motor is on, each lock signal is checked every 100 milliseconds. If the High status is detected 20 times consecutively, the machine determines that the motor is not running correctly. The machine issues an SC and stops the motor.</p>
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Harness broken • IOB defective • Unit torque increased. • Executed "Middle-Low Speed" mode of SP5805/5806 (Output Check) on D135/D137/D138 machines.
		<ul style="list-style-type: none"> • Replace the motor. • Reconnect the connector. • Replace the harness. • Replace the IOB. • Replace the unit. • Replace the driven unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC541-00	A	Sensor 1: Heating Roller Center Disconnection
		<p>0 degrees or lower was detected for (t1) seconds consecutively.</p> <p>Number of times: 10 or more</p> <p>D135 (Japan): 50 (seconds)</p> <p>D136 (Japan)/D135 (NA): 50 (seconds)</p> <p>D136 (NA)/D135 (EU)/D136(EU): 50 (seconds)</p> <p>D137 (Japan): 50 (seconds)</p> <p>D138 (Japan)/D137 (NA)/D138 (NA)/D137 (EU)/D138 (EU): 50 (seconds)</p> <p>Monitored at: All times, though SC is not issued when temperature is not controlled (when in off mode/sleep mode, when a door, excluding the toner supply door, is open, or when the heater relay is off).</p>
		<ul style="list-style-type: none"> • Thermopile disconnection • Connector contact failure
		<ul style="list-style-type: none"> • Replace the thermopile. • Reconnect the connector. • Replace the connector. • Replace the connector.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC542-02	A	Sensor 1: Heating Roller Center: Reload Failure: Timeout 1
		<p>Failed to reach (T2) degrees centigrade after (t4) seconds from the start of heater control.</p> <p>D135 (Japan):T2 = 80, t4 = 100</p> <p>D136 (Japan)/D135 (NA): T2 = 80, t4 = 80</p> <p>D136 (NA)/D135 (EU)/D136(EU): T2 = 80, t4 = 80</p> <p>D137 (Japan): T2 = 80, t4 = 80</p> <p>D138 (Japan)/D137 (NA)/D138 (NA)/D137 (EU)/D138 (EU): T2 = 80, t4 = 80</p> <p>Monitored at: Startup (Power-on, when a cover is closed, when fuser heater is under control)</p>
		<ul style="list-style-type: none"> • Thermopile lens smudged • Input voltage out of specification
		<ul style="list-style-type: none"> • Replace the thermopile. • Use with supported input voltage • Replace the IH coil/IH inverter. • Replace the unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC542-03	A	Sensor 1: Heating Roller Center: Reload Failure: Timeout 2
		<p>Failed to reach reload temperature after (t5) seconds from the start of heater control.</p> <p>D135 (Japan):t5 = 230</p> <p>D136 (Japan)/D135 (NA): t5 = 230</p> <p>D136 (NA)/D135 (EU)/D136(EU): t5 = 230</p> <p>D137 (Japan): t5 = 230</p> <p>D138 (Japan)/D137 (NA)/D138 (NA)/D137 (EU)/D138 (EU): t5 = 230</p> <p>Monitored at: Startup (Power-on, when a cover is closed, when fuser heater is under control)</p>
		<ul style="list-style-type: none"> • IH malfunctioning • Overheating prevention device worked.
		<ul style="list-style-type: none"> • Replace the thermopile. • Use with supported input voltage • Replace the IH coil/IH inverter. • Replace the unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC543-00	A	Sensor 1: Heating Roller Center: Overheat detection (software)
		(T3) degrees centigrade or higher was detected for (t6) seconds consecutively. Number of times: 10 or more D135 (Japan):T3 = 250, t6 = 1 D136 (Japan)/D135 (NA): T3 = 250, t6 = 1 D136 (NA)/D135 (EU)/D136(EU): T3 = 250, t6 = 1 D137 (Japan): T3 = 250, t6 = 1 D138 (Japan)/D137 (NA)/D138 (NA)/D137 (EU)/D138 (EU): T3 = 250, t6 = 1
		Monitored at: All times, though SC is not issued when temperature is not controlled (when in off mode/sleep mode, when a door, excluding the toner supply door, is open, or when the heater relay is off).
		<ul style="list-style-type: none"> • Triac shorted. • IOB board defective.
		<ul style="list-style-type: none"> • Replace the IOB board. • Replace the unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC544-00	A	Heating Roller Center: Overheat detection (hardware)
		Hardware detection of overheat condition. The heating roller center thermopile was detected as the cause.
		<ul style="list-style-type: none"> • IOB defective • Fuser control software running out of control • Heating roller center thermopile defective • IH inverter supplied continuously (software error or temperature sensor malfunctioning)
		<ul style="list-style-type: none"> • After removing the cause of the SC, set "Fusing SC Clear" in the SP mode. • If necessary, replace: IOB/heating roller center thermopile/IH coil/IH inverter.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC547-01	D	Zero Cross Error (Relay contact welded)
		When this error occurs, machine stops with fusing relay off and displays the SC.
		<ul style="list-style-type: none"> Fusing relay defective (contact welded) Fusing relay drive circuit defective
		<ul style="list-style-type: none"> Turn the main power off/on. If the fusing relay is damaged, replace the AC control board. Check the connection between the AC control board and the FSB (fusing IOB) and replace the harness and/or circuit board if necessary.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC547-02	D	Zero Cross Error (Relay contact defective)
		When this error occurs, the fusing heater trigger turns off and then, after a specified time, machine stops with fusing relay off and displays the SC.
		<ul style="list-style-type: none"> Fusing relay defective (contact welded) Fusing relay drive circuit defective
		<ul style="list-style-type: none"> Turn the main power off/on. If the fusing relay is damaged, replace the AC control board. Check the connection between the AC control board and the FSB (fusing IOB) and replace the harness and/or circuit board if necessary.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC547-03	D	Zero Cross Error (low frequency error)
		When this error occurs, the fusing heater trigger turns off and then, after a specified time, machine stops with fusing relay off and displays the SC.
		<ul style="list-style-type: none"> • Unstable commercial power supply frequency
		<ul style="list-style-type: none"> • Turn the main power off/on. • If the fusing relay is damaged, replace the AC control board. • Check the connection between the AC control board and the FSB (fusing IOB) and replace the harness and/or circuit board if necessary.

5

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC548-00	A	Fusing rotation detection
		Blocking/non-blocking signal of the heating roller rotation sensor was not received within specified time.
		<ul style="list-style-type: none"> • The feeler for heating roller rotation detection deformed or broken. • Fusing motor defective • Heating roller rotation sensor defective • IOB defective
		<ul style="list-style-type: none"> • After removing the cause of the SC, set "Fusing SC Clear" in the SP mode, and then turn the main power off/on.

SC548
D135 RTB 47
D137 RTB 65
D137 RTB 198
D135 RTB 158

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC550-01	D	Refresh roller drive motor: Lock
		<p>The IOB detects the fusing motor lock error (rotation speed out of specification).</p> <p>Vodka assignment: GPIO28DATA[7]</p> <p>Details:</p> <p>When the motor is on, each lock signal is checked every 100 milliseconds. If the High status is detected 20 times consecutively, the machine determines that the motor is not running correctly. The machine issues an SC and stops the motor.</p>
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Harness broken • IOB defective • Unit torque increased.
		<ul style="list-style-type: none"> • Replace the motor. • Reconnect the connector. • Replace the harness. • Replace the IOB. • Replace the unit. • Replace the driven unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC551-00	A	Sensor 4: Pressure Roller Center Disconnection
		<p>0 degrees or lower was detected for (t1) seconds consecutively.</p> <p>Number of times: 10 or more</p> <p>D135 (Japan): 75 (seconds)</p> <p>D136 (Japan)/D135 (NA): 75 (seconds)</p> <p>D136 (NA)/D135 (EU)/D136(EU): 75 (seconds)</p> <p>D137 (Japan): 75 (seconds)</p> <p>D138 (Japan)/D137 (NA)/D138 (NA)/D137 (EU)/D138 (EU): 75 (seconds)</p> <p>Monitored at: All times, though SC is not issued when temperature is not controlled (when in off mode/sleep mode, when a door, excluding the toner supply door, is open, or when the heater relay is off).</p>
		<ul style="list-style-type: none"> • Thermopile disconnection • Connector contact failure
		<ul style="list-style-type: none"> • Replace the thermopile. • Reconnect the connector. • Replace the connector. • Replace the connector.

SC552-02
D135 RTB 43
D137 RTB 69

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC552-02	A	Sensor 4: Heating Roller Center: Reload Failure: Timeout 1
		<p>Failed to reach (T2) degrees centigrade after (t4) seconds from the start of heater control.</p> <p>D135 (Japan):T2 = 45, t4 = 80</p> <p>D136 (Japan)/D135 (NA): T2 = 45, t4 = 60</p> <p>D136 (NA)/D135 (EU)/D136(EU): T2 = 45, t4 = 60</p> <p>D137 (Japan): T2 = 45, t4 = 60</p> <p>D138 (Japan)/D137 (NA)/D138 (NA)/D137 (EU)/D138 (EU): T2 = 45, t4 = 60</p> <p>Monitored at: Startup (Power-on, when a cover is closed, when fuser heater is under control)</p>
		<ul style="list-style-type: none"> • Thermistor deformed or floating • Input voltage out of specification
		<ul style="list-style-type: none"> • Replace the thermopile. • Use with supported input voltage • Replace the pressure roller heater. • Replace the unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC552-03	A	Sensor 4: Heating Roller Center: Reload Failure: Timeout 2
		<p>Failed to reach reload temperature after (t5) seconds from the start of heater control.</p> <p>D135 (Japan):t5 = 230</p> <p>D136 (Japan)/D135 (NA): t5 = 230</p> <p>D136 (NA)/D135 (EU)/D136(EU): t5 = 230</p> <p>D137 (Japan): t5 = 230</p> <p>D138 (Japan)/D137 (NA)/D138 (NA)/D137 (EU)/D138 (EU): t5 = 230</p> <p>Monitored at: Startup (Power-on, when a cover is closed, when fuser heater is under control)</p>
		<ul style="list-style-type: none"> • Pressure heater malfunctioning • Overheating prevention device worked.
		<ul style="list-style-type: none"> • Replace the thermopile. • Use with supported input voltage • Replace the pressure roller heater. • Replace the unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC553-00	A	Sensor 4: Pressure Roller Center: Overheat detection (software)
		(T3) degrees centigrade or higher was detected for (t6) seconds consecutively. Number of times: 10 or more D135 (Japan):T3 = 220, t6 = 1 D136 (Japan)/D135 (NA): T3 = 220, t6 = 1 D136 (NA)/D135 (EU)/D136(EU): T3 = 220, t6 = 1 D137 (Japan): T3 = 220, t6 = 1 D138 (Japan)/D137 (NA)/D138 (NA)/D137 (EU)/D138 (EU): T3 = 220, t6 = 1
		Monitored at: All times, though SC is not issued when temperature is not controlled (when in off mode/sleep mode, when a door, excluding the toner supply door, is open, or when the heater relay is off).
		<ul style="list-style-type: none"> • Triac shorted. • IOB board defective.
		<ul style="list-style-type: none"> • Replace the IOB board. • Replace the unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC554-00	A	Pressure Roller Center: Overheat detection (hardware)
		Hardware detection of overheat condition. The pressure roller center thermopile was detected as the cause.
		<ul style="list-style-type: none"> • IOB defective • Fuser control software running out of control • Triac damaged (shorted). • Pressure roller center thermopile defective
		<ul style="list-style-type: none"> • After removing the cause of the SC, Set "Fusing SC Clear" in the SP mode. • If necessary, replace: IOB/pressure roller center thermopile/AC drive.

SC555
RTB 49

5

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC555-00	A	Heater 2: Heater Continuously On (Sensor 4: Thermopile: Pressure Roller Center)
		Target temperature was not reached (t7) seconds after reload. Time elapsed after reload (excluding paper transport time) (t8) D135 (Japan): t7 = 90, t8 = 90 D136 (Japan)/D135 (NA): t7 = 90, t8 = 90 D136 (NA)/D135 (EU)/D136(EU): t7 = 90, t8 = 90 D137 (Japan): t7 = 90, t8 = 90 D138 (Japan)/D137 (NA)/D138 (NA)/D137 (EU)/D138 (EU): t7 = 90, t8 = 90
		Monitored at: All times, though SC is not issued when temperature is not controlled (when in off mode/sleep mode, when a door, excluding the toner supply door, is open, or when the heater relay is off).
		<ul style="list-style-type: none"> • Thermopile detection error • Heater disconnection • Overheating prevention device worked.
		<ul style="list-style-type: none"> • Replace the thermopile. • Replace the heater. • Replace the unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC557-00	C	Zero Cross Error (high frequency)
		-
		Details: The SC code is logged and the operation of the machine is not affected.
		<ul style="list-style-type: none"> • Unstable commercial power supply frequency
		No action required.

SC559
D135 RTB 137
D137 RTB 176

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC559-00	A	Fusing jam: 3 counts
		Fusing jam (fusing exit sensor late jam) was detected 3 times consecutively. Details: This SC can be set ON/OFF. The factory setting is OFF; set it ON when requested by the customer. SP1-142-001: 0: OFF (factory setting) 1: ON (set by service personnel at the request of customer) This prevents collateral problems (such as thermistor floating) that may be caused by repeated jams in the fusing unit. <ul style="list-style-type: none"> • The jam counter is not reset by power off/on. • When paper is output successfully, the jam counter is reset.
		<ul style="list-style-type: none"> • Paper jam in the fusing unit • Sensor defective
		-

5

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC560-00	D	Web unit contact error
		Contact/separation control failed 3 times consecutively. Monitored when contact/separation mechanism is operating.
		<ul style="list-style-type: none"> • Web unit contact motor/sensor defective • Feeler deformed or damaged • Contact/separation mechanism defective
		<ul style="list-style-type: none"> • Replace the motor. • Replace the sensor. • Replace the feeler. • Replace the unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC561-00	A	Sensor 2: Heating Roller Front Disconnection
		<p>0 degrees or lower was detected for (t1) seconds consecutively.</p> <p>Number of times: 10 or more</p> <p>D135 (Japan): 50 (seconds)</p> <p>D136 (Japan)/D135 (NA): 50 (seconds)</p> <p>D136 (NA)/D135 (EU)/D136(EU): 50 (seconds)</p> <p>D137 (Japan): 50 (seconds)</p> <p>D138 (Japan)/D137 (NA)/D138 (NA)/D137 (EU)/D138 (EU): 50 (seconds)</p> <p>Monitored at: All times, though SC is not issued when temperature is not controlled (when in off mode/sleep mode, when a door, excluding the toner supply door, is open, or when the heater relay is off).</p>
		<ul style="list-style-type: none"> • Thermistor disconnection • Connector contact failure
		<ul style="list-style-type: none"> • Replace the thermistor. • Reconnect the connector. • Replace the connector. • Replace the connector.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC562-02	A	Sensor 2: Heating Roller Front: Reload Failure: Timeout 1
		<p>Failed to reach (T2) degrees centigrade after (t4) seconds from the start of heater control.</p> <p>D135 (Japan):T2 = 45, t4 = 80</p> <p>D136 (Japan)/D135 (NA): T2 = 45, t4 = 80</p> <p>D136 (NA)/D135 (EU)/D136(EU): T2 = 45, t4 = 80</p> <p>D137 (Japan): T2 = 45, t4 = 80</p> <p>D138 (Japan)/D137 (NA)/D138 (NA)/D137 (EU)/D138 (EU): T2 = 45, t4 = 80</p> <p>Monitored at: Startup (Power-on, when a cover is closed, when fuser heater is under control)</p>
		<ul style="list-style-type: none"> • Thermopile lens smudged • Thermistor deformed or floating • Input voltage out of specification
		<ul style="list-style-type: none"> • Replace the thermopile. • Use with supported input voltage • Replace the IH coil/IH inverter. • Replace the unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC562-03	A	Sensor 2: Heating Roller Front: Reload Failure: Timeout 2
		<p>Failed to reach reload temperature after (t5) seconds from the start of heater control.</p> <p>D135 (Japan):t5 = 350</p> <p>D136 (Japan)/D135 (NA): t5 = 350</p> <p>D136 (NA)/D135 (EU)/D136(EU): t5 = 350</p> <p>D137 (Japan): t5 = 350</p> <p>D138 (Japan)/D137 (NA)/D138 (NA)/D137 (EU)/D138 (EU): t5 = 350</p> <p>Monitored at: Startup (Power-on, when a cover is closed, when fuser heater is under control)</p>
		<ul style="list-style-type: none"> • IH malfunctioning • Overheating prevention device worked.
		<ul style="list-style-type: none"> • Replace the thermopile. • Use with supported input voltage • Replace the IH coil/IH inverter. • Replace the unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC563-00	A	Sensor 2: Heating Roller Front: Overheat detection (software)
		(T3) degrees centigrade or higher was detected for (t6) seconds consecutively. Number of times: 10 or more D135 (Japan):T3 = 250, t5 = 1 D136 (Japan)/D135 (NA): T3 = 250, t5 = 1 D136 (NA)/D135 (EU)/D136(EU): T3 = 250, t5 = 1 D137 (Japan): T3 = 250, t5 = 1 D138 (Japan)/D137 (NA)/D138 (NA)/D137 (EU)/D138 (EU): T3 = 250, t5 = 1
		Monitored at: All times, though SC is not issued when temperature is not controlled (when in off mode/sleep mode, when a door, excluding the toner supply door, is open, or when the heater relay is off).
		<ul style="list-style-type: none"> • Triac shorted. • IOB board defective.
		<ul style="list-style-type: none"> • Replace the IOB board. • Replace the unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC564-00	A	Heating Roller Front: Overheat detection (hardware)
		Hardware detection of overheat condition. The heating roller front thermistor was detected as the cause.
		<ul style="list-style-type: none"> • IOB defective • Fuser control software running out of control • Heating roller front thermistor defective • IH inverter supplied continuously (software error or temperature sensor malfunctioning)
		<ul style="list-style-type: none"> • After removing the cause of the SC, Set "Fusing SC Clear" in the SP mode. • If necessary, replace: IOB/heating roller front thermistor/IH coil/IH inverter.

SC569-02
RTB 49

5

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC569-02	D	Pressure Release Error: HP failed 3 times
		Pressure release/Home position/control failed 3 times consecutively. Monitored when the pressure release mechanism is operating. Pressure Change: SP1-151-001 1:On/0: Off When this SP is set to OFF, SC detection is disabled.
		<ul style="list-style-type: none"> • Pressure release motor, sensor defective • Feeler deformed or damaged • Pressure release mechanism defective
		<ul style="list-style-type: none"> • Replace the motor. • Replace the sensor. • Replace the feeler. • Replace the unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC569-03	D	Pressure Release Error: Overrun
		When sensor A shows Low and Sensor B shows High. Except when home position is detected. Monitored when the pressure release mechanism is operating. Pressure Change: SP1-151-001 1:On/0: Off When this SP is set to OFF, SC detection is disabled.
		<ul style="list-style-type: none"> • Pressure release motor, sensor defective • Feeler deformed or damaged • Pressure release mechanism defective
		<ul style="list-style-type: none"> • Replace the motor. • Replace the sensor. • Replace the feeler. • Replace the unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC569-04	D	Pressure Release Error: Overrun
		When "Sensor A: Low" is not detected within 1000 msec from the start of pressure application. Monitored when the pressure release mechanism is operating. Pressure Change: SP1-151-001 1:On/0: Off When this SP is set to OFF, SC detection is disabled.
		<ul style="list-style-type: none"> • Pressure release motor, sensor defective • Feeler deformed or damaged • Pressure release mechanism defective
		<ul style="list-style-type: none"> • Replace the motor. • Replace the sensor. • Replace the feeler. • Replace the unit.

SC570
D137 RTB 116

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC570-00	D	Refresh Roller Contact Error
		Contact/separation/control failed 3 times consecutively. Monitored when the contact/separation mechanism is operating.
		<ul style="list-style-type: none"> • Refresh roller contact motor, sensor defective • Feeler deformed or damaged • Contact/separation mechanism defective
		<ul style="list-style-type: none"> • Replace the motor. • Replace the sensor. • Replace the feeler. • Replace the unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC576-00	A	Sensor 6: Fusing Roller Front Side Disconnection
		<p>0 degrees or lower was detected for (t1) seconds consecutively.</p> <p>Number of times: 10 or more</p> <p>D135 (Japan): 75 (seconds)</p> <p>D136 (Japan)/D135 (NA): 75 (seconds)</p> <p>D136 (NA)/D135 (EU)/D136(EU): 75 (seconds)</p> <p>D137 (Japan): 75 (seconds)</p> <p>D138 (Japan)/D137 (NA)/D138 (NA)/D137 (EU)/D138 (EU): 75 (seconds)</p> <p>Monitored at: All times, though SC is not issued when temperature is not controlled (when in off mode/sleep mode, when a door, excluding the toner supply door, is open, or when the heater relay is off).</p>
		<ul style="list-style-type: none"> • Thermopile disconnection • Connector contact failure
		<ul style="list-style-type: none"> • Replace the NC sensor. • Reconnect the connector. • Replace the connector. • Replace the unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC577-00	A	Sensor 6: Fusing Roller Front Side: Overheat detection (software)
		(T3) degrees centigrade or higher was detected for (t6) seconds consecutively.
		Number of times: 10 or more
		D135 (Japan):T3 = 250, t6 = 1
		D136 (Japan)/D135 (NA): T3 = 250, t6 = 1
D136 (NA)/D135 (EU)/D136(EU): T3 = 250, t6 = 1	D137 (Japan): T3 = 250, t6 = 1	
D138 (Japan)/D137 (NA)/D138 (NA)/D137 (EU)/D138 (EU): T3 = 250, t6 = 1	Monitored at: All times, though SC is not issued when temperature is not controlled (when in off mode/sleep mode, when a door, excluding the toner supply door, is open, or when the heater relay is off).	
<ul style="list-style-type: none"> • Triac shorted. • IOB board defective. 	<ul style="list-style-type: none"> • Replace the IOB board. • Replace the unit. 	

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC579-00	A	Sensor 7: Fusing Roller Core Disconnection
		<p>0 degrees or lower was detected for 1000 seconds consecutively.</p> <p>Number of times: 10 or more</p> <p>Monitored at: All times, though SC is not issued when temperature is not controlled (when in off mode/sleep mode, when a door, excluding the toner supply door, is open, or when the heater relay is off).</p> <p>Monitored only when SP1-107-024 is set to ON.</p> <p>SP1-107-024:</p> <p>0: OFF (default)</p> <p>1: ON</p>
		<ul style="list-style-type: none"> • Thermistor disconnection • Connector contact failure
		<ul style="list-style-type: none"> • Replace the thermistor. • Reconnect the connector. • Replace the connector. • Replace the unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC580-03	A	Sensor 7: Fusing Roller Core: Reload Failure: Timeout 2
		Failed to reach reload temperature after (t5) seconds from the start of heater control.
		D135 (Japan):t5 = 2700
		D136 (Japan)/D135 (NA): t5 = 2700
		D136 (NA)/D135 (EU)/D136(EU): t5 = 2700
D137 (Japan): t5 = 2700		
D138 (Japan)/D137 (NA)/D138 (NA)/D137 (EU)/D138 (EU): t5 = 230		
Monitored at: Startup (Power-on, when a cover is closed, when fuser heater is under control)		
<ul style="list-style-type: none"> IH malfunctioning Overheating prevention device worked. 		
<ul style="list-style-type: none"> Replace the thermopile. Use with supported input voltage Replace the IH coil/IH inverter. Replace the unit. 		

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC582-01	A	IGBT Overvoltage Error
		Error notification from the IH inverter with a command (0x64 bit 0)
		<ul style="list-style-type: none"> Fusing unit defective IH inverter malfunctioning
		<ul style="list-style-type: none"> After removing the cause of the SC, set "Fusing SC Clear" in the SP mode, and then turn the main power off/on. If necessary, replace: Fusing unit, IH inverter

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC582-02	A	<ul style="list-style-type: none"> IH Input Voltage Error
		<ul style="list-style-type: none"> Error notification from the IH inverter with a command (0x64 bit 1)
		<ul style="list-style-type: none"> Input voltage abnormal Harness broken IH inverter defective IOB defective
		<ul style="list-style-type: none"> After removing the cause of the SC, set "Fusing SC Clear" in the SP mode, and then turn the main power off/on. If necessary, replace: Harness, IH inverter, IOB

SC500 (Engine: Paper Transport 3: Feed, Duplex, Transport, Fusing)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC511-01	C	Paper Thickness Sensor Error
		<p>During initial calibration of the paper thickness sensor, the number of times the sensor failed to output an appropriate value reached 3. The counter is reset at the start of initial calibration.</p>
		<ul style="list-style-type: none"> Paper thickness sensor harness broken/connector disconnected Paper thickness sensor dirty with paper dust, etc. Foreign object on the section of the roller which is used for paper thickness detection.
		<ul style="list-style-type: none"> Check the harness and connector of the sensor. Clean or replace the sensor. Clean or replace the section of the roller which is used for paper thickness detection.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC511-02	C	Bypass Tray Paper Thickness Sensor Error
		<p>During initial calibration of the bypass tray paper thickness sensor, the number of times the sensor failed to output an appropriate value reached 3.</p> <p>The counter is reset at the start of initial calibration.</p>
		<ul style="list-style-type: none"> • Paper thickness sensor harness broken/connector disconnected • Paper thickness sensor dirty with paper dust, etc. • Foreign object on the section of the roller which is used for paper thickness detection.
		<ul style="list-style-type: none"> • Check the harness and connector of the sensor. • Clean or replace the sensor. • Clean or replace the section of the roller which is used for paper thickness detection.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC514-00	D	Inverter Junction Gate Motor Error
		<p>Inverter junction gate home position sensor did not turn on or off within 150msec from the start of home position detection operation (motor drive start).</p> <p>Details:</p> <p>If detected for the first or second time:</p> <ul style="list-style-type: none"> • During paper transport, this is not handled as a jam/SC; paper is fed normally and the error counter increases. • Otherwise (during initialization), a jam alert is displayed to instruct the user to remove jammed paper, and the error counter increases. <p>If detected for the third time:</p> <ul style="list-style-type: none"> • Displays the SC No. on the operation panel.
		<ul style="list-style-type: none"> • Inverter junction gate motor defective/connector disconnected/harness broken • Inverter junction gate home position sensor defective/connector disconnected/harness broken • Circuit board (PFB, DUB) defective • Junction gate/junction gate drive unit does not move e.g. because physical obstacle (piece of paper, etc.) is blocking operation.
		<ul style="list-style-type: none"> • Inverter junction gate motor and inverter junction gate home position sensor check/cleaning/replacement/harness reconnection/harness replacement • Check or replace the circuit board (PFB, DUB). • Check and/or replace the inverter junction gate and inverter junction gate drive unit.

SC515-01
D135 RTB 58
D137 RTB 112

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC515-01	B	Roller Shift Motor 1 Error
		When an error occurs during roller shift motor 1 home position detection, the machine handles it as a jam (JAM097) and stops operation, and displays the SC No. on the control panel.
		<ul style="list-style-type: none"> • Roller shift motor 1 connector disconnected or defective • Motor driver defective • Roller home position sensor 1 connector disconnected or defective • Roller shift motor 1 does not move because of overload which may be due to foreign objects, etc. • Roller home position sensor 1 deformed, damaged or connected incorrectly
		<ul style="list-style-type: none"> • Clean the roller home position sensor 1 and check its harness. • Reconnect the connectors of roller shift motor 1 and roller home position sensor 1. • Check and, if necessary, replace: roller shift motor 1, roller home position sensor 1, harness, circuit board (PFB, DUB), unit, driven unit.

SC515-02
 D135 RTB 54
 D135 RTB 59
 D137 RTB 77
 D137 RTB 196

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC515-02	B	Roller Shift Motor 2 Error
		When an error occurs during roller shift motor 2 home position detection, the machine handles it as a jam (JAM097) and stops operation, and displays the SC No. on the control panel.
		<ul style="list-style-type: none"> • Roller shift motor 2 connector disconnected or defective • Motor driver defective • Roller home position sensor 2 connector disconnected or defective • Roller shift motor 2 does not move because of overload which may be due to foreign objects, etc. • Roller home position sensor 2 deformed, damaged or connected incorrectly
		<ul style="list-style-type: none"> • Clean the roller home position sensor 2 and check its harness. • Reconnect the connectors of roller shift motor 2 and roller home position sensor 2. • Check and, if necessary, replace: roller shift motor 2, roller home position sensor 2, harness, circuit board (PFB, DUB), unit, driven unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC516-01	B	Sensor Shift Motor Home Position Error
		When an error occurs during sensor shift motor home position detection, the machine handles it as a jam (JAM097) and stops operation, and displays the SC No. on the control panel.
		<ul style="list-style-type: none"> • Sensor shift motor connector disconnected or defective • Motor driver defective • Sensor shift home position sensor connector disconnected or defective • Sensor shift motor does not move because of overload which may be due to foreign objects, etc. • Sensor shift home position sensor deformed, damaged or connected incorrectly
		<ul style="list-style-type: none"> • Clean the sensor shift home position sensor and check its harness. • Reconnect the connectors of sensor shift motor and sensor shift home position sensor. • Check and, if necessary, replace: sensor shift motor, sensor shift home position sensor, harness, circuit board (PFB, DUB), unit, driven unit.

SC516-02
 D135 RTB 46
 D135 RTB 90
 D137 RTB 66
 D137 RTB 93

5

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC516-02	B	Sensor Shift Motor Edge Detection Error
		When an error occurs during sensor shift motor edge detection, the machine handles it as a jam (JAM097) the first two times and displays the SC No. on the control panel the third time.
		<ul style="list-style-type: none"> • Sensor shift motor connector disconnected or defective • Motor driver defective • Edge detection sensor connector disconnected or defective • Sensor shift motor does not move because of overload which may be due to foreign objects, etc. • Sensor shift home position sensor deformed, damaged or connected incorrectly • Wrong paper size
		<ul style="list-style-type: none"> • Load paper again. • Clean the edge detection sensor and check its harness. • Reconnect the connectors of sensor shift motor and edge detection sensor. • Check and, if necessary, replace: sensor shift motor, edge detection sensor, harness, circuit board (PFB, DUB), unit, driven unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC595-00	D	TDCU Hardware Error
		Command notification from the TDCU.
		<ul style="list-style-type: none"> • STM defective, brush motor defective, harness disconnected
		<ul style="list-style-type: none"> • Replace the TDCU, harness, and motor.

SC595
 RTB 205

SC500 (Engine: Others)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC581-00	D	Secondary Power Cord Not Connected
		The main power cord is connected but the secondary power cord is not connected.
		The secondary power cord is not connected.
		<ul style="list-style-type: none">• Turn the machine off and plug in the secondary power cord again.• Replace the harness.• Replace the AC drive/IOB.

Service Call 620-689

SC600 (Engine: Communication and Others)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC620-01	D	ADF Communication Error
SC620-02	D	ADF Communication Error
		<p>Communication error between the main machine and ADF connected with ASAP.</p> <p>SC620-01: A BREAK was detected after a successful connection.</p> <p>SC620-02: Communication timeout after a successful connection.</p> <p>Details:</p> <p>SC is issued when an error is detected after ADF connection was recognized at power-on.</p> <p>There will be no response either, if the ADF was not connected at power-on. In this case, however, SC is not issued and functions that do not use the ADF (copying from the exposure glass) are available.</p>
		<ul style="list-style-type: none"> • ADF connection fault. • ADF defective • IPU board defective • Electrical noise on the line
		<ul style="list-style-type: none"> • Check ADF cable connection. • Replace the ADF. • Replace the IPU board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC621-00	D	Finisher/mail box communication error
		Detected an error when connecting the communication line. Received a communication error notification from the URAT.
		<ul style="list-style-type: none"> • Finisher control board defective. • BCU or IOB defective • Connection fault between finisher and main machine.
		<ul style="list-style-type: none"> • Reconnect the Finisher/mail box interface cable. • Replace the BCU or replace the finisher/mail box • Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC622-00	D	Paper bank communication error.
		Communication error between main machine and paper bank/LCT.
		<ul style="list-style-type: none"> • Paper bank control board defective. • BCU or IOB defective • Paper bank-main machine connection fault.
		<ul style="list-style-type: none"> • Reconnect the paper bank connection cable. / Replace the BCU./ Replace the paper bank. • Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC625-00	D	TDCU communication error.
		ASAP communication protocol error <ul style="list-style-type: none"> • A BREAK signal was detected at power-on. • Non-response (100 ms) was detected 3 times consecutively during normal operation. • NAK was received 3 times before ACK was received during normal operation. • A BREAK signal was detected during normal operation.
		<ul style="list-style-type: none"> • IOB defective
		<ul style="list-style-type: none"> • Replace the IOB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC626-01	D	DUB communication error at power-on
SC626-02	D	DUB communication error during normal operation
SC626-03	D	DUB BREAK detection during normal operation

SC626-01
D135 RTB 54
D137 RTB 77

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>ASAP communication protocol error</p> <ul style="list-style-type: none"> • A BREAK signal was detected at power-on. • Non-response (100 ms) was detected 3 times consecutively during normal operation. • NAK was received 3 times before ACK was received during normal operation. • A BREAK signal was detected during normal operation.
		<ul style="list-style-type: none"> • DUB defective • PFB defective • Harness between DUB and PFB broken • Connector between DUB and PFB disconnected • Unintended electrical noise
		<ul style="list-style-type: none"> • Replace the DUB. • Replace the PFB. • Replace the harness between DUB and PFB. • Replace the connector between DUB and PFB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC626-04	D	TSB communication error at power-on
SC626-05	D	TSB communication error during normal operation
SC626-06	D	TSB BREAK detection during normal operation

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>ASAP communication protocol error</p> <ul style="list-style-type: none"> • A BREAK signal was detected at power-on. • Non-response (100 ms) was detected 3 times consecutively during normal operation. • NAK was received 3 times before ACK was received during normal operation. • A BREAK signal was detected during normal operation.
		<ul style="list-style-type: none"> • TSB defective • IOB defective • Harness between TSB and IOB broken • Connector between TSB and IOB disconnected • Unintended electrical noise
		<ul style="list-style-type: none"> • Replace the TSB. • Replace the IOB. • Replace the harness between TSB and IOB. • Replace the connector between TSB and IOB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC664-01	D	VODKA SRAM program expansion error
SC664-02	D	
SC664-03	D	
		<p>VODKA I</p> <p>SC664-01: VODKA SRAM access permission error (Write permission denied)</p> <p>SC664-02: VODKA SRAM write error (write result abnormal)</p> <p>SC664-03: VODKA program startup error</p>
		<ul style="list-style-type: none"> • Electric noises and hardware defect
		<ul style="list-style-type: none"> • IOB replacement, harness check

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC664-11	D	VODKA SRAM program expansion error
SC664-12	D	
SC664-13	D	
		VODKA2 SC664-11: VODKA SRAM access permission error (Write permission denied) SC664-12: VODKA SRAM write error (write result abnormal) SC664-13: VODKA program startup error
		<ul style="list-style-type: none"> • Electric noises and hardware defect
		<ul style="list-style-type: none"> • IOB replacement, harness check

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC664-21	D	VODKA SRAM program expansion error
SC664-22	D	
SC664-23	D	
		VODKA3 SC664-21: VODKA SRAM access permission error (Write permission denied) SC664-22: VODKA SRAM write error (write result abnormal) SC664-23: VODKA program startup error
		<ul style="list-style-type: none"> • Electric noises and hardware defect
		<ul style="list-style-type: none"> • IOB replacement, harness check

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC664-31	D	VODKA SRAM program expansion error
SC664-32	D	
SC664-33	D	

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		VODKA4 SC664-31: VODKA SRAM access permission error (Write permission denied) SC664-32: VODKA SRAM write error (write result abnormal) SC664-33: VODKA program startup error
		<ul style="list-style-type: none"> • Electric noises and hardware defect
		<ul style="list-style-type: none"> • IOB replacement, harness check

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC664-41	D	VODKA SRAM program expansion error
SC664-42	D	
SC664-43	D	
		VODKA5 SC664-41: VODKA SRAM access permission error (Write permission denied) SC664-42: VODKA SRAM write error (write result abnormal) SC664-33: VODKA program startup error
		<ul style="list-style-type: none"> • Electric noises and hardware defect
		<ul style="list-style-type: none"> • IOB replacement, harness check

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC665-01	D	FFC set detection (Error between IPU and BCU)
		<p>The HORUS port on the BCU is used for FFC connection detection to detect FFC (harness) disconnection and loose connection between BCU and IPU. By checking the "H" or "L" status of this port, the connection status can be checked.</p> <ul style="list-style-type: none"> • Normal condition (Connector connected): "H" at the HORUS port on the BCU. • Abnormal condition (Connector not connected): "L" at the HORUS port on the BCU. <p>Details:</p> <ul style="list-style-type: none"> • When a connector is disconnected, the voltage level becomes "L" level (0V level) because there is a pull-down resistor in the BCU.
		<ul style="list-style-type: none"> • FFC harness between BCU and IPU broken • FFC harness between BCU and IPU not connected fully • BCU damaged • IPU damaged
		<ul style="list-style-type: none"> • Replace the FFC harness between BCU and IPU. • Reconnect the FFC harness between BCU and IPU. • Replace the BCU board. • Replace the IPU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC665-02	D	FFC set detection (Error between BCU and IOB)
		<p>The HORUS port on the BCU is used for FFC connection detection to detect FFC (harness) disconnection and loose connection between BCU and IOB. By checking the voltage level of the AD terminal, the connection status can be checked.</p> <p>Details:</p> <ul style="list-style-type: none"> • When the harness between BCU and IOB becomes disconnected, the number of parallelly connected resistors changes and therefore the voltage input to the AD terminal changes.
		<ul style="list-style-type: none"> • FFC harness between BCU and IOB broken • FFC harness between BCU and IOB not connected fully • BCU damaged • IOB damaged
		<ul style="list-style-type: none"> • Replace the FFC harness between BCU and IOB. • Reconnect the FFC harness between BCU and IOB. • Replace the BCU board. • Replace the IOB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC665-03	D	FFC set detection (Error between IOB and PFB)
		<p>The HORUS port on the BCU is used for FFC connection detection to detect FFC (harness) disconnection and loose connection between IOB and PFB. By checking the voltage level of the AD terminal, the connection status can be checked.</p> <p>Details:</p> <ul style="list-style-type: none"> • When the harness between IOB and PFB becomes disconnected, the number of parallelly connected resistors changes and therefore the voltage input to the AD terminal changes.
		<ul style="list-style-type: none"> • FFC harness between IOB and PFB broken • FFC harness between IOB and PFB not connected fully • BCU damaged • IOB damaged • PFB damaged
		<ul style="list-style-type: none"> • Replace the FFC harness between IOB and PFB. • Reconnect the FFC harness between IOB and PFB. • Replace the BCU board. • Replace the IOB. • Replace the PFB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC665-04	D	IOB does not start
		The IOB_WAKE signal of the IOB and the PFB is not "WAKE". (Occurs when either 2 Vodkas in the IOB or 3 Vodkas in the PFB are in the reset status. Details: <ul style="list-style-type: none"> • Detected when IOB_WAKE signal from the 2 Vodkas on the IOB (PIB function, FSB function) and 3 Vodkas on the FSB stay in the WAKE status. • IOB_WAKE signal is output from 5 Vodkas as explained above and if at least one of them is "WAKE", IOB_WAKE is not canceled.
		<ul style="list-style-type: none"> • IOB damaged • PFB damaged • BCU defective • Harness between BCU and IOB: Ground fault • Harness between IOB and PFB: Ground fault • PSU5V not output
		<ul style="list-style-type: none"> • Replace the harness between IOB and PFB. • Replace the harness between BCU and IOB. • Replace the IOB. • Replace the PFB. • Replace the BCU board. • Replace the PSU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC669		EEPROM Communication Error
SC669-01	D	EEPROM OPEN: ID error
SC669-02	D	EEPROM OPEN: Channel error
SC669-03	D	EEPROM OPEN: Device error
SC669-04	D	EEPROM OPEN: Communication abort error
SC669-05	D	EEPROM OPEN: Communication timeout error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC669-06	D	EEPROM OPEN: Operation stopped error
SC669-07	D	EEPROM OPEN: Buffer full
SC669-08	D	EEPROM OPEN: No error code
SC669-09	D	EEPROM CLOSE: ID error
SC669-10	D	EEPROM CLOSE: No error code
SC669-11	D	EEPROM Data write: ID error
SC669-12	D	EEPROM Data write: Channel error
SC669-13	D	EEPROM Data write: Device error
SC669-14	D	EEPROM Data write: Communication abort error
SC669-15	D	EEPROM Data write: Communication timeout error
SC669-16	D	EEPROM Data write: Operation stopped error
SC669-17	D	EEPROM Data write: Buffer full
SC669-18	D	EEPROM Data write: No error code
SC669-19	D	EEPROM Data read: ID error
SC669-20	D	EEPROM Data read: Channel error
SC669-21	D	EEPROM Data read: Device error
SC669-22	D	EEPROM Data read: Communication abort error
SC669-23	D	EEPROM Data read: Communication timeout error
SC669-24	D	EEPROM Data read: Operation stopped error
SC669-25	D	EEPROM Data read: Buffer full
SC669-26	D	EEPROM Data read: No error code
SC669-27	D	EEPROM Device detection: ID error
SC669-28	D	EEPROM Device detection: Channel error
SC669-29	D	EEPROM Device detection: Device error
SC669-30	D	EEPROM Device detection: Communication abort error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC669-31	D	EEPROM Device detection: Communication timeout error
SC669-32	D	EEPROM Device detection: Operation stopped error
SC669-33	D	EEPROM Device detection: Buffer full
SC669-34	D	EEPROM Device detection: No error code
		<p>Received a error notification during EEPROM communication and does not resume after 3 retries.</p> <ul style="list-style-type: none"> • Electrical noise • EEPROM not connected fully • EEPROM not installed • EEPROM damaged • BCU damaged <ul style="list-style-type: none"> • Cycle the machine off/on. • Reconnect the EEPROM. • Replace the EEPROM. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC681		Toner Cartridge: ID Chip Communication Error
SC681-01	D	Toner Supply: ID Chip Communication Error (K_Invalid Device ID)
SC681-02	D	Toner Supply: ID Chip Communication Error (M_Invalid Device ID)
SC681-03	D	Toner Supply: ID Chip Communication Error (C_Invalid Device ID)
SC681-04	D	Toner Supply: ID Chip Communication Error (Y_Invalid Device ID)
SC681-05	D	Toner Supply: ID Chip Communication Error (K_Channel error (e.g. bus disconnection))
SC681-06	D	Toner Supply: ID Chip Communication Error (M_Channel error (e.g. bus disconnection))
SC681-07	D	Toner Supply: ID Chip Communication Error (C_Channel error (e.g. bus disconnection))

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC681-08	D	Toner Supply: ID Chip Communication Error (Y_Channel error (e.g. bus disconnection))
SC681-09	D	Toner Supply: ID Chip Communication Error (K_Device Error (No ID chip))
SC681-11	D	Toner Supply: ID Chip Communication Error (M_Device Error (No ID chip))
SC681-12	D	Toner Supply: ID Chip Communication Error (C_Device Error (No ID chip))
SC681-13	D	Toner Supply: ID Chip Communication Error (Y_Device Error (No ID chip))
SC681-14	D	Toner Supply: ID Chip Communication Error (K_Communication aborted (error during communication))
SC681-16	D	Toner Supply: ID Chip Communication Error (M_Communication aborted (error during communication))
SC681-17	D	Toner Supply: ID Chip Communication Error (C_Communication aborted (error during communication))
SC681-18	D	Toner Supply: ID Chip Communication Error (Y_Communication aborted (error during communication))
SC681-19	D	Toner Supply: ID Chip Communication Error (K_Communication timeout)
SC681-21	D	Toner Supply: ID Chip Communication Error (M_Communication timeout)
SC681-22	D	Toner Supply: ID Chip Communication Error (C_Communication timeout)
SC681-23	D	Toner Supply: ID Chip Communication Error (Y_Communication timeout)
SC681-24	D	Toner Supply: ID Chip Communication Error (K_Device stopped (logically stopped))
SC681-26	D	Toner Supply: ID Chip Communication Error (M_Device stopped (logically stopped))
SC681-27	D	Toner Supply: ID Chip Communication Error (C_Device stopped (logically stopped))
SC681-28	D	Toner Supply: ID Chip Communication Error (Y_Device stopped (logically stopped))

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC681-29	D	Toner Supply: ID Chip Communication Error (K_Requested buffer full)
SC681-31	D	Toner Supply: ID Chip Communication Error (M_Requested buffer full)
SC681-32	D	Toner Supply: ID Chip Communication Error (C_Requested buffer full)
SC681-33	D	Toner Supply: ID Chip Communication Error (Y_Requested buffer full)
SC681-34	D	Toner Supply: ID Chip Communication Error (K_No error code)
SC681-35	D	Toner Supply: ID Chip Communication Error (M_No error code)
SC681-36	D	Toner Supply: ID Chip Communication Error (C_No error code)
SC681-37	D	Toner Supply: ID Chip Communication Error (Y_No error code)
SC681-38	D	Toner Supply: ID Chip Communication Error (K_Invalid Device ID)
SC681-39	D	Toner Supply: ID Chip Communication Error (M_Invalid Device ID)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>Errors defined in I2C communication</p> <ul style="list-style-type: none"> • When abnormality occurs at cable connection • When error notification was received during communication with the tag and operation is not resumed after 3 retries.
		<p>There was an error during (wired) communication with the ID chip on the toner bottle.</p> <p>SC681-01 to 04: Device ID data corrupted.</p> <p>SC681-06 to 09: Contact fault (e.g. Bus disconnection)</p> <p>SC681-11 to 14: No ID chip</p> <p>SC681-16 to 19/21 to 24/26 to 39: Noise</p> <p>SC681-31 to 34/36 to 39: Software problem</p> <ul style="list-style-type: none"> • Toner supply set error • ID chip defective • Harness broken • BCU damaged • IOB damaged • TSB damaged • TCB damaged • Unintended noise
		<ul style="list-style-type: none"> • Cycle the machine off/on. • Set the toner supply again. • Replace the ID chip. • Fix the harness. • Replace the BCU board. • Replace the IOB. • Replace the TSB. • Replace the TCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC682		PCU: ID Chip Communication Error
SC682-01	D	PCU: ID Chip Communication Error(K_Invalid Device ID)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC682-02	D	PCU: ID Chip Communication Error(M_Invalid Device ID)
SC682-03	D	PCU: ID Chip Communication Error(C_Invalid Device ID)
SC682-04	D	PCU: ID Chip Communication Error(Y_Invalid Device ID)
SC682-05	D	PCU: ID Chip Communication Error(K_Channel error (e.g. bus disconnection))
SC682-06	D	PCU: ID Chip Communication Error(M_Channel error (e.g. bus disconnection))
SC682-07	D	PCU: ID Chip Communication Error(C_Channel error (e.g. bus disconnection))
SC682-08	D	PCU: ID Chip Communication Error(Y_Channel error (e.g. bus disconnection))
SC682-09	D	PCU: ID Chip Communication Error(K_Device Error (No ID chip))
SC682-11	D	PCU: ID Chip Communication Error(M_Device Error (No ID chip))
SC682-12	D	PCU: ID Chip Communication Error(C_Device Error (No ID chip))
SC682-13	D	PCU: ID Chip Communication Error(Y_Device Error (No ID chip))
SC682-14	D	PCU: ID Chip Communication Error(K_Communication aborted (error during communication))
SC682-16	D	PCU: ID Chip Communication Error(M_Communication aborted (error during communication))
SC682-17	D	PCU: ID Chip Communication Error(C_Communication aborted (error during communication))
SC682-18	D	PCU: ID Chip Communication Error(Y_Communication aborted (error during communication))
SC682-19	D	PCU: ID Chip Communication Error(K_Communication timeout)
SC682-21	D	PCU: ID Chip Communication Error(M_Communication timeout)
SC682-22	D	PCU: ID Chip Communication Error(C_Communication timeout)
SC682-23	D	PCU: ID Chip Communication Error(Y_Communication timeout)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC682-24	D	PCU: ID Chip Communication Error(K_Device stopped (logically stopped))
SC682-26	D	PCU: ID Chip Communication Error(M_Device stopped (logically stopped))
SC682-27	D	PCU: ID Chip Communication Error(C_Device stopped (logically stopped))
SC682-28	D	PCU: ID Chip Communication Error(Y_Device stopped (logically stopped))
SC682-29	D	PCU: ID Chip Communication Error(K_Requested buffer full)
SC682-31	D	PCU: ID Chip Communication Error(M_Requested buffer full)
SC682-32	D	PCU: ID Chip Communication Error(C_Requested buffer full)
SC682-33	D	PCU: ID Chip Communication Error(Y_Requested buffer full)
SC682-34	D	PCU: ID Chip Communication Error(K_No error code)
SC682-35	D	PCU: ID Chip Communication Error(M_No error code)
SC682-36	D	PCU: ID Chip Communication Error(C_No error code)
SC682-37	D	PCU: ID Chip Communication Error(Y_No error code)
SC682-38	D	PCU: ID Chip Communication Error(K_Invalid Device ID)
SC682-39	D	PCU: ID Chip Communication Error(M_Invalid Device ID)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>Errors defined in I2C communication</p> <ul style="list-style-type: none"> • When abnormality occurs at cable connection • When error notification was received during communication with the tag and operation is not resumed after 3 retries.
		<p>There was an error during (wired) communication with the ID chip on the toner bottle.</p> <ul style="list-style-type: none"> • PCU set error • HST sensor defective • Harness broken • BCU damaged • IOB damaged • Unintended noise
		<ul style="list-style-type: none"> • Set the PCU again. • Replace the HST sensor. • Fix the harness. • Replace the BCU board. • Replace the IOB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC684		Fusing: ID Chip Communication Error
SC684-01	D	Fusing: ID Chip Communication Error(Invalid Device ID)
SC684-02	D	Fusing: ID Chip Communication Error(Channel error (e.g. bus disconnection))
SC684-03	D	Fusing: ID Chip Communication Error(Device Error (No ID chip))
SC684-04	D	Fusing: ID Chip Communication Error(Communication aborted (error during communication))
SC684-05	D	Fusing: ID Chip Communication Error(Communication timeout)
SC684-06	D	Fusing: ID Chip Communication Error(Device stopped (logically stopped))
SC684-07	D	Fusing: ID Chip Communication Error(Requested buffer full)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC684-08	D	Fusing: ID Chip Communication Error(No error code)
		Errors defined in I2C communication
		<ul style="list-style-type: none"> • Fusing unit set error • ID chip defective • Harness broken • IOB damaged • Unintended noise
		<ul style="list-style-type: none"> • Set the fusing unit again. • Replace the ID chip. • Fix the harness. • Replace the IOB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		DC Power Supply Voltage Error
		Uses the power supply status signal monitored by the VODKA on the IOB. Tracks for 1 second from the time the converter SW trigger turns ON (SWTRG1=0 to 1). Target: 24VS1-N
SC685-00	D	<ul style="list-style-type: none"> • PSU malfunctioning • IOB malfunctioning • Connector disconnected • Harness broken or ground fault • Load fault
		<ul style="list-style-type: none"> • Replace the PSU. • Replace the IOB. • Set the connector again. • Replace the harness. • Replace the part where ground fault occurred. • Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC687-00	D	PER Not Received Error
		Unable to receive the PER command from the controller.
		<ul style="list-style-type: none"> • Communication error
		<ul style="list-style-type: none"> • Cycle the machine off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC689-00	D	IH Inverter Communication Error
		IH inverter not responding to request
		IH inverter communication error (ASAP IV compliant)
		IH inverter response information unavailable
		<ul style="list-style-type: none"> • Harness broken • IH inverter defective • IOB defective
<ul style="list-style-type: none"> • Remove the cause of the SC and then turn off/on the power or main power. • Replace the harness/IH inverter/IOB as required. 		

SC600 (Controller)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC632-00	B	Counter device error 1
		After 3 attempts to send a data frame to the optional counter device via the serial communication line, no ACK signal was received within 100 ms.
		Serial line between the optional counter device, the relay board and copier control board is disconnected or damaged.
		<ul style="list-style-type: none"> • Turn the main power off/on. • Check the serial communication line.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC633-00	B	Counter device error 2
		After communication was established, the controller received the brake signal from the accounting device.
		Serial line between the optional counter device, the relay board and copier control board is disconnected or damaged.
		<ul style="list-style-type: none"> • Turn the main power off/on. • Check the serial communication line.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC634-00	B	Counter device error 3
		A backup RAM error was returned by the counter device.
		Counter device control board or the backup battery of counter device defective
		<ul style="list-style-type: none"> • Replace the counter device control board. • Replace the backup battery.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC635-00	B	Counter device error 4
		A backup battery error was returned by the counter device.
		Counter device control board or the backup battery of counter device defective
		<ul style="list-style-type: none"> • Replace the counter device control board. • Replace the backup battery.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC636-01	D	IC Card Error (Expanded authentication module error)
		<p>Issued when expanded authentication management is set to "ON" but either of the following occur.</p> <ul style="list-style-type: none"> • There is no expanded authentication module in the machine. • The SD card or the file of the expanded authentication module is broken. • There is no DESS module in the machine.
		<ul style="list-style-type: none"> • There is no DESS module in the machine (models on which the function is optional). • There is no expanded authentication module in the machine. • The SD card or the file of the expanded authentication module is broken.
		<ul style="list-style-type: none"> • Set a working SD card/expanded authentication module file. • Install the DESS module. • In the SSP mode set SP5-401-160 to 0. • In the SSP mode, set SP5-401-161 to 0. • Replace the NVRAM.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC636-02	D	IC Card Error (Version error)
		The version of the expanded authentication module is not correct.
		Incorrect module version
		Install the correct file of the expanded authentication module.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC636-11	D	IC Card Error (OSM user code file error)
		<ul style="list-style-type: none"> The correct "usercode" file could not be found in the root folder of the SD card. The "usercode" file on the SD card could not be read.
		<ul style="list-style-type: none"> The "usercode" file does not exist on the SD card. The "usercode" file on the SD card is an invalid file. Data in the "usercode" file on the SD card is invalid. "usercode" file was not moved when moving the application to another SD card
		Use the user code configuration tool for OSM users (ldissuer.exe) to create the "usercode" and store it in the root folder of the SD card containing the IC card module (eccm.mod).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC637-01	D	Tracking Information Notification Error (Tracking application error)
		Tracking information was lost.
		<ul style="list-style-type: none"> Tracking SDK application error Internal notification error
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC637-02	D	Tracking Information Notification Error (Management server error)
		Tracking information was lost.
		Communication with tracking management server failed. <ul style="list-style-type: none"> Network error tracking management server error Tracking SDK application error
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC641-00	D	Communication error between BCU and Controller board.
		Controller board does not respond after BCU tries to communicate three times.
		<ul style="list-style-type: none"> • Controller board software error • Connect error between BCU and Controller board • Engine board software error
		<ul style="list-style-type: none"> • Check connections between Controller board and BCU. • Turn the main switch off and on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC650-01	B	Remote Service Modem Communication Error (Dialup authentication failure)
		<ul style="list-style-type: none"> • An error related to communication (dialup connection, modem board etc.) using the RC Gate Type M was detected or an error that prevents RC Gate operation was detected at power on. • Displayed only when an error is detected while RC Gate is operating. • SC is not issued if an error occurs during RC Gate installation (because it can be referenced using SP).
		Dialup authentication failure
		Check the following SPs. <ul style="list-style-type: none"> • SP5-816-156 • SP5-816-157

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC650-04	B	Remote Service Modem Communication Error (dialup failing because of incorrect modem configuration)
		<ul style="list-style-type: none"> An error related to communication (dialup connection, modem board etc.) using the RC Gate Type M was detected or an error that prevents RC Gate operation was detected at power on. Displayed only when an error is detected while RC Gate is operating. SC is not issued if an error occurs during RC Gate installation (because it can be referenced using SP).
		Dialup failing because of incorrect modem configuration
		<p>Check if the setting of SP5-816-160 is correct.</p> <p>If it is correct, then there is a software bug.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC650-05	B	Remote Service Modem Communication Error (insufficient current or connection fault)
		<ul style="list-style-type: none"> An error related to communication (dialup connection, modem board etc.) using the RC Gate Type M was detected or an error that prevents RC Gate operation was detected at power on. Displayed only when an error is detected while RC Gate is operating. SC is not issued if an error occurs during RC Gate installation (because it can be referenced using SP).
		Insufficient current or connection fault
		The line is not supported and nothing can be done.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC650-13	B	Remote Service Modem Communication Error (RC Gate Type Mwas installed but modem is not present (detected during operation))
		<ul style="list-style-type: none"> • An error related to communication (dialup connection, modem board etc.) using the RC Gate Type M was detected or an error that prevents RC Gate operation was detected at power on. • Displayed only when an error is detected while RC Gate is operating. • SC is not issued if an error occurs during RC Gate installation (because it can be referenced using SP).
		RC Gate Type Mwas installed but modem is not present (detected during operation)
		<ul style="list-style-type: none"> • If a modem board is not installed, install it. • Check again if the modem driver configurations (SP5-816-160, SP5-816-165 to 171, SP5-816-165 to 171) are correct. • If the problem is not solved, replace the modem.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC650-14	B	Remote Service Modem Communication Error (RC Gate Type N was installed but modem is present or wired/wireless LAN is not working correctly)
		<ul style="list-style-type: none"> • An error related to communication (dialup connection, modem board etc.) using the RC Gate was detected or an error that prevents RC Gate operation was detected at power on. • Displayed only when an error is detected while RC Gate is operating. • SC is not issued if an error occurs during RC Gate installation (because it can be referenced using SP).
		RC Gate Type N was installed but modem is present or wired/wireless LAN is not working correctly
		<ul style="list-style-type: none"> • If a modem board is attached, remove it. • Check if wired/wireless LAN works.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC651-01	C	Illegal Remote Service Dial-up (Chat program parameter error)
		An unexpected error occurred when RC Gate Type M dialed up the NRS Center.
		Software bug
		Logging only.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC651-02	C	Illegal Remote Service Dial-up (Chat program execution error)
		An unexpected error occurred when RC Gate dialed up the NRS Center.
		Software bug
		Logging only.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC652-00	D	Remote service ID2 mismatching
		There was an authentication mismatch between ID2 for @Remote, the controller board, and NVRAM.
		<ul style="list-style-type: none"> Used controller board installed Used NVRAM installed (such action is not allowed.)
		<ul style="list-style-type: none"> If this occurs during RC Gate installation: Check the validity of the certificate and the NVRAM, check the machine serial number, write the common certificate, and then begin installation again. If this occurs after RC Gate installation: Clear the RC Gate install status, check the validity of the certificate and the NVRAM, check the machine serial number, write the common certificate, and then begin installation again.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC653-00	D	Incorrect remote service ID2
		ID2 stored in the NVRAM has either of the following problems. <ul style="list-style-type: none">• Number of characters is not 17.• Includes a character that cannot be printed.• All spaces• NULL
		Replace the NVRAM.
		Clear the RC Gate install status, write the common certificate, and then begin installation again.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC670-00	D	Engine start up error
		<ul style="list-style-type: none"> • Case 1 <ul style="list-style-type: none"> • /ENGRDY signal was not asserted when the machine was turned on or returned from energy saver mode. • /IPURDY signal was not asserted when the machine was turned on or returned from energy saver mode. • EC response was not received within specified time from power on. • PC response was not received within specified time from power on. • SC response was not received within specified time from power on. • Writing to Rapi driver failed (the other party not found through PCI). • Case 2 <ul style="list-style-type: none"> • Unexpected down status was detected after /ENGRDY assertion.
		<ul style="list-style-type: none"> • Case 1 <ul style="list-style-type: none"> • Engine board does not start up. • Case 2 <ul style="list-style-type: none"> • Engine board reset unexpectedly.
		<p>Check the connection between the engine board and the controller board.</p> <ul style="list-style-type: none"> • If it is always reproduced, replace the engine board. If the problem persists, consider replacing the controller board or other boards between them. • If reproducibility is low, multiple causes are to be considered, such as software, engine board, controller board, and PSU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC672-10	D	Controller start up error
		After the machine was powered on, communication between the controller and the operation panel was not established.
		<ul style="list-style-type: none"> • Controller stalled • Board installed incorrectly • Controller board defective • Operation panel connector loose, broken, or defective • Controller late
		<ul style="list-style-type: none"> • Turn the main power off/on. • Check the connection of the controller board. • Replace the controller board. • Check the control panel harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC672-11	D	Controller start up error
		After the machine was powered on, communication between the controller and the operation panel was not established, or communication with controller was interrupted after a normal startup.
		<ul style="list-style-type: none"> • Controller stalled • Board installed incorrectly • Controller board defective • Operation panel connector loose, broken, or defective • Controller late
		<ul style="list-style-type: none"> • Turn the main power off/on. • Check the connection of the controller board. • Replace the controller board. • Check the control panel harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC672-12	D	Controller start up error
		Communication with controller was interrupted after a normal startup.
		<ul style="list-style-type: none"> • Controller stalled • Board installed incorrectly • Controller board defective • Operation panel connector loose, broken, or defective • Controller late
		<ul style="list-style-type: none"> • Turn the main power off/on. • Check the connection of the controller board. • Replace the controller board. • Check the control panel harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC672-13	D	Controller start up error
		The operation panel detected that the controller is down.
		<ul style="list-style-type: none"> • Controller stalled • Board installed incorrectly • Controller board defective • Operation panel connector loose, broken, or defective • Controller late
		<ul style="list-style-type: none"> • Turn the main power off/on. • Check the connection of the controller board. • Replace the controller board. • Check the control panel harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC672-99	D	Controller start up error
		The operation panel software ended abnormally.
		<ul style="list-style-type: none"> • Controller stalled • Board installed incorrectly • Controller board defective • Operation panel connector loose, broken, or defective • Controller late
		<ul style="list-style-type: none"> • Turn the main power off/on. • Check the connection of the controller board. • Replace the controller board. • Check the control panel harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC673-10	D	Connection error of Smart Operation Panel
		The main machine does not respond to the smart operation panel.
		The SP setting for the smart operation panel is mismatch.
		<ul style="list-style-type: none"> • Set the SP5748-201 (OpePanel Setting) to [1: ON].

Service Call 700-780

SC700 (Engine: Peripherals)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC700-01	D	Bottom plate lift motor error (1-pass ADF)
		<p>The bottom plate HP sensor does not detect the home position of the bottom plate after the bottom plate lift motor switches on and lowers the bottom plate. Or, the bottom plate position sensor does not detect the position of the plate after the lift motor switches on and raises the bottom plate.</p> <p>Details:</p> <p>The ADF notifies the main machine of the error. The first two occurrences are displayed as jams.</p>
		<ul style="list-style-type: none"> • Bottom plate position sensor output error • Bottom plate HP sensor output error • Bottom plate lift motor error (does not rotate) • ARDF main board defective
		<ul style="list-style-type: none"> • Check the connections of the sensor harnesses and motor harnesses. • Replace the sensor harnesses and motor harnesses. • Replace the sensor or motor. • Replace the ARDF main board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC700-02	D	Original pick up error (1-pass ADF)
		<p>The pick-up motor is turned on but the pick-up home position sensor is not detecting it.</p> <p>Details: The ADF notifies the main machine of the error. The first two occurrences are displayed as jams.</p>
		<ul style="list-style-type: none"> • Pick-up HP sensor output error • Pick-up motor error (does not rotate) • ARDF main board defective
		<ul style="list-style-type: none"> • Check the connections of the sensor harnesses and motor harnesses. • Replace the sensor harnesses and motor harnesses. • Replace the sensor or motor. • Replace the ARDF main board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC700-04	D	Feed motor error (1-pass ADF)
		<p>Error signal detected while the motor is driven.</p> <p>Details:</p> <p>When encoder channel A (B) error or overload error is detected among the feed motor error notification registers.</p> <p>The first two occurrences, however, are displayed as jams.</p>
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Harness broken • Overload
		<ul style="list-style-type: none"> • Check the harness connection. • Replace the encoder harness. • Replace the motor. • Replace the board. • Remove torn paper from the paper path, remove foreign objects from the drive area, and check for motor/motor bracket deformation.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC700-05	D	Pull-out motor error (1-pass ADF)
		<p>Error signal detected while the motor is driven.</p> <p>Details:</p> <p>When encoder channel A (B) error or overload error is detected among the pull-out motor error notification registers.</p> <p>The first two occurrences, however, are displayed as jams.</p>
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Harness broken • Overload
		<ul style="list-style-type: none"> • Check the harness connection. • Replace the encoder harness. • Replace the motor. • Replace the board. • Remove torn paper from the paper path, remove foreign objects from the drive area, and check for motor/motor bracket deformation.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC700-06	D	Intermediate motor error (1-pass ADF)
		<p>Error signal detected while the motor is driven.</p> <p>Details:</p> <p>When encoder channel A (B) error or overload error is detected among the intermediate motor error notification registers.</p> <p>The first two occurrences, however, are displayed as jams.</p>
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Harness broken • Overload
		<ul style="list-style-type: none"> • Check the harness connection. • Replace the encoder harness. • Replace the motor. • Replace the board. • Remove torn paper from the paper path, remove foreign objects from the drive area, and check for motor/motor bracket deformation.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC700-07	D	Scanning motor error (1-pass ADF)
		<p>Error signal detected while the motor is driven.</p> <p>Details:</p> <p>When encoder channel A (B) error or overload error is detected among the scanning motor error notification registers.</p> <p>The first two occurrences, however, are displayed as jams.</p>
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Harness broken • Overload
		<ul style="list-style-type: none"> • Check the harness connection. • Replace the encoder harness. • Replace the motor. • Replace the board. • Remove torn paper from the paper path, remove foreign objects from the drive area, and check for motor/motor bracket deformation.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC700-09	D	Exit motor error (1-pass ADF)
		Error signal detected while the motor is driven. Details: When encoder channel A (B) error or overload error is detected among the exit motor error notification registers. The first two occurrences, however, are displayed as jams.
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Harness broken • Overload
		<ul style="list-style-type: none"> • Check the harness connection. • Replace the encoder harness. • Replace the motor. • Replace the board. • Remove torn paper from the paper path, remove foreign objects from the drive area, and check for motor/motor bracket deformation.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC701-02	D	Original pick-up motor driver error (1-pass ADF)
		Motor driver IC error flag was asserted when a jam occurred. Details: The protection mechanism of the motor driver IC detected overcurrent or overheat and output an error.
		Motor driver IC detected an error.
		<ul style="list-style-type: none"> • Check the motor harness connection. • Check for torn paper on the paper path or foreign objects in the drive area. • Replace the motor harness. • Replace the motor. • Replace the board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC702-04	D	Protection device break error 4 (1-pass ADF)
		The non-interlock power supply system protection device broke the circuit with the 24V power supply on. Details: A motor defect or a short circuit occurred in either the pick-up motor, transmission stamp, or bottom plate lift motor and the non-interlock power system protection device broke the circuit.
		<ul style="list-style-type: none"> • Motor defect in non-interlock power supply system. • Harness broken
		<ul style="list-style-type: none"> • Replace the pick-up motor, transmission stamp solenoid, or bottom plate lift motor. • Replace the harness of pick-up motor, transmission stamp solenoid, or bottom plate lift motor. • Replace the board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC702-05	D	Protection device break error 5 (1-pass ADF)
		The non-interlock power supply system protection device broke the circuit with the 24V power supply on. Details: A motor defect or a short circuit occurred in either the feed motor, pull-out motor, intermediate motor, scanning motor, or exit motor and the non-interlock power system protection device broke the circuit.
		<ul style="list-style-type: none"> • Motor defect in non-interlock power supply system. • Harness broken
		<ul style="list-style-type: none"> • Replace the feed motor, pull-out motor, intermediate motor, scanning motor, or exit motor. • Replace the harness of feed motor, pull-out motor, intermediate motor, scanning motor, or exit motor. • Replace the board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC719-07	D	Downstream device communication error (D751)
		<ul style="list-style-type: none"> • Communication with the downstream device has established, but the device is not responding to the command sent out, even after being sent three times. • The port level of the downstream device does not become H level (break cancel) within specified time.
		<ul style="list-style-type: none"> • Interface cable (downstream device side) connector disconnected or broken • Board defective (Buffer pass unit or downstream device)
		<ul style="list-style-type: none"> • Replace the interface cable between buffer pass unit and downstream device or reconnect the connectors. • Replace the board (of the buffer pass unit or downstream device).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC719-08	D	Buffer pass unit_CTB_+24V_Power supply error
		Detected +24V power OFF of the Buffer pass unit PCB: CTB.
		<ul style="list-style-type: none"> • Buffer pass unit PSU defect • Connector disconnected • Harness ground fault/broken • 24V load (motor/fan) layer short • PCB defective • Fuse tripped (PSU, PCB)
		<ul style="list-style-type: none"> • Replace the Buffer pass unit PSU. • Reconnect the connector. • Replace the harness. • Replace the motor/fan. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC719-09	D	Buffer pass unit_CTB_+24VINT_Power supply error
		Detected +24VINT power OFF of the Buffer pass unit PCB: CTB.
		<ul style="list-style-type: none"> • Buffer pass unit PSU defect • Connector disconnected • Harness ground fault/broken • 24V load (motor/fan) layer short • PCB defective • Fuse tripped (PSU, PCB) • PCB relay defect
		<ul style="list-style-type: none"> • Replace the Buffer pass unit PSU. • Reconnect the connector. • Replace the harness. • Replace the motor/fan. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720-01	D	Downstream device communication error (D703/D704)
		Communication with the downstream device has established, but the device is not responding to the command sent out, even after being sent three times.
		<ul style="list-style-type: none"> • Interface cable (downstream device side) connector disconnected or broken • PCB of downstream device defective • Controller PCB defective
		<ul style="list-style-type: none"> • Replace the controller board. • Replace the PCB of downstream device. • Replace the interface cable.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720-03	B	Protection device break error 1 (D703/D704)
		Protection device break error (fuse tripped)
		<ul style="list-style-type: none"> • Short-circuit • Overload • Motor/solenoid defective
		<ul style="list-style-type: none"> • Check the harness. • Replace the PCB/motor/solenoid.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720-04	B	Protection device break error 1 (2000/3000-sheet finisher with Mailbox)
		Protection device break error (fuse tripped)
		<ul style="list-style-type: none"> • Short-circuit • Overload • Motor/solenoid defective
		<p>2000/3000-sheet finisher</p> <ul style="list-style-type: none"> • Check the harness. • Replace the PCB. <p>Mailbox</p> <ul style="list-style-type: none"> • Check the harness. • Replace the PCB. • Replace the motor/solenoid.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720-10	B	Entrance Transport Motor Error (2000/3000
SC720-11	B	Horizontal Transport Motor Error (2000/3000
SC720-12	B	Pre Stack Transport Motor Error (2000/3000
SC720-13	B	Middle Transport Motor Error (2000/3000

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720-16	B	Tray Exit Motor Error (2000/3000)
		<p>Motor driver detected an error (DC motor control error). (The first time: jam display, the second time: SC)</p> <ul style="list-style-type: none"> • Motor defective • Connector disconnected • Overload • Encoder defective
		<ul style="list-style-type: none"> • Check motor connection. • Replace the motor. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720-20	B	Lower Junction Gate Motor Error (2000/3000)
SC720-24	B	Paper Exit Gate Motor Error (2000/3000)
		<ul style="list-style-type: none"> • Motor driver detected an error (short-circuit or overheat). (SC from the first time) • When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) • When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Overload • Home position sensor defective
		<ul style="list-style-type: none"> • Check the connections of the motor and home position sensor. • Replace the motor/home position sensor. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720-25	B	Punch Motor Error (2000/3000)
SC720-27	B	Punch Drive Motor Error (2000/3000)
SC720-28	B	Paper Position Sensor Side Motor Error (2000/3000)
		<ul style="list-style-type: none"> • When moving to the home position, home position was not detected within specified number of pulses (p0 pulse). (The first time: jam display, the second time: SC) • When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Overload • Home position sensor defective
		<ul style="list-style-type: none"> • Check the connections of the motor and home position sensor. • Replace the motor/home position sensor. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720-30	B	Jogger Motor Error (2000/3000)
SC720-33	B	Positioning Roller Motor Error (2000/3000)
SC720-41	B	Feed Out Motor Error (2000/3000)
SC720-42	B	Corner Stapler Movement Motor Error (2000/3000)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<ul style="list-style-type: none"> • Motor driver detected an error (short-circuit or overheat). (SC from the first time) • When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) • When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Overload • Home position sensor defective
		<ul style="list-style-type: none"> • Check the connections of the motor and home position sensor. • Replace the motor/home position sensor. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720-44	B	Corner Stapling Motor Error (D703/D704)
		<ul style="list-style-type: none"> • When moving to the home position, home position was not detected within specified time (t0 sec). (The first time: jam display, the second time: SC) • When moving from the home position, home position was still detected after specified time (t1 sec). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Overload • Home position sensor defective
		<ul style="list-style-type: none"> • Check the connections of the motor and home position sensor. • Replace the motor/home position sensor. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720-50	B	Booklet Jogger Motor Error (2000/3000)
SC720-51	B	Booklet Guide Motor Error (2000/3000)
SC720-53	B	Booklet Fence Motor Error (2000/3000)
		<ul style="list-style-type: none"> • Motor driver detected an error (short-circuit or overheat). (SC from the first time) • When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) • When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Overload • Home position sensor defective
		<ul style="list-style-type: none"> • Check the connections of the motor and home position sensor. • Replace the motor/home position sensor. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720-60	B	Booklet Stapling Motor Error (D703/D704)
		<ul style="list-style-type: none"> When moving to the home position, home position was not detected within specified time (t0 sec). (The first time: jam display, the second time: SC) When moving from the home position, home position was still detected after specified time (t1 sec). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> Motor defective Connector disconnected Overload Home position sensor defective
		<ul style="list-style-type: none"> Check the connections of the motor and home position sensor. Replace the motor/home position sensor. Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720-62	B	Movement Roller Transport Motor Error (D703/D704)
		Motor driver detected an error (DC motor control error). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> Motor defective Connector disconnected Overload Encoder defective
		<ul style="list-style-type: none"> Check the motor connection. Replace the motor. Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720-63	B	Folding Transport Motor Error (D703/D704)
		Motor driver detected an error (short-circuit or overheat). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Overload
		<ul style="list-style-type: none"> • Check the motor connection. • Replace the motor. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720-65	B	Press Folding Motor Error (D703/D704)
		<ul style="list-style-type: none"> • Motor driver detected an error (short-circuit or overheat). (SC from the first time) • When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) • When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Overload • Home position sensor defective
		<ul style="list-style-type: none"> • Check the connections of the motor and home position sensor. • Replace the motor/home position sensor. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720-70	B	Tray Lift Motor Error (D703/D704)
		<ul style="list-style-type: none"> • Motor controller detected an error (overload). (The first time: jam display, the second time: SC) • When descending, paper sensor is still detecting paper after the specified time (t0 sec). (The first time: jam display, the second time: SC) • When ascending, paper sensor did not detect paper within specified time (t1 sec). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Overload • Home position sensor defective
		<ul style="list-style-type: none"> • Check the connections of the motor and home position sensor. • Replace the motor/home position sensor. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720-71	B	Shift Motor Error (D703/D704)
SC720-72	B	Shift Jogger Front Motor Error (D703/D704)
SC720-73	B	Shift Jogger Rear Motor Error (D703/D704)
SC720-74	B	Shift Jogger Retraction Motor Error (D703/D704)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<ul style="list-style-type: none"> • Motor driver detected an error (short-circuit or overheat). (SC from the first time) • When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) • When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Overload • Home position sensor defective
		<ul style="list-style-type: none"> • Check the connections of the motor and home position sensor. • Replace the motor/home position sensor. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720-75	B	Stacking Roller Motor Error (D703/D704)
		<ul style="list-style-type: none"> • Motor driver detected an error (DC motor control error). (The first time: jam display, the second time: SC) • When moving to the home position, home position was not detected within specified time (t0 sec). (The first time: jam display, the second time: SC) • When moving from the home position, home position was still detected after specified time (t1 sec). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Overload • Home position sensor defective
		<ul style="list-style-type: none"> • Check the connections of the motor and home position sensor. • Replace the motor/home position sensor. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720-77	B	Leading Edge Guide Motor Error (D703/D704)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<ul style="list-style-type: none"> • Motor driver detected an error (short-circuit or overheat). (SC from the first time) • When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) • When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Overload • Home position sensor defective
		<ul style="list-style-type: none"> • Check the connections of the motor and home position sensor. • Replace the motor/home position sensor. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720-78	B	Trailing Edge Pressure Plate Motor Error (D703/D704)
		<ul style="list-style-type: none"> • Motor driver detected an error (DC motor control error). (The first time: jam display, the second time: SC) • When moving to the home position, home position was not detected within specified time (t0 sec). (The first time: jam display, the second time: SC) • When moving from the home position, home position was still detected after specified time (t1 sec). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Overload • Home position sensor defective
		<ul style="list-style-type: none"> • Check the connections of the motor and home position sensor. • Replace the motor/home position sensor. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC720-80	B	Protection device break error 2 (D703/D704)
		Protection device break error (fuse tripped)
		<ul style="list-style-type: none"> • Short-circuit • Overload • Motor/solenoid defective
		<p>D703/D704:</p> <ul style="list-style-type: none"> • Check the harness/replace the PCB. <p>Insertor:</p> <ul style="list-style-type: none"> • Check the harness. • Replace the PCB. • Replace the motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-10	B	Upper Transport Motor Error (D707)
		<ul style="list-style-type: none"> Motor pulse not detected for a specified time. (The first time: jam display, the second time: SC) The motor speed does not reach the specified value after a specified time (t1 msec) from motor startup.
		<ul style="list-style-type: none"> Motor defective Connector disconnected Overload
		<ul style="list-style-type: none"> Check motor connection. Replace the motor. Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-14	B	Lower Transport Motor Error (D707)
		<ul style="list-style-type: none"> Motor pulse not detected for a specified time. (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> Motor defective Connector disconnected Overload
		<ul style="list-style-type: none"> Check motor connection. Replace the motor. Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-15	B	Pre-stack Transport Motor Error (D707)
SC722-16	B	Upper Tray Exit Motor Error (D707)
SC722-17	B	Shift Tray Exit Motor Error (D707)
SC722-18	B	Stapler Exit Motor Error (D707)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		Motor driver detected an open circuit or short-circuit. (SC from the first time)
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected
		<ul style="list-style-type: none"> • Check motor connection. • Replace the motor. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-20	B	Upper Tray Junction Gate Motor Error (D707)
SC722-21	B	Stapler Junction Gate Motor Error (D707)
SC722-22	B	Pre-stack Junction Gate Motor Error (D707)
SC722-23	B	Pre-stack Paper Stopper Motor Error (D707)
		<ul style="list-style-type: none"> • When moving to the home position, home position was not detected within specified time (t_0 ms). (The first time: jam display, the second time: SC) • When moving from the home position, home position was still detected after specified time (t_1 ms). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Overload • Home position sensor defective
		<ul style="list-style-type: none"> • Check the connections of the motor and home position sensor. • Replace the motor/home position sensor. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-24	B	Exit Guide Motor Error (D707)
		<ul style="list-style-type: none"> When moving to the home position, home position was not detected within specified time (t0 ms). (The first time: jam display, the second time: SC) When moving from the home position, home position was still detected after specified time (t1 ms). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> Motor defective Connector disconnected Overload Home position sensor defective
		<ul style="list-style-type: none"> Check the connections of the motor and home position sensor. Replace the motor/home position sensor. Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-25	B	Punch Motor Error (D707)
		<ul style="list-style-type: none"> No change to the punch home position sensor after a specified time (t1 ms) from punch operation. (The first time: jam display, the second time: SC) No change to the punch home position sensor within a specified number of pulses (p0 pulses) from punch operation. (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> Motor defective Connector disconnected Overload Home position sensor defective
		<ul style="list-style-type: none"> Check the connections of the motor and home position sensor. Replace the motor/home position sensor. Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-30	B	Jogger Motor Error (D707)
		<ul style="list-style-type: none"> When moving to the home position, home position was not detected within specified time (t0 ms). (The first time: jam display, the second time: SC) When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> Motor defective Connector disconnected Overload Home position sensor defective
		<ul style="list-style-type: none"> Check the connections of the motor and home position sensor. Replace the motor/home position sensor. Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-33	B	Positioning Roller Motor Error (D707)
		<ul style="list-style-type: none"> When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> Motor defective Connector disconnected Overload Home position sensor defective
		<ul style="list-style-type: none"> Check the connections of the motor and home position sensor. Replace the motor/home position sensor. Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-34	B	Positioning Roller Transport Motor Error (D707)
		Motor driver detected an open circuit or short-circuit. (SC from the first time)
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Home position sensor defective
		<ul style="list-style-type: none"> • Check motor connection. • Replace the motor. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-35	B	Stack Plate-Center Motor Error (D707)
		<ul style="list-style-type: none"> • The drive unit in the staple tray does not return to the home position within a specified time (t0ms). (The first time: jam display, the second time: SC) • When the drive unit in the staple tray was moving away from the home position, the home position was still detected after a specified time (t1 ms). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Overload • Home position sensor defective
		<ul style="list-style-type: none"> • Check the connections of the motor and home position sensor. • Replace the motor/home position sensor. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-36	B	Stapler Plate-Front Motor Error (D707)
		<ul style="list-style-type: none"> The drive unit in the staple tray does not return to the home position within a specified time (t0ms). (The first time: jam display, the second time: SC) When the drive unit in the staple tray was moving away from the home position, the home position was still detected after a specified time (t1 ms). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> Motor defective Connector disconnected Overload Home position sensor defective
		<ul style="list-style-type: none"> Check the connections of the motor and home position sensor. Replace the motor/home position sensor. Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-37	B	Stapler Plate-Rear Motor Error (D707)
		<ul style="list-style-type: none"> The drive unit in the staple tray does not return to the home position within a specified time (t0ms). (The first time: jam display, the second time: SC) When the drive unit in the staple tray was moving away from the home position, the home position was still detected after a specified time (t1 ms). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> Motor defective Connector disconnected Overload Home position sensor defective
		<ul style="list-style-type: none"> Check the connections of the motor and home position sensor. Replace the motor/home position sensor. Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-39	B	Stapler Movement Motor Error (D707)
		<ul style="list-style-type: none"> • When moving to the home position, home position was not detected within specified time (t0 ms). (The first time: jam display, the second time: SC) • When moving from the home position, home position was still detected after specified time (t1 ms). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Overload • Home position sensor defective
		<ul style="list-style-type: none"> • Check the connections of the motor and home position sensor. • Replace the motor/home position sensor. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-40	B	Stapler Rotation Motor Error (D707)
		<ul style="list-style-type: none"> • When moving to the home position, home position was not detected within specified time (t0 ms). (The first time: jam display, the second time: SC) • When moving from the home position, home position was still detected after specified time (t1 ms). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Overload • Home position sensor defective
		<ul style="list-style-type: none"> • Check the connections of the motor and home position sensor. • Replace the motor/home position sensor. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-41	B	Stack Feed-Out Belt Motor Error (D707)
		<ul style="list-style-type: none"> When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) When moving from the home position, home position was still detected after specified time (t1 sec). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> Motor defective Connector disconnected Overload Home position sensor defective
		<ul style="list-style-type: none"> Check the connections of the motor and home position sensor. Replace the motor/home position sensor. Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-42	B	Stapler Motor Error (D707)
		<ul style="list-style-type: none"> When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> Motor defective Connector disconnected Overload Home position sensor defective
		<ul style="list-style-type: none"> Check the connections of the motor and home position sensor. Replace the motor/home position sensor. Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-43	B	Stapler Rotation Motor Error (D707)
		<ul style="list-style-type: none"> When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> Motor defective Connector disconnected Overload Home position sensor defective
		<ul style="list-style-type: none"> Check the connections of the motor and home position sensor. Replace the motor/home position sensor. Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-44	B	Stapler Hammer Motor Error (D707)
		<ul style="list-style-type: none"> The staple drive unit does not complete operation within specified time (t0ms). (The first time: jam display, the second time: SC) When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> Overload due to staple jam or number of sheets exceeding the limit, etc. Motor defective Connector disconnected Home position sensor defective
		<ul style="list-style-type: none"> Check the connections of the motor and home position sensor. Replace the motor/home position sensor. Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-70	B	Shift Tray Lift Motor Error (D707)
		<ul style="list-style-type: none"> When ascending, paper sensor did not detect paper within specified time (t0 sec). (The first time: jam display, the second time: SC) When descending, paper sensor is still detecting paper after the specified time (t1 sec). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> Overload due to staple jam or number of sheets exceeding the limit, etc. Motor defective Connector disconnected Home position sensor defective
		<ul style="list-style-type: none"> Check the connections of the motor and home position sensor. Replace the motor/home position sensor. Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-71	B	Shift Motor Error (D707)
		<ul style="list-style-type: none"> When moving to the home position, home position was not detected within specified time (t0 sec). (The first time: jam display, the second time: SC) When moving from the home position, home position was still detected after specified time (t1 sec). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> Overload due to staple jam or number of sheets exceeding the limit, etc. Motor defective Connector disconnected Home position sensor defective
		<ul style="list-style-type: none"> Check the connections of the motor and home position sensor. Replace the motor/home position sensor. Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-72	B	Shift Jogger Motor Error (D707)
		<ul style="list-style-type: none"> When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> Overload due to staple jam or number of sheets exceeding the limit, etc. Motor defective Connector disconnected Home position sensor defective
		<ul style="list-style-type: none"> Check the connections of the motor and home position sensor. Replace the motor/home position sensor. Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-74	B	Shift Jogger Lift Motor Error (D707)
		<ul style="list-style-type: none"> When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> Overload due to staple jam or number of sheets exceeding the limit, etc. Motor defective Connector disconnected Home position sensor defective
		<ul style="list-style-type: none"> Check the connections of the motor and home position sensor. Replace the motor/home position sensor. Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-75	B	Stacking Roller Drug Motor Error (D707)
		<ul style="list-style-type: none"> When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> Overload due to staple jam or number of sheets exceeding the limit, etc. Motor defective Connector disconnected Home position sensor defective
		<ul style="list-style-type: none"> Check the connections of the motor and home position sensor. Replace the motor/home position sensor. Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC722-76	B	Stacking Roller Motor Error (D707)
		Motor driver detected an open circuit or short-circuit. (SC from the first time)
		<ul style="list-style-type: none"> Motor defective Connector disconnected
		<ul style="list-style-type: none"> Check motor connection. Replace the motor. Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC725-01	D	Downstream device communication error (D615)
		<ul style="list-style-type: none"> • Communication with the downstream device has established, but the device is not responding to the command sent out, even after being sent three times. • The port level of the downstream device does not become H level (break cancel) within specified time.
		<ul style="list-style-type: none"> • Interface cable (downstream device side) connector disconnected or broken • PCB of downstream device defective • Controller PCB defective
		<ul style="list-style-type: none"> • Replace the interface cable. • Replace the PCB of downstream device. • Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC725-12	B	Reg. Roller Transport Motor Error (D615)
		<ul style="list-style-type: none"> • Motor driver detected an error. (SC from the first time)
		<ul style="list-style-type: none"> • Overcurrent to the motor. • Motor drive overheat
		<ul style="list-style-type: none"> • Replace the controller board. • Replace the motor. • Replace the harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC725-13	B	Dynamic Roller Transport Motor Error (D615)
		<ul style="list-style-type: none"> • Motor driver detected an error. (SC from the first time)
		<ul style="list-style-type: none"> • Overcurrent to the motor. • Motor drive overheat
		<ul style="list-style-type: none"> • Replace the controller board. • Replace the motor. • Replace the harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC725-14	B	Z-fold top tray exit motor error (D615)
		<ul style="list-style-type: none"> • Motor driver detected an error. (SC from the first time)
		<ul style="list-style-type: none"> • Overcurrent to the motor. • Motor drive overheat
		<ul style="list-style-type: none"> • Replace the controller board. • Replace the motor. • Replace the harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC725-30	B	Z-fold stopper 1 Motor error (D615)
		<ul style="list-style-type: none"> • When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) • When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC) • Motor driver detected an error. (SC from the first time)
		<ul style="list-style-type: none"> • Overcurrent to the motor. • Motor drive overheat • Connector disconnected
		<ul style="list-style-type: none"> • Replace the controller board. • Replace the motor. • Replace the harness. • Re-connect the connector. • Replace the sensor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC725-31	B	2nd Stopper Motor Error (D615)
		<ul style="list-style-type: none"> • When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) • When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC) • Motor driver detected an error. (SC from the first time)
		<ul style="list-style-type: none"> • Overcurrent to the motor. • Motor drive overheat • Connector disconnected
		<ul style="list-style-type: none"> • Replace the controller board. • Replace the motor. • Replace the harness. • Re-connect the connector. • Replace the sensor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC725-32	B	3rd Stopper Motor Error (D615)
		<ul style="list-style-type: none"> • When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) • When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC) • Motor driver detected an error. (SC from the first time)
		<ul style="list-style-type: none"> • Overcurrent to the motor. • Motor drive overheat • Connector disconnected
		<ul style="list-style-type: none"> • Replace the controller board. • Replace the motor. • Replace the harness. • Re-connect the connector. • Replace the sensor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC725-33	B	Jogger Fence Motor Error (D615)
		<ul style="list-style-type: none"> • When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) • When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC) • Motor driver detected an error. (SC from the first time)
		<ul style="list-style-type: none"> • Overcurrent to the motor. • Motor drive overheat • Connector disconnected
		<ul style="list-style-type: none"> • Replace the controller board. • Replace the motor. • Replace the harness. • Re-connect the connector. • Replace the sensor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC725-34	B	Dynamic Roller Lift Motor Error (D615)
		<ul style="list-style-type: none"> • When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) • When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC) • Motor driver detected an error. (SC from the first time)
		<ul style="list-style-type: none"> • Overcurrent to the motor. • Motor drive overheat • Connector disconnected
		<ul style="list-style-type: none"> • Replace the controller board. • Replace the motor. • Replace the harness. • Re-connect the connector. • Replace the sensor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC725-35	B	Registration Roller Release Motor Error (D615)
		<ul style="list-style-type: none"> • When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) • When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC) • Motor driver detected an error. (SC from the first time)
		<ul style="list-style-type: none"> • Overcurrent to the motor. • Motor drive overheat • Connector disconnected
		<ul style="list-style-type: none"> • Replace the controller board. • Replace the motor. • Replace the harness. • Re-connect the connector. • Replace the sensor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC725-36	B	FM2 Direct-Send JG Motor Error (D615)
		<ul style="list-style-type: none"> • When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) • When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC) • Motor driver detected an error. (SC from the first time)
		<ul style="list-style-type: none"> • Overcurrent to the motor. • Motor drive overheat • Connector disconnected
		<ul style="list-style-type: none"> • Replace the controller board. • Replace the motor. • Replace the harness. • Re-connect the connector. • Replace the sensor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC725-37	B	FM6 Pawl Motor Error (D615)
		<ul style="list-style-type: none"> • When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) • When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC) • Motor driver detected an error. (SC from the first time)
		<ul style="list-style-type: none"> • Overcurrent to the motor. • Motor drive overheat • Connector disconnected
		<ul style="list-style-type: none"> • Replace the controller board. • Replace the motor. • Replace the harness. • Re-connect the connector. • Replace the sensor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC725-38	B	Fold Plate Motor Error (D615)
		<ul style="list-style-type: none"> When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC) Motor driver detected an error. (SC from the first time)
		<ul style="list-style-type: none"> Overcurrent to the motor. Motor drive overheat Connector disconnected
		<ul style="list-style-type: none"> Replace the controller board. Replace the motor. Replace the harness. Re-connect the connector. Replace the sensor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC725-39	B	1st Fold Motor Error (D615)
		<ul style="list-style-type: none"> Motor driver detected an error. (SC from the first time)
		<ul style="list-style-type: none"> Overcurrent to the motor. Motor drive overheat
		<ul style="list-style-type: none"> Replace the controller board. Replace the motor. Replace the harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC725-40	B	2nd Fold Motor Error (D615)
		<ul style="list-style-type: none"> • Motor driver detected an error. (SC from the first time)
		<ul style="list-style-type: none"> • Overcurrent to the motor. • Motor drive overheat
		<ul style="list-style-type: none"> • Replace the controller board. • Replace the motor. • Replace the harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC725-41	B	Crease Motor Error (D615)
		<ul style="list-style-type: none"> • Motor driver detected an error. (SC from the first time)
		<ul style="list-style-type: none"> • Overcurrent to the motor. • Motor drive overheat
		<ul style="list-style-type: none"> • Replace the controller board. • Replace the motor. • Replace the harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC725-71	D	Horizontal Transport Motor Error (D615)
		<ul style="list-style-type: none"> • Motor driver detected an error. (SC from the first time)
		<ul style="list-style-type: none"> • Overcurrent to the motor. • Motor drive overheat
		<ul style="list-style-type: none"> • Replace the controller board. • Replace the motor. • Replace the harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC725-72	D	Horizontal exit motor error (D615)
		<ul style="list-style-type: none"> • Motor driver detected an error. (SC from the first time)
		<ul style="list-style-type: none"> • Overcurrent to the motor. • Motor drive overheat
		<ul style="list-style-type: none"> • Replace the controller board. • Replace the motor. • Replace the harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC725-73	D	Horizontal exit motor error (D615)
		<ul style="list-style-type: none"> • Motor driver detected an error. (SC from the first time)
		<ul style="list-style-type: none"> • Overcurrent to the motor. • Motor drive overheat
		<ul style="list-style-type: none"> • Replace the controller board. • Replace the motor. • Replace the harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC725-74	D	Entrance JG Motor Error (D615)
		<ul style="list-style-type: none"> When moving to the home position, home position was not detected within specified number of pulses (p0 pulses). (The first time: jam display, the second time: SC) When moving from the home position, home position was still detected after specified number of pulses (p1 pulses). (The first time: jam display, the second time: SC) Motor driver detected an error. (SC from the first time)
		<ul style="list-style-type: none"> Overcurrent to the motor. Motor drive overheat Connector disconnected
		<ul style="list-style-type: none"> Replace the controller board. Replace the motor. Replace the harness. Re-connect the connector. Replace the sensor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC740-01	D	Downstream device communication error (D712)
		<ul style="list-style-type: none"> Communication with the downstream device has established, but the device is not responding to the command sent out, even after being sent three times. The port level of the downstream device does not become H level (break cancel) within specified time.
		<ul style="list-style-type: none"> Interface cable (between inserter and downstream device) connector disconnected or broken PCB (of inserter or downstream device) defective
		<ul style="list-style-type: none"> Reconnect or replace the interface cable (between inserter and downstream device) connector disconnected or broken Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC740-10	B	Bottom Plate Lift Motor Error (D711)
		<ul style="list-style-type: none"> • The lift motor rotates in the ascending direction but the upper limit sensor does not detect within specified time (t0sec). (The first time: jam display, the second time: SC) • The lift motor rotates in the descending direction but the lower limit sensor does not detect within specified time (t0sec). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> • Motor defective • Connector disconnected • Overload • Upper limit sensor defective • Lower limit sensor defective
		<ul style="list-style-type: none"> • Check the motor and upper limit sensor. • Check the lower limit sensor. • Replace the motor/upper limit sensor./lower limit sensor. • Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC740-10	B	1st Lift Motor Error (D712)
		<ul style="list-style-type: none"> • The lift motor rotates in the ascending direction but the upper limit sensor does not detect within specified time (t0sec). (The first time: jam display, the second time: SC) • The lift motor rotates in the descending direction but the lower limit sensor does not detect within specified time (t0sec). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> • Lift motor defective/Connector disconnected • Upper limit sensor defective/Connector disconnected • Lower limit sensor defective/Connector disconnected • Harness broken • PCB defective • Mechanical defect of the tray lift mechanism
		<ul style="list-style-type: none"> • Replace or reconnect the lift motor. • Replace or reconnect the upper limit sensor. • Replace or reconnect the lower limit sensor. • Replace the harness. • Replace the PCB. • Repair the tray lift mechanism

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC740-11	B	1st Pick-Up Motor Error (D712)
		<ul style="list-style-type: none"> • Home position is not detected within a specified number of pulses after the pick-up motor is driven. (The first time: jam display, the second time: SC) • Home position is still detected after the pick-up motor has been driven for a specified number of pulses. (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> • Pick-up motor defective/connector disconnected • Home position sensor defective/connector disconnected • Harness broken • PCB defective • Mechanical defect of the pick-up mechanism
		<ul style="list-style-type: none"> • Replace or reconnect the pick-up motor. • Replace or reconnect the home position sensor. • Replace the harness. • Replace the PCB. • Repair the pick-up mechanism

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC740-20	B	2nd Lift Motor Error (D712)
		<ul style="list-style-type: none"> • The lift motor rotates in the ascending direction but the upper limit sensor does not detect within specified time (t0sec). (The first time: jam display, the second time: SC) • The lift motor rotates in the descending direction but the lower limit sensor does not detect within specified time (t0sec). (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> • Lift motor defective/Connector disconnected • Upper limit sensor defective/Connector disconnected • Lower limit sensor defective/Connector disconnected • Harness broken • PCB defective • Mechanical defect of the tray lift mechanism
		<ul style="list-style-type: none"> • Replace or reconnect the lift motor. • Replace or reconnect the upper limit sensor. • Replace or reconnect the lower limit sensor. • Replace the harness. • Replace the PCB. • Repair the tray lift mechanism

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC740-21	B	2nd Pick-Up Motor Error (D712)
		<ul style="list-style-type: none"> • Home position is not detected within a specified number of pulses after the pick-up motor is driven. (The first time: jam display, the second time: SC) • Home position is still detected after the pick-up motor has been driven for a specified number of pulses. (The first time: jam display, the second time: SC)
		<ul style="list-style-type: none"> • Pick-up motor defective/connector disconnected • Home position sensor defective/connector disconnected • Harness broken • PCB defective • Mechanical defect of the pick-up mechanism
		<ul style="list-style-type: none"> • Replace or reconnect the pick-up motor. • Replace or reconnect the home position sensor. • Replace the harness. • Replace the PCB. • Repair the pick-up mechanism

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC745-03	B	Protection device break error 1 (Mailbox)
		Protection device break error (fuse tripped)
		<ul style="list-style-type: none"> • Short-circuit • Overload • Motor/solenoid defective
		<ul style="list-style-type: none"> • Check the harness. • Replace the PCB. • Replace the motor/solenoid.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC773-00	D	De-curl Pressure Adjustment Motor Error (D727)
		<ul style="list-style-type: none"> The home position sensor did not change from non-blocked to blocked 9 seconds after homing operation started. The home position sensor did not change from blocked to non-blocked 1.2 seconds after homing operation started.
		<ul style="list-style-type: none"> Motor defective Connector disconnected Overload Home position sensor defective
		<ul style="list-style-type: none"> Check the connections of the motor and home position sensor. Replace the motor/home position sensor. Replace the PCB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC780-50	B	LCT high efficiency controller communication error
		An error was detected during read/write access in SPI communication between SPU and high-efficiency controller.
		<ul style="list-style-type: none"> PCB defective High-efficiency controller defective High-efficiency controller system clock error
		<ul style="list-style-type: none"> Replace the PCB.

Service Call 816-899

SC800 (Controller)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC816	[0x0000]	Energy save I/O subsystem error
SC816-01	D	Subsystem error
SC816-02	D	Sysarch (LPUX_GET_PORT_INFO) error
SC816-03	D	Transition to STR was denied.
SC816-04	D	Interrupt in kernel communication driver
SC816-05	D	Preparation for transition to STR failed.
SC816-07	D	Sysarch (LPUX_GET_PORT_INFO) error
SC816-08	D	Sysarch (LPUX_ENGINE_TIMERCTRL) error
SC816-09	D	Sysarch (LPUX_RETURN_FACTOR_STR) error
SC816-10	D	Sysarch (LPUX_GET_PORT_INFO) error
SC816-11	D	Sysarch (LPUX_GET_PORT_INFO) error
SC816-12	D	Sysarch (LPUX_GET_PORT_INFO) error
SC816-13	D	open() error
SC816-14	D	Memory address error
SC816-15	D	open() error
SC816-16	D	open() error
SC816-17	D	open() error
SC816-18	D	open() error
SC816-19	D	Double open() error
SC816-20	D	open() error
SC816-22	D	Parameter error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC816-23	D	read() error
SC816-24	D	read() error
SC816-25	D	read() error
SC816-26	D	write() communication retry error
SC816-27	D	write() communication retry error
SC816-28	D	write() communication retry error
SC816-29	D	write() communication retry error
SC816-30	D	write() communication retry error
SC816-35	D	read() error
SC816-36	D	Subsystem error
SC816-37	D	Subsystem error
SC816-38	D	Subsystem error
SC816-39	D	Subsystem error
SC816-40	D	Subsystem error
SC816-41	D	Subsystem error
SC816-42	D	Subsystem error
SC816-43	D	Subsystem error
SC816-44	D	Subsystem error
SC816-45	D	Subsystem error
SC816-46	D	Subsystem error
SC816-47	D	Subsystem error
SC816--48	D	Subsystem error
SC816--49	D	Subsystem error
SC816--50	D	Subsystem error
SC816--51	D	Subsystem error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC816--52	D	Subsystem error
SC816--53	D	Subsystem error
SC816--54	D	Subsystem error
SC816--55	D	Subsystem error
SC816--56	D	Subsystem error
SC816--57	D	Subsystem error
SC816--58	D	Subsystem error
SC816--59	D	Subsystem error
SC816--60	D	Subsystem error
SC816--61	D	Subsystem error
SC816--62	D	Subsystem error
SC816--63	D	Subsystem error
SC816--64	D	Subsystem error
SC816--65	D	Subsystem error
SC816--66	D	Subsystem error
SC816--67	D	Subsystem error
SC816--68	D	Subsystem error
SC816--69	D	Subsystem error
SC816--70	D	Subsystem error
SC816--71	D	Subsystem error
SC816--72	D	Subsystem error
SC816--73	D	Subsystem error
SC816--74	D	Subsystem error
SC816--75	D	Subsystem error
SC816--76	D	Subsystem error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC816--77	D	Subsystem error
SC816--78	D	Subsystem error
SC816--79	D	Subsystem error
SC816--80	D	Subsystem error
SC816--81	D	Subsystem error
SC816--82	D	Subsystem error
SC816--83	D	Subsystem error
SC816--84	D	Subsystem error
SC816--85	D	Subsystem error
SC816--86	D	Subsystem error
SC816--87	D	Subsystem error
SC816--88	D	Subsystem error
SC816--89	D	Subsystem error
SC816--90	D	Subsystem error
SC816--91	D	Subsystem error
SC816--92	D	Subsystem error
SC816--93	D	Subsystem error
SC816--94	D	Subsystem error
		<p>Energy save I/O subsystem detected some abnormality.</p> <ul style="list-style-type: none"> • Energy save I/O subsystem defective • Energy save I/O subsystem detected a controller board error (non-response). • Error was detected during preparation for transition to STR. <ul style="list-style-type: none"> • Turn the main power off/on. • Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution	
SC819-00	D	Fatal kernel error	
		Due to a control error, a RAM overflow occurred during system processing. One of the following messages was displayed on the operation panel.	
		0x5032	HAIC-P2 error
		0x5245	Link-up fail
		0x5355	L2 Status Time Out
		0x696e	gwinit died
		0x766d	Vm_pageout: VM is full
		554C	USB loader defect
		Other	Other error
			<ul style="list-style-type: none"> • System program defective • Controller board defective • Optional board defective • Replace controller firmware

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC840-00	D	EEPROM access error
		An error occurred during I/O processing. <ul style="list-style-type: none"> • A read error occurred and 3 retries failed. • A write error occurred.
		EEPROM defective or end-of-life
		-

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC841-00	D	EEPROM read data error
		Compared the data from 3 areas of the EEPROM mirror data with the original data and all 3 of them were different from the original data.
		Data in the specific area of the EEPROM has been modified.
		-

SC842-02
D135 RTB 57

5

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC842-00	C	Nand-Flash updating verification error
		During remote ROM update or ROM update, the SCS detected a write error (verify error) regarding the data written to the Nand-Flash.
		Nand-Flash damaged
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC842-01	B	Nand-Flash bad block number exceeding the threshold
		When the status of the Nand-Flash was checked at power-on or when returning from energy saver mode, the number of bad blocks exceeded the threshold.
		Nand-Flash bad block number exceeding the threshold
		Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC842-02	B	Number of times of Nand-Flash block erase exceeding the threshold
		When the status of the Nand-Flash was checked at power-on or when returning from energy saver mode, the number of times the block was erased exceeded the threshold.
		Number of times of Nand-Flash block erase exceeding the threshold
		Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC853-00	B	Bluetooth device connection error
		The Bluetooth hardware (USB type) was connected after the machine was turned on.
		The Bluetooth hardware (USB type) was connected after the machine was turned on.
		Turn the main power with the Bluetooth hardware (USB type) connected.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC854-00	B	Bluetooth device disconnected
		The Bluetooth hardware (USB type) was disconnected after the machine was turned on.
		The Bluetooth hardware (USB type) was disconnected after the machine was turned on.
		Turn the main power with the Bluetooth hardware (USB type) connected.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC855-01	B	Wireless LAN board error (driver attachment failure)
		Wireless LAN board error (wireless LAN card: 802.11 is covered)
		<ul style="list-style-type: none"> • Defective wireless LAN board • Loose connection
		<ul style="list-style-type: none"> • Turn the main power off/on. • Replace wireless LAN board

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC855-02	B	Wireless LAN board error (driver initialization failure)
		Wireless LAN board error (wireless LAN card: 802.11 is covered)
		<ul style="list-style-type: none"> Defective wireless LAN board Loose connection
		<ul style="list-style-type: none"> Turn the main power off/on. Replace wireless LAN board

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC857-00	B	USB I/F Error
		The USB interface is unusable because of a driver error.
		USB driver error (There are three causes of USB error: RX error/CRC error/STALL. SC is issued only in the case of STALL.)
		<ul style="list-style-type: none"> Check USB connection. Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC858-01	-	Data encryption conversion error (HDD Key Setting Error)
		A serious error occurred during an attempt to update the encryption key.
		<ul style="list-style-type: none"> Data in the USB Flash etc. corrupted Communication error because of electromagnetic interference etc. Controller board defective
		Replace the board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC858-02	A	Data encryption conversion error (NVRAM read/write error)
		A serious error occurred after data conversion during an attempt to update the encryption key.
		NVRAM defective
		Replace the board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC858-30	A	Data encryption conversion error (NVRAM Before Replace error)
		A serious error occurred after data conversion during an attempt to update the encryption key.
		Software error such as conversion parameters being invalid.
		Replace the board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC858-31	A	Data encryption conversion error (Other Error)
		A serious error occurred after data conversion during an attempt to update the encryption key.
		Controller board defective
		Replace the board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC859-01	B	Data encryption conversion HDD conversion error (HDD check error)
		HDD was not converted correctly during an attempt to update the encryption key. Only an error screen is displayed and no SC is issued during conversion. This SC is issued after machine restart.
		<ul style="list-style-type: none"> • HDD conversion was selected in the Encryption key update function but the machine was turned on with the HDD removed. • Power failure occurred during encryption key update. • HDD was not successfully converted during encryption key update due to HDD errors or cable noises.
		<ul style="list-style-type: none"> • Check HDD connection. • Format the HDD. • If there is a problem with the HDD, it has to be replaced.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC859-02	B	Data encryption conversion HDD conversion error (Power failure during conversion)
		HDD was not converted correctly during an attempt to update the encryption key. Only an error screen is displayed and no SC is issued during conversion. This SC is issued after machine restart.
		Details: NVRAM/HDD conversion is incomplete.
		Power failure occurred during encryption key update.
		None The display after restart instructs the user to format the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC859-10	B	Data encryption conversion HDD conversion error (Data read/write command error)
		HDD was not converted correctly during an attempt to update the encryption key. Only an error screen is displayed and no SC is issued during conversion. This SC is issued after machine restart. Details: Abnormal DMAC return value has been received two or more times (DMAC timeout, serial communication error etc.)
		HDD was not successfully converted during encryption key update due to HDD errors or cable noises.
		<ul style="list-style-type: none"> • Check HDD connection. • Format the HDD. • If there is a problem with the HDD, it has to be replaced.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC860-00	B	HDD startup error at main power on (HDD error)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<ul style="list-style-type: none"> • The HDD is connected but the driver detected the following errors. <ul style="list-style-type: none"> • SS_NOT_READY:/* (-2)HDD does not become READY*/ • SS_BAD_LABEL:/* (-4)Wrong partition type*/ • SS_READ_ERROR:/* (-5)Error occurred while reading or checking the label*/ • SS_WRITE_ERROR:/* (-6)Error occurred while writing or checking the label*/ • SS_FS_ERROR:/* (-7)Failed to repair the filesystem*/ • SS_MOUNT_ERROR:/* (-8)Failed to mount the filesystem*/ • SS_COMMAND_ERROR:/* (-9)Drive not responding to command*/ • SS_KERNEL_ERROR:/* (-10)Internal kernel error*/ • SS_SIZE_ERROR:/* (-11)Drive size too small*/ • SS_NO_PARTITION:/* (-12)The specified partition does not exist*/ • SS_NO_FILE:/* (-13)Device file does not exist*/ • Attempted to acquire HDD status through the driver but there has been no response for 30 seconds or more.
		<ul style="list-style-type: none"> • Unformatted HDD • Label data corrupted • HDD defective <p>Format the HDD through SP mode.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-01	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in an area that does not belong to a partition, such as the disklabel area.)
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-02	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "a".)
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-03	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "b".)
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-04	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "c".)
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-05	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "d".)
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-06	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "e".)
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-07	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "F".)
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-08	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "g".)
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-09	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "h".)
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-10	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "i".)
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-11	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "j".)
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-12	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "k".)
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-13	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "I".)
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-14	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "m".)
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-15	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "n".)
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-16	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "o".)
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-17	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "p".)
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-18	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "q".)
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-19	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "r.")
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-20	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "r.")
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-21	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "t")
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-22	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "u".)
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> 1. When SC863 has occurred ten times or more <ul style="list-style-type: none"> • The interval is short. • Repeatedly occurs in the same situation (At power-on, etc.). • Startup takes a long time when the main power is turned on. 2. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC863-23	D	HDD data read failure
		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation. (An error occurred in partition "y".)
		<p>Guide for when to replace the HDD</p> <ol style="list-style-type: none"> When SC863 has occurred ten times or more <ul style="list-style-type: none"> The interval is short. Repeatedly occurs in the same situation (At power-on, etc.). Startup takes a long time when the main power is turned on. It takes a long time after main power on for the operation panel to become ready. <p>HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.</p>

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-01	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in an area that does not belong to a partition, such as the disklabel area.)
		<ul style="list-style-type: none"> Format the HDD. Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-02	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "a".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-03	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "b".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-04	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "c".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-05	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "d".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-06	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "e".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-07	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "f".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-08	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "g".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-09	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "h".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-10	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "i".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-11	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "j".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-12	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "k".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-13	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "l".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-14	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "m".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-15	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "n".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-16	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "o".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-17	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "p".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-18	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "q".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-19	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "r".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-20	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "s".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-21	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "r".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-22	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "u".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC864-23	D	HDD data CRC error
		During HDD operation, the HDD returned a CRC error.
		Bad sectors were generated during operation. (An error occurred in partition "v".)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-00	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error).
		Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-01	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in an area that does not belong to a partition, such as the disklabel area.)
		Replace the HDD.

SC865
RTB 162

5

SC865
RTB 162

5

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-02	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "a".)
		Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-03	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "b".)
		Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-03	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "c".)
		Replace the HDD.

SC865
RTB 162

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-05	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "d".)
		Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-06	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "e".)
		Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-07	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "f".)
		Replace the HDD.

SC865
RTB 162

5

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-08	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "g".)
		Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-09	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "h".)
		Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-10	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "i".)
		Replace the HDD.

SC865
RTB 162

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-11	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "j".)
		Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-12	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "k".)
		Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-13	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "l".)
		Replace the HDD.

SC865
RTB 162

5

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-14	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "m".)
		Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-15	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "n".)
		Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-16	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "o".)
		Replace the HDD.

SC865
RTB 162

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-17	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "p".)
		Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-18	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "q".)
		Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-19	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "r".)
		Replace the HDD.

SC865
RTB 162

5

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-20	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "s".)
		Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-21	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "r".)
		Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-22	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "u".)
		Replace the HDD.

SC865
RTB 162

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-23	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error). (An error occurred in partition "v".)
		Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC866-00	B	SD card authentication error
		A license error of an application that is started from the SD card was detected.
		Invalid program data is stored on the SD card.
		Store a valid program data on the SD card.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC867-00	D	SD card removed
		The SD card that starts an application was removed from the slot.
		The SD card that starts an application was removed from the slot (mount point of /mnt/sd0).
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC867-01	D	SD card removed
		The SD card that starts an application was removed from the slot.
		The SD card that starts an application was removed from the slot (mount point of /mnt/sd1).
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC867-02	D	SD card removed
		The SD card that starts an application was removed from the slot.
		The SD card that starts an application was removed from the slot (mount point of /mnt/sd2).
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC868-00	D	SD card access error
		The SD controller returned an error during operation. (Error occurred at the mount point of /mnt/sd0)
		<ul style="list-style-type: none"> • SD card defective • SD controller defective
		<ul style="list-style-type: none"> • Reformat the SD card (using the "SD Formatter" made by Panasonic).* • Check the SD card insertion status. • Replace the SD card. • Replace the controller board.

* Do not format an SD card supplied with the main machine or sold as an option. You may only format SD cards used for Firmware Update by a Customer Engineer.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC868-01	D	SD card access error
		The SD controller returned an error during operation. (Error occurred at the mount point of /mnt/sd1)
		<ul style="list-style-type: none"> • SD card defective • SD controller defective
		<p>SD card that starts an application</p> <ul style="list-style-type: none"> • Turn the main power off and check the SD card insertion status. <ul style="list-style-type: none"> • If no problem is found, insert the SD card and turn the main power on. • If an error occurs, replace the SD card. • SD card for users <ul style="list-style-type: none"> • In case of a file system error, reformat the SD card (using the "SD Formatter" made by Panasonic).* • In case of a device access error, turn the main power off and check the SD card insertion status. • If no problem is found, insert the SD card and turn the main power on. • If an error occurs, use another SD card. • If the error persists

* Do not format an SD card supplied with the main machine or sold as an option. You may only format SD cards used for Firmware Update by a Customer Engineer.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC868-02	D	SD card access error
		The SD controller returned an error during operation. (Error occurred at the mount point of /mnt/sd1)
		<ul style="list-style-type: none"> • SD card defective • SD controller defective
		SD card that starts an application <ul style="list-style-type: none"> • Turn the main power off and check the SD card insertion status. <ul style="list-style-type: none"> • If no problem is found, insert the SD card and turn the main power on. • If an error occurs, replace the SD card. • SD card for users <ul style="list-style-type: none"> • In case of a file system error, reformat the SD card (using the "SD Formatter" made by Panasonic).* • In case of a device access error, turn the main power off and check the SD card insertion status. • If no problem is found, insert the SD card and turn the main power on. • If an error occurs, use another SD card. • If the error persists

* Do not format an SD card supplied with the main machine or sold as an option. You may only format SD cards used for Firmware Update by a Customer Engineer.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC870-00	B	Address Book data error (Anytime: Address Book Error.)
SC870-01	B	Address Book data error (On startup: Media required for storing the Address Book is missing.)
SC870-02	B	Address Book data error (On startup: encryption is configured but the module required for encryption (DESS) is missing.)
SC870-03	B	Address Book data error (Initialization: Failed to generate a file to store internal Address Book.)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC870-04	B	Address Book data error (Initialization: Failed to generate a file to store delivery sender.)
SC870-05	B	Address Book data error (Initialization: Failed to generate a file to store delivery destination.)
SC870-06	B	Address Book data error (Initialization: Failed to generate a file to store information required for LDAP search.)
SC870-07	B	Address Book data error (Initialization: Failed to initialize entries required for machine operation.)
SC870-08	B	Address Book data error (Machine configuration: HDD is present but the space for storing the Address Book is unusable.)
SC870-09	B	Address Book data error (Machine configuration: Inconsistency in the NVRAM area used for storing settings required for Address Book configuration.)
SC870-10	B	Address Book data error (Machine configuration: Cannot make a directory for storing the Address Book in the SD/USB FlashROM.)
SC870-11	B	Address Book data error (On startup: Inconsistency in Address Book entry number.)
SC870-20	B	Address Book data error (File I/O: Failed to initialize file.)
SC870-21	B	Address Book data error (File I/O: Failed to generate file.)
SC870-22	B	Address Book data error (File I/O: Failed to open file.)
SC870-23	B	Address Book data error (File I/O: Failed to write to file.)
SC870-24	B	Address Book data error (File I/O: Failed to read file.)
SC870-25	B	Address Book data error (File I/O: Failed to check file size.)
SC870-26	B	Address Book data error (File I/O: Failed to delete data.)
SC870-27	B	Address Book data error (File I/O: Failed to add data.)
SC870-30	B	Address Book data error (Search: Failed to obtain data from cache when searching in the machine Address Book. delivery destination/sender.)
SC870-31	B	Address Book data error (Search:Failed to obtain data from cache during LDAP search.)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC870-32	B	Address Book data error (Search:Failed to obtain data from cache while searching the WS-Scanner Address Book.)
SC870-41	B	Address Book data error (Cache: failed to obtain data from cache.)
SC870-50	B	Address Book data error (On startup: Detected abnormality of the Address Book encryption status.)
SC870-51	B	Address Book data error (Encryption settings: Failed to create directory required for conversion between plaintext and encrypted text.)
SC870-52	B	Address Book data error (Encryption settings: Failed to convert from plaintext to encrypted text.)
SC870-53	B	Address Book data error (Encryption settings: Failed to convert from encrypted text to plaintext.)
SC870-54	B	Address Book data error (Encryption settings: Detected data inconsistency when reading the encrypted Address Book.)
SC870-55	B	Address Book data error (Encryption settings: Failed to delete file when changing encryption setting.)
SC870-56	B	Address Book data error (Encryption settings: Failed to erase the file that records the encryption key during an attempt to change the encryption setting.)
SC870-57	B	Address Book data error (Encryption settings: Failed to move a file during an attempt to change the encryption setting.)
SC870-58	B	Address Book data error (Encryption settings: Failed to delete a directory during an attempt to change the encryption setting.)
SC870-59	B	Address Book data error (Encryption settings: Detected a resource shortage during an attempt to change the encryption setting.)
SC870-60	B	Address Book data error (Unable to obtain the on/off setting for administrator authentication (06A and later).)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		When an error related to the Address Book is detected during startup or operation.
		<ul style="list-style-type: none"> • Software bug • Inconsistency of Address Book source location (machine/delivery server/LDAP server) • Inconsistency of Address Book encryption setting or encryption key (NVRAM or HDD was replaced individually without formatting the Address Book) • Address Book storage device (SD/HDD) was temporarily removed or hardware configuration does not match the application configuration. • Address Book data corruption was detected.
		<ul style="list-style-type: none"> • Check the HDD connection. • Initialize all UCS settings and address/authentication information (SP5-846-046). • Initialize the Address Book partition (SP5-832-006).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		HDD mail reception error
		An error was detected on the HDD immediately after the machine was turned on.
		<ul style="list-style-type: none"> • HDD defective • Power was turned off while the machine used the HDD.
SC872-00	B	<ul style="list-style-type: none"> • Format the HDD (SP5-832-007). • Replace the HDD. <p>When you do the above, the following information will be initialized.</p> <ul style="list-style-type: none"> • Partly received partial mail messages. • Already-read statuses of POP3-received messages (All messages on the mail server are handled as new messages).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC873-00	B	HDD mail reception error
		An error was detected on the HDD immediately after the machine was turned on.
		<ul style="list-style-type: none"> • HDD defective • Power was turned of while the machine used the HDD.
		<ul style="list-style-type: none"> • Format the HDD (SP5-832-007). • Replace the HDD. <p>When you do the above, the following information will be initialized.</p> <ul style="list-style-type: none"> • Default sender name/password (SMB/FTP/NCP) • Administrator mail address • Scanner delivery history

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC875-01	D	Delete all error (HDD erasure) (hddchack -i error)
SC875-02	D	Delete all error (HDD erasure) (Data deletion failure)
		An error was detected before HDD/data erasure starts. (Failed to erase data/failed to logically format HDD)
		<ul style="list-style-type: none"> • HDD logical formatting failed. • The modules failed to erase data.
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC876-01	D	Log Data Error 1
		An error was detected in the handling of the log data at power on or during machine operation.
		Damaged log data file
		Initialize the HDD (SP5-832-004).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC876-02	D	Log Data Error 2
		An error was detected in the handling of the log data at power on or during machine operation.
		Log encryption is enabled but encryption module is not installed.
		<ul style="list-style-type: none"> • Replace or set again the encryption module. • Disable the log encryption setting.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC876-03	D	Log Data Error 3
		An error was detected in the handling of the log data at power on or during machine operation.
		Inconsistency of encryption key between NV-RAM and HDD.
		<ul style="list-style-type: none"> • Disable the log encryption setting. • Initialize LCS memory (SP5801-019). • Initialize the HDD (SP5-832-004).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC876-04	D	Log Data Error 4
		An error was detected in the handling of the log data at power on or during machine operation.
		<ul style="list-style-type: none"> • Log encryption key is disabled but the log data file is encrypted. (NVRAM data corruption) • Log encryption key is enabled but the log data file is not encrypted. (NVRAM data corruption)
		Initialize the HDD (SP5-832-004).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC876-05	D	Log Data Error 5
		An error was detected in the handling of the log data at power on or during machine operation.
		<ul style="list-style-type: none"> • Only the NV-RAM has been replaced with one previously used in another machine. • Only the HDD has been replaced with one previously used in another machine.
		<ul style="list-style-type: none"> • Attach the original NV-RAM. • Attach the original HDD. • With the configuration that caused the SC, initialize the HDD (SP5-832-004).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC876-99	D	Log Data Error 99
		An error was detected in the handling of the log data at power on or during machine operation.
		Other causes
		-

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC877-00	B	Data Overwrite Security card error
		The "Auto Erase Memory" function of the Data Overwrite Security is set to on but it cannot be done.
		<ul style="list-style-type: none"> • Data Overwrite Security option SD card is broken. • Data Overwrite Security option SD card has been removed.
		<ul style="list-style-type: none"> • If the SD card is broken, prepare a new Data Overwrite Security option SD card and replace the NVRAM. • If the SD card has been removed, turn the main power off and reinstall a working Data Overwrite Security option SD card.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC878-00	D	TPM electronic authentication error
		The machine failed TPM electronic authentication. System hash registered in the TPM did not match the data on the USB flash.
		<ul style="list-style-type: none"> System module was updated in an unauthorized manner. USB flash is not working correctly.
		Replace the board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC878-01	D	USB Flash error
		USB Flash file system error
		USB Flash file system has been destroyed.
		Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC878-02	D	TPM error
		Error occurred in the TPM or TPM driver.
		TPM defective
		Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC878-03	D	TCSD error
		Error occurred in TPM software stack.
		<ul style="list-style-type: none"> Unable to start TPM Necessary files missing from the TPM.
		Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC880-00	D	MLB error
		Reply to MLB access was not returned within a specified time.
		MLB defective
		<ul style="list-style-type: none"> • Replace the MLB. • Remove the MLB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC881-01	D	Authentication area error
		<ul style="list-style-type: none"> • Software error detected. • This error may occur even if IC card option (ERIE/AYU/Greenland etc.) is not installed.
		<ul style="list-style-type: none"> • This is caused by accumulation of abnormal authentication information in the software. (User operation will not directly cause it.) • Occurs when authentication is done. <p>Example: When a job is sent to the printer/when logged on from the operation panel/when logged on from a Web browser</p>
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC899-00	D	Software performance error (signal reception end)
		-
		Occurs when an internal program behaves abnormally.
		<p>In case of a hardware defect</p> <ul style="list-style-type: none"> • Replace the hardware. <p>In case of a software error</p> <ul style="list-style-type: none"> • Turn the main power off/on. • Try updating the firmware.

Service Call 900-998

SC900 (Engine: Others)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC995-01	D	CPM setting error 1
		Comparison of machine serial number (11 digits) and machine identification code. Details: <ul style="list-style-type: none"> Machine serial number cannot be identified because of BICU replacement or malfunctioning. Machine serial number cannot be identified because of NV-RAM replacement
		machine serial number (11 digits) or machine identification code does not match.
		<ul style="list-style-type: none"> Enter the machine serial number using SP5-811, and then turn the power on/off. Attach the NV-RAM that was installed previously.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC995-02	D	CPM setting error 2
		Comparison of machine serial number (11 digits) and machine identification code. Details: <p>Machine serial number cannot be identified because of NV-RAM replacement or malfunctioning.</p>
		machine serial number (11 digits) or machine identification code does not match.
		<ul style="list-style-type: none"> Attach the NV-RAM that was installed previously. Download data on the NV-RAM using SP5-825.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC995-03	D	CPM setting error 3
		Comparison of machine serial number (11 digits) and machine identification code. Details: Unable to recognize machine identification code because the controller was replaced incorrectly or is malfunctioning.
		machine serial number (11 digits) or machine identification code does not match.
		Replace it with a specified controller.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC995-04	D	CPM setting error 4
		Comparison of machine serial number (11 digits) and machine identification code.
		machine serial number (11 digits) or machine identification code does not match.
		Return the parts to the original configuration, and then replace them according to the manual.

SC900 (Controller)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC900-00	D	Electric counter error
		The electric total counter value is out of specification. Error is detected when increasing the total counter.
		<ul style="list-style-type: none"> • Unexpected NV-RAM is attached. • NV-RAM defective • NV-RAM data corrupted. • Data written to unexpected area because of external factor etc. • The count requested by the SRM on receiving PRT is not completed.
		Replace the NV-RAM.

5

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC910-00	B	External Controller Error 1
		Notification from external application (external controller)
		Subject to external application (external controller) specification
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-00	B	External Controller Error 2
		Notification from external application (external controller)
		Subject to external application (external controller) specification
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC912-00	B	External Controller Error 3
		Notification from external application (external controller)
		Subject to external application (external controller) specification
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC913-00	B	External Controller Error 4
		Notification from external application (external controller)
		Subject to external application (external controller) specification
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC914-00	B	External Controller Error 5
		Notification from external application (external controller)
		Subject to external application (external controller) specification
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC915-01	A	External Controller Error 6 (Egret board error)
SC915-02	A	External Controller Error 6 (HDD serial communication error)
SC915-03	A	External Controller Error 6 (CPU temperature rise)
SC915-04	A	External Controller Error 6 (Unable to communicate with GW controller because invalid command was received)
SC915-05	A	External Controller Error 6 (Unable to communicate with GW controller because of an error)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		Notification from external application (external controller)
		Notification from external application (external controller)
		Replace the Egret controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC919-00	D	External controller down
		While EAC (External Application Converter), the conversion module, was operating normally, the receipt of a power line interrupt signal from the FLUTE serial driver was detected, of BREAK signal from the other station was detected.
		External controller and the machine had been operating correctly (*) but the external controller was turned off or rebooted, or the video bus was disconnected. * Printing or scanning using the external controller.
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC920-00	B	Printer application error (No response at PM startup)
SC920-01	B	Printer application error (Timeout during PM operation)
SC920-02	B	Printer application error (Unable to obtain work memory)
SC920-03	B	Printer application error (Unable to start filter process)
SC920-04	B	Printer application error (Abnormal termination of filter process)
		When an error is detected in the application, which makes continued operation impossible.
		<ul style="list-style-type: none"> • Software bug • Unexpected hardware configuration (such as insufficient memory)
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC921-00	B	Printer application error (Resident font not found)
		Resident font was not found at printer startup.
		Preinstalled font files not found.
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC921-01	B	Printer application error (Optional font not found)
		Optional font required by an emulation was not found at printer startup.
		Optional emulation font not found
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC925-00	B	NetFile function error
SC925-01	B	NetFile function error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		<p>The NetFile file management on the HDD cannot be used, or a NetFile management file is corrupted and operation cannot continue.</p> <ul style="list-style-type: none"> • HDD defective • HDD inconsistency caused by power failure during HDD access, etc. • Software bug <p>If another SC related to HDD errors (SC860 to SC865) is issued at the same time, the HDD is the cause. Solve the other SC.</p> <ul style="list-style-type: none"> • If SC860 to SC865 is not issued • Turn the main power off/on. • If this does not work, initialize the HDD NetFile partition (SP5-832-011). Approval by the customer is required because received fax message waiting to be delivered and documents waiting to be captured will be lost. <p>Procedure:</p> <ol style="list-style-type: none"> 1. Go into the User Tools mode and do "Delivery Settings" to print all received fax documents that are scheduled for delivery. Then erase them. 2. In the User Tools mode, do Document Management> Batch Delete Transfer Documents. 3. Do SP5832-011, then turn the machine power off and on. <ul style="list-style-type: none"> • If this does not solve the problem, initialize all partitions of the HDD (SP5-832-001), then turn the machine power off and on. <p>Approval by the customer is required because documents and Address Book information in the HDD will be lost. Received fax messages stored are protected but the order may be changed.</p> <ul style="list-style-type: none"> • If this does not solve the problem, replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC990-00	D	Software operation error
		Software attempted an unexpected operation.
		<ul style="list-style-type: none"> Parameter error Internal parameter error Insufficient work memory Operation error caused by abnormalities that are normally undetectable.
		<ul style="list-style-type: none"> Turn the main power off/on. Reinstall the software of the controller and BICU board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC991-00	C	Recoverable software operation error
		Software attempted an unexpected operation. SC991 covers recoverable errors as opposed to CS990.
		<ul style="list-style-type: none"> Parameter error Internal parameter error Insufficient work memory Operation error caused by abnormalities that are normally undetectable.
		Logging only

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC992-00	D	Undefined SC issued.
		An SC, that is not controlled by the system, occurred.
		<ul style="list-style-type: none"> An SC for the previous model was used mistakenly, etc. Basically a software bug.
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC994-00	C	Operation error caused by abnormalities that are normally undetectable.
		An error occurred because the number of records exceeded the limit for images managed in the service layer of the firmware.
		This can occur if there are too many application screens open on the operation panel.
		Logging only.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC997-00	D	Application function selection error
		The application selected by the operation panel key operated abnormally (No response, abnormal ending).
		Software bug (mainly the application)
		<ul style="list-style-type: none"> • Check the optional RAM, DIMM, boards required by the application program. • Check if the combination of downloaded programs are correct.

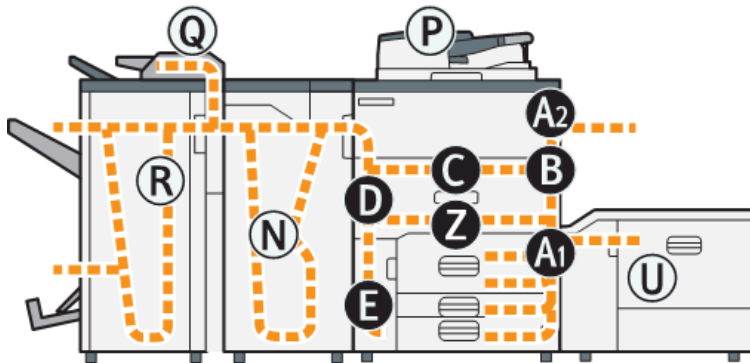
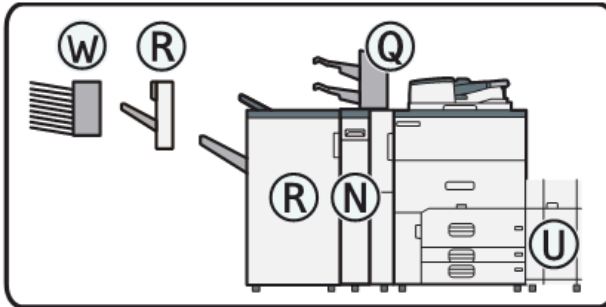
SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC998-00	D	Application start error
		<ul style="list-style-type: none"> • No application was registered to system within a specified time after the main power was turned on. (No application starts/All applications have been terminated abnormally) • Application started but cannot be drawn now for some reason.
		<ul style="list-style-type: none"> • Software bug (mainly the application) • The optional RAM, DIMM, boards required by the application program. Are not installed correctly.
		<ul style="list-style-type: none"> • Turn the main power off/on. • Check the optional RAM, DIMM, boards • Check the combination of programs • Replace the controller board.

Jam Detection

Jam Displays

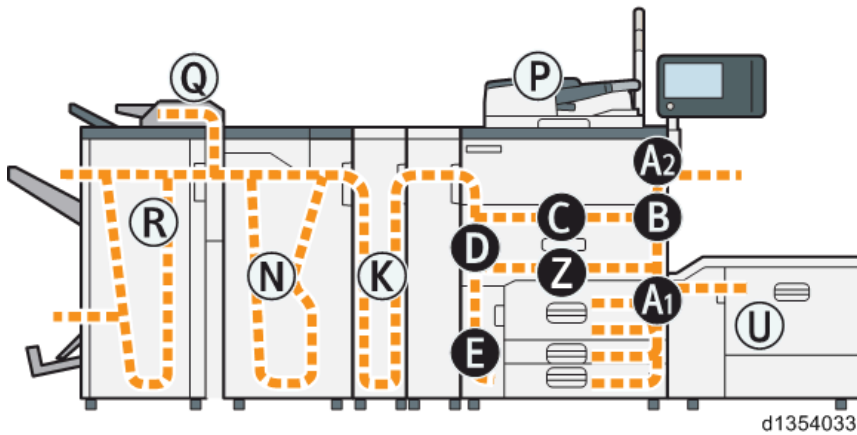
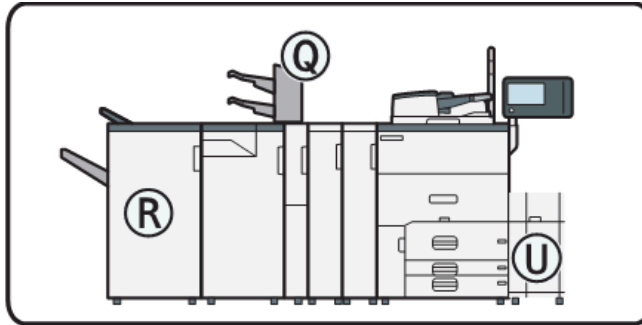
When a jam occurs, the location is displayed on the operation panel.

D135/D136



d1354032

D137/D138



Removing Jammed Paper

See the decals on the machine for how to remove jammed paper.

Printer Engine Jam History

How to check

Plotter Jam History can be displayed using SP7-507.

- SP7-507-001 Plotter Jam History Latest
- SP7-507-002 Plotter Jam History Latest 1
- SP7-507-003 Plotter Jam History Latest 2
- SP7-507-004 Plotter Jam History Latest 3
- SP7-507-005 Plotter Jam History Latest 4

- SP7-507-006 Plotter Jam History Latest 5
- SP7-507-007 Plotter Jam History Latest 6
- SP7-507-008 Plotter Jam History Latest 7
- SP7-507-009 Plotter Jam History Latest 8
- SP7-507-010 Plotter Jam History Latest 9

Display



```
CODE : 011
SIZE : 005
TOTAL : 0000334
DATE : Mon Jan 21 11:44:50 2008
```

- CODE: Displays the jam code.
- SIZE: Displays the paper size code.
- TOTAL: Displays the total number of printer jams (SP7-502-001).
- DATE: Displays the date and time the jam occurred.

↓ Note

- The 10 latest printer jams are displayed.
- Initial jams are not recorded.

Jam Codes and Position Codes

↓ Note

- Jam code: Shows the cause of a jam. Appears in the log data.
- Position code: Shows the location of a jam. Appears on the operation panel.

These are lists of jam codes for the main machine and peripheral devices. Please note:

- **Late jam.** The paper has failed to arrive within the prescribed time due to a jam that has occurred upstream of the referenced sensor.
- **Lag jam.** The paper has failed to leave the location of the referenced sensor within the prescribed time due to a jam downstream of the referenced sensor.

ADF

Jam code	Jam description	Position code
13	Separation Sensor: Late Jam	P1
63	Separation Sensor: Lag Jam	P1
14	Skew Correction Sensor: Late Jam	P1
64	Skew Correction Sensor: Lag Jam	P1
15	Original Set Sensor: Late Jam	P1
65	Original Set Sensor: Lag Jam	P1
16	Original Registration Sensor: Late Jam	P2
66	Original Registration Sensor: Lag Jam	P2
17	Original Exit Sensor: Late Jam	P2
67	Original Exit Sensor: Lag Jam	P2
239	Misfeed:Original Removed	P1
1	Initial jam	P1
1	Overload jam	P1

Main Machine

Jam code	Jam description	Position code
1	Bypass Paper Feed Sensor	A2
1	1st Tray Transport Sensor	A1
1	2nd Tray Transport Sensor	A1
1	3rd Transport Sensor	A1
1	Main relay Sensor	B
1	Registration Sensor	B
1	PTB Paper Sensor	C

Jam code	Jam description	Position code
1	Fusing Entrance Sensor	D
1	Fusing Exit Sensor	D
1	Invert/Entrance Sensor	E
1	Invert/Exit Sensor	E
1	Purged Paper Sensor	E
1	Exit Invert Sensor	E
1	Exid Relay Sensor	E
1	Exid Sensor	E
1	Invert/Duplex Sensor	E
1	Duplex Entrance Sensor	Z
1	Duplex Transport Sensor 1	Z
1	Duplex Transport Sensor 2	Z
1	Duplex Transport Sensor 3	Z
1	Duplex Transport Sensor 4	Z
1	Duplex Exit Sensor	Z
1	Purged Paper Sensor	E
3	Tray 1 No Feed	A1
5	Tray 2 No Feed	A1
6	Tray 3 No Feed	A1
8	Bypass Tray No Feed	A2
9	Duplex No Feed	Z
10	1st Tray Transport Sensor: Late Jam	A1
13	2nd Tray Transport Sensor: Late Jam	A1
14	3rd Tray Transport Sensor: Late Jam	A1
58	Bypass Feed Sensor: Lag Jam	A2

Jam code	Jam description	Position code
60	1st Tray Transport Sensor: Lag Jam	A1
63	2nd Tray Transport Sensor: Lag Jam	A1
64	3rd Tray Transport Sensor: Lag Jam	A1
18	Main Relay Sensor: Late Jam	B
18	Main Relay Sensor: Late Jam	B
19	Registration Sensor: Late Jam	B
68	Main Relay Sensor: Lag Jam	B
69	Registration Sensor: Lag Jam	B
22	PTB Paper Sensor: Late Jam	C
24	Fusing Exit Sensor: Late Jam	D
72	PTB Paper Sensor: Lag Jam	C
74	Fusing Exit Sensor: Lag Jam	D
25	Invert/Entrance Sensor: Late Jam	E
26	Invert/Exit Sensor: Late Jam	E
28	Exit Invert Sensor: Late Jam	E
29	ExitRelay Sensor: Late Jam	E
30	Exit Sensor: Late Jam	E
75	Invert/Entrance Sensor: Lag Jam	E
76	Invert/Exit Sensor: Lag Jam	E
78	Exit Invert Sensor: Lag Jam	E
79	Exit Relay Sensor: Lag Jam	E
80	Exit Sensor: Lag Jam	E
31	Invert/Duplex Sensor: Late Jam	E
33	Duplex Entrance Sensor: Late Jam	Z
34	Duplex Transport Sensor 1: Late Jam	Z

Jam code	Jam description	Position code
35	Duplex Transport Sensor 2: Late Jam	Z
36	Duplex Transport Sensor 3: Late Jam	Z
37	Duplex Transport Sensor 4: Late Jam	Z
38	Duplex Exit Sensor: Late Jam	Z
81	Invert/Duplex Sensor: Lag Jam	E
83	Duplex Entrance Sensor: Lag Jam	Z
84	Duplex Transport Sensor 1: Lag Jam	Z
85	Duplex Transport Sensor 2: Lag Jam	Z
86	Duplex Transport Sensor 3: Lag Jam	Z
87	Duplex Transport Sensor 4: Lag Jam	Z
88	Duplex Exit Sensor: Lag Jam	Z
95	Multi feed (front) detected	B
96	Timing lost	Only the location of remaining paper is displayed.
97	Shift cover	Z
98	Paper thickness error	B
99	Multi feed (back) detected	B

LCIT RT4020 (D709)

Jam code	Jam description	Position code
1	Paper Feed Sensor	U
1	Paper Transport Sensor	B3
7	LCT No Feed	U
57	Paper Feed Sensor: Lag Jam	U

Jam code	Jam description	Position code
17	Paper Transport Sensor: Late Jam	U
67	Paper Transport Sensor: Lag Jam	B3

LCIT RT4030 (D710)

Jam code	Jam description	Position code
1	LCT Feed Sensor	U
1	LCT Transport Sensor	U
1	LCT Exit Sensor	U
1	Relay Sensor	B3
7	LCT No Feed	U
57	LCT Feed Sensor: Lag Jam	U
15	LCT Transport Sensor: Late Jam	U
65	LCT Transport Sensor: Lag Jam	U
16	Relay Sensor: Late Jam	U
66	LCT Exit Sensor: Lag Jam	U
17	Relay Sensor: Late Jam	U
67	Relay Sensor: Lag Jam	B3

Finisher SR4090 (D703)

Jam code	Jam description	Position code
1	Entrance Sensor	R1-R5
1	Horizontal Transport Sensor	R1-R5
1	Switchback Transport Sensor	R1-R5
1	Proof Tray Paper Exit Sensor	R1-R5

Jam code	Jam description	Position code
1	Shift Tray Paper Exit Sensor	R1-R5
150	Entrance Sensor: Late Jam	R1-R5
151	Entrance Sensor: Lag Jam	R1-R5
152	Horizontal Transport Sensor: Late Jam	R1-R5
153	Horizontal Transport Sensor: Lag Jam	R1-R5
154	Switchback Transport Sensor: Late Jam	R1-R5
155	Switchback Transport Sensor: Lag Jam	R1-R5
156	Proof Tray Jam	R1-R5
157	Shift Tray Jam	R1-R5
159	Entrance Transport Motor Jam	R1-R5
160	Horizontal Transport Motor Jam	R1-R5
161	Pre Stack Transport Motor Jam	R1-R5
162	Middle Transport Motor Jam	R1-R5
163	Tray Exit Motor Jam	R1-R5
164	Trailing Edge Pressure Plate Motor Jam	R1-R5
165	Paper Exit Gate Motor Jam	R1-R5
166	Punch Motor Jam	R1-R5
167	Punch Drive Motor Jam	R1-R5
168	Paper Position Sensor Side Motor Jam	R1-R5
169	Lower Junction Gate Motor Jam	R1-R5
170	Jogger Motor Jam	R1-R5
171	Positioning Roller Motor Jam	R1-R5
172	Feed Out Motor Jam	R1-R5
173	Corner Stapler Movement Motor Jam	R1-R5
174	Corner Stapling Motor Jam	R1-R5

Jam code	Jam description	Position code
183	Tray Lift Motor Jam	R1-R5
184	Shift Motor Jam	R1-R5
185	Shift Jogger Front Motor Jam	R1-R5
186	Shift Jogger Rear Motor Jam	R1-R5
187	Shift Jogger Retraction Motor Jam	R1-R5
188	Stacking Roller Motor Jam	R1-R5
189	Leading Edge Guide Motor Jam	R1-R5
190	Main Machine Data Corrupt	R1-R5

Booklet Finisher SR4100 (D704)

Jam code	Jam description	Position code
1	Entrance Sensor	R1-R5
1	Horizontal Transport Sensor	R1-R5
1	Switchback Transport Sensor	R1-R5
1	Proof Tray Paper Exit Sensor	R1-R5
1	Shift Tray Paper Exit Sensor	R1-R5
1	Booklet Paper Exit Sensor	R6-R11
150	Entrance Sensor: Late Jam	R1-R5
151	Entrance Sensor: Lag Jam	R1-R5
152	Horizontal Transport Sensor: Late Jam	R1-R5
153	Horizontal Transport Sensor: Lag Jam	R1-R5
154	Switchback Transport Sensor: Late Jam	R1-R5
155	Switchback Transport Sensor: Lag Jam	R1-R5
156	Proof Tray Jam	R1-R5

Jam code	Jam description	Position code
157	Shift Tray Jam	R1-R5
158	Booklet Tray Jam	R6-R11
159	Entrance Transport Motor Jam	R1-R5
160	Horizontal Transport Motor Jam	R1-R5
161	Pre Stack Transport Motor Jam	R1-R5
162	Middle Transport Motor Jam	R1-R5
163	Tray Exit Motor Jam	R1-R5
164	Trailing Edge Pressure Plate Motor Jam	R1-R5
165	Paper Exit Gate Motor Jam	R1-R5
166	Punch Motor Jam	R1-R5
167	Punch Drive Motor Jam	R1-R5
168	Paper Position Sensor Side Motor Jam	R1-R5
169	Lower Junction Gate Motor Jam	R1-R5
170	Jogger Motor Jam	R1-R5
171	Positioning Roller Motor Jam	R1-R5
172	Feed Out Motor Jam	R1-R5
173	Corner Stapler Movement Motor Jam	R1-R5
174	Corner Stapling Motor Jam	R1-R5
175	Booklet Jogger Motor Jam	R6-R11
176	Booklet Guide Motor Jam	R6-R11
177	Booklet Fence Motor Jam	R6-R11
178	Booklet Stapling Motor Jam	R6-R11
179	Movement Roller Transport Motor Jam	R6-R11
180	Folding Transport Motor Jam	R6-R11
182	Press Folding Motor Jam	R6-R11

Jam code	Jam description	Position code
183	Tray Lift Motor Jam	R1-R5
184	Shift Motor Jam	R1-R5
185	Shift Jogger Front Motor Jam	R1-R5
186	Shift Jogger Rear Motor Jam	R1-R5
187	Shift Jogger Retraction Motor Jam	R1-R5
188	Stacking Roller Motor Jam	R1-R5
189	Leading Edge Guide Motor Jam	R1-R5
190	Main Machine Data Corrupt	R1-R5

Finisher SR4110 (D707)

Jam code	Jam description	Position code
1	Entrance Sensor	R1-3
1	Proof Tray Exit Sensor	R1-3
1	Proof Tray Exit Sensor	R1-3
1	Stapler Exit Sensor	R4-8
1	Pre-Stack Sensor	R4-8
100	Entrance: Late Jam	R1-3
101	Entrance: Lag Jam	R1-3
102	Proof Tray Exit: Late Jam	R1-3
103	Proof Tray Exit: Lag Jam	R1-3
104	Shift Tray Exit: Late Jam	R1-3
105	Shift Tray Exit: Lag Jam	R1-3
106	Stapler Exit: Late Jam	R4-8
107	Stapler Exit: Lag Jam	R4-8

Jam code	Jam description	Position code
108	Pre-stack Tray: Late Jam	R4-8
109	Pre-Stack Tray: Lag Jam	R4-8
110	Output Jam	R4-8
111	Drive Mechanism Jam	R1-3
112	Tray Lift Motor Jam	R1-3
113	Jogger Motor Jam	R4-8
114	Shift Motor Jam	R1-3
115	Stapling Motor Jam	R8-10
116	Output Motor Jam	R4-8
117	Punch Motor Jam	R1-3
118	Z-Fold Motor Jam	R4-8
119	Pre-Stack Drive Mechanism Jam	R4-8
120	Main Machine Data Corrupt	R1-3

Multi Folding Unit FD4000 (D615):

Jam code	Jam description	Position code
1	Entrance Sensor	N1 to N5
1	Horizontal Path Exit Sensor	N1 to N5
1	Top Tray Exit Sensor	N1 to N5
1	Top Tray Paper Path Sensor	N1 to N5
1	Registration Sensor	N6 to 22
1	1st Stopper Paper Sensor	N6 to 22
1	2nd Stopper Paper Sensor	N6 to 22
1	3rd Stopper Paper Sensor	N6 to 22

Jam code	Jam description	Position code
1	Horizontal Path Paper Sensor	N1 to N5
1	Bypass Entrance Paper	N6 to 22
1	Bypass Exit Paper Sensor	N6 to 22
200	Entrance Sensor: Late Jam	N1 to N5
201	Entrance Sensor: Lag Jam	N1 to N5
202	Top Tray Exit Sensor: Late Jam	N1 to N5
203	Top Tray Exit Sensor: Lag Jam	N1 to N5
204	Horizontal Path Exit Sensor: Late Jam	N1 to N5
205	Horizontal Path Exit Sensor: Lag Jam	N1 to N5
206	1st Stopper HP Sensor: Late Jam	N6 to N22
207	1st Stopper HP Sensor: Lag Jam	N6 to N22
208	2nd Stopper HP Sensor: Late Jam	N6 to N22
209	2nd Stopper HP Sensor: Lag Jam	N6 to N22
210	3rd Stopper HP Sensor: Late Jam	N6 to N22
211	3rd Stopper HP Sensor: Lag Jam	N6 to N22
212	Skew Correction Jam	N6 to N22
213	Folded Paper Path Jam	N1 to N5
214	Entrance JG Motor Jam	N1 to N5
215	1st Stopper Motor Jam	N6 to N22
216	2nd Stopper Motor Jam	N6 to N22
217	3rd Stopper Motor Jam	N6 to N22
218	Dynamic Roller Trans. Motor Jam	N6 to N22
219	Registration Roller Release Motor Jam	N6 to N22
220	Fold Plate Motor Jam	N6 to N22
221	Jogger Fence Motor Jam	N6 to N22

Jam code	Jam description	Position code
222	Direct-Send JG Motor Jam	N6 to N22
223	FM6 Pawl Motor Jam	N6 to N22
249	Main Machine Data Corrupt	N1 to N5, N6 to N22

Mail Box CS4010 (D708)

Jam code	Jam description	Position code
1	Transport Sensor 1	W
1	Transport Sensor 2	W
1	Transport Sensor 3	W
1	Transport Sensor 4	W
1	Transport Sensor 5	W
350	Transport Sensor 1: Late Jam	W
350	Transport Sensor 1: Lag Jam	W
351	Transport Sensor 2: Late Jam	W
351	Transport Sensor 2: Lag Jam	W
352	Transport Sensor 3: Late Jam	W
352	Transport Sensor 3: Lag Jam	W
353	Transport Sensor 4: Late Jam	W
353	Transport Sensor 4: Lag Jam	W
354	Transport Sensor 5: Late Jam	W
354	Transport Sensor 5: Lag Jam	W
361	Main Machine Data Corrupt	W

Cover Interposer Tray CI4010 (D711)

Jam code	Jam description	Position code
1	Feed Sensor	Q
1	Exit Sensor	Q
370	Feed Sensor: Late Jam or Lag Jam	Q
371	Exit Sensor: Late Jam or Lag Jam	Q
372	Bottom Plate Motor Jam	Q

Cover Interposer Tray CI4020 (D712)

Jam code	Jam description	Position code
1	1st Paper Feed Sensor	Q1
1	2nd Paper Feed Sensor	Q2
1	1st Transport Sensor	Q1
1	2nd Transport Sensor	Q2
1	1st Vertical Transport Sensor	Q1
1	2nd Vertical Transport Sensor	Q3 to Q4
1	Exit Sensor	Q3 to Q4
1	Entrance Sensor	Q3 to Q4
1	Exit Sensor	Q3 to Q4
300	1st Paper Feed Sensor: Late Jam	Q1
301	1st Paper Feed Sensor: Lag Jam	Q1
302	2nd Paper Feed Sensor: Late Jam	Q2
303	2nd Paper Feed Sensor: Lag Jam	Q2
304	1st Transport Sensor: Late Jam	Q1
305	1st Transport Sensor: Lag Jam	Q1

Jam code	Jam description	Position code
306	2nd Transport Sensor: Late Jam	Q2
307	2nd Transport Sensor: Lag Jam	Q2
308	1st Vertical Transport Sensor: Late Jam	Q1
309	1st Vertical Transport Sensor: Lag Jam	Q1
310	2nd Vertical Transport Sensor: Late Jam	Q3 to Q4
311	2nd Vertical Transport Sensor: Lag Jam	Q3 to Q4
312	Exit Sensor: Late Jam	Q3 to Q4
313	Exit Sensor: Lag Jam	Q3 to Q4
314	Entrance Sensor: Late Jam	Q3 to Q4
315	Entrance Sensor: Lag Jam	Q3 to Q4
316	Exit Sensor: Late Jam	Q3 to Q4
317	Exit Sensor: Lag Jam	Q3 to Q4
318	1st Lift Motor Jam	Q1
319	2nd Lift Motor Jam	Q2
320	1st Pick-up Motor Jam	Q1
321	2nd Pick-up Motor Jam	Q2
349	Main Machine Data Corrupt	Q3 to Q4

Decurl Unit DU5020

Jam code	Jam description	Position code
1	Entrance Sensor	K1 to K4
1	Exit Sensor	K1 to K4
380	Entrance Sensor: Late Jam	K1 to K4
381	Exit Sensor: Late Jam	K1 to K4

Buffer Pass Unit Type 5020 (D751)

Jam code	Jam description	Position code
1	Transport Sensor 1	Kc1 to Kc9
1	Transport Sensor 2	Kc1 to Kc9
1	Transport Sensor 3	Kc1 to Kc9
1	Transport Sensor 4	Kc1 to Kc9
1	Transport Sensor 5	Kc1 to Kc9
1	Transport Sensor 6	Kc1 to Kc9
1	Transport Sensor 7	Kc1 to Kc9
1	Transport Sensor 8	Kc1 to Kc9
400	Transport Sensor 1: Late Jam	Kc1 to Kc9
401	Transport Sensor 1: Lag Jam	Kc1 to Kc9
402	Transport Sensor 2: Late Jam	Kc1 to Kc9
403	Transport Sensor 2: Lag Jam	Kc1 to Kc9
404	Transport Sensor 3: Late Jam	Kc1 to Kc9
405	Transport Sensor 3: Lag Jam	Kc1 to Kc9
406	Transport Sensor 4: Late Jam	Kc1 to Kc9
407	Transport Sensor 4: Lag Jam	Kc1 to Kc9
408	Transport Sensor 5: Late Jam	Kc1 to Kc9
409	Transport Sensor 5: Lag Jam	Kc1 to Kc9
410	Transport Sensor 6: Late Jam	Kc1 to Kc9
411	Transport Sensor 6: Lag Jam	Kc1 to Kc9
412	Transport Sensor 7: Late Jam	Kc1 to Kc9
413	Transport Sensor 7: Lag Jam	Kc1 to Kc9
414	Transport Sensor 8: Late Jam	Kc1 to Kc9

Jam code	Jam description	Position code
415	Transport Sensor 8: Lag Jam	Kc1 to Kc9
416	Main Machine Data Corrupt	Kc1 to Kc9

Plockmatic Bookletmaker

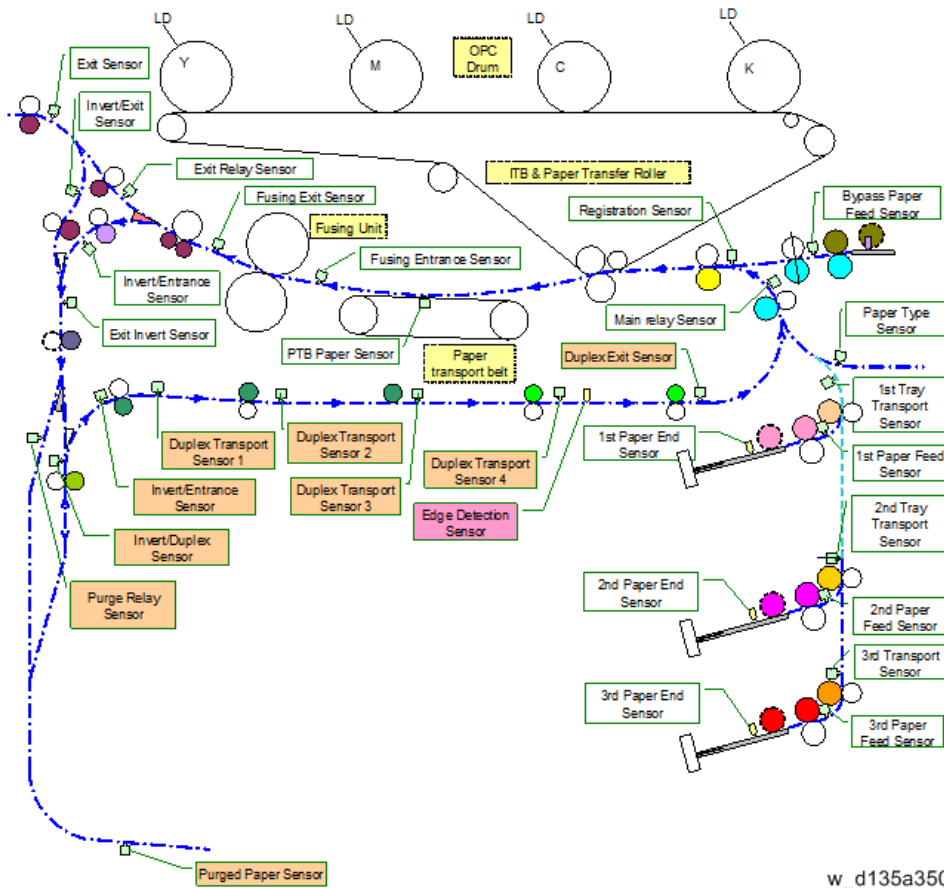
Jam code	Jam description	Position code
148	Plockmatic Bookletmaker Jam	Displayed by Plockmatic

5

GBC Stream Punch

Jam code	Jam description	Position code
149	GBC Stream Punch Jam	Displayed by GBC

Sensor Locations



Paper Size Codes

Paper size codes are as follows.

* The unit of Main Scan/Sub Scan Length is 0.1 mm.

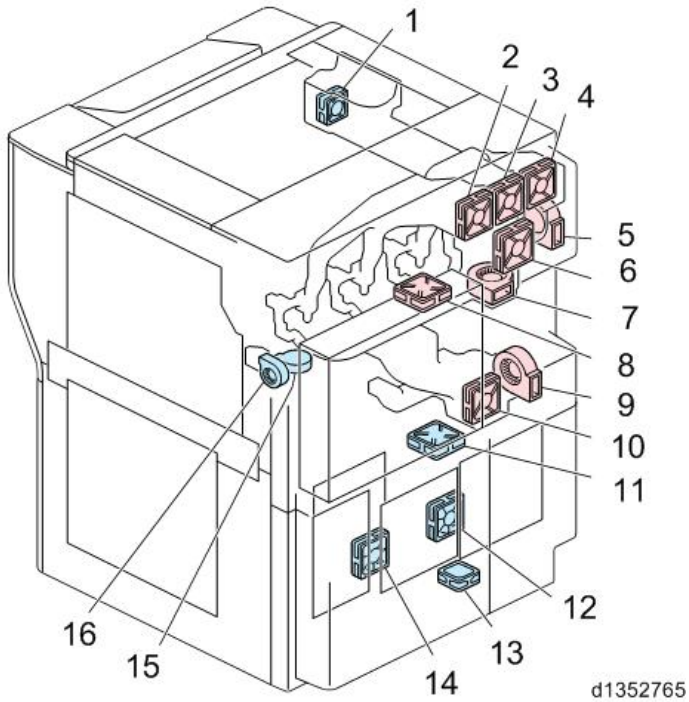
Size Code	Paper Size Name	Orientation	Main Scan Length	Sub Scan Length
132(84H)	A3	SEF	2970	4200
005(05H)	A4	LEF	2970	2100
133(85H)	A4	SEF	2100	2970

Size Code	Paper Size Name	Orientation	Main Scan Length	Sub Scan Length
141(8DH)	B4	SEF	2570	3640
006(06H)	A5	LEF	2100	1480
134(86H)	A5	SEF	1480	2100
014(0EH)	B5	LEF	2570	1820
142(8EH)	B5	SEF	1820	2570
135(87H)	A6	SEF	1050	1480
143(8FH)	B6	SEF	1280	1820
160(A0H)	11"x17"(DLT)	SEF	2794	4318
164(A4H)	8 1/2"x14"(LG)	SEF	2159	3556
166(A6H)	8 1/2"x11"(LT)	SEF	2159	2794
038(26H)	8 1/2"x11"(LT)	LEF	2794	2159
172(ACH)	5 1/2"x8 1/2"(HLT)	SEF	1397	2159
175(AFH)	12" x 18"	SEF	3048	4572

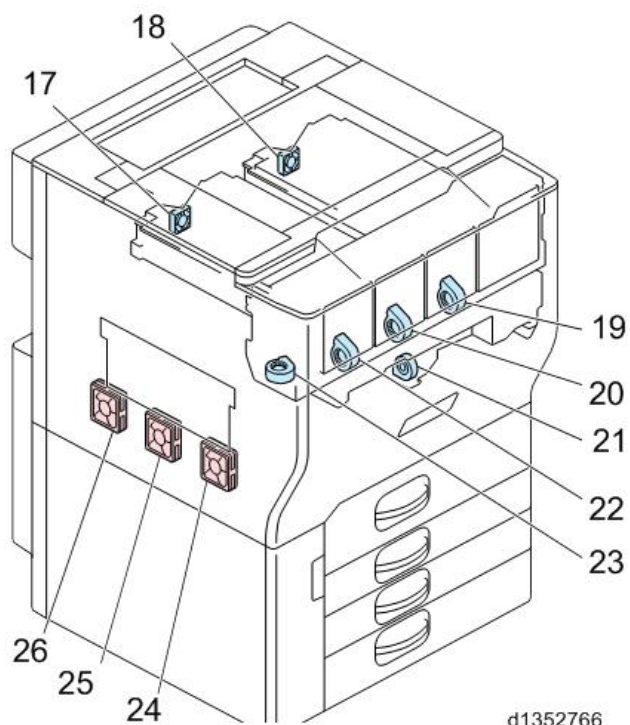
Fan Defect Detection

Fan Locations and Fan SC

Main Machine (Rear)

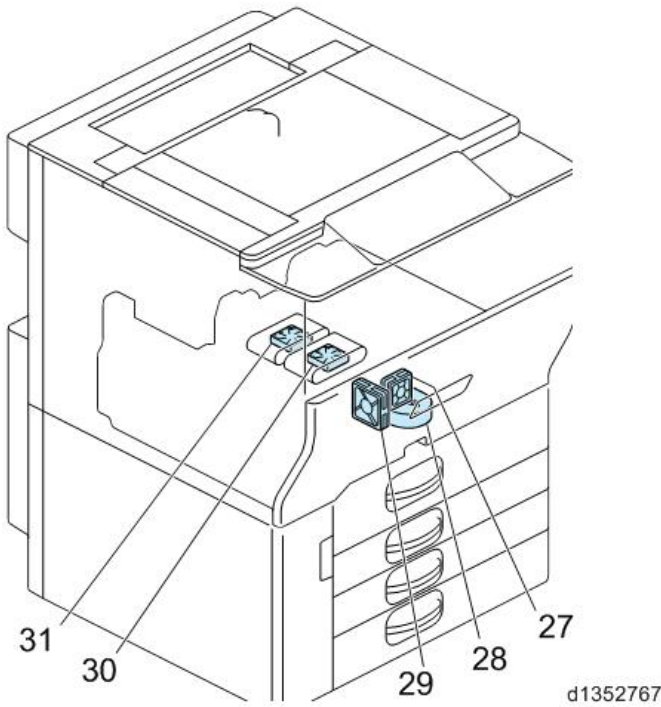


Main Machine (Front)



d1352766

Drawer (Inside)



5

SC Code	SC Name	Fan of to be detected	Fan No.
SC531-01	Development Intake Fan (Y): Lock	Development Intake Fan (Y)	23
SC531-02	Development Intake Fan (M): Lock	Development Intake Fan (M)	22
SC531-03	Development Intake Fan (C): Lock	Development Intake Fan (C)	20
SC531-04	Development Intake Fan (K): Lock	Development Intake Fan (K)	19
SC531-05	Development Exhaust Fan (Right): Lock	Development Exhaust Fan (Right)	2
SC531-06	Development Exhaust Fan (Left): Lock	Development Exhaust Fan (Left)	3
SC530-01	Fusing Pressure Roller Intake Fan: Lock	Fusing Pressure Roller Intake Fan	28
SC530-02	Fusing Pressure Roller Exhaust Fan: Lock	Fusing Pressure Roller Exhaust Fan	9
SC530-03	Heat Pipe Panel Intake Fan: Lock	Heat Pipe Panel Intake Fan	1

SC Code	SC Name	Fan of to be detected	Fan No.
SC530-04	Heat Pipe Panel Exhaust Fan: Lock	Heat Pipe Panel Exhaust Fan	4
SC530-05	Fusing Exit Exhaust Fan: Lock	Fusing Exit Exhaust Fan	5
SC530-06	ITB Cleaning Intake Fan: Lock	ITB Cleaning Intake Fan	21
SC530-07	IH Coil Power Cooling Fan: Lock	IH Coil Cooling Fan	27
SC530-08	PTR Fusing Exhaust Fan: Lock	PTR Fusing Exhaust Fan	10
SC530-09	IH Coil Power Cooling Fan: Lock	IH Coil Power Cooling Fan	13
SC532-01	Controller Intake Fan: Lock	Controller Intake Fan	11
SC532-02	Controller Exhaust Fan: Lock	Controller Exhaust Fan	8
SC532-03	PSU Fan (Rgiht): Lock	PSU Fan (Rgiht)	14
SC532-04	PSU Fan (Left): Lock	PSU Fan (Left)	12
SC533-01	Laser Unit Cooling Fan (Right): Lock	Laser Unit Cooling Fan (Right)	18
SC533-02	Laser Unit Cooling Fan (Left): Lock	Laser Unit Cooling Fan (Left)	17
SC534-01	Duplex Exhaust Fan (Front): Lock	Duplex Exhaust Fan (Front)	24
SC534-02	Duplex Exhaust Fan (Rear): Lock	Duplex Exhaust Fan (Rear)	26
SC534-03	Duplex Exhaust Fan (Middle): Lock	Duplex Exhaust Fan (Middle)	25
SC535-02	Drive Exhaust Fan (Left): Lock	Drive Exhaust Fan (Left)	6
SC536-01	Fusing Heat Pipe Cooling Fan: Lock	Fusing Heat Pipe Cooling Fan	29
SC537-01	Ozone Exhaust Fan: Lock	Ozone Exhaust Fan	7
SC538-01	ID Sensor Cleaning Fan: Lock	ID Sensor Cleaning Fan / ITB Motor Cooling Fan	16, 15
SC539-01	PTB Fan (Front): Lock	PTB Fan (Front)	30
SC539-02	PTB Fan (Rear): Lock	PTB Fan (Rear)	31

Adjustment

Adjustment 001: ACC (Automatic Color Calibration)

Overview

Color Calibration can be performed by the Automatic Color Calibration (ACC) in "Maintenance" in "User Tools".

There are two types of ACC.

- Copier Function ACC
- Printer Function ACC

ACC for the Printer Function has 5 modes according to the printer resolution.

Mode	Resolution		
Calibration 1	600 x 600 dpi	600dpi 1bit Photo/ Text	
Calibration 2	1800 x 600 dpi	600dpi 2bit Photo/ Text	Recommended Mode
Calibration 3	9000 x 600 dpi	600dpi 4bit Photo/ Text	
Calibration 4	1200 x 1200 dpi	1200dpi 1bit Photo/ Text	
Calibration 5	3600 x 1200 dpi	1200dpi 2bit Photo/ Text	

Procedure

1. Press [User Tools].
2. To print a color pattern, select Maintenance> Auto Color Calibration.
3. Touch [Start] for the selected function (Copier Function or Printer Function).
4. If "Printer Function" is selected, resolution ("1800 x 600 dpi" for example) should be selected next.
5. Touch "Start Printing". (The machine will print the Test Pattern after self-checking has been completed).

6. Place the color test pattern face-down with the arrow aligned with the rear left corner of the exposure glass.
7. Touch [Start Scanning] on the display. The machine scans the pattern one time.
8. Remove the pattern from the exposure glass.
9. Touch [Exit] three times to return to the Copy mode screen.

↓ Note

- When scanning the color test pattern, place about 10 sheets of white paper over the test pattern, in order to prevent the test pattern from being away from the exposure glass.
- Please instruct the customer to perform the ACC periodically to keep good image quality.
- Both "Copier Function ACC" and "Printer Function ACC" should be performed as a set.
- ACC can be cancelled by pressing "Previous Settings" if the customer is not satisfied with the ACC results.

Adjustment 002: Manual Gamma Adjustment

Overview

Printer Gamma can be adjusted with SP mode. Highlight (H), Shadow (S), Middle (M) and IDmax can be set independently from the range 0 through 30 (15 is the default).

Printer Mode Adjustment

Overview

6 types of adjustment mode exist as shown in table

Mode	SP number	Mode	SP number
2,400×600dpi Photo	SP1-102	2,400×600dpi Text	SP1-102
1,800×600dpi Photo	SP1-102	1,800×600dpi Text	SP1-102
600×600dpi Photo	SP1-102	600×600dpi Text	SP1-102

Adjustment Procedure

1. Perform ACC in Printer Function.
2. Enter Printer SP mode
3. Select the Mode to be adjusted with SP1 102 (Resolution Setting)
4. Print out the Color Gray Scale pattern with SP1 103-001.

SP1102 setting	Mode to be adjusted	Note
0	1200dpi 2bit Photo Gamma	
1	1200dpi 1bit Photo Gamma	
2	600dpi 4bit Photo Gamma	
3	600dpi 2bit Photo Gamma	Default in Printer Mode
4	600dpi 1bit Photo Gamma	
5	1200dpi 2bit Text Gamma	
6	1200dpi 1bit Text Gamma	
7	600dpi 4bit Text Gamma	
8	600dpi 2bit Text Gamma	Default in Printer Mode
9	600dpi 1bit Text Gamma	

5. Compare the IDmax patch pattern on the C-4 test chart for each color and the corresponding patch pattern on the Color Gray Scale printed with SP1103-001. (If no adjustment is required, go step #8).

See NOTE 3 about the corresponding patch pattern.

6. Adjust the IDmax for CMYK with SP1104 (Gamma Adjustment) and save the adjusted value with SP1105 (Save Toner Control Value).
7. Print out the Color Gray Scale pattern with SP1103-001 again.
8. Compare the Middle (M) patch pattern on the C-4 test chart for each color and the corresponding patch pattern on the Color Gray Scale printed with SP1103-001. (If no adjustment is required, go step #11).

See NOTE 3 about the corresponding patch pattern.

9. Adjust the Middle (M) for CMYK with SP1104 (Gamma Adjustment) and save the adjusted value with SP1105 (Save Toner Control Value).
10. Print out the Color Gray Scale pattern with SP1103-001 again.
11. Compare the Shadow (S) patch pattern on the C-4 test chart for each color and the corresponding patch pattern on the Color Gray Scale printed with SP1103-001. (If no adjustment is required, go step #14).

See NOTE 3 about the corresponding patch pattern.

12. Adjust the Shadow (S) for CMYK with SP1104 (Gamma Adjustment) and save the adjusted value with SP1105 (Save Toner Control Value).

13. Print out the Color Gray Scale pattern with SP1103-001 again.
14. Compare the Highlight (H) patch pattern on the C-4 test chart for each color and the corresponding patch pattern on the Color Gray Scale printed with SP1103-001. (If no adjustment is required, all adjustment is completed).
See NOTE 3 about the corresponding patch pattern.
15. Adjust the Highlight (H) for CMYK with SP1104 (Gamma Adjustment) and save the adjusted value with SP1105 (Save Toner Control Value).
16. Turn the main power switch OFF and ON.

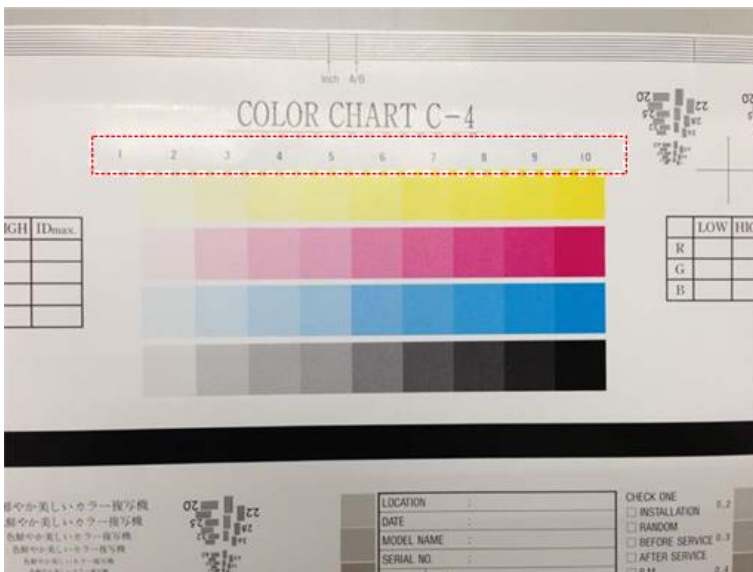
NOTE 1: Adjustment order should be IDmax -> Middle -> Shadow -> Highlight.

NOTE 2: SP1-104

Output ID	K	C	M
Highlight	SP1-104-001	SP1-104-021	SP1-104-041
Shadow	SP1-104-002	SP1-104-022	SP1-104-042
Middle	SP1-104-003	SP1-104-023	SP1-104-043
IDmax	SP1-104-004	SP1-104-024	SP1-104-044

NOTE 3: Cross reference between C-4 test chart and Color

Gradation Patch Pattern on the C-4 test chart



d1353062

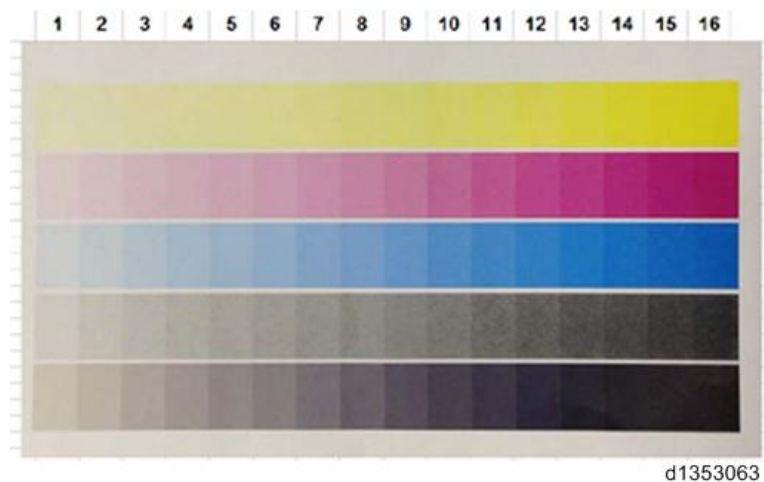
Highlight: 2-5

Middle: 3-7

Shadow: 6-9

IDmax: 10

Gradation Patch Pattern on Gray Scale printed with SP1-103-001



5

The following table shows a cross reference between the gradation patch pattern on the C-4 test chart and the Gray Scale printed with SP1-103-001.

C-4 test chart		1	2	3	4	5	6	7	8	9	10
Gray Scale printed with SP1-103-001	C	--	1	3	4	5	8	9	11	13	15-16
	M	1	2	5	6	7	10	12	14	15	16
	Y	1	3	5	7	9	10	13	14	15	16
	K	--	1	3	4	5	7	10	13	16	--

15-16	Very Close
14, 15, 16	Close
--	Corresponding Patch does not exist

Adjustment Item	Color	Gradation Patch Pattern Number	
		Gray Scale printed with SP1103-001	Color Chart C-4
IDmax	C	16	10
	M	16	10
	Y	16	10
	K	16	9
Middle (M)	C	8	6
	M	7	5
	Y	7	4
	K	7	6
Shadow (S)	C	13	9
	M	12	7
	Y	13	7
	K	13	8
Highlight (H)	C	5	5
	M	5	3
	Y	5	3
	K	4	4

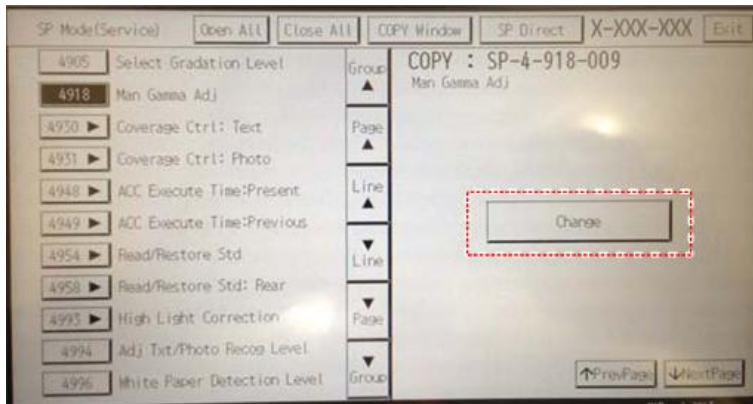
Copier Mode Adjustment

Overview

This procedure shows how to adjust the printer gamma by SP mode manually after the ACC (Automatic Color Calibration) has been performed. Adjustment should be performed only in the 'Offset' part of the screen, and not in the 'Option' part of the screen. Adjustable modes are "Text mode", "Photo mode", "B&W text mode" and "B&W photo mode".

1. Perform ACC in copier mode with User Tools.
2. Take a copy of a C-4 test chart in the mode which you need to adjust.

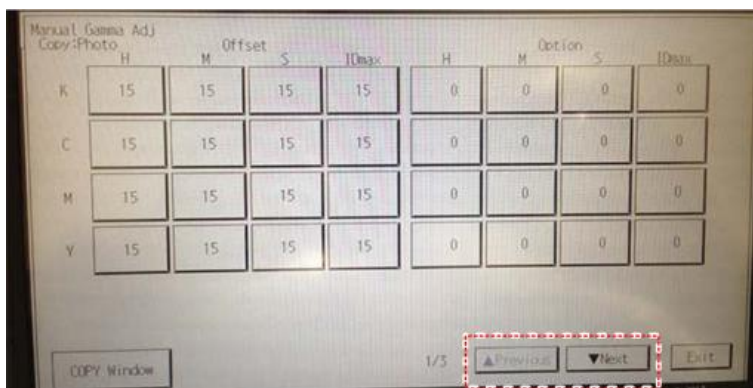
3. Enter Copier SP mode.
4. Select SP4918-009 (Man Gamma Adj) and press "CHANGE"



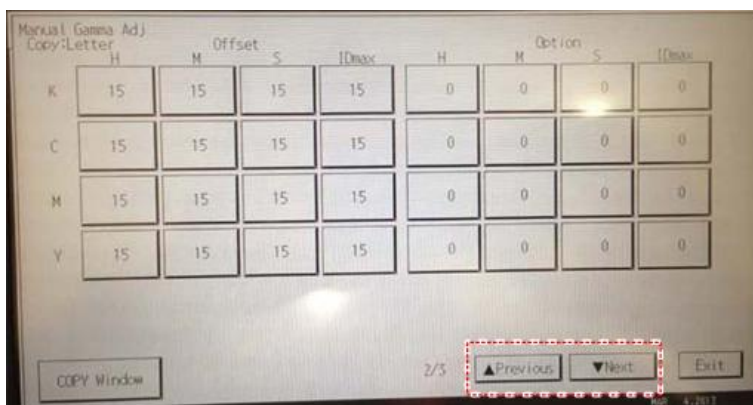
d1353064

5. If you touch the "Change" button, the following 3 screens will be displayed. These screens can be changed by pressing the "Next" or "Previous" button.

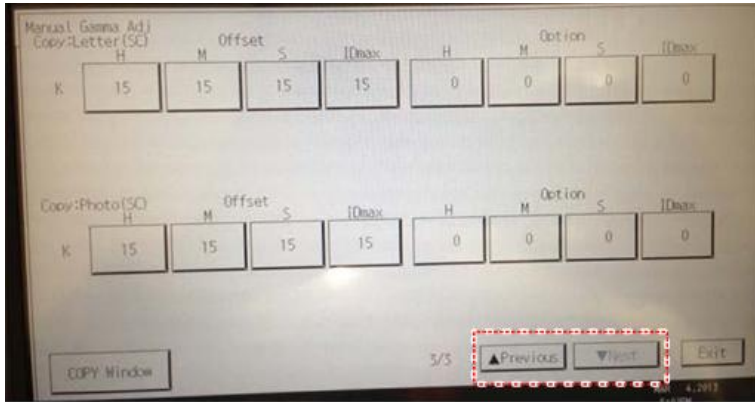
5



d1353065



d1353066



d1353067

- Press the "Copy Window" button on the bottom left, then take a copy of the C-4 test chart. Then compare the gradation patch pattern on the copied image and the C-4 test chart.

5

Step	Output ID	C-4 chart level	Adjustment Reference
1	ID max (K/C/M/Y)	1 2 3 4 5 6 7 8 9 10	Adjust the 'Offset' value so that the density of level 10 in the gradation patch pattern on the copy becomes the same as level 10 on the C-4 chart.
2	Middle (K/C/M/Y)	1 2 3 4 5 6 7 8 9 10	Adjust the 'Offset' value so that the density of level 6 in the gradation patch pattern on the copy becomes the same as level 10 on the C-4 chart.
3	Shadow (K/C/M/Y)	1 2 3 4 5 6 7 8 9 10	Adjust the 'Offset' value so that the density of level 8 in the gradation patch pattern on the copy becomes the same as level 10 on the C-4 chart.
4	Highlight (K/C/M/Y)	1 2 3 4 5 6 7 8 9 10	Adjust the 'Offset' value so that dirty background is not visible on the copy and the density of level 3 is slightly lighter that of level 3 on the C-4 chart.

Step	Output ID	C-4 chart level										Adjustment Reference
5	K Highlight (K/C/M/Y)	1	2	3	4	5	6	7	8	9	10	Adjust the 'Offset' value so that black scale levels 3 through 5 in the copy are seen as gray (no C, M, or Y should be visible). If the black scale contains C, M, or Y, redo step 1 to 4. - Only in Photo mode -

Adjustment 003: Scanner Registration

Overview

Scanning registration can be adjusted in the Main Scan and Sub Scan directions. Sub Scan Magnification can also be adjusted.

Adjustment Procedure

Adjustment can be performed by the following SPs. (☛ page 669 "Magnification and Registration Adjustment")

- SP4-011-001 (Main Scan Reg.): Registration in the Main Scan direction.
- SP4-010-001 (Sub Scan Registration Adj): Registration in the Sub Scan direction.
- SP4-008-001 (Sub Scan Magnification Adj): Magnification in the Sub Scan direction.

Adjustment 004: ADF Registration

Overview

Adjust the position and scaling applied to scanned images when using the ADF with the copier and scanner functions. By specifying this setting, you can correct image misalignment, expansion, and shrinkage due to non-uniform paper feeding.

This adjustment needs to be done before doing "Adjustment 005: Registration Adjustment"

Adjustment Procedure

Adjustment can be performed by the following SPs. (▶ page 560 "Adjustment after Replacing the ADF")

- ADF Adjustment Side-to-Side Regist: Front (SP6-006-001)
- ADF Adjustment Side-to-Side Regist: Rear (SP6-006-002)
- L-Edge Regist (1-pass): Front (SP6-006-010)
- L-Edge Regist (1-pass): Rear (SP6-006-011)
- DF Magnification Adj. (SP6-017-001)

Adjustment 005: Registration

5

Overview

This troubleshooting covers all the procedures involving registration adjustments; skew, image position and front-back magnification adjustment except ADF and scanner registration. Note that these procedures should be done BEFORE making registration adjustments on the Fiery controller and scanner/ADF of the machine.

Cause

Skew

- Incorrect positioning of the side fence
- Something in the paper path
- Insufficient paper buckling at registration roller

Image Shift

- Incorrect positioning of the side fence
- Change during transport according to the paper characteristics, such as thickness and stickiness

Incorrect magnification between Front and Back

- Incorrect positioning of the side fence
- Paper Path Variation by paper Specification (Thick, stiffness etc)

Contents

Step 1. Side fence check

Step 2. Skew Adjustment for front and back.

Step 3. Image Adjustment for front.

Step 4. Image Adjustment for back.

Step 5. Adjustment of magnification for back.

Step 1. Side fence check

Check the side fence status for each paper tray. If not correct, adjust the trays.

Step 2. Skew Adjustment for front and back.

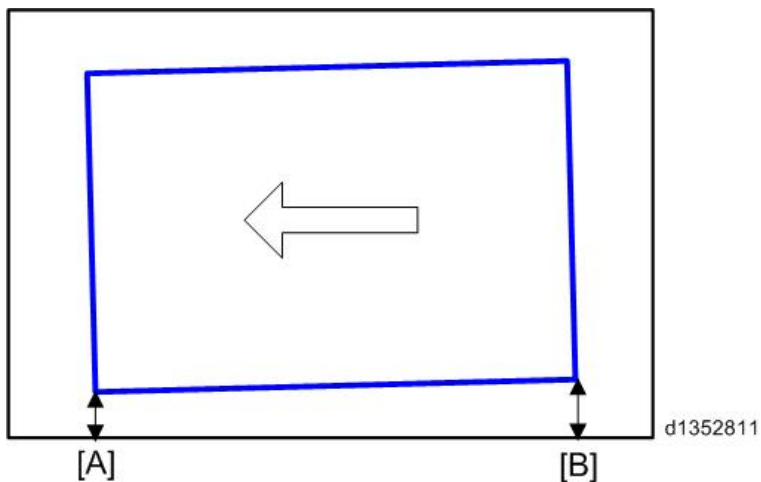
Step 2-1 Set A3 or DLT plain paper (63.1-80.0 gsm) in Tray 2 and apply the paper tray settings.

Step 2-2 Print 5 copies of the test pattern Trimming Area (SP2109-003-14) in b/w and simplex.

Step 2-3 Measure the two locations [A] and [B] on all 5 copies.

Step 2-4 You need to make an adjustment with SP1-004-001 so that the average values of [A] and [B] are the same.

Front Side (1st Side)

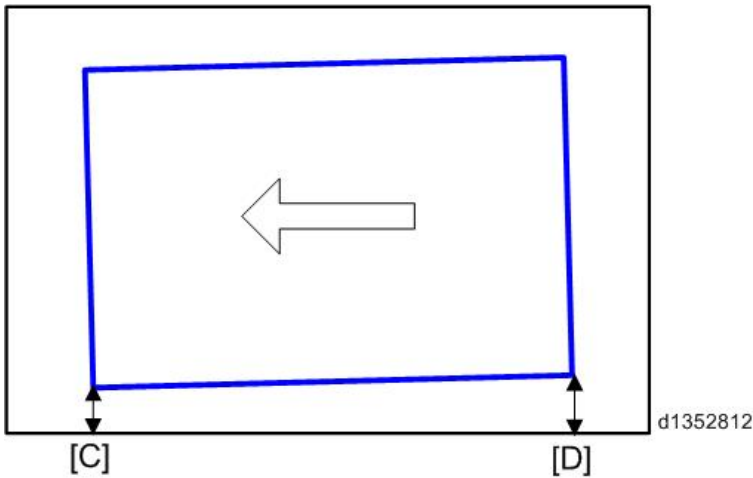


*The arrow indicates the paper feed direction

Step 2-5 Make another 5 copies, this time in duplex.

Step 2-6 Measure the locations [C] and [D] on the back side.

Step 2-7 You need to make an adjustment with SP1-004-003 so that the average values of [C] and [D] are the same.

Back Side (2nd Side)

*The arrow indicates the paper feed direction

Step 3. Image Adjustment for front

Step 3-1 Set A3 or DLT plain paper (63.1-80.0 gsm) in Tray 2 and apply the tray paper settings.

Step 3-2 Print 5 copies of the test pattern Trimming Area (SP2-109-003-14) in b/w, simplex.

Step 3-3 Measure the distance [A] and [B] on all 5 copies and calculate the average.

Step 3-4 You need to make an adjustment with SP1-003-XXX so that the average values of [A] and [B] are the same. Refer to 'Reference Information-2' below.

(You can make an adjustment for each paper type with SP1-952-XXX for IMSS setting in the Pro machine.)

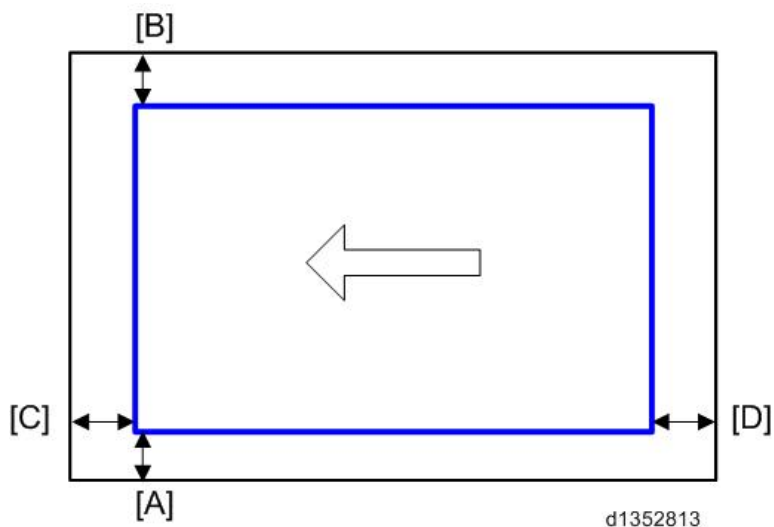
Step 3-5 You need to make an adjustment with SP1-001-XXX so that the average values of [A] and [B] are the same. Refer to 'Reference Information-2' below.

(You can make an adjustment for each paper type with SP1-950-XXX for IMSS setting in the Pro machine.)

Step 3-6 If you finished the adjustment, check that the value of [C] is more than 4mm.

Note

- If the value of [C] is less than 4mm, a jam may occur because of the fusing stripper pawls.
- So adjust the value of [C] so that it is more than 4mm.



*The arrow indicates the paper feed direction

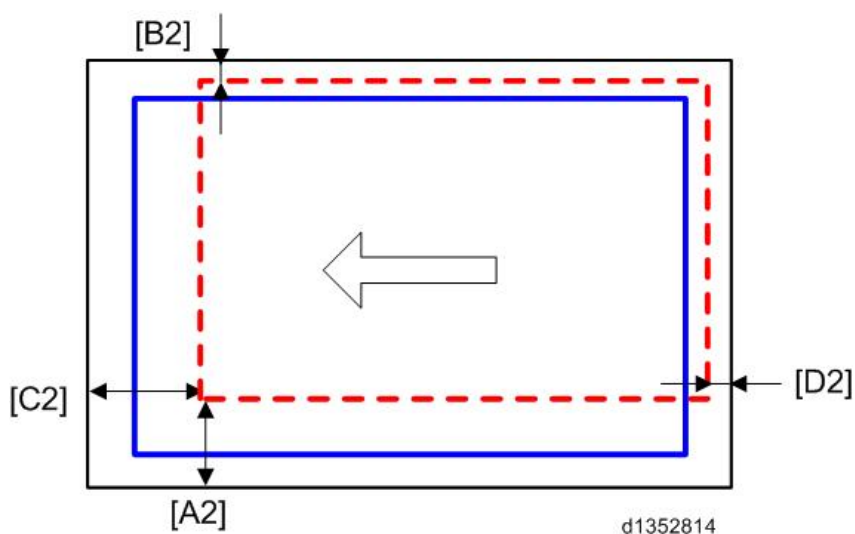
Step 4. Image Adjustment for back

Step 4-1 Print 11 copies of the test pattern Trimming Area (SP2-109-003-14) in b/w, duplex, and select 5 copies (from the 4th to the 8th copy) from among the 11.

Note

- The first and the last 3 copies will not be used due to the higher possibility of image size variations.

Step 4-2 Measure the distances [A2], [B2], [C2] and [D2] on all 5 copies and calculate the average.



*The arrow indicates the paper feed direction

Solid line: Trimming area 1st side

Dashed line: Trimming area 2nd side

Step 4-3 You need to make an adjustment with SP1-003-006 so that the average values of [A2] and [B2] are the same. Refer to 'Reference Information-3' below.

(You can make an adjustment for each paper type with SP1-953-XXX for IMSS setting in a Pro machine.)

Step 4-4 You need to make an adjustment with SP1-001-003 so that the average values of [C2] and [D2] are the same. Refer to 'Reference Information-3' below.

(You can make an adjustment for each paper type with SP1-951-XXX for IMSS setting in a Pro machine.)

Step 5. Adjustment of magnification for back.

Step 5-1 Set A3 or DLT plain paper (63.1-80.0 gsm) in Tray 2 and apply the tray paper settings.

Step 5-2 Print 5 copies of the test pattern Trimming Area (SP2109-003-14) in b/w, Duplex.

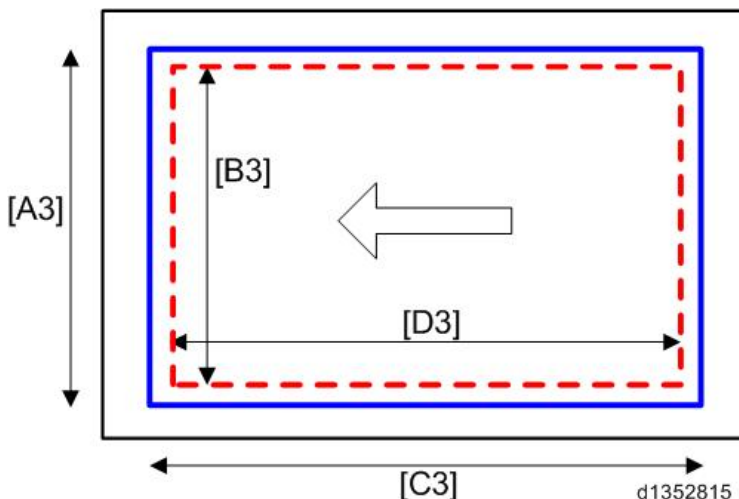
Step 5-3 Measure the distance [A] and [B] on all 5 copies and calculate the average.

Step 5-4 You need to make an adjustment with SP2-102-043 so that the average values of [A3] and [B3] are the same. Refer to 'Reference Information-4' below.

(You can make an adjustment for each paper type with SP2-952-XXX for IMSS setting in a Pro machine.)

Step 5-5 You need to make an adjustment with SP2-102-044 so that the average values of [C3] and [D3] are the same. Refer to 'Reference Information-4' below.

(You can make an adjustment for each paper type with SP2-953-XXX for IMSS setting in a Pro machine.)



Reference Information-1 (Step 2. Skew adjustment for front and back)

1. Check the SP value for the tray being used.

2. Increase the value of the SP by 1 mm.
 1. Example: If the current value is 1 mm, input 2 mm into the SP.
3. Print out.

If you can't solve the skew, repeat steps 1 to 3.

Pro/Office	Number	Description	Adjustment area
SP	SP1-004-001	Reg buckle Adj(Tray 1,2,3,4)	±5.0mm
SP	SP1-004-003	Reg buckle Adj(Duplex)	±5.0mm

Reference Information-2 (Step 3. Image Adjustment for front)

Side-to-Side Registration

1. Do the following calculation: $((\text{average [B]} - (\text{average [A]}))/2 = X$
2. Add X to the current values in SP1003. (If you use IMSS, SP1950)

SP1003 Side-to-Side Reg	Current SP Value	X	Modified Value
Tray 1			
Tray 2			
Duplex Tray			
A3LCT Tray 3			
A3LCT Tray 4			
A3LCT Tray 5			
Bypass Tray			

Examples

SP1003 Side-to-Side Reg	Current SP Value	X	Modified Value
Example 1.	1.0	0.1	1.1
Example 2.	1.0	-0.2	0.8

Pro/Office	Number	Description	Adjustment Area
SP	SP1-003-XXX	Side-to-Side Reg	±3.0mm

[For IMSS]

Pro	Number	Description	Adjustment Area
IMSS	08	Adjust Image Position of Side 1 Across Feed Direction (Each Custom Papers)	±3.0mm
SP	SP1-952-XXX	S-to-S Regist Adj (Each Custom Papers)	±3.0mm

Lead Edge Registration

1. Do the following calculation: $((\text{average [C]} - (\text{average[D]}))/2 = Y$
2. Add Y to the current values in SP1001. If you use IMSS, SP1950

5

SP1001 Side-to-Side Reg	Current SP Value	X	Modified Value
Tray 1			
Tray 2			
Duplex Tray			
A3LCT Tray 3			
A3LCT Tray 4			
A3LCT Tray 5			
Bypass Tray			

Pro/Office	Number	Description	Adjustment Area
SP	SP1-001-XXX	Lead Edge Reg (Each trays)	±3.0mm

[For IMSS]

Pro	Number	Description	Adjustment Area
IMSS	06	Adjust Image Position of Side 1 With Feed Direction (Each Custom Papers)	±3.0mm
SP	SP1-950-XXX	L-Edge Regist Adj (Front) (Each Custom Papers)	±5.0mm

Reference Information-3 (Step 4. Image Adjustment for back)

1. Do the following calculation:

$$(\text{average [B2]} - (\text{average [A2]}))/2 = x$$

$$(\text{average [C2]} - (\text{average [D2]}))/2 = y$$
2. Make an adjustment in the same way as front image position adjustment.
3. Make a print out and check it.

If you can't solve the magnification problem, repeat steps 1 to 3.

Pro/Office	Number	Description	Adjustment Area
SP	SP1-003-006	Side-to-Side Reg (Duplex)	±3.0mm
SP	SP1-001-003	Lead Edge Reg (Duplex)	±9.0mm

For IMSS

Pro	Number	Description	Adjustment Area
IMSS	09	Adjust Image Position of Side 2 Across Feed Direction	±3.0mm
IMSS	07	Adjust Image Position of Side 2 With Feed Direction	±9.0mm
SP	SP1-953-XXX	S-to-S Regist Adj (Rear) (Each Custom papers)	±3.0mm
SP	SP1-951-XXX	L-Edge Regist Adj (Rear) (Each Custom papers)	±9.0mm

Reference Information-4 (Step 5. Adjustment of magnification for back)

1. Do the following calculation:

$$\text{average [A3]}/\text{average [B3]}-1 = A$$

$$\text{average [C3]}/\text{average [D3]}-1 = C$$
2. Add A to the current values in SP2102-043. (If IMSS, SP2952)
3. Add C to the current values in SP2102-044. (If IMSS, SP2953)
4. Make a print out and check it.

If you can't solve the magnification problem, repeat steps 1 to 4.

Pro/Office	Number	Description	Adjustment Area
SP	SP2-102-043	Verso Main Meg set& Adj	±0.5%
SP	SP2-102-044	Verso Main Sub set& Adj	±0.5%

For IMSS

Pro	Number	Description	Adjustment Area
IMSS	12	Adjust Magnification of Side 2 Across Feed Direction (Each Custom Papers)	±0.5%
IMSS	13	Adjust Magnification of Side 2 With Feed Direction (Each Custom Papers)	±0.5%
SP	SP2952-XXX	Verso Main Meg set& Adj (Each Custom Papers)	±0.5%
SP	SP2-953-XXX	Verso Main Sub set& Adj (Each Custom Papers)	±0.5%

Note

- Adjustment step is 0.025%

Adjustment 006: Fusing Nip Width Adjustment for Envelopes

Overview

Adjust the nip width between the fusing belt and pressure roller for envelope printing. Changing this setting may lead to insufficient fusing or cause the envelopes to wrinkle. When encountering such problems, do the following adjustment.

Adjustment Procedure

To correct insufficient fusing, increase the value in the following SP by 5msec and check the result.

To correct wrinkles, decrease the value in the following SP by 5msec and check the result.

Pro/Office	Number	Description	Adjustment Area
SP	SP1-996-109 to 254	Envelope Nip Width Setting	0 to 2000msec

For IMSS

Pro	Number	Description	Adjustment Area
IMSS	85	Fusing Nip Width Adjustment for Envelope (Custom papers)	0 to 2000msec
SP	SP1-996-001 to 100	Envelope Nip Width Setting (Custom papers)	0 to 2000msec

Adjustment 007: Adjustments Required for Improved Glossiness

5

Overview

What to do when the customer is not satisfied with the glossiness of the copies made with the suggested temperature is described below.

↓ Note

- Note that the adjustment procedures for Pro C5110S/Pro C5100S and MP C8002SP/MP C6502SP Office differ.

Adjustments Required for Improved Glossiness (Pro C5110S /Pro C5100S)

- In the SP mode or IMSS, increase the fusing heat roller temperature until the desired glossiness is achieved.

SP1-984-XXX	Htg Roller Temp Setting	0 to 200 °C
IMSS setting #74	Fusing Heat Roller Temperature Adjustment	

↓ Note

- Do not set the temperature higher than 180°C.
- Following are possible side effects:
 - Paper curls and jams
 - Gloss streaks

- Blisters on coated paper
 - Reduced gloss
2. Make 50 copies in A4/LT SEF and check the results.
 3. If the results are unsatisfactory, set the process speed to “Low” in the SP mode or IMSS.

SP1-986-XXX	“3” (default: 0)
IMSS setting #15: Process Speed Setting	Paper thickness 1 to 5: “1” (default: 0) → 55.8ppm Paper thickness 6: “3” (default: 1) → 35.7ppm

4. For the process speed adjustment to take effect, turn the machine power OFF and then ON.

Adjustments Required for Improved Glossiness (MP C8002SP/MP C6502SP)

1. In [Tray Paper Settings] – [Paper Type], select [Coated Paper (Glossy)].

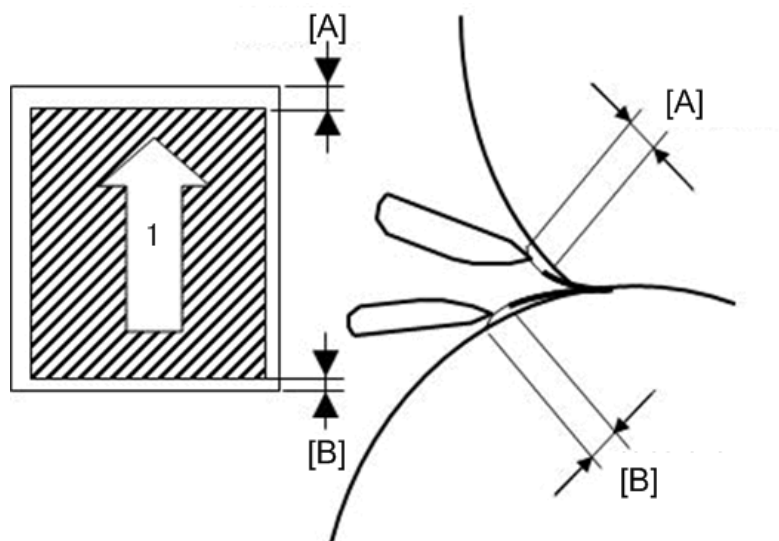
Note

- This will increase the temperature of fusing roller but will also slow down the processing speed.

Adjustment 008: Margin Adjustment

Overview

Procedure for adjusting the leading edge margin [A] and trailing edge margin [B] is described below.



d135a3018

5

1: Paper feed direction

Note

- Narrowing the margin too much may cause the side edge of the paper to be dirty.
- Take care because if you narrow the margin too much, paper may jam in the fusing unit separation unit and damage the fusing unit.

Margin adjustment

1. Adjust the margins using the following SPs.

Leading edge margin adjustment

Pro/Office	SP No.	SP Name	Value
Pro/Office	SP2-122-201 to 254	[Erase Margin Adj Leading Edge] (for each paper type/thickness)	-3 to 6mm
Pro	SP2-122-001 to 100	[Erase Margin Adj Leading Edge] (for each custom paper)	-3 to 6mm

Pro/Office	IMSS setting No.	IMSS setting	Value
Pro	10	Adjust Erase Margin of Leading Edge (for each custom paper)	-3 to 6mm

Trailing edge margin adjustment

Pro/Office	SP No.	SP Name	Value
Pro/Office	SP2-123-201 to 254	[Erase Margin Adj Trailing Edge] (for each paper type/thickness)	-3 to 6mm
Pro	SP2-123-001 to 100	[Erase Margin Adj Trailing Edge] (for each custom paper)	-3 to 6mm

Pro/Office	IMSS setting No.	IMSS setting	Value
Pro	11	Adjust Erase Margin of Trailing Edge (for each custom paper)	-3 to 6mm

5

★ Important

- Adjust this SP in increments of ± 0.5 mm. Higher values will increase the margin, while lower values will decrease the margin.
2. Make some test prints (simplex and duplex) and make sure that fusing jams and side edge smudges do not occur.

Adjustment 009: Staple misalignment (3 mm or more) occurs

Symptom

Staple misalignment (3mm or more) occurs.

Sample:



d135a3136

Cause

5

Cause 1:

The paper contacts the jogger fence and skews inside the staple tray during standby.

Cause 2:

The side to side registration is not aligned when the paper is being transported from the mainframe to the finisher.

Solution

Production line

The shape of the bracket was changed and applied from the following cut-in S/N:

Model	Cut-in S/N
D688-17	E783Q810001
D689-17	E793Q910001
D703-17	E433Q810077
D704-17	E443Q810008

In the field

For Cause 1:

Update the firmware to Ver. 02.000.10 or newer.

For Cause 2:

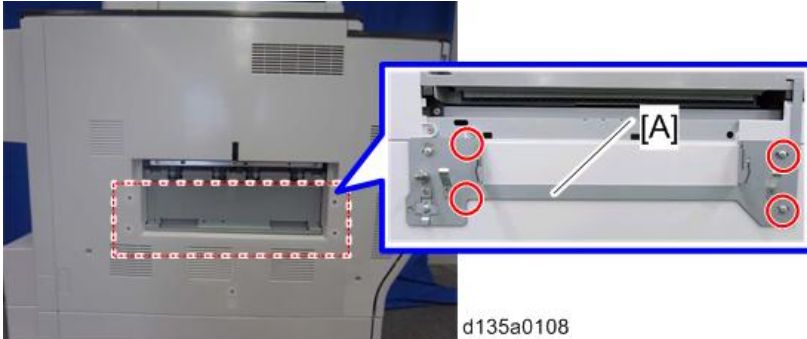
Increase the width of the jogger fences when in standby mode from 7mm to 10mm.

See procedure below.

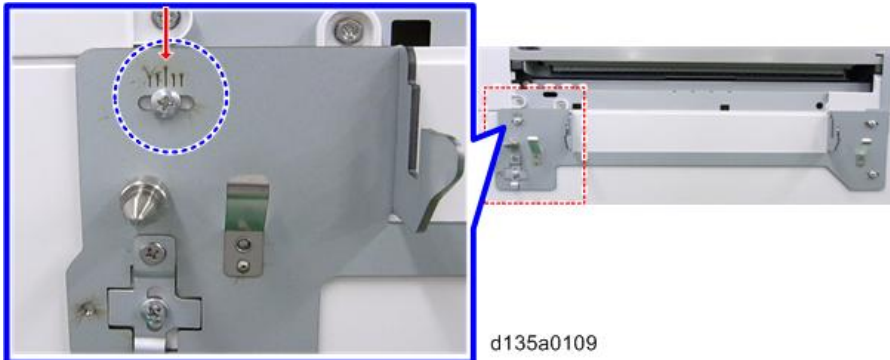
Procedure

Attach the modified docking bracket to make it possible to adjust side-to-side registration at joint between mainframe and finisher in accordance with the procedure below.

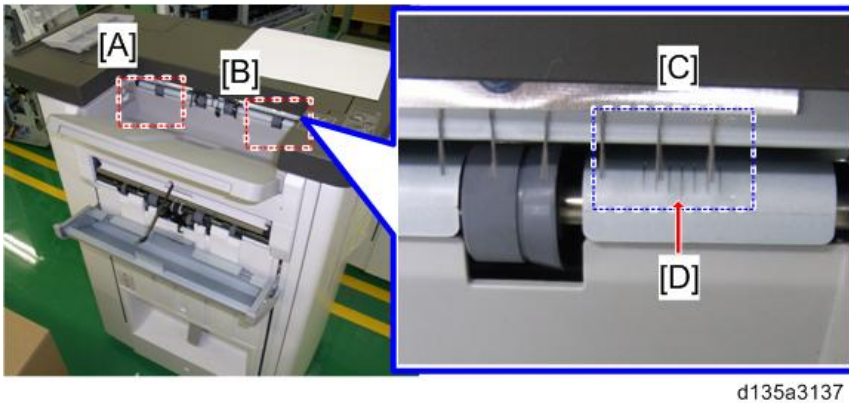
1. Secure the docking bracket [A] in its default attachment position (⚙️ x 4).



Default attachment position (The screw head is centered)



2. Check the side-to-side registration by exiting to the proof tray.
 1. Print out an A3 sheet to the proof tray.
 2. Using the markings on the front-most exit roller (see photo below), check to see where the paper edge is located when the paper is exited. For purposes of accuracy, print out about 5 sets.



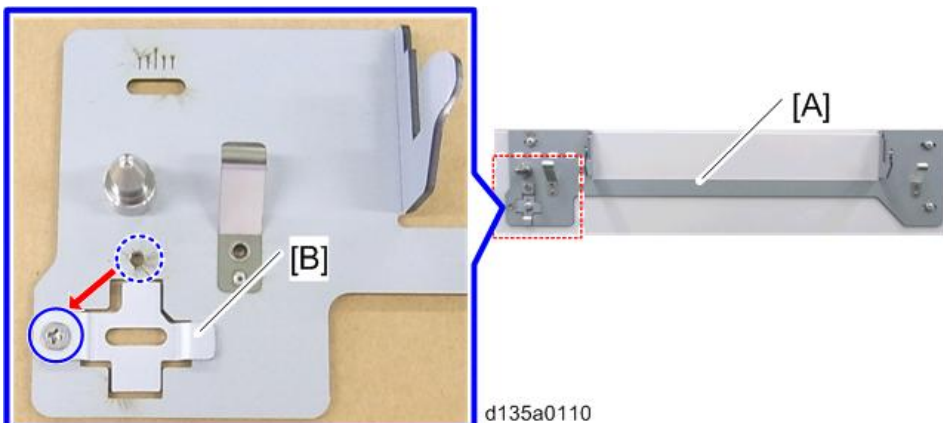
[A]: Make sure to use the markings on the FRONT exit rollers. The roller markings at the rear side are for DLT sized paper only, and do not apply to this.

[B]: Front exit rollers

[C]: Each marking represents 2mm. If the paper edge is lined up with the center marking, this means the paper is aligned correctly. If the paper edge is lined up with any marking to the right of center, this means the paper is shifted toward the front. If the paper edge is lined up with any marking to the left of center, this means the paper is shifted toward the rear.

[D]: Center marking

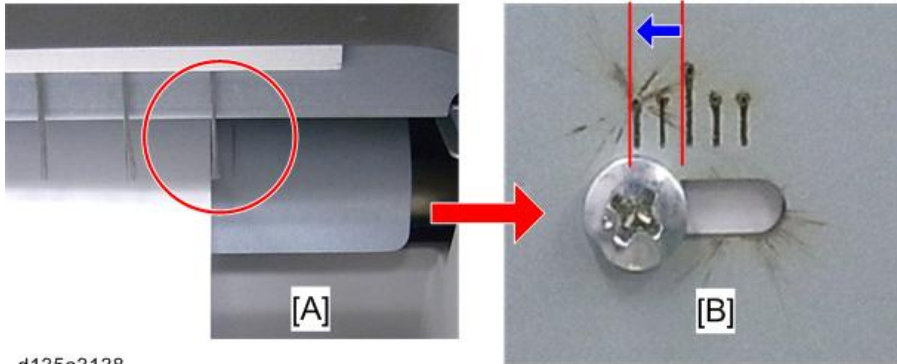
3. Attach the small bracket [B] to the docking bracket [A] as shown (using the screw hole shown by the red arrow), which will allow the docking bracket to slide side-to-side. Then, reattach the docking bracket to the machine.



- If the paper shifts forward (toward the operator side), slide the docking bracket by the same amount in the same direction. This is to move the Finisher toward the operator side.

Note: Each scale marking represents 2mm.

Ex: Paper is shifted 4mm from center toward the front



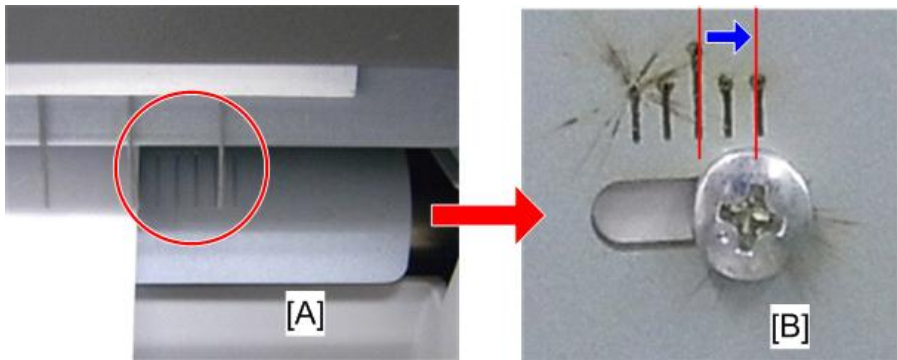
d135a3138

[A]: Proof tray

[B]: Docking BKT screw

- If the paper shifts toward the rear (non-operator side), slide the bracket in the same direction as described below.

Ex: Paper is shifted 4mm from center toward the rear



d135a3139

[A]: Proof tray

[B]: Docking BKT screw

4. Check the side-to-side registration by printing out to the proof tray.
If the registration is still not corrected, do Steps 3 onward one more time.

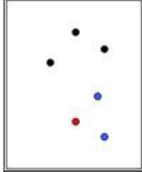
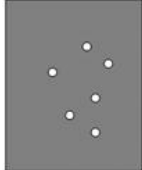

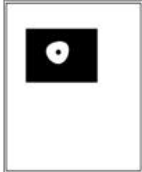
Image Quality

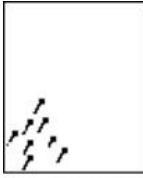
Definitions of Abnormal Images

Large classification: Points

Middle classification1: Spots

Definition: White spots seen in solid image areas or black/color spots seen where there should be nothing printed. The description "white spots" excludes those with toner cores.

Middle classification2	Sample	Definition
Black (color) spots	 <p>d1352869</p>	Stains are visible as crisp black (color) spots.
White spots	 <p>d1352870</p>	White spots are visible inside solid image or halftone image area because of missing toner.
Spots with toner	 <p>d1352871</p>	Toner aggregated inside the machine has been transferred to paper.
White spots with toner cores	 <p>d1352872</p>	White spots with pieces of aggregated toner in the center visible in solid color area. Pieces of aggregated toner may be irremovable.

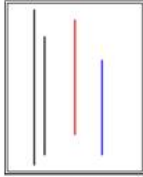

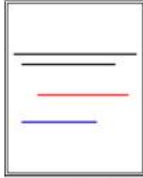

Middle classification2	Sample	Definition
Fish-shape stains	 <p>d1352873</p>	Stains in the shape of small fish which appear to be swimming in the paper feed direction.

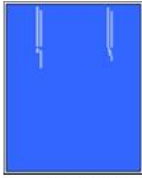


Large classification: Lines

Middle classification1: Streaks

Definition: A smudge or a white area inside an image, in a linear shape with 1 mm or smaller width.



5

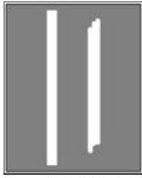

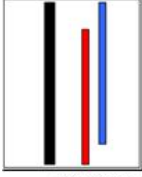
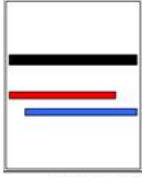

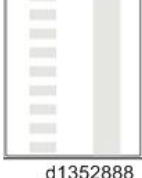
Middle classification2	Sample	Definition
Vertical black (color) streaks	 <p>d1352874</p>	Black (color) streaks appearing in the paper feed direction.
Vertical white streaks	 <p>d1352875</p>	Image missing in the shape of streaks in the paper feed direction.
Horizontal black (color) streaks	 <p>d1352876</p>	Black (color) streaks appearing in the direction perpendicular to the paper feed direction.
Horizontal white streaks	 <p>d1352877</p>	Image missing in the shape of streaks in the direction perpendicular to the paper feed direction.

Middle classification2	Sample	Definition
Horizontal glossy streaks	 d1352878	Glossy streaks appearing in the paper feed direction.
Horizontal white streaks	 d1352879	Glossy streaks appearing in the direction perpendicular to the paper feed direction.
Image scratches	 d1352880	Stains in the shape of vertical streaks which seem to result from being scratched by the guide plate ribs or other parts.

Middle classification1: Bands

Definition: A smudge or a white area inside an image, in a linear shape with 1 mm or larger width.

Middle classification2	Sample	Definition
Jitter	 d1352881	Blurred area visible as bands in the direction perpendicular to the paper feed direction.
Banding	 d1352882	Pitch banding in the direction perpendicular to the paper feed direction. (Gear eyes: Color unevenness in the same interval as the pitch of the gear.)

Middle classification2	Sample	Definition
Vertical white bands	 <p>d1352883</p>	White bands in the paper feed direction.
Horizontal white bands	 <p>d1352884</p>	White bands in the direction perpendicular to the paper feed direction.
Vertical black (color) bands	 <p>d1352885</p>	Black (color) bands in the paper feed direction.
Horizontal black (color) bands	 <p>d1352886</p>	Black (color) bands in the direction perpendicular to the paper feed direction.
Fuzzy lines	 <p>d1352887</p>	Blurred images in the shape of slightly winding bands in the paper feed direction.
Roller tracks	 <p>d1352888</p>	Stains on the transport rollers transferred to paper.

Large classification: Plane

Middle classification1: Whole area

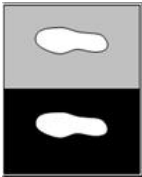

Definition: Images and text missing from the whole sheet.



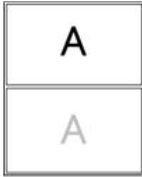

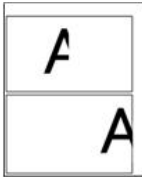
Middle classification2	Sample	Definition
All black	 d1352889	Copied paper is all black.
Blank	 d1352890	No image is reproduced.

5

Middle classification1: Non-reproduction

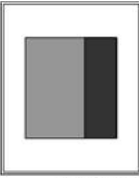
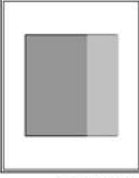



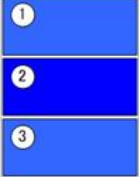
Definition: Parts of the developed images and letters are not reproduced.




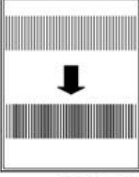

Middle classification2	Sample	Definition
White zone	 d1352891	Part of a solid image or halftone is missing.
Wormholes	 d1352892	The outline of a letter (or a line) is reproduced but the inside of it is missing.

Middle classification2	Sample	Definition
Halo	 <p>d1352893</p>	There is a white line around a solid object.
Negative residual image	 <p>d1352894</p>	Previously copied image is reproduced with its black and white reversed on the same page or the next page.
Positive residual image	 <p>d1352895</p>	Previously copied image is reproduced on the same page or the next page.
Offset	 <p>d1352896</p>	The same image is repeatedly transferred in the same interval.
Missing image	 <p>d1352897</p>	Developed image slided in the subscan direction or missing.

Middle classification1: Unevenness





Definition: The density of the developed image is uneven.

Middle classification2	Sample	Definition
High density	 <p>d1352898</p>	Image density higher than configured.
Low density	 <p>d1352899</p>	Image density lower than configured.
Uneven density	 <p>d1352900</p>	Image density is uneven within the same page.
Unevenness in indefinite shape	 <p>d1352901</p>	Image density unevenness in indefinite shapes.
Uneven glossiness	 <p>d1352902</p>	The glossiness is uneven inside a dark solid image. Check it by looking at the paper from different angles.
Color changing	 <p>d1352903</p>	During repeated printing, the color or the density changes from sheet to sheet.

Middle classification2	Sample	Definition
Color difference	 <p>d1352904</p>	The colors differ between the original and the copy.
Rough image	 <p>d1352905</p>	Color is uneven and small white spots are visible inside a solid image. With color copiers, white spots may not appear when two colors are overlapped.
Earthworm shape	 <p>d1352906</p>	White area in a shape similar to an earthworm.
Moire	 <p>d1352907</p>	When superimposed regular pattern, it is a pattern of striped periodic possible by pixel to interfere with each other. Halftones may become mosaics.
Blur	 <p>d1352908</p>	Image seemingly blurred in all directions.

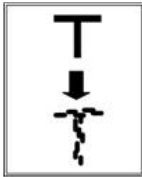
Middle classification1: Stains

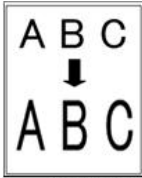
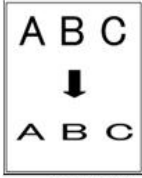
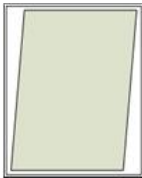
Definition: Areas outside letters or images are stained.

Middle classification2	Sample	Definition
Background stains	 d1352909	Granular stains are visible in unprinted areas of the paper.
Backside stains	 d1352910	Granular stains are visible on the backside of the paper.
Toner scattered	 d1352911	Toner scattered around a letter.
Edge stains	 d1352912	The side edges of paper are stained.

Middle classification1: Irregularity


Definition: Image or letter becoming irregular in comparison with the original.

Middle classification2	Sample	Definition
Irregularity	 d1352913	Image becoming irregular in comparison with the original.

Middle classification2	Sample	Definition
Image expansion	 <p>d1352914</p>	Image expanded abnormally in comparison with the original.
Image contraction	 <p>d1352915</p>	Image contracted abnormally in comparison with the original.
Skew	 <p>d1352916</p>	The corners of an image copied from a rectangle original are not square.

Middle classification1: Scratches

Definition:Stains in the shape of vertical streaks which seem to result from being scratched by the guide plate ribs or other parts.

Middle classification2	Sample	Definition
Claw marks	 <p>d1352917</p>	Stains of toner that got on the paper when it came into contact with drum/fuser pawls.

Middle classification1: Image shift

Definition:Stains in the shape of vertical streaks which seem to result from being scratched by the guide plate ribs or other parts.

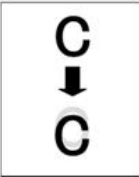
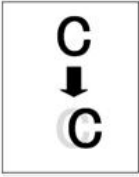


Middle classification2	Sample	Definition
Vertical image shift	 <p>d1352918</p>	Images and lines shifted in the paper feed direction.
Horizontal image shift	 <p>d1352919</p>	Images and lines shifted in the direction perpendicular to the paper feed direction.
Vertical color shift	 <p>d1352920</p>	Color shifted in the paper feed direction where colors should be overlaid.
Horizontal color shift	 <p>d1352921</p>	Color shifted in the direction perpendicular to the paper feed direction where colors should be overlaid.

Image Quality 001: Spots

Overview

White spots seen in solid colored areas or color spots seen in areas without images. The description "white spots" excludes those with toner cores.

Item	Description
Color spots (189mm/40mm pitch)	Color spots in 189mm/40 mm pitch may appear in solid areas.

Item	Description
White spots in low-temperature, low-humidity environment	White spots may appear in low-temperature, low-humidity (10 °C/15 %) environments.
White spots in Winter Environment (D137/D138)	White spots appear in an area ranging 40mm from the leading edge.
White spots	White spots or black spots may appear when printing halftone images in low-temperature, low-humidity environments immediately after replacing the developer.
White spots with toner cores	White spots with toner cores may appear inside solid images.
White, fish-shape stains	White points or short lines may appear in the feed direction in 189 mm pitch.
Small granular toner fixation	0.5-1 mm or trailing toner fixation may appear in halftone images.

Troubleshooting for Color spots (189mm/40mm pitch)

Symptom

Colored spots appear at 40mm or 189mm intervals in solid image areas (black or white) or throughout the entire image on the single-color Independent Pattern (1-dot), when printing onto A3 or SRA3 sheets.

Cause

- Scratches or foreign particles on the OPC surface
- Scratches or foreign particles on the charge rollers

Solution

Do the following:

1. Load A3 or SRA3 paper in the tray.
2. In SP2-1090-003, set the test pattern to solid white, solid black, and single color Independent Pattern 1-dot.
3. Print out the pattern and check the interval of the spots.

If the symptom occurs at 189mm intervals:

- If there are any scratches on the OPC, replace the OPC.
- If there are no scratches, wipe the OPC surface with a damp cloth and then with a dry cloth.

If the symptom occurs at 40mm intervals:

- If there are scratches on the charge rollers, replace the affected roller(s).
- If there are no scratches, wipe the surface of the roller with a damp cloth and then with a dry cloth.

Troubleshooting for White Spots in Low-Temperature, Low-Humidity Environment**Symptom**

1. Under the weight of Plain Paper 2: White spots may appear on the 2nd page of duplex printing when using the paper with unsmooth surface and high electric resistance in LL environment.
2. Higher than weight of Middle Thick Paper: White spots may appear on paper with unsmooth surface and high electric resistance. (See sample image below)



d1352971

5

Cause

1. The electrical resistance increases when the paper goes through the fusing roller and the moisture of the paper evaporates.
2. Due to high electrical resistance characteristics of the paper.

Action

Lower transfer current by changing the following SP

Only change the paper type and thickness that the user needs to use.

D135/D136/D137/D138

SP No.	SP Name
SP2-641-001 to 078	PTR Bias:BW

SP No.	SP Name
SP2-642-001 to 078	PTR Bias:BW
SP2-651-001 to 078	PTR Bias:FC
SP2-652-001 to 078	PTR Bias:FC

D137/D138 only

No.	IMSS setting
42	Paper Transfer Current Setting: B&W: Side 1
43	Paper Transfer Current Setting: Full Color: Side 1
44	Paper Transfer Current Setting: B&W: Side 2
45	Paper Transfer Current Setting: Full Color: Side 2

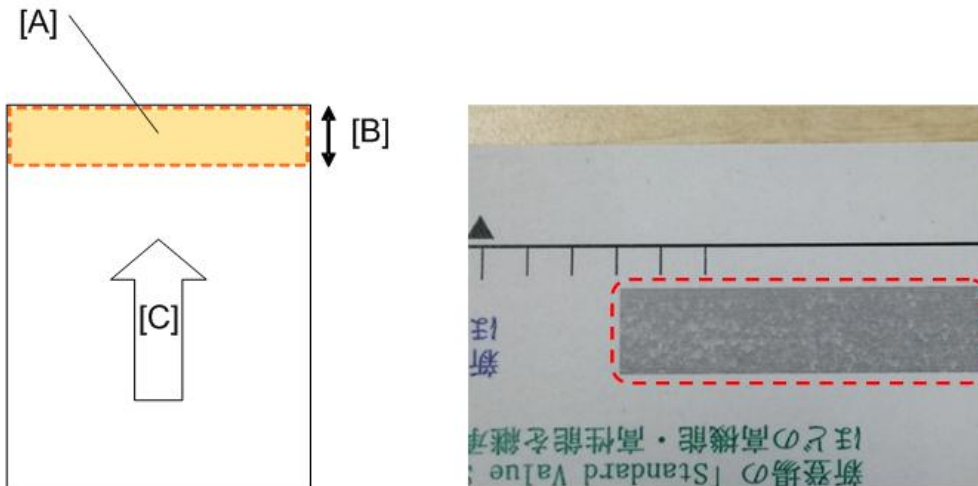
Note

- Image may not be solid enough, in case of too low transfer current.

Troubleshooting for White spots Appear in Winter Environment (Pro C5110S/Pro C5100S)

Symptom

White spots appear in an area ranging 40mm from the leading edge.



d135a3152

[A]: White spots

[B]: 40mm

[C]: Feed direction

Cause

Electrical discharge occurs at the PTR nip.

-In detail-

In low temp and low humidity environment, the resistivity of the PTR increases. To maintain the prescribed electric current level in this adverse condition, the transfer voltage increases. Running the machine in this condition using paper with high resistivity and low surface smoothness causes electrical discharge at the PTR nip as a result of excessive transfer voltage.

The problem is likely to occur in the following conditions.

Model: D137/D138 only (AC transfer applies higher transfer voltage at the leading edge)

Environment : Low temperature & low humidity

Paper: High resistance & low surface smoothness

Image: Halftone

Solution

1. Decrease the paper transfer current from -75 micro A (default) to -60 micro A.
This will prevent the PTR voltage from increasing.
Possible side effect: Solid colors appear slightly faint.
2. Run a 50-100 page job. This will increase the machine internal temperature and prevent the discharge from occurring at the PTR nip.
3. Request your customer to use paper with lower resistivity and higher surface smoothness.

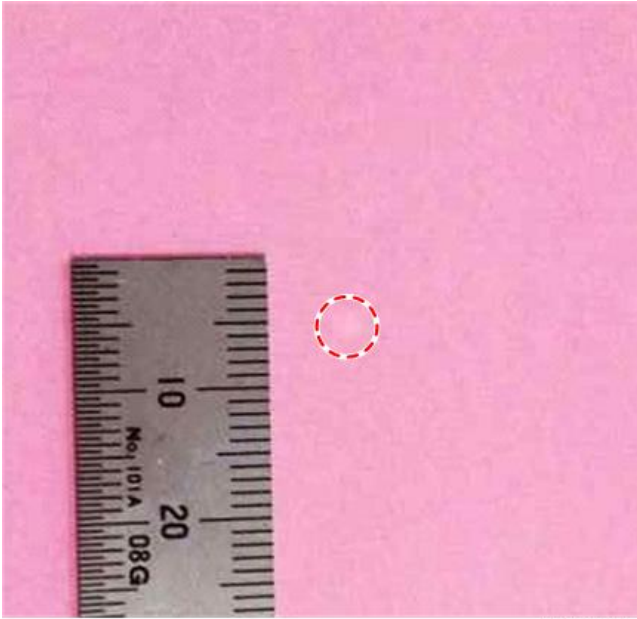
Troubleshooting for White spots

Symptom

White or black spots appear when printing halftone images in low-temperature, low-humidity environments (10C/15%) immediately after the developer is replaced.

↓ Note

- Black spots occur more frequently when printing onto coated paper.



d1352926

Cause

Some carrier particles inside newly-installed developer have a relatively high electrical potential. These particles may be transferred to the OPC in non-image areas as well, and then fall off before image transfer. As a result, a white spot is developed on the image.

If these carrier particles are transferred to the ITB, toner around the carrier drops off, forming a black spot.

Solution

Do the following.

D137/D138:

Execute "Adjust Image Density" (0201-01) inside the Skilled Operator Settings.

↓ Note

- This is effective when the development gamma is low (about 0.8 or less) or the OPC electric potential is high, such as in low-temperature, low-humidity environments.

D135/D136:

Execute "Density Adjustment Process Control" by tapping the following buttons: [User Tools/Counters] – [Management] – [Auto Color Calibration].

↓ Note

- This is effective when the development gamma is low (about 0.8 or less) or the OPC electric potential is high, such as in low-temperature, low-humidity environments.
- After you do this, color calibration is optional.

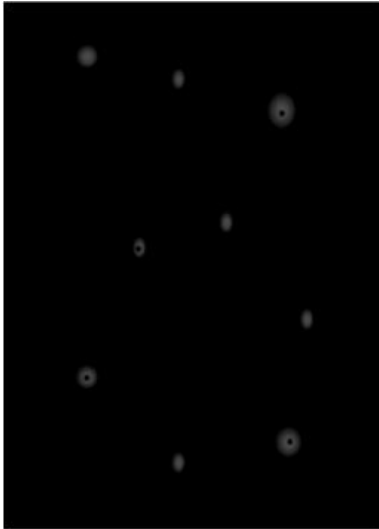
CE:

Execute SP3-011-002 ([Manual ProCon :Exe] - Density Adjustment).

Troubleshooting for White spots with toner cores

Symptom

White spots with "toner cores" appear inside solid images/patches when printing under high-temperature conditions.



d1352842

5

Cause

- The machine is left unused for an extended time, and toner tends to clump inside the development unit. As a result, toner may not be transferred onto the paper correctly.
- The PCDU is subjected to strong vibration or shock. This may cause toner on the wall of the unit to fall inside the developer and form clumps.
- The toner is left outside the moisture bag too long. This may cause toner to form clumps.

Solution

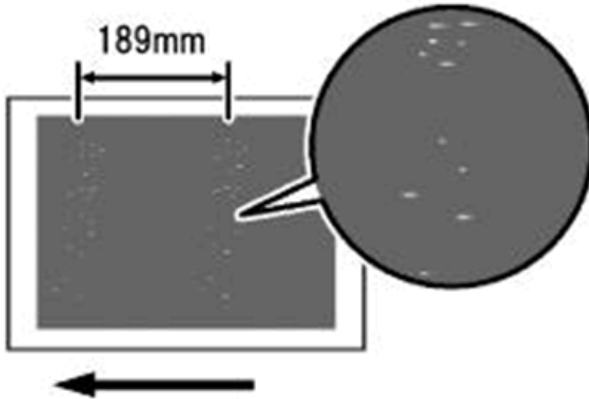
Do the following, which will clear the toner clumps out of the development unit.

1. Make a test print and determine the affected color(s).
2. Print out 30-200 A3 sheets with solid images of the affected color(s).
3. If the symptom still occurs, replace the toner cartridge of the affected color.
4. Repeat Step 2.
5. If the symptom still occurs, replace the development unit/developer of the affected color.

Troubleshooting for White, fish-shape stains

Symptom

Rows of “Medaka” (small, white, fish-shaped specks) appear in solid image areas along the paper feed direction at 189mm intervals when printing onto A3/SRA3 paper.



5

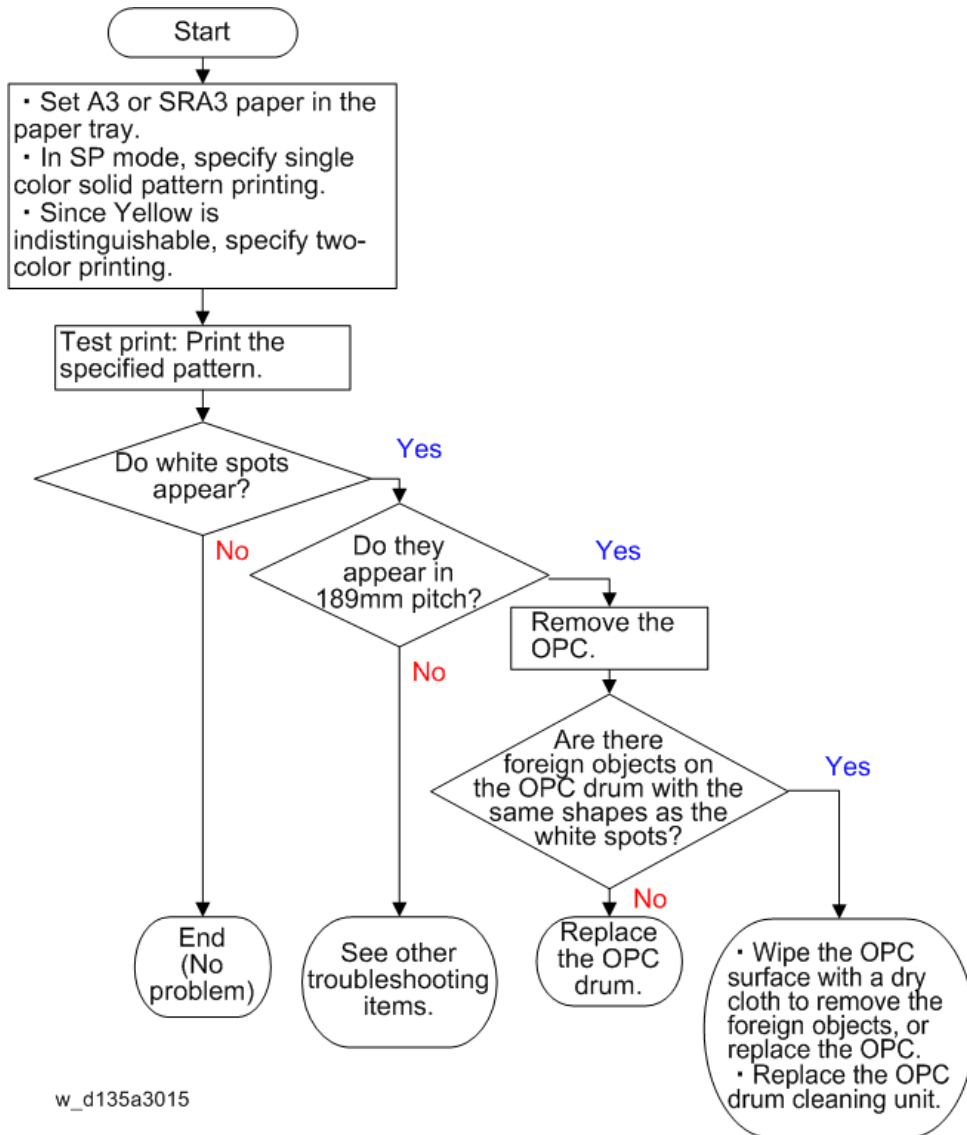
d135a3014

Cause

Small foreign objects or particles on the surface of the OPC drum

Solution

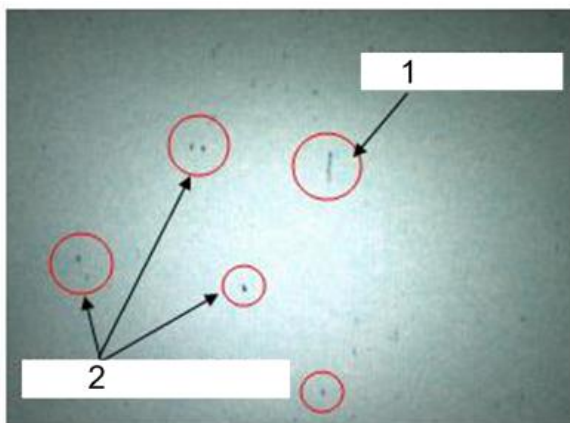
Do the action shown in the flowchart below.



Troubleshooting for Small granular toner fixation (Pro C5110S /Pro C5100S)

Symptom

Small clumps of toner are offset and appear as spots or short lines.



d135a3016

5

1. Short line
2. Spots (0.5 to 1 mm)

Cause

Toner clumps adhered to the pressure roller are not picked up by the cleaning web and offset to the printed paper.

Following are conditions that increase the risk of this symptom:

- Halftone printing
- Duplex printing
- Uncoated (especially rough surfaced) paper
- Small size paper (B5, customer paper of 216mm in sub scan direction)

Flow chart

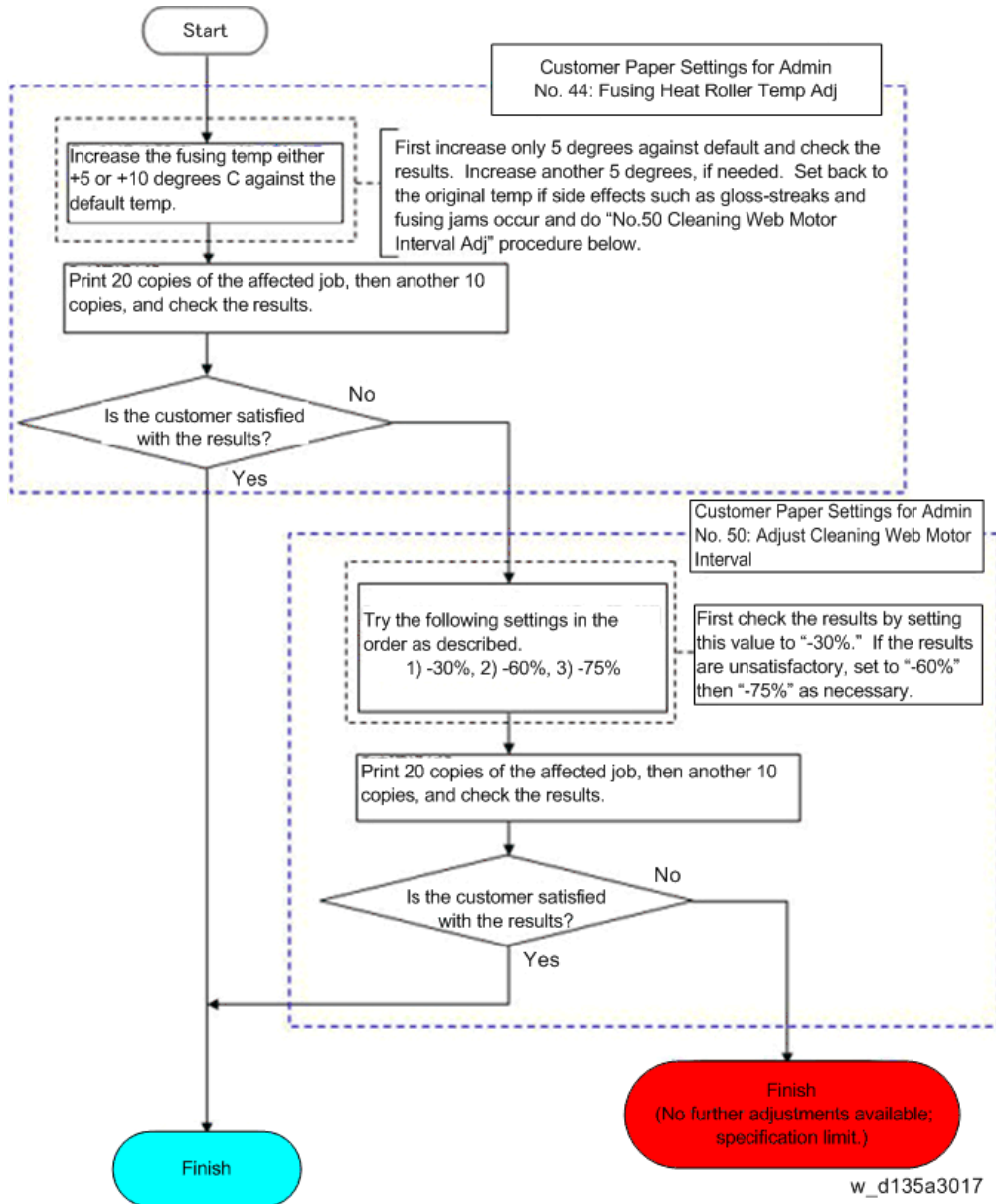


Image Quality 002: Streaks

Overview

A smudge or a white area inside an image, in a linear shape with 1 mm or smaller width.

Item	Description
Vertical streaks caused by contact with the toner adhering to the guide plate	Vertical streaks may appear.
Streaks made by Paper Edges	Streaks appear on the prints after switching the paper to a larger size
Horizontal white streaks in small solid black areas	Horizontal white streaks may appear in the small solid black area when printing in HH environment (27° C 80%).

Troubleshooting for Vertical streaks caused by contact with the toner adhering to the guide plate

5

Symptom

Vertical streaks appear.

Condition

Scratches tend to stand out when printing on relatively stiff thick coated paper.

Cause

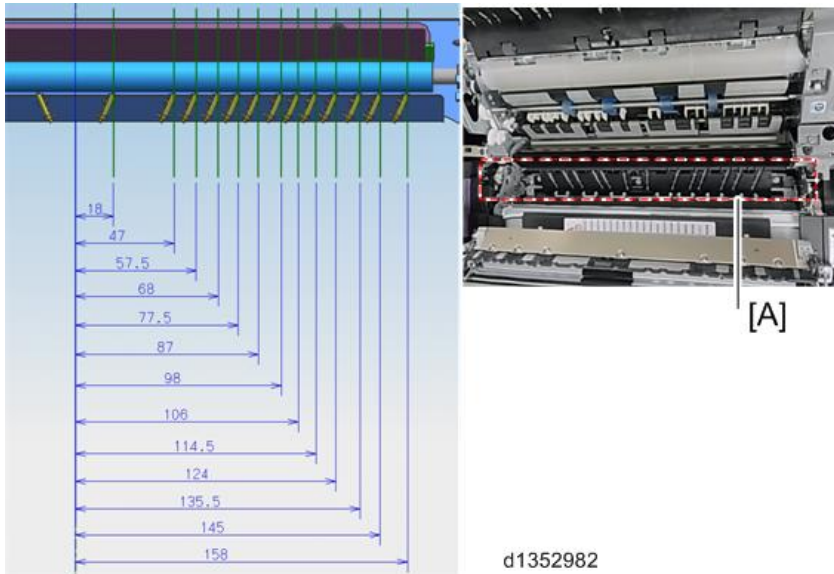
Paper after fusing come into contact with small convex scratches or adhering toner on the guide plate and vertical streaks appear.

Action (overview)

1. If the problem occurs in the position of the ribs of the heat pipe entrance guide plate, clean the heat pipe entrance guide plate ribs.
2. If the problem occurs in other places, clean the paper transport path/duplex unit.
3. If cleaning does not improve the situation, lower the fusing temperature.

Action (detail 1): Clean the heat pipe entrance guide plate ribs.

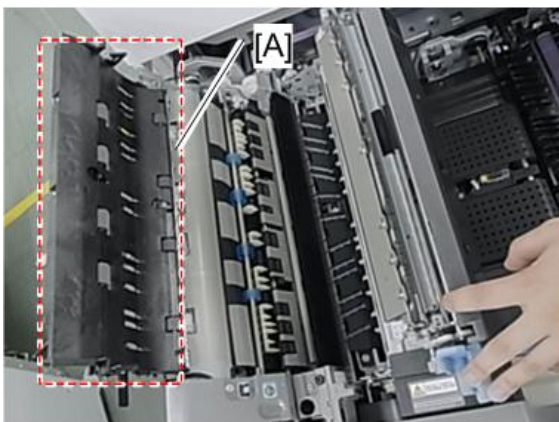
Position of the heat pipe entrance guide plate ribs [A]



Action (detail 2): Clean the Paper Exit transport path/Duplex unit.

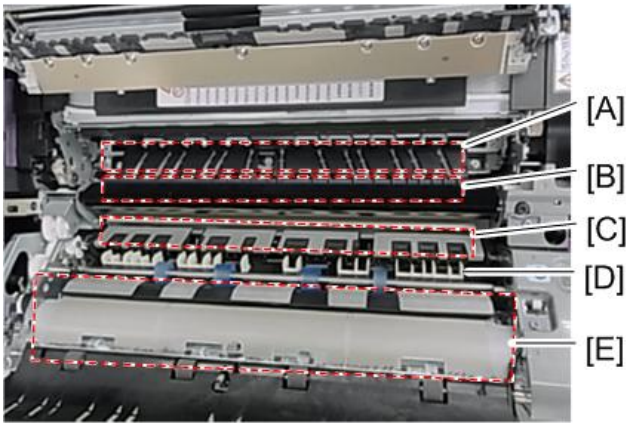
- If streaks appear on straight-fed one-sided prints or the second side of two side prints: (1) Clean the upper part of the Paper Exit transport path.
- If streaks appear on first sides of two-sided prints: (2) Clean the lower part of the Paper Exit transport path.
- If streaks appear on inverted one-sided prints: (3) Clean the lower left part of the Paper Exit transport path.
- If streaks appear on the second side of two side prints: (4) Clean the duplex unit.

1. Upper part of the Paper Exit transport path



[A]: Paper Exit Upper Guide Plate

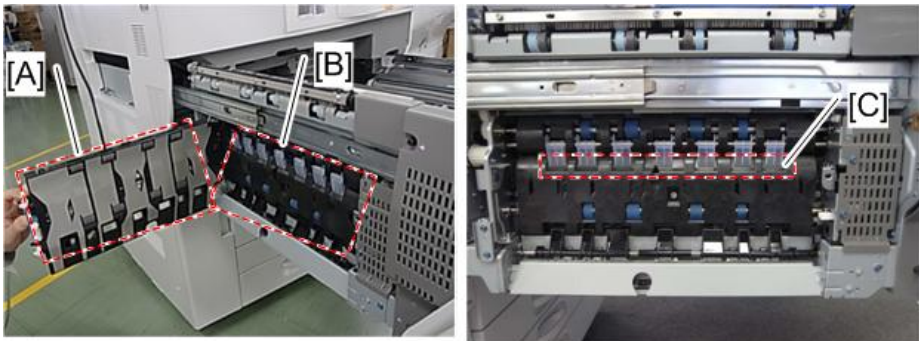
2. Lower part of the Paper Exit transport path



d1352936

- [A]: Fuser Exit Guide Plate
- [B]: Heat Pipe Entrance Guide Plate
- [C]: Paper Exit Junction Gate
- [D]: Transport Ribs (22 positions)
- [E]: Paper Exit Guide Plate (Clean this point intensively.)

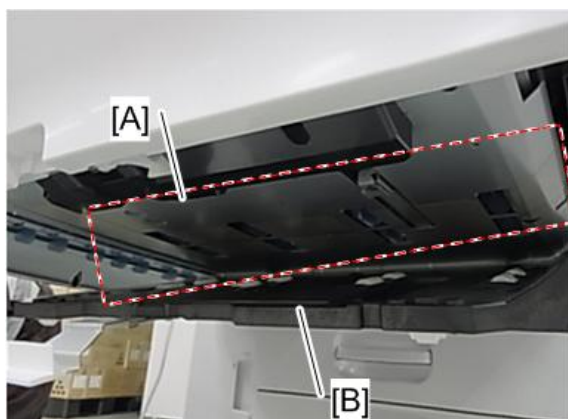
3. Lower left part of the Paper Exit transport path



d1352937

- [A]: Paper Exit Lower Left Guide Plate (Clean this point intensively.)
- [B]: Paper Exit Lower Right Guide Plate
- [C]: Junction Gate Ends

4. Duplex unit



d1352938

[A]: Duplex Transport guide plate (Upper) (Clean the turning point on the right intensively.)

[B]: Duplex Transport guide plate (Lower)

Action (detail 3): Lower the fusing temperature.

Enter SP mode and lower the fusing temperature with SP1-984. (Guideline: Lower it 10° C at a time.)

↓ Note

- There is a risk of decreasing fusing ability. Be sure to check the printed results.

Pro/Office	SP No.	SP Name	Value
Pro/Office	SP1-984-109 to 254	Htg Roller Temp Setting	0 to 200

Pro/Office	No.	IMSS setting	Value
Pro	74 (SP1-984-001 to 100)	Fusing Heat Roller Temperature Adjustment	0 to 200

Reference

Following are features unique to the CH-C1 series that contribute to the vertical streaks.

- Chances of foreign materials to scratch the prints are high because the toner used for the Charis series has a low melting point.
- Paper contacts the guide plate after fusing because the curve of the switchback exit path is tight.

	MPC7501/6501	ProC5100S/5110S	ProC751EX/651EX
Curvature	Ave R35	Ave R50	Ave R70

	MPC7501/6501	ProC5100S/5110S	ProC751EX/651EX
Supported paper (gsm)	Straight: up to 300gsm Switchback: up to 163gsm Duplex: up to 163gsm	Straight: up to 300gsm Switchback: up to 256gsm Duplex: up to 256gsm	Straight: up to 300gsm Switchback: up to 256gsm Duplex: up to 256gsm
Toner	CER	SPR-F2 * Low melting point	CER-gamma

Comparison with MPC7501/6501

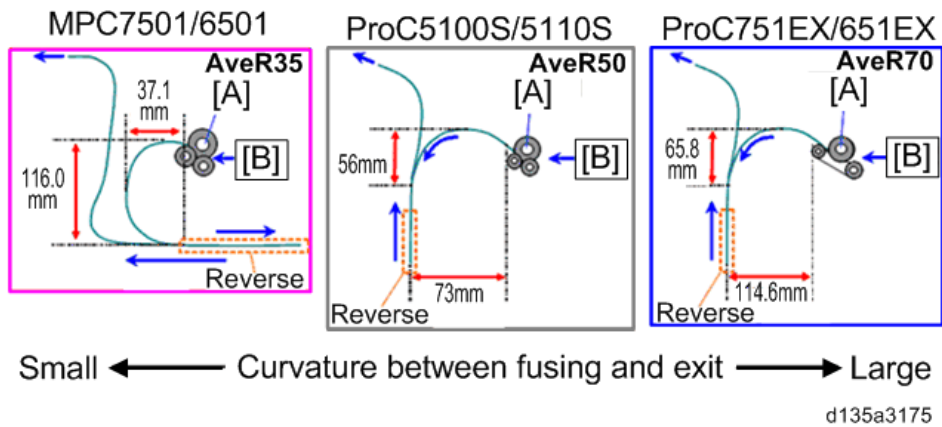
Advantage: Curvature

Disadvantage: Support for thicker paper, Toner

Comparison with ProC751EX/651EX

Disadvantage: Support for thicker paper, Toner

Layout of the fusing exit paper path



[A]: Cooling roller

[B]: Fusing

Troubleshooting for Streaks made by Paper Edges

General

D137/D138 employs the new Fusing Belt Smoothing Roller feature to prevent streaks caused by scratches on the fusing belt generated by paper edges.

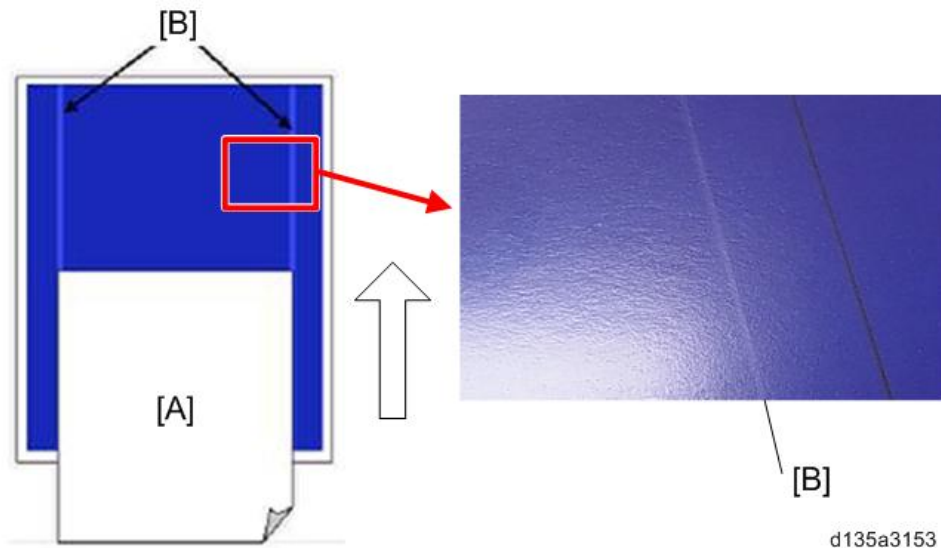
Since this feature can be used by operators, please recommend usage of this feature to customers who are troubled with the problem described below, especially for customers who use coated and/or thick paper.

Symptom

Streaks appear along the feed direction when switching to a larger paper size.

Cause

Running a job continuously on a certain paper size causes the paper edges to damage the fusing belt, which causes streaks on the printouts when switching to a larger paper size.

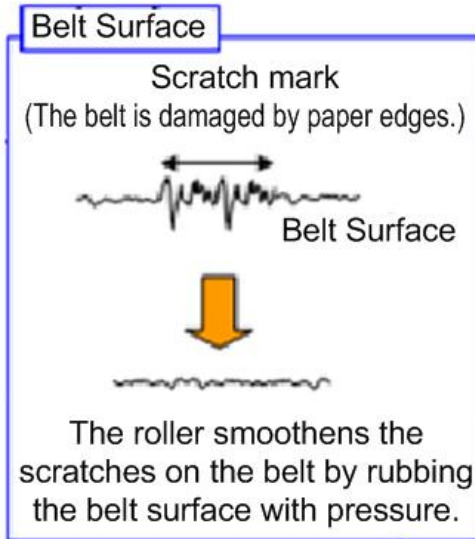


[A] The smaller size paper used prior to the job resulting in the streaks, which causes the damage to the fusing belt

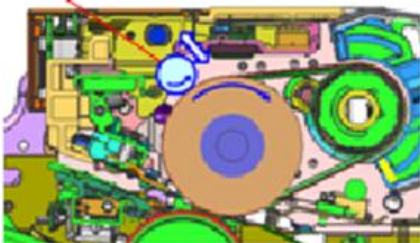
[B] Paper edge mark on the fusing belt

Solution (D137/D138)

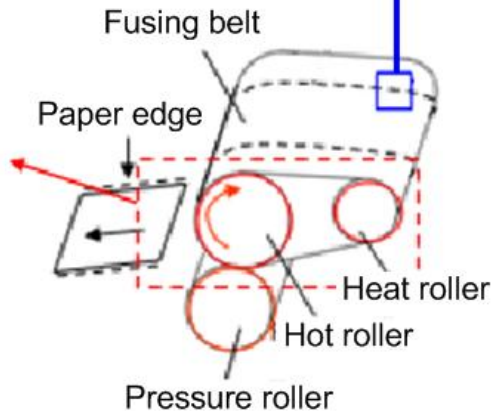
Smooth the Fusing Belt with the Fusing Smoothing Roller using SP mode.



Belt smoothing roller



d135a3154





SP	Operator menu	Description	Setting
SP1-133-110	0210	Fusing Belt Smoothing Roller	1: Yes 0: No

- One belt smoothing operation lasts for 3 minutes.
- Belt smoothing operation time can be adjusted in SP1-133-120 (default: 3 min).
- The yield of the belt smoothing roller is 180 minutes (= 60 times).

Effect

The photos in the table below show a sample of the effect brought from the belt smoothing operation.

Condition 1: Printing on HML A3 after printing 10kp of full-bleed solid on HMLSRA3	Condition 2: One smoothing operation (3 min) after "Condition 1"	Condition 3: Two smoothing operations (6 min) after "Condition 2"
 <p>d135a3155</p>	 <p>d135a3156</p>	 <p>d135a3157</p>

Note

- Effect will differ depending on the paper in use and job conditions.

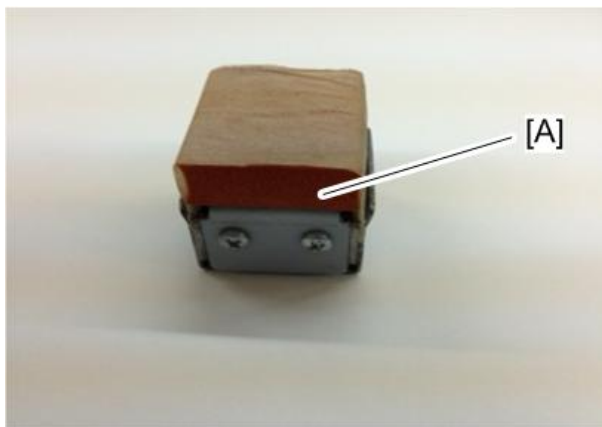
Solution (D135/D136)

Polish the edges on the fusing belt using the tool in the following table.

See procedure below.

5

New P/N	Description	Q'ty	Int	Page	Index	Note
M077428 7	WEB:POLISH:FUSING:ASS'Y	1	-	-	-	-



d135a3134

[A]: M0774287 WEB:POLISH:FUSING:ASS'Y

Procedure for Polishing the Fusing Belt

1. Pull out the drawer unit.

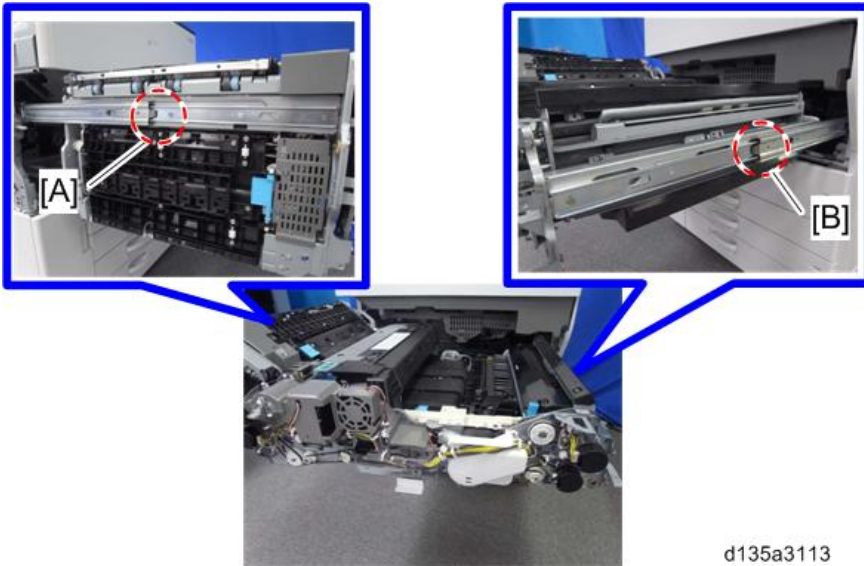


d135a3112

2. Press locks ([A], [B]) and remove the unit from the machine.

★ Important

- Hold the locks down while you pull out the unit.



d135a3113

3. Open the top cover.



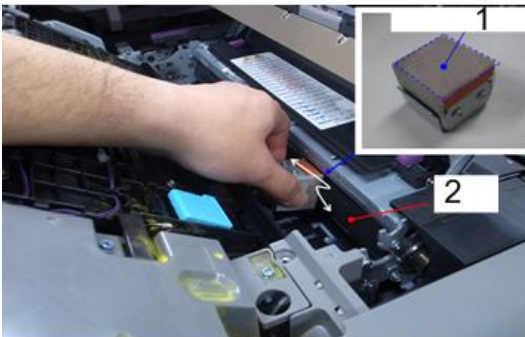
d135a3102

4. Rub the surface of the M0774287 polishing tool (WEB:POLISH:FUSING:ASS'Y) against the surface of the fusing belt.

★ Important

- After you finish each section of the fusing belt surface, rotate the fusing gear [A] counterclockwise and do the next section. Repeat this until you have polished the entire surface of the belt.
- Make sure to polish both the front and rear sides of the fusing belt. This is because scratches are generated by the front and rear edges of paper.

5



d135a3114

1. Surface of polishing tool

2. Fusing belt

↓ Note

- This action will smoothen out any scratches on the fusing belt surface.
- When you rotate the fusing gear [A] counterclockwise, the fusing belt rotates clockwise.



d135a3115

5. After you finish polishing the entire belt, close the fusing unit cover.
6. Reattach the drawer unit.
7. Print out some sample copies and check whether the vertical lines appear.

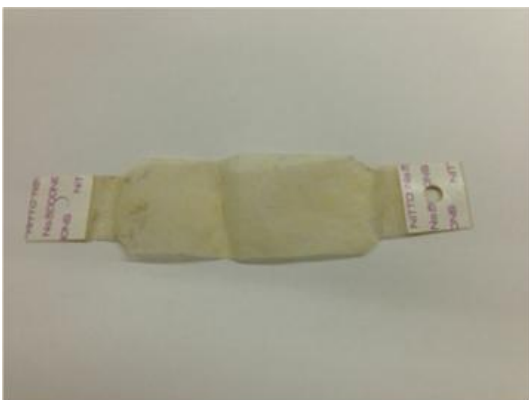
5

Note

- It is recommended to replace this web (M0774288) after each polishing of the fusing belt (one web per fusing belt) in accordance with the following procedure.

New P/N	Description	Q'ty	Int	Page	Index	Note
M0774288	WEB:POLISH:FUSING	1	-	-	-	-

M0774288 WEB:POLISH:FUSING



d135a3103

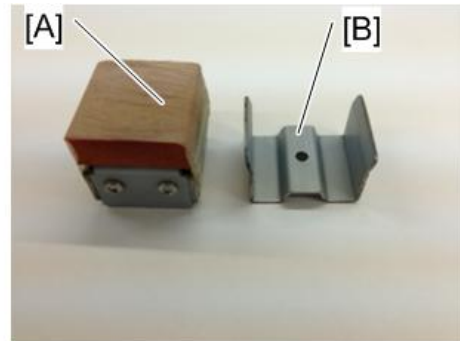
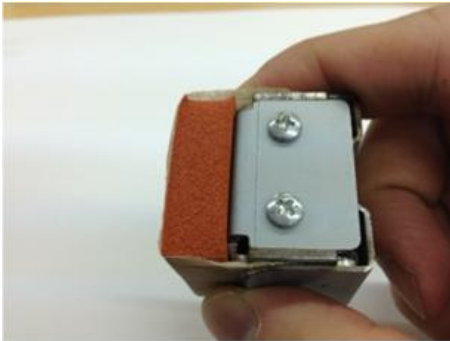
Procedure for Replacing the Web

1. Remove the screw at the bottom of the tool.



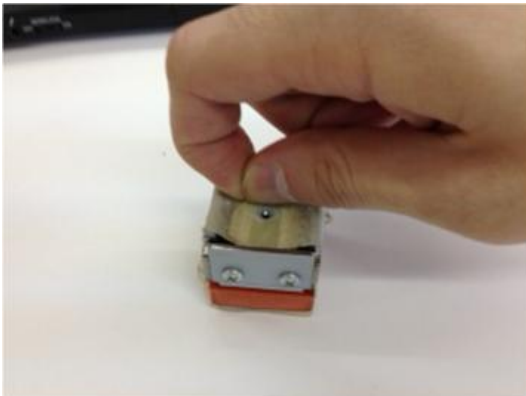
d135a3104

2. Remove the metal plate [B] from the tool [A].



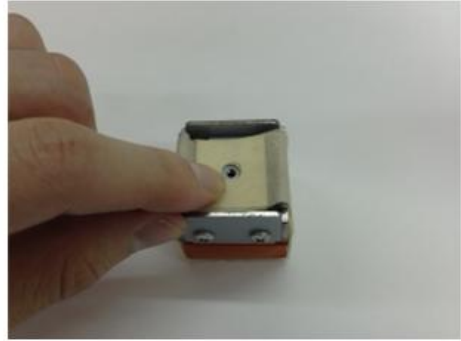
d135a3105

3. Peel off the used web (M0774288 WEB:POLISH:FUSING).



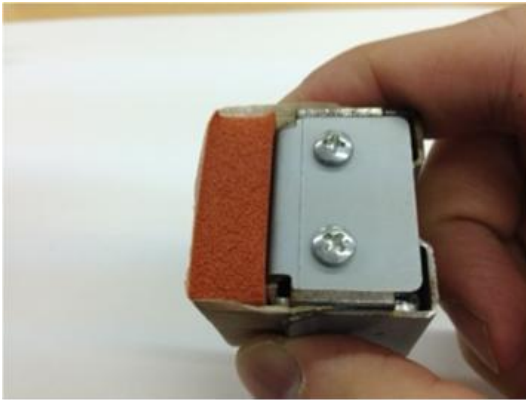
d135a3106

4. Peel off the seals on both ends of the new web, and then wrap the web around the tool.



d135a3107

5. Attach the metal plate to the tool.



d135a3108

6. Fasten the bottom screw to complete the procedure.



d135a3109

Troubleshooting for Horizontal White Streaks in Small Solid Black Areas

Symptom

White streaks may appear in feeding direction on the small solid black area (smaller than 3cm x 3cm). (See sample below in red circle)



Cause

Detailed description will be added when this manual is revised.

Action

1. Print black in FC mode.

PS driver and PCL driver

- Select "Print Quality" from Detailed Settings.
- Select "User Setting" as Settings for Images.
- Select "CMY+K" or "Black by K (Black) – Text Only" for PS driver, and "CMY+K" for PCL driver as Gray Reproduction.

Fiery driver

- Select "Job Properties" of the affected image.
- Select "Expert setting" from "Color" tab.
- Select "Gray/Black Processing" Tab.
- Specify "Normal" for Black text and graphics in order to print in CMYK mode.

2. Increase image transfer current. (+5 to 10 μ A from the default)

D135/D136/D137/D138

SP No.	SP Name
SP2-451-001	ITB K:Standard:FC
SP2-451-002	ITB K:Standard:BW

D137/D138 only

No.	IMSS setting
37	Image Transfer Current Setting: B&W
38	Image Transfer Current Setting: FC: Black

Note

- Transfer capability and image density may worsen.
- Residual image in black halftone may appear.

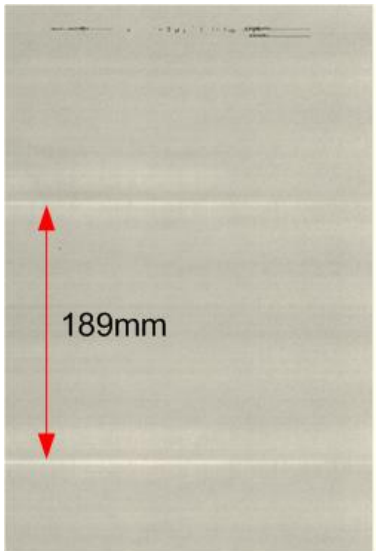
Image Quality 003: Bands

5

Troubleshooting for Blurred Image in 189mm Pitch (OPC Drum Circumference)

Symptom

First few printouts after turning on the machine may have 189mm pitch blurred image (which corresponds to the OPC drum circumference) on halftone images in high humidity environment. (See sample below)



d135a3116

Cause

Charge failure caused by "corona products" that form on the OPC drum
 If the symptom occurs when all of conditions below are met,

- Operation after a long break (as in the initial operation of the day)
- Halftone image
- High humidity

Action

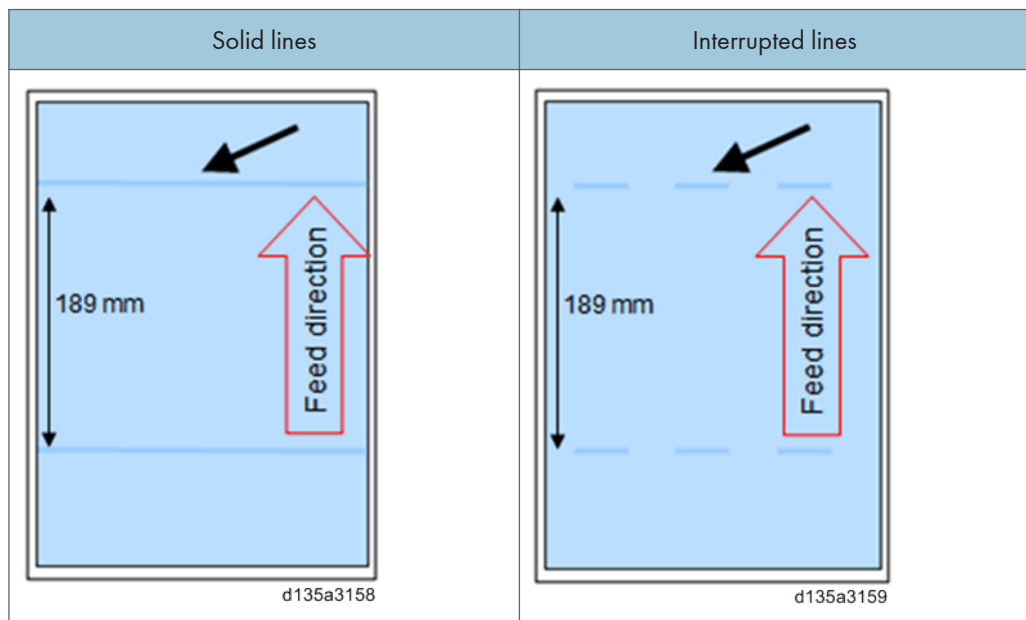
1. Execute "Color Registration" from "Maintenance" in User Tools.
2. Execute "Auto Color Calibration" from "Maintenance" in User Tools.

Troubleshooting fuzzy line in originating in cyan drum (Pro C5110S/Pro C5100S)

This section provides troubleshooting procedures for the image quality issue known as "fuzzy lines", particularly for those originating in the Cyan station.

Symptom

Unwanted lines appear on the printouts in 189mm pitch (=drum circumference) in main scan direction. The lines could either be solid or interrupted as shown below.



Note

- To check if the lines are originating in the Cyan station, print out a solid image in 100% Cyan.

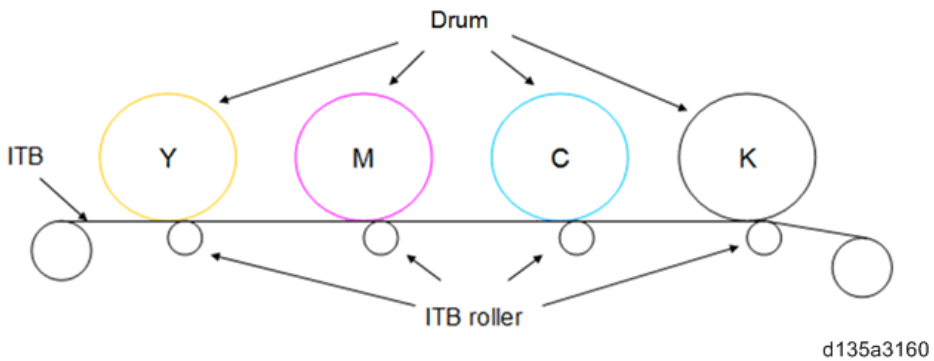
Cause

The electrical charge applied to the ITB is discharged when the ITB passes under the Cyan drum. This is because the ITB is closer to the Cyan drum than other drums when the ITB retracts.

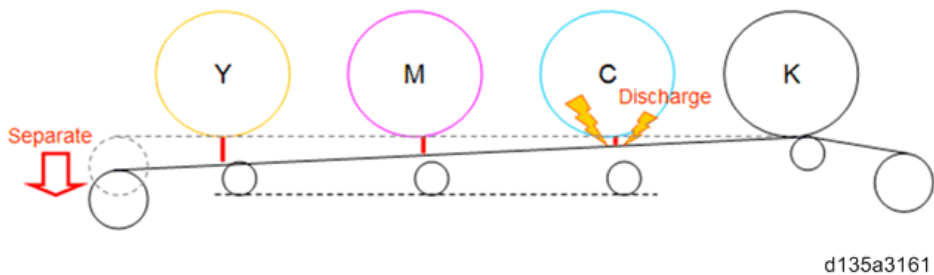
Note

- The problem is more likely to occur with a wrinkled ITB because the distance between the ITB and drum could come closer at the wrinkled spots, resulting in the discharge. The unwanted lines usually appear interrupted in this case.
- Also, the problem is more likely to occur with brand new units. Running the machine will acclimatize the ITB and drum, and resolve the problem.

This diagram describes the condition of the ITB and drums when the ITB is in contact with all the drums.



However, when the ITB retracts from the color drums, the distance between the ITB and Y, M and C drums varies. The C drum is closest to the ITB.



Solution

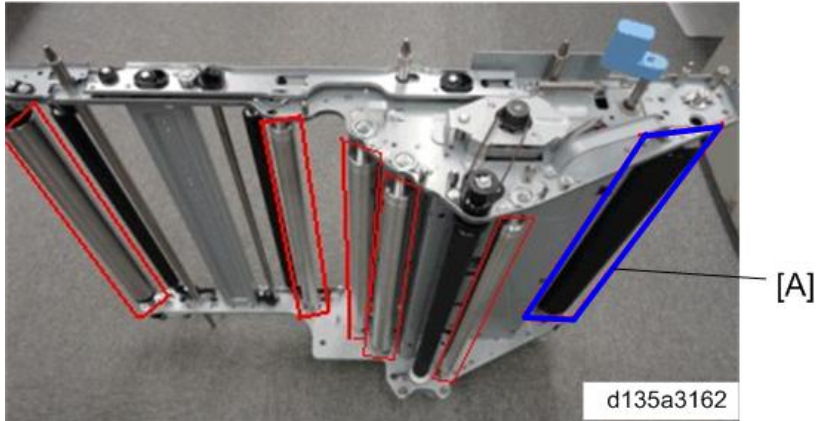
For solid lines:

Replace the ITB drive roller.

If the problem persists even after replacing the ITB driver roller, print out 10 to 50 copies of solid images in 100% Cyan to acclimatize the ITB and drum.

For interrupted lines:

Replace the ITB driver roller. This will help prevent wrinkles from forming on the ITB.



[A]: ITB drive roller

Model: D137/D138

Old Part Number	New Part Number	Description	Q'ty	Int	Page	Index	Note
D1366070	D1356070	DRIVE ROLLER: INTERMEDIATE TRANSFER:ASS'Y	1	-	-	-	-

S/N information

The production process was improved to prevent wrinkles from forming on the ITB for units of the following S/N.

D13717: E253C900027-

D13721: E253C920001-

D13727: E253C930001-

D13729: E253C950001-

D13817: E263C900001-

D13821: E263C920001 -

D13827: E263C930001-

D13829: E263C950001-

Troubleshooting Roller marks

Symptom

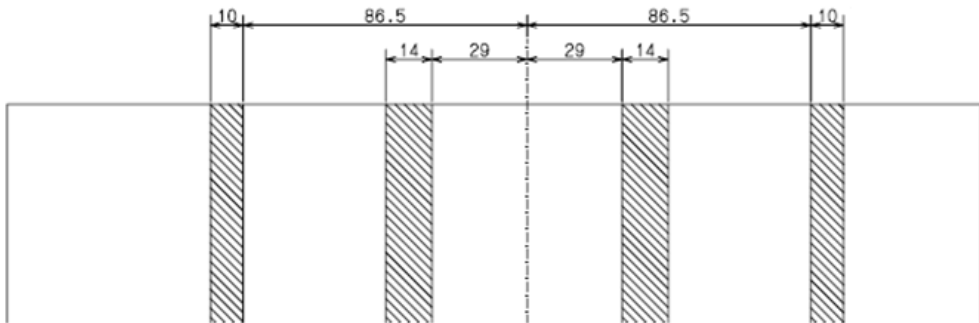
Roller marks appear on the printouts when any of the following conditions are met:

- Coated paper
- Solid image
- High-temp / high-humidity environment (27 °C, 80% or higher)

Cause

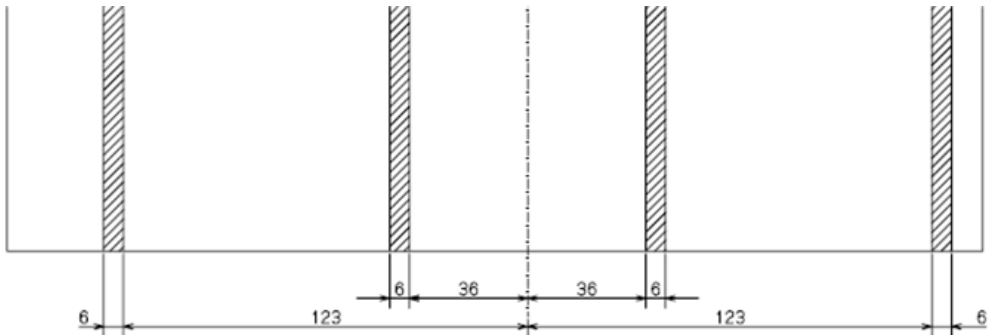
Nip of the drive and idle rollers installed in the paper path after the fusing unit

Diagram describing the location of the roller marks caused by the **Paper exit relay roller, Inverter feed-in roller, Inverter exit roller, Inverter feed-out roller**:



d1352973

Diagram describing the location of the roller marks caused by the **Paper exit roller**:



d1352974

Solution

Step 1: Clean or replace the drive/idle rollers.

If the roller marks do not disappear by cleaning or replacing the rollers, do Step 2.

Step 2: Decrease the fusing temp.

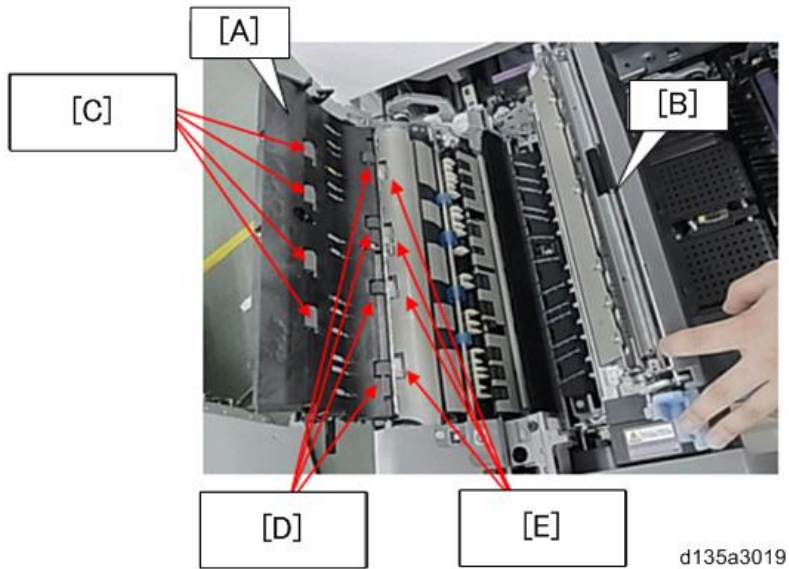
Step 1: Clean or replace the drive/idle rollers in the following units.

Note

- Clean the rollers with dry cloth. DO NOT apply alcohol.

Paper Exit Unit

Open the guide plates and clean the following rollers.



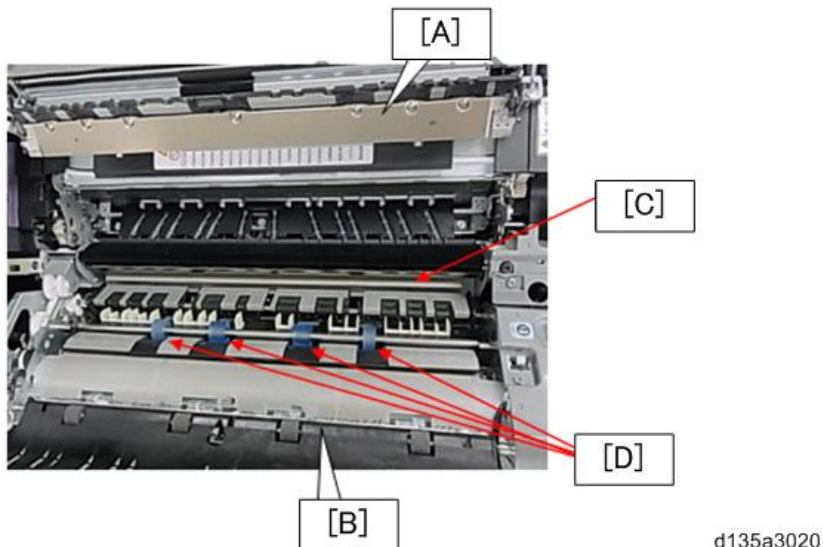
[A]: Paper exit unit

[B]: Fusing unit

[C]: Sponge rollers (Paper exit relay)

[D]: Sponge rollers (Paper exit)

[E]: Rubber rollers (Paper exit)

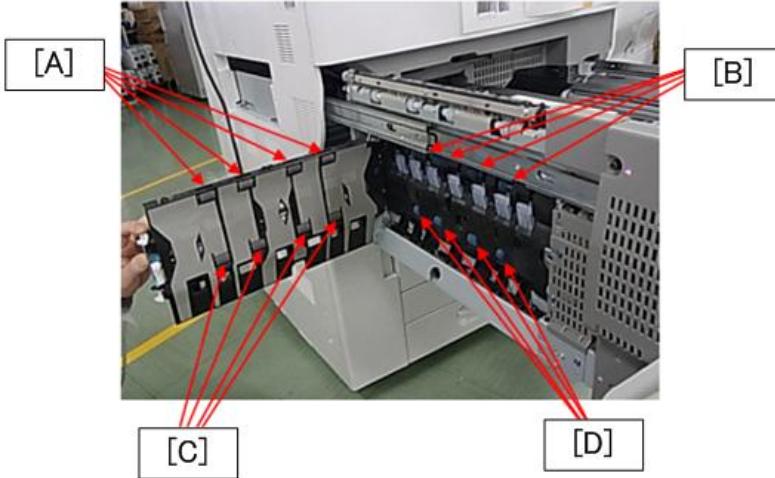


[A]: Fusing unit

[B]: Paper exit unit

[C]: Heat pipe rollers

[D]: Rubber Rollers (Paper exit relay)



d135a3021

[A]: Sponge rollers (Inverter exit)

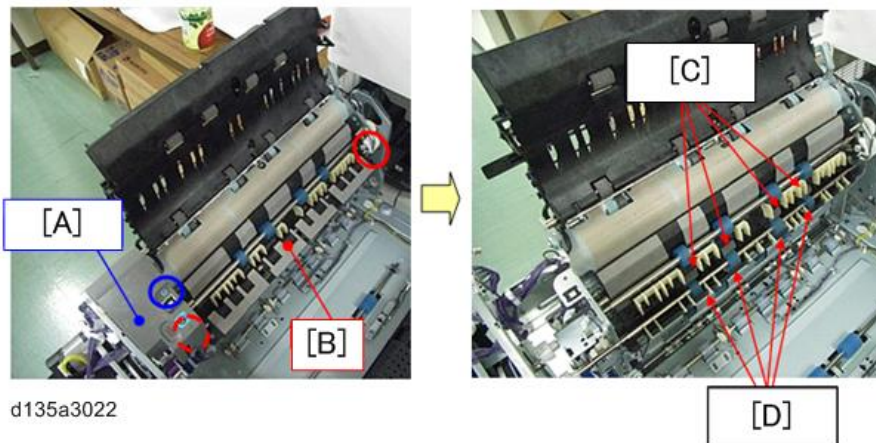
[B]: Rubber rollers (Inverter exit)

[C]: Sponge rollers (Inverter feed-out)

[D]: Rubber rollers (Inverter feed-out)

Inverter Feed-in

Remove the fusing unit. Remove the screw (circled in blue) to remove the inner cover. Remove the 2 E-rings (circled in red) to remove the junction gate.



d135a3022

[A]: Inner cover

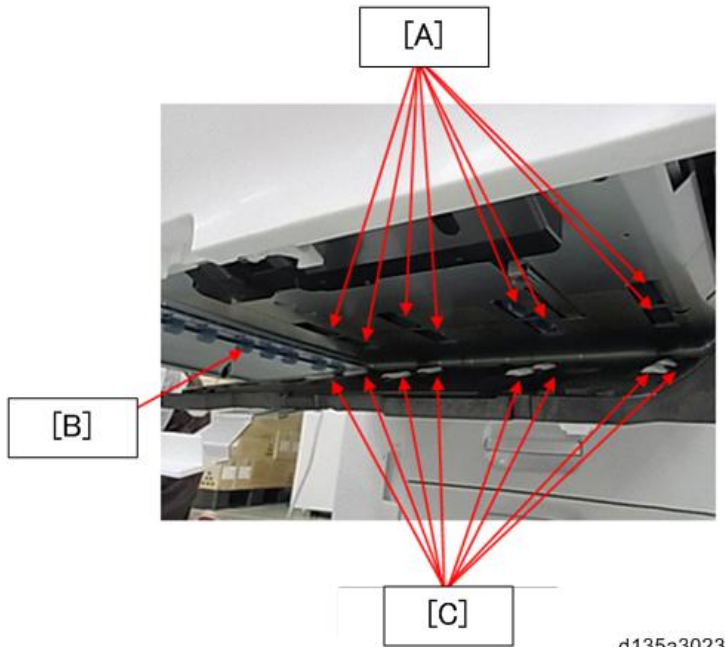
[B]: Junction gate

[C]: Sponge rollers (Inverter feed-in)

[D]: Rubber rollers (Inverter feed-in)

Duplex Unit

To clean the rollers inside the Duplex unit, cover the cloth over an equipment with length, for example, a ruler for extended reach.



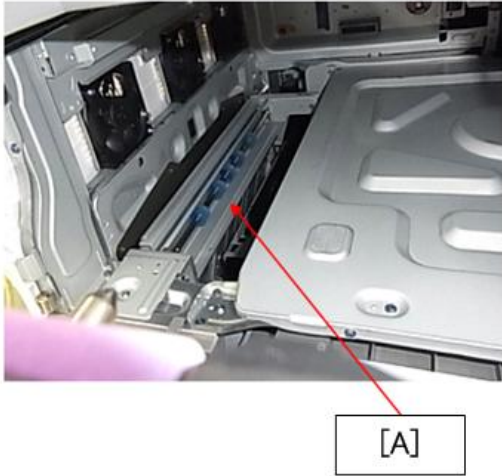
d135a3023

[A]: Rubber rollers x 8

[B]: Rubber rollers x 7

[C]: Idle rollers x 8

Duplex Inverter Unit



d135a3024

[A]: Rubber rollers x 5

5

Step 2: Decreasing the fusing temp

Decrease the fusing temp by 1 step (10 °C) in either the IMSS or SP mode.

↓ Note

- Decreasing the fusing temp may cause poor fusing. Make sure to check the results after every adjustment.

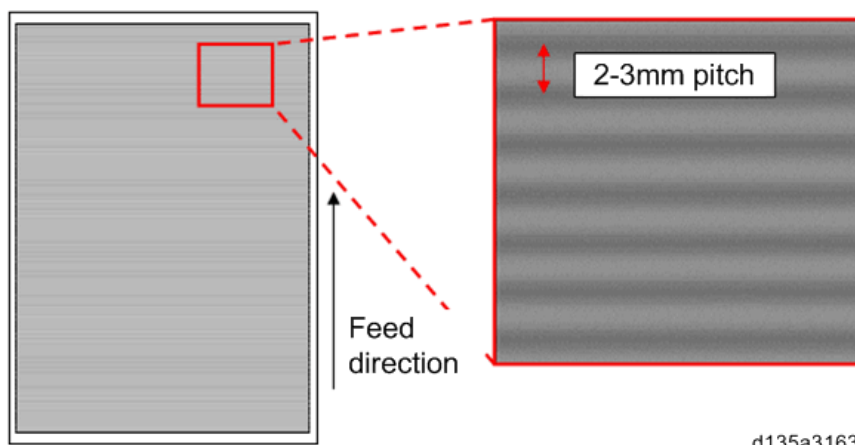
IMSS No.	Description	Range
74 (SP1-984-001 to 100)	Fusing Heat Roller Temperature Adjustment (for each custom paper)	0 to 200 °C

SP No.	Description	Range
SP1-984-109 to 254	Htg Roller Temp Setting (for each paper type/ thickness)	0 to 200 °C

Troubleshooting for 2-3mm pitch banding

Symptom

Banding (uneven density) in 2-3mm pitch



d135a3163

Cause

Vibration of the cleaning unit synchronizes with the vibration generated by the gears that rotate the Cleaning Brush Roller, creating a resonance.

This occurs specifically when the Cleaning Brush Roller rotates in the following 2 speeds, which are defined as "Environment Coefficient 7 & 8" based on the absolute humidity detected internally by the machine.

Operation mode	Absolute humidity	Cleaning brush roller rotation speed coefficient
Environment Coefficient 7	15-17.5 g/m ³	1.63 (default)
Environment Coefficient 8	17.5-20 g/m ³	1.76 (default)

Reference

Environment Coefficient 1-3: Low temperature and low humidity

Environment Coefficient 4-6: Optimum machine operational condition (laboratory)

Environment Coefficient 7-10: High temperature and high humidity

Solution

Enter the SP mode and modify the environment coefficient set for Environment Coefficient 7 and 8 as shown below.

SP2-225-038 Environment Coefficient 7	1.63 (default)	→ 1.90
SP2-225-039 Environment Coefficient 8	1.76 (default)	→ 1.90

* 1.90 is the default environment coefficient set for Environment Coefficient 9.

IMPORTANT

If you are not sure whether the uneven density problem you are trying to resolve is "Banding in 2-3mm pitch" or not, do the following procedure.

- A) Set SP2-225-032 through 041 to "1.50", and print the job showing the problem.
- B) Set SP2-225-032 through 041 to "1.63", and print the job showing the problem.
- C) Set SP2-225-032 through 041 to "1.76", and print the job showing the problem.

If the problem does not occur in condition A, but occurs either in conditions B or C, the problem is judged to be Banding in 2-3mm pitch.

★ Important

- **DO NOT print more than 10 pages with the above modified SP setting. Make sure to set each SP back to default after the test.**

5

Environment Coefficient	SP number	Default
1	SP2-225-032	0.70
2	SP2-225-033	0.83
3	SP2-225-034	0.96
4	SP2-225-035	1.10
5	SP2-225-036	1.30
6	SP2-225-037	1.50
7	SP2-225-038	1.63
8	SP2-225-039	1.76
9	SP2-225-040	1.90
10	SP2-225-041	2.00

Side effect

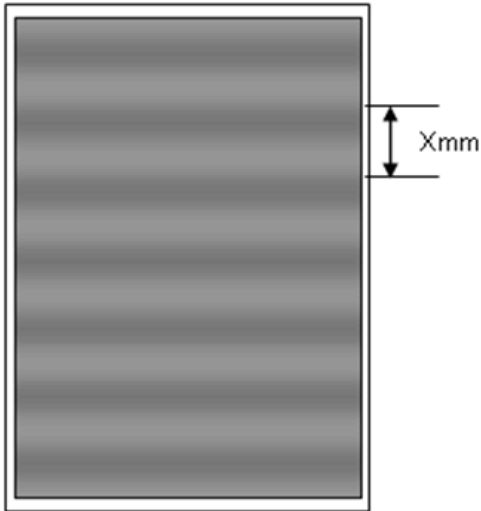
Increased lubricant consumption

Troubleshooting for Banding Caused by the PCDU (Pro C5110S/Pro C5100S)

Symptom / Cause

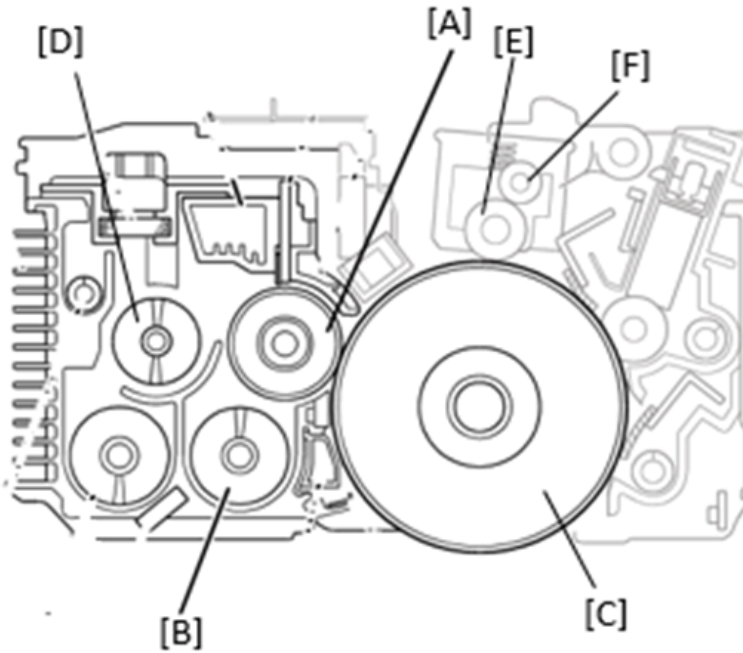
Bands (uneven density) in a certain pitch appear across the entire page. The problem is caused by the vibration of the components of the PCDU.

The pitch in which the bands appear differs depending on the component causing the problem.



d135a0014

- 53mm pitch: Primary development roller [A]
- 26.5mm pitch: Secondary development roller [B]
- 189mm pitch: Drum [C]
- 32mm pitch: Developer supply auger [D]
- 40mm pitch: Charge roller [E]
- 4 to 5mm pitch: Charge cleaning roller [F]



d135a3140

How to verify if the bands are caused by components of the PCDU

1. Execute Process Control (SP3-011-002).
2. Select the test patterns (CMYK) in SP2-109-003 and specify the values described in the table below and print out the test patterns.

		Test pattern (CMYK Chart) and Setting			
		K	C	M	Y
SP	2-109-003 (Test pattern no.)	26	26	26	26
	2-109-006 (Bk output density)	5	0	0	0
	2-109-007 (C output density)	0	5	0	0
	2-109-008 (M output density)	0	0	5	0
	2-109-009 (Y output density)	0	0	0	5

3. Measure the pitch of the bands.

Solution

Bands caused by the Development Roller [53mm/26.5mm pitch]

1. Execute DEMS (SP3040-001).
2. Do the procedure: "Centering the axis of the Development roller" described on the last page.
3. If the problem does not resolve, replace the PCDU and execute DEMS (SP3040-001).

Bands caused by the Drum [189mm pitch]

1. Execute DEMS (SP3040-001).
2. Do the procedure: "Centering the axis of the Drum" described on the last page.
3. If the problem does not resolve, replace the PCDU and execute DEMS (SP3040-001).

Bands caused by the Toner Supply Auger [32mm pitch]

1. Reset the PCDU and execute DEMS (SP3040-001).
2. If the problem does not resolve, replace the PCDU and execute DEMS (SP3040-001).

Bands caused by the Charge Roller [40mm pitch]

1. Reset the charge roller unit and execute DEMS (SP3040-001).

Bands caused by the Charge Cleaning Roller [4-5mm pitch]

1. Execute Process Control (SP3-011-002).
2. Reset the charge roller unit and execute DEMS (SP3040-001).

3. If the problem does not resolve, replace the charge roller unit and execute DEMS (SP3040-001).

Bands that appear in random pitch

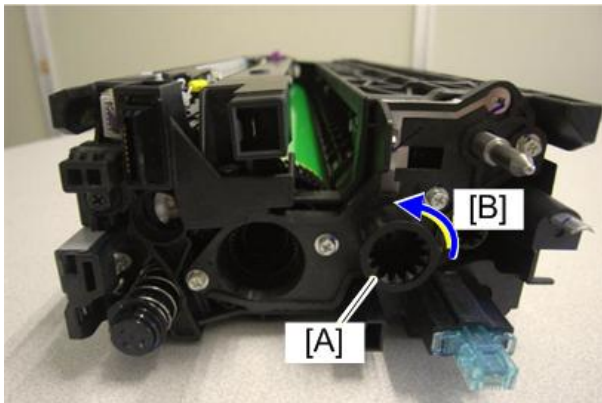
1. Reset the PCDU and execute DEMS (SP3040-001).
2. Do the procedure: "Centering the axis of the Development roller" described on the next page.
3. Replace the charge roller unit and execute DEMS (SP3040-001).
4. Do the procedure: "Centering the axis of the Drum" described on the next page.
5. Replace the drum and execute DEMS (SP3040-001).
6. Replace the PCDU and execute DEMS (SP3040-001).

Centering the axis of the development roller

Ideally, the development roller and drum should revolve at the very center of the axis so that a consistent gap is maintained between these components during the development process. This however is not possible due to the margin of error.

To reduce the margin of error, center the axis of the development roller by fine adjusting the engagement between the drive and coupling gears of the development roller.

1. Pull out the PCDU of the affected color.
2. Turn the coupling gear located at the rear side of the development unit 90 degrees counterclockwise (viewed from rear).
3. Set the PCDU and execute DEMS (SP3040-001).
4. Print the test pattern and check the results.
5. Repeat the above steps, if improvement cannot be confirmed.



d135a3141

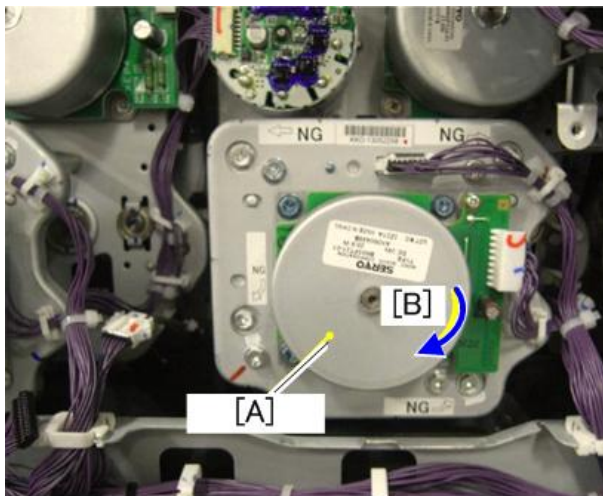
[A]: Joint of the development roller

[B]: Direction of rotation

Centering the axis of the drum

Similarly to the above procedure, center the axis of the drum by performing the following procedure.

1. Pull out the PCDU.
2. Remove the rear cover.
3. Turn the drum motor 5 full rotations clockwise (viewed from rear).
4. Set the PCDU and attach the rear cover.
5. Execute DEMS (SP3040-001).
6. Print the test pattern and check the results.
7. Repeat the above steps, if improvement cannot be confirmed.



d135a3142

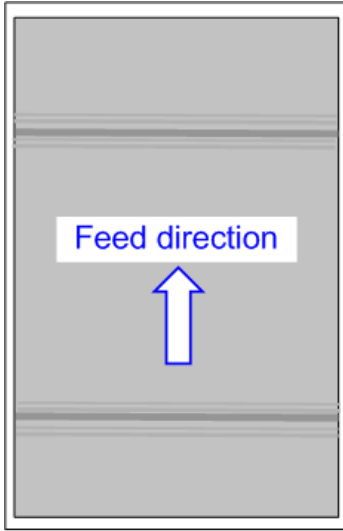
[A]: Drum motor

[B]: Turn clockwise

Troubleshooting for “shock-jitter” in B/W mode (Pro C5110S/Pro C5100S)

Symptom

One or more lines appear on the printout across the paper feed direction when printing in B/W mode. This image quality issue is known as “shock-jitter”.



d135a3164

5

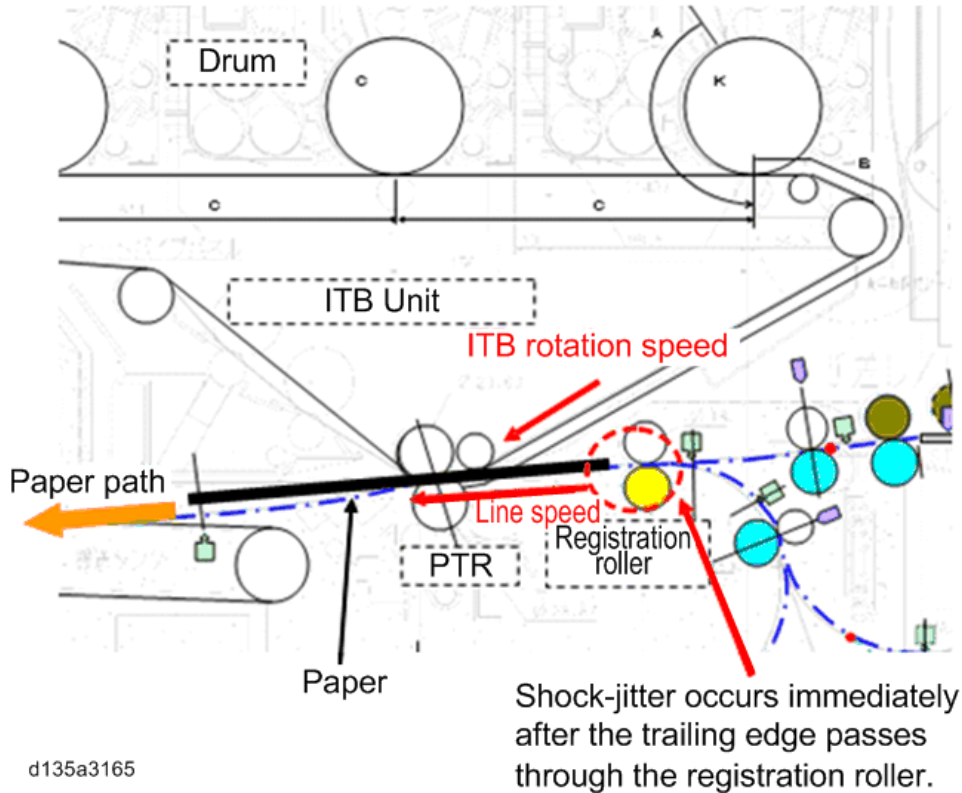
Cause

The primary cause of the problem is the difference in the rotation speed of the ITB motor and Registration motor.

Details of the cause differ depending on the type of shock-jitter as described below.

Type 1

Difference in the rotation speed of the ITB motor and registration motor causes difference in the ITB rotation speed and the paper transport speed, which generates a shock and disrupts the image transfer process at the PTR. Image is disrupted when the trailing edge passes through the registration roller.



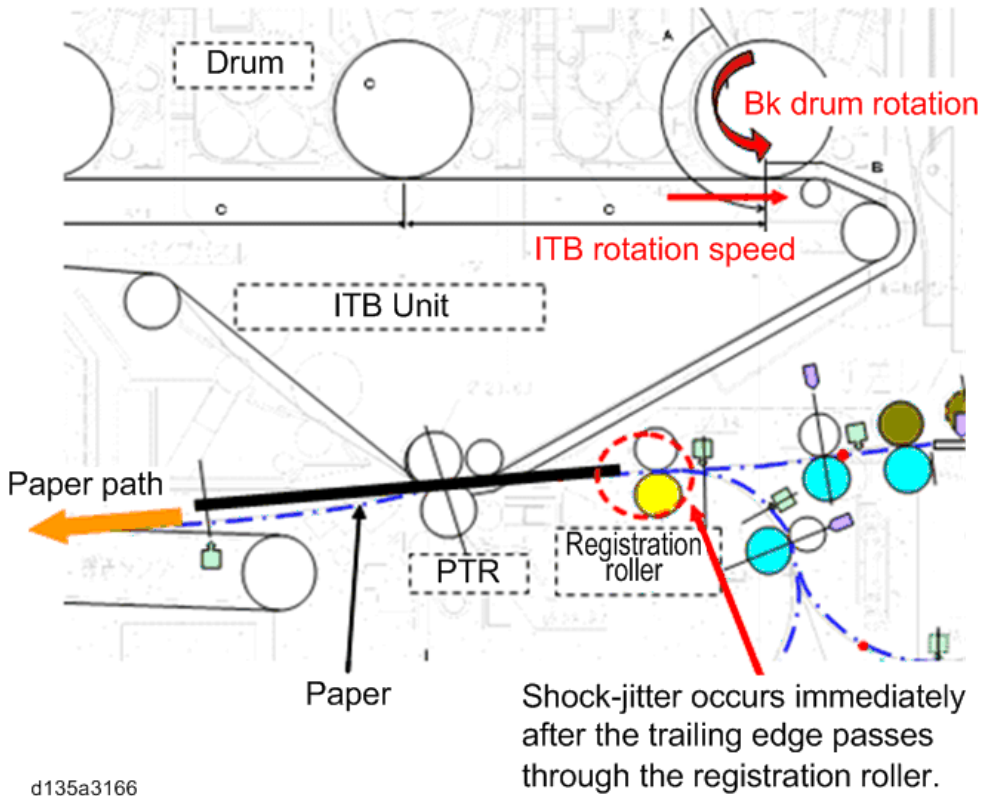
Type 2

This type involves both of the following 2 factors.

A) Difference in the rotation speed of the ITB motor and registration motor causes difference in the ITB rotation speed and the paper transport speed, which generates a shock and disrupts the image transfer process at the PTR.

B) Depending on the type of paper in use the paper drags the ITB, which causes the ITB to rotate slightly faster than the Bk drum. This disrupts the toner transfer from the Bk drum to the ITB.

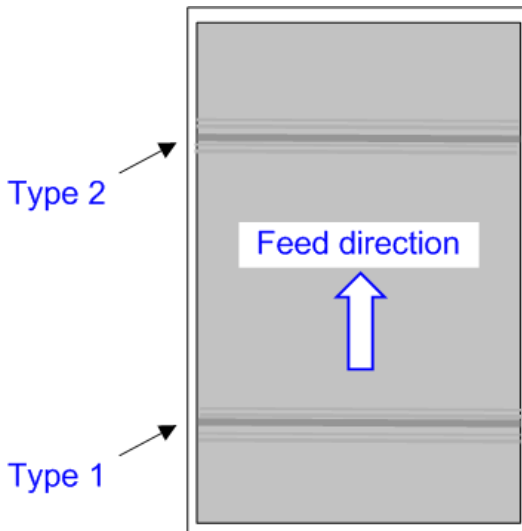
As a result of the above, the image disrupted between the drum and ITB is transferred to the paper at the PTR, which corresponds to the timing when the trailing edge passes through the registration roller.



d135a3166

Shock-jitter of Type 2 generates the unwanted line toward the Leading edge.

Shock-jitter of Type 1 generates the unwanted line toward the Trailing edge.



d135a3167

Note

- Shock-jitter of Types 1 and 2 can occur together on the same printout.

Solution

Fine adjust the line speed in the SP mode according to the paper in use. See following pages for detailed procedure.

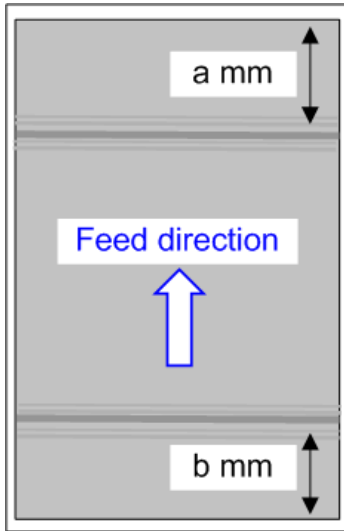
Important

- Note the following side effect when adjusting the line speed.
 - Image size will reduce in sub-scan direction as described in the table to the right. The reduction ratio will differ depending on the machine.

Paper weight	Line speed adjustment	Image size reduction in sub-scan direction
Weight 5	-0.2%	-0.20%
	-0.4%	-0.22%
	-0.5%	-0.26%
Weight 6	-0.2%	-0.22%
	-0.4%	-0.25%
	-0.5%	-0.26%
Weight 7	-0.3%	-0.24%
	-0.5%	-0.27%
	-0.6%	-0.29%
Weight 8	-0.3%	-0.20%
	-0.5%	-0.28%
	-0.6%	-0.30%

How to verify if the lines are “shock-jitter”

Before fine adjusting the line speed, print a test pattern under the following conditions and check the location of the lines to verify if the lines you are trying to resolve are shock-jitter.



d135a3168

5

[Test conditions]

Paper size	A3/DLT or SRA3
Feed tray	Tray 1-4 or LCT
Print mode	B/W mode
Weight	Weight 3 (216-256 gsm) (=Weight 7 in Customer Paper Settings)
No. of copies	More than 2 (Shock-jitter does not appear on the 1st sheet.)
Test pattern	SP2109-003: 26 SP2019-005: 5

Note

- **Weight 3** paper is not necessarily needed for the check, but the **weight** of this paper tends to display the lines more accurately in the expected location and makes the check easier.

[Check table]

D137

	A3	A3	SRA3
a (distance from LE)	Approx 130 mm	Approx 128mm	Approx 94 mm

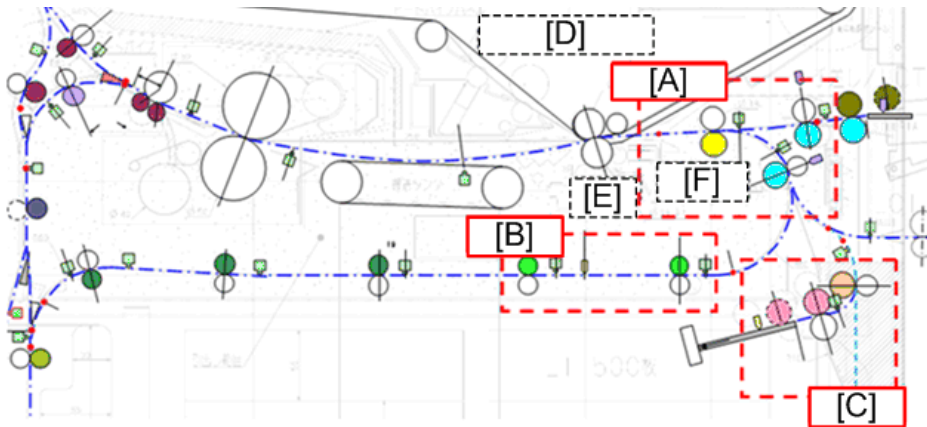
	A3	A3	SRA3
b (distance from TE)	Approx 84 mm	Approx 84 mm	Approx 84 mm

D138

	A3	A3	SRA3
a (distance from LE)	Approx 161 mm	Approx 159 mm	Approx 121 mm
b (distance from TE)	Approx 84 mm	Approx 84 mm	Approx 84 mm

Procedure: Line Speed Adjustment in the SP Mode

SP modification to fine adjust the line speed will reduce the line speed before the PTR in the following locations: Registration, Duplex exit, Feed tray



d135a3169

[A]: Registration

[B]: Duplex exit

[C]: Feed tray

[D]: ITB Unit

[E]: PTR

[F]: Registration roller

★ Important

- When modifying the SP values, make sure to apply the same modified value for all of the following 7 SPs as a set.

SP (Paper type / weight)	IMSS	Description	Adjustment range
SP1-019-001 to 022	16 (SP1-961-001 to 100)	Registration Motor Feed Speed Adjustment	-3.0 to 3.0 (0.1% steps)
SP1-008-001 to 008	17 (SP1-956-001 to 100)	First Transport Motor Feed Speed Adjustment	-3.0 to 3.0 (0.1% steps)
SP1-010-001 to 008	18 (SP1-957-001 to 100)	Second Transport Motor Feed Speed Adjustment	-3.0 to 3.0 (0.1% steps)
SP1-012-001 to 008	19 (SP1-958-001 to 100)	Third Transport Motor Feed Speed Adjustment	-3.0 to 3.0 (0.1% steps)
SP1-016-001 to 022	20 (SP1-959-001 to 100)	Relay Transport Motor Feed Speed Adjustment: CW	-3.0 to 3.0 (0.1% steps)
SP1-018-001 to 022	21 (SP1-960-001 to 100)	Relay Transport Motor Feed Speed Adjustment: CCW	-3.0 to 3.0 (0.1% steps)
SP1-034-001 to 022	29 (SP1-969-001 to 100)	2-sided Exit Motor Feed Speed Adjustment	-3.0 to 3.0 (0.1% steps)

Example

The following table describes an example of reducing the line speed 0.2% for **Weight 3** paper (=Weight 7 in Custom Paper Settings).

SP	Target motor	Paper	Default	Modified
SP1-019-007	Registration Motor Feed Speed Adjustment	Plain: Weight3	-0.3	-0.5
SP1-019-014		Matte: Weight 3	-0.3	-0.5
SP1-019-021		Glossy: Weight 3	-0.3	-0.5
SP1-008-007	First Transport Motor Feed Speed Adjustment	Plain: Weight 3	-0.3	-0.5
SP1-010-007	Second Transport Motor Feed Speed Adjustment	Plain: Weight 3	-0.3	-0.5
SP1-012-007	Third Transport Motor Feed Speed Adjustment	Plain: Weight 3	-0.3	-0.5
SP1-016-007	Relay Transport Motor Feed Speed Adjustment: CW	Plain: Weight 3	-0.3	-0.5
SP1-016-014		Matte: Weight 3	-0.3	-0.5
SP1-016-021		Glossy: Weight 3	-0.3	-0.5
SP1-018-007	Relay Transport Motor Feed Speed Adjustment: CCW	Plain: Weight 3	-0.3	-0.5
SP1-018-014		Matte: Weight 3	-0.3	-0.5
SP1-018-021		Glossy: Weight 3	-0.3	-0.5
SP1-034-007	2-sided Exit Motor Feed Speed Adjustment	Plain: Weight 3	-0.3	-0.5
SP1-034-014		Matte: Weight 3	-0.3	-0.5
SP1-034-021		Glossy: Weight 3	-0.3	-0.5

* Note that there are more than 7 SPs to adjust due to the adjustments needed for different paper types.

↓ Note

- SP mode and Custom Paper Settings apply different terms to express paper **weight**. This is due to the application of a common firmware for D135/D136 and D137/D138.
- Refer to the comparison table below to prevent mistakes.

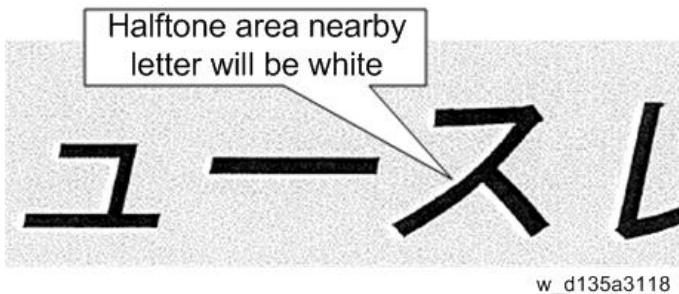
Paper weight	Indication in SP mode	Indication in Custom Paper Settings
52.3 to 65.9 gsm	Plain: Thin	Paper weight 1
66 to 80.9 gsm	Plain 1	Paper weight 2
81 to 100.9 gsm	Plain 2	Paper weight 3
101 to 127.4 gsm	Mid-Weight	Paper weight 4
127.5 to 150 gsm	Weight 1	Paper weight 5
150.1 to 216 gsm	Weight 2	Paper weight 6
216.1 to 256 gsm	Weight 3	Paper weight 7
256.1 to 300 gsm	Weight 4	Paper weight 8

Image Quality 004: Non-Reproduction

Troubleshooting for Halo image

Symptom

Halo may appear especially in low-temperature, low-humidity environment (See sample below)



Cause

Detailed description will be added when this RTB is revised.

Action

In case of GW controller

Change the dpi from "2400 x 600dpi" (Default setting) to "600 x 600dpi"

In case of EFI controller

Change the halftone mode from "200 Dot + Fine Text" to "175 Dot" from "Image" tab.

Image Quality 005: Unevenness

Overview

The density of images and text is uneven.

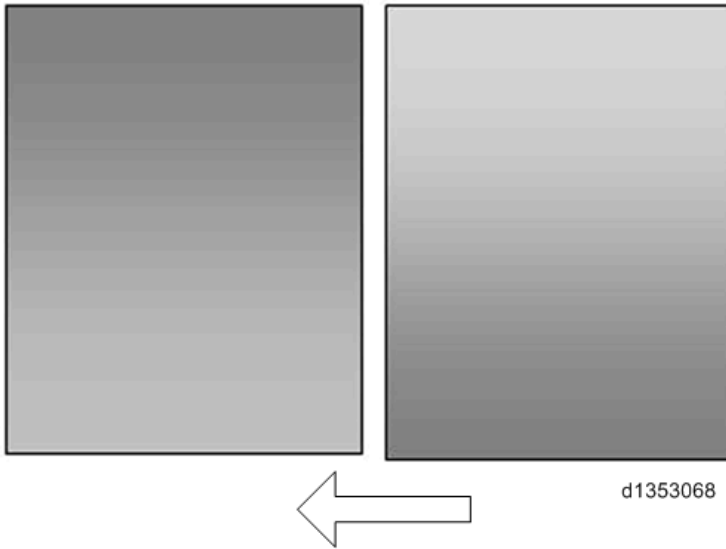
Item	Description
Density difference between left and right	
Vertical bands of density unevenness on back sides of duplex prints made on coated paper in low-temperature, low-humidity environment	When making duplex prints on coated paper in low-temperature, low-humidity environment (10°C, 15%), vertical bands of density unevenness appear on halftone images only on the back sides.
Uneven density in the area 85mm from the trailing edge	Uneven density of halftone image may appear in area 85mm from the trailing edge, which correspond to the point where the paper leave the registration rollers.
Uneven density in the area 85mm from the trailing edge in low-temperature, low-humidity environment	Density of halftone image may be higher or lower in area 85mm from the trailing edge.
Grainy image	The image density is not uniform across image areas when printing onto paper that is not smooth under High-temperature, High-humidity (27°C, 80%).
Density unevenness and dust when using AC transfer (CH-C1 Pro only)	With certain types of paper, the concave portions of the paper may be white or too dark, or there may be thin lines of dust.
Uneven glossiness when feeding large size paper after small size paper	The glossiness may be uneven at the sides of the paper (outside the width of the small size paper).
Unevenness in indefinite shape on sides of paper	Unevenness in indefinite shape may appear on both sides of paper.

Troubleshooting for Density Difference between Left and Right

Overview

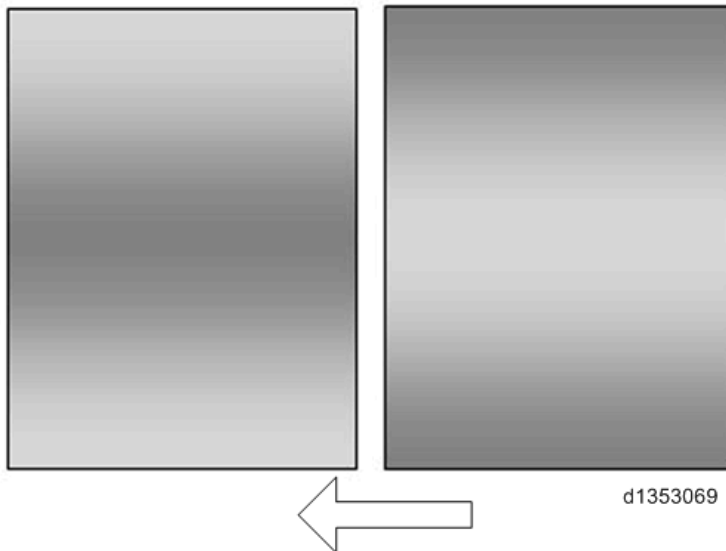
If uneven density occurs, follow this troubleshooting procedure.

Density difference between left and right



*The arrow indicates the paper feed direction

Density difference between middle and right/left



Cause

- Variation in Paper Transfer Roller
- Pressure deviation of ITB bias roller

Solution (Summary)

Step 1: Print a color-by-color solid image and check the color/type of image density difference.

Step 2: Adjust the image density difference between right and left.

Step 3: Adjust Image Density difference between middle and right/left.

Solution (Detailed)

Step 1: Print a color-by-color solid image and check the color/type of image density difference.

1. Select SP2-109-003-26 (Test Pattern: Pattern Selection: Full Dot)
2. Do SP2-109-005 (Test Pattern Color Selection) and select the appropriate color.
3. Do SP2-109-006 to 009 (Density: K.C.M.Y) and set the appropriate color's density to 1.5.
4. Press the button "Copy mode" and move to the copy window
5. If you want to print a K solid image, select BW mode and A4 paper and print. If you want to print a C, M, Y solid image, select FC mode and A4 paper and print.
6. Check the color and type of image density difference of the output.

If there is a density difference between right and left: Go to Step 2.

If there is a density difference between middle and right/left: Go to Step 3.

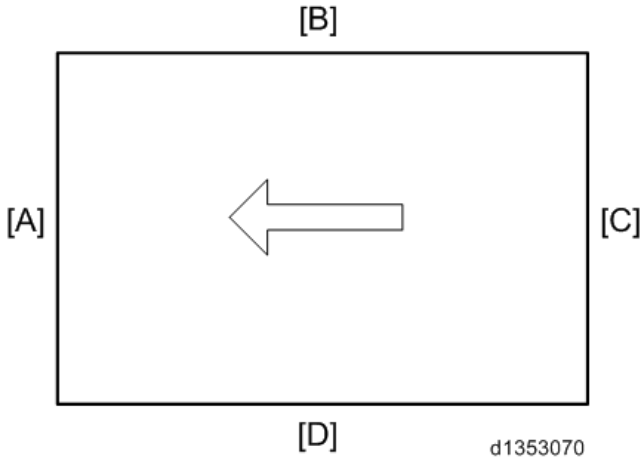
Step 2: Adjust the image density difference between right and left.

1. Select SP2-109-003-026 (Test Pattern: Pattern Selection: Full Dot)
2. Do SP2-109-005 (Test Pattern Color Selection) and select the appropriate color.
3. Do SP2-109-006 to 009 and set the density value of the appropriate color to 8.
4. Do the following SP or Adjust Settings for Skilled Operator and adjust the appropriate color's image density difference between right and left.

Model	SP No.	SP Name	Value
Pro/Office	SP2-113-001 to 004	Adj Density Diff Main Scan Dir K.C.M.Y	±5
Pro	205-01 to 04	Adj Density Diff Main Scan Dir K.C.M.Y	±5

Press [+] to increase the density at the right, which means to decrease it at the left.

Press [-] to decrease the density at the right, which means to increase it at the left.



*The arrow indicates the paper feed direction

[A]: Leading edge

[B]: Right

[C]: Trailing edge

[D]: Left

Note

- Depending on the machine's other settings; this setting may have no effect.

5. Turn the main power off and then back on.
6. Print out halftone paper by following Steps 2-1 to 3 and check effect of the adjusted settings.

Step 3: Adjust Image Density difference between middle and right/left

1. Set the appropriate color's ITB bias to 5 μ A by doing the following SP.

When adjusting the ITB bias for all paper types at once (excluding the paper library for the Office version), please use the following SP

Model	SP No.	SP Name	Remarks
Pro/Office	SP2-451-001	ITB K:Standard FC	BW mode
Pro/Office	SP2-451-002	ITB K:Standard FC	FC mode
Pro/Office	SP2-461-001	ITB C:Standard FC	FC mode
Pro/Office	SP2-471-001	ITB M:Standard FC	FC mode
Pro/Office	SP2-481-001	ITB Y:Standard FC	FC mode

When adjusting the ITB bias for all paper types in the paper library at once (Office only), please use the following SP.

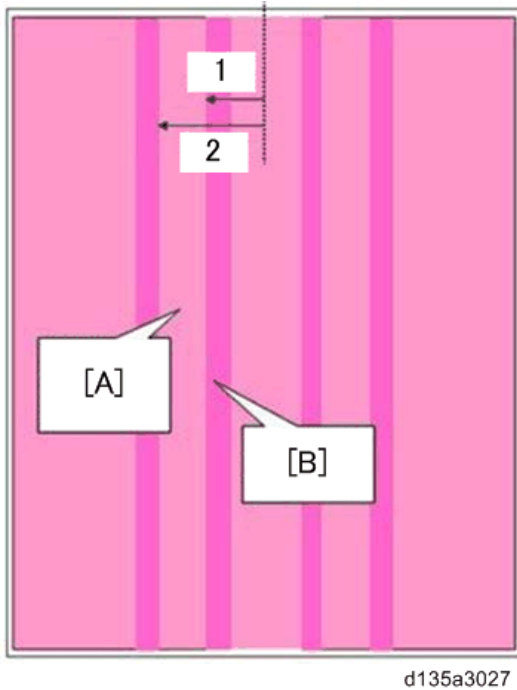
Model	SP No.	SP Name	Remarks
Pro	SP2-801-001 to 100	ITB Bias:K:BW	BW mode
Pro	SP2-802-001 to 100	ITB Bias:K:FC	FC mode
Pro	SP2-803-001 to 100	ITB Bias:C:FC	FC mode
Pro	SP2-804-001 to 100	ITB Bias:M:FC	FC mode
Pro	SP2-805-001 to 100	ITB Bias:Y:FC	FC mode

2. Print out a sheet with 100% Coverage using the same procedure as Steps 1-1, 2 and compare with the 100% Coverage printed out in Step 1.
If the image density difference is improved, go to Step 3-3.
If the image density difference is worse, go to Step 3-4.
3. Decrease the value $1\ \mu\text{A}$ by $1\ \mu\text{A}$ (Minimum :- $10\ \mu\text{A}$ from the default value)
4. Increase the value $1\ \mu\text{A}$ by $1\ \mu\text{A}$.

Troubleshooting for Vertical band of halftone images

Symptom

Vertical bands of uneven image density appear in halftone images on the rear side of duplex copies/prints when printing onto coated paper in low-temperature, low-humidity environments (10°C , 15%).



1: Approximately 30mm

2: Approximately 50mm

[A]: Bands of low density (at approx. 30-50mm from center)

[B]: Density is relatively high at ends of bands

Cause

Friction between the paper and registration roller generates an electrical charge on some areas of the paper, after the paper has passed through the fusing unit to fuse the first side. The areas on the paper are charged differently, and these differences are visible as bands.

Solution

Lower the PTR bias for the second side.

D137/D138:

- The user can use the IMSS settings to lower the bias.
- If the symptom occurs in full-color mode, use [PTR Bias:FC:Side2: Custom Paper 001 to 100] (2-814-001 to 100).
- If the symptom occurs in B/W mode, use [PTR Bias:BW:Side2: Custom Paper 001 to 100] (2-812-001 to 100).

↓ Note

- When using plain paper, the setting can be changed using 2-652-012 to 028 (for each paper thickness and type) and 2-642-012 to 028 (for each paper thickness and type).

D135/D136:

A customer engineer must perform the following adjustment:

- If the symptom occurs in full-color mode, lower the value of **SP2-652-001** to **008** (for each paper thickness).
- If the symptom occurs in B/W mode, lower the value of **SP2-642-001** to **008** (for each paper thickness).
- Adjust the value between the [default value] and [default value - 20+A].

Note

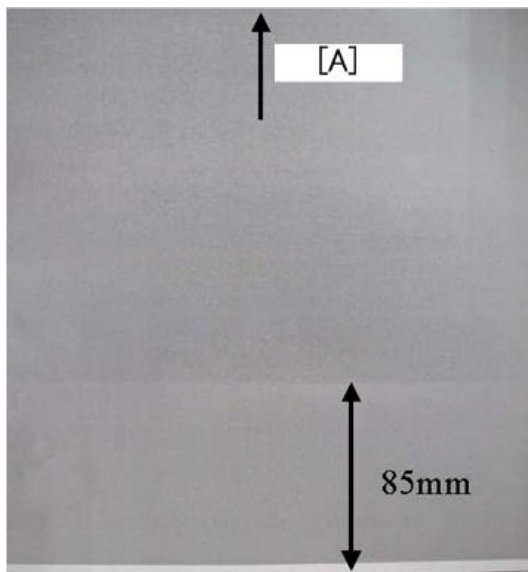
- The density of solid images may be decreased if the bias is too low (especially high-density solid image areas). In addition, other image problems may occur.

Troubleshooting for Uneven Density in the Area 85mm from the Trailing Edge

5

Symptom

Uneven density of halftone image may appear in area 85mm from the trailing edge. (See sample below)



d135a3117

[A]: Paper feed direction

Cause

Uneven density may appear because of the difference of both sticking level and distance between the ITB and the paper immediately before the paper transfer process.

Following factors tend to change the sticking level and the distance:

- When the rotation speed of the Transfer Timing Roller and PTR differ in great degree
- Thin paper stocks

In low-temperature, low-humidity environment, electric field is generated at the PTR entrance

Action

Do the one of the following workarounds.

1. Adjust the transfer timing roller speed. Change the figure by 0.1% each.

From SP mode (D135/D136/D137/D138):

SP No.	SP Name
SP2-661-001 to 018	PTR Spd Adj:Std Spd
SP2-662-001 to 018	PTR Spd Adj:Mid Spd
SP2-663-001 to 018	PTR Spd Adj:Mid-Low Spd
SP2-664-001 to 018	PTR Spd Adj:Low Spd

From IMSS setting (D137/D138 only):

No.	IMSS setting
22	Paper Transfer Feed Speed Adjustment

Note

- Only change the paper type and thickness that the user needs to use.
2. Change either registration motor speed or transport motor speed. If you will go with this workaround, please reset the transfer roller speed to default, then change the figure by 0.1% each.

From SP mode (D135/D136/D137/D138):

SP No.	SP Name
SP1-008-001 to 008	Fine Adj. Transport Motor 1 Speed
SP1-010-001 to 008	Fine Adj. Transport Motor 2 Speed
SP1-012-001 to 008	Fine Adj. Transport Motor 3 Speed
SP1-016-001 to 022	Fine Adj. Relay Motor CW Speed
SP1-019-001 to 022	Fine Adj. Registration Motor Speed
SP1-034-001 to 022	Fine Adj. Duplex Exit Motor Speed

From IMSS setting (D137/D138 only):

No.	IMSS setting
16	Registration Motor Feed Speed Adjustment
17	First Transport Motor Feed Speed Adjustment
18	Second Transport Motor Feed Speed Adjustment
19	Third Transport Motor Feed Speed Adjustment
20	Relay Transport Motor Feed Speed Adjustment: CW
21	Relay Transport Motor Feed Speed Adjustment: CCW
29	2-sided Exit Motor Feed Speed Adjustment

Note

- Only change the paper type and thickness that the user needs to use.
- Change the all the speed in the same figure.

Troubleshooting for Uneven density in the area 85mm from the trailing edge in low-temperature, low-humidity environment

Symptom

The density in independent dot halftone or halftone areas may be higher or lower in the area 0-85mm from the trailing edge, when printing under low-temperature/low-humidity conditions.

Cause

- Variations in the attractive force and distance between the ITB and paper immediately before paper transfer
- Toner scatters in the pre-transfer section after the paper clears the registration rollers, which produces high image density in these areas.

Solution

Adjust the speed of the registration rollers as follows.

- If the image density is high, set the following to a lower value, and vice-versa.
- Change the value 1% at a time and check the results.

Pro/Office	SP No.	SP Name	Value
Pro/Office	SP2-451-001	[ITB K:Standard: FC]	0 to 70

Pro/Office	SP No.	SP Name	Value
Pro	SP2-802-001 to 100	[ITB Bias:K:FC] (for each custom paper)	0 to 70

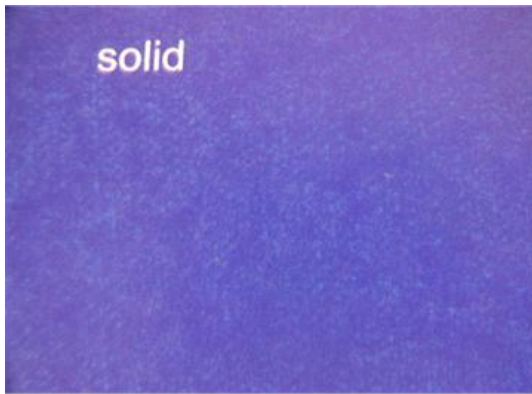
Pro/Office	IMSS setting No.	IMSS setting	Value
Pro	38	Image Transfer Current Setting: FC: Black (for each custom paper)	0 to 70

Troubleshooting for Grainy image

5

Symptom

The image density is not uniform across image areas when printing onto paper that is not smooth under High-temperature, High-humidity. (See sample below)



d1352939

Cause

When using paper that has an unsmooth surface, the strength of the electrical field between the ITB and the concaved areas in the paper weakens, causing low image density only in these areas.

Action

D135/D136:

Increase toner density by following SPs.

1. Change process control target from SP mode (Ideal setting: +0.03 to 1.0 from the default)
SP: 3-620-111 to 114 (Plain : Maximum M/ A : K, C, M, Y)
2. Execute manual process control from SP mode.
SP: 3-011-002 (Manual ProCon: Density Adjustment)

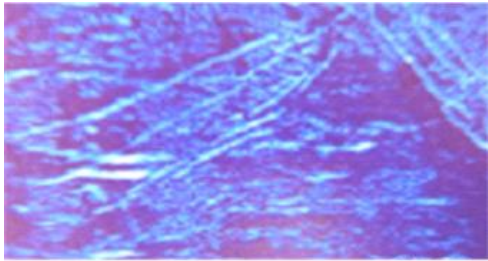
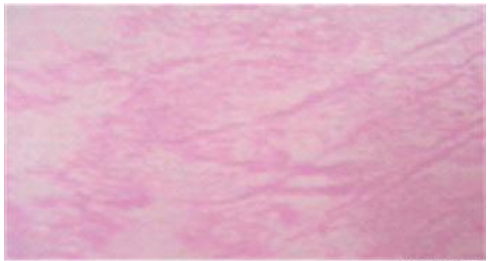
D137/D138:

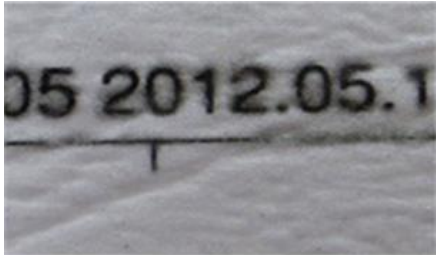
Increase the value of Toner Adhesion in the IMSS setting.

No.	IMSS setting
33	Adjust Toner Adhesion (Black)
34	Adjust Toner Adhesion (Cyan)
35	Adjust Toner Adhesion (Magenta)
36	Adjust Toner Adhesion (Yellow)

Troubleshooting for Density unevenness and dust when using AC transfer (Pro C5110S / Pro C5100S)

Symptom / Cause

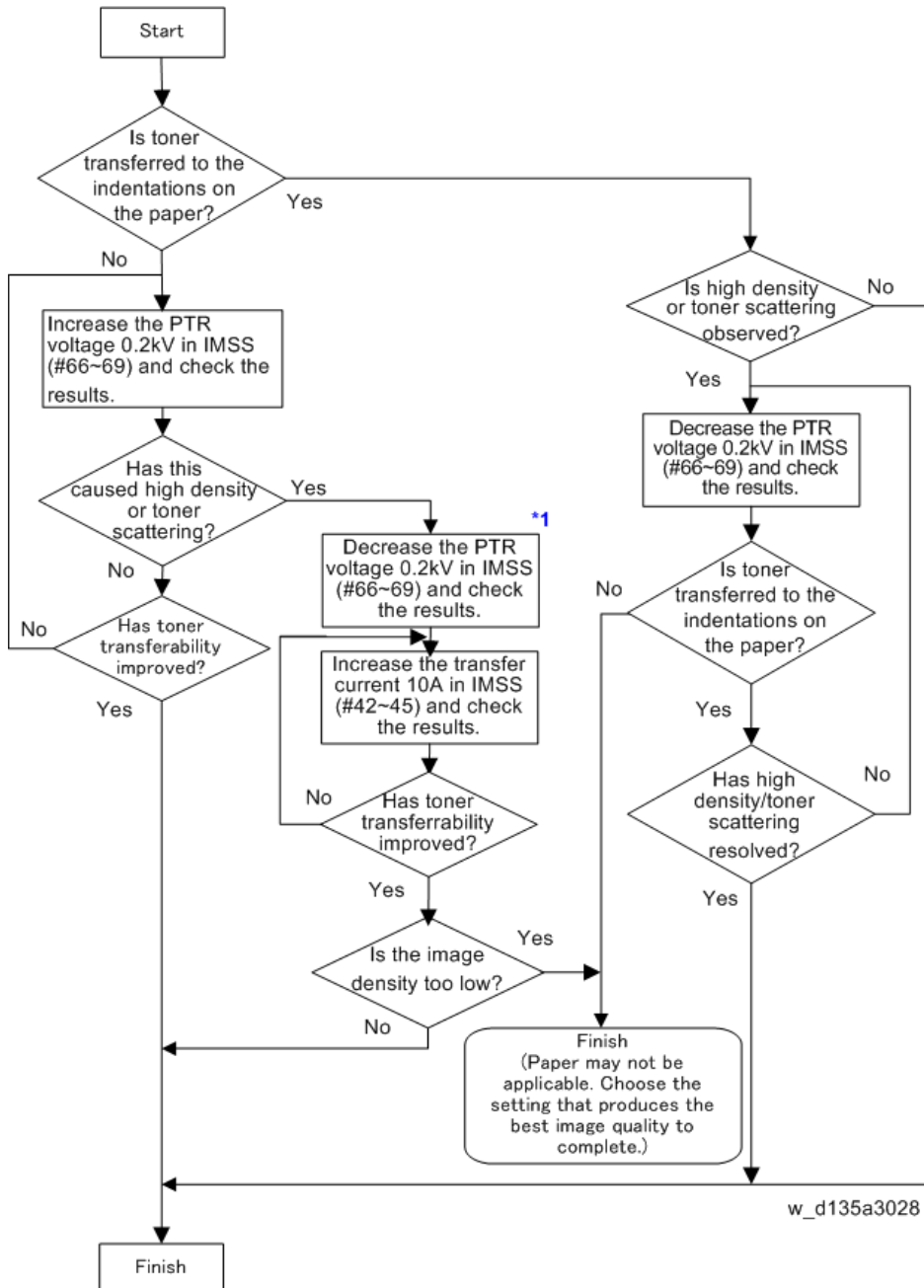
Symptom	Example	Cause
Toner is not transferred to the indentations on texture paper.	 <p style="text-align: right;">d1352929</p>	<ul style="list-style-type: none"> • Surface of the paper is rough. • PTR voltage is too low.
Toner accumulates and density is too high in the indentations on texture paper.	 <p style="text-align: right;">d1352930</p>	<ul style="list-style-type: none"> • Surface of the paper is rough. • PTR voltage is too high.

Symptom	Example	Cause
Scattered text and thin line images	 <p style="text-align: right; margin-right: 10px;">d1352931</p>	<ul style="list-style-type: none"> • Surface of the paper is rough. • PTR voltage is too high.

The above problems are likely to occur under the following conditions:

- Printing on thick texture paper
- Continuous printing of low image coverage jobs (5% or lower)

Flow chart



[Textured Paper: Paper Transfer Voltage Setting]

B/W

IMSS No. / SP	Description	Range
66 (SP2-851-001 to 100)	Textured Paper: Paper Transfer Voltage Setting: B&W: Side 1	0.0 to 14.0kV (Default: 8.0)
67 (SP2-852-001 to 100)	Textured Paper: Paper Transfer Voltage Setting: B&W: Side 2	0.0 to 14.0kV (Default: 8.0)

Full color

IMSS No. / SP	Description	Range
68 (SP2-853-001 to 100)	Textured Paper: Paper Transfer Voltage Setting: Full Color: Side 1	0.0 to 14.0kV (Default: 8.0)
69 (SP2-854-001 to 100)	Textured Paper: Paper Transfer Voltage Setting: Full Color: Side 2	0.0 to 14.0kV (Default: 8.0)

5

[Textured Paper: Paper Transfer Current Setting]

B/W

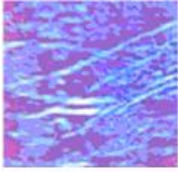
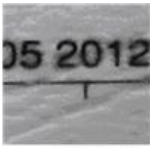
IMSS No. / SP	Description	Range
42 (SP2-811-001 to 100)	Paper Transfer Current Setting: B&W: Side 1	-300 to 0 μ A (Default: -34)
44 (SP2-812-001 to 100)	Paper Transfer Current Setting: B&W: Side 2	-300 to 0 μ A (Default: -34)

Full color

IMSS No. / SP	Description	Range
43 (SP2-813-001 to 100)	Paper Transfer Current Setting: Full Color: Side 1	-300 to 0 μ A (Default: -34)
45 (SP2-814-001 to 100)	Paper Transfer Current Setting: Full Color: Side 2	-300 to 0 μ A (Default: -34)

Reference: PTR voltage vs. Toner transferability

Table 1: Problems when the PTR voltage does not reach the target

Cause	PTR voltage waveform (AC + DC)	Symptom
PTR voltage does not reach the target.	<p style="text-align: center;">d135a3029</p> <p>[A]: V (target) [B]: V (actual) [C]: Risk of poor toner transfer</p>	Insufficient toner transfer  d1359980
PTR voltage is set too high. (Fluctuation of the waveform is too big.) As a result, electrical discharge occurs at the PTR.	<p style="text-align: center;">d135a3030</p> <p>[A]: V (high AC) [B]: Risk of electrical discharge</p>	Excess toner transfer  d1359973

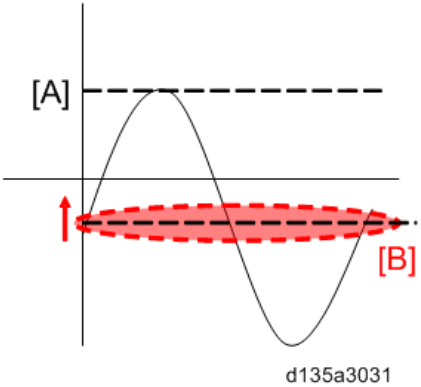
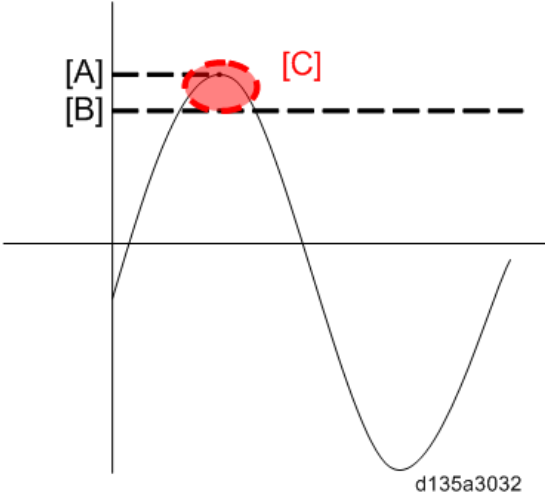
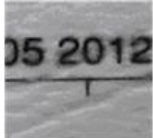
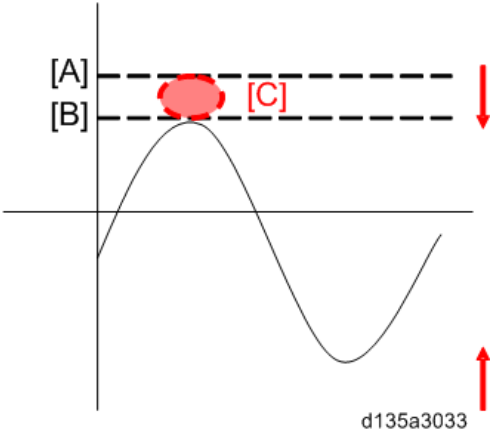
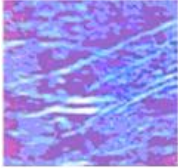
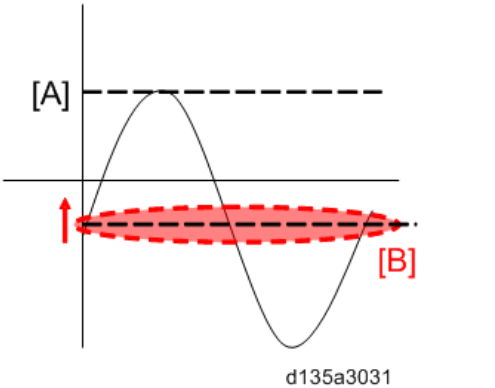
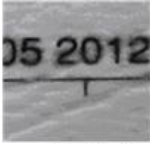
Cause	PTR voltage waveform (AC + DC)	Symptom
<p>PTR transfer current is set too high and causes the waveform to shift to the positive.</p>	 <p style="text-align: center;">d135a3031</p> <p>[A]: V (high DC) [B]: Risk of low density</p>	<p>Image density decreases.</p>

Table 2: Problems when the PTR voltage exceeds the target

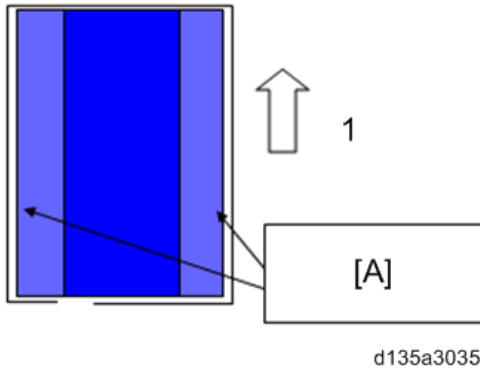
Cause	PTR voltage waveform (AC + DC)	Symptom
<p>PTR voltage exceeds the target and causes electrical discharge at the PTR.</p>	 <p style="text-align: center;">d135a3032</p> <p>[A]: V (actual) [B]: V (target) [C]: Risk of scattered text/line</p>	<p>Excess toner transfer</p>  <p style="text-align: center;">d1359973</p>

Cause	PTR voltage waveform (AC + DC)	Symptom
PTR voltage is set too low. (Fluctuation of the waveform is too small.)	 <p>[A]: V (target) [B]: V (low AC) [C]: Risk of poor toner transfer</p>	Insufficient toner transfer  <p>d1359980</p>
PTR transfer current is set too high and causes the waveform to shift to the negative. As a result, electrical discharge occurs at the PTR.	 <p>[A]: V (low DC) [B]: Risk of electrical discharge</p>	Excess toner transfer  <p>d1359973</p>

Troubleshooting for Uneven glossiness when feeding large size paper after small size paper

Symptom

The glossiness is uneven at the left and right sides of the paper, along the paper feed direction (outside the width of the small-sized paper types), when printing onto wide paper types after making many prints onto narrow paper.



1: Feed direction

[A]: Sides of the belt [A] that are wider than narrow paper types

Cause

Making many prints of narrow sheets leaves the sides of the belt [A] hot and the center relatively cool. As a result, the surface temperature across the belt is uneven.

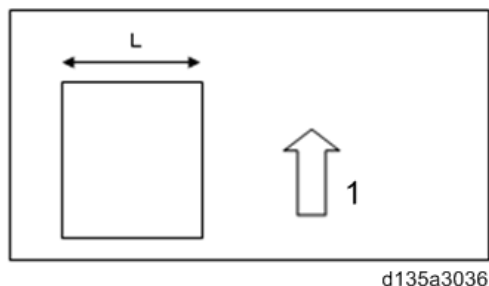
Solution

Do the following.

1. Change the SP values as shown below depending on the size of the (narrow) paper that was used before the symptom occurred.

Size of paper that was previously fed		Corresponding SP			
Paper size L	Paper size (example)	Name	No.	Default value	Change to
216.0mm < L ≤ 257.0mm	B4 SEF	Switch:Rotation Start/Stop: End Temp.:After Job:B4	1-121-005	200	120
182.0mm < L ≤ 216.0mm	Letter SEF, Legal SEF, A4 SEF	Switch:Rotation Start/Stop: End Temp.:After Job:B5	1-121-006	200	120
L ≤ 182.0mm	B5 SEF, A5 SEF, Half Letter SEF, B6 SEF, A6 SEF, Postcard	Switch:Rotation Start/Stop: End Temp.:After Job:A5	1-121-007	200	120

Illustration of paper size



1: Feed direction

- Set **SP1-121-003** (Switch:Rotation Start/Stop: Time:After Job) to a value of "100 sec".

Pro/Office	SP No.	SP Name	Value
Pro/Office	SP2-121-003	Switch:Rotation Start/Stop: Time:After Job	0 to 300

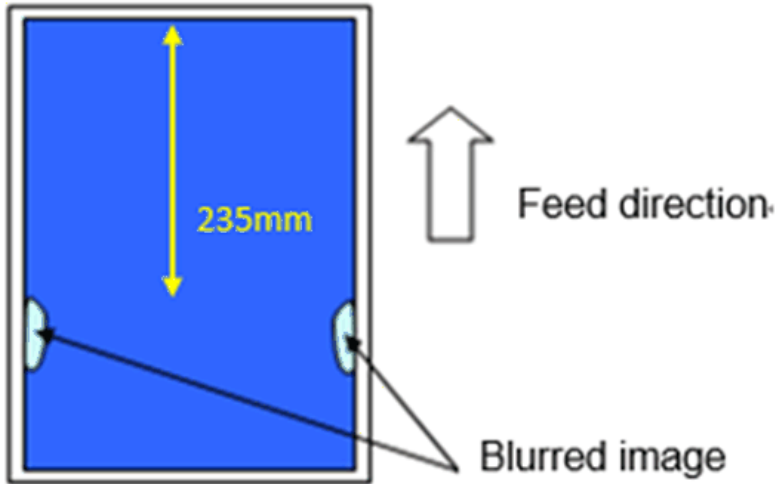
5

- Feed paper in the same way as when the problem occurred.
- If the symptom still occurs, set **SP1-121-003** (Switch:Rotation Start/Stop: Time:After Job) to a value of "180sec" and check the results.
- If the symptom still occurs, set **SP1-121-003** (Switch:Rotation Start/Stop: Time:After Job) to a value of "240sec" and check the results.
- If the symptom still occurs, set **SP1-121-003** (Switch:Rotation Start/Stop: Time:After Job) to a value of "300sec" and check the results.

Troubleshooting blurred image on front and rear sides toward the Trailing Edge

Symptom

Image on both front (operator) and rear (non-operator) sides toward the trailing edge is blurred.



5

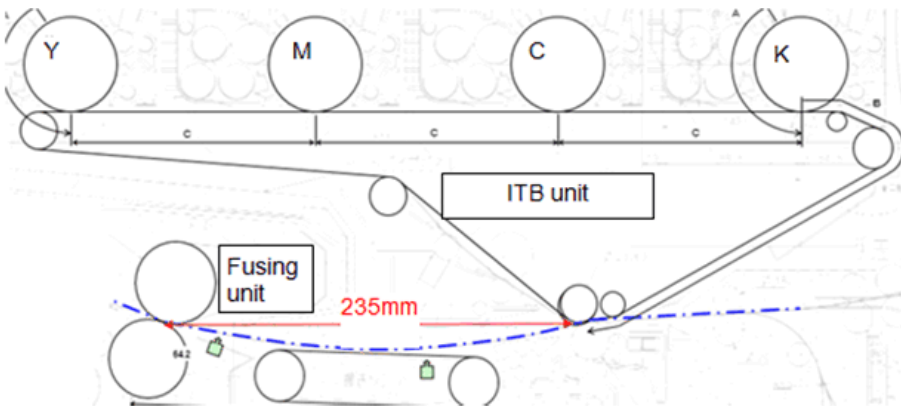
w_d135a3143

The problem could occur under any of the following conditions

- Paper with low stiffness
- Thin paper
- A3/DLT or larger

Cause

Line speed of the fusing unit is slightly faster than the ITB. This causes to pull the paper and affect the image at 235mm from the leading edge, which corresponds to the distance between the two units.



w_d135a3144

Solution

Part 1: Line speed adjustment in IMSS (or in SP mode)

Decreasing the line speed of the fusing unit will prevent pulling of the paper between the fusing and ITB units.

Part 2: Fusing entrance guide adjustment

Lowering the fusing entrance guide plate will make the paper path straighter (= shorter), which also helps prevent the fusing and ITB units from pulling the paper.

Part 1: Line speed adjustment in IMSS (or in SP mode)

1. Decrease the fusing speed and paper exit motor speed 0.5% from the current value in IMSS (or in SP mode).

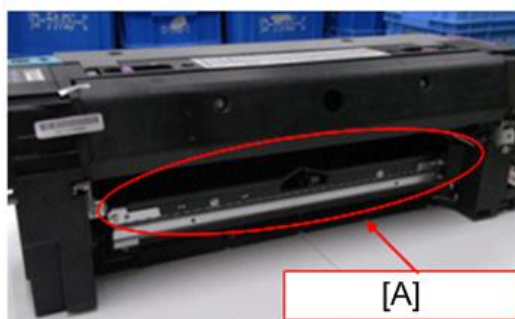
IMSS No. / SP	Description	Range
23 (SP1-987-001 to 254)	Fusing Feed Speed Adjustment	-10 to +10
24 (SP1-965-001 to 100)	Exit Motor Feed Speed Adjustment	-3 to +3

Print out 20 copies of the affected image and check the result. If a different abnormal image appears, restore the settings and do Part 2: Fusing entrance guide plate adjustment.

2. If no improvement, repeat step 1, however, this time by 0.5%.
3. Print out 20 copies of the affected image and check the result. If the problem persists, do Part 2: Fusing entrance guide plate adjustment.

Part 2: Fusing entrance guide plate adjustment

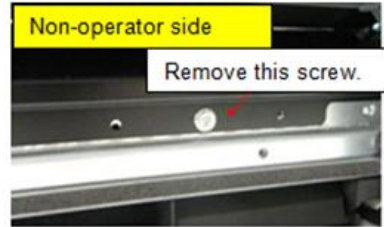
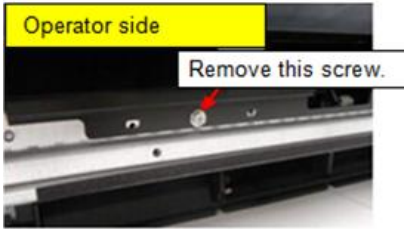
1. Remove the fusing unit from the mainframe.



d135a3040

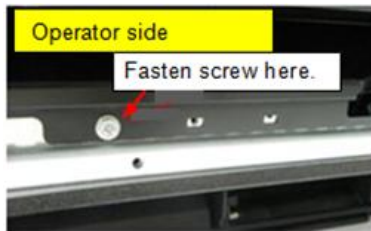
[A]: Fusing entrance guide plate

2. Remove the screws fixing the guide plate at both front (operator) and rear (non-operator) sides.



w_d135a3145

3. Set the screw removed in the previous step to the hole in the front most position for both operator and non-operator sides. DO NOT fully fasten the screws yet.



w_d135a3146

4. Fully fasten the screws to complete the procedure.

Troubleshooting for Random Pitch Banding Caused by Lubricant Falling from the Drum Cleaning Unit

Symptom

Banding appears on the printouts at random intervals/pitch.



d135a0023

Cause

The lubricant in the drum cleaning unit falls into the registration unit and creates smudges on the ITB encoder sensor. As a result, the engine speed cannot be controlled correctly.

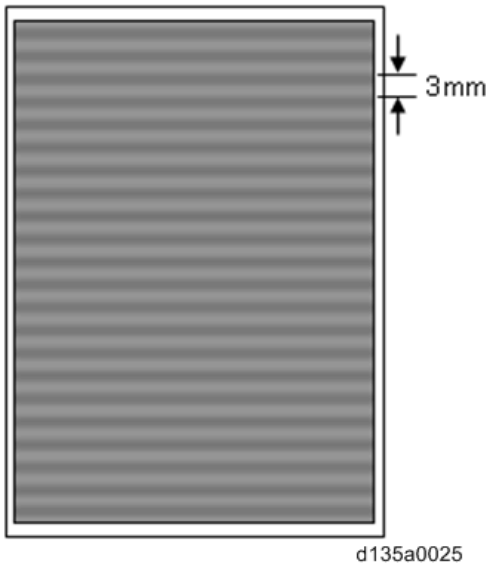
Solution

Clean the ITB encoder with a blower brush.

Troubleshooting for 3mm-Pitch Banding on Paper with Paper Thickness 6 (Pro C5110S/C5100S)

Symptom

Bands (uneven density) in 3mm pitch appear across the entire page when printing on Thick6 paper.



Cause

PCB power output level is inconsistent.

How to verify if the bands are caused by inconsistent PCB power output level

1. Execute Process Control (SP3-011-002).
2. Select the test patterns (CMYK) in SP2-109-003 and specify the values described in the table below and print out the test patterns.

		Test pattern (CMYK Chart) and Setting			
		K	C	M	Y
SP	2-109-003 (Test pattern no.)	12	12	12	12
	2-109-006 (Bk output density)	15	0	0	0
	2-109-007 (C output density)	0	15	0	0
	2-109-008 (M output density)	0	0	15	0
	2-109-009 (Y output density)	0	0	0	15

3. Measure the pitch of the bands.

Solution

1. Set the process speed to "3: Low speed" and decrease the fusing heat roller temperature 10 °C from the current temperature in IMSS (or in SP mode).

IMSS No. / SP	Description	Range
15 (SP1-986-001 to 100)	Process Speed Setting (for each custom paper)	0 to 3 (Default: 0)
74 (SP1-984-001 to 100)	Fusing Heat Roller Temperature Adjustment (for each custom paper)	0 to 200

2. Print the test pattern and check the results. If the fuseability has degraded, turn on the "Toner reduction" mode provided that the image is of 3C and image quality is maintained.
3. Again, print the test pattern and check the results. If the fuseability is still poor, increase the heating roller temperature 5°C. (DO NOT set the temp higher than 180°C.)
4. If the problem does not resolve, replace the PCB (K/C) and/or PCB (M/Y) depending on the color showing the problem.

Image Quality 006: Stains

Overview

Areas outside letters or images are stained.

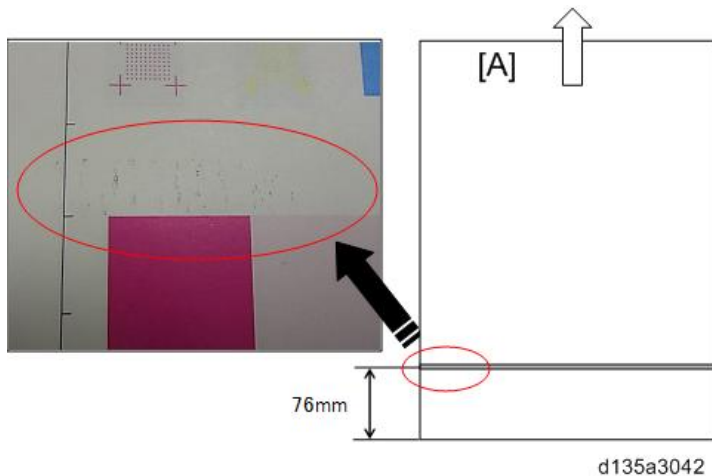
Item	Description
Stains in the area 76mm from the trailing edge	Stains in the shape of horizontal streaks may appear in the area 76mm from the trailing edge.
Stains on the side edges of paper	If the machine has been used for a long time, toner, paper powder and foreign objects sticking to the rollers may get on the side edges of the paper.

5

Troubleshooting for Stains in the area 76mm from the trailing edge

Symptom

Stains in the shape of horizontal streaks appear in the area 76mm from the trailing edge when printing high-coverage images onto coated paper.



[A]: Feed direction

Cause

Fused toner passes through the heat pipe rollers, and sticks to the surfaces of the rollers. When the heat pipe roller slips, it chips off toner that has been fixed on the paper. The offset toner may get on the paper again, depending on the paper type and the image being printed.

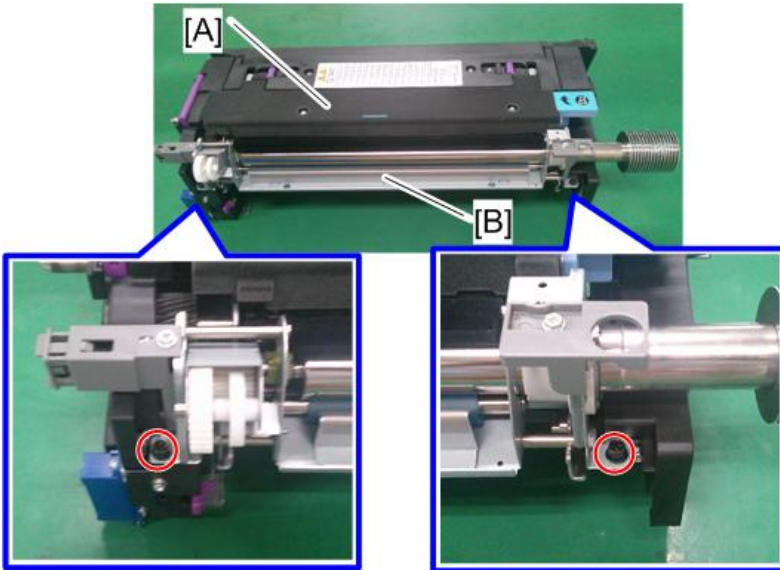
Solution

Clean the heat pipe unit.

See Procedure below.

Procedure

1. Remove the fusing unit.
2. Open the separation unit [A] and remove the heat pipe unit [B] (5 screws).

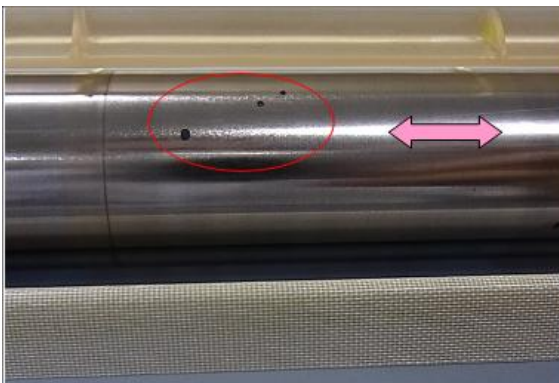


d1355086a

3. Remove the toner stuck to the heat pipe rollers using sandpaper (#1500).

★ Important

- Move the sandpaper back and forth horizontally and rotate the heat pipe roller to clean it full-circle.



d1352963

4. Wipe the places that you sanded in Step 3 with a damp cloth.

5. Re-attach the heat pipe unit to the fusing unit.

Troubleshooting for Stains on the side edges of paper

Symptom

Toner, paper dust, and foreign objects may stick to the rollers and then to the side edges of the paper.

Cause

The machine has not been used for a long period of time.

Solution

Do the following.

1. If the paper has stains, match up their positions against the roller/rib map. If the positions of the stains match those of the transport rollers, wipe the transport rollers, paper exit rollers, duplex unit rollers, and rollers inside paper handling options with a damp (wrung-out) cloth.
2. If the stains appear to be caused the by the static discharge brushes, clean these brushes in the paper exit section [A] and inverter section [B] on the left side with a blower brush.



d1352969

Image Quality 007: Toner Flaking Off

Troubleshooting for Blocking on the Paper Output Tray

Symptom

Paper printed and stacked on the output tray stick together (known as "toner blocking") when printed in duplex.

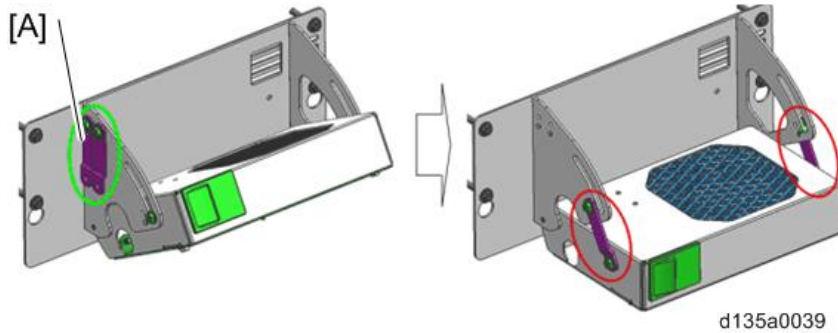
Cause

Toner fused on the paper is not completely dried.

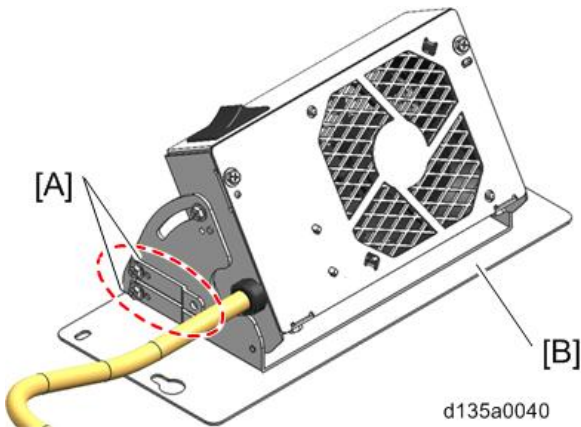
Solution

Activate the Cooling Fan included as an accessory to the Copy Tray Type M2.

If the above does not resolve the problem, set the cooling fan in the procedure described on the following pages so that it faces in a 90° angle.

**Procedure**

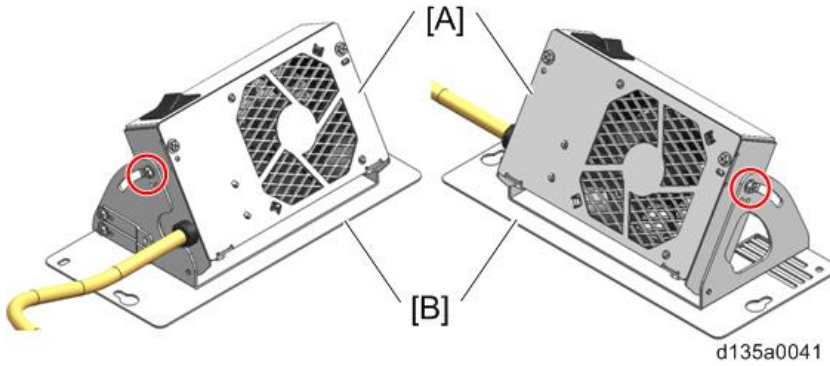
1. Remove bracket [A] from bracket [B]. (⚙️ x 2)



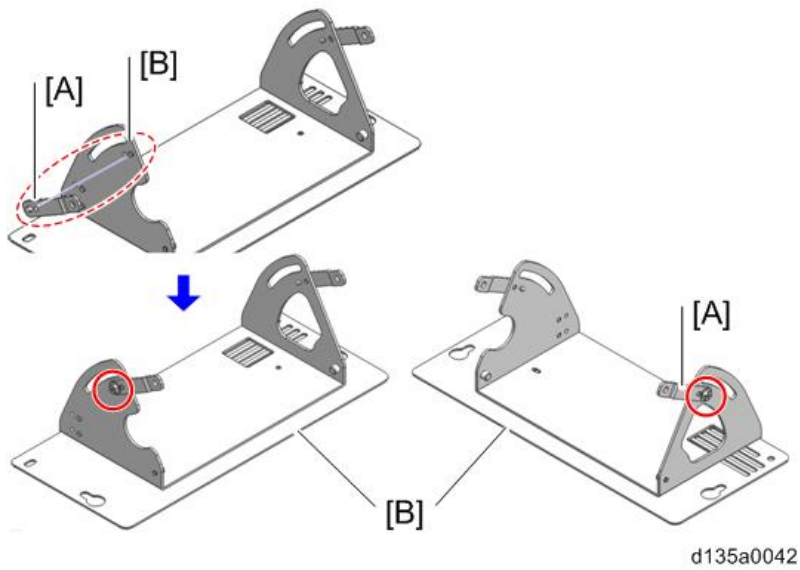
2. Do the same on the other side. (⚙️ x 2)

★ Important

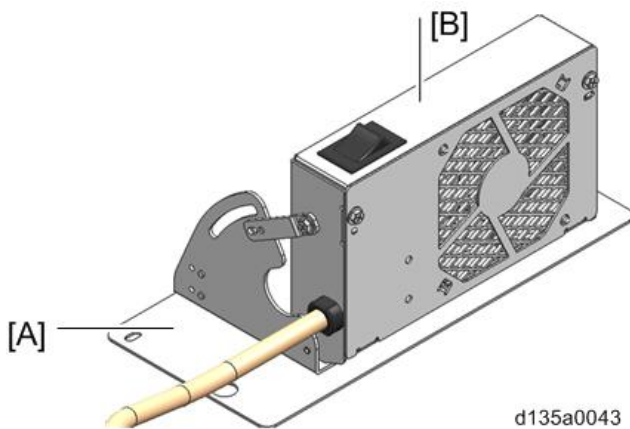
- Work carefully to avoid dropping the unit.



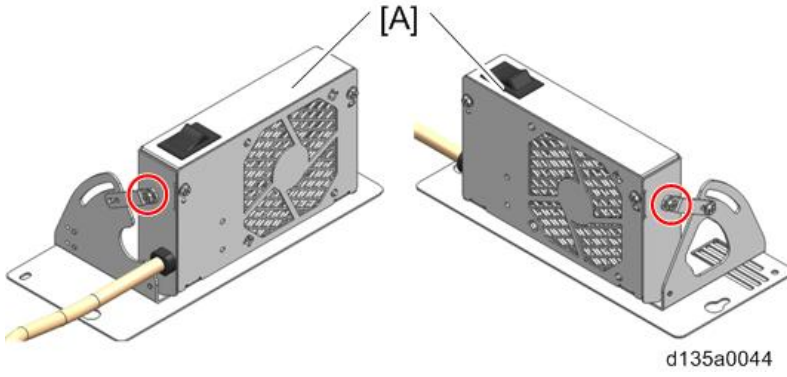
3. Fit the bosses on bracket [B] to the holes on bracket [A] and fix the brackets. (⚙️ x 2)



4. Set the cooling unit [B] on the bracket [A] in a 90° angle.



5. Fix the cooling unit [A] with the bracket in a 90° angle. (⚙️ x2)



Paper Transport

Paper Transport 001: Curls

Symptom

Thin paper curls inside the machine if the Decurl unit is not installed.

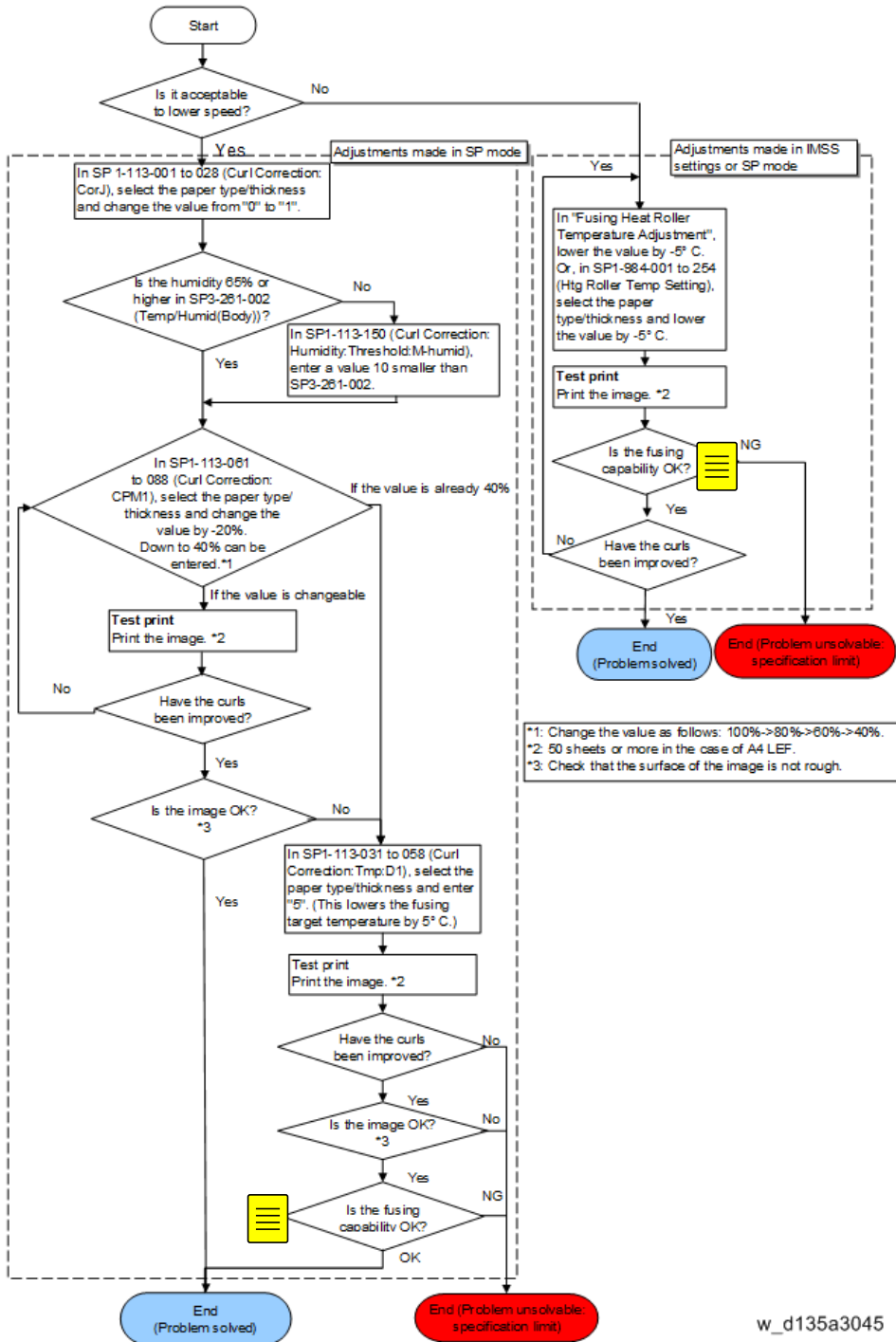
Cause

Thin paper types tend to “shrink” during the fusing process.

Solution

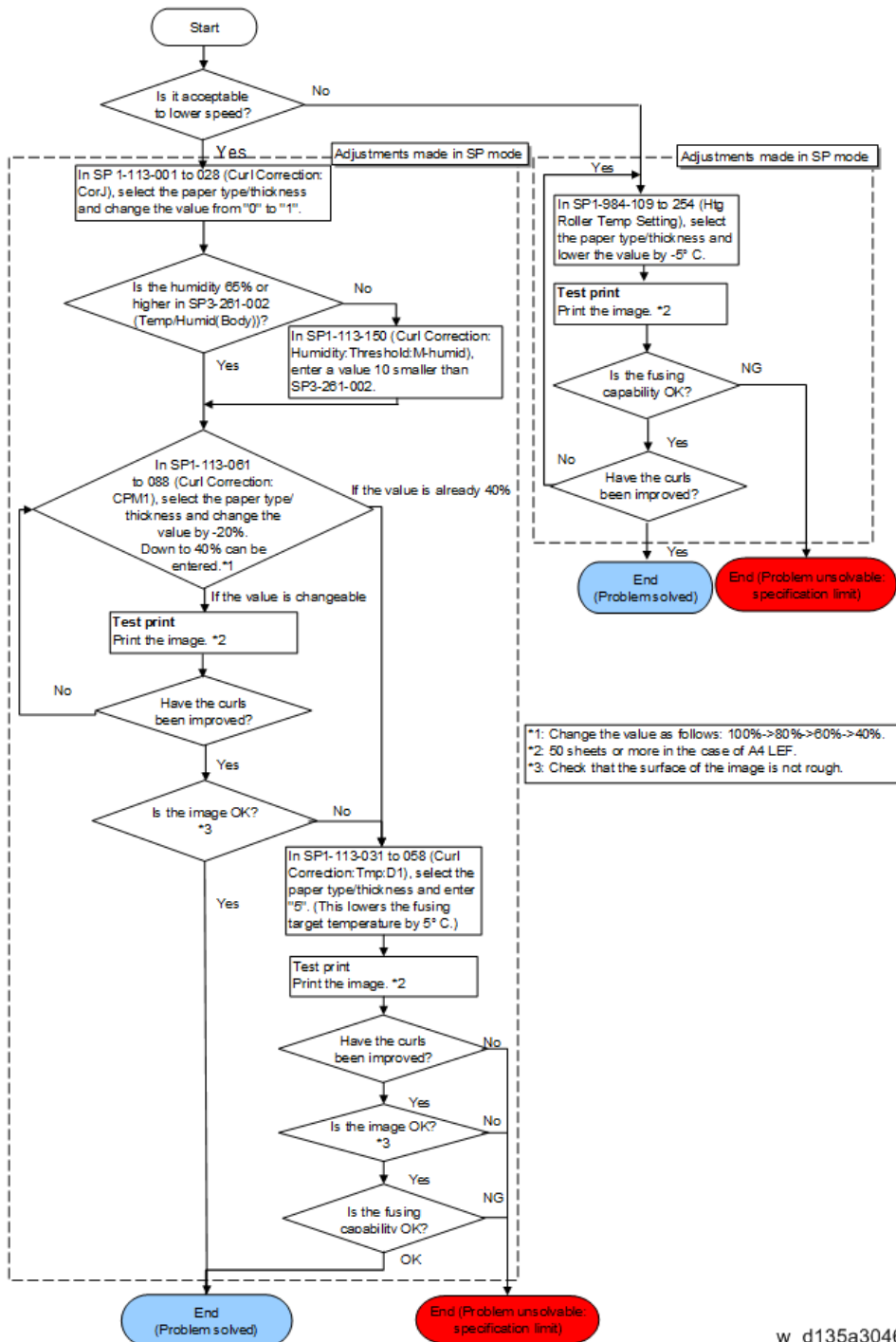
Do the action in the flowcharts below for each model (D137/D138, D135/D136).

D137/D138:



w_d135a3045

D135/D136:



↓ **Note**

- Raising the heat roller temperature may cause the following side effects.

- Fusibility may be reduced
- Glossiness of the image may decrease
- Stains may be visible if printing halftone images onto uncoated paper

Paper Transport 002: Envelopes

Troubleshooting for Envelopes Are Wrinkled

Symptom

Poor fusing or wrinkles may occur when printing onto some types of envelopes.

Cause

The nip width (clearance) is not optimal for some types of envelopes.

Solution

Adjust the envelope nip width as follows.

Poor fusing:

Change the SP value in increments of +5msec and check the print results.

Wrinkles:

Change the SP value in increments of -5msec and check the print results.

Pro/Office	SP No.	SP Name	Value
Pro/Office	SP1-996-109 to 254	Envelope Nip Width Setting (for each paper thickness/ type)	0 to 2000msec
Pro	SP1-996-001 to 100	Envelope Nip Width Setting (for each custom paper)	0 to 2000msec

Pro/Office	IMSS setting No.	IMSS setting	Value
Pro	85	Fusing Nip Width Adjustment for Envelope	0 to 2000msec

Troubleshooting for Feed Direction Limitations Applied on Certain Types of Envelopes

Symptom

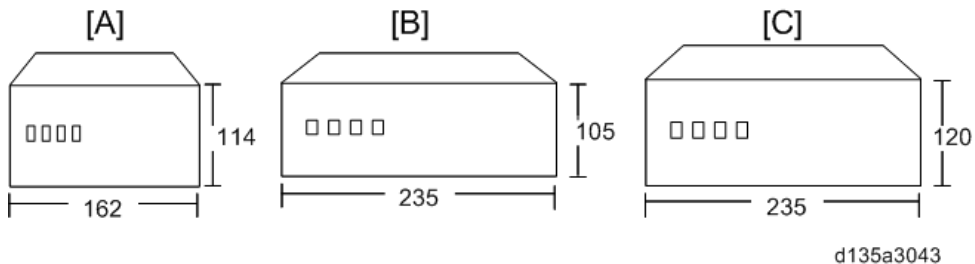
The following may occur when printing onto the envelopes shown below:

- Wrinkles

- Paper transport issues
- Flaps stick (closed) to the body of the envelope

Note

- If the envelopes are fed in the SEF direction, they tend to warp in between the PTR unit and fusing unit.



[A]: C6, [B]: 105x235, [C]: DLX

Cause

The heat of the fusing process may cause wrinkles to form or the adhesive on the flaps to melt if the flaps are folded.

Solution

When feeding the types of envelopes described above, feed them from the bypass tray, in the LEF direction (from the trailing edge), with the flaps open.

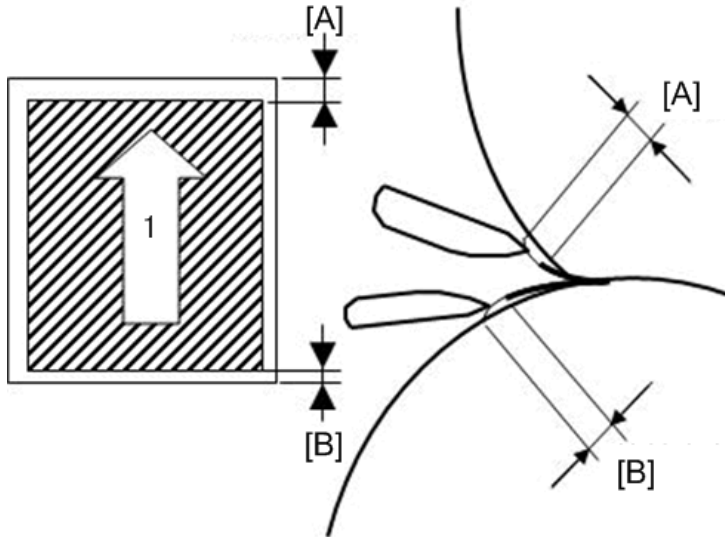
Paper Transport 003: Twining Jams

Troubleshooting for Twining Jams in the Lower Part of the Fusing Unit Caused by Insufficient Margins

Symptom

An "accordion jam" may occur under the following conditions:

- Thin, coated paper
- A large amount of toner is needed to develop the images on the leading or trailing edge
- The margins at the leading and trailing edges are relatively narrow



d135a3018

1: Feed direction

[A]: Leading edge margin

[B]: Trailing edge margin

Cause

The margin at the leading or trailing edge is too narrow, which causes the paper to stick to the pressure roller stripper plate.

Solution

Do the following:

1. Increase the margins the leading/trailing edges (up to a maximum of 10mm).
See page 1367 "Margin adjustment".

↓ Note

- If you adjust the margins without adjusting the image position, parts of the image may not be printed. To adjust the image position, see Step 2 below.
2. If the symptom still occurs, try adjusting the position of the image at the same time. Change the value in increments of **-0.5mm**, up to a maximum width of 10mm.

★ Important

- **Before you make any registration adjustments, make sure that the margin in the direction you will move the image is wide enough.**

Subscan registration adjustments:

Pro/Office	SP No.	SP Name	Value
Pro/Office	SP1-001-004 to 111	Lead Edge Reg (for each paper type)	±9.0
Pro	SP1-950-001 to 100	L-Edge Regist Adj (Front) (for each custom paper)	±3.0
Pro	SP1-951-001 to 100	L-Edge Regist Adj (Rear) (for each custom paper)	±3.0

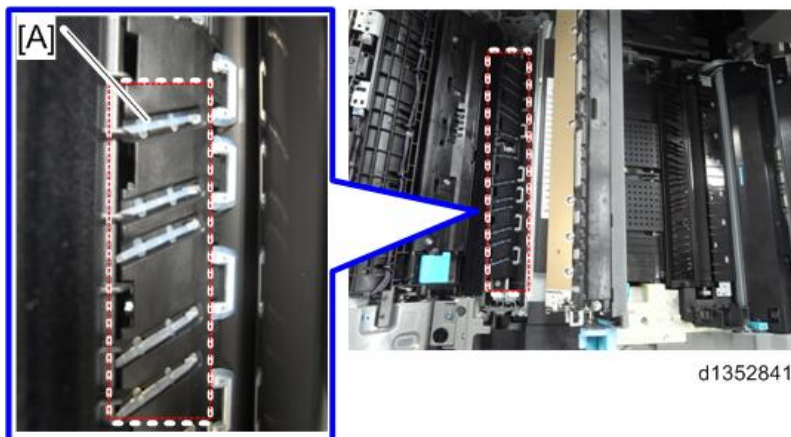
Pro/Office	IMSS setting No.	IMSS setting	Value
Pro	6	Adjust Image Position of Side 1 With Feed Direction	±3.0
Pro	7	Adjust Image Position of Side 2 With Feed Direction	±3.0

3. If the symptom still occurs, check the following and replace parts as necessary.

- If the fusing belt is damaged, replace it.
- If the gap between the fusing stripper plate and fusing belt is wider than normal, replace the fusing unit.

Note: The fusing stripper plate cannot be replaced individually (it can only be attached and precision-adjusted at the factory).

- If the pressure roller is damaged, replace it.
- If the gap between the pressure roller stripper plate and pressure roller is wider than normal, replace the pressure roller stripper plate.
- If the rib [A] has come loose, correct the position of the rib as shown.



Other Problems

Other 001: Drawer Unit

Drawer Unit Lock Motor Emergency

Overview

If you cannot open the drawer, follow this troubleshooting procedure.

Cause

1. The drawer is in a "Not-withdrawable" state.
2. There is a paper jam between the Drawer Unit and another unit (this is called a 'straddling jam'). In this case, the Drawer Unit is locked because if the user pulls out the drawer under that condition, it would tear the paper.
3. The pressure of the PTR is not released correctly.
4. The Drawer Unit Lock Sensor or Drawer Unit Lock Motor is defective.

Solution (Summary)

- Step 1: Check the machine state.
- Step 2: Check whether the pressure of the PTR is released correctly.
- Step 3: Check whether the Drawer Unit Lock Sensor or Drawer Unit Lock Motor is defective.
- Step 4: Check for the presence or absence of a straddling jam.
- Step 5: Release the Drawer Unit lock by removing the parts related to the Drawer Unit lock.
- Step 6: Check whether the Drawer Unit Lock Sensor and Drawer Unit Lock Motor work correctly.
- Step 7: Check the connections of the Drawer Unit Lock Sensor and Drawer Unit Lock Motor.

Solution (Detailed)

Step 1: Check the machine state.

Drawer Unit State List: Not withdrawable

Machine State		Solution
Output		Wait till the output has finished.
Correcting /Adjusting Operation	Warming-up, Process Control, MUSIC, Toner Recovery, Web Cleaning	
Forced Power off	Forced shutdown due to blackout / disconnection, or pressing and holding the power button	Rebooting

Machine State		Solution
SC Issued	SC670 / SC672 occurs	See the SC table and follow the solution.
DUB / TSB Abnormal	SC626 occurs	
Defective Any Drawer Lock-related Parts	Cannot release the drawer lock correctly. SC525 occurs due to a problem with the drawer unit lock motor or the PTR release motor.	Go to Step 3
Straddling Jam	<p>If there is a jam (such as the listed jams below) that straddles the drawer unit and other unit, jammed paper will be torn if you pull out the drawer unit, and torn paper may remain in the machine.</p> <p>Jam between:</p> <p>The bypass unit and the registration unit</p> <p>The relay unit and the vertical transport</p> <p>The paper exit and the purge unit</p> <p>So in this machine, the drawer unit is locked when a straddling jam occurs.</p>	Go to Step 2

Step 2: Check whether the pressure of the PTR is released correctly.

1. Remove the Drawer Unit Lock Motor Cover.
2. Check whether the D-cut surface direction of the axis points down.
If the D-cut surface direction is correct: Go to Step 4.
3. Release the pressure of the PTR by using the link plate. (☛ page 595 "If the Drawer is Locked")
If the Drawer Unit can be withdrawn: Solution procedure is finished.
If the Drawer Unit can't be withdrawn: Go to Step 3

Step 3: Check whether the Drawer Unit Lock Sensor or Drawer Unit Lock Motor is defective.

1. Do SP1040-001 (Drawer Lock Motor Unlocking Operation).
If the Drawer Unit is unlocked: Go to Step 4.
If the Drawer Unit is still locked: Go to Step 5.

Step 4: Check for the presence or absence of a straddling jam.

1. Check whether there is jammed paper at the vertical transport, bypass unit, or purge unit.
If absent: Solution procedure is finished.

If present: Remove jammed paper. (Go to the next step.)

Step 5: Release the Drawer Unit lock by removing the parts related to the Drawer Unit lock.

1. Turn the main switch OFF.
2. Follow the procedure 'If You Cannot Open the Drawer' in the service manual, and release the Drawer Unit lock.

Replacement and Adjustment > Drawer Unit > Drawer Unit Cover > If You Cannot Open the Drawer

3. Turn the main switch ON.

If successful: Go to Step 6.

If an error occurs: Go to Step 7.

Step 6: Check whether the Drawer Unit Lock Sensor and Drawer Unit Lock Motor work correctly.

1. Do SP5803-204: Input Check Drawer Lock Sensor
2. Do SP5805-150: Output Check Drawer Lock Sensor

If successful: Solution procedure is finished.

If an error occurs: Go to Step 7.

Step 7: Check the connections of the Drawer Unit Lock Sensor and Drawer Unit Lock Motor

If the harness connection is correct: Replace the Drawer Unit Lock Sensor and/or Motor.

If the harness connection is poor: Connect it correctly. (Solution procedure is finished.)

Troubleshooting for Too Much Weight/Abnormal Noise on Pulling Out/Pushing In the Drawer Unit

Symptom

It is very difficult to pull out/push in the drawer unit, and/or noise is made when this is done.

Cause

Grease on the positioning pins decreases over time.

Solution

Apply grease (Barrierta S552R) to the drawer unit positioning pins when the amount of grease gets too low.

Note

- As a rough figure, the grease needs to be applied every 2000 times the drawer unit is opened.

Procedure

1. Press the release levers and pull out the drawer unit [A] all the way.

★ Important

- If you are working in a low-temperature environment (15 °C or lower), make sure to complete this step within 30 minutes. This is because the tension of the drawer cord will decrease and the cord will stretch.



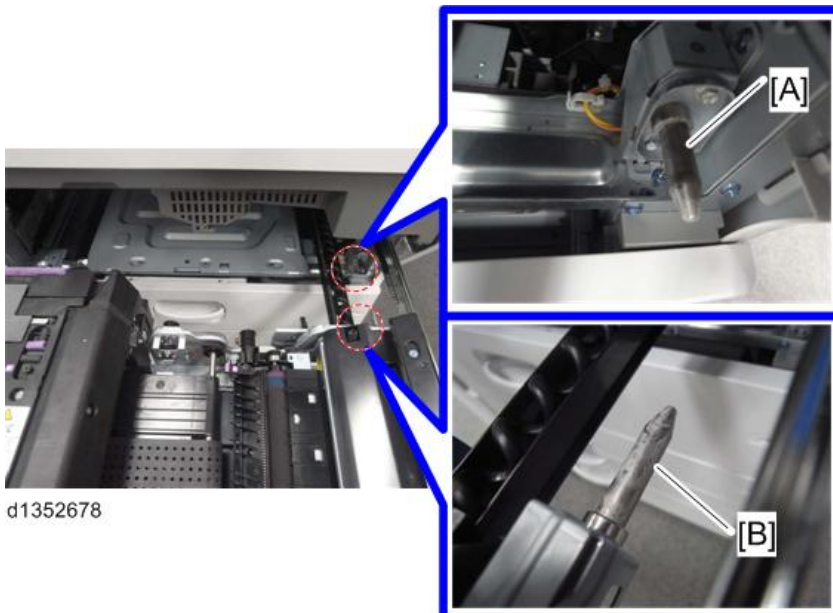
2. Apply Grease Barrierta S552R in thin layers to the drawer unit positioning pins.

Area: On and around the positioning pins

Amount: **0.05g - 0.1g**

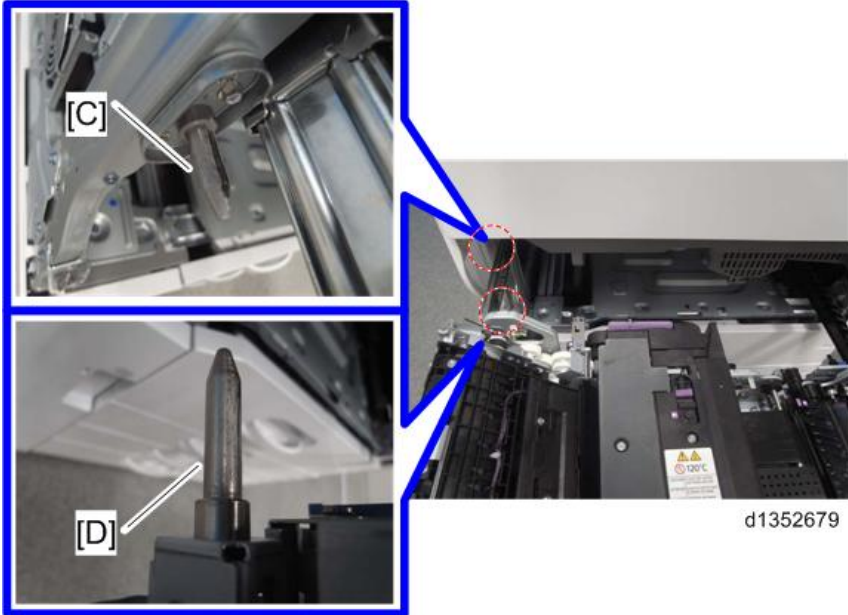
[A]: Drawer unit positioning pin (right-front)

[B]: Drawer unit positioning pin (right-rear)



[C]: Drawer unit positioning pin (front left)

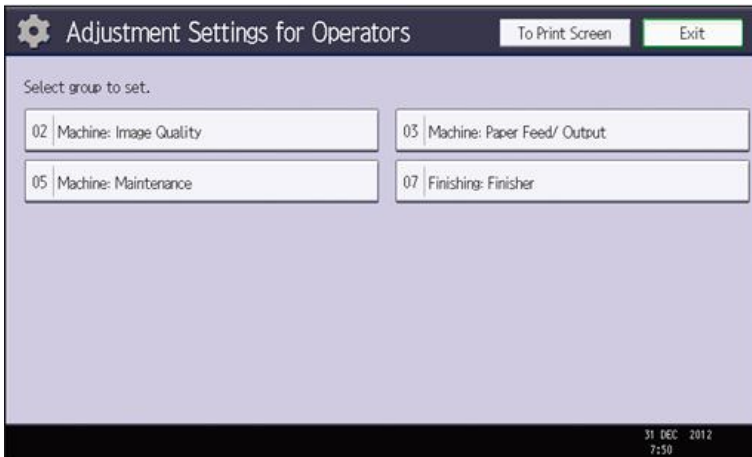
[D]: Drawer unit positioning pin (rear left)



Other 002: Correspondance Table for Adjustment Settings

Correspondence Table for Adjustment Settings for Operators and SP Mode

The correspondence table for Adjustment Settings for Operators and SP settings is as follows.



w_d135a3044

02 Machine: Image Quality

No.	Item	SP No.
0209	Photoconductor Special Mode	SP2-225
0210	Fusing Belt Smoothing	SP1-133
0211	Fusing Ability by Paper Feed Speed	SP1-135

03 Machine: Paper Feed/Output

No.	Item	SP No.
0106	Criteria for Paper Weight	SP1-307

05 Machine: Maintenance

No.	Item	SP No.
0701	Temperature	SP3-260
0702	Humidity inside the Machine	SP3-261

07 Finishing: Finisher

No.	Item	SP No.
0401	Adjust Punch Position With Feed Direction	SP6-100
0402	Adjust Punch Position Across Feed Direction	SP6-101
0403	Adjust Staple Position	SP6-111
0404	Adjust Staple Position for Booklet	SP6-112
0405	Adjust Folding Position for Booklet	SP6-113
0406	Adjust Folding Speed for Booklet	SP6-114
0407	Correct Punch Skew	SP6-102
0408	Punch Skew Correction	SP6-103
0409	Paper Alignment in Shift Tray Across Feed Direction	SP6-104
0410	Paper Alignment for Stapling Across Feed Direction	SP6-107
0411	Paper Alignment for Booklet Across Feed Direction	SP6-108
0412	Adjust Paper Tapping for Extra Feed for Stapling	SP6-120

No.	Item	SP No.
0413	Adjust Claw Shift for Center Folding	SP6-122
0501	Adjust Staple Position	SP6-142
0502	Adjust Punch Position With Feed Direction	SP6-140

Correspondance Table for Adjustment Setting and SP Mode (D137/D138 Only)

The correspondence table for TCRU adjustment settings and SP settings is as follows.

Number	Skilled Operator Setting	SP No	
0101	Adjust Image Position With Feed Direction	1	001
0102	Adjust Image Position Across Feed Direction	1	003
0103	Adjust Registration Paper Buckle	1	004
0104	Adjust Registration Paper Buckle (Thick Paper)	1	004
0106	Criteria for Paper Weight	1	307
0107	Adjust Erase Margin of Leading Edge	2	121
0107	Adjust Erase Margin of Trailing Edge	2	121
0107	Adjust Erase Margin of Left Edge	2	121
0107	Adjust Erase Margin of Right Edge	2	121
0108	Adjust Wide LCT Fan Level	1	920
0109	Adjust Wide LCT Fan Timer	1	921
0110	Pickup Assist Setting	1	923
0120	Adjust Paper Curl	1	906
0130	Perpendicularity Adjustment	2	104
0140	Buffer Pass Unit Fan Activation Setting	1	932
0201	Adjust Image Density	3	001
0201	DEMS	3	040
0202	Image Density Adjustment Execute Interval	3	533

Number	Skilled Operator Setting	SP No	
0203	Adjust Maximum Image Density	3	620
0204	Adjust Line Width	3	623
0205	Adjust Density Difference Across Feed Direction	2	113
0206	Adjust Cleaning Web Motor Interval	1	161
0207	Adjust Fusing Temperature on Standby	1	107
0208	Auto Color Selection Setting	2	907
0209	Photoconductor Special Mode	2	225
0210	Fusing Belt Smoothing	1	133
0211	Fusing Ability by Paper Feed Speed	1	135
0301	Execute Cleaning Initial Setting	3	032
0302	Execute Process Initial Setting	3	020
0303	ITB Manual Lubrication	2	696
0304	Tighten Fusing Cleaning Unit at Replacement	1	161
0305	Reset Replaceable Parts Counter	3	701
0306	Replaceable Parts Counter	7	621
0307	Target Value for Replaceable Part	7	623
0401	Adjust Punch Position With Feed Direction	6	100
0402	Adjust Punch Position Across Feed Direction	6	101
0403	Adjust Staple Position	6	111
0404	Adjust Staple Position for Booklet	6	112
0405	Adjust Folding Position for Booklet	6	113
0406	Adjust Folding Speed for Booklet	6	114
0407	Correct Punch Skew	6	102
0408	Punch Skew Correction	6	103
0409	Paper Alignment in Shift Tray Across Feed Direction	6	104

Number	Skilled Operator Setting	SP No	
0410	Paper Alignment for Stapling Across Feed Direction	6	107
0411	Paper Alignment for Booklet Across Feed Direction	6	108
0412	Adjust Paper Tapping for Extra Feed for Stapling	6	120
0413	Adjust Claw Shift for Center Folding	6	122
0501	Adjust Staple Position	6	142
0502	Adjust Punch Position With Feed Direction	6	140
0503	Paper Alignment for Stapling Across Feed Direction	6	141
0504	Paper Alignment for Stapling With Feed Direction	6	145
0505	Paper Alignment in Shift Tray Across Feed Direction	6	143
0601	Half Fold Position (Multi-sheet Fold)	6	314
0602	Letter Fold-out Position 1 (Multi-sheet Fold)	6	315
0603	Letter Fold-out Position 2 (Multi-sheet Fold)	6	316
0604	Letter Fold-in Position 1 (Multi-sheet Fold)	6	317
0605	Letter Fold-in Position 2 (Multi-sheet Fold)	6	318
0606	Folding Unit Tray Full Detection	6	762
0607	Number of Sheets Folded after Full Detection	6	763
0701	Temperature	3	260
0702	Humidity inside the Machine	3	261
0703	Back Up / Restore Custom Paper Data	-	-

Other 003: Correspondance Table for IMSS Settings

Correspondence Table for IMSS Settings and SP Mode (D137/D138 Only)

Category	No.	IMSS setting	SP No.		
Paper Feed	1	Wide LCT Fan Setting	1	976	001 to 100
	2	Adjust Wide LCT Fan Level	1	975	001 to 100
	3	Pickup Assist Setting	1	977	001 to 100
Paper Path	4	Paper Weight Detection	1	954	001 to 100
	5	Double Feed Detection	1	955	001 to 100
Registration	6	Adjust Image Position of Side 1 With Feed Direction	1	950	001 to 100
	7	Adjust Image Position of Side 2 With Feed Direction	1	951	001 to 100
	8	Adjust Image Position of Side 1 Across Feed Direction	1	952	001 to 100
	9	Adjust Image Position of Side 2 Across Feed Direction	1	953	001 to 100
	10	Adjust Erase Margin of Leading Edge	2	122	001 to 100
	11	Adjust Erase Margin of Trailing Edge	2	123	001 to 100
	12	Adjust Magnification of Side 2 Across Feed Direction	2	952	001 to 100
	13	Adjust Magnification of Side 2 With Feed Direction	2	953	001 to 100
	14	Trailing Edge Full Bleed	2	124	001 to 100

Category	No.	IMSS setting	SP No.		
Drive	15	Process Speed Setting	1	986	001 to 100
	16	Registration Motor Feed Speed Adjustment	1	961	001 to 100
	17	First Transport Motor Feed Speed Adjustment	1	956	001 to 100
	18	Second Transport Motor Feed Speed Adjustment	1	957	001 to 100
	19	Third Transport Motor Feed Speed Adjustment	1	958	001 to 100
	20	Relay Transport Motor Feed Speed Adjustment: CW	1	959	001 to 100
	21	Relay Transport Motor Feed Speed Adjustment: CCW	1	960	001 to 100
	22	Paper Transfer Feed Speed Adjustment	2	831	001 to 100
	23	Fusing Feed Speed Adjustment	1	987	001 to 100
Drive	24	Exit Motor Feed Speed Adjustment	1	965	001 to 100
	25	Switchback Entrance Feed Speed Adjustment	1	966	001 to 100
	26	Switchback Exit Feed Speed Adjustment: CW	1	967	001 to 100
	27	Switchback Exit Feed Speed Adjustment: CCW	1	970	001 to 100
	28	2-sided Switchback Motor Feed Speed Adjustment: CCW	1	971	001 to 100
	29	2-sided Exit Motor Feed Speed Adjustment	1	969	001 to 100
	30	2-sided Transport Roller Shift Adjustment 1	1	981	001 to 100
	31	2-sided Transport Roller Shift Adjustment 2	1	982	001 to 100
	32	Deactivate 2-sided Transport Roller Shift	1	983	001 to 100

Category	No.	IMSS setting	SP No.		
Toner Adhesion	33	Adjust Toner Adhesion (Black)	3	921	001 to 100
	34	Adjust Toner Adhesion (Cyan)	3	922	001 to 100
	35	Adjust Toner Adhesion (Magenta)	3	923	001 to 100
	36	Adjust Toner Adhesion (Yellow)	3	924	001 to 100
Image Transfer	37	Image Transfer Current Setting: B&W	2	801	001 to 100
	38	Image Transfer Current Setting: FC: Black	2	802	001 to 100
	39	Image Transfer Current Setting: FC: Cyan	2	803	001 to 100
Image Transfer	40	Image Transfer Current Setting: FC: Magenta	2	804	001 to 100
	41	Image Transfer Current Setting: FC: Yellow	2	805	001 to 100
	42	Paper Transfer Current Setting: B&W: Side 1	2	811	001 to 100
	43	Paper Transfer Current Setting: Full Color: Side 1	2	813	001 to 100
	44	Paper Transfer Current Setting: B&W: Side 2	2	812	001 to 100
	45	Paper Transfer Current Setting: Full Color: Side 2	2	814	001 to 100
	46	Paper Transfer Current; Lead Edge: B&W	2	821	001 to 100
	47	Paper Transfer Current; Lead Edge: Full Color	2	822	001 to 100
	48	Paper Transfer Current; Lead Edge Distance: B&W	2	823	001 to 100
	49	Paper Transfer Current; Lead Edge Distance: Full Color	2	824	001 to 100

Category	No.	IMSS setting	SP No.		
Image Transfer	50	Paper Transfer Current; Trail Edge: B&W	2	825	001 to 100
	51	Paper Transfer Current; Trail Edge: Full Color	2	826	001 to 100
	52	Paper Transfer Current; Trail Edge Distance: B&W	2	827	001 to 100
	53	Paper Transfer Current; Trail Edge Distance: Full Color	2	828	001 to 100
	54	Paper Transfer CV Start Timing: B&W: Side 1	2	832	001 to 100
	55	Paper Transfer CV Start Timing: B&W: Side 2	2	833	001 to 100
	56	Paper Transfer CV Start Timing: Full Color: Side 1	2	834	001 to 100
	57	Paper Transfer CV Start Timing: Full Color: Side 2	2	835	001 to 100
	58	Paper Transfer CV Control Duration: B&W: Side 1	2	836	001 to 100
	59	Paper Transfer CV Control Duration: B&W: Side 2	2	837	001 to 100

Category	No.	IMSS setting	SP No.		
Image Transfer	60	Paper Transfer CV Control Duration: Full Color: Side 1	2	838	001 to 100
	61	Paper Transfer CV Control Duration: Full Color: Side 2	2	839	001 to 100
	62	Paper Transfer Contact and Disengage Mode	2	841	001 to 100
	63	Adjust Contact Timing of Paper Transfer	2	842	001 to 100
	64	Adjust Disengage Timing of Paper Transfer	2	843	001 to 100
	65	Textured Paper Mode	2	850	001 to 100
	66	Textured Paper: Paper Transfer Voltage Setting: B&W: Side 1	2	851	001 to 100
	67	Textured Paper: Paper Transfer Voltage Setting: B&W: Side 2	2	852	001 to 100
	68	Textured Paper: Paper Transfer Voltage Setting: Full Color: Side 1	2	853	001 to 100
	69	Textured Paper: Paper Transfer Voltage Setting: Full Color: Side 2	2	854	001 to 100
Image Transfer	70	Textured Paper: AC Frequency of Paper Transfer Voltage	2	855	001 to 100
	71	Textured Paper: AC Duty Cycle of Paper Transfer Voltage	2	856	001 to 100
	72	Textured Paper: Paper Transfer Isolation Voltage: Side 1	2	857	001 to 100
	73	Textured Paper: Paper Transfer Isolation Voltage: Side 2	2	858	001 to 100

Category	No.	IMSS setting	SP No.		
Fusing	74	Fusing Heat Roller Temperature Adjustment	1	984	001 to 100
	75	Fusing Pressure Roller Temperature Adjustment	1	985	001 to 100
	76	Fusing Nip Width Setting	1	989	001 to 100
	77	Adjust Fusing Temperature to Transfer Paper	1	995	001 to 100
	78	Adjust Adding Fusing Temperature 1	1	993	001 to 100
	79	Adjust Adding Fusing Temperature 2	1	994	001 to 100
	80	Paper Feed Interval Setting	1	988	001 to 100
	81	Reduce Initial CPM: Low Temperature Environment	1	990	001 to 100
	82	Reduce Initial CPM: Normal/High Temperature Environment	1	991	001 to 100
	83	Adjust Cleaning Web Motor Interval	1	992	001 to 100
	84	Cleaning Web Contact and Disengage	1	998	001 to 100
	85	Fusing Nip Width Adjustment for Envelope	1	996	001 to 100
Decurler	86	Paper Curl Correction Level	6	928	001 to 100
	87	Adjust Paper Curl Correction Level	6	929	001 to 100

Category	No.	IMSS setting	SP No.		
Finisher	88	Adjust Z-fold Position 1	6	750	001 to 100
	89	Adjust Z-fold Position 2	6	751	001 to 100
	90	Half Fold Position: Single-sheet Fold	6	752	001 to 100
	91	Adjust Letter Fold-out Position 1: Single-sheet Fold	6	753	001 to 100
	92	Adjust Letter Fold-out Position 2: Single-sheet Fold	6	754	001 to 100
	93	Adjust Letter Fold-in Position 1: Single-sheet Fold	6	755	001 to 100
	94	Adjust Letter Fold-in Position 2: Single-sheet Fold	6	756	001 to 100
	95	Double Parallel Fold Position 1	6	757	001 to 100
	96	Double Parallel Fold Position 2	6	758	001 to 100
	97	Adjust Gate Fold Position 1	6	759	001 to 100
	98	Adjust Gate Fold Position 2	6	760	001 to 100
	99	Adjust Gate Fold Position 3	6	761	001 to 100

Other 004: SC

Troubleshooting for SC516 after Repeated J097

Symptom

Unusual clattering noise is heard when a duplex job starts and the system starts to feed paper. Jam074 occurs, followed by Jam097, which occurs 3 times in succession. The system finally stops with an SC516-02 (sensor shift motor edge detection error).

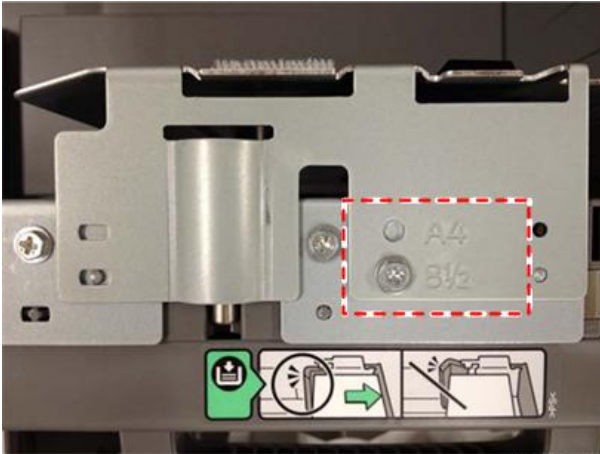
Cause

The paper size (A4 or 8¹/₂) fixed with the end fence on the tandem tray does not match with the size specified on the control panel.

The shift roller in the duplex unit operates according to the paper size specified on the control panel, resulting in the above jams and SC.

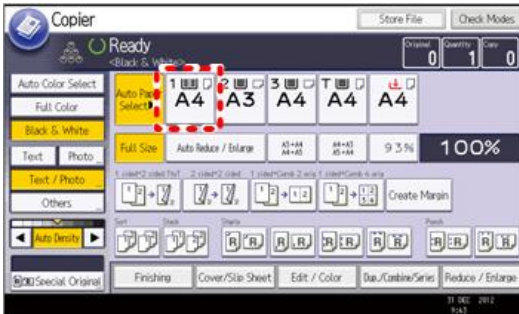
Solution

1. Check the paper size fixed with the end fence on the tandem tray.
Photo below describes an example of the end fence fixed to 8 1/2 size.



d1352924

2. Check the paper size specified for the tandem tray on the control panel.



w_d135a3001

3. If the sizes do not match, enter SP5-959-001; Paper Size: 1st Tray (Tandem) and specify the size according to the paper in use.
0: A4 LEF
1: 8 1/2 × 11 LEF
4. Turn the main power off/on.
5. Confirm proper duplex printing to complete the procedure.

Troubleshooting SC 570-00 (fusing belt smoothing roller error)**Symptom**

SC570-00 (fusing belt smoothing roller operation error)

How to isolate the cause of the problem

Execute a forced fusing belt smoothing operation (SP1-133-110).

If the SC occurs, do Procedure 1.

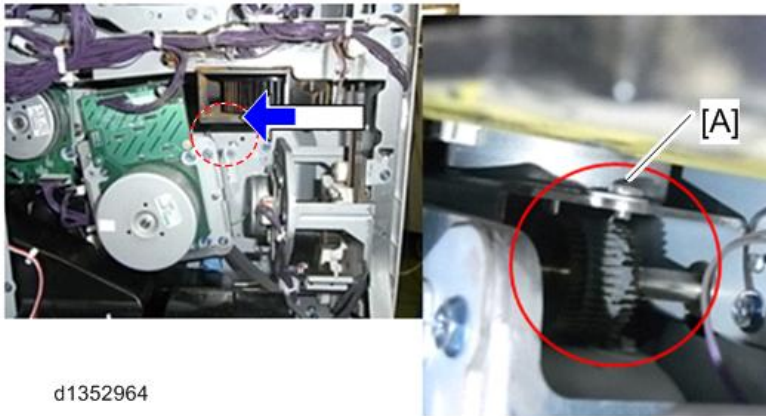
If the SC does not occur, do Procedure 2.

Solution

Procedure 1

The goal of this procedure is to verify the parts (gear, feeler, sensor, harness, motor) that may be damaged or not connected properly, causing the SC.

1. Set the value in SP1-133-120 (Fixed Operation Time: Manual) to "1".
2. Execute SP1-133-110 (Manual Smoothing: Exe).
3. Set the value in SP1-133-120 (Fixed Operation Time: Manual) back to "180".
4. Check if the gear [A] rotates.



If the gear rotates,

- Smoothing roller contact/separate Gear
- Smoothing roller contact/separate Feeler
- Smoothing roller contact/separate Sensor

may be damaged.

If the gear DOES NOT rotate,

- Harness
- Motor

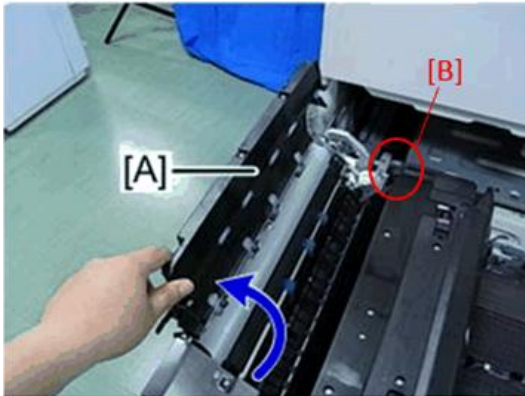
may be damaged or its connection is loose.

5. Replace or fix the affected part(s) accordingly to complete the procedure.

Procedure 2

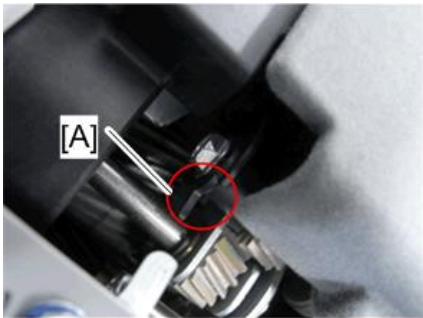

The goal of this procedure is to verify if the SC is caused by an incorrectly positioned feeler, which may be caused by excess load put on the cam.

1. Open the upper guide plate [A] of the fusing unit and locate the belt smoothing roller contact/separate feeler [B]. If the cut-out on the feeler is not visible, do Procedure 3.



d135a3147

* The top part of the fusing unit shown in this photo is gray because the unit is of the prototype.

Incorrect	Correct
Cut-out [A] on the feeler is visible.	Cut-out on the feeler is not visible.
 <p>d1352965</p>	 <p>d1352966</p>
Continue with the next step.	Do Procedure 3.

2. Check if the brackets [A] and/or [B] are deformed.
If deformed, replace the fusing unit to complete the procedure.
If the brackets are not deformed, excess load on the cam may be the problem. Do the next step.
3. Apply Fluotribo grease to the sliding surfaces [C] and [D] of the brackets [A] and [B]. Grease amount: 5 ± 1 mm in diameter (0.1 to 0.4 gm)

Procedure 3

The goal of this procedure is to reconfirm proper operation of the belt smoothing roller.

1. Set the value in SP1-133-120 (Fixed Operation Time: Manual) to "1".
2. Execute SP1-133-110 (Manual Smoothing: Exe).
3. Set the value in SP1-133-120 (Fixed Operation Time: Manual) back to "180".
4. Check if the SC occurs.

If it does not occur, repeat the above steps 1 through 3 three times and check if the SC still does not occur to confirm the effect.

If it does occur, excess load on the cam may be the problem. Do Procedure 2.

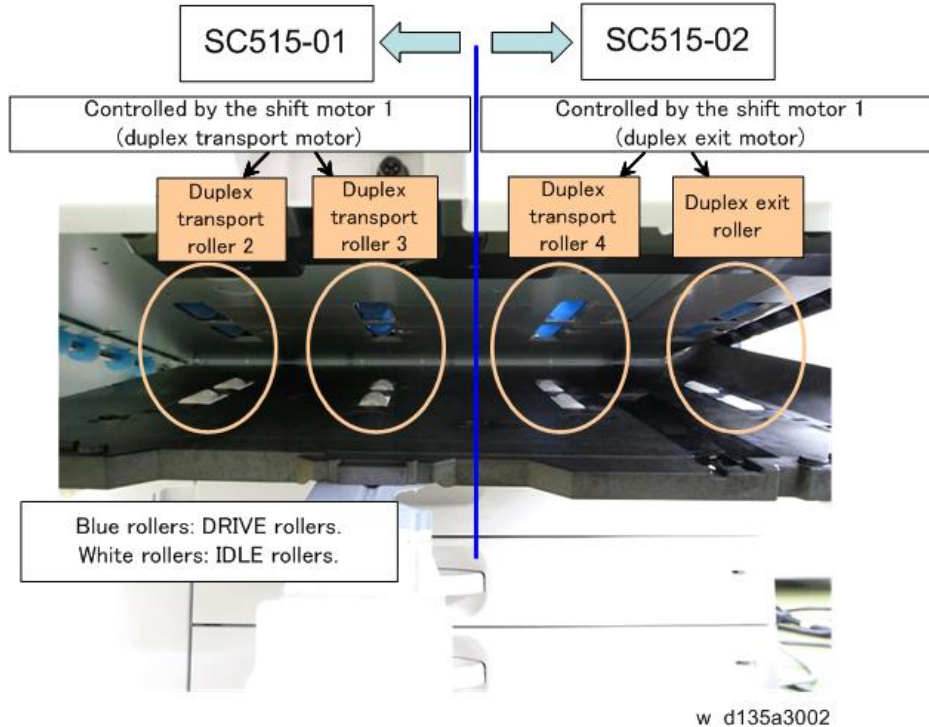
Troubleshooting SC515-01

Symptom

SC515-01 (Roller Shift Motor 1 Error) before total print volume reaches 10K.

Cause

Because the machine is still new, grease is not completely spread across the roller shift motor (duplex transport motor), causing the motor to lose steps.



Action

If SC515-01 is observed before the machine reaches 10K since installation, do the following procedure to age the duplex transport roller/duplex exit roller.

1. Pull out the drawer unit and open the duplex unit lower guide plate.
2. Slide the idle rollers of duplex transport rollers [C] and [D] with your fingers toward the front side of the machine as far as they go.

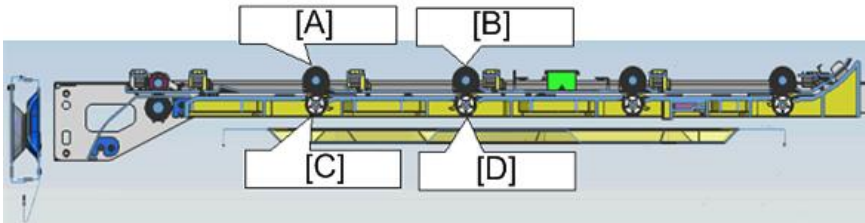
★ Important

- Make sure to grip the edge of the rollers, not the surface.

3. Slide the drive rollers of duplex transport rollers [A] and [B] with your fingers toward the front side of the machine as far as they go.

★ Important

- Make sure to grip the edge of the rollers, not the surface.



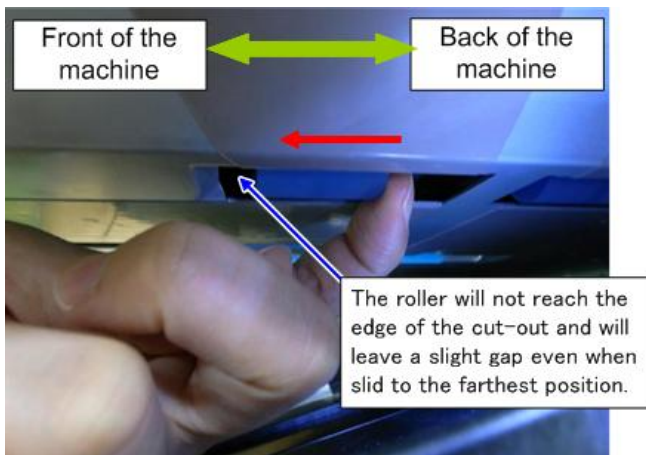
w_d135a3003

[A]: Duplex transport roller 2 (drive)

[B]: Duplex transport roller 3 (drive)

[C]: Duplex transport roller 2 (idle)

[D]: Duplex transport roller 3 (idle)



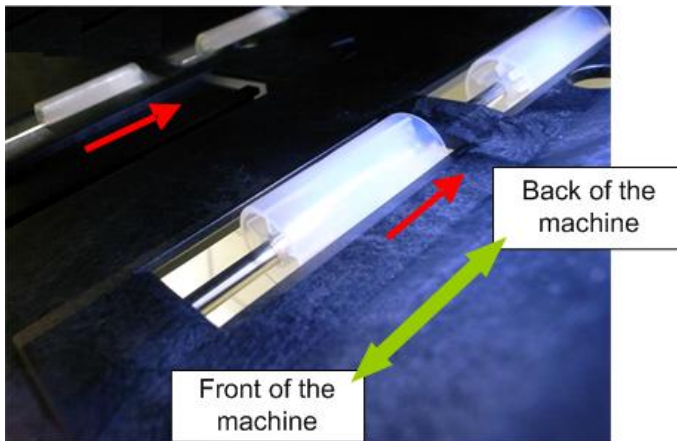
w_d135a3004

4. Close the duplex unit lower guide plate and push the drawer unit back into the machine.

5. Set SP5-806-161 (Duplex Feed Mtr:Std Speed) to ON to rotate the duplex transport rollers 2 and 3.
6. While keeping SP5-806-161 set to ON, set SP5-806-195 (Shift Roller Motor1:Homing) ON and then OFF. Repeat the ON/OFF cycle 10 times.
7. Set SP5-806-161 (Duplex Feed Mtr:Std Speed) back to OFF.
8. Pull out the drawer unit and open the duplex unit lower guide plate.
9. Slide the idle rollers of duplex transport rollers [C] and [D] with your fingers toward the back side of the machine as far as they go.

★ Important

- Make sure to grip the edge of the rollers, not the surface.



w_d135a3005

10. Slide the drive rollers of duplex transport rollers [A] and [B] with your fingers toward the back side of the machine as far as they go.

★ Important

- Make sure to grip the edge of the rollers, not the surface.

11. Close the duplex unit lower guide plate and push the drawer unit back into the machine.
12. Set SP5-806-195 (Shift Roller Motor1:Homing) ON and then OFF.
13. Repeat steps 8 through 12 five times and run a test job to confirm SC515-01 does not occur.

↓ Note

- If the SC persists, repeat steps 1 through 13.

Troubleshooting SC515-02

Symptom

SC515-02 (Roller Shift Motor 2 Error) before total print volume reaches 10K.

Cause

Because the machine is still new, grease is not completely spread across the roller shift motor (duplex exit motor), causing the motor to lose steps.

Action

If SC515-02 is observed before the machine reaches 10K since installation, do the following procedure to age the duplex transport roller/duplex exit roller.

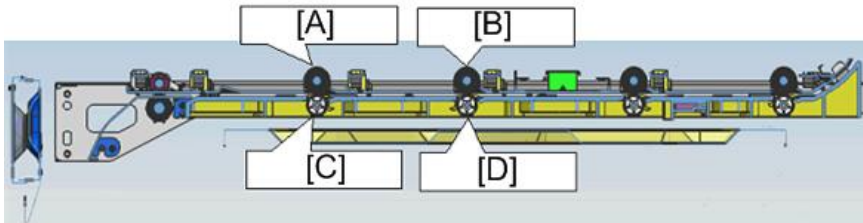
1. Pull out the drawer unit and open the duplex unit lower guide plate.
2. Slide the drive rollers of duplex transport roller [C] and duplex exit roller [D] with your fingers toward the front side of the machine as far as they go.

★ Important

- Make sure to grip the edge of the rollers, not the surface.
3. Slide the drive rollers of duplex transport roller [A] and duplex exit roller [B] with your fingers toward the front side of the machine as far as they go.

★ Important

- Make sure to grip the edge of the rollers, not the surface.



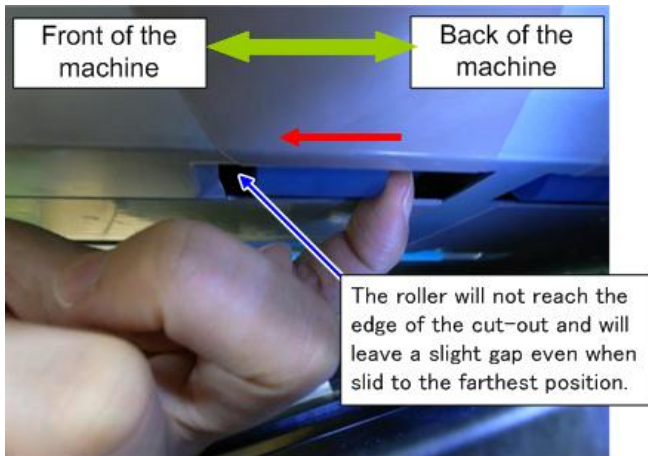
w_d135a3003

[A]: Duplex transport roller 4 (drive)

[B]: Duplex exit roller (drive)

[C]: Duplex transport roller 4 (idle)

[D]: Duplex exit roller (idle)

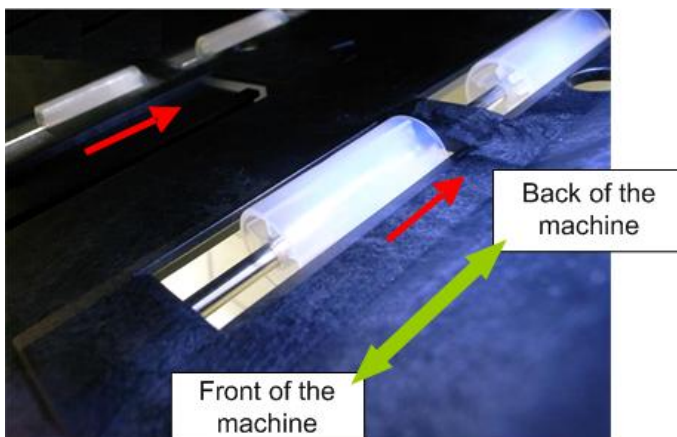


w_d135a3004

1. Close the duplex unit lower guide plate and push the drawer unit back into the machine.
2. Set SP5-806-174 (Duplex Exit Mtr:Feed Speed:Std Speed) to ON to rotate the duplex transport rollers 2 and 3.
3. While keeping SP5-806-161 set to ON, set SP5-806-200 (Shift Roller Motor2:Homing) ON and then OFF. Repeat the ON/OFF cycle 10 times.
4. Set SP5-806-174 (Duplex Exit Mtr:Feed Speed:Std Speed) back to OFF.
5. Pull out the drawer unit and open the duplex unit lower guide plate.
6. Slide the idle rollers of duplex transport roller [C] and duplex exit roller [D] with your fingers toward the back side of the machine as far as they go.

★ Important

- Make sure to grip the edge of the rollers, not the surface.



w_d135a3005

Slide the drive rollers of duplex transport roller [A] and duplex exit roller [B] with your fingers toward the back side of the machine as far as they go.

Caution: Make sure to grip the edge of the rollers, not the surface.

Close the duplex unit lower guide plate and push the drawer unit back into the machine.

Set SP5-806-195 (Shift Roller Motor1:Homing) ON and then OFF.

Repeat steps 8 through 12 five times and run a test job to confirm SC515-02 does not occur.

Note

- If the SC persists, repeat steps 1 through 13.

Other 005: HDD Troubleshooting

5

Symptom

1. The "Please wait" display does not change to "Ready" after warming up at power ON or after recovering from Energy Saver Mode.
2. HDD related SC occurrence (Mainly for SC860 to 865)

Cause

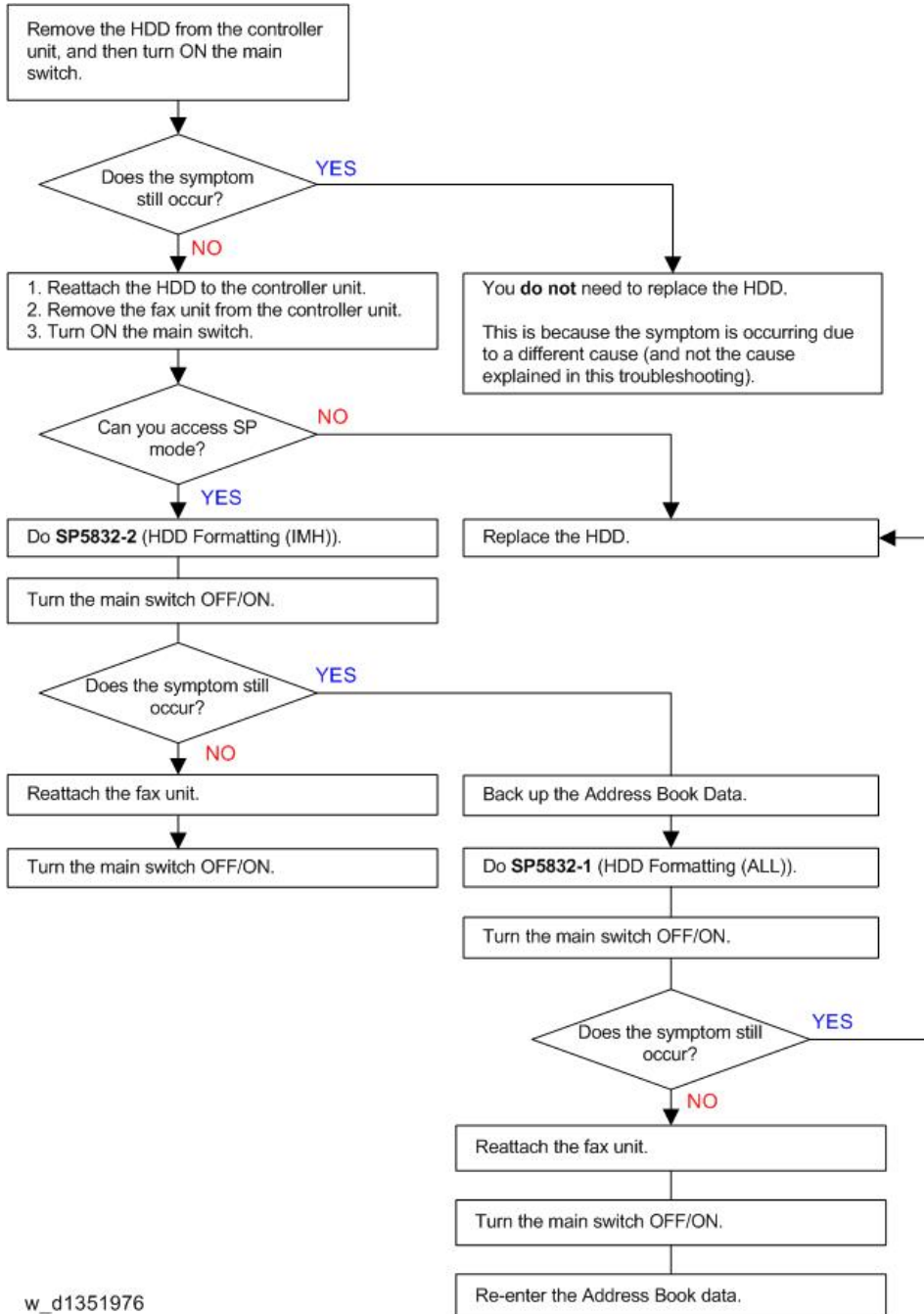
Mainly AC voltage supplied to the PSU is interrupted, possibly causing corruption of data in the HDD. As a result, the fax function cannot boot up.

Note

- This symptom can happen when the power is interrupted for an instant, or for a longer period (e.g. the user pulls the power cord out of the outlet).
- If the power is interrupted, the area in the HDD that contains image data is corrupted easily.

Solution

Follow the action in the attached flowchart.



w_d1351976

Other 006: Original Size Misdetection

Symptom

When feeding originals with a **different width perpendicular to the feed direction** in **Mixed Sizes mode**, the second original [A] fed through the ADF is detected as the wrong size [B]. Depending on the combination of sizes (see chart below), this may cause a customer to be overcharged.

↓ Note

- This occurs depending on the value of SP5-131-001 (Paper Size Type Selection).
- This does not occur if the width of the two originals is the same perpendicular to the feed direction (Ex., A3 SEF and A4 LEF).
- The symptom is limited to Mixed Sizes mode.

5

Value of SP5-131-001 is "0 (DOM/Japan)"

First original fed	Second original fed [A]	Size detected (error) [B]
A3 (SEF)	DLT (SEF)	A3 (SEF)
A3 (SEF)	LT (LEF)	A4 (LEF)
A4 (LEF)	B5 (LEF)	
A4 (LEF)	DLT (SEF)	A3 (SEF)
LT (LEF)	B5 (LEF)	A4 (LEF)
B4 (SEF)	A4 (SEF)	B4 (SEF)
B5 (LEF)	LT (SEF)	
	B5 (SEF)	LT (SEF)
LT (SEF)		
A4 (SEF)		
A4 (LEF)	B5 (SEF)	A3 (SEF)
A3 (SEF)	LT (SEF)	
	A4 (SEF)	
	B4 (SEF)	
	11×15 (SEF)	

First original fed	Second original fed [A]	Size detected (error) [B]
11×15 (SEF)	B5 (SEF)	A3 (SEF)
LT (LEF)	LT (SEF)	
DLT (SEF)	A4 (SEF)	
	B4 (SEF)	

Value of SP5-131-001 is "1(NA)"

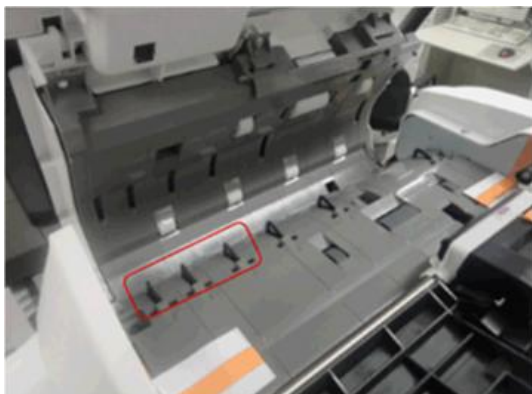
First original fed	Second original fed [A]	Size detected (error) [B]
A4 (LEF)	DLT (SEF)	A3 (SEF)
DLT(SEF)	10×14(SEF) 8.5×14(SEF) 7 ¹ / ₄ ×10.5(SEF) LT(SEF)	11×15(SEF)
11×15(SEF) LT(LEF) 7 ¹ / ₄ ×10.5(LEF) A3(SEF) A4(LEF)	10×14(SEF) 8.5×14(SEF) 332mm×242mm(SEF) A4(SEF) 7 ¹ / ₄ ×10.5(SEF) LT(SEF) 8×10(SEF)	11×15(SEF)
10×14(SEF)	8.5×14(SEF) 332mm×242mm(SEF) A4(SEF) 7 ¹ / ₄ ×10.5(SEF) LT(SEF) 8×10(SEF)	10×14(SEF)
8.5×14(SEF) LT(SEF)	7 ¹ / ₄ ×10.5(SEF)	LT(SEF)
A3(SEF)	DLT(SEF)	A3(SEF)
A3(SEF) A4(LEF)	LT(LEF) 7 ¹ / ₄ ×10.5(LEF)	A4(LEF)

Value of SP5-131-001 is "2(EU)"

First original fed	Second original fed [A]	Size detected (error) [B]
A3(SEF) A4(LEF)	DLT(SEF)	A3(SEF)
A3(SEF) A4(LEF)	LT(LEF) 16K(LEF) B5(LEF)	A4(LEF)
B4(SEF) B5(LEF)	332mm×242mm(SEF) A4(SEF) LT(SEF) 16K(SEF) B5(SEF)	B4(SEF)
F4(SEF) A4(SEF)	B5(SEF)	LT(SEF)
A4(LEF) A3(SEF)	B5(SEF) 16K(SEF) LT(SEF) A4(SEF) F4(SEF) B4(SEF) 8K(SEF)	A3(SEF)
16K(LEF) 8K(SEF) LT(LEF) DLT(SEF)	B5(SEF) 16K(SEF) LT(SEF) A4(SEF) 332mm×242mm(SEF) B4(SEF)	A3(SEF)

Cause

The sensor actuators shown in red below continue to fluctuate/chatter after the original has passed them. Due to the insufficient weight of the actuators, they continue to chatter while the next original is passing their position.



d135a3170

5

Solution

Production line:

The ADF firmware was modified to Version 01.310:16 (Program# D6835550D).

↓ Note

- The interval between original feeds was decreased by 0.5 sec/ page.

Cut-in S/N

Model	S/N	Model	S/N
D135-17	E234C100001	D136-17	E243CC00039-E243CC00042 E243CC00044 E243CC00046-E243CC00052 E243CC00075 E243CC00076 E244C100001
D135-21	E234C120001	D136-21	E244C120001

Model	S/N	Model	S/N
D135-27	E234C130001	D136-27	E243CC30022 E243CC30048-E243CC30050 E243CC30052 E243CC30053 E243CC30055-E243CC30058 E244C130001
D135-29	E233CC50011 E233CC50012 E233CC50015 E233CC50021-E233CC50025 E233CC50027 E233CC50029-E233CC50032 E233CC50035-E233CC50043 E233CC50045-E233CC50047 E233CC50050 E234C150001	D136-29	E243CB50005 E243CB50010 E243CC50001-E243CC50010 E244C250001

In the field:

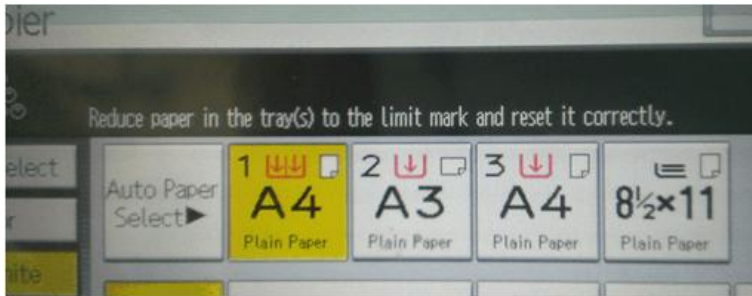
Upgrade the ADF firmware to Version 01.310:16 or newer.

Other 007: Improper Message When Setting the Tandem Tray

Symptom

The following message is displayed and the tandem tray does not lift up even after the customer has pushed in the tandem tray, even if the amount of paper in the stack is correct:

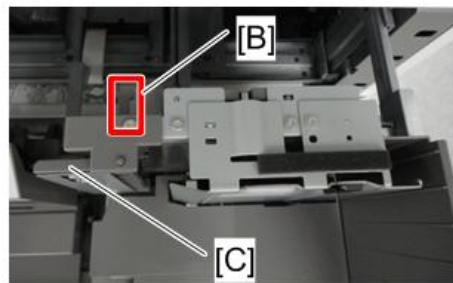
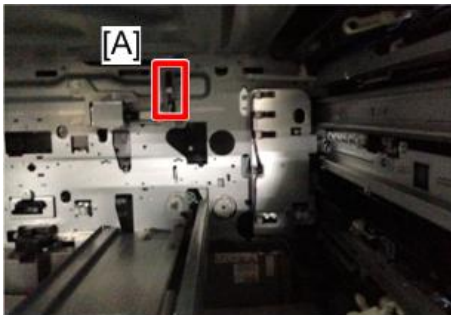
“Reduce paper in the tray(s) to the limit mark and reset it correctly.”



d135a3171

Cause

The end fence [C] is not positioned correctly. As a result, the tandem tray set detection sensor [A] cannot detect the actuator [B].



d135a3172

5

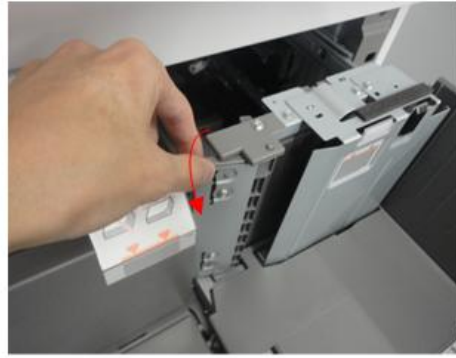
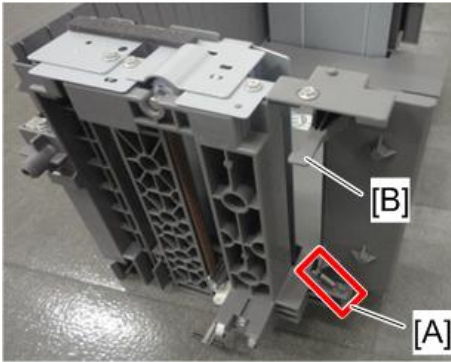
Solution

Do the following if the symptom occurs.

1. Confirm that the spring [A] is attached correctly as shown below.
2. Confirm that the end fence moves freely by the force of the spring in the direction of the red arrow.

↓ Note

- If the spring is not attached correctly, the actuator cannot move freely and the machine cannot detect the actuator when the tray is pushed in.



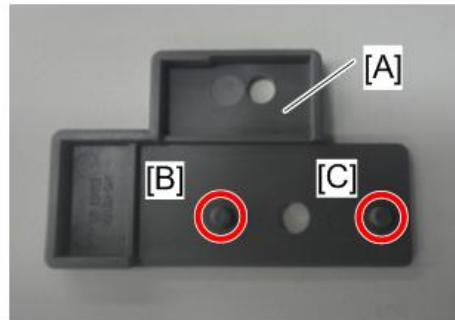
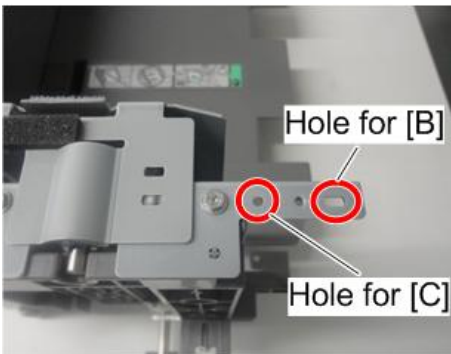
d135a3173

3. Confirm that pins [B] and [C] are passing through the two holes on the bracket shown.

Note

- If the cover is not attached correctly, the pins may not pass through these holes. As a result, the end fence will not move correctly, even if the spring is attached correctly.

5



d135a3174

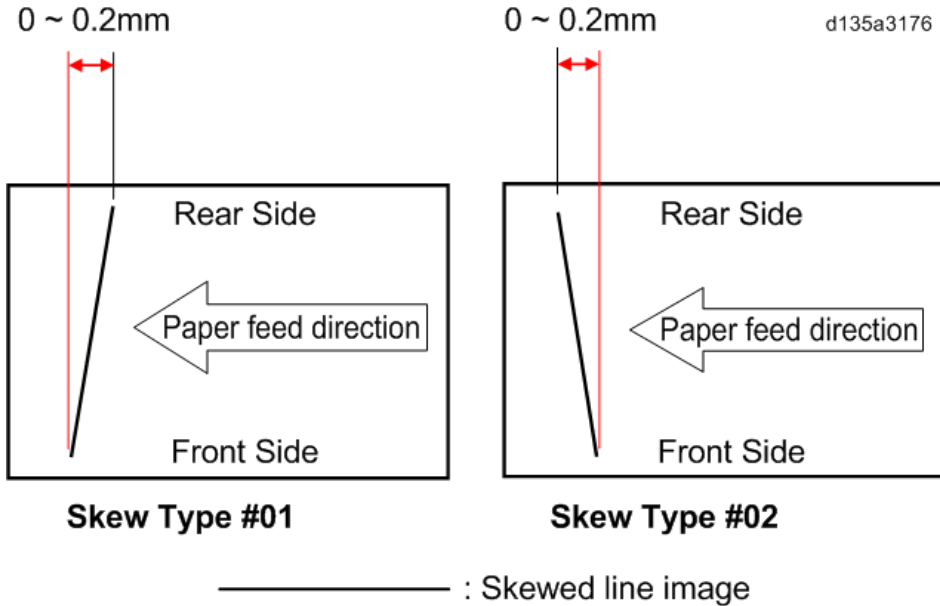
Other 008: Skew in sub-scan direction

★ Important

- The troubleshooting procedure described in this section is effective **ONLY** for skews smaller than 0.2mm on A3/DLT SEF or A4/LT LEF. Do not apply the procedures for skews greater than 0.2mm.
- The troubleshooting procedure will take approximately 3 to 4 hours.
- While skew in sub-scan direction can be caused by many factors, for example, paper in the tray is set improperly, skewed OPC drum shaft, skewed ITB etc., the troubleshooting procedure described in this section focuses on skews owing to an improperly set Laser Unit. If the skew is caused by other factors, the skew will persist even after performing the troubleshooting procedure.

Symptom

Line images skew as shown in the illustrations below.



Skew Type #01: Edge of the line at the rear side positions behind the edge at the front side in paper feed direction.

Skew Type #02: Edge of the line at the front side positions behind the edge at the rear side in paper feed direction.

Cause

The CK laser unit is not mounted level on the copier and causes the laser beams emitted on the OPC drum to skew.

This copier does not have a skew adjustment motor for the K (black) laser unit because the laser beams emitted from the K unit are used as reference for other colors (C, M and Y). Skew adjustments for C, M and Y are performed automatically with the skew adjustment motors.

Solution

Insert shims in between the CK laser unit and copier frame to level the CK laser unit.

Procedure

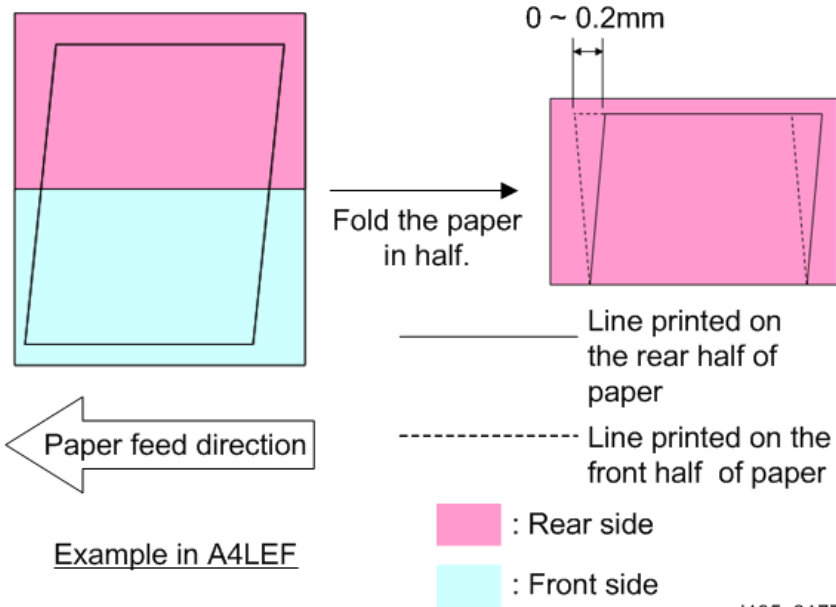
1. Enter SP2-109-003 (Test Pattern/Pattern Selection) and select 14: Trimming Area.

2. Press the "Copy Window" button and print the "Trimming Area" pattern in black & white mode on A3/DLT SEF or A4/LT LEF. **Print out totally 5 sheets.**

Note

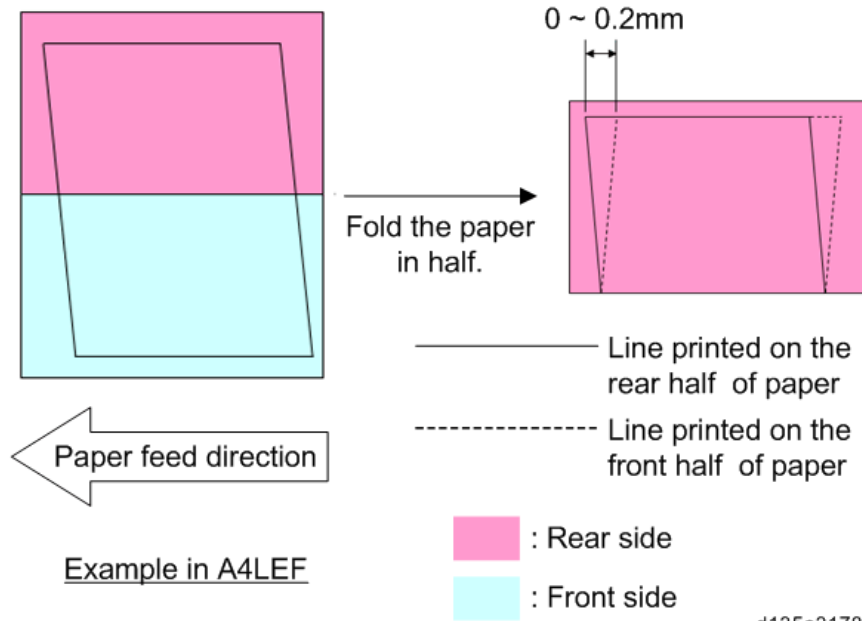
- Make sure to select Face Up paper feeding.
3. Measure the skew by folding the printout in half. Take average of skew amount on 5 sheets.

Skew Type #01



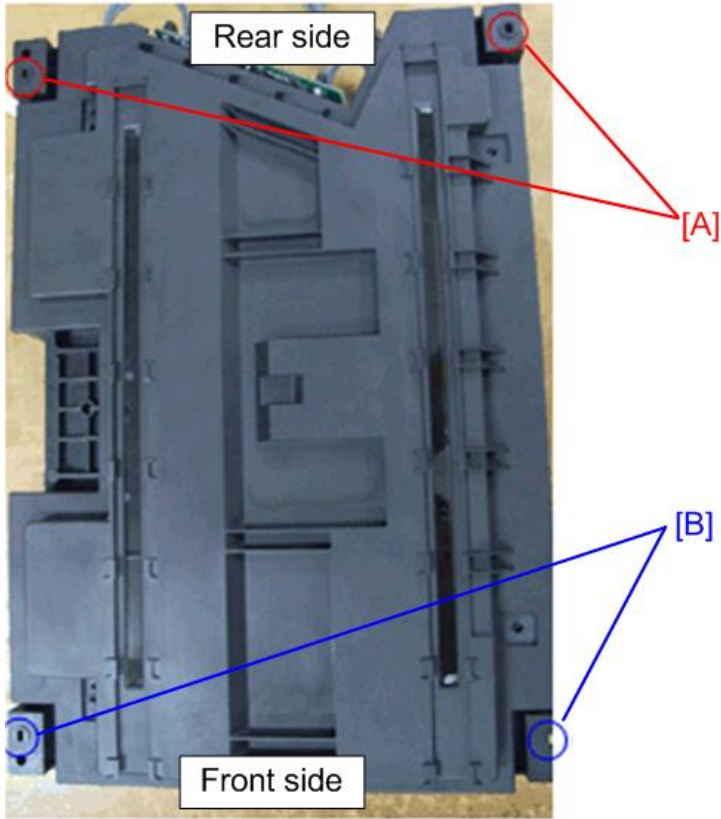
d135a3177

Skew Type #02



4. Remove the CK laser unit from the copier. (See page 671 "Laser Unit".)
5. Place the CK laser unit upside down on a table. Attach the shims to positions [A] or [B] by referring to the table below. (Shim P/N: D1362140)

Skew amount	0 - 0.033mm	0.034 - 0.066mm	0.067 - 0.099mm	0.100 - 0.133mm	0.134 - 0.165mm	0.166 - 0.200mm
Number of shims	1	2	3	4	5	6 to 7



d135a3179

[A]: Attach shims here for **Skew Type #02**.

[B]: Attach shims here for **Skew Type #01**.

Note

- Do **NOT** attach **more than 7 shims** to each position. Doing so could cause unexpected side effects, for example, banding level is getting worse at rear side or front side because the laser writing focus will be abnormal due to the too large distance between laser unit and OPC drum.

6. Put back the CK laser unit and **confirm reduction in the amount of skew** to complete the procedure.

Problems Related to Peripheral Devices

Peripherals 001: Buffer Pass Unit Type 5020

Troubleshooting for Fan Noise Is Large

Symptom

The fan makes a large noise.

Cause

The fan is triggered automatically depending on machine internal settings, as well as the type of paper used and temperature conditions as well.

Solution

Change the fan settings (TCRU adjustment settings).

No.	Item	SP No.
0140	Buffer Pass Unit Fan Activation Setting	SP1-932

- The factory-default setting is "Operate with Paper Thickness 4 and higher".
- Choose the appropriate setting among "Always On", "Operate with Paper Thickness 3 and higher", "Operate with Paper Thickness 4 and higher", "Operate with Paper Thickness 5 and higher", "Operate with Paper Thickness 6 and higher", and "Always Off".

Note

- Note: There is a tradeoff whereby, the longer the fan is off, the greater tendency there is for toner to flake off the paper.

Peripherals 002: Finisher SR4090/SR4100

Troubleshooting for Proof Tray Detected to Be Full Too Soon

Symptom

The machine detects the tray full condition for the proof tray before the number of sheets in the tray has reached capacity when printing onto large-sized, thin, short-grained paper.



d1352932

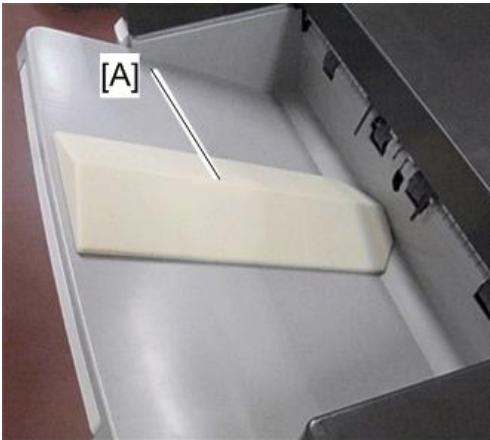
Cause

This type of paper is relatively weak and tends to buckle at the proof tray end fence (see photo). This blocks the proof tray sensor.

5

Solution

Attach the proof support tray [A] (included with the finisher), as shown below.



d1352934

Troubleshooting for Envelopes Are Not Fed

Symptom

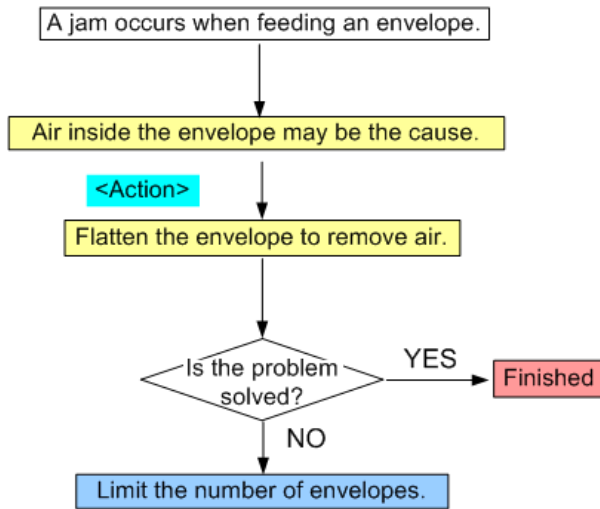
Non-feed jams occur when a large amount of envelopes that have not been flattened enough for feeding are loaded in the feed tray.

Cause

There is air inside the envelopes, which reduces the effective pressure applied by the pickup roller.

Solution

Do the action in the following flowchart:



w_d135a3013

5

Troubleshooting for toner rubbing off along the fold line

Symptom

Toner rubs off onto the fold line of stapled Booklets.

Cause

The flat fold rollers in the flat fold booklet unit apply too much pressure to the paper.

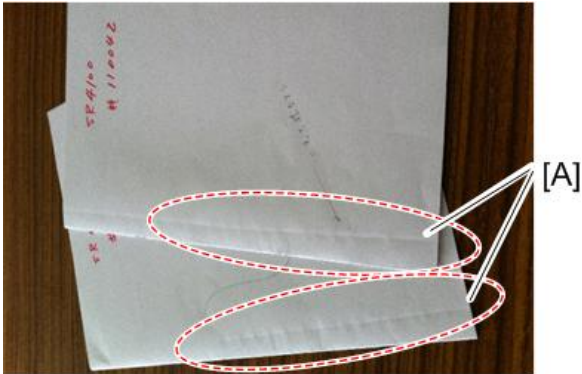
Solution

Do the procedures described in "Adjustment of the Flat Fold Booklet Unit" in the Finisher Service Manual (pg. 45).

Troubleshooting Creases and Jam in Stapler Unit (SR4100)

Symptoms

1. Crease [A] appears along the folded edge of a stapled booklet.
2. Paper jam occurs in the booklet stapler unit.

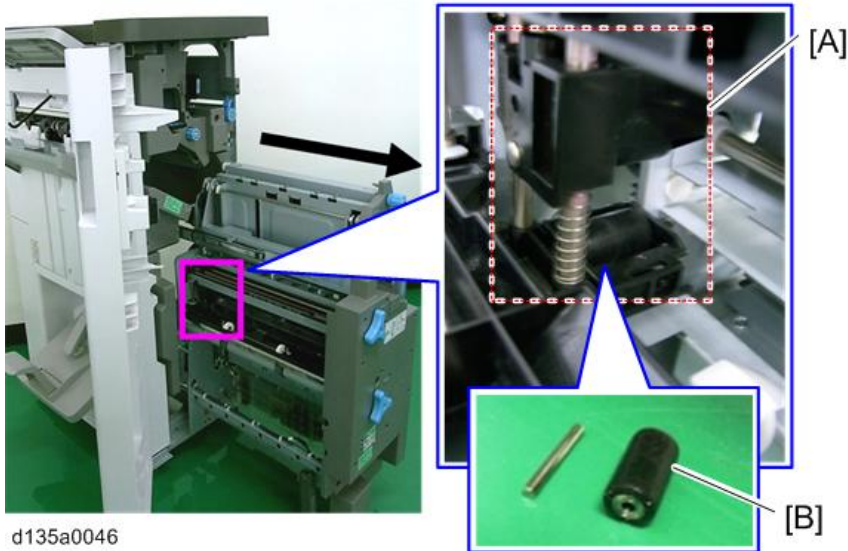


d135a0045

Cause

The lower flat fold roller [B], installed in the flat fold roller unit [A] is not set in the correct position, possibly due to the shock when pulling out/pushing in the stapler unit.

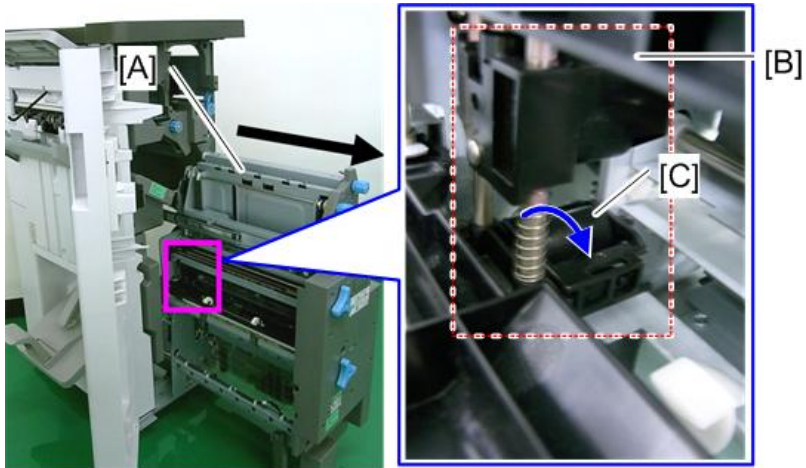
5



d135a0046

Solution

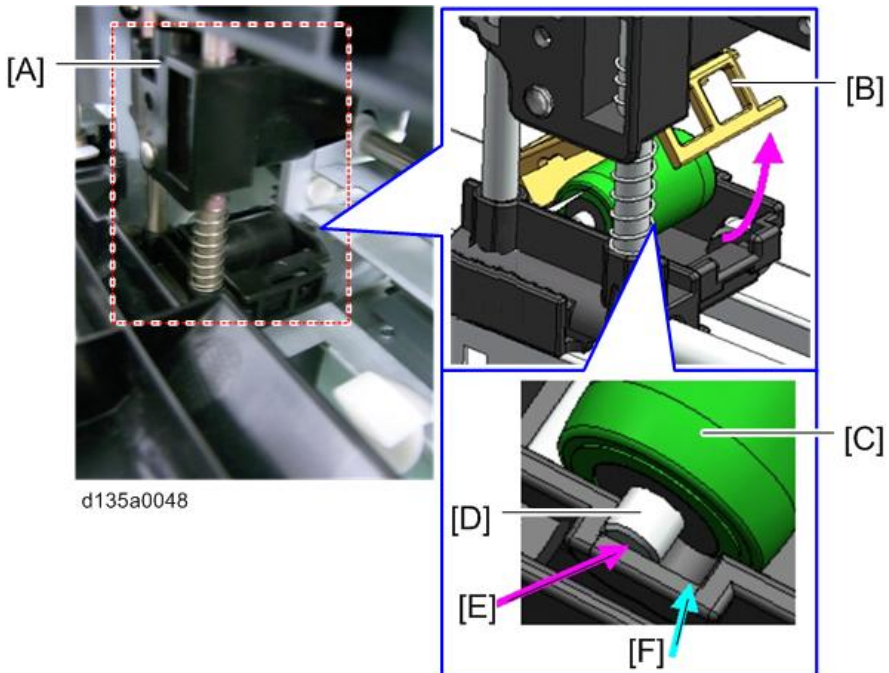
1. Pull out the stapler unit [A].
2. To check if the lower flat fold roller [C] inside the flat fold roller unit [B] is set correctly or not, rotate it with your finger.
 - The roller should rotate smoothly, if it is set correctly.
 - The roller will not rotate, if it is set incorrectly.



d135a0047

3. Open the case [B] attached to the top half of the flat fold roller unit [A].
4. Set the lower flat fold roller [C] so that its shaft [D] sits on either of the grooves; [E] at the rear or [F] at the front.
5. Close the case [B] to complete the procedure.

5



d135a0048

Note

- The default position of the lower flat fold roller is set to groove [E] at the factory.

- If the folding operation causes to peel off the toner on the printout, change the roller position to groove [F], which will reduce the pressure applied in the folding operation, purposed for creating thick booklets.
- For more details, see page 47 of the Finisher SR4090 /Booklet Finisher SR4100 Field Service Manual.

Corner Stapling Failure/Stack Failure/Large Misalignment

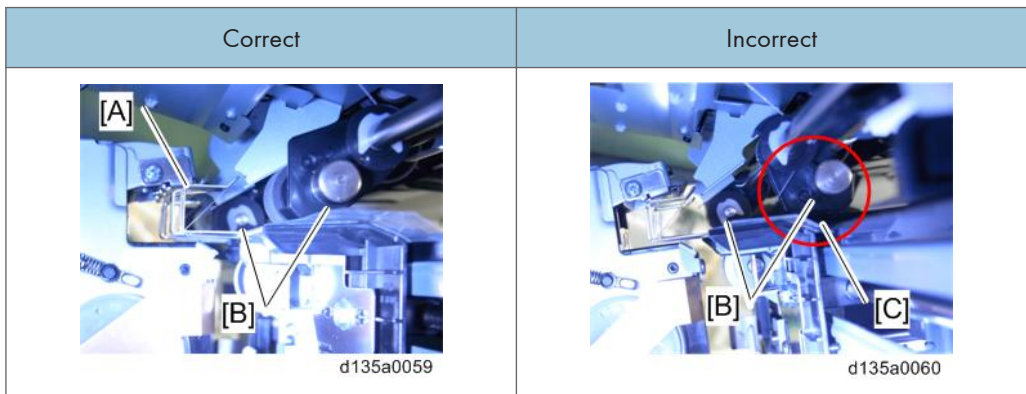
Symptom

Some sheets fail to be stapled or large misalignments occur with corner stapling.

Cause

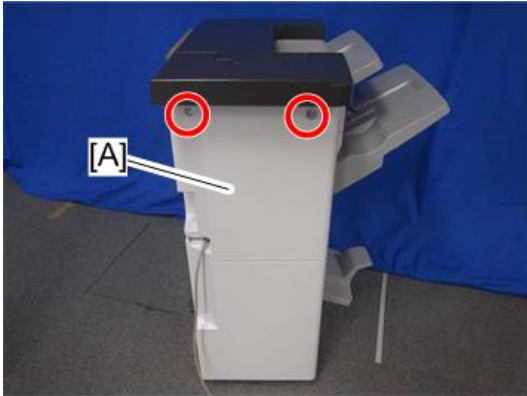
Stacking and stapling is disabled because the drag rollers [B] are stuck on top of the staple tray [C]. This could happen when the trailing edge of the stacked sheets are curled, because curled sheets tend to pull the drag rollers. Another causing factor is when the stack has to be removed manually due to a failure in feeding out the stack.

5



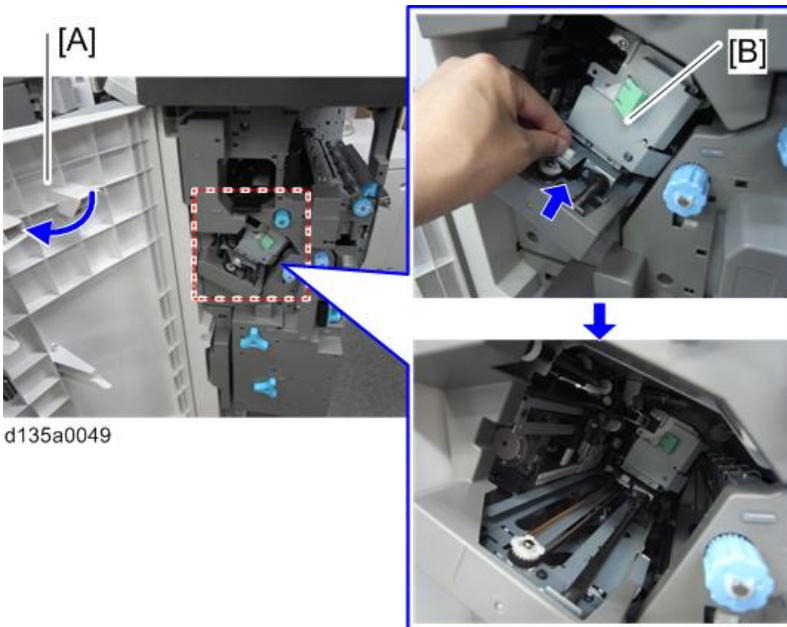
How to check if the drag rollers are positioned correctly

1. Remove the rear upper cover.



d1351253

2. Open the front cover [A] and move the stapler unit [B] to the center.



d135a0049

3. Locate the drag rollers and check if they are positioned correctly by referring to the table below.

Drag roller - FRONT

[A]: Correct position



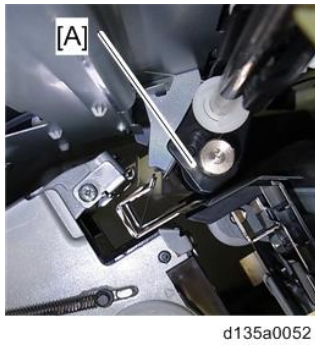
[B]: Incorrect position

Drag roller is stuck on top of the staple tray.



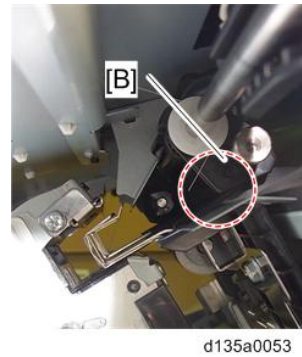
Drag roller - REAR

[A]: Correct position



[B]: Incorrect position

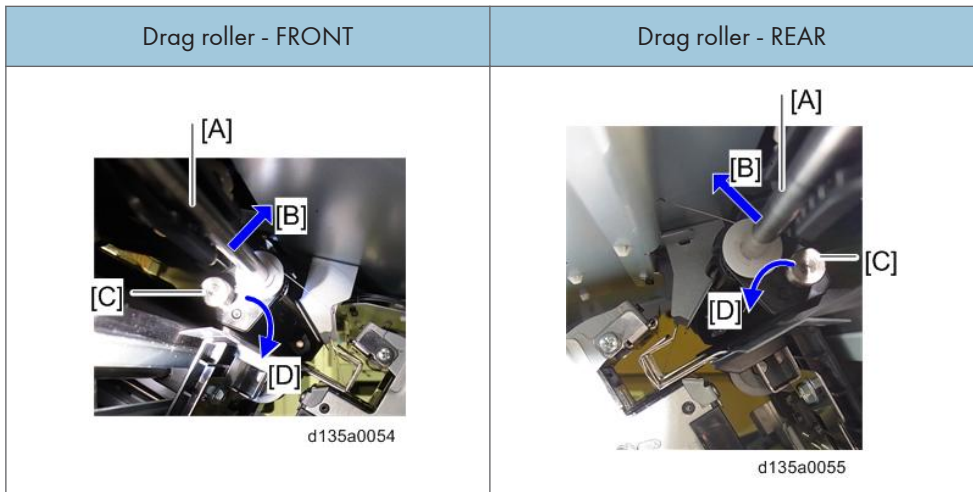
Drag roller is stuck on top of the staple tray.



5

Solution

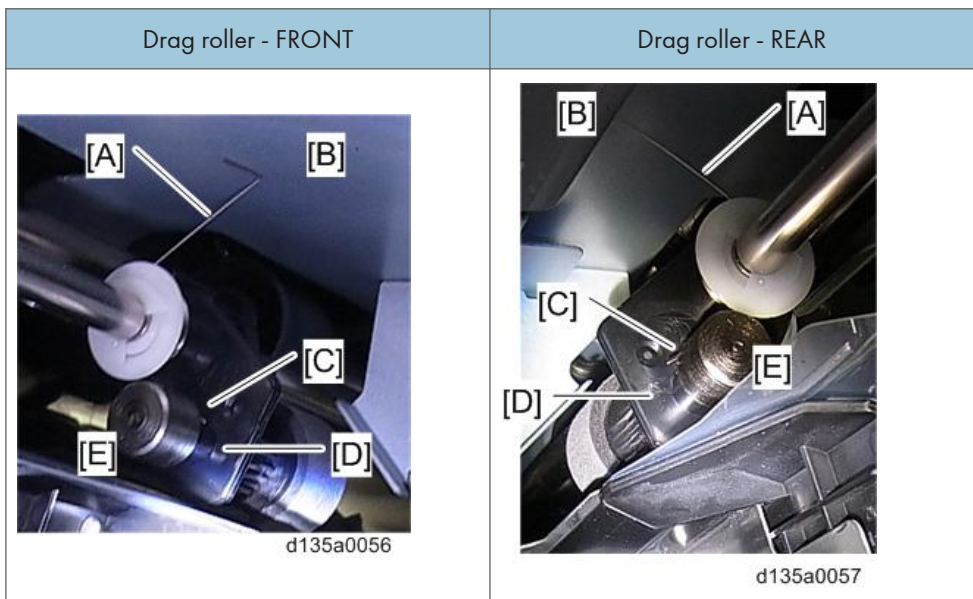
1. If the roller is stuck on top of the staple tray, bend the drag roller shaft [A] in the direction of the arrow [B] and forcibly rotate the drag roller [C] in the direction of the arrow [D] to retrieve the correct position.

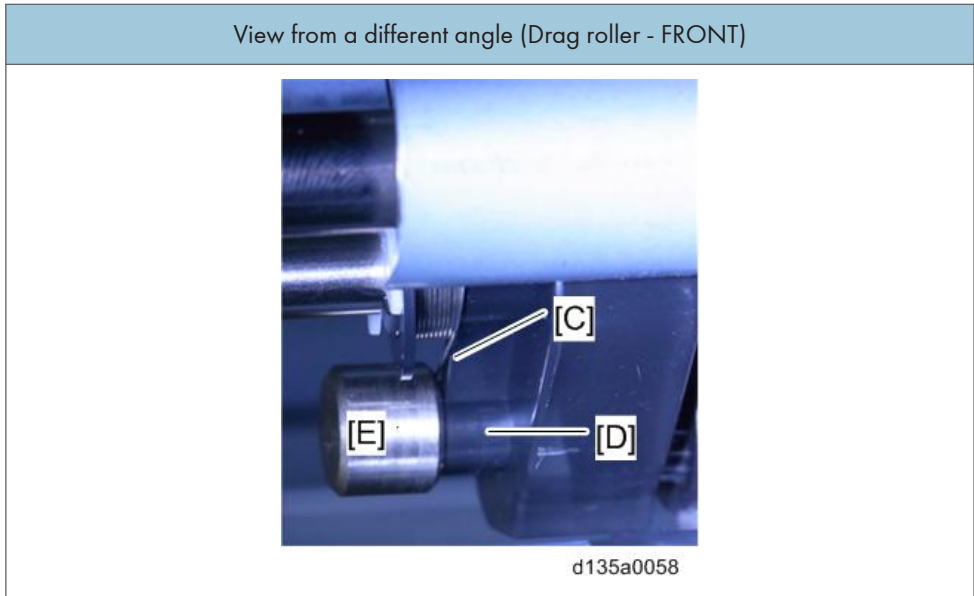


2. Confirm the spring of the drag roller is in position.

- Long arm [A] of the spring is in contact with the guide plate [B].
- Short arm [C] positions between the drag roller holder [D] and the weight [E].

5





1st Sheet of Stapled Stack Misaligned

Symptom

In stapling mode, the 1st sheet of a stack is misaligned approximately 3mm to 5 mm. The problem occurs with the following paper sizes if paper is pre-stacked: A4 SEF/LEF, B5 SEF/LEF, and LT SEF/LEF.

Rear side of 1st sheet misaligned	Front side of 1st sheet misaligned	Parallely misaligned
<p>d135a0061</p>	<p>d135a0062</p>	<p>d135a0063</p>

Cause

The 1st sheet of the pre-stacked paper bounces off the bottom pawl or does not reach the bottom pawl.

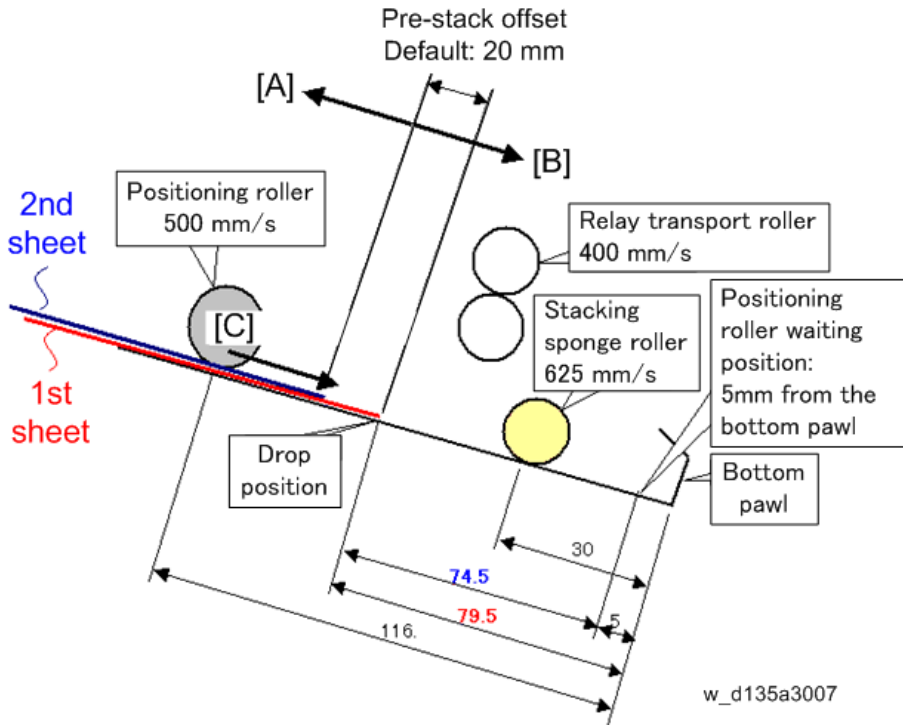
Action

Do either of the following.

- SP6-118-(paper size): [CrnrStplrPrstkOffsAdj:2K/3KFIN]
- SP6-120-(paper size): [CrnStpPosExFeedAmtAdj:2K/3KFIN]

Offset direction

- [CnrStplrPrstkOffsAdj:2K/3KFIN] (range: ± 16 mm, step: 2 mm)
 When adjusted in the + direction, pre-stack offset increases in the [A] direction.
 When adjusted in the - direction, pre-stack offset decreases in the [B] direction.
- [CrnStpPosExFeedAmtAdj:2K/3KFIN] (range: 0 to 30 mm, step: 10 mm)
 Increasing this value shifts the sheet toward direction [C].



SP adjustment by type of misalignment

	Rear side of the 1st sheet	Front side of the 1st sheet	Misaligned in parallel
Type of misalignment	 d135a0061	 d135a0062	 d135a0063
SP	SP6-118	SP6-118	SP6-120

Adjustment value (estimation)	+10 mm	-10 mm	20 mm
----------------------------------	--------	--------	-------

Check after SP adjustment

After modifying the SP value, make 50 sets of 2-sheet booklet stapled horizontally (2 points stapling) and check the alignment accuracy.

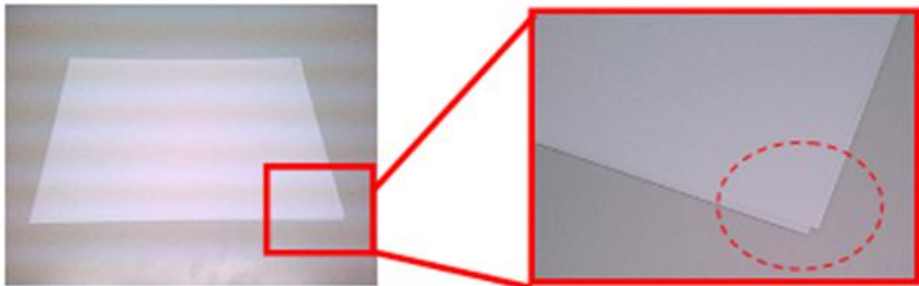
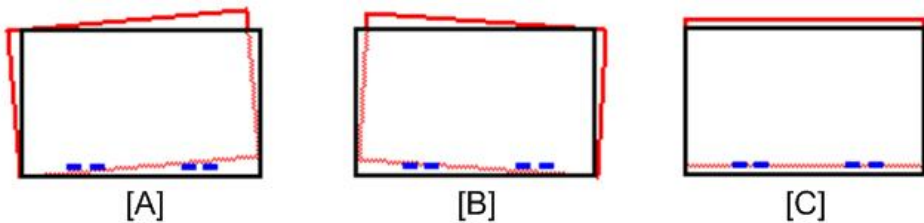
If misalignment is observed even after the SP adjustment, make further adjustments in the SP.

Staple Misalignment Troubleshooting

Symptom

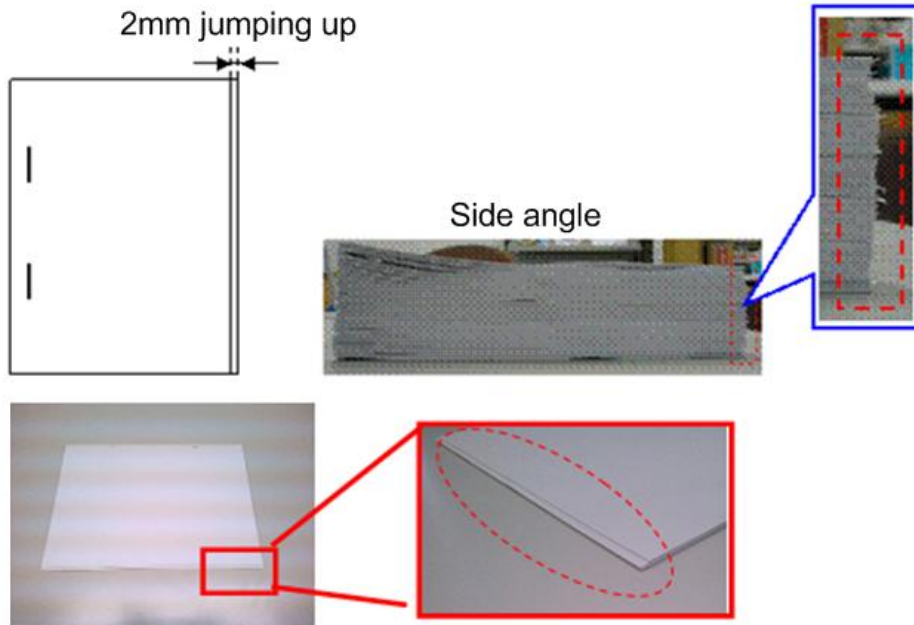
One of the following occurs when using stapling:

1. The first sheet of the stapled set is misalign with respect to the paper feed direction ([A] and [B] below), or shifted along the paper feed direction ([C]). As a result, one or both of the staples passes partially through the paper or misses the paper altogether.



d135a3180

2. One or more sheets in a stapled set is shifted up to 2mm along the paper feed direction with respect to the other sheets in the set.



d135a3181

5

Cause

- Symptom 1:
With stapling, the width of the jogger fences during pre-stacking of the first 1-2 sheets is narrower than with other modes. As a result, in some cases, the first sheet cannot be aligned correctly.
- Symptom 2:
Sometimes, the width of the jogger fences during stacking is narrower than expected. As a result, one or more of the sheets juts out from the stack when the jogger fences close.

Solution

Symptom 1:

1. Set SP6116-001 to -014[CnrStplrMxPrstkShAdj:2K/3K FIN] to a value of "-1" (disabled).

★ Important

- After this is done, the interval between jobs will be longer. Therefore, in cases where there are few sheets in each stapled set, productivity will be the same as with the predecessor finisher (SR4040).
2. Update the SR4100/4090 firmware to Ver. 02.020:10 (P/N D7045300H) or newer.
[SP6116-XXX: CnrStplrMxPrstkShAdj:2K/3K FIN]

6116	[CnrStplrMxPrstkShAdj:2K/3KFIN]		
	Adjusts Maximum Pre-Stack Number for Corner Stapler for specified papers. Adjustment value: 0; 1 sheet Pre-Stack (Standard), Adjustment value: -1: No Pre-Stack.		
001	A3 SEF	*ENG	[-1 to 0 / 0 / 1 page/step]
002	B4 SEF	ENG	
003	A4 SEF	ENG	
004	A4Y	ENG	
005	B5T	ENG	[-1 to 0 / 0 / 1 page/step]
006	B5Y	ENG	
007	DLT SEF	ENG	
008	LG SEF	ENG	
009	LT SEF	ENG	
010	LT-Y	ENG	
011	8-Kai SEF	ENG	[-1 to 0 / 0 / 1 page/step]
012	16-Kai SEF	ENG	
013	16-Kai LEF	ENG	
014	Other	ENG	[-1 to 0 / 0 / 1 page/step]
	Adjusts Maximum Pre-Stack Number for Corner Stapler for specified papers. Adjustment value: 0; 1 sheet Pre-Stack (Standard), Adjustment value: -1: No Pre-Stack.		

Symptom 2:

1. Set SP6107-001 to -014([JogPosAdj(CnrStplr):2K/3K FIN]) to a higher value within the setting range of 1.0mm – 1.5mm.
2. Make some test printouts and check the alignment of the paper.

 **Note**

- This check is necessary because if the value of SP6107 is too high, the jogger fences will be too far apart.

- SP6107 adjusts the width of the jogger fences (along the paper feed direction) used during pre-stacking. A higher value increases this width, while a lower value decreases the width.

[SP6107-XXX: JogPosAdj(CrnStplr):2K/3K FIN]]

6107	[JogPosAdj(CrnStplr):2K/3K FIN]		
	Adjusts Corner Stapler Jogger width (Main Scan position) when jogging specified papers. <ul style="list-style-type: none"> • Adjustment Value "-": Movement in the direction that Jogger width becomes narrower than the standard value, • Adjustment Value "+": Movement in the direction that Jogger width becomes wider than the standard value. 		
001	A3 SEF	*ENG	[-1.5 to 1.5 / 0.0 / 0.5mm/step]
002	B4 SEF	*ENG	
003	A4 SEF	*ENG	
004	A4Y	*ENG	
005	B5T	*ENG	[-1.5 to 1.5 / 0.0 / 0.5mm/step]
006	B5Y	*ENG	
007	DLT SEF	*ENG	
008	LG SEF	*ENG	
009	LT SEF	*ENG	
010	LT-Y	*ENG	
011	8-Kai SEF	*ENG	[-1.5 to 1.5 / 0.0 / 0.5mm/step]
012	16-Kai SEF	*ENG	
013	16-Kai LEF	*ENG	

	Other	*ENG	[-1.5 to 1.5 / 0.0 / 0.5mm/step]
014	Adjusts Corner Stapler Jogger width (Main Scan position) when jogging specified papers. <ul style="list-style-type: none"> • Adjustment Value "-": Movement in the direction that Jogger width becomes narrower than the standard value, • Adjustment Value "+": Movement in the direction that Jogger width becomes wider than the standard value. 		

↓ Note

- Default setting of the follow units was changed to Pre-stack off (**SP6116-001 to -014: -1**)
 - D13717: E253C900048-
 - D13721: E253C920001-
 - D13727: E253C930029-
 - D13729: E253C950005-
 - D13817: E263C900001-
 - D13727: E263C920019-
 - D13827: E263C930001-
 - D13829: E263C950001-

Shift Tray Stalls Causing Paper Jam

Symptom

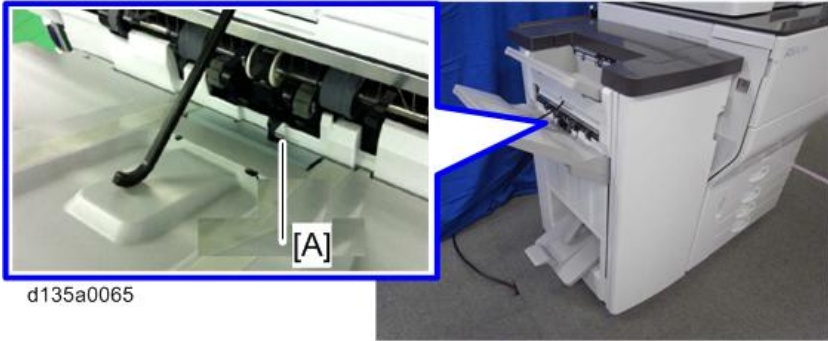
The shift tray [A] unexpectedly stalls at its highest or lowest positions and causes paper jams.

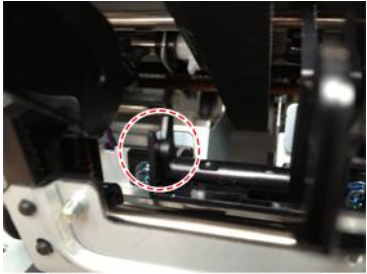
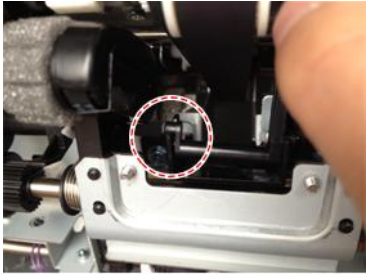


d135a0064

Cause

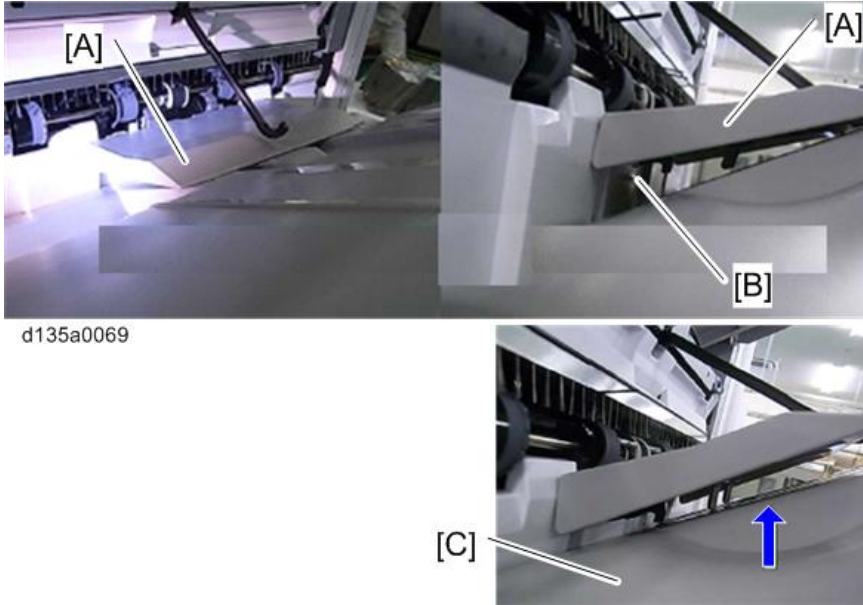
The shift tray paper feeler [A] is out of position.



Correct	Incorrect
 <p>d135a0066</p>	 <p>d135a0067</p>

The problem occurs if the Shift Auxiliary Tray [A] included with the finisher is set incorrectly. In this condition, the feeler gets caught between the auxiliary tray and shift tray when the shift tray moves up and is displaced.





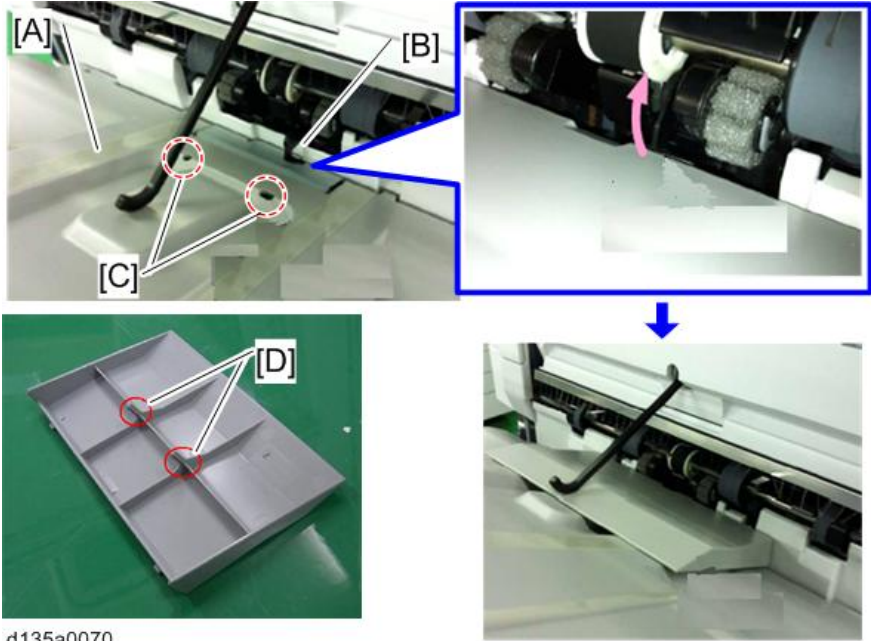
★ Important

- The Shift Auxiliary Tray [A] is to be used only when the configuration consists of the Multi-Folding Unit FD4000. This auxiliary tray increases the stacking capacity of z-folded paper.
- If the Multi-Folding Unit FD4000 is not installed, do not attach the Shift Auxiliary Tray as it may cause the shift tray to malfunction.

Solution

If the Multi-Folding Unit FD4000 is installed:

Start the finisher initialization process to raise the shift tray [A]. As you lift up and hold the shift tray paper feeler [B] up, insert the two bosses [D] on the back of the Shift Auxiliary Tray to the two holes [C] on the shift tray.



d135a0070

Good	Bad
<p>OK</p> <p>[B]</p> <p>[A]</p>	<p>NG</p> <p>[B]</p> <p>[A]</p> <p>d135a0071</p>
<p>There is no space between the Shift Auxiliary Tray [A] and shift tray [B].</p>	<p>The Shift Auxiliary Tray [A] is positioned above the feeler, creating a space between the Shift Auxiliary Tray and shift tray [B].</p>

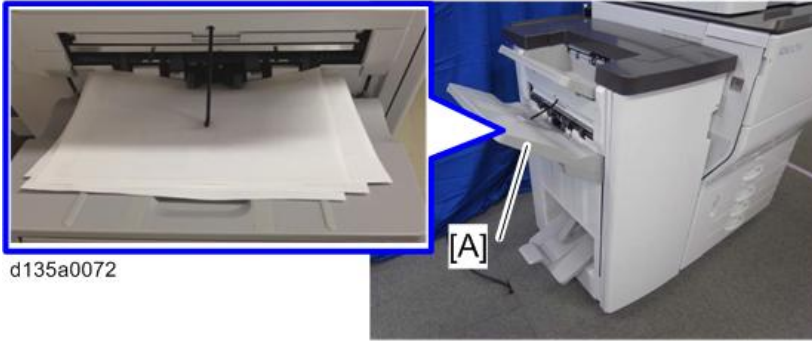
If the Multi-Folding Unit FD4000 is not installed:

Do not use the Shift Auxiliary Tray [A] included with the finisher.

Poor Stacking on Shift Tray

Symptom

Poor stacking on shift tray [A]

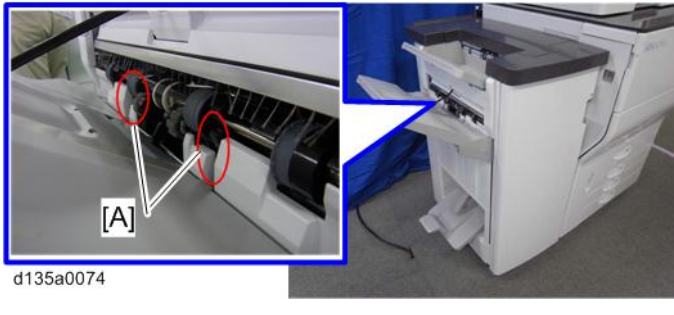


Cause

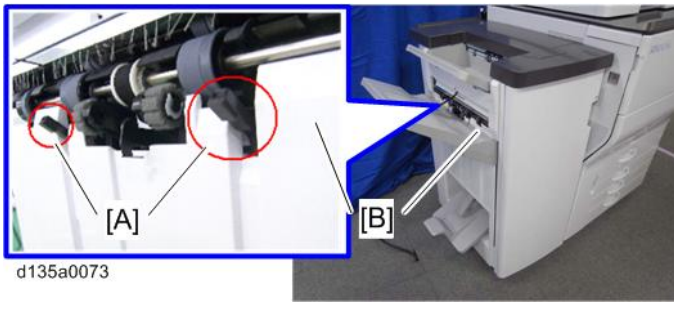
The paper stacking holders [A] are incorrectly positioned and protruding from the end fence [B], causing the paper to get caught on top of these holders.

5

Correct position of the paper stacking holders



Incorrect position of the paper stacking holders

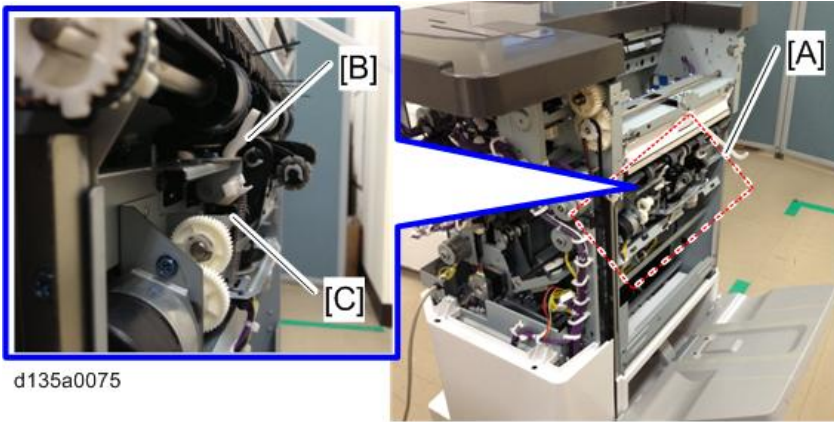


Solution

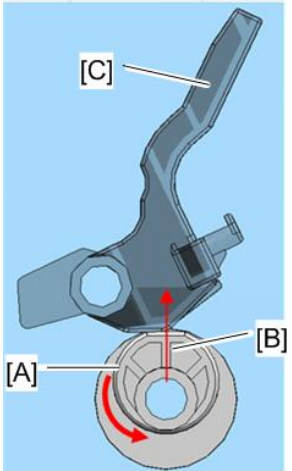
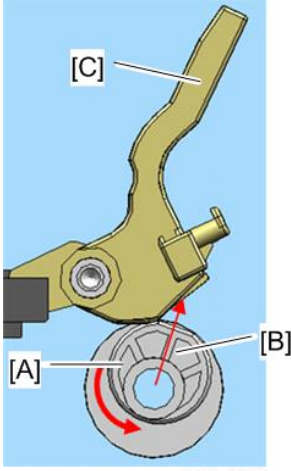
1. Turn ON the main power of the mainframe or open/close the finisher front door to start the initialization process.
2. Remove the following parts by referring to the procedures described in the service manual, pages 5 to 13.

- Shift tray
- Rear upper cover
- Paper exit cover
- Left cover
- End fence

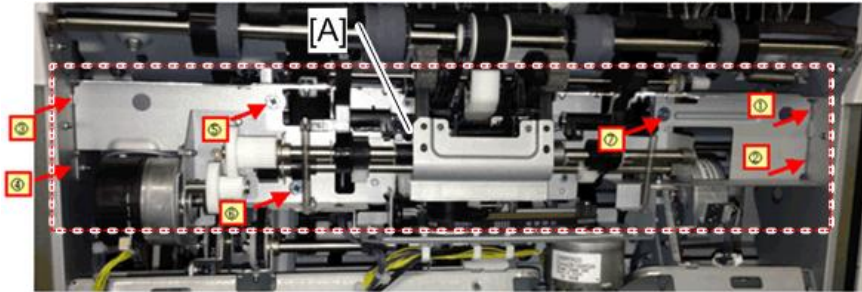
3. Locate the paper stacking holder unit [A], and check if the paper stacking holder [B] is set correctly against the eccentric cam [C].



d135a0075

Correct	Incorrect
<p>The center rib [B] of the eccentric cam [A] is facing straight up and the paper stacking holder [C] is in contact with the flat surface of the eccentric cam [A].</p>  <p style="text-align: center;">d135a0076</p>	<p>The center rib [B] of the eccentric cam [A] is slanted and the paper stacking holder [C] is not in contact with the flat surface of the eccentric cam [A].</p>  <p style="text-align: center;">d135a0077</p>

4. If the paper stacking holder is positioned incorrectly, replace the paper stacking holder unit [A] with a new one (x7). See field service manual for the procedure.



d135a0078

P/N of the paper stack holder unit: D7033700

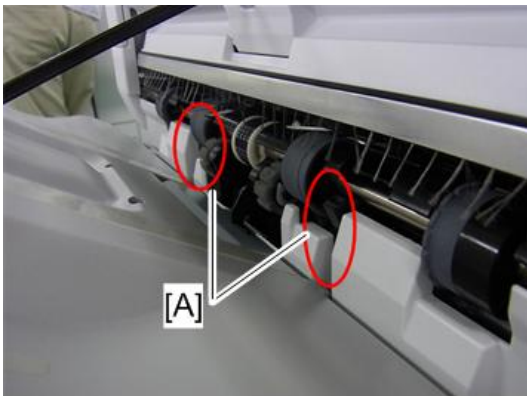
Check after replacing the paper stack holder unit

5

After replacing the paper stacking holder unit, confirm proper operation of the paper stacking holder as described below.

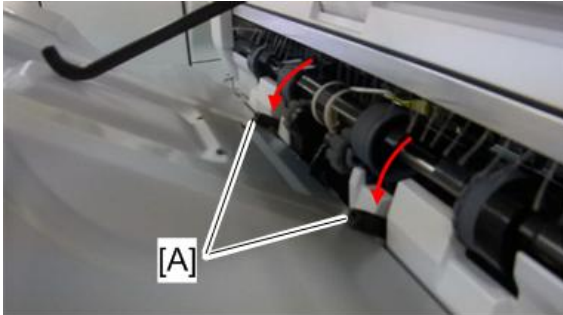
Job: A4/LT LEF, shift sort, 1 original x 10 copies

1. Before the job starts, the paper stacking holders [A] are at home position and are not protruding from the end fence.



d135a0079

2. When the job starts, the paper stacking holders [A] move down to the holding position.



d135a0080

3. Immediately after the leading edge of the first sheet of the job passes through the exit, the paper stacking holders [A] retract and stay at home position until the job completes.



d135a0081

4. The initialization process is run after the job completes, in which the paper stacking holders [A] move down to the holding position, and then, return to home position.

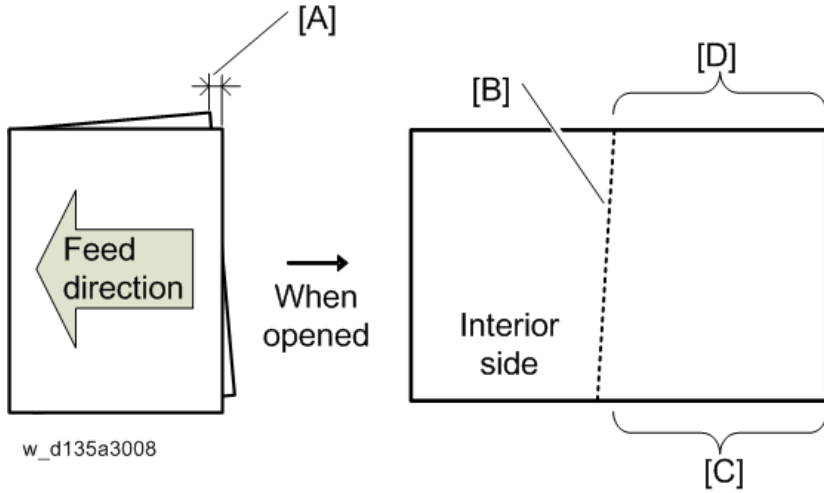


d135a0082

How to improve center-folding accuracy (SR4100)

Symptom 1

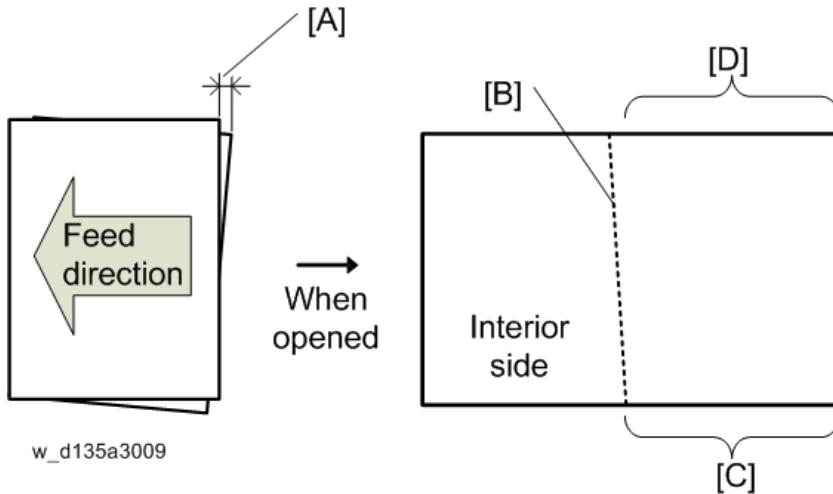
When sheets are center-folded, the fold line [B] is slanted, causing the front side [C] to be longer than the rear side [D], resulting in a misalignment [A].



5

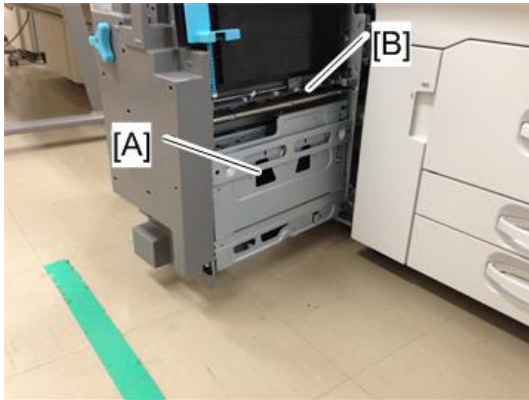
Symptom 2

When sheets are center-folded, the fold line [B] is slanted, causing the front side [C] to be shorter than the rear side [D], resulting in a misalignment [A].



Cause

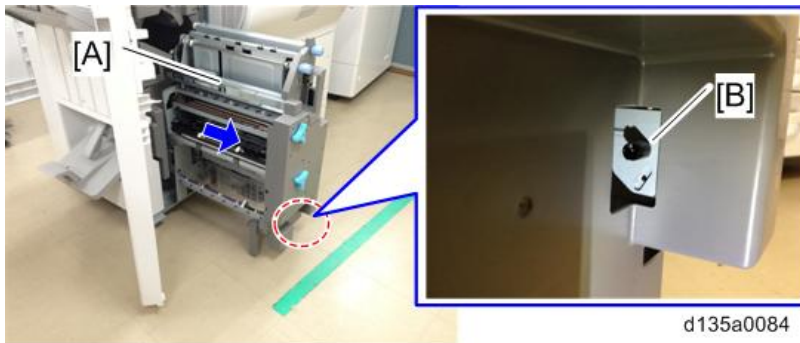
Incorrect angle between the bottom fence [A] and folding plate [B]



d135a0083

Solution

1. Pull out the stapling unit [A] and remove the black thumbscrew [B], which fixes the bottom fence.

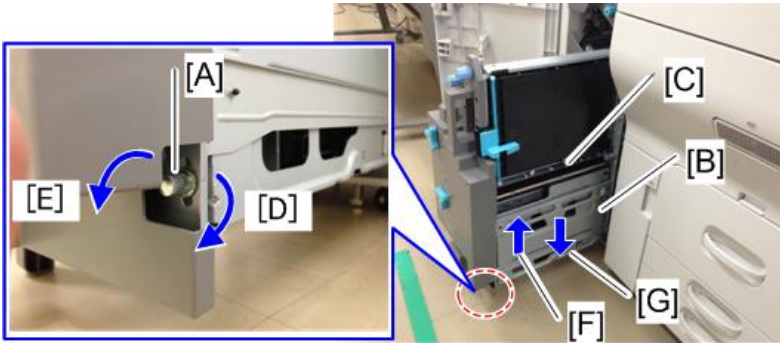


d135a0084

2. Turn the bottom fence adjustment screw [A] to adjust the angle between the bottom fence [B] and the folding plate [C].

★ Important

- For Symptom 1, turn the bottom fence adjustment screw [A] clockwise [D] to incline the bottom fence [B] in the [F] direction.
- For Symptom 2, turn the bottom fence adjustment screw [A] counterclockwise [E] to decline the bottom fence [B] in the [G] direction.



d135a0085

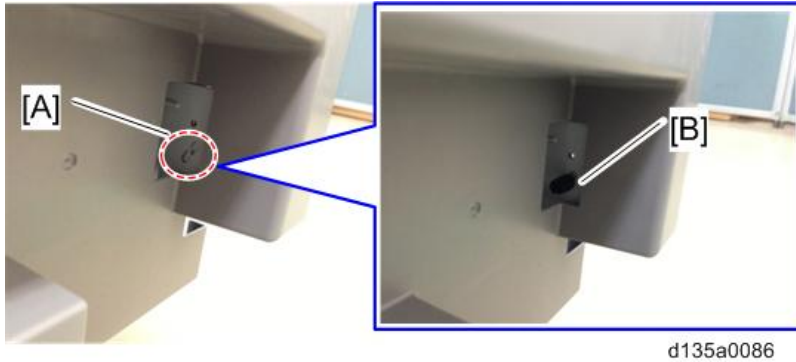
Table: Adjustment value [a] per 1 revolution of the bottom fence adjustment screw

5

Symptom 1	Symptom 2
<p>d135a3010</p> <p>1: Feed direction</p>	<p>d135a3011</p> <p>1: Feed direction</p>

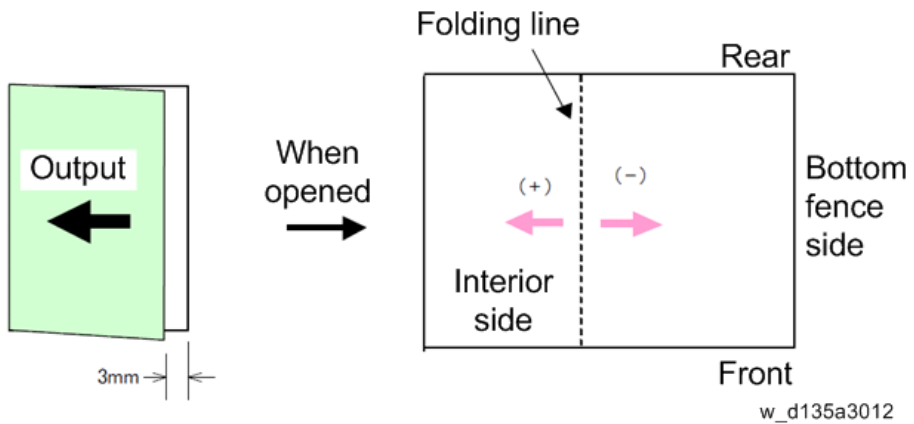
Paper size	Clockwise	Counterclockwise
B5	0.56 mm	0.55 mm
A4	0.64 mm	0.64 mm
B4	0.79 mm	0.78 mm
A3	0.91 mm	0.90 mm

- Put back the black thumbscrew [B] removed in step 1 to the adjustment screw hole (long hole) [A].



4. If the adjustment up to this point has caused the folding position to shift to either left or right, make corrections in SP6-113 ([BookletFolderPosAdj:2K/3K FIN]).

Example: If the folding line appears as in below with a misalignment gap of 3mm, shift the folding line "-1.5mm" in the (-) direction.



SP Settings for adjusting Shift Tray Jogger/Corner Stapling/Booklet Stapling

↓ Note

- See "System Maintenance 2" for paper size and orientation for each of the available adjustments summarized in the following table.

	SP #	Description	Range	Step	Adjustment
Shift tray jogger	6104	ShiftTrayJogPosAdj: 2K/3K FIN (Shift Tray Jogger Position Adjustment)	±1.5 mm	0.5 mm	+ to widen - to narrow the jogging movement in main scan direction
	6105	ShftJogRtrctAngAdj: 2K/3K FIN (Shift Tray Jogger Retract Angle Adjustment)	±10 degrees	5 degrees	+ to raise - to lower the direction in which the jogger retracts

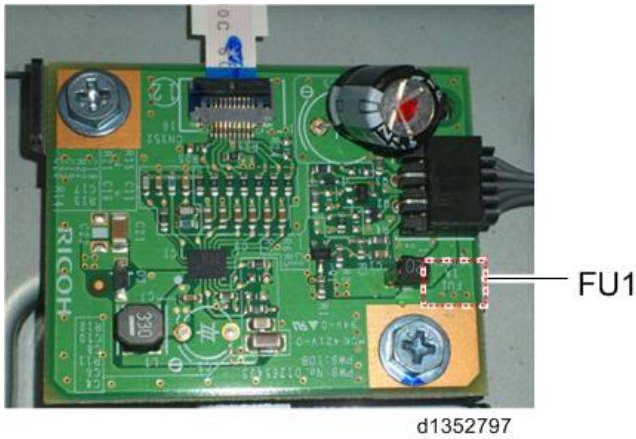
	SP #	Description	Range	Step	Adjustment
Corner stapling	6107	JogPosAdj(CrnStplr): 2K/3K FIN (Corner Stapler Jogger Position Adjustment)	±1.5 mm	0.5 mm	+ to widen - to narrow the jogging movement in main scan direction
	6109	CrnStplrJogTimeAdj: 2K/3K FIN (Corner Stapler Jogging Time Adjustment)	0 to 2 times	1 time	Specifies the number of jogging operation
	6111	Staple Position Adj: 2K/3K FIN (Staple Position Adjustment)	±3.5 mm	0.5 mm	+ to move stapling position to the front (operator side) - to move stapling position to the rear (non-operator side)
	6116	CrnStplrMxPrstkShAdj: 2K/3KFIN (Corner Stapler Maximum Pre-Stack Sheets Adjustment)	-1 to 0 sheets	1 sheet	Specifies the number of pre-stacked sheets
	6118	CrnStplrPrstkOffsAdj: 2K/3KFIN (Corner Stapler Pre-Stack Offset Adjustment)	±16 mm	2 mm	+ to increase - to decrease the amount of offset in sub scan direction
	6120	CrnStpPosExFeedAmtAdj: 2K/3KFIN (Corner Stapler Positioning Roller Excess Feed Amount Adjustment)	0 to 30 mm	10 mm	Increases the distance the sheets are transported by the positioning roller

	SP #	Description	Range	Step	Adjustment
Booklet stapling	6110	BookStplrJogTimeAdj: 2K/3K FIN (Booklet Stapler Jogging Time Adjustment)	0 to 2 times	1 time	Specifies the number of jogging operation.
	6112	BookletStaplerPosAdj: 2K/3K FIN (Booklet Stapler Staple Position Adjustment)	±3 mm	0.2 mm	+ to move the stapling position toward the LE - to move the stapling position toward the TE
	6113	BookletFolderPosAdj: 2K/3K FIN (Booklet Folder Folding Position Adjustment)	±3 mm	0.2 mm	+ to move the saddle-stitching position toward the LE - to move the saddle-stitching position toward the TE
	6117	BookStplrMxPrstkShAdj: 2K/3KFIN (Booklet Stapler Maximum Pre-Stack Sheets Adjustment)	-7 to 0 sheets	1 sheet	Specifies the number of pre-stacked sheets. (Note that -3, -4, -5, -6, -7 will all result in "0", i.e., no pre-stacking.)
	6119	BookStplrPrstkOffsAdj: 2K/3KFIN (Booklet Stapler Pre-Stack Offset Adjustment)	±30 mm	2 mm	+ to increase - to decrease the amount of offset between each pre-stacked sheet
	6122	BkFoldJogSolMovAmtAdj: 2K/3KFIN (Booklet Folder Jogger Stack Junction Gate Move Amount Adjustment)	±5 mm	1 mm	+ to move up - to move down the stack junction gate in the booklet staple path

Blown Fuse Conditions

IDB (D1365492)

FUSE	Fuse part number	Output	Reason for Overcurrent	Action
FU1	11071259	24V	LEDB	Replace the FFC/ LEDB/IDB



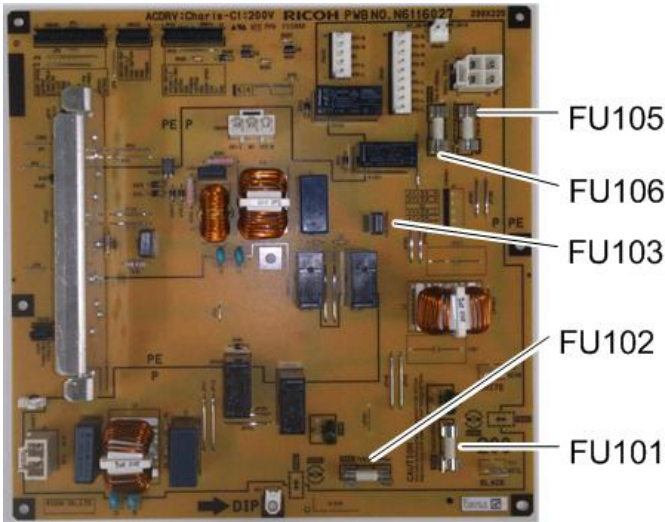
5

AC Control Board (D0165460)

FUSE	Fuse part number	Output	Reason for Overcurrent	Action
FU101	11071252	AC	Fusing Lamp Tray Heater Scanner Heater Switch of heater PSU1 / PSU2	Replace AC board or harnesses
FU102	11071350	AC	Potential Sensor Board	Replace AC board or harnesses
FU103	11071225	AC	Tray Heater Scanner Heater	Replace AC board or harnesses

FUSE	Fuse part number	Output	Reason for Overcurrent	Action
FU105	[100V] 11071347 [200V] 11071344	AC	PSU1	Replace AC board or harnesses
FU106	[100V] 11071347 [200V] 11071344	AC	PSU2	Replace AC board or harnesses

5



d1352798

PSU

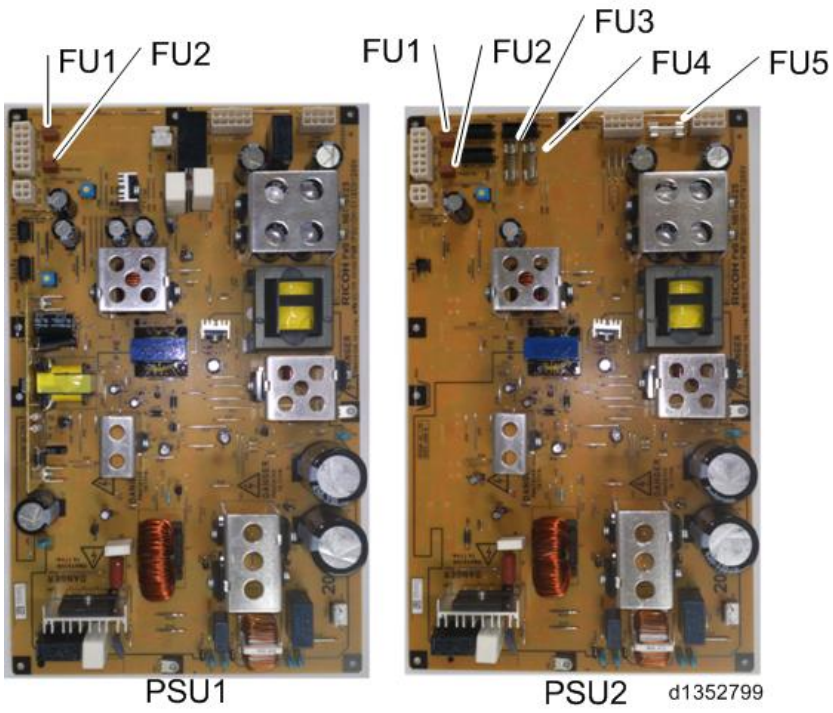
PSU1 (AZ240226)

FUSE	Fuse part number	Output	Reason for Overcurrent	Action
FU1	11071351	5V	Nothing	Replace PSU or Harnesses

FUSE	Fuse part number	Output	Reason for Overcurrent	Action
FU2	11071351	5V	Nothing	Replace PSU or Harnesses

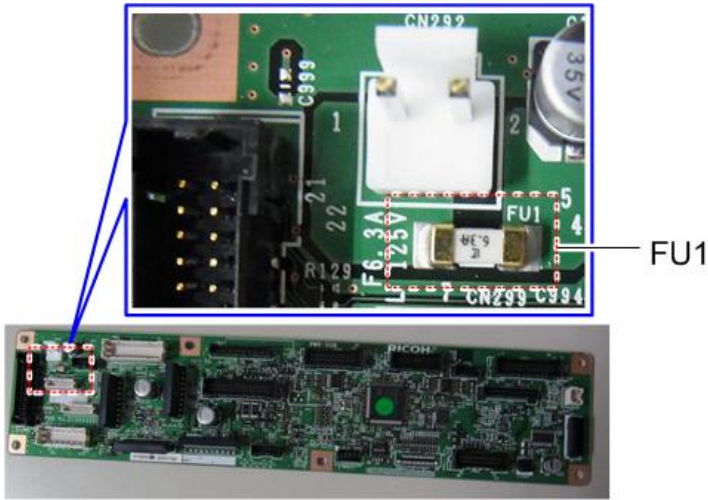
PSU2 (AX240230)

FUSE	Fuse part number	Output	Reason for Overcurrent	Action
FU1	11071351	24V	IPU IOB Decurl Unit	Replace PSU or Harnesses
FU2	11071351	24V	DUB TDRB TSB	Replace PSU or Harnesses
FU3	11071216	24V	ADF LCT	Replace PSU or Harnesses
FU4	11071216	24V	Finisher	Replace PSU or Harnesses
FU5	11071216	24V	SIO Decurl Unit	Replace PSU or Harnesses



DUB (D1365121)

FUSE	Fuse part number	Output	Reason for Overcurrent	Action
FU1	11071213	24VS	<ul style="list-style-type: none"> - Motors - Duplex Transport Motor Duplex Exit Motor Exit Inverter Motor Duplex inverter entrance motor Exit Motor Registration motor - STM - Roller Shift Motor 1,2 Senser Shift Motor Duplex inverter entrance motor Cleaning Web Drive Motor Cleaning Web Contact Motor 	Replace DUB or harnesses.
FU1	11071213	24VS	<ul style="list-style-type: none"> - Fans - PTB Fans IH Coil Cooling Fan Fusing Heat Pipe Cooling Fan Fusing Pressure Roller Intake Fan - Solenoids - Inverter Exit SOL Duplex SOL - Boards - FDB-D 	Replace DUB or harnesses.



d1352800

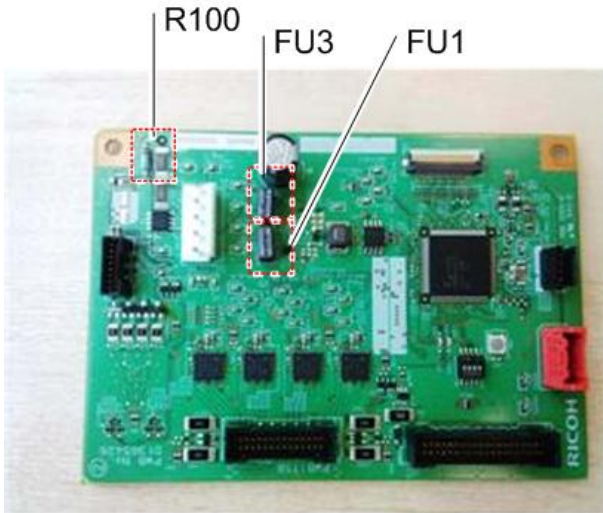
5

Potential Sensor Board (D1365450 [100V], D1365455 [200V])

FUSE	Fuse part number	Output	Reason for Overcurrent	Action
FU1	11071229	250V	Potential Sensor Board	Replace Potential sensor board

TSB (D1365425)

FUSE	Fuse part number	Output	Reason for Overcurrent	Action
FU1	11071229	24V	Toner Feed Motor (Y/M/C/K) Development Intake Fan (Y/M/C/K) ITB Cleaning Intake Fan	Replace TSB or harnesses
FU3	11071228	24VS_TSB	Toner Cartridge Drive Motor (Y/M/C/K)	Replace TSB or harnesses
R100	16002100	24VS_TSB	Toner Cartridge Drive Motor (Y/M/C/K)	Replace TSB or harnesses

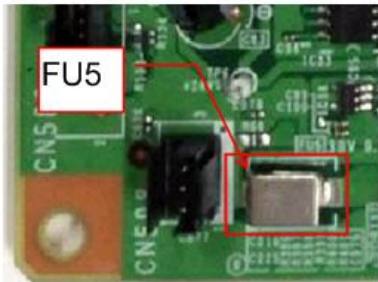
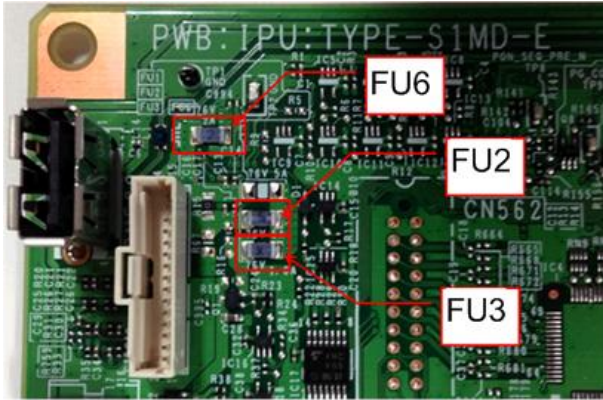


d1352801

5

IPU (D1365724)

FUSE	Fuse part number	Output	Reason for Overcurrent	Action
FU2	11071302	5VX	Operation Panel	Replace the IPU
FU3	11071127	5VX	IOB, SIO, PEACE	
FU6	11071118	5VX	USB	
FU5	11090016	24V	Operator Call Light	Power OFF/ON



d1352802

5

IOB (D1385110)

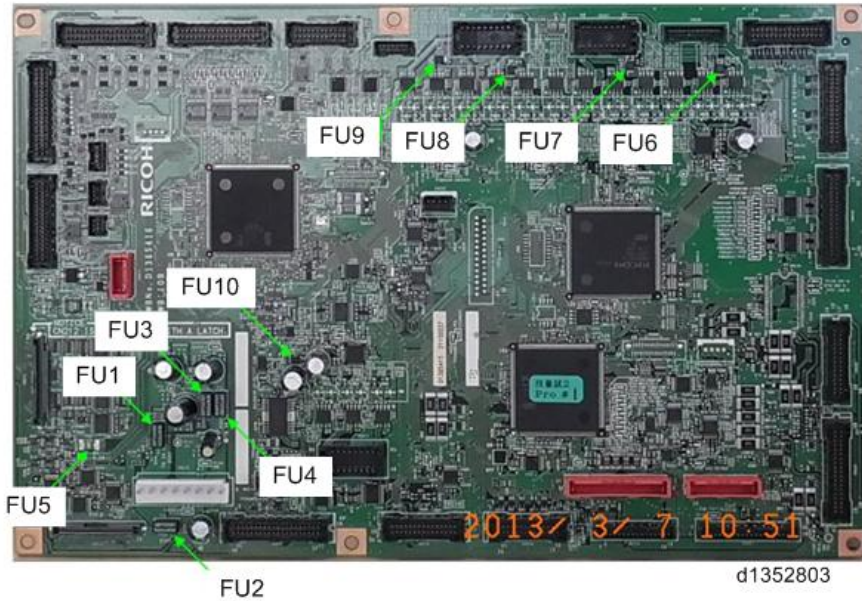
FUSE	Fuse part number	Output	Reason for Overcurrent	Action
FU1	11071110	+24VS5	Drum Motor (Y/M/C/K) PTR Motor ITB Lift (YMC) Motor Voltage Sensor High-Voltage Power Supply Developer Bias Power Supply AC Transfer Power Supply ITB Power Supply PTR Power Supply	Replace the PCB

FUSE	Fuse part number	Output	Reason for Overcurrent	Action
FU2	11071229	+24VS5	Fusing Pressure Roller Exhaust Fan Duplex Exhaust Fan (Front/Middle/Rear) Fusing Drive Motor Hot Roller Release Motor Fusing Belt Smoothing Drive Motor Fusing Belt Smoothing Release Motor	Replace the PCB
FU3	11071110	+24V6	Skew Motor Y/M/C Shutter Motor Laser Unit Cooling Fan(Left and Right) Controller Exhaust Fan ID Sensor Cleaning Fan PCL (Y/M/C/K) Development Motor (Y/M/C/K)	Replace the PCB
FU4	11071110	+24V6	Drum Cleaning Motor (Y/M/C/K) Weste Toner Bottle Motor Heat Pipe Panel Intake Fan Heat Pipe Panel Exhaust Fan PTR Fusing Exhaust Fan Development Exhaust Fan / Right, Left Ozone Exhaust Fan Fusing Exit Exhaust Fan Drive Exhaust Fan PSU Fun	Replace the PCB
FU5	11090007	+5V_PTC	HST Sensor (Y/M/C/K) Toner cartridge ID Chip (Y/M/C/K) Fusing ID Chip (Y/M/C/K)	Replace the PCB

FUSE	Fuse part number	Output	Reason for Overcurrent	Action
FU6	11071107	+24VS5	Drum Motor:Y	Replace the PCB
FU7	11071107	+24VS5	Drum Motor:M	Replace the PCB
FU8	11071107	+24VS5	Drum Motor:C	Replace the PCB
FU9	11071107	+24VS5	Drum Motor:K	Replace the PCB
FU10	11071107	+24VS5	PTR Motor	Replace the PCB

5

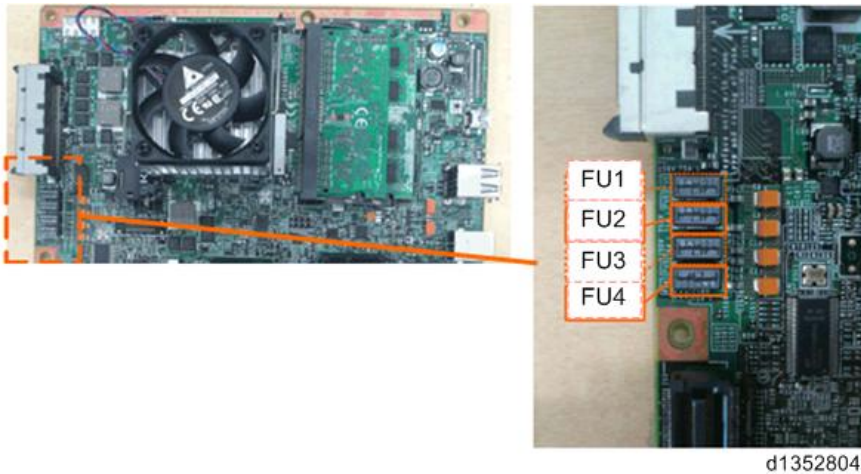
- FU6



Controller (D1365700/D1365705)

FUSE	Fuse part number	Output	Reason for Overcurrent	Action
FU1 FU2 FU3 FU4	11071229	5VX	USB Bluetooth IC Card SD Card CPU FAN Case FAN RiO3 Option PCIe Option LAN USB Device	Replace the CTL

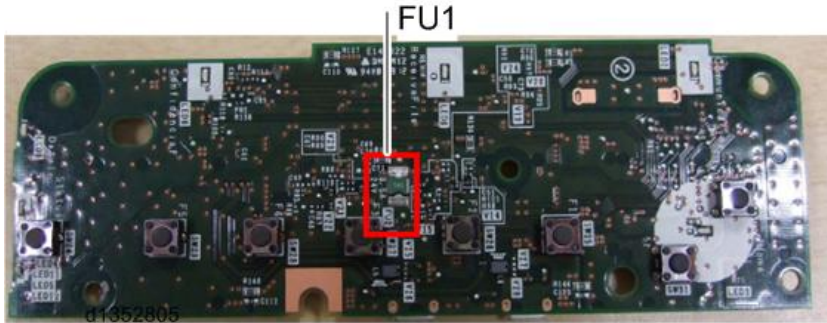
5



Operation Panel

Pro OP-R (D1387395)

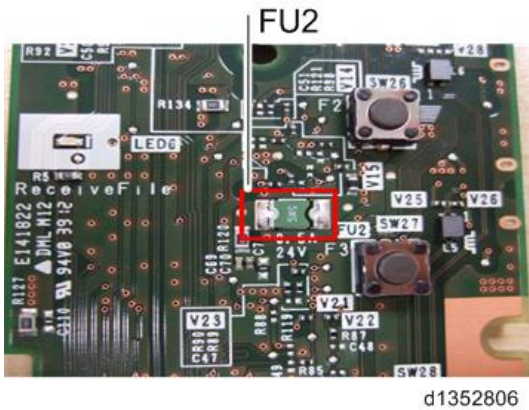
FUSE	Fuse part number	Output	Reason for Overcurrent	Action
FU1	11090049	3.3V	SDCard I/F	Replace Pro OP-R



Office OP-L (D1491478)

5

FUSE	Fuse part number	Output	Reason for Overcurrent	Action
FU2	11090049	3.3V	SDCardI/F	Replace Office OP-L

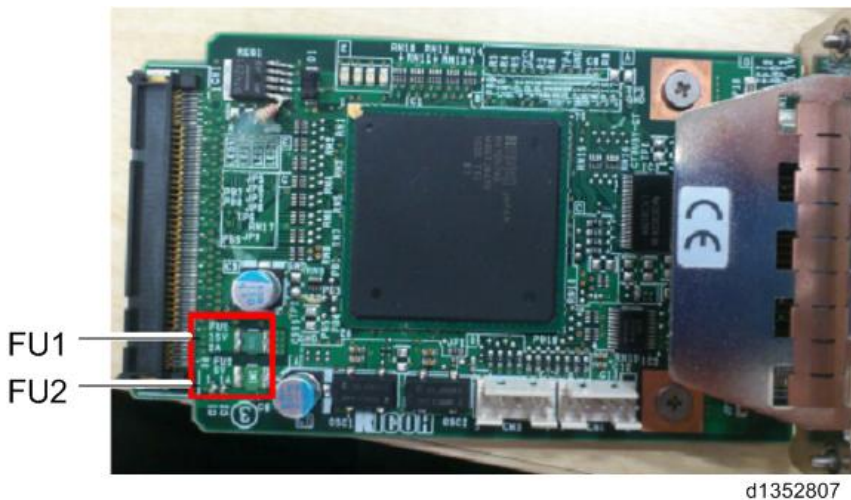


Option Board

IEEE1284 (B5955710)

FUSE	Fuse part number	Output	Reason for Overcurrent	Action
FU1	11090044	5VEP	IEEE1284	Replace IEEE1284B oard

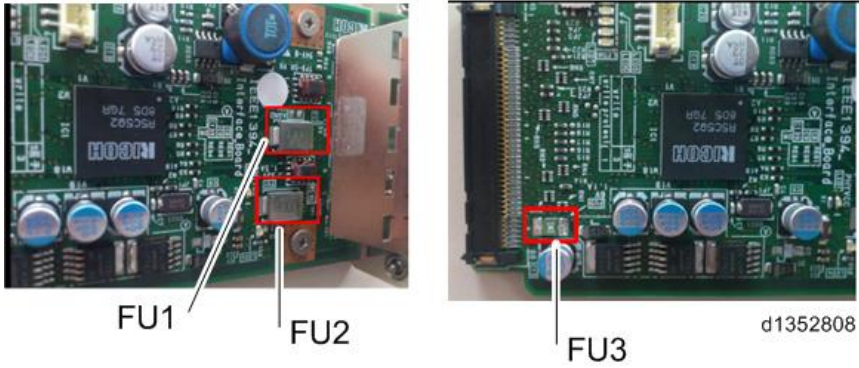
FUSE	Fuse part number	Output	Reason for Overcurrent	Action
FU2	11090007	3.3VEP	IEEE1284	Replace IEEE1284 Board



5

Copy connector (B5815710)

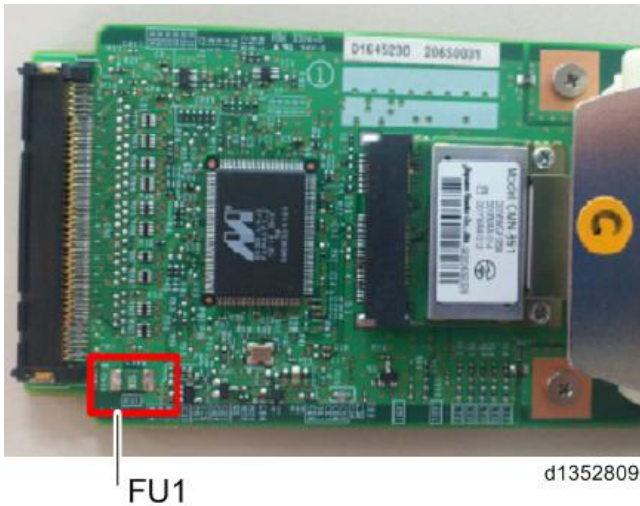
FUSE	Fuse part number	Output	Reason for Overcurrent	Action
FU1	11090020	BUSOUTPUT	Connector Hub inner of connector board	Replace the board
FU2		12VEP		
FU3	11090007	5VEP	Connector Hub inner of connector board	Replace the board



Wireless Lan: 11n (D1645230)

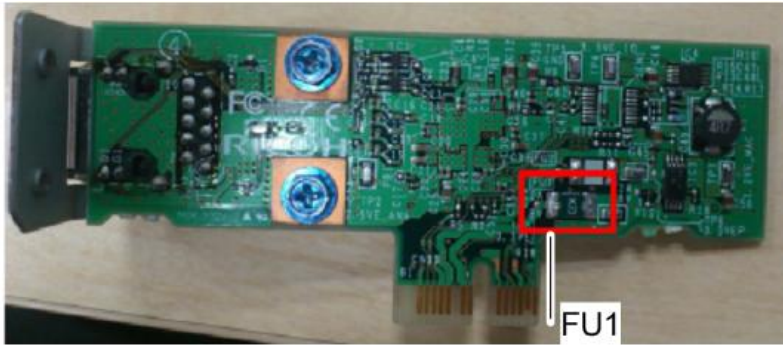
5

FUSE	Fuse part number	Output	Reason for Overcurrent	Action
FU1	11090042	3.3VEP	Inner of W-LAN	Replace the W-LAN



Giga-Ethernet Board (D7306036)

FUSE	Fuse part number	Output	Reason for Overcurrent	Action
FU1	11090044	3.3VE	Inner of PCIe-Gig	Replace the board



d1352810

6. Energy Saving

Energy Saving

Energy Save

If the Energy Saver button is pressed during machine operation

Previous models:

The job in progress is cancelled and the machine switches to Energy Saver mode immediately.

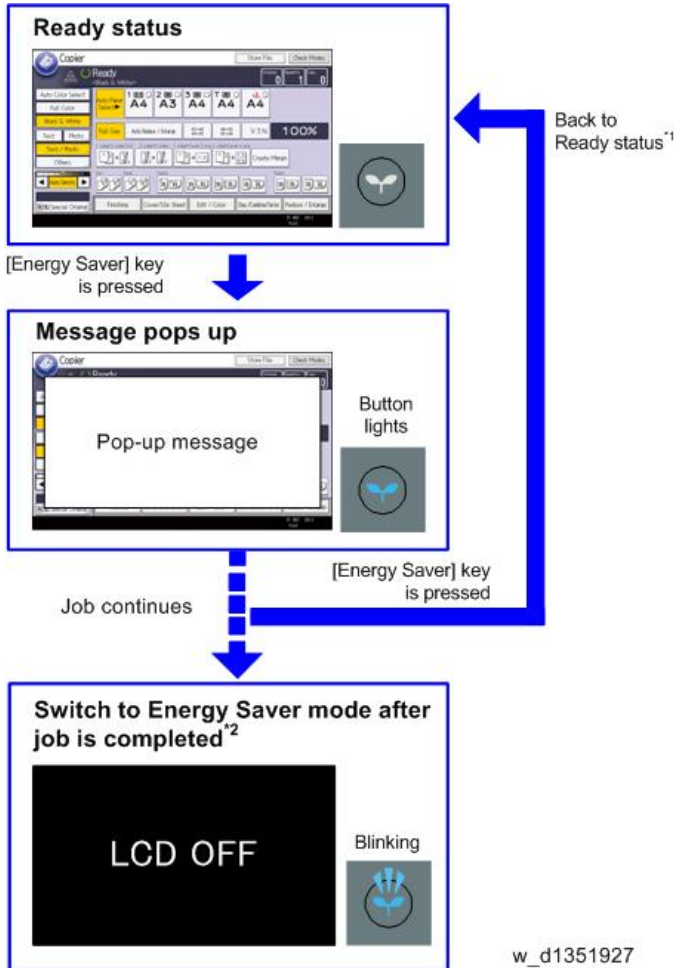
This model:

The following sequence is followed.

1. The [Energy Saver] key lights up and a pop-up message is displayed informing the user that the machine will switch to Energy Saver mode as soon as the current job is completed. The job continues until the end.
2. When the job has been completed, the machine enters Energy Saver mode.

Note

- If the [Energy Saver] key is pressed again during the job, the machine returns to the Ready condition.



* 1: The machine return to ready status by doing one of the following,

- Press the [Energy Saver] key
- Open the platen cover
- Set an original in the ADF

* 2: Recovering from the Energy Saver mode is the same. Do one of the following.

- Press the [Energy Saver] key
- Open the platen cover
- Set an original in the ADF

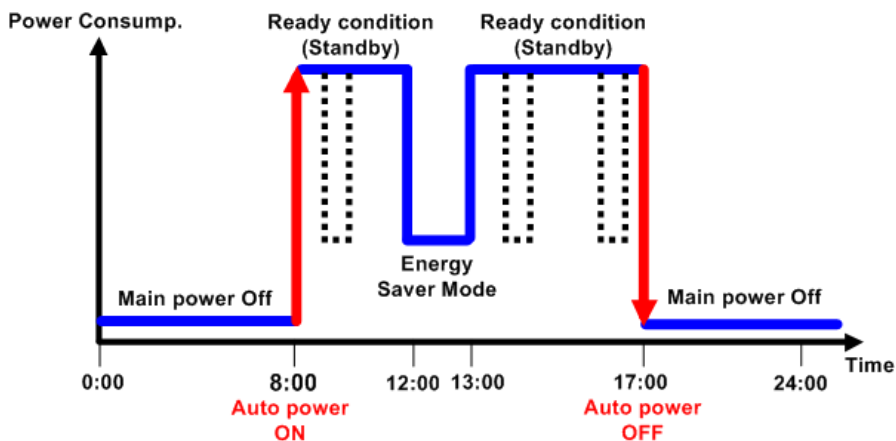
Energy Saver Timer

- With this timer, the user can choose when the machine will automatically enter and recover from Energy Saver mode, as well as when it will turn on and off. The user does not need to worry about turning the machine on or off in the morning, during lunchtime, or when leaving the office. As a result, the machine contributes to overall energy saving in the user's office environment, while at the same time helping to improve work efficiency.
- The user is able to control how far the machine will power down, i.e. only to Energy Saver mode or all the way off.
- With auto power ON and OFF, the user need not remember to turn the machine on and off every day.
- Auto power ON:

Improves work efficiency, as machine warm-up is already completed by the time the user is ready to begin work (the user is not made to wait).

- Auto power OFF:

Prevents unnecessary power consumption during after-work hours, saving power.



w_d1351928

- The user can disable the Weekly Timer, so that the machine power is not turned on automatically during extended periods of inactivity (Ex. Summer holiday).
- A password can be set so that the machine can be used during this period if necessary, but only by the select group who know this password.

Note

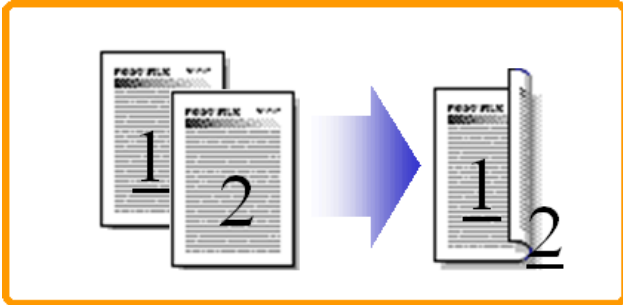
- You can set the energy saver timer setting on "Weekly Timer" in "Timer Settings" menu under "System Settings".

Paper Save

Effectiveness of Duplex/Combine Function

Duplexing and the combine functions reduce the amount of paper used. This means that less energy overall is used for paper production, which improves the environment.

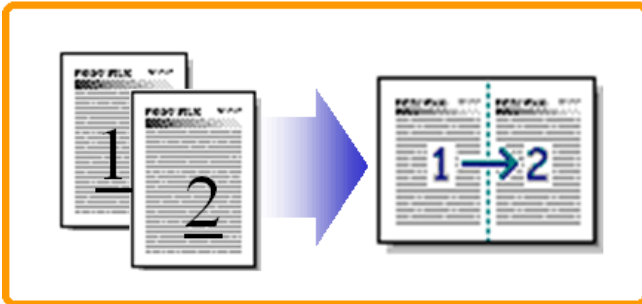
1. Duplex:



d1351966

Reduce paper volume in half!

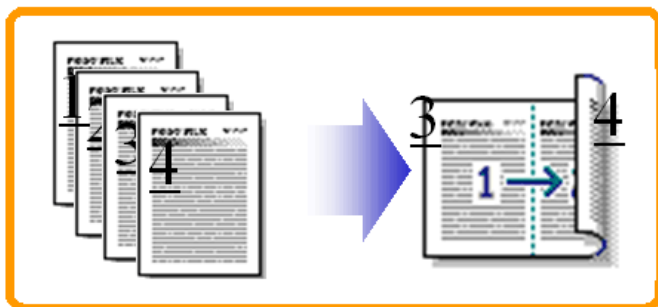
2. Combine mode:



d1351967

Reduce paper volume in half!

3. Duplex + Combine:



d1351968

Using both features together can further reduce paper volume by 3/4!

To check the paper consumption, look at the total counter and the duplex counter.

The total counter counts all pages printed.

- For one duplex page, the total counter goes up by 2.
- For a duplex job of a three-page original, the total counter goes up by 3.
- The duplex counter counts pages that have images on both sides.
- For one duplex page, the duplex counter goes up by 1.
- For a duplex job of a three-page original, the duplex counter will only increase by 1, even though two sheets are used.

6

Paper Savings and Counter

- Total counter: SP 8581-001
- Duplex counter: SP 8411-001
- Single-sided with combine mode: SP 8421-004
- Duplex with combine mode: SP 8421-005

The following table shows paper savings and how the counters increase for some simple examples of single-sided and duplex jobs.

Duplex mode:

Originals	Simplex Sheet used	Duplex Sheets used	Paper Saved	Total counter SP8501-001	Duplex counter SP8411-001
1	1	1	0	1	0
2	2	1	1	2	1

Originals	Simplex Sheet used	Duplex Sheets used	Paper Saved	Total counter SP8501-001	Duplex counter SP8411-001
3	3	2	1	3	1
4	4	2	2	4	2
5	5	3	2	5	2
10	10	5	5	10	5
20	20	10	10	20	10

If combine mode is used, the total and duplex counters work in the same way as explained previously. The following table shows paper savings and how the counters increase for some simple examples of duplex/combine jobs.

2 in 1 mode:

Originals	Simplex Sheet used	Duplex Sheets used	Paper Saved	Total counter SP8501-001	Duplex counter SP8411-001
1	1	1	0	1	1
2	2	1	1	1	1
3	3	2	1	2	2
4	4	2	2	2	2
5	5	3	2	3	2
10	10	5	5	5	5
20	20	10	10	10	10

Duplex + 2 in 1 mode:

Originals	Simplex Sheet used	Duplex Sheets used	Paper Saved	Total counter SP8501-001	Duplex counter SP8411-001
1	1	1	0	1	1
2	2	1	1	1	1

Originals	Simplex Sheet used	Duplex Sheets used	Paper Saved	Total counter SP8501-001	Duplex counter SP8411-001
3	3	1	2	2	2
4	4	1	3	2	2
5	5	2	3	3	3
6	6	2	4	3	3
7	7	2	5	4	4
8	8	2	6	4	4
9	9	3	6	5	5
10	10	3	7	5	5
11	11	3	8	6	6
12	12	3	9	6	6

MEMO

**Model CH-C1
Machine Code:
D135/D136/D137/D138
Appendices**

24 April, 2014

TABLE OF CONTENTS

1. Appendices: Specifications

Specifications.....	3
General Specifications.....	3
Printer Specifications.....	8
Scan Specifications.....	10
Other Specifications.....	12
HDD Specifications.....	12
Speed Specification.....	13
OFF/Sleep mode Watts, Return time.....	14
Noise.....	14
Supported Paper Sizes.....	15
Original Size Detection.....	15
Paper Feed.....	17
Tray, Bypass tray, LCT.....	17
Paper Exit.....	19
Main unit: Main unit tray/1 bin: inner 1 bin tray.....	19
Software Accessories.....	22
Printer Drivers.....	22
Scanner and LAN fax drivers.....	23
Optional Equipment	24
Finisher SR4090 (D70300).....	24
Booklet Finisher SR4100 (D70400).....	26
Finisher SR 4110 (D70700).....	29
Copy Tray Type M2 (D74400).....	32
Decurl Unit DU5020 (D72700) Pro Models Only.....	33
Buffer Pass Unit Type 5020 (D75100) Pro Models Only.....	33
Multi-Folding Unit FD4000 (D61500).....	33
Mail Box CS4010 (D70800) Office Models Only.....	34
Cover Interposer Tray CI4010 (D71100).....	35
Cover Interposer Tray CI4020 (D71200).....	35
LCIT RT4020 (D70900).....	36
LCIT RT4030 (D71000)	36

2. Appendices: Preventive Maintenance Tables

Preventive Maintenance.....	39
Preventive Maintenance Items.....	39
PM Parts.....	39
Mainframe.....	39

1. Appendices: Specifications

Specifications

General Specifications

Item	Office	Pro
Configuration:	console	
CPU:	Intel(R) Celeron(R) Processor P4505 1.86GHz	
RAM:	2.5GB (Standard)	
Color Support:	Full Color	
Photoreceptor Type:	OPC Drum	
Copy System:	Laser Beam Electrostatic Transfer System	
Develop System:	Dry Two-component Triple Shaft O.D. Cycle Develop System	
Fusing System:	Oil-less Belt Fusing System	
Original Holder type:	Fixed Holder	
Original Scanning System:	Flat Scanning System	
First copy time:	<ul style="list-style-type: none"> • D135 Color: 7.5 Sec. or less (A4/LT LEF) Black & White: 5.5 Sec. or less (A4/LT LEF) • D136 Color: 6.4 Sec. or less (A4/LT LEF) Black & White: 4.8 Sec. or less (A4/LT LEF) 	<ul style="list-style-type: none"> • D137 Color: 10.6 Sec. or less (A4/LT LEF) Black & White: 10.3 Sec. of less (A4/LT LEF) • D138 Color: 9.6 Sec. or less (A4/LT LEF) Black & White: 9.2 Sec. or less (A4/LT LEF)

Item	Office	Pro
Copying speed:	D135: 65 Pages/Min. (Black & White, Color) D136: 80 Pages/Min.(Black & White, Color)	D137:65 Pages/Min. (Black & White, Color) D138:80 Pages/Min. (Black & White, Color)
Warm-up time: (Temperature:20C/68F, NRP)	60 Sec. or less (Temperature: 20C/68F, NRP)	All Models: 300Sec. or less(Temperature: 20C/68F, NRP)
Originals:	Sheet/Book/Object	
Maximum original size:	297 x 432mm/11.7" x 17" (Both Book, ADF):A3/DLT Full size (Max. placeable original size: 11" x 17")	
Copy Paper Size:	Main Unit Tray1: A4 LEF/LT LEF *With A3/DLT Optional kit: Fixed Form Size: A3, B4, A4, B5, A5, 12" x 18", DLT, LG, LT, HLT, F/F4	
	Main Unit Tray2/3/4: 13 x 19.2" SEF, 13 x 19"SEF, 12.6 x 19.2"SEF, 12.6 x 18.5" SEF 13 x 18" SEF, SRA3 SEF, 12 x 18" SEF,SRA4 SEF/LEF, A3 SEF, A4 SEF/LEF, A5 SEF/LEF, B4 SEF, B5 SEF/LEF, DLT SEF, LG SEF, 8.5 x 13" SEF, LT SEF/LEF,8 x 10" SEF/LEF, 8.25 x 14" SEF, 8.25 x 13" SEF, Executive SEF/LEF, HLT SEF/LEF, 8K SEF, 16K SEF/LEF, 11 x 15" SEF, 11 x 14" SEF, 10 x 15" SEF, Custom size: Horizontal: 139.7mm to 330.2mm / 5.5" x 13" Vertical: 139.7mm to 487.7mm / 5.5" x 19.2"	

Item	Office	Pro
	<p>Bypass Tray:</p> <p>13 x 19.2" SEF, 13 x 19"SEF, 12.6 x 19.2"SEF, 12.6 x 18.5" SEF, 13 x 18" SEF, SRA3 SEF, 12 x 18" SEF,SRA4 SEF/LEF, A3, B4, A4, B5, A5, B6, 12" x 18",DLT,LG,LT,HLT,F/F4, C6, Com10, Monarch, C5, DL Env.</p> <p>Custom Size:</p> <p>Horizontal: 90mm to 330.2mm</p> <p>Vertical: 148mm to 487.7mm</p>	
	<p>A4 LCT:</p> <p>A4 LEF, LT LEF, B5 LEF</p> <p>* With B4/LG Optional Kit</p> <p>Fixed Form Size: B4 SEF, LG SEF,A4 SEF, LT SEF</p>	
	<p>A3 LCT:</p> <p>13 x 19.2" SEF, 13 x 19"SEF, 12.6 x 19.2"SEF, 12.6 x 18.5" SEF, 13 x 18" SEF, SRA3 SEF, 12 x 18" SEF,SRA4 SEF/LEF, A3 SEF, A4 SEF/LEF, A5 SEF/LEF, A6 SEF, B4 SEF, B5 SEF/LEF, B6 SEF,DLT SEF, LG SEF, 8.5 x 13" SEF, LT SEF/LEF, 8.25 x 14" SEF, 8.25 x 13" SEF, 8 x 13" SEF, 8 x 10.5" LT SEF/LEF, 8 x 10" SEF/LEF, Executive SEF/LEF, HLT SEF/LEF, Line Slider 1 SEF/LEF, Line Slider 2 SEF, 8K SEF, 16K SEF/LEF, 11 x 15" SEF, 11 x 14" SEF, 10 x 15" SEF, 10 x 14" SEF, xxxx BD SEF/LEF</p> <p>Custom Paper:</p> <p>Horizontal:100mm to 330.2mm/3.9" x 13"</p> <p>Vertical:139.7mm to 487.7mm/5.5 x 19.2"</p>	
<p>Paper Thickness:</p>	<ul style="list-style-type: none"> • Main Unit Tray: 52.3 to 256 g/m2 • Bypass Tray: 52.3 to 300 g/m2 • Duplex: 52.3 to 256 g/m2 • A4LCT: 52.3 to 216 g/m2 • A3LCT: 52.3 to 300 g/m2 	

Item	Office	Pro
Missing image area:	<ul style="list-style-type: none"> • Leading Edge: 4.2(+1.8/-1.2)mm/0.17" (+0.07"/0.05") • Left/Right: 2.0±1.5mm/ 0.08"±0.06" • Trailing Edge: 5.0±2.0mm(0.5 to 7.0mm with simplex)/0.2"±0.08" (0.02" to 0.28" with simplex) 	<ul style="list-style-type: none"> • Leading Edge: <Non-Coat Paper> Paper Thickness 1 to 3: 5.0±1.5mm/0.2"±0.06" Paper Thickness 4 to 8: 4(+1.8/-1.2)mm/0.2" (+0.07"/-0.05") <Coat Paper> Paper Thickness 1 to 4: 5.0±1.5mm Paper Thickness 5 to 8: 4(+1.8/-1.2)mm/0.2" (+0.07"/-0.05") • Left/Right: 2.0±1.5mm/ 0.08"±0.06" • Trailing Edge: <Non-Coat Paper> Paper Thickness 1 to 4: 5.0±2.0mm/0.2"±0.08" Paper Thickness 5 to 8: 4.0±2.0mm/0.16"±0.08" <Coat Paper> Paper Thickness 1 to 6: 5.0±2.0mm/0.2"±0.08 Paper Thickness 7 to 8: 4.0±2.0mm/0.16"±0.08"
Copy Scale (Fix)	4.000, 2.000, 1.410, 1.220, 1.150, 0.930, 0.870, 0.820, 0.710, 0.610, 0.500, 0.250 Scale Error Range Actual Size: Main Scan ±1.5%, Sub Scan ±2.75% Variable Size: Main Scan ±1.5%, Sub Scan ±2.75%	
Copy Scale (Zoom)	25 to 400%(1%/Step)	
Resolution (Scanning)	600dpi (Main Scan) x 600dpi (Sub Scan)	
Resolution(Writing)	1200dpi (Main Scan) x 4800dpi (Sub Scan)	

Item	Office	Pro
Tone	256	
Feeding System / Paper Capacity	Standard: <ul style="list-style-type: none"> • 500 Sheets x 2 + 550 Sheets x 3 + Office: 100 Sheets/Pro:250 Sheets (Bypass) Optional: <ul style="list-style-type: none"> • A4 LCT RT4020: 4400Sheets / 4000 Sheets (A4 LCT) • A3 LCT RT4030: 2200Sheets / 2000Sheets (A3 Plus LCT) • Paper capacity Using A3 kit for tandem LCT: 1000 Sheets (A3/ DLT) 	
Continuance Copy Amount	1 to 999 Sheets	
Power Source	<ul style="list-style-type: none"> • D135: 100V/15A, 50/60Hz • D136: 100V/15A x 2, 50/60Hz *D136 consumption current is 20A Max. 	<ul style="list-style-type: none"> • D137: 100V/15A x 2, 50/60Hz • D138: 200V/15A, 50/60Hz *Total consumption current is 20A Max.
Max. Watts	<ul style="list-style-type: none"> • D135: 1500W or less (full system) • D136: 2000W or less (full system) *Optional Power Source not included	<ul style="list-style-type: none"> • D137: 2000W or less (full system) • D138: 2400W or less (full system)
Dimensions (W x D x H)	<ul style="list-style-type: none"> • Standard Main Unit: 750mm×880mm x 1050mm/29.5" x 34.6" x 41.3" or less (Pro Width 835mm/32.9" or less) *Height up to contact glass • Standard Main Unit: 750mm x 880mm x 1230mm/29.5" x 34.6" x 48.42" or less (Pro Width 835mm or less/32.9" or less) *Height up to ADF 	

Item	Office	Pro
Unit Occupation Dimensions (W x D)	<ul style="list-style-type: none"> Standard Main Unit (Width x Depth) Width: Bypass tray cover to Output tray Leading edge Depth: Front cover Max. to Rear cover 1110 x 856mm	TBD
	<ul style="list-style-type: none"> Max. (Width x Depth) Width: Main Unit + LCT + 3000 Sheets Finisher + inserting paper Depth: Open cover 90 Deg. to Rear cover 1914 x 1456mm/75.4" x 57.3"	
Weight:	241 kg or less	261 kg or less
Laser Standard	Class1 (This Unit falls under to "class 1 laser product" based on JIS C 6802 (IEC 60825-1) Laser product safety regulation.)	

Printer Specifications

Item	Spec.	
Configuration:	Build in	
Print Size	<ul style="list-style-type: none"> Fixed form size: Max. A3 Vertical (297x420mm), 12" x 18" Vertical (304.8x457.2mm) Custom: Max. 305x600mm/12" x 23.6" (Bypass Tray) 	
Continuance Print Speed	<ul style="list-style-type: none"> D135: 65 Pages/Min. (B&W, Color) D136: 80 Page/Min. (B&W, Color) 	<ul style="list-style-type: none"> D137: 65 Pages/Min. (B&W, Color) D138: 80 Pages/Min. (B&W, Color)
Resolution:	200dpi / 300dpi / 400dpi / 600dpi / 1200dpi	

Item	Spec.
PDL:	Standard: RPCS, RPDL, MediaPrint: JPEG, MediaPrint: TIFF, PDF Direct Optional: PCL6, PCL5C, PS3, RTIFF, R55, PictBridge, BMLinks
Emulation (Option):	R55, RTIFF, R55/RTIFF/PS3, BMLinkS, PCL
Interface:	Standard: <ul style="list-style-type: none"> • USB2.0 Type A/Type B • Ethernet (1000BASE-T/100BASE-TX/10BASE-T) Extend: <ul style="list-style-type: none"> • Wireless LAN (IEEE802.11a/b/g/n) • Bluetooth • IEEE1284
Protocol:	TCP/IP, IPX/SPX, AppleTalk
USB Interface (Standard)	<ul style="list-style-type: none"> • Available Operating Systems: Windows 2000/XP/Vista/7, Windows Server 2003/2003 R2/2008/2008 R2, Mac OS 10.3.3 or later. • communication mode: Corresponded to USB2.0 Standard • Connecting mode: Devices corresponded to USB2.0 Standard
Available Operating Systems:	Windows /XP/Vista/7, Windows Server 2003/2008
Built-in Fonts:	(Standard) 136 of PS European alphabets, 2 Japanese fonts (Heisei myoh-tyoh W3, Heisei kaku gothic W5) Myoh-tyoh L, Gothic B Variations of RPDL European fonts. OCR-B, Chinese characters stroke 45 of PCL European alphabets fonts + 13 International Fonts (Optional) Ryumin light KL, Gothic BBB

Item	Spec.
Scale:	20% to 400%

Scan Specifications

Item	Spec.
Configuration:	Full color scanner
Original Scanning Method:	Flat scanning system
Image Sensor Type:	CCD image sensor
Originals:	Sheet, Book, Object
Available Original Size for Scanning:	Vertical (10 to 297mm) x Horizontal (10 to 432mm)
Detectable Original Size for Book Scanner:	A3 SEF, B4 SEF, A4 LEF, A4 SEF, B5LEF, B5SEF, A5LEF
Auto Detectable Size for Originals Set to ADF:	A3 SEF, B4 SEF, A4 LEF, A4 SEF, B5 LEF, B5 SEF, A5 LEF, A5 SEF, B6 LEF, B6 SEF, 11 x 17 SEF, 8 ¹ / ₂ " x 11" LEF, 8 ¹ / ₂ " x 11" SEF
Original Scanning Speed:	<p>A4 SEF Scan time (BOOK)</p> <p>Standard Size Letters: 0.7 Sec.</p> <p>Smaller Size Letters: 0.7 Sec.</p> <p>Extra Smaller Size Letters: 0.7 Sec.</p> <p>Continues Storing Speed (DF) (reference: From second sheet, A4 SEF)</p> <p>Standard Size Letters: 47spm</p> <p>Smaller Size Letters: 47spm</p> <p>Extra Smaller Size Letters: 47spm</p> <p>Rotate continues Storing Speed (DF) (reference: From second sheet, A4 LEF)</p> <p>Standard Size Letters: 50spm</p> <p>Smaller Size Letters: 46spm</p> <p>Extra Smaller Size Letters: 30spm</p>

Item	Spec.
Tone:	256
Basic Scanning Resolution:	200dpi
Compress Format for Binary B&W Image:	MH, MR, MMR
Compress Format for Gray Scale / Full Color:	PDF
Interface:	<ul style="list-style-type: none"> Standard: Ethernet (1000BASE-T/1100BASE-TX/10BASE-T) Optional: Wireless LAN (IEEE802.11a/b/g/n), SD Card slot
Protocol for Network Connection:	TCP/IP
Scanning Resolution for Sending email:	100dpi, 200dpi, 300dpi, 400dpi, 600dpi
Available Protocol for Sending email.	SMTP
Output Format for Sending email* 1:	TIFF, JPEG, PDF, Clear light PDF, PDF/A
Scanning Resolution for Scan to Folder:	100dpi, 200dpi, 300dpi, 400dpi, 600dpi
Available Protocol for Send to Folder:	SMB, FTP, NCP
Output Format for Send to Folder* 1:	Multi Pages TIFF/PDF, PDF/A
Available Protocol for WSD Scanner Sending:	Web Services on Devices for Scanning
Scan Resolution for Network TWAIN Scanner:	100 to 1200dpi

Item	Spec.
Available Protocol for Network TWAIN Scanner:	1) Available Protocol: TCP/IP 2) Other <ul style="list-style-type: none"> • UZ-D1/UZ-S1/Plumeria/CS/Palm are available. • SNMP Ricoh MIB is available.
Available Operating Systems for Network TWAIN Scanner:	Windows XP / Vista / 7, Windows Server 2003 / 2008
Scanning Resolution for Scan to Network (Main Scan x Sub Scan):	100dpi (High Compressed PDF Not available), 150dpi (High Compressed PDF Not available), 200dpi, 300dpi, 400dpi, 600dpi
Scan Resolution for when Using WIA Scanner:	100 to 1200dpi
Available Protocol for when Using WIA Scanner:	TCP/IP
Available Operating Systems for WIA Scanner:	Windows Vista (SP1 or later) /7, Windows Server 2008/2008 R2 (64bit OS are also available for WIA Scanner)

* 1 Electric certificate can be attached when selecting [PDF], [Clear light PDF], or [PDF/A] as file format. For [PDF] or [Clear light PDF], Security Settings are available.

Other Specifications

HDD Specifications

Item	Spec.
Capacity:	250GB x 2

Item	Spec.
Functions	<ul style="list-style-type: none"> • Download fonts • Download forms • Electric sort • Managing coast/Keep job history data • Spool print job • LS Input • Test Print/Privacy Print/Hold print/Save print • Image overlay (as Form overlay)

Speed Specification

Book First Copy Time (A4/LT SEF)

Office		Pro	
D135	D136	D137	D138
BW: 5.5 Sec. or less	BW: 4.8 Sec. or less	BW: 10.3 Sec. or less	BW: 9.2 Sec. or less
FC: 7.5 Sec. or less	FC: 6.4 Sec. or less	FC: 10.6 Sec. or less	FC: 9.6 Sec. or less

Copy Speed: Simplex (CPM)

Mode	Office		Pro	
	D135	D136	D137	D138
Standard Paper (66 to 80.9 g/square meters)	65	80	65	80

Copy Speed: Duplex (CPM) (A4/LT SEF)

Mode	Office		Pro	
	D135	D136	D137	D138
Standard Paper	65	80	65	80

Electric Sort Copy Speed: Duplex Simplex to Duplex (CPM) (A4/LT SEF)

Mode	Office		Pro	
	D135	D136	D137	D138
Standard Paper	65	80	65	80

OFF/Sleep mode Switching time

Item	Spec.
OFF/Sleep Mode Switching time	Standard: 1 min., Can set form 1 to 240 min.(1 min. /step) or OFF with setup settings

OFF/Sleep mode Watts, Return time

Item	Watts	Return time
OFF/Sleep mode	1.0W or less	Office: 60.0 Sec. of less Pro: 300.0 Sec. or less

Note

- Due to operating environment, usage status, Watts for OFF/Sleep mode might change. (Such cases as power change to control fuse temperature under low temperature environment, or network environment obstructs to switch to STR mode)
- *Off mode is applied to Basic Models, Sleep mode is applied to LP and MFP models.

Noise

Item	Office	Pro
Main unit alone (B&W/FC)	D135: 72.0dB D136:73.0dB	D137: 72.0dB D138: 73.0dB
Stanby	D135: 52.5dB D136: 57.0dB	D137: 52.5dB D138: 57.0dB

Supported Paper Sizes

Original Size Detection

Size (W x L) [mm]	NA		EU/AP	
	Book	ADF	Book	ADF
A3 SEF (297 x 420)	-	Y	Y*4	Y
B4 SEF (257 x 364)	-	-	Y*4	Y
A4 SEF (210 x 297)	Y*5	Y	Y*4*5	Y
A4 LEF (297 x 210)	Y*5	Y	Y*4*5	Y
B5 SEF (182 x 257)	-	-	Y*4	Y
B5 LEF (257 x 182)	-	-	Y*4	Y
A5 SEF (148 x 210)	-	-	Y*2-4	Y
A5 LEF (210 x 148)	-	-	Y*4	Y
B6 SEF (128 x 182)	-	-	-	Y
B6 LEF (182 x 128)	-	-	-	Y
DLT SEF (11" x 17")	-	Y	-	Y*Da
LG SEF (8 ¹ / ₂ " x 14")	Y*5	Y	-	-
LT SEF (8 ¹ / ₂ " x 11")	Y*5	Y*5	Y*5	Y*Db
LT LEF (11" x 8 ¹ / ₂ "	Y*2	Y*5	Y*5	Y*Dc
HLT SEF (5 ¹ / ₂ " x 8 ¹ / ₂ "	Y	Y*2	-	-
HLT LEF (8 ¹ / ₂ " x 5 ¹ / ₂ "	-	Y	-	-
F SEF (8" x 13")	-	-	Y*Se*3	Y*Se*3
Foolscap SEF (8 ¹ / ₂ " x 13")	-	-	Y*De*3	Y*De*3
Folio SEF (8 ¹ / ₄ " x 13")	-	-	Y*Se*3	Y*Se*3
Folio SEF (11" x 15")	-	-	-	-

Size (W x L) [mm]	NA		EU/AP	
	Book	ADF	Book	ADF
Folio SEF (10" x 14")	-	-	-	-
Folio SEF (8" x 10")	-	-	-	-
US EXE SEF (7 ¹ / ₄ " x 10 ¹ / ₂ "	-	-	-	-
US EXE LEF (10 ¹ / ₂ " x 7 ¹ / ₄ "	-	-	-	-
8K SEF (267 x 390)	-	-	Y*4	Y*Sa
16K SEF (195 x 267)	-	-	Y*4	Y*Sb
16K LEF (267 x 195)	-	-	Y*4	Y*Sc

Sizes with letters (a, b, c) means only either size with the corresponding letter can be selected for size detect. "D" is for default set sizes, and when setting "S" sizes for size detection from SP mode, "D" sizes can no longer be detected.

(*2)For detected originals smaller than A5 size, with SP mode either "detect as A5" or "Detect as Unknown" can be selected.(Default is "Detect as unknown")

(*3)F Sizes (8.5" x 13" SEF, 8.25" x 13" SEF, 8" x 13" SEF) will be available by SP mode settings.

(*4)Switch Book scanner original detection between "K" series and "A/B" series from SP mode.

(Can not set both to detect, but 8K/16K detect can be set from SO mode)

8K SEF -> Switch between A3, B4 SEF

16K SEF -> Switch between A4, A5, B5 SEF

16K LEF -> Switch between A4, A5, B5 LEF *Can not switch only either size.

(*5)Can be selected with switching A4/LT from SP mode:

- Standard detect (default)
- When placing A4/LT size LEF, detect as A4 LEF. When placing SEF, detect as LT SEF.
- When placing A4/LT size LEF, detect as LT LEF. When placing SEF, detect as A4 SEF.

Remarks:

Y	Yes; available
-	Not available

Paper Feed

Tray, Bypass tray, LCT

Size (W x L) [mm]	Tray 1	Tray 2/3	Bypass	LCT (MAUI-D)	LCT (MALAY)	Auto duplex
A3 SEF (297 x 420)	A ^{*1}	M	M	-	A	A
A4 SEF (210 x 297)	A	M	M	A ^{*2}	A	A
A4 LEF (297 x 210)	A ^{*1}	M	M	A	A	A
A5 SEF (148 x 210)	A ^{*1}	M	M	A ^{*3}	A	A
A5 LEF (210 x 148)	A ^{*1}	M	M	A ^{*3}	A	A
A6 SEF (105 x 148)	-	-	-	-	A	-
B4 SEF (257 x 364)	A ^{*1}	M	M	A ^{*2}	A	A
B5 SEF (182 x 257)	A ^{*1}	M	M	-	A	A
B5 LEF (257 x 182)	A ^{*1}	M	M	A	A	A
B6 SEF (128 x 182)	-	-	M	-	A	A
DLT SEF (11" x 17")	A ^{*1}	A	A	-	A	A
Legal (8 ¹ / ₂ " x 14")	A ^{*1}	A	A	A ^{*2}	A	A
Foolscap (8 ¹ / ₂ " x 13")	-	A	-	-	A	A
LT SEF (8 ¹ / ₂ " x 11")	A	A	A	A ^{*2}	A	A
LT LEF (11" x 8 ¹ / ₂ ")	A ^{*1}	A	A	A	A	A
Gov. LG SEF (8 ¹ / ₄ " x 14")	-	A	-	-	A	A
Folio SEF (8 ¹ / ₄ " x 13")	-	A	-	-	A	A
F/GL (8" x 13")	-	-	-	-	A	A
F/F4	A ^{*1}		A	-		A
GLT SEF (8" x 10 ¹ / ₂ ")	-	-	-	-	A	A

Size (W x L) [mm]	Tray 1	Tray 2/3	Bypass	LCT (MAUI-D)	LCT (MALAY)	Auto duplex
GLT LEF (10 ¹ / ₂ " x 8")	-	-	-	-	A	A
Eng Quatro SEF (8" x 10")	-	A	-	-	A	A
Eng Quatro LEF (10" x 8")	-	A	-	-	A	A
Executive SEF (7 ¹ / ₄ " x 10 ¹ / ₂ ")	-	A	-	-	A	A
Executive LEF (10 ¹ / ₂ " x 7 ¹ / ₄ ")	-	A	-	-	A	A
HLT SEF (5 ¹ / ₂ " x 8 ¹ / ₂ ")	A* ¹	A	A	-	A	A
HLT LEF (8 ¹ / ₂ " x 5 ¹ / ₂ ")	A* ¹	A	A	-	A	A
SRA3 SEF(420 x 320)		M	M	-	A	A
SRA4 SEF		A	A	-	A	A
SRA4 LEF		A	A	-	A	A
Line slider 1 SEF	-	-	-	-	A	A
Line slider 1 LEF	-	-	-	-	A	A
Line slider 2 SEF	-	-	-	-	A	A
Line slider 2 LEF	-	-	-	-	A	A
Com10(104.8 x 241.3)			A	-	-	A
Monarch(98.4 x 190.5)			A	-	-	-
C5(162 x 229)	-	-	A	-	-	A
DL(110 x 220)	-	-	A	-	-	A
8K SEF (267 x 390)	-	A	-	-	A	A
16K SEF (195 x 267)	-	A	-	-	A	A
16K LEF (267 x 195)	-	A	-	-	A	A

Size (W x L) [mm]	Tray 1	Tray 2/3	Bypass	LCT (MAUI-D)	LCT (MALAY)	Auto duplex
13" x 19.2" SEF	-	A	A	-	A	A
13" x 19" SEF	-	M	M	-	A	-
13" x 18" SEF	-	A	A	-	A	-
12.6" x 19.2 SEF	-	A	A	-	A	-
12.6" x 18.5" SEF	-	A	A	-	A	-
12" x 18" SEF	A* ¹	A	A	-	A	-
12" x 18" LEF	A* ¹	-	A	-	-	-
11" x 15" SEF	-	A	-	-	A	-
11" x 14" SEF	-	A	-	-	A	-
10" x 15" SEF	-	A	-	-	A	-
10" x 14" SEF	-	-	-	-	A	-

(*1) With A3/DLT optional kit

(*2) With B4/LG optional kit

(*3) With special order

Remarks:

A	Available, Auto detectable
M	Available, Paper size must be set from initial setting
-	Not available

Paper Exit

Main unit: Main unit tray/ 1bin: inner 1bin tray

Size (W x L) [mm]	Main unit paper exit
A3 SEF (297 x 420)	Y

Size (W x L) [mm]	Main unit paper exit
A4 SEF (210 x 297)	Y
A4 LEF (297 x 210)	Y
A5 SEF (148 x 210)	Y
A5 LEF (210 x 148)	Y
A6 SEF (105 x 148)	Y
B4 SEF (257 x 364)	Y
B5 SEF (182 x 257)	Y
B5 LEF (257 x 182)	Y
B6 SEF (128 x 182)	Y
DLT SEF (11" x 17")	Y
Legal SEF (8.5" x 14")	Y
Foolscap SEF (8.5" x 13")	Y
LT SEF (8.5" x 11")	Y
LT LEF (11" x 8.5")	Y
Government LG SEF (8.25" x 14")	Y
Folio SEF (8.25" x 13")	Y
F/GL SEF (8" x 13")	Y
G LT SEF (8" x 10.5")	Y
G LT LEF (10.5" x 8")	Y
Eng Quatro SEF (8" x 10")	Y
Eng Quatro LEF (10" x 8")	Y
Executive SEF (7.25" x 10.5")	Y

Size (W x L) [mm]	Main unit paper exit
Executive LEF (10.5" x 7.25")	Y
HLT SEF (5.5" x 8.5")	Y
HLT LEF (8.5" x 5.5")	Y
8K SEF (267 x 390)	Y
16K SEF (195 x 267)	Y
16K LEF (267 x 195)	Y
12" x 18" SEF	Y
11" x 15" SEF	Y
11" x 14" SEF	Y
10" x 15" SEF	Y
10" x 14" SEF	Y

Remarks:

Y	Available
-	Not available

Software Accessories

The printer drivers and utility software are provided on one CD-ROM. An auto-run installer allows you to select which components to install.

Printer Drivers

Printer Language	Windows XP ^{*1*}	Windows Vista ^{*2*}	Windows 7 ^{*3*}	Windows 8 ^{*6*}
RPCS	Yes	Yes	Yes	Yes
PCL 6	Yes	Yes	Yes	Yes
PS3	Yes	Yes	Yes	Yes

Printer Language	Windows Server 2003 ^{*4*}	Windows Server 2008 ^{*5*}	Windows Server 2012 ^{*9*}	Macintosh ^{*7*}
RPCS	Yes	Yes	Yes	No
PCL 6	Yes	Yes	Yes	No
PS3	Yes	Yes	Yes	Yes

*1 Microsoft Windows XP Professional Edition / Home Edition / Media Center Edition / Tablet PC Edition

*2 Microsoft Windows Vista Ultimate / Enterprise / Business / Home Premium / Home Basic

*3 Microsoft Windows 7 Home Premium / Professional / Ultimate / Enterprise

*4 Microsoft Windows Server 2003 Standard Edition / Enterprise Edition / Microsoft Windows Server 2003 R2 Standard Edition / Enterprise Edition

*5 Microsoft Windows Server 2008 Standard / Enterprise / Microsoft Windows Server 2008 R2 Standard / Enterprise

*6 Supports both 32bit, 64bit

*7 Supports Mac OS X 10.4 or later

*8 Microsoft Windows 8 (Core Edition) / Pro / Enterprise

*9 Microsoft Windows Server 2012 Standard / Datacenter / Essentials

Note

- All other Drivers except ones for Windows XP / 2003 / Vista / 7 / 8 are Adobe genuine PostScript driver.
- PPD file for each operation systems is included in the driver.

Scanner and LAN fax drivers

Driver	Windows XP ^{*1*6}	Windows Vista ^{*2*6}	Windows 7 ^{*3*6}	Windows 8 ^{*6*7}
TWAIN	Yes	Yes	Yes	Yes
PC-FAX	Yes	Yes	Yes	Yes

Driver	Windows Server 2003 ^{*4*6}	Windows Server 2008 ^{*5*6}	Windows Server 2012 ^{*8}	Macintosh
TWAIN	Yes	Yes	Yes	No
PC-FAX	Yes	Yes	Yes	No

*1 Microsoft Windows XP Professional Edition / Home Edition / Media Center Edition / Tablet PC Edition

*2 Microsoft Windows Vista Ultimate / Enterprise / Business / Home Premium / Home Basic

*3 Microsoft Windows 7 Home Premium / Professional / Ultimate / Enterprise

*4 Microsoft Windows Server 2003 Standard Edition / Enterprise Edition / Microsoft Windows Server 2003 R2 Standard Edition / Enterprise Edition

*5 Microsoft Windows Server 2008 Standard / Enterprise / Microsoft Windows Server 2008 R2 Standard / Enterprise

*6 Supports both 32bit, 64bit (Scanner driver works on 32bit compatible mode)

*7 Microsoft Windows 8 (Core Edition) / Pro / Enterprise

*8 Microsoft Windows Server 2012 Standard / Datacenter / Essentials

Note

- With LAX Fax driver, sending documents directly from PC will be available.
- Also Address Book Editor and Cover Sheet Editor will installed along.
- Network TWAIN driver will be provided on the scanner driver CD-ROM.

Optional Equipment

1

Finisher SR4090 (D70300)

Paper Size:	Finisher / Upper Tray	A3 LEF, A4, A5, A6 LEF, B4 LEF, B5, B6 LEF, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11, 8 x 13 LEF, 7 1/4 x 10 1/2, 5 1/2 x 8 1/2, LEF, 8K LEF, 16K, 12 x 18 LEF, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF, 13 x 19 1/5 LEF, 13 x 19 LEF, 12 3/5 x 19 1/5 LEF, 12 3/5 x 18 1/2 LEF, 13 x 18 LEF, SRA3 LEF, SRA4, Custom size
	Finisher / Shift Tray	A3 LEF, A4, A5, B4 LEF, B5, B6 LEF, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11, 8 x 13 LEF, 7 1/4 x 10 1/2, 5 1/2 x 8 1/2, LEF, 8K LEF, 16K, 12 x 18 LEF, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF, 13 x 19 1/5 LEF, 13 x 19 LEF, 12 3/5 x 19 1/5 LEF, 12 3/5 x 18 1/2 LEF, 13 x 18 LEF, SRA3 LEF, SRA4, Custom size
	Finisher / Shift Tray / Shifting	A3 LEF, A4, A5, B4 LEF, B5, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11, 8 x 13 LEF, 7 1/4 x 10 1/2, 5 1/2 x 8 1/2, 8K LEF, 16K, 12 x 18 LEF, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF, SRA4 LEF, Custom size
	Staple	A3 LEF, A4, B4 LEF, B5, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11, 8 x 13 LEF, 7 1/4 x 10 1/2, 8K LEF, 16K, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF, Custom size
	Punch	A3 LEF, A4, A5, B4 LEF, B5, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11, 8 x 13 LEF, 7 1/4 x 10 1/2, 5 1/2 x 8 1/2, 8K LEF, 16K, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF, Custom size
Paper Thickness:	Finisher / Upper Tray	52.3 to 220.0 g/m ²
	Finisher / Shift Tray	52.3 to 300.0 g/m ²
	Staple	52.3 to 105.0 g/m ²
	Punch	52.3 to 256.0 g/m ²

Capacity:	Finisher / Upper Tray	<ul style="list-style-type: none"> • A4, 8 1/2 x 11 or less:250 sheets • B4, 8 1/2 x 14 or more:50 sheets
	Finisher / Shift Tray	<ul style="list-style-type: none"> • A4 SEF, 8 1/2 x 11 SEF: 3,000 sheets • A3 LEF, B4 LEF, A4 LEF, B5, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11 LEF, 12 x 18 LEF, SRA3 LEF, 13 x 19 1/5 LEF: 1,500 sheets • A5 SEF: 500 sheets • A5 LEF, B6 LEF, 5 1/2 x 8 1/2 LEF: 100 sheets
	Staple	<ul style="list-style-type: none"> • A3 LEF, A4, B4 LEF, B5, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 x 13 LEF, 8 1/2 x 11, 7 1/4 x 10 1/2, 8K LEF, 16K, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF: 65sheets • Mixed Size: 50sheets (A3 LEF/A4 SEF, B4 LEF/B5 SEF, 11 x 17 LEF/8 1/2 x 11 SEF)
	Staple Output	<ul style="list-style-type: none"> • A4 SEF, 8 1/2 x 11 SEF: Binding 20 to 65 sheets...150 to 46 Sets, Binding 2 to 19 sheets...150 Sets • A4 LEF, B5, 8 1/2 x 11 LEF: Binding 15 to 65 sheets...100 to 23 Sets, Binding 2 to 14 sheets...100 Sets • Other Paper Size: Binding 15 to 65 sheets...100 to 23 Sets, Binding 2 to 14 sheets...100 Sets • Mixed Size: Binding 2 to 65 sheets...23 Sets (A3 LEF/A4 SEF, B4 LEF/B5 SEF, 11 x 17 LEF/8 1/2 x 11 SEF) <p>(With My Paper Brand)</p>
Power Source:	Draw from main unit	
Power Consumption:	55.7W or less	
Weight:	38 kg	
Dimensions (W x D x H):	657 x 613 x 960 mm	

Booklet Finisher SR4100 (D70400)

Paper Size:	Finisher / Upper Tray	A3 LEF, A4, A5, A6 LEF, B4 LEF, B5, B6, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11, 8 x 13 LEF, 7 1/4 x 10 1/2, 5 1/2 x 8 1/2, LEF, 8K LEF, 16K, 12 x 18 LEF, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF, 13 x 19 1/5 LEF, 13 x 19 LEF, 12 3/5 x 19 1/5 LEF, 12 3/5 x 18 1/2 LEF, 13 x 18 LEF, SRA3 LEF, SRA4, Custom size
	Finisher / Shift Tray	A3 LEF, A4, A5, B4 LEF, B5, B6 LEF, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11, 8 x 13 LEF, 7 1/4 x 10 1/2, 5 1/2 x 8 1/2, LEF, 8K LEF, 16K, 12 x 18 LEF, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF, 13 x 19 1/5 LEF, 13 x 19 LEF, 12 3/5 x 19 1/5 LEF, 12 3/5 x 18 1/2 LEF, 13 x 18 LEF, SRA3 LEF, SRA4, Custom size
	Finisher / Shift Tray / Shifting	A3 LEF, A4, A5, B4 LEF, B5, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11, 8 x 13 LEF, 7 1/4 x 10 1/2, 5 1/2 x 8 1/2, 8K LEF, 16K, 12 x 18 LEF, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF, SRA4 LEF, Custom size
Paper Size:	Staple	A3 LEF, A4, B4 LEF, B5, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11, 8 x 13 LEF, 7 1/4 x 10 1/2, 8K LEF, 16K, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF, Custom size
	Saddle stitch staple	A3 LEF, A4 LEF, B4 LEF, B5 LEF, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11 LEF, 12 x 18 LEF, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF, 13 x 18 LEF, SRA4 LEF
	Punch	A3 LEF, A4, A5, B4 LEF, B5, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11, 8 x 13 LEF, 7 1/4 x 10 1/2, 5 1/2 x 8 1/2, 8K LEF, 16K, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF, Custom size
	Half fold	A3 LEF, A4 LEF, B4 LEF, B5 LEF, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11 LEF, 12 x 18 LEF, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF, 13 x 18 LEF, SRA4
	Multiple sheets	A3 LEF, A4 LEF, B4 LEF, B5 LEF, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11 LEF, 12 x 18 LEF, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF, 13 x 18 LEF, SRA4 LEF

Paper Thickness:	Finisher / Upper Tray	52.3 to 220.0 g/m ²
	Finisher / Shift Tray	52.3 to 300.0 g/m ²
	Staple	52.3 to 105.0 g/m ²
	Saddle stitch staple	64.0 to 105.0 g/m ²
	Punch	52.3 to 256.0 g/m ²
	Half fold	64.0 to 216.0 g/m ²
	Multiple sheets	64.0 to 105.0 g/m ²

Capacity:	Finisher / Upper Tray	<ul style="list-style-type: none"> • A4, 8 1/2 x 11 or less: 250 sheets • B4, 8 1/2 x 14 or more: 50 sheets
	Finisher / Shift Tray	<ul style="list-style-type: none"> • A4 SEF, 8 1/2 x 11 SEF: 2,000 sheets • A3 LEF, B4 LEF, A4 LEF, B5, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11 LEF, 12 x 18 LEF, SRA3 LEF, 13 x 19 1/5 LEF: 1,000 sheets • A5 SEF: 500 sheets • A5 LEF, B6 LEF, 5 1/2 x 8 1/2 LEF: 100 sheets <p>(With My Paper Brand)</p>
	Staple	<ul style="list-style-type: none"> • A3 LEF, A4, B4 LEF, B5, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 x 13 LEF, 8 1/2 x 11, 7 1/4 x 10 1/2, 8K LEF, 16K, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF: 65sheets • Mixed Size: 50 sheets (A3 LEF/A4 SEF, B4 LEF/B5 SEF, 11 x 17 LEF/8 1/2 x 11 SEF) <p>(With My Paper Brand)</p>
	Staple Output	<ul style="list-style-type: none"> • A4 SEF, 8 1/2 x 11 SEF: Binding 13 to 65 sheets...150 to 30 Sets, Binding 2 to 12 sheets...150 Sets • A4 LEF, B5, 8 1/2 x 11 LEF: Binding 10 to 65 sheets...100 to 15 Sets, Binding 2 to 9 sheets...100 Sets • Other Paper Size: Binding 10 to 65 sheets...100 to 15 Sets, Binding 2 to 9 sheets...100 Sets • Mixed Size <p>Binding 2 to 65 sheets...23 Sets (A3 LEF/A4 SEF, B4 LEF/B5 SEF, 11 x 17 LEF/8 1/2 x 11 SEF)</p> <p>(With My Paper Brand)</p>
	Saddle stitch staple	20 sheets (With My Paper Brand)
	Saddle stitch staple Output	<p>Binding 2 to 5 sheets: approx. 30 Sets, Binding 6 to 10sheets: approx. 15 Sets, Binding 11 to 15 sheets: approx. 10 Sets, Binding 16 to 20sheets: approx. 6 Sets</p> <p>(With My Paper Brand)</p>
Power Source:	Draw from main unit	
Power Consumption:	55.7W or less	

Weight:	approx. 57kg
Dimensions (W x D x H):	657 x 613 x 960mm

Finisher SR 4110 (D70700)

Paper Size:	Finisher / Upper Tray	<ul style="list-style-type: none"> Without Z-Folding <p>A3 LEF, A4, A5, A6 LEF, B4 LEF, B5, B6 LEF, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11, 8 x 13 LEF, 7 1/4 x 10 1/2, 5 1/2 x 8 1/2, LEF, 8K LEF, 16K, 12 x 18 LEF, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF, 13 x 19 1/5 LEF, 13 x 19 LEF, 12 3/5 x 19 1/5 LEF, 12 3/5 x 18 1/2 LEF, 13 x 18 LEF, SRA3 LEF, SRA4, Custom size</p> <ul style="list-style-type: none"> With Z-Folding <p>A3 LEF, A4 LEF, B4 LEF, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11 LEF</p>
	Finisher / Shift Tray	<ul style="list-style-type: none"> Without Z-Folding <p>A3 LEF, A4, A5, B4 LEF, B5, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11, 8 x 13 LEF, 7 1/4 x 10 1/2, 5 1/2 x 8 1/2, 8K LEF, 16K, 12 x 18 LEF, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF, 13 x 19 1/5 LEF, 13 x 19 LEF, 12 3/5 x 19 1/5 LEF, 12 3/5 x 18 1/2 LEF, 13 x 18 LEF, SRA3 LEF, SRA4, Custom size</p> <ul style="list-style-type: none"> With Z-Folding <p>A3 LEF, A4 LEF, B4 LEF, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11 LEF</p>

Paper Size:	Finisher / Shift Tray / Shifting	A3 LEF, A4, A5, B4 LEF, B5, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11, 8 x 13 LEF, 7 1/4 x 10 1/2, 5 1/2 x 8 1/2, 8K LEF, 16K, 12 x 18 LEF, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF, 13 x 19 1/5 LEF, 13 x 19 LEF, Custom size
	Staple	<ul style="list-style-type: none"> • Without Z-Folding A3 LEF, A4, B4 LEF, B5, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11, 8 x 13 LEF, 7 1/4 x 10 1/2, 8K LEF, 16K, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF • With Z-Folding A3 LEF, B4 LEF, 11 x 17 LEF • With Z-Folding, Mixed Size A3 LEF and A4 LEF B4 LEF and B5 LEF 11 x 17 LEF and 8 1/2 x 11 LEF
Paper Thickness:	Finisher / Upper Tray	<ul style="list-style-type: none"> • Without Z-Folding 52.3 to 216.0 g/m² • With Z-Folding 64.0 to 80.0 g/m²
	Finisher / Shift Tray	<ul style="list-style-type: none"> • Without Z-Folding 52.3 to 300.0 g/m² • With Z-Folding 64.0 to 80.0 g/m²
	Finisher / Shift Tray / Shifting	52.3 to 300.0 g/m ²
	Staple	<ul style="list-style-type: none"> • Without Z-Folding 64.0 to 90.0 g/m² • With Z-Folding 64.0 to 80.0 g/m²

Capacity:	Finisher / Upper Tray	<ul style="list-style-type: none"> Without Z-Folding A4, 8 1/2 x 11 or less: 500 sheets B4, 8 1/2 x 14 or more: 250 sheets With Z-Folding 30 sheets (With My Paper Brand)
	Finisher / Shift Tray	<ul style="list-style-type: none"> Without Z-Folding A4, B5, 8 1/2 x 11: 3,000 sheets A3, A4, B4, B5, 11 x 17, 8 1/2 x 14, 8 1/2 x 11: 1,500 sheets 12 x 18, 13 x 19: 1,000 sheets A5, 5 1/2 x 8 1/2: 500 sheets A5, 5 1/2 x 8 1/2: 100 sheets With Z-Folding 30 sheets (With My Paper Brand)
	Staple	<ul style="list-style-type: none"> Without Z-Folding A LEF, B4 LEF, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 x 13 LEF, 8K LEF, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF: 50 sheets A4, B5, 8 1/2 x 11, 7 1/4 x 10 1/2, 16K: 100 sheets Mixed Size 50 sheets (A3 LEF /A4 SEF, B4 LEF/B5 SEF, 11 x 17 LEF/8 1/2 x 11 SEF) With Z-Folding 10 sheets Combination of With and Without Z-Folding 10 sheets of Z-Folding and 0 sheets Without Z-Folding, 9 sheets of Z-Folding and 0 to 10 sheets Without Z-Folding, 8 sheets of Z-Folding and 0 to 20 sheets Without Z-Folding, 7 sheets of Z-Folding and 0 to 30 sheets Without Z-Folding, 6 sheets of Z-Folding and 0 to 40 sheets Without Z-Folding, 5 sheets of Z-Folding and 0 to 50 sheets Without Z-Folding, 4 sheets of Z-Folding and 0 to 60 sheets Without Z-Folding, 3 sheets of Z-Folding and 0 to 70 sheets Without Z-Folding, 2 sheets of Z-Folding and 0 to 80 sheets Without Z-Folding, 1 sheet of Z-Folding and 1 to 90 sheets Without Z-Folding (With My Paper Brand)

	Staple Output	<ul style="list-style-type: none"> • Without Z-Folding A4 SEF, B5 SEF, 8 1/2 x 11 SEF: binding 10 to 100 sheets... 200 to 30 Sets A4 LEF, B5 LEF, 8 1/2 x 11 LEF, 11 x 17 LEF, 8 1/2 x 14 LEF: binding 2 to 9 sheets... 150 Sets A3, B4: binding 10 to 50 sheets... 150 to 30 Sets • With Z-Folding, Mixed Size Z-Folded A3 LEF and A4 SEF, Z-Folded B4 LEF and B5 SEF, Z- Folded 11 x 17 LEF and 8 1/2 x 11 SEF: 1 to 10 sheets...30 to 3 Sets • Mixed Size 2 to 50 sheets...30 Sets(A3 LEF/A4 SEF, B4 LEF/B5 SEF, 11 x 17 LEF/8 1/2 x 11 SEF) (With My Paper Brand)
Power Source:	Draw from main unit	
Power Consumption:	120 W or less	
Weight:	approx. 75 kg	
Dimensions (W x D x H):	806 x 730 x 980 mm	

Copy Tray Type M2 (D74400)

Paper Size:	
Paper Thickness:	
Power Source:	
Power Consumption:	
Weight:	
Dimensions (W x D x H):	

Decurl Unit DU5020 (D72700) Pro Models Only

Paper Size:	A3 LEF, A4, A5, A6 LEF, B4 LEF, B5, B6 LEF, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11, 8 x 13 LEF, 7 1/4 x 10 1/2, 5 1/2 x 8 1/2, 8K LEF, 16K, 12 x 18 LEF, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF, 13 x 19 1/5 LEF, 13 x 19 LEF, 12 3/5 x 19 1/5 LEF, 12 3/5 x 18 1/2 LEF, 13 x 18 LEF, SRA3 LEF, SRA4, Custom size
Paper Thickness:	52.3 to 300.0 g/m ²
Power Source:	Draw from main unit
Power Consumption:	30W or less
Weight:	approx. 30kg
Dimensions (W x D x H):	170 x 730 x 990 mm

Buffer Pass Unit Type 5020 (D75100) Pro Models Only

Paper Size:	A3 LEF, A4, A5, A6 LEF, B4 LEF, B5, B6 LEF, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11, 8 x 13 LEF, 7 1/4 x 10 1/2, 5 1/2 x 8 1/2, LEF, 8K LEF, 16K, 12 x 18 LEF, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF, 13 x 19 1/5 LEF, 13 x 19 LEF, 12 3/5 x 19 1/5 LEF, 12 3/5 x 18 1/2 LEF, 13 x 18 LEF, SRA3 LEF, SRA4, Custom size
Paper Thickness:	52.3 to 300.0 g/m ²
Power Source:	100V, 3A, 50/60Hz
Power Consumption:	200W or less
Weight:	approx. 92kg
Dimensions (W x D x H):	330 x 725 x 980mm

Multi-Folding Unit FD4000 (D61500)

Folding Methods:	Half Fold, Letter Fold-out, Letter Fold-in, Double Parallel Fold, Gate Fold, Z-Folding
------------------	--

Paper Size:	Fold	<ul style="list-style-type: none"> • Z-Folding A3 LEF, A4 LEF, B4 LEF, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11 LEF, 8K LEF, 12 x 18 LEF • Half Fold A3 LEF, A4 LEF, B4 LEF, B5 LEF, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11 LEF, 8K LEF, 12 x 18 LEF, 13 x 19 1/5 LEF, 13 x 19 LEF, 12 3/5 x 19 1/5 LEF, 12 3/5 x 18 1/2 LEF, 13 x 18 LEF, SRA3 LEF, SRA4 LEF • Letter Fold-out, Letter Fold-in, Double Parallel Fold, Gate Fold A3 LEF, A4 LEF, B4 LEF, B5 LEF, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11 LEF, 8K LEF, 12 x 18 LEF
	Multiple sheets	<ul style="list-style-type: none"> • Half Fold A3 LEF, A4 LEF, B4 LEF, B5 LEF, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11 LEF, 8K LEF, 12 x 18 LEF, 13 x 19 1/5 LEF, 13 x 19 LEF, 12 3/5 x 19 1/5 LEF, 12 3/5 x 18 1/2 LEF, 13 x 18 LEF, SRA3 LEF, SRA4 LEF • Letter Fold-in A3 LEF, A4 LEF, B4 LEF, B5 LEF, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11 LEF, 8K LEF, 12 x 18 LEF • Letter Fold-out A4 LEF, B4 LEF, B5 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11 LEF
Paper Thickness:	Fold	64.0 to 105.0 g/m ²
	Multiple sheets	64.0 to 80.0 g/m ²
Power Source:	100V, 2.4A, 50/60Hz	
Power Consumption:	240W or less (Can not draw from main unit)	
Weight:	approx. 92kg	
Dimensions (W x D x H):	470 x 730 x 980 mm	

Mail Box CS4010 (D70800) Office Models Only

Bin	9 Bins
-----	--------

Paper Size:	A3 LEF, A4, A5, B4 LEF, B5, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11, 8 x 13 LEF, 7 1/4 x 10 1/2, 5 1/2 x 8 1/2, 8K LEF, 16K, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF
Paper Thickness:	60.0 to 128.0 g/m ² (52 to 110kg)
Capacity:	100 Sheets each bin, total 900 Sheets (With My Paper Brand)
Power Source:	Draw from main unit
Power Consumption:	30 W or less
Weight:	approx. 15kg
Dimensions (W x D x H):	540 x 600 x 660 mm

Cover Interposer Tray CI4010 (D71100)

Paper Size:	A3 LEF, A4, A5, B4 LEF, B5, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11, 12 x 18 LEF
Paper Thickness:	64.0 to 216.0 g/m ² (55 to 186kg)
Capacity:	230 sheets (With My Paper Brand)
Power Source:	Draw from main unit
Power Consumption:	43 W or less
Weight:	approx. 12kg
Dimensions (W x D x H):	500 x 600 x 600 mm

Cover Interposer Tray CI4020 (D71200)

Paper Size:	A3 LEF, A4, A5, B4 LEF, B5, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11 SEF, 8 x 13 LEF, 7 1/4 x 10 1/2, 5 1/2 x 8 1/2, 8K LEF, 16K, 12 x 18 LEF, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF, 13 x 19 1/5 LEF, 13 x 19 LEF, 12 3/5 x 19 1/5 LEF, 12 3/5 x 18 1/2 LEF, 13 x 18 LEF, SRA3 LEF, SRA4, Custom size
-------------	--

Paper Thickness:	64.0 to 216.0 g/m ² (55 to 186kg)
Capacity:	260 sheets x 2 drawers (With My Paper Brand)
Power Source:	Draw from main unit
Power Consumption:	84 W or less
Weight:	approx. 45kg
Dimensions (W x D x H):	540 x 730 x 1,270mm

LCIT RT4020 (D70900)

Paper Size:	A4 SEF, B5 SEF, 8 1/2 x 11 SEF
Paper Thickness:	52.3 to 216.0 g/m ² (45 to 185kg)
Capacity:	4,780 sheets (With My Paper Brand)
Power Source:	Draw from main unit
Power Consumption:	50W or less
Weight:	approx. 20kg
Dimensions (W x D x H):	352 x 540 x 625 mm

LCIT RT4030 (D71000)

Paper Size:	A3 LEF, A4, A5, A6 LEF, B4 LEF, B5, B6 LEF, 11 x 17 LEF, 8 1/2 x 14 LEF, 8 1/2 x 11, 8 x 13 LEF, 7 1/4 x 10 1/2, 8 1/2 x 5 1/2, LEF, 8K LEF, 16K, 12 x 18 LEF, 11 x 15 LEF, 11 x 14 LEF, 10 x 15 LEF, 10 x 14 LEF, 13 x 19 1/5 LEF, 13 x 19 LEF, 12 3/5 x 19 1/5 LEF, 12 3/5 x 18 1/2 LEF, 13 x 18 LEF, SRA3 LEF, SRA4, Custom size
Paper Thickness:	52.3 to 300.0 g/m ² (45 to 258kg)
Capacity:	2,390 sheets (With My Paper Brand)
Power Source:	Draw from main unit
Power Consumption:	72W or less

Weight:	approx. 81.7kg
Dimensions (W x D x H):	869 x 730 x 658 mm

2. Appendices: Preventive Maintenance Tables

Preventive Maintenance

Preventive Maintenance Items

Preventive Maintenance Items

PM Parts

The parts mentioned in these tables have a target yield. However, the total copy/print volume made by the machine will not reach the target yield within the machine's targeted lifetime if the machine is used under the target usage conditions (ACV, color ratio, P/J, and C/O). So, these parts are categorized not as PM parts but as EM parts. The parts with "(R)" in this table are PM parts.

Chart: A4 (LT)/5%

Mode: 4 copies / original (prints/job)

Ratio 30%

Environment: Normal temperature and humidity

Yield may change depending on circumstances and print conditions.

Symbol keys: C: Clean, R: Replace, L: Lubricant, I: Inspect

Mainframe

Item	300K	600K	900K	1200 K	EM	Remarks
Scanner						
Reflector	C					Optics cloth
1st mirror	C					Optics cloth
2nd mirror	C					Optics cloth
3rd mirror	C					Optics cloth
Exposure Glass	C				C	Dry cloth

Item	300K	600K	900K	1200 K	EM	Remarks
APS Sensors	C					Dry cloth
ADF Exposure Glass	C				C	Dry cloth
Development						
Developer		R				Collect with a plastic bag
Filter		R				Blower brush, Dry cloth
Gears	C					Blower brush, Dry cloth
Development Unit	C					
PCDU						
Drum Cleaning Unit	C					Replace the Unit (TCRU)
(Cleaning Blade)	C					
(Side seal: cleaning blade)	C					Replace at the same time as the cleaning blade
(Lubricant Brush)	C					Replace at the same time as the lubricant bar
(Lubricant Bar)	C					
(Lubricant Blade)	C					
(Side seal: Lubricant Blade)	C					Replace at the same time as the lubricant blade
(Brush Drive Joint)	C					
(Gears)	C					

Item	300K	600K	900K	1200 K	EM	Remarks
Charge Unit	C					Replace the Unit (TCRU)
(Charge Roller)	C					
(Charge Roller Gear)	C					
(Cleaning Roller)	C					
OPC Drum			C (Office)	C (Pro)		
Potential Sensor		C				Dry cloth
Quenching Lamp		C				Dry cloth
Toner Supply						
Toner Supply Unit	C					Blower brush, Dry cloth
Transfer						
Image Transfer Belt			R			
Image Transfer Roller Unit						
(Rollers)			C			Dry cloth
(ID Sensor)		C				Damp cloth
(Image Transfer Roller)				R		
(ITB Bias Roller)				R		
ITB Cleaning Unit		R				Replace the Unit (TCRU)
(Brush Roller)		R				
(Cleaning Blade)		R				

Item	300K	600K	900K	1200 K	EM	Remarks
(Lubricant Brush)		R				Replace all together
(Lube Application Blade)		R				
(Lubricant Bar)		R				
Paper Transfer Roller		R				
Quenching		R				
Paper Sensor	C					Remove toner and paper dust, Blower brush
Fusing						
Fusing Unit		R				Replace the Unit (TCRU)
(Fusing Belt: Office)		R				
(Fusing Belt: Pro)		R				
(Heating Roller: Office)		R				
(Heating Roller: Pro)		R				
(Pressure Roller)		R				
(Pressure Roller Bearings)		R				
(Separation plate: Fusing Roller)	C					Remove toner and paper dust, Dry cloth
(Separation Plate: Pressure Roller)	C					Remove toner and paper dust, Dry cloth
(Fusing entrance upper guide plates)	C					Remove toner and paper dust, Dry cloth
(Contact Thermistor fusing belt)		C				Remove toner and paper dust
(Contact thermistor fusing roller)		C				Remove toner and paper dust,

Item	300K	600K	900K	1200 K	EM	Remarks
(Gears)	L					
(Bearing: Fusing Roller)		I/R				
(Thermopile)		C				Dry cloth
(Smoothing Roller: Pro)	TBD					
Cleaning Web Unit (Pro)		R				Replace the Unit (TCRU)
(Web Cleaning Roller)		R				
(Web Pressing Roller)		R				
(Web Roller Stopper)		R				
Miscellaneous						
Waste Toner Bottle						Replace when toner bottle is full
Ozone Filter						Fixed
Dust Glass					C	Dust glass cleaning kit
Dust Filer: Dev.: exhaust: Large		R				
Dust Filers: Dev.: exhaust: Small		R				
Deodorization filter: Large				R		
Deodorization filter: Small				R		
Dust Filer: Dev.: absorb				C		
Dust Filers: Pressure Roller: absorb				C		
Paper Feed (Paper Trays)						
Tray 1 Pick-up Roller					C	Damp cloth

Item	300K	600K	900K	1200 K	EM	Remarks
Tray 2 Pick-up Roller					C	Damp cloth
Tray 3 Pick-up Roller					C	Damp cloth
Tray 1 Feed Roller					C	Damp cloth
Tray 2 Feed Roller					C	Damp cloth
Tray 3 Feed Roller					C	Damp cloth
Tray 4 Feed Roller					C	Damp cloth
Tray 1 Separation Roller					C	Damp cloth
Tray 2 Separation Roller					C	Damp cloth
Tray 3 Separation Roller					C	Damp cloth
Tray 4 Separation Roller					C	Damp cloth
Tray 1 Paper Transfer Roller (drive / following)	C	C				Damp cloth
Tray 2 Paper Transfer Roller (drive / following)	C	C				Damp cloth
Tray 3 Paper Transfer Roller (drive / following)	C	C				Damp cloth
Tray 4 Paper Transfer Roller (drive / following)	C	C				Damp cloth
Tray 1 Transfer Sensor	C	C			C	Blower brush
Tray 2 Transfer Sensor	C	C			C	Blower brush
Tray 3 Transfer Sensor	C	C			C	Blower brush
Tray 4 Transfer Sensor	C	C			C	Blower brush
Tray 1 Paper Feed Sensor	C	C			C	Blower brush
Tray 2 Paper Feed Sensor	C	C			C	Blower brush
Tray 3 Paper Feed Sensor	C	C			C	Blower brush
Tray 4 Paper Feed Sensor	C	C			C	Blower brush

Item	300K	600K	900K	1200 K	EM	Remarks
Paper Feed (Mainframe)						
Registration Rollers (drive / following)	C	C			C	Damp cloth
Relay Roller (drive / following)	C	C			C	Damp cloth
By-pass Relay Roller (drive / following)	C	C			C	Damp cloth
Registration Sensor	C	C			C	Blower brush
Main Unit Relay Sensor	C	C			C	Blower brush
Cleaning Unit (Paper Dust Container)	C	C			C	Paper dust out and dry cloth
Registration Guide Plates (upper / lower)	C	C			C	Blower brush, Dry cloth
By-pass Pick-up Roller					C	Damp cloth
By-pass Feed Roller					C	Damp cloth
By-pass Separation Roller					C	Damp cloth
By-pass Feed Sensor	C	C			C	Blower brush
Paper End Sensor (Pro)	C	C			C	Blower brush
Paper Exit / Duplex						
Heat Pipe Roller	C	C			C	Damp cloth
Heat Pipe Roller (drive)	C	C			C	Damp cloth
Paper Exit Roller	C	C			C	Damp cloth
Inverter Exit Roller	C	C			C	Damp cloth
Paper Exit Inverter Roller	C	C			C	Damp cloth
Paper Exit Relay Roller	C	C			C	Damp cloth
Inverter Entrance Roller	C	C			C	Damp cloth

Item	300K	600K	900K	1200 K	EM	Remarks
Paper Exit Relay Sensor	C	C			C	Blower brush
Paper Exit Sensor	C	C			C	Blower brush
Inverter Entrance Sensor	C	C			C	Blower brush
Inverter Exit Sensor	C	C			C	Blower brush
Paper Exit Inverter Sensor	C	C			C	Blower brush
Discharge Brush (Paper Exit)	C	C			C	Clean and Dry cloth
Discharge Brush (Inverter)	C	C			C	Clean and Dry cloth
Paper Sensor	C	C			C	Blower brush
Exit Transfer Roller Guide Plates (Top / Center / Left)	C	C			C	Clean and Dry cloth
Duplex Inverter Roller	C	C			C	Damp cloth
Duplex Transport Roller 1	C	C			C	Damp cloth
Duplex Transport Roller 2	C	C			C	Damp cloth
Duplex Transport Roller 3	C	C			C	Damp cloth
Duplex Transport Roller 4	C	C			C	Damp cloth
Duplex Exit Roller	C	C			C	Damp cloth
Duplex Inverter Sensor	C	C			C	Blower brush
Duplex Entrance Sensor	C	C			C	Blower brush
Duplex Transport Sensor 1	C	C			C	Blower brush
Duplex Transport Sensor 2	C	C			C	Blower brush
Duplex Transport Sensor 3	C	C			C	Blower brush
Duplex Transport Sensor 4	C	C			C	Blower brush
Duplex Exit Sensor	C	C			C	Blower brush

Item	300K	600K	900K	1200 K	EM	Remarks
Edge Detection Sensor	C	C			C	Blower brush
Horizontal Transport Guide Plates (upper / lower)	C	C			C	Clean and Dry cloth
Purge Section Lower Guide Board	C	C			C	Clean and Dry cloth

MEMO