Multi-Folding Unit FD5010/FD5020
Machine Code: D521/D740

Field Service Manual

V1.1

May 2015

Revision History

This is the Revision History for the Multi-Folding Unit FD5020 service manual.

Version	Date	Changes
Ver. 1.1	31 Mar 2015	**Text, Illustrations**. In procedures the order of the text and illustrations has been reversed. For each step, the text description (action) is followed by the relevant illustration. The callouts [A], [B], [C] in text refer to the illustration below, not above. **Added safety caution**: ⚠**CAUTION** • Never not touch solder connections or electronic parts on the PSU after removing it because electrical charge can remain on the PSU even after it has been removed. • After removing the PSU, never place put it on a conductive material such as metal.

Safety, Conventions, Trademarks

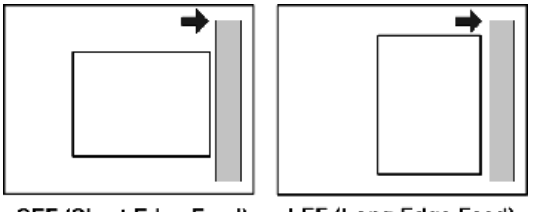
Conventions

Common Terms

This is a list of symbols and abbreviations used in this manual.

Symbol	What it means
	Binding screw (shoulder hexagonal head)
	Binding screw (round flathead)
	Black screw (heavy, fusing unit, TCRU)
	Bushing
	C-ring
	Connector
	E-ring
	FFC (Flat Film Connector)
	FFC (Flat Film Connector)
	Gear
	Harness clamp
	Harness clamp (metal: fusing unit)
	Hook (or tab release)
	Knob screw (black)
	Knob screw (sliver)
	Pivot screw
	Screw (common screw)
	Shoulder screw

Symbol	What it means
	Spring
	Standoff
	Stud screw
	Tapping screw (for plastic)
	Timing belt



The notations "SEF" and "LEF" describe the direction of paper feed, with the arrows indicating paper feed direction.

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 finisher or other property.

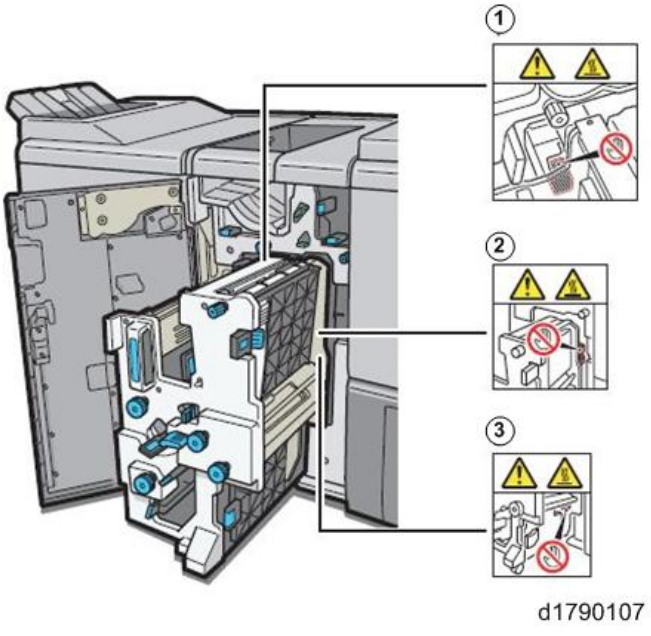
Important

- **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.

Safety Labels



①	To avoid injury, avoid touching the indicated area where parts can become very hot during operation. Work carefully when removing a paper jam.
②	To avoid injury, avoid touching the indicated area where parts can become very hot during operation. Work carefully when removing a paper jam.
③	To avoid injury, avoid touching the indicated area where parts can become very hot during operation. Work carefully when removing a paper jam.

General Safety Instructions

For your safety, please read this manual carefully before you use this product. Keep this manual handy for future reference.

Safety Information

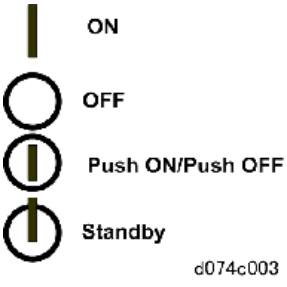
Always obey the following safety precautions when using this product.

Safety During Operation

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

Switches and Symbols

Where symbols are used on or near switches on machines for Europe and other areas, the meaning of each symbol conforms with IEC60417.



Responsibilities of the Customer Engineer

Reference Material for Maintenance

- Maintenance shall be done using the special tools and procedures prescribed for maintenance of the machine described in the reference materials (service manuals, technical bulletins, operating instructions, and safety guidelines for customer engineers).
- Use only consumable supplies and replacement parts designed for use of the machine.

Before Installation, Maintenance

Installation, Disassembly, and Adjustments

⚠CAUTION

- After installation, maintenance, or adjustment, always check the operation of the machine to make sure that it is operating normally. This ensures that all shipping materials, protective materials, wires and tags, metal brackets, etc., removed for installation, have been removed and that no tools remain inside the machine. This also ensures that all release interlock switches have been restored to normal operation.
- Never use your fingers to check moving parts causing spurious noise. Never use your fingers to lubricate moving parts while the machine is operating.

Special Tools

⚠CAUTION

- Use only standard tools approved for machine maintenance.
- For special adjustments, use only the special tools and lubricants described in the service manual. Using tools incorrectly, or using tools that could damage parts, could damage the machine or cause injuries.

During Maintenance

General

⚠CAUTION

- Before you begin a maintenance procedure: 1) Switch the machine off, 2) Disconnect the power plug from the power source, 3) Allow the machine to cool for at least 10 minutes.
- Avoid touching the components inside the machine that are labeled as hot surfaces.

Power

⚠WARNING

- Always disconnect the power plug before doing any maintenance procedure. After switching off the machine, power is still supplied to the main machine and other devices. To prevent electrical shock, switch the machine off, wait for a few seconds, then unplug the machine from the power source.
- Before you do any checks or adjustments after turning the machine off, work carefully to avoid injury. After removing covers or opening the machine to do checks or adjustments, never touch electrical components or moving parts (gears, timing belts, etc.).
- After turning the machine on with any cover removed, keep your hands away from electrical components and moving parts. Never touch the cover of the fusing unit, gears, timing belts, etc.

Organic Cleaners

⚠CAUTION

- During preventive maintenance, never use any organic cleaners (alcohol, etc.) other than those described in the service manual.
- Make sure the room is well ventilated before using any organic cleaner. Use organic solvents in small amounts to avoid breathing the fumes and becoming nauseous.
- Switch the machine off, unplug it, and allow it to cool before doing preventive maintenance. To avoid fire or explosion, never use an organic cleaner near any part that generates heat.
- Wash your hands thoroughly after cleaning parts with an organic cleaner to contamination of food, drinks, etc. which could cause illness.

Power Plug and Power Cord

⚠WARNING

- Before servicing the machine (especially when responding to a service call), always make sure that the power plug has been inserted completely into the power source. A partially inserted plug could lead to heat generation (due to a power surge caused by high resistance) and cause a fire or other problems.
- Always check the power plug and make sure that it is free of dust and lint. Clean it if necessary. A dirty plug can generate heat which could cause a fire.
- Inspect the length of the power cord for cuts or other damage. Replace the power cord if necessary. A frayed or otherwise damaged power cord can cause a short circuit which could lead to a fire or personal injury from electrical shock.
- Check the length of the power cord between the machine and power supply. Make sure the power cord is not coiled or wrapped around any object such as a table leg. Coiling the power cord can cause excessive heat to build up and could cause a fire.
- Make sure that the area around the power source is free of obstacles so the power cord can be removed quickly in case of an emergency.
- Make sure that the power cord is grounded (earthed) at the power source with the ground wire on the plug.
- Connect the power cord directly into the power source. Never use an extension cord.
- When you disconnect the power plug from the power source, always pull on the plug, not the cable.

After Installation, Servicing

Disposal of Used Items

⚠CAUTION

- Always dispose of used items in accordance with the local laws and regulations regarding the disposal of such items.

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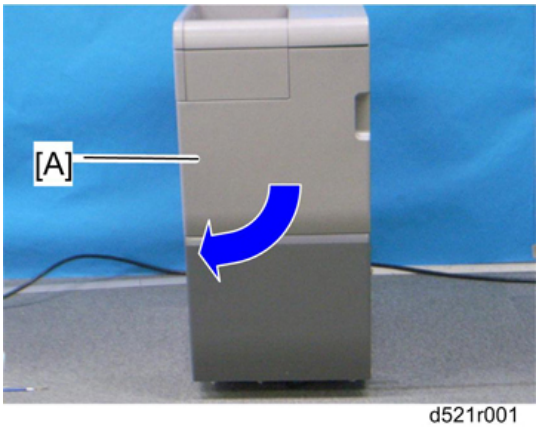
1. Replacement and Adjustment

Exterior and Inner Covers

Front Door Upper Cover

1. Open the front door [A].



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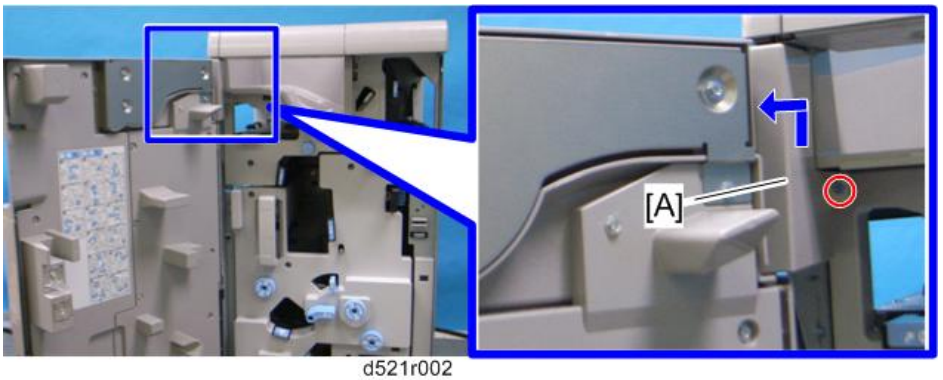
2. Hinge cover [A] (x 1)



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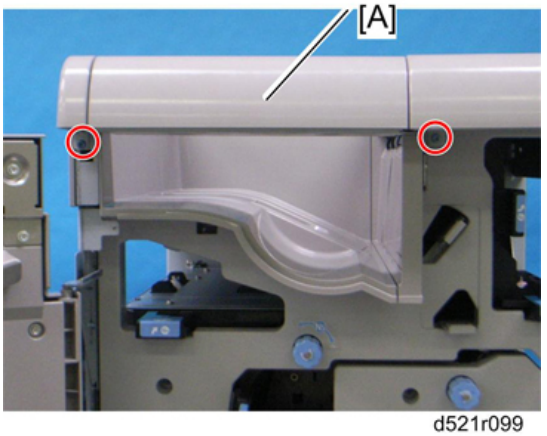
3. Cross-piece [A] (x 2).



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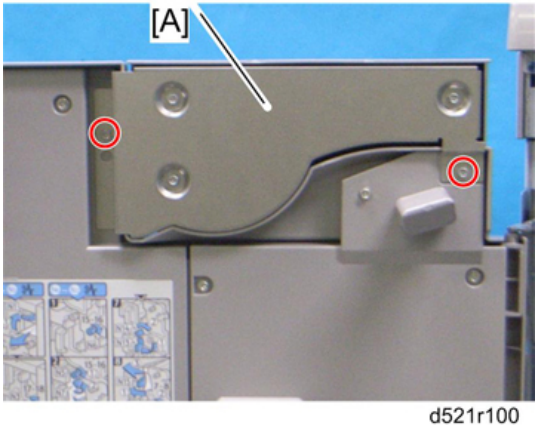
4. Front door upper cover [A] (x 2)



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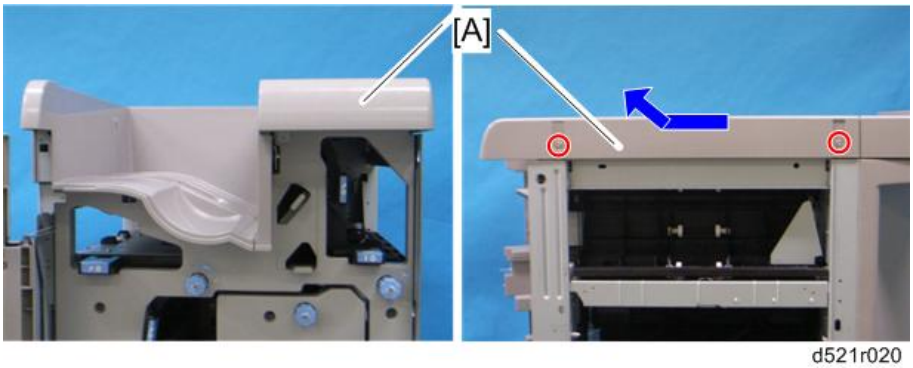
Top Cover

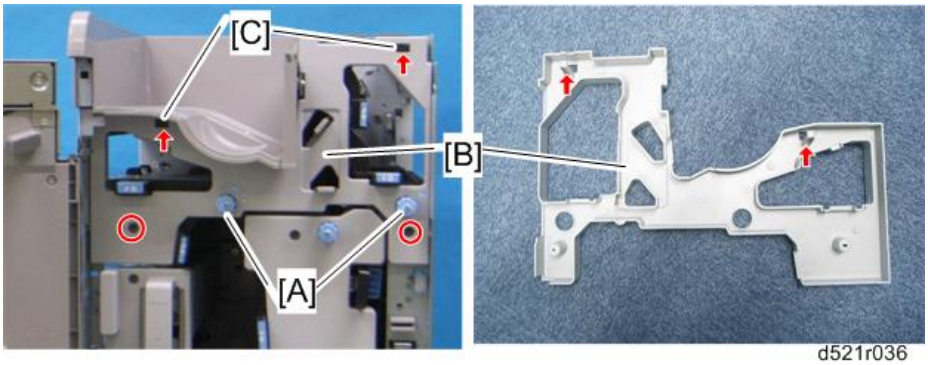
1. Open the front door.
2. Hinge cover (page 13)
3. Cross-piece
4. Top cover [A] (x 2)



d521r020

Inner Upper Cover

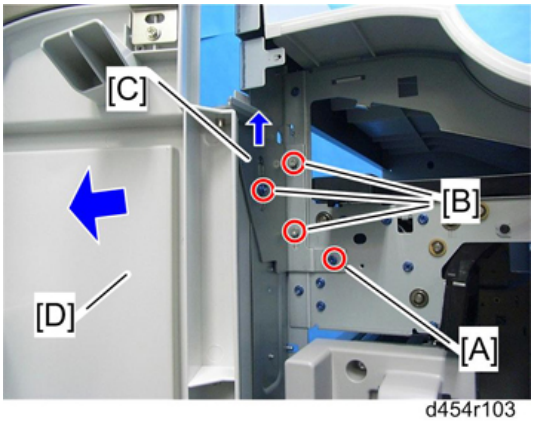
1. Top cover (page 14)
2. Remove the knobs [A] (x 1 each).
3. Inner upper cover [B] (x 2)
4. Release the hooks [C] to remove the inner upper cover.



d521r036

Front Door

1. Top cover (page 14)
2. Inner upper cover (page 15)
3. Remove the screw [A].
4. Loosen three screws [B].
5. Lift up the hinge bracket [C].
6. Front door [D]



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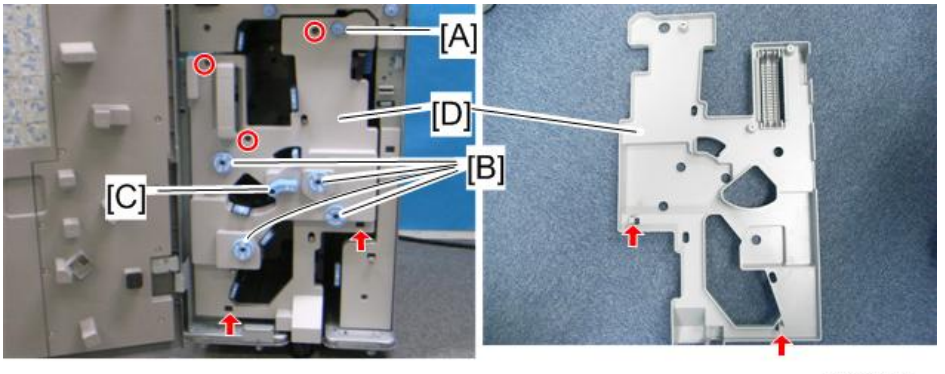
Folding Unit Cover

1. Open the front door.
2. Remove the knob [A] (x 1).
3. Remove four knobs [B] (x 1 each).
4. Remove the lever [C] (x 1).
5. Folding unit cover [D] (x 3, hook x 2)



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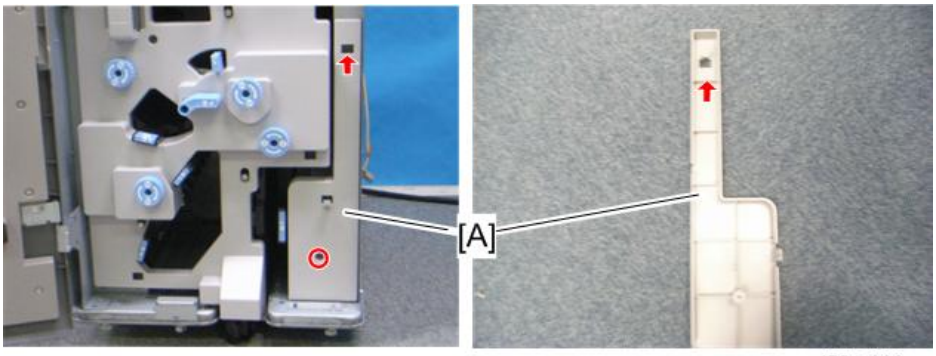
Inner Lower Cover

1. Open the front door.
2. Inner lower cover [A] (x 1, hook)



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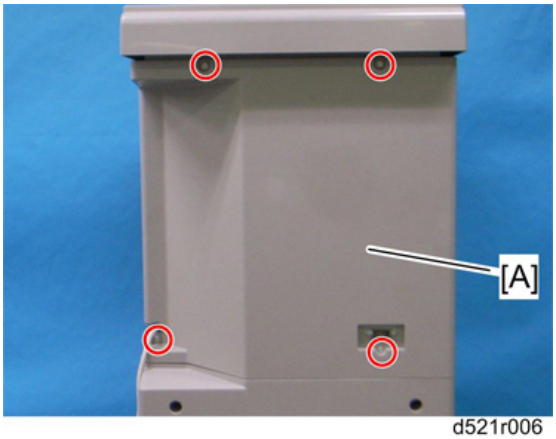
Rear Upper Cover

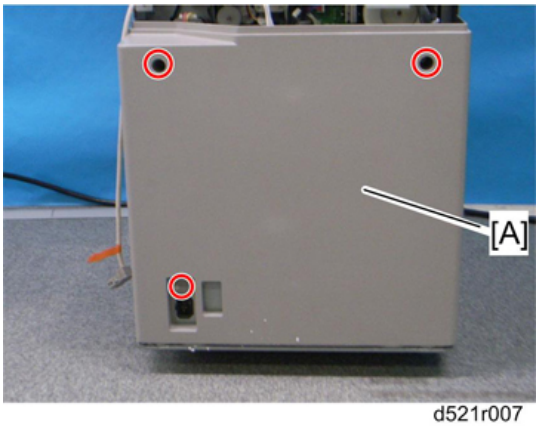
1. Rear upper cover [A] (x 4)



d521r006

Rear Lower Cover

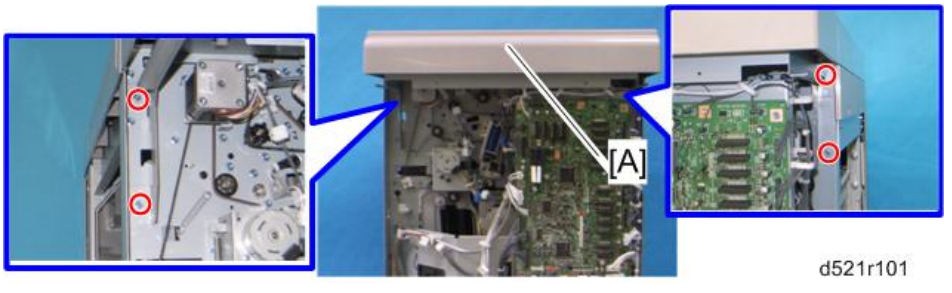
1. Rear upper cover (page 17)
2. Rear lower cover [A] (x 3)



d521r007

Top Rear Cover

1. Rear upper cover (page 17)
2. Top rear cover [A] (x 4)



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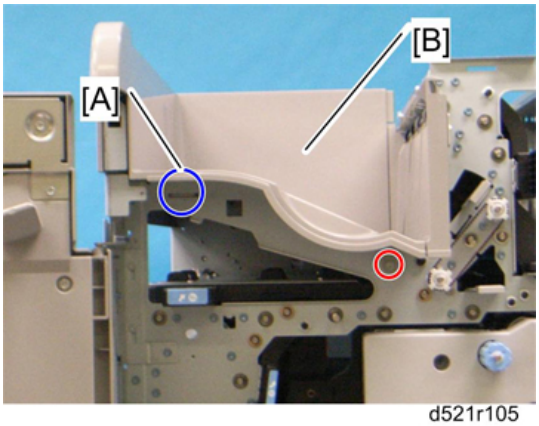
Top Tray

1. Top rear cover (page 18)
2. Inner upper cover (page 15)
3. Release the hook [A], and remove the top tray [B] (x 1).



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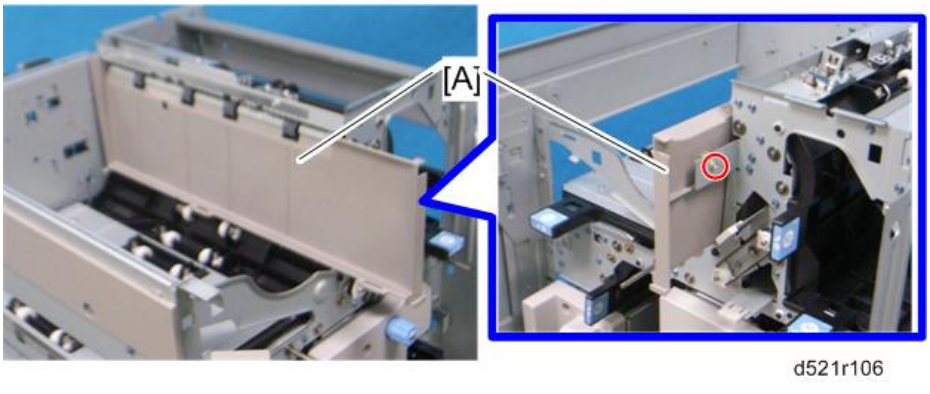
Top Tray Right Cover

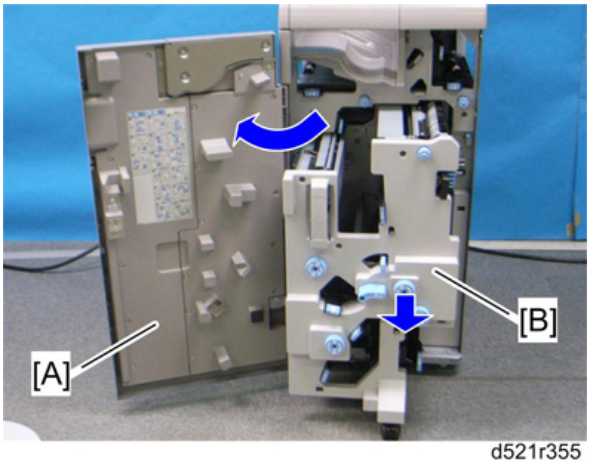
1. Top tray (page 18)
2. Top tray right cover [A] (x 1)



d521r106

Pulling Out the Folding Unit Drawer

1. Open the front door [A]
2. Pull out the folding unit drawer [B].



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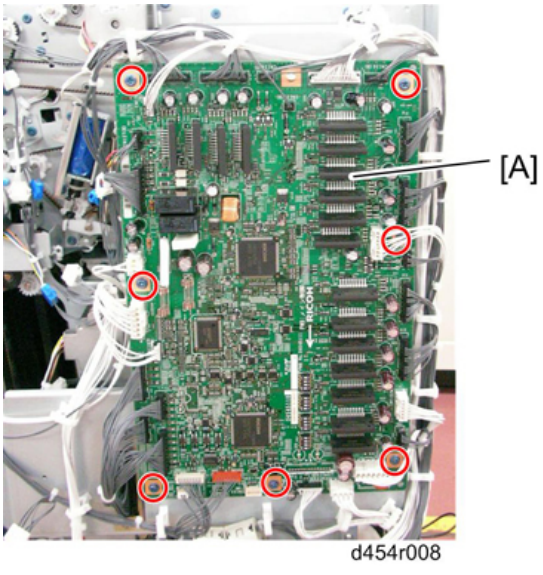
Electrical Components: Rear Side

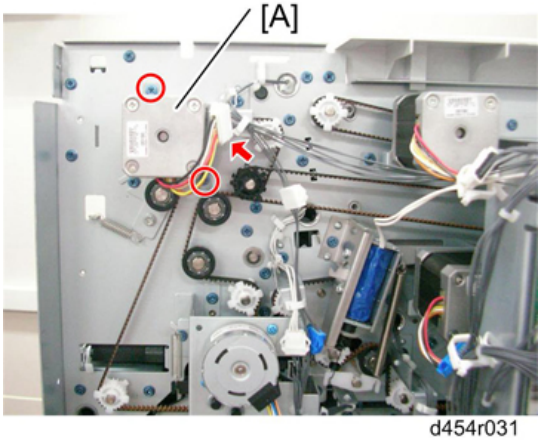
Main Board

1. Rear upper cover '(page 17)
2. Main board [A] (x all, x 7)



Horizontal Transport Motor

1. Rear upper cover (page 17)
2. Top rear cover (page 18)
3. Horizontal transport motor bracket [A] (x 1, x 2)



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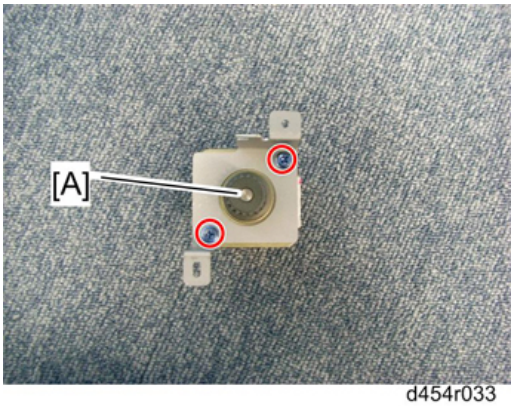
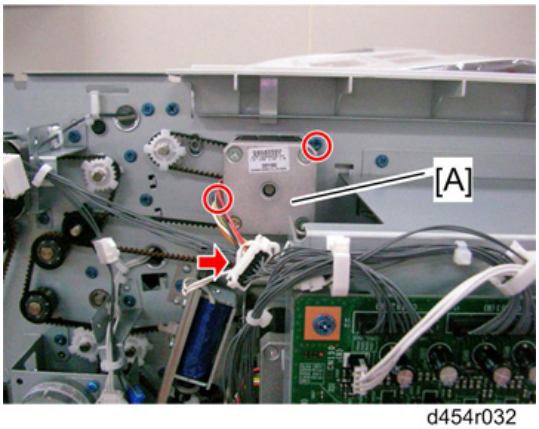
4. Horizontal transport motor [A] (x 2)



d454r033

Top Tray Exit Motor

1. Rear upper cover (page 17)
2. Top rear cover (page 18)
3. Top tray exit motor bracket [A] (x 1, x 1, x 2)



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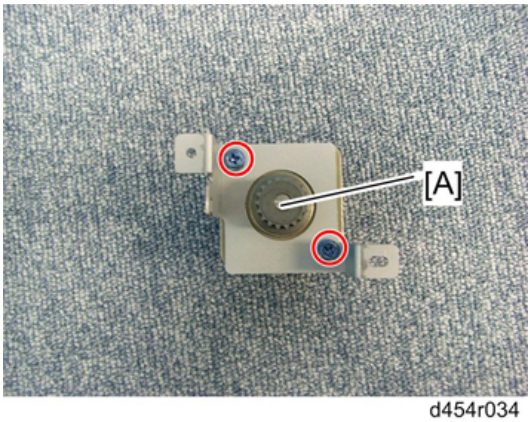
4. Top tray exit motor [A] (x 2)



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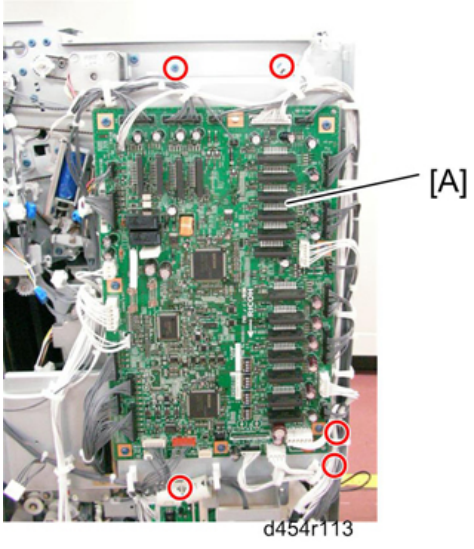
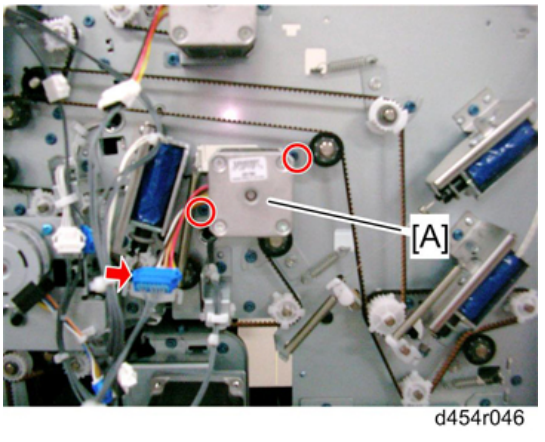
Top Tray Transport Motor

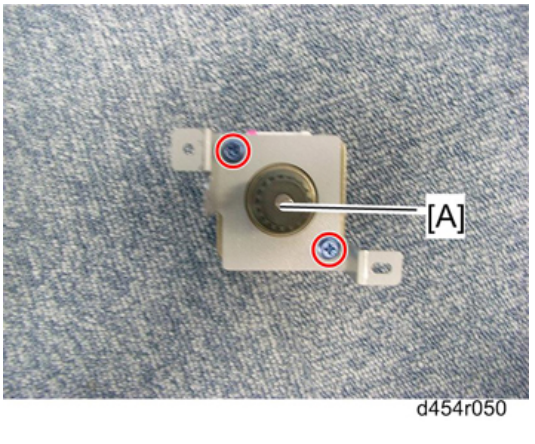
1. Rear upper cover (page 17)
2. Top rear cover (page 18)
3. Main board bracket [A] (x all, x 5, ground cable x 1)



4. Top tray transport motor bracket [A] (x 1, x 2)

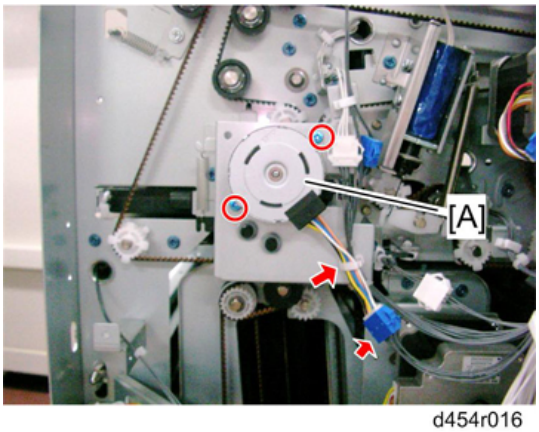


5. Top tray transport motor [A] (x 2)



Entrance JG (Junction Gate) Motor

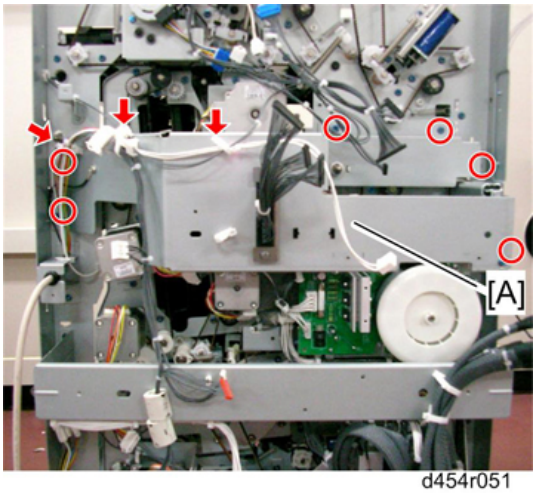
1. Rear upper cover (page 17)
2. Entrance JG motor [A] (x 1, x 1, x 2)



d454r016

Dynamic Roller Lift Motor

1. Rear upper cover (page 17)
2. Top rear cover (page 18)
3. Main board bracket (page 23)
4. Rear upper stay [A] (x 3, x 6)



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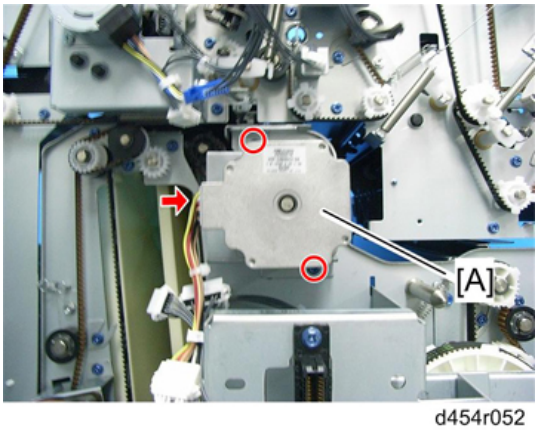
5. Dynamic roller lift motor bracket [A] (x 1, x 2)



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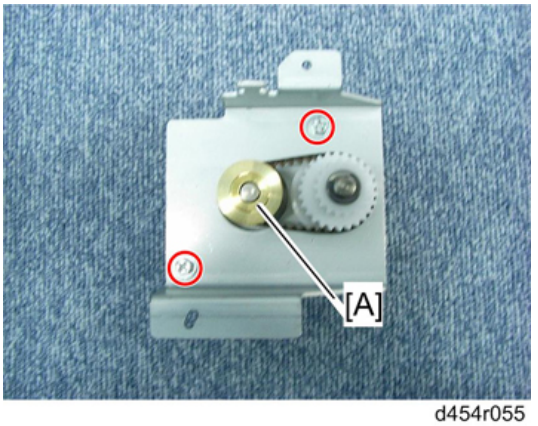
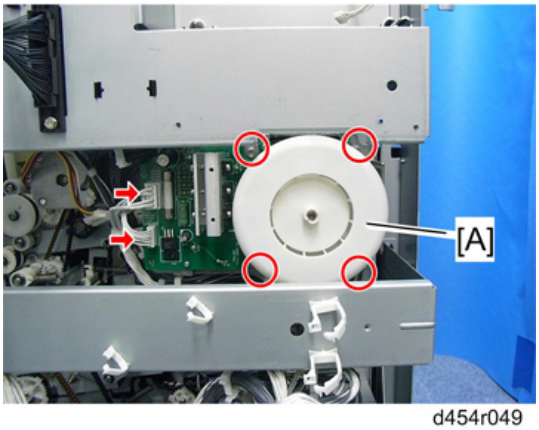
6. Dynamic roller lift motor [A] (x 2)



d454r055

Crease Motor

1. Rear upper cover (page 17)
2. Rear lower cover (page 17)
3. Top rear cover (page 18)
4. Main board bracket (page 23)
5. Crease motor [A] (x 2, x 4)



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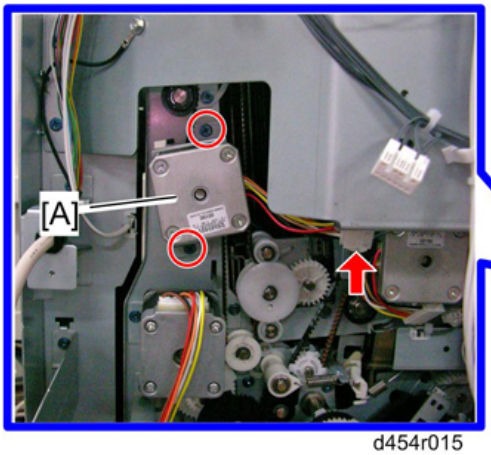
Dynamic Roller Transport Motor

1. Rear upper cover (page 17)
2. Dynamic roller transport motor bracket [A](x 1, x 2)



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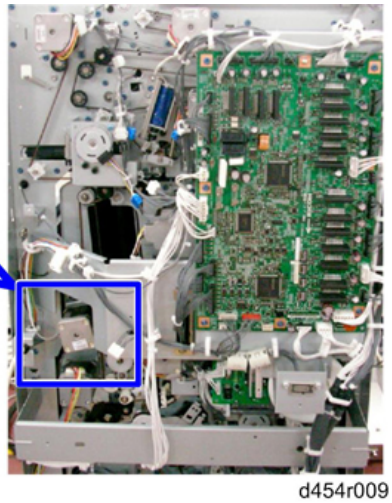

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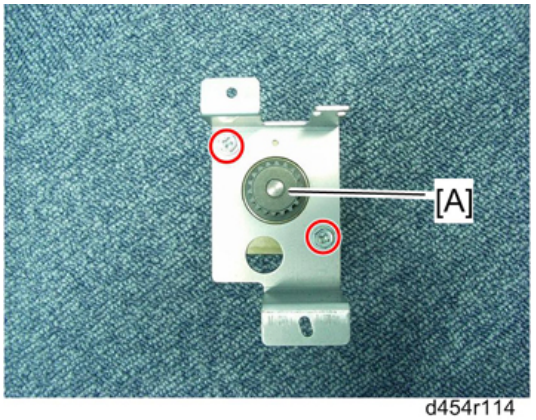
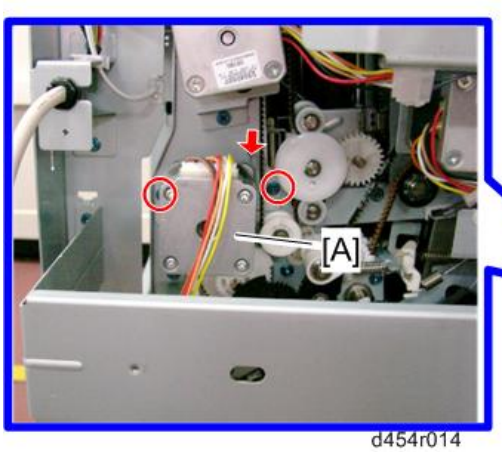
3. Dynamic roller transport motor (x 2)



d454r114

Registration Roller Release Motor

1. Rear upper cover (page 17)
2. Rear lower cover (page 17)
3. Registration roller release motor bracket [A] (x 1, x 2)



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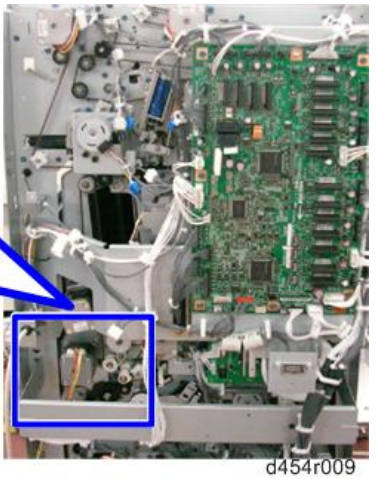
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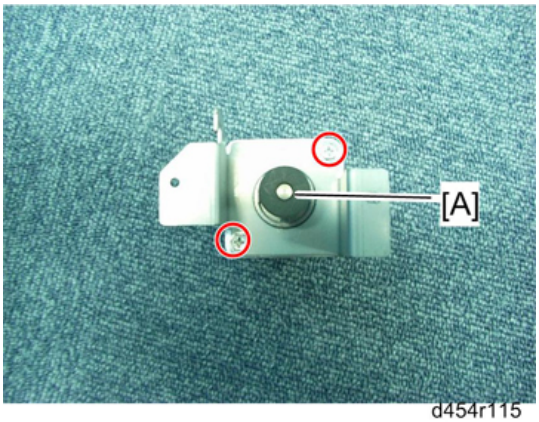
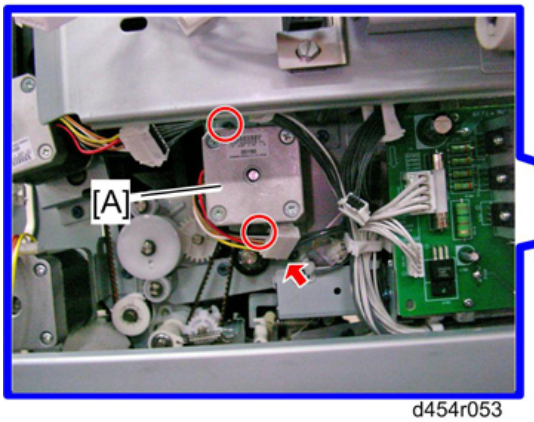
4. Registration roller release motor [A] (x 2)



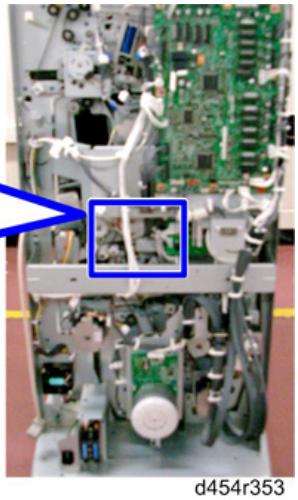
d454r115

Registration Roller Transport Motor

1. Rear upper cover (page 17)
2. Rear lower cover (page 17)
3. Registration roller transport motor bracket [A] (x 1, x 2)

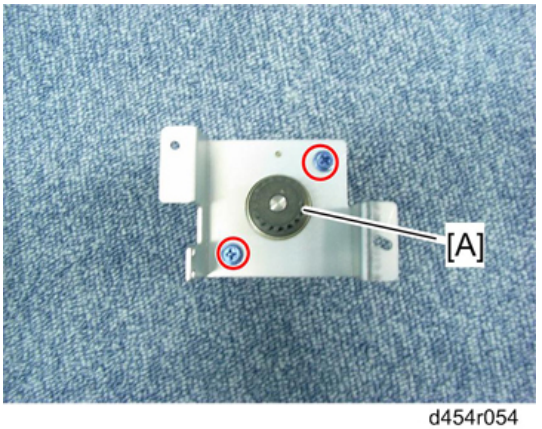


d454r053



d454r353

4. Registration roller transport motor [A] (x 2)

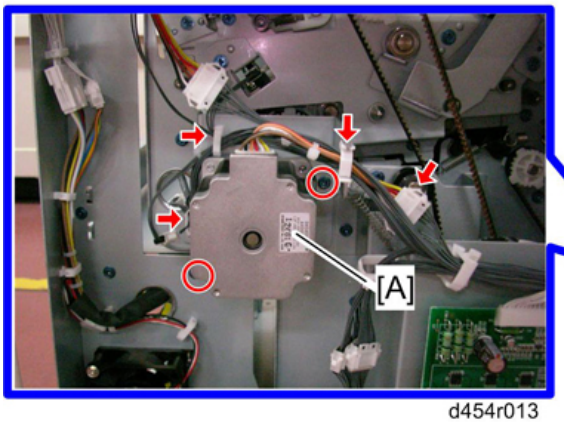


d454r054

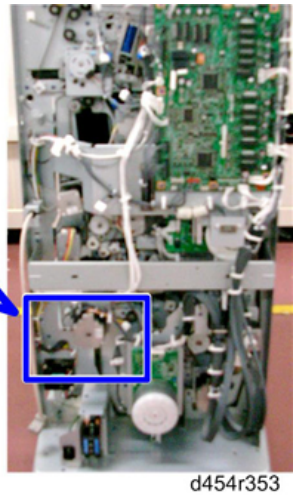
Electrical Components: 1st Stopper

Fold Plate Motor

1. Rear upper cover (page 17)
2. Rear lower cover (page 17)
3. Fold plate motor bracket [A] (x 3, x 1, x 2)

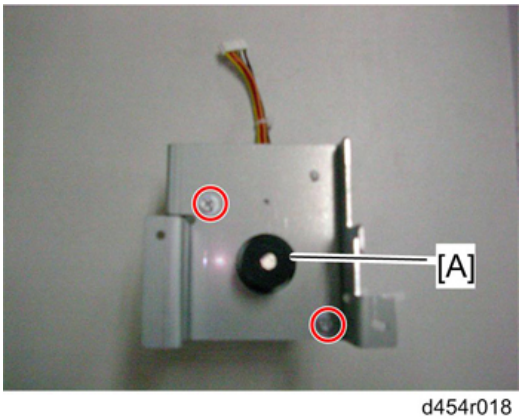


d454r013



d454r353

4. Fold plate motor [A] (x 2)

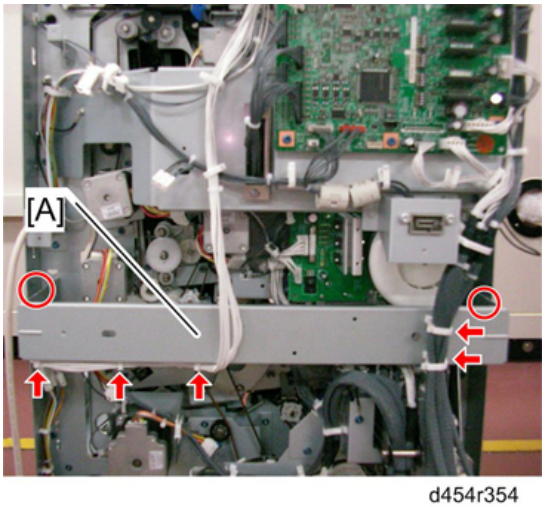


d454r018

Direct-Send JG Motor

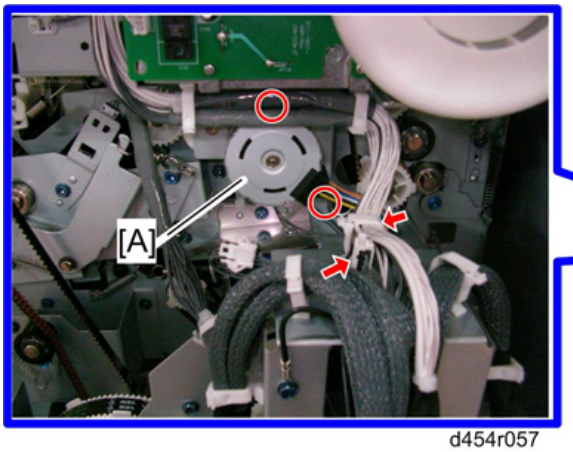
1. Rear upper cover (page 17)
2. Rear lower cover (page 17)

3. Rear lower stay [A] (x 5, x 2)

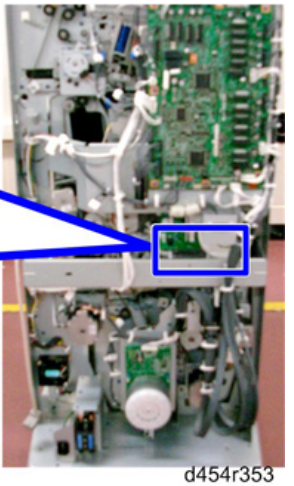


d454r354

4. Direct-Send JG motor bracket [A] (x 1, x 1, x 2)

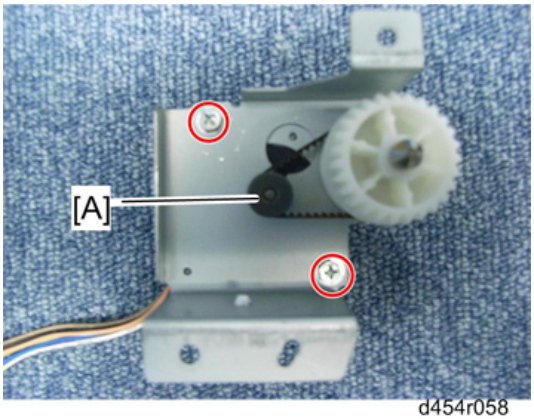


d454r057



d454r353

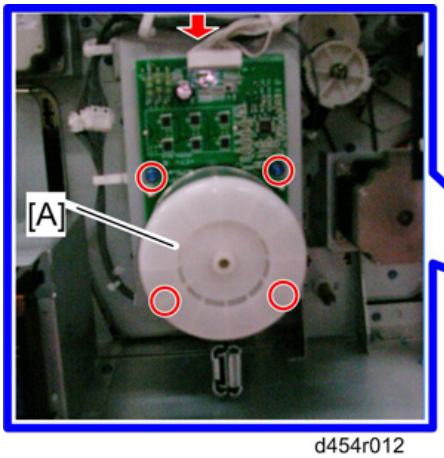
5. Direct-Send JG motor [A] (x 2)



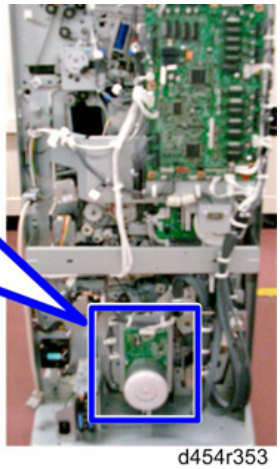
d454r058

1st Fold Motor

1. Rear upper cover (page 17)
2. Rear lower cover (page 17)
3. 1st fold motor [A] (x 1, x 4)

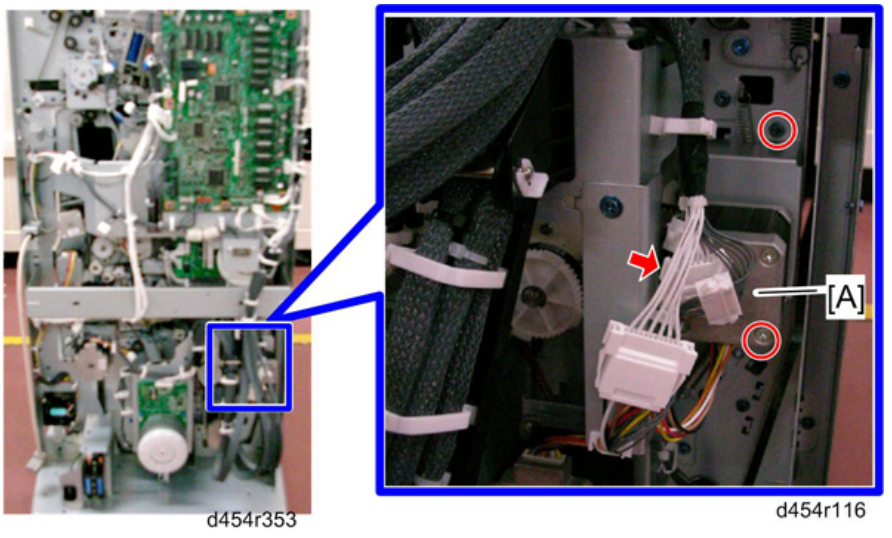


d454r012

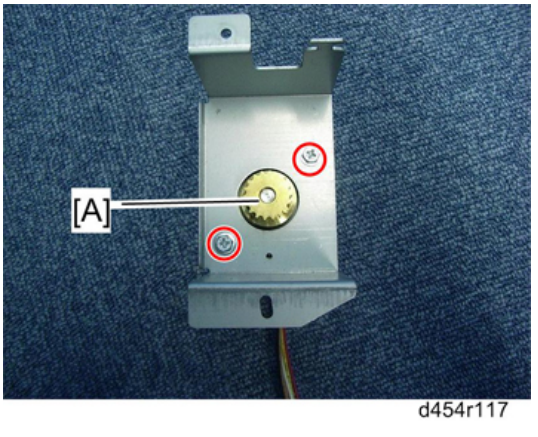

d454r353

FM6 Pawl Motor

1. Rear upper cover (page 17)
2. Rear lower cover (page 17)
3. FM6 pawl motor bracket [A] (x 1, x 1, x 2)

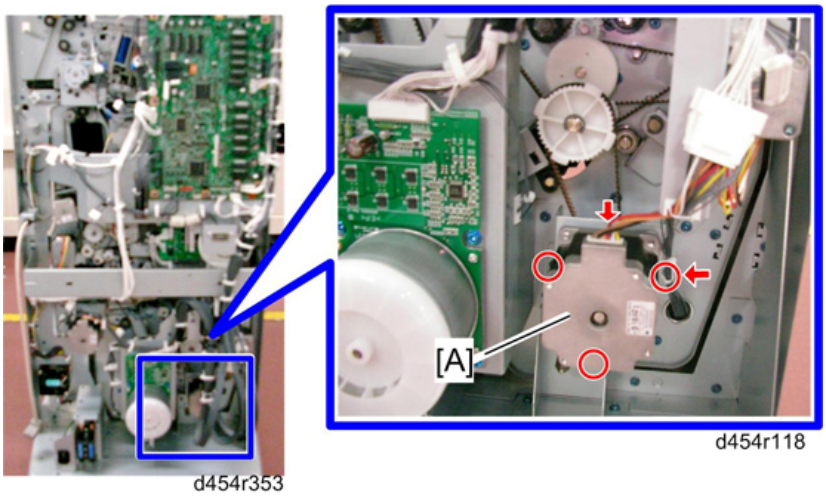


4. FM6 pawl motor [A] (x 2)



2nd Fold Motor

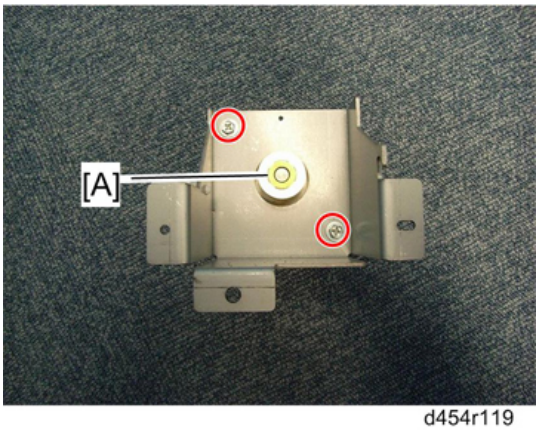
1. Rear upper cover (page 17)
2. Rear lower cover (page 17)
3. 2nd fold motor bracket [A] (x 1, x 1, x 3)



d454r353

d454r118

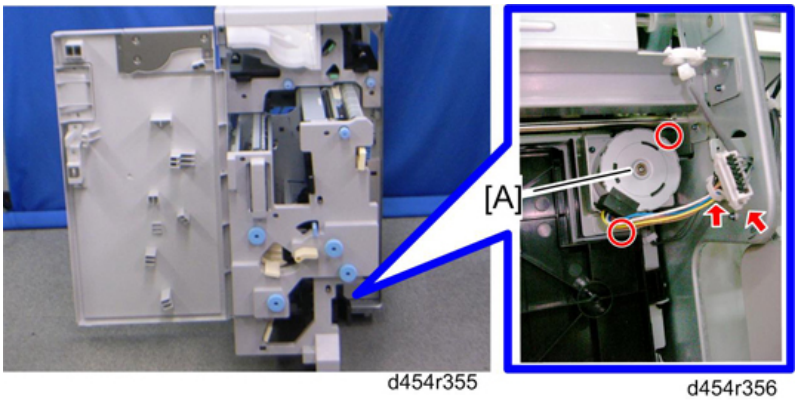
4. 2nd fold motor [A] (x 2)



d454r119

Jogger Fence Motor

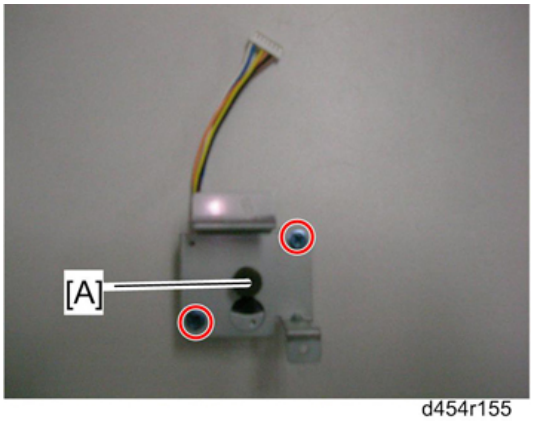
1. Pull out the folding unit drawer (page 19)
2. Jogger fence motor bracket [A] (x 1, x 1, x 2)



d454r355

d454r356

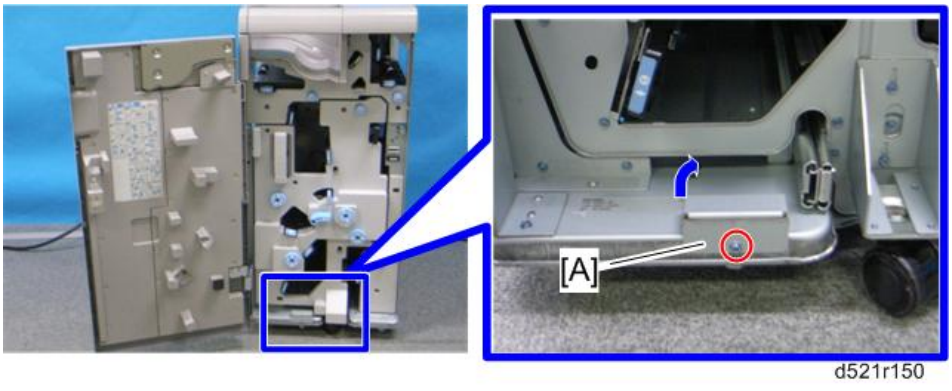
3. Jogger fence motor [A] (x 2)



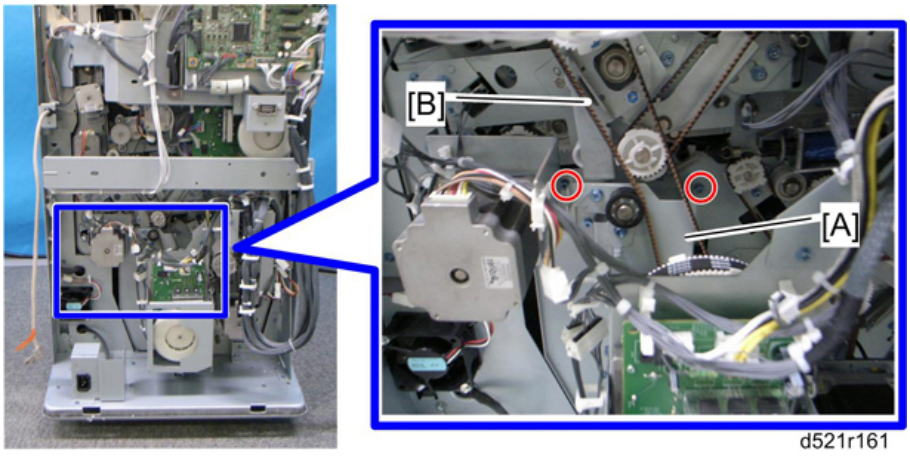
d454r155

1st Stopper Unit

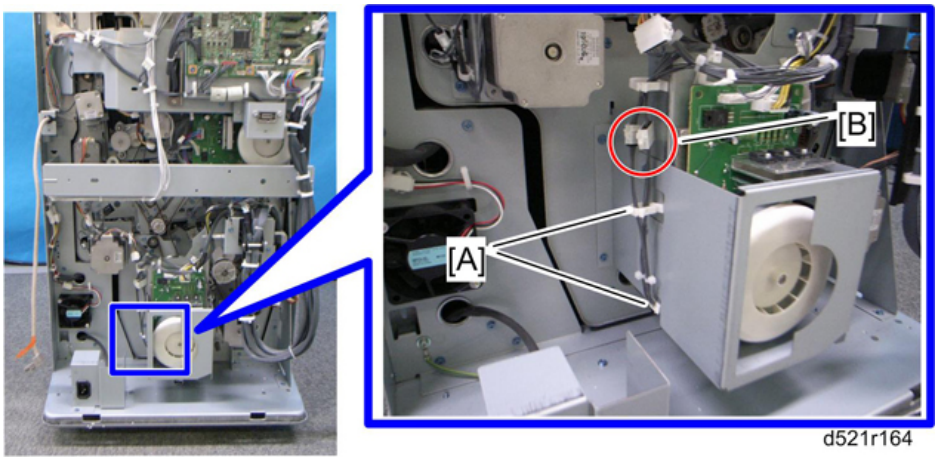
1. Folding unit cover (page 16)
2. Rear upper cover (page 17)
3. Rear lower cover (page 17)
4. Drawer stopper [A] (x 1)



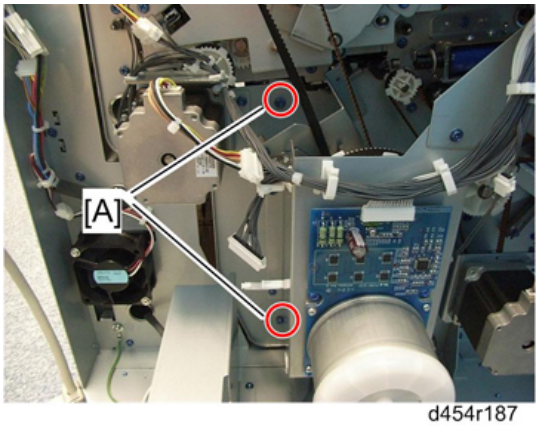
5. Belt tension bracket [A] (x 2)
6. Release the timing belt [B] to take out the belt tension bracket.



7. Release two clamps [A].
8. Disconnect two connectors [B].

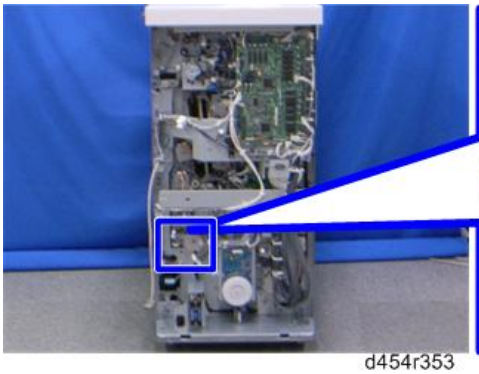


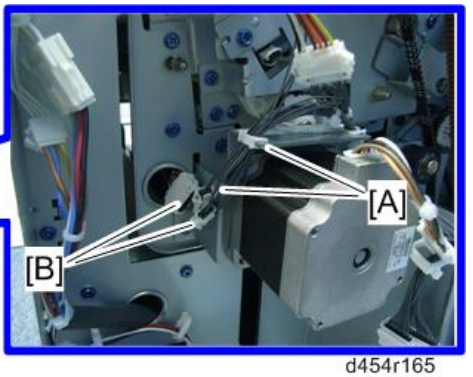
9. Remove two screws [A].



d454r187

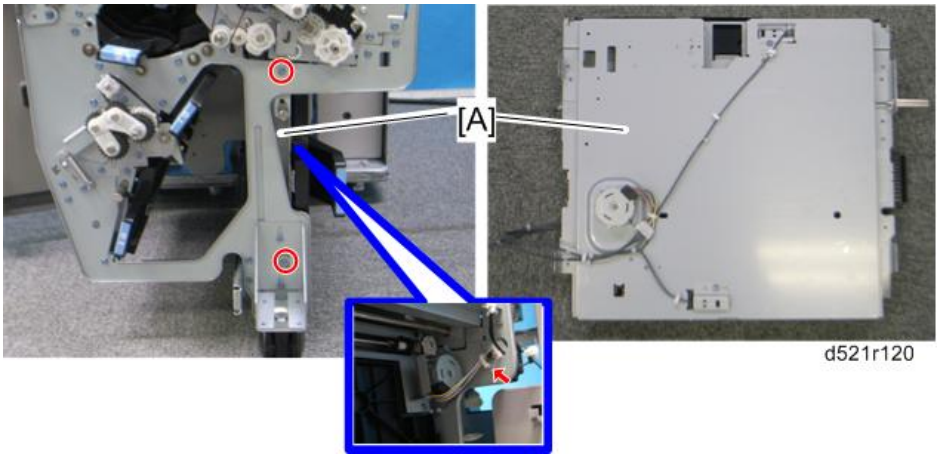
10. Release two clamps [A].
11. Disconnect two connectors [B].


d454r353



d454r165

12. Pull out the folding unit drawer (page 19)
13. Hold the 1st stopper unit [A], and then remove it (x 2, x 1).



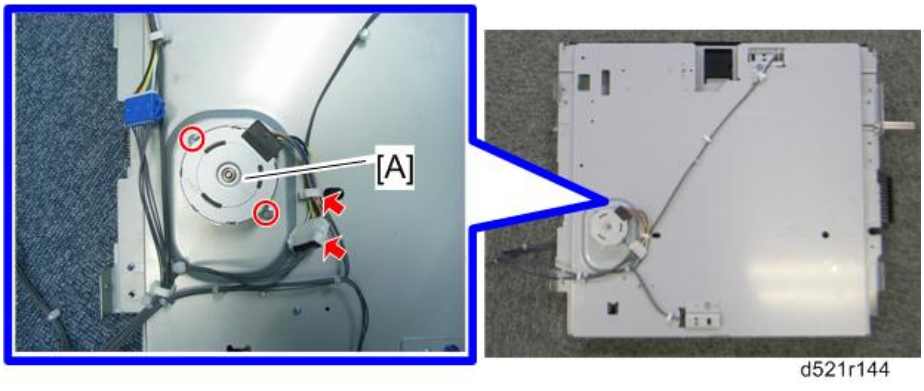
d521r120

Important

- The 1st stopper unit cannot hang the folding unit drawer without the two screws. If you remove the 1st stopper unit without any support, the 1st stopper unit can fall and be broken.

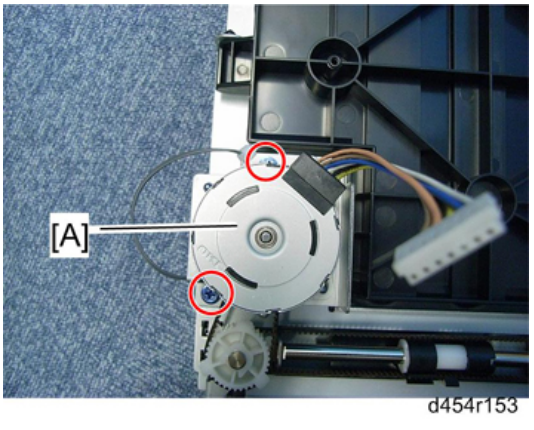
1st Stopper Motor

1. 1st stopper unit (page 36)
2. 1st stopper motor [A] (x 1, x 1, x 2)

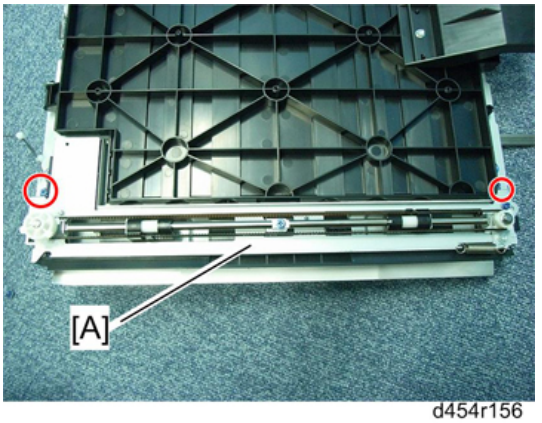


Jogger Fence HP Sensor

1. 1st stopper unit page 36
2. Jogger fence motor bracket [A] (x 2)

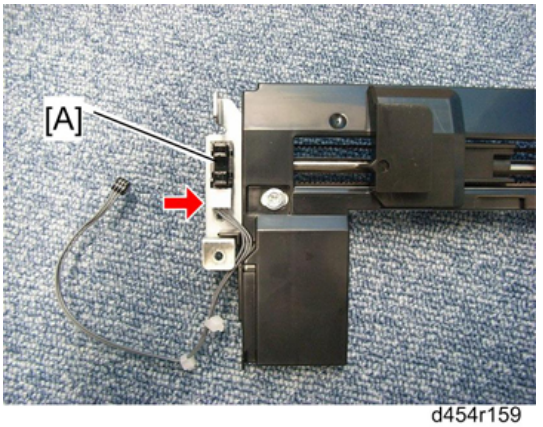


3. Jogger fence timing belt bracket [A] (x 2)



d454r156

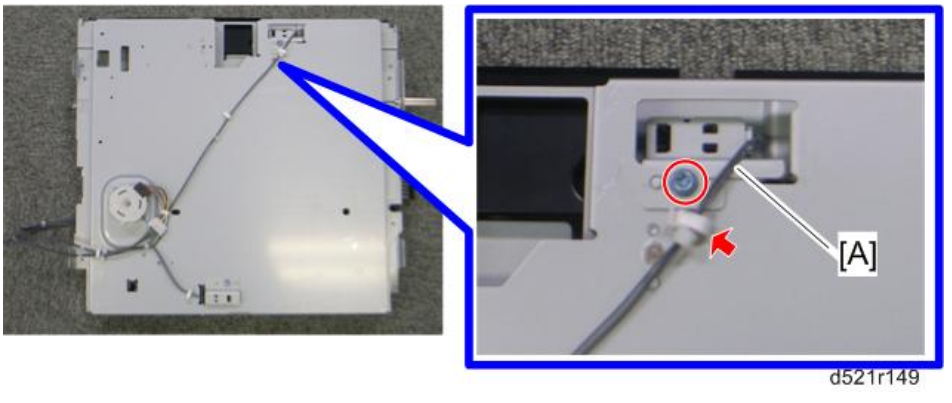
4. Jogger fence HP sensor [A] (hooks, x 1)



d454r159

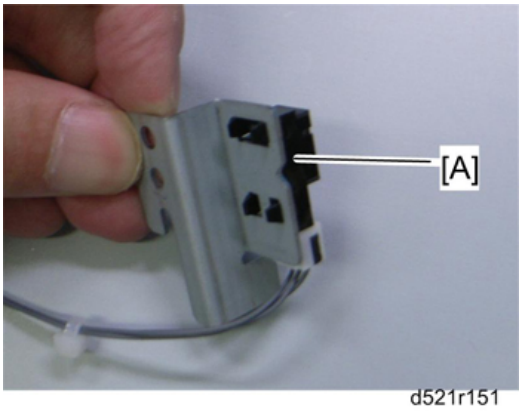
1st Stopper Paper Sensor

1. 1st stopper unit (page 36)
2. 1st stopper paper sensor bracket [A] (x 1)



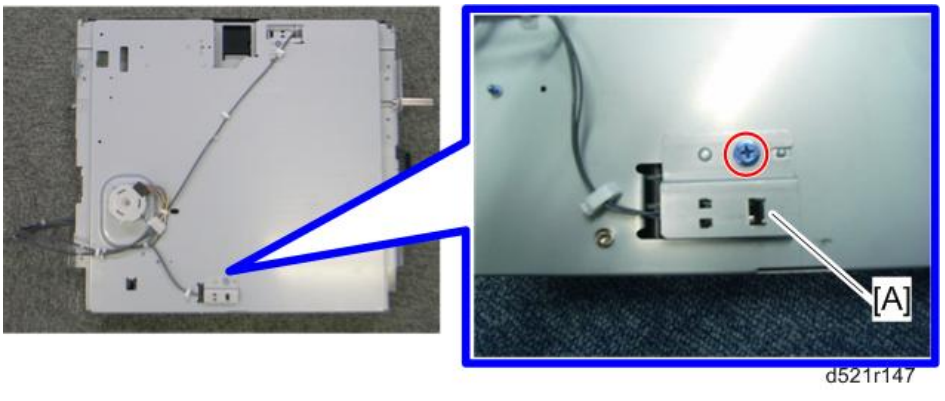
d521r149

3. 1st stopper paper sensor [A] (hooks)

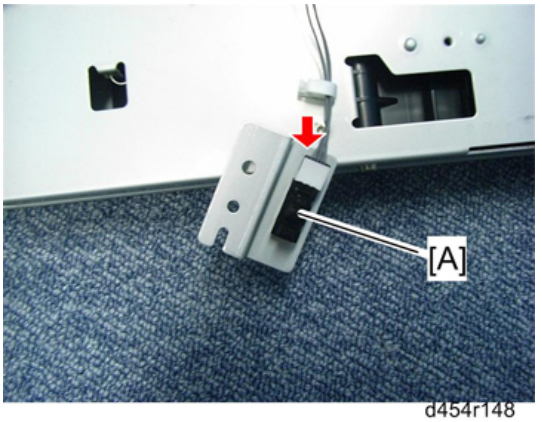


1st Stopper HP Sensor

1. 1st stopper unit (page 36)
2. 1st stopper HP sensor bracket [A] (x 1)



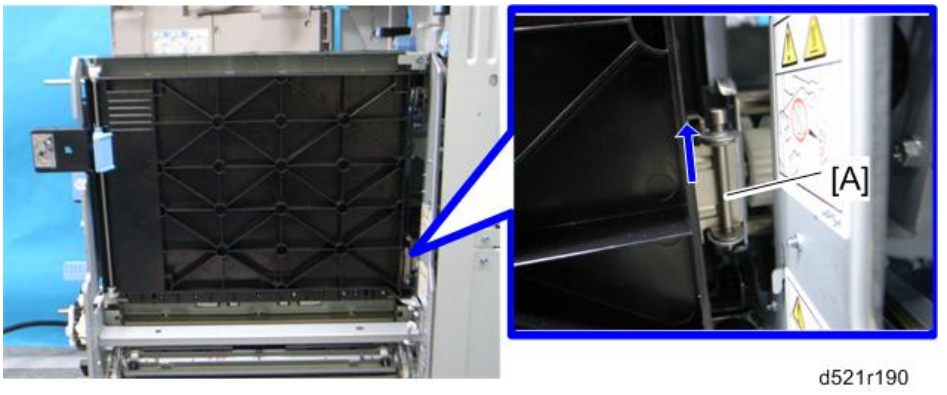
3. 1st stopper HP sensor [A] (hooks)



d454r148

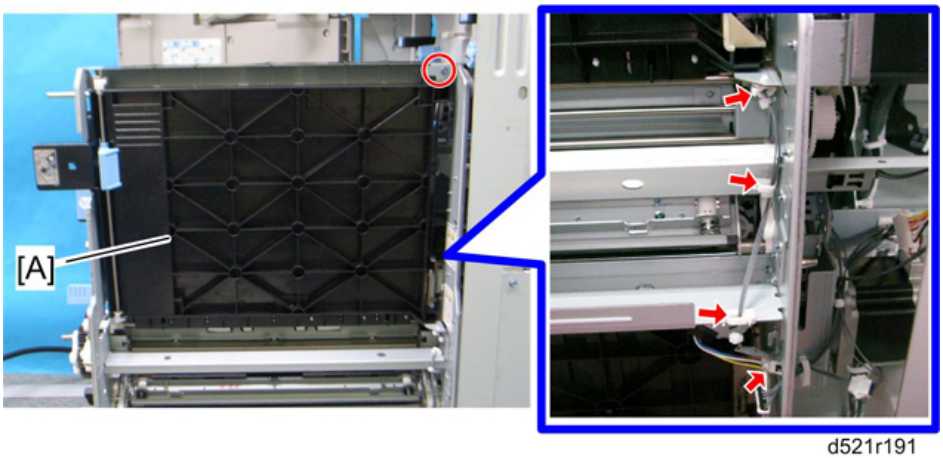
Registration Sensor

1. Pull out the folding unit drawer (page 19)
2. Pull out the pin [A] (x 1)



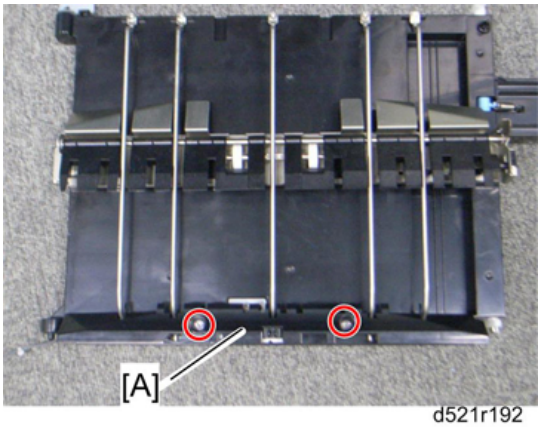
d521r190

3. Jam removal door [A] (x 1, x 3, x 1)



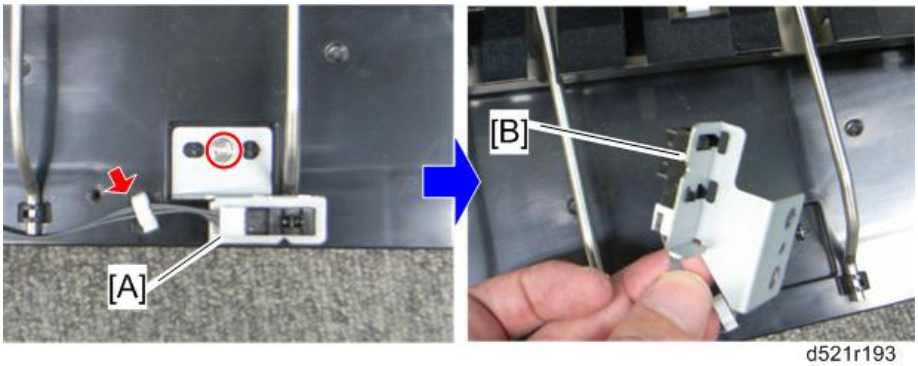
d521r191

4. Dynamic roller bottom guide [A] (x 2)



d521r192

5. Registration sensor bracket [A] (x 1, x1)
6. Registration sensor [B] (hooks, x 1)



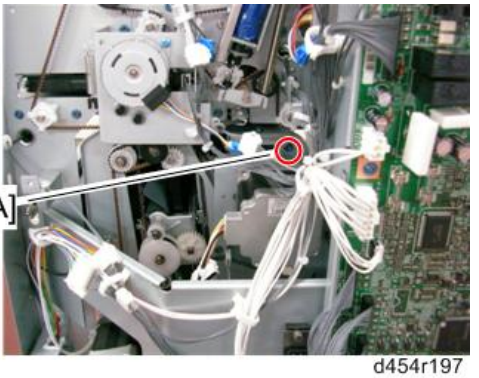
d521r193

Electrical Components: 2nd Stopper

2nd Stopper Unit

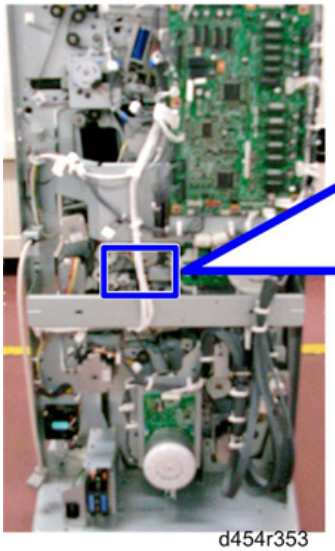
1. 1st stopper unit (page 36)
2. Jam removal door (page 42)
3. Remove two screws [A] at the rear side of the folding unit drawer.

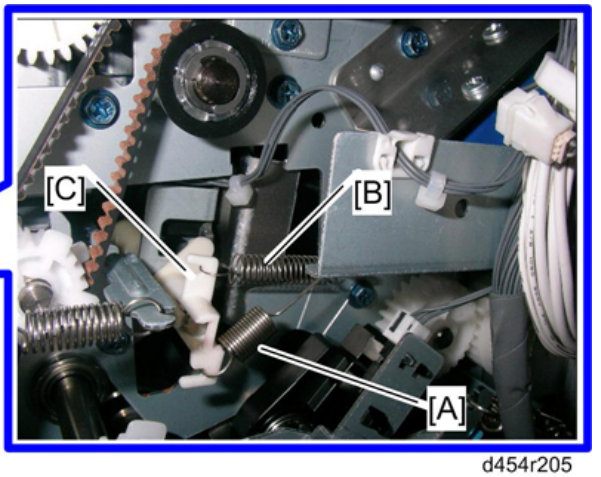

d454r194



d454r197

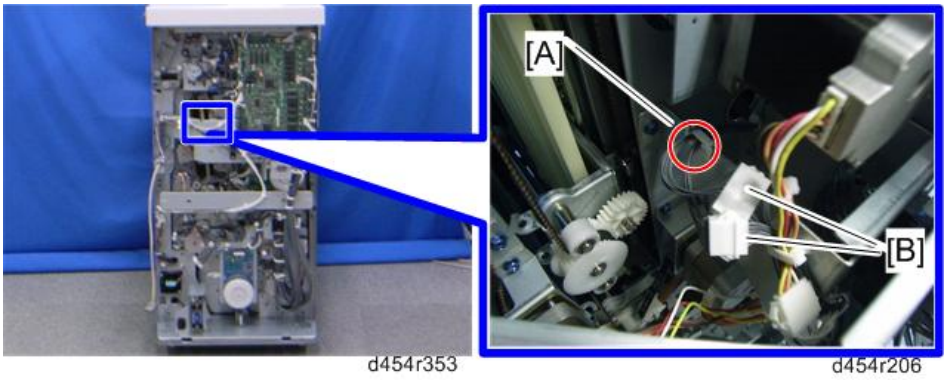
4. Remove the spring [A] for the solenoid spring [B] for the guide plate.
5. Remove the arm [C] for the guide plate.


d454r353

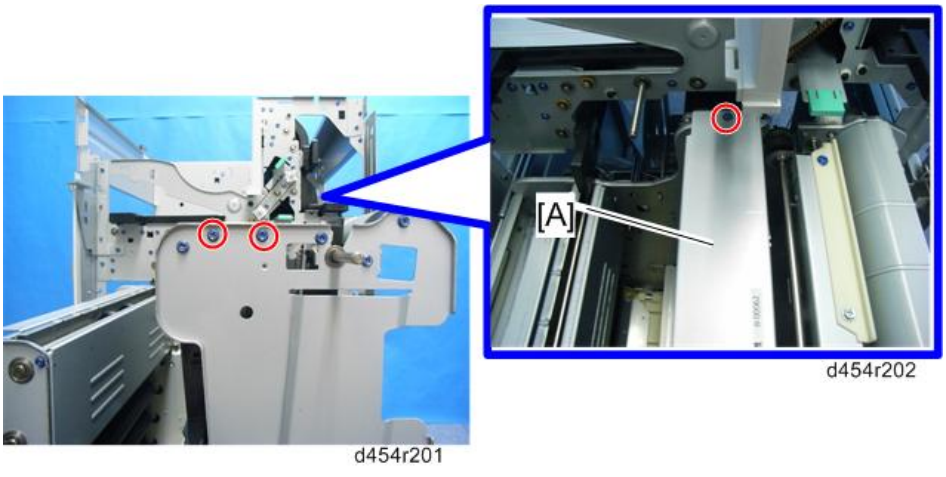


d454r205

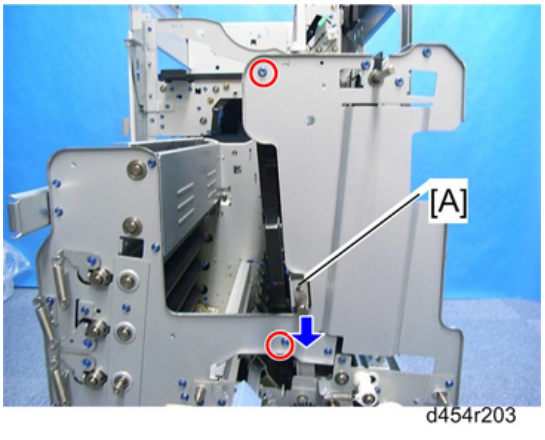
6. Release the clamp [A] and disconnect two connectors [B].



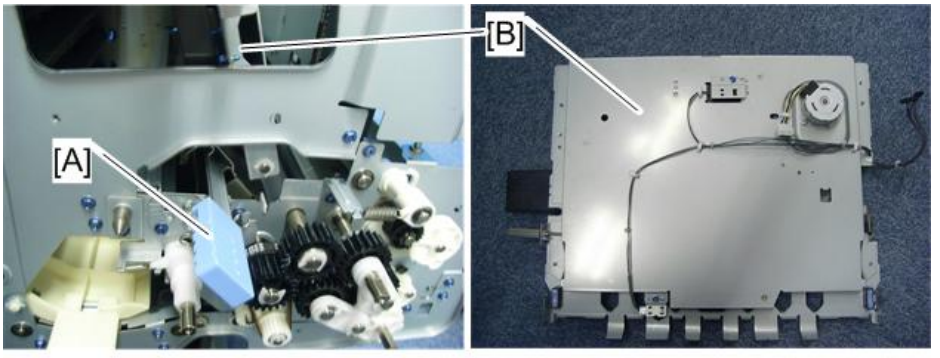
7. Pull out the folding unit drawer.
8. Top stay [A] (x 3)



9. Move down the 2nd stopper unit [A] a little bit (x 2).



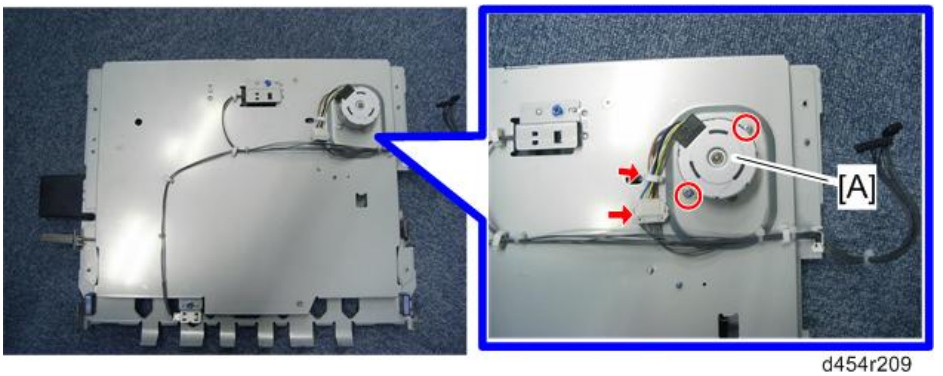
10. Open the jam removal door [A], and then remove the 2nd stopper unit [B].



d454r207

2nd Stopper Motor

1. 2nd stopper unit page 44
2. 2nd stopper motor [A] (x 1, x 1, x 2)



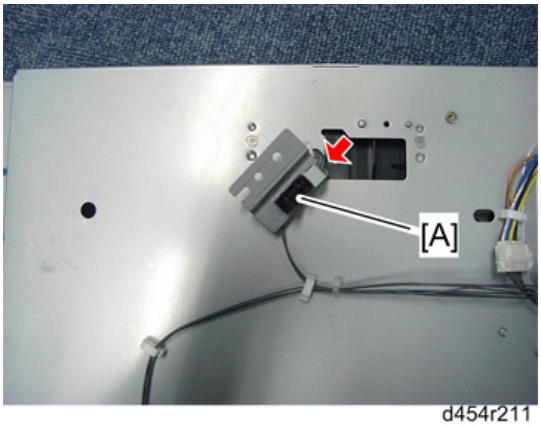
d454r209

2nd Stopper HP Sensor

1. 2nd stopper unit (page 44)
2. 2nd stopper HP sensor bracket [A] (x 1)

d454r210

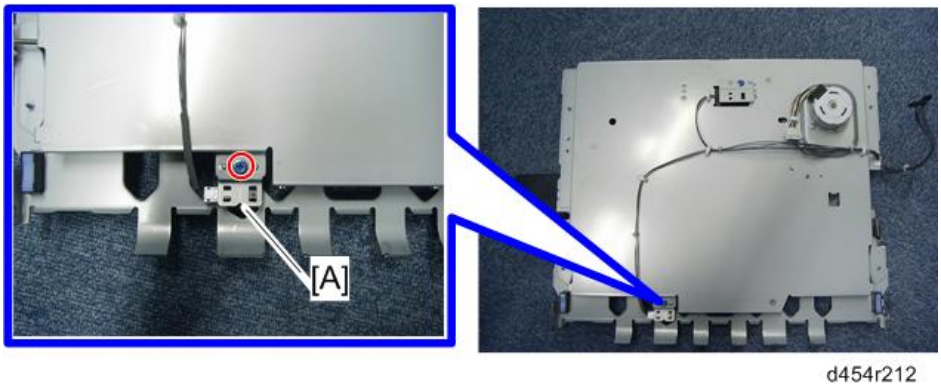
3. 2nd stopper HP sensor [A] (hooks, x 1)



d454r211

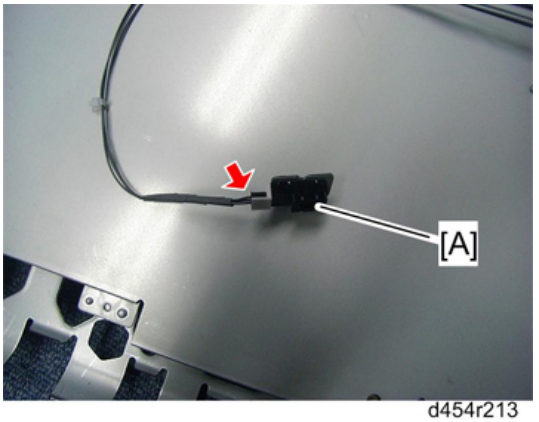
2nd Stopper Paper Sensor

1. 2nd stopper unit (page 44)
2. 2nd stopper paper sensor bracket [A] (x 1)



d454r212

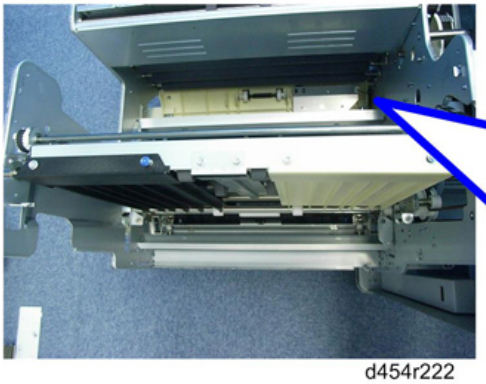
3. 2nd stopper paper sensor [A] (x 1)



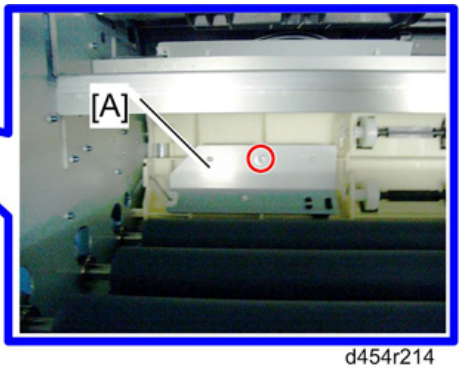
d454r213

Bypass Exit Paper Sensor

1. Pull out the folding unit drawer (page 19)
2. 2nd stopper unit (page 44)
3. Bypass exit paper sensor bracket [A] (x 1)

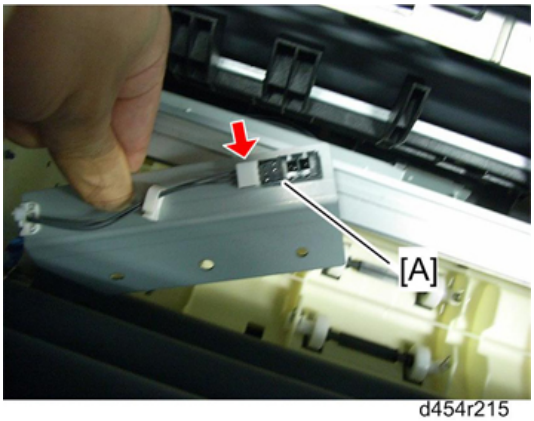


d454r222



d454r214

4. Bypass exit paper sensor [A] (x 1)

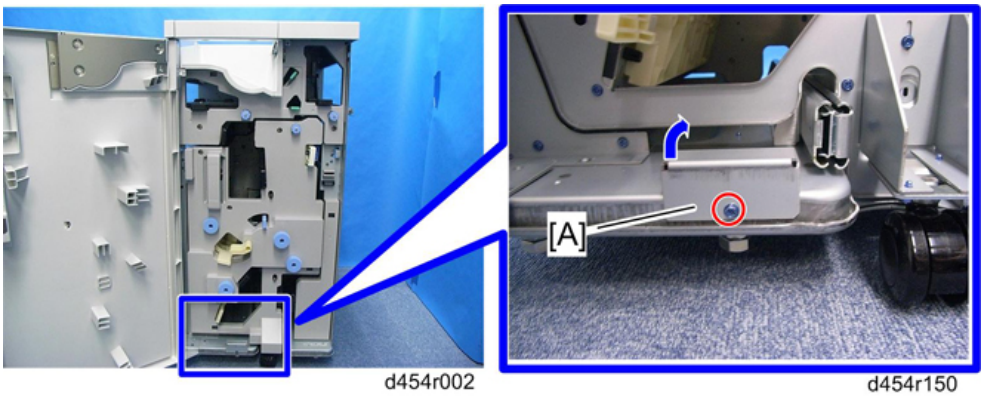


d454r215

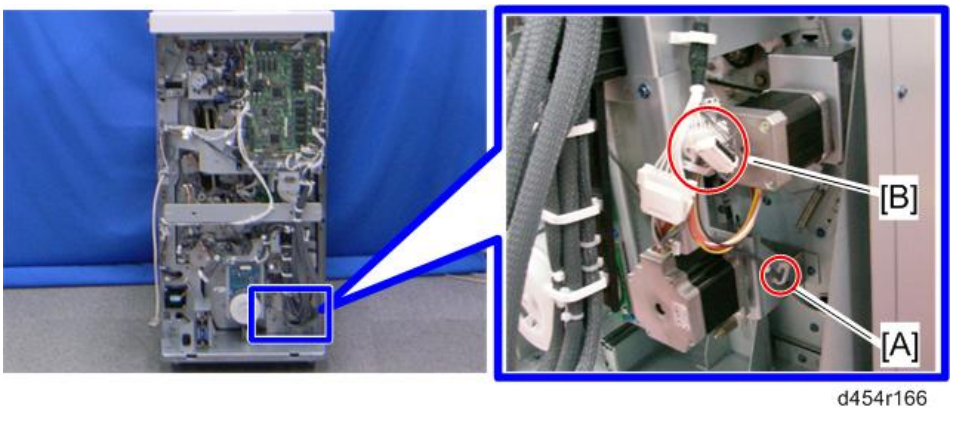
Electrical Components: 3rd Stopper

3rd Stopper Unit

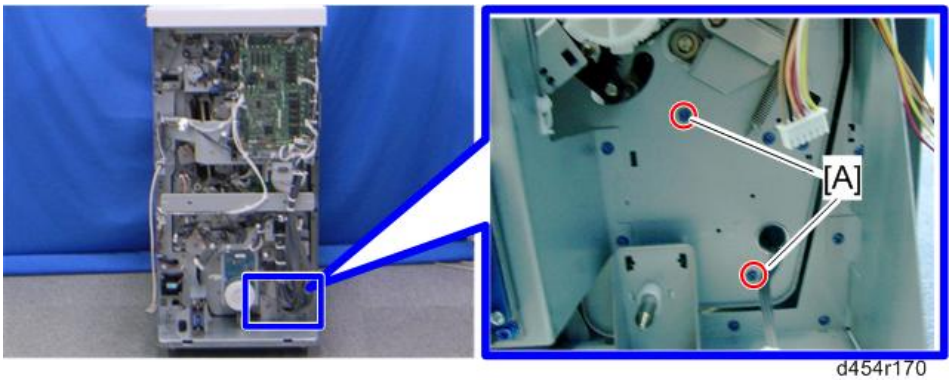
1. Folding unit cover (page 16)
2. Rear upper cover (page 17)
3. Rear lower cover (page 17)
4. Drawer stopper [A] (x 1)



5. Release the clamp [A].
6. Disconnect two connectors [B].

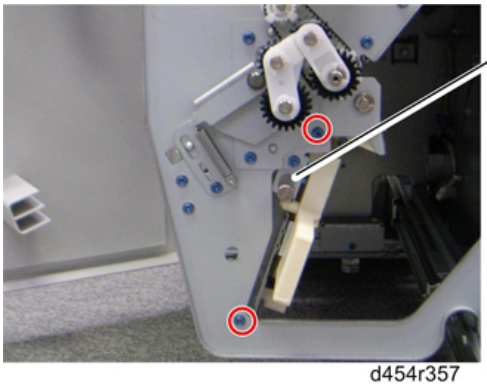


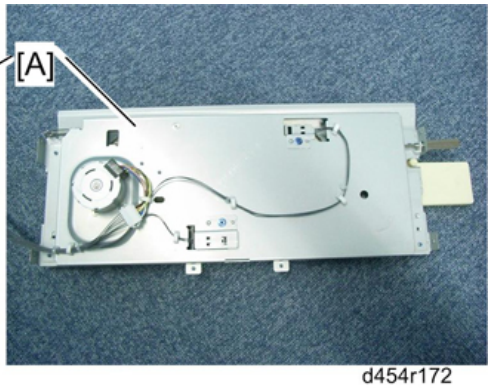
7. 2nd fold motor bracket (page 34)



d454r170

8. Remove two screws [A].
9. Hold the 3rd stopper unit [A], and then remove it (x 2).


d454r357



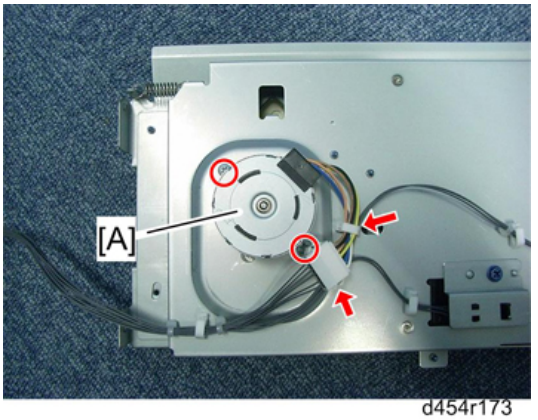
d454r172

Important

- **The 3rd stopper unit cannot hang the folding unit drawer without the two screws. If you remove the 1st stopper unit without any support, the 3rd stopper unit can fall and be broken.**

3rd Stopper Motor

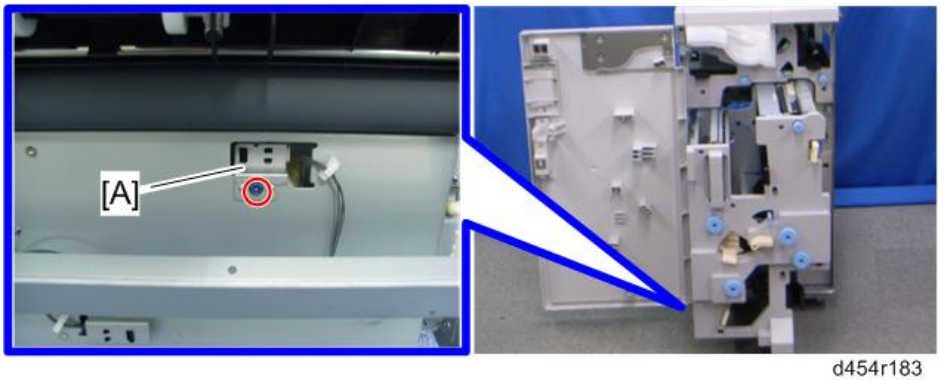
1. 3rd stopper unit (page 50)
2. 3rd stopper motor [A] (x 1, x 1, x 2)



d454r173

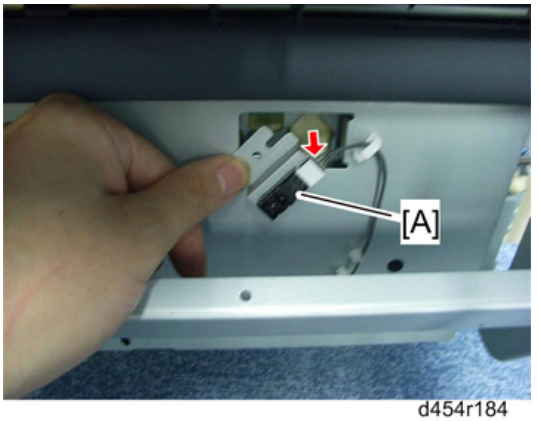
3rd Stopper Paper Sensor

1. Pull out the folding unit drawer. (page 19)
2. 3rd stopper paper sensor bracket [A] (x 1)



d454r183

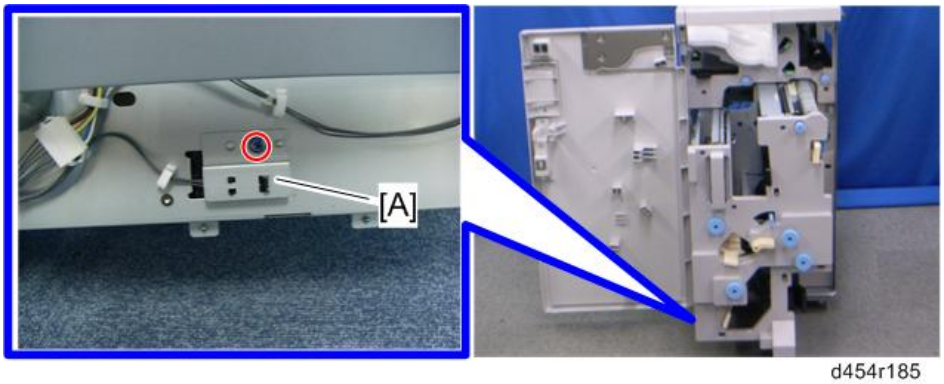
3. 3rd stopper paper sensor [A] (x 1)



d454r184

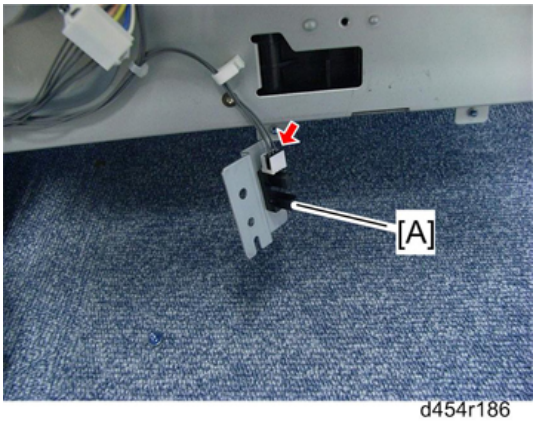
3rd Stopper HP Sensor

1. Pull out the folding unit drawer. (page 19)
2. 3rd stopper HP sensor bracket [A] (x 1)



d454r185

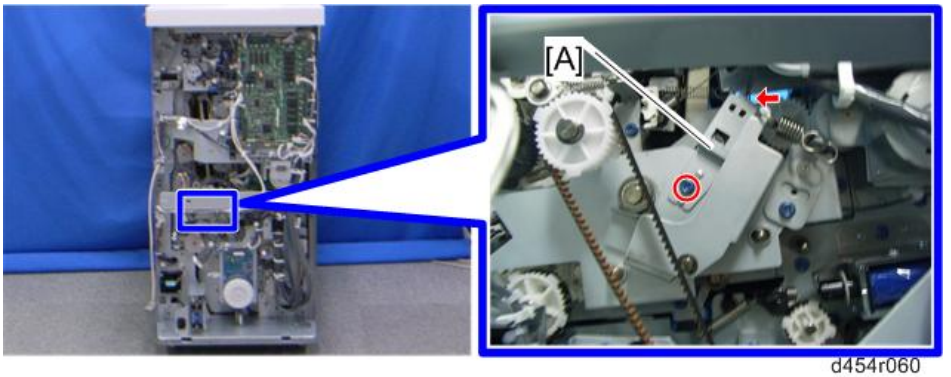
3. 3rd stopper HP sensor [A] (x 1)



d454r186

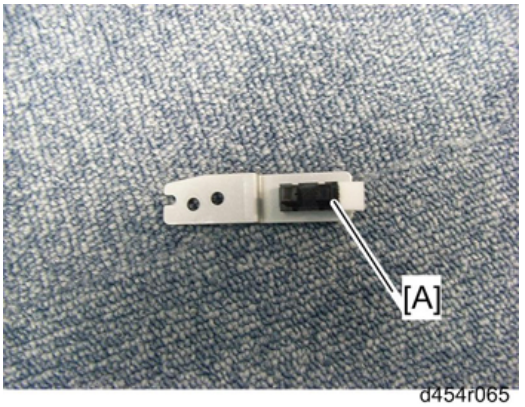
Direct-Send JG (Junction Gate) HP Sensor

1. Rear upper cover (page 17)
2. Rear lower cover (page 17)
3. Direct-Send JG HP sensor bracket [A] (x 1, x 1)



d454r060

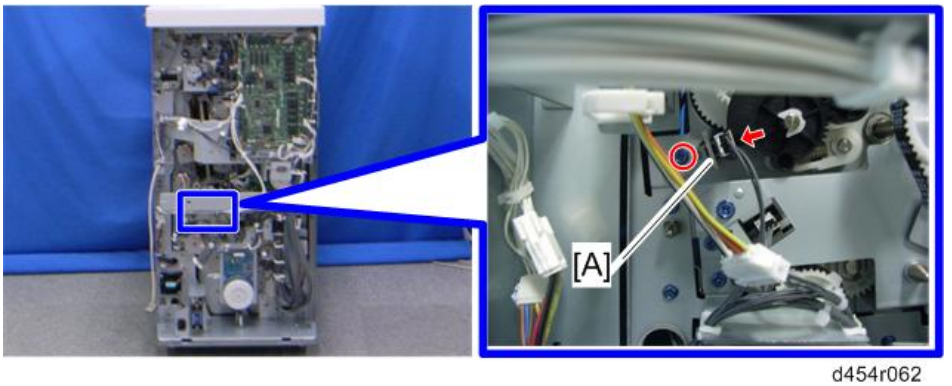
4. Direct-Send JG HP sensor [A] (hooks)



d454r065

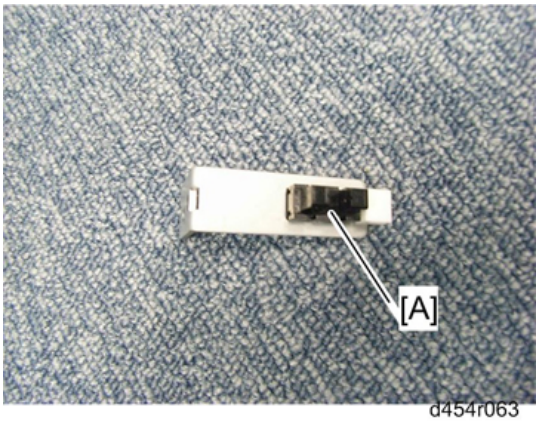
Registration Roller HP Sensor

1. Rear upper cover (page 17)
2. Rear lower cover (page 17)
3. Registration roller HP sensor bracket [A] (x 1, x 1)



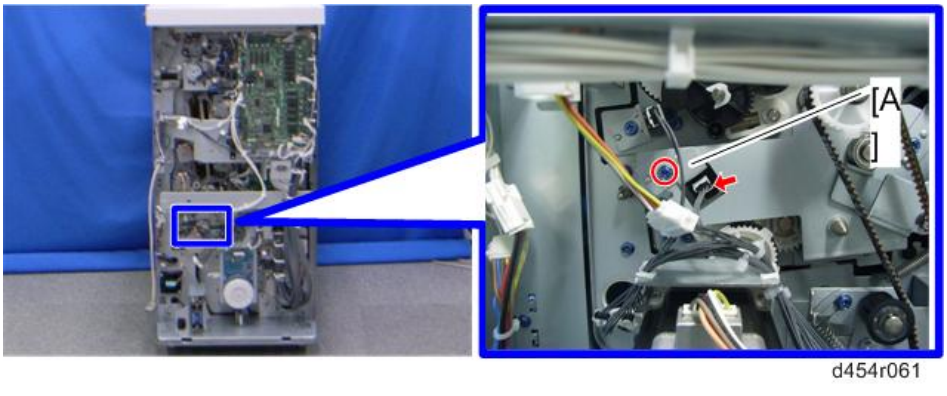
d454r062

4. Registration roller HP sensor [A] (hooks)

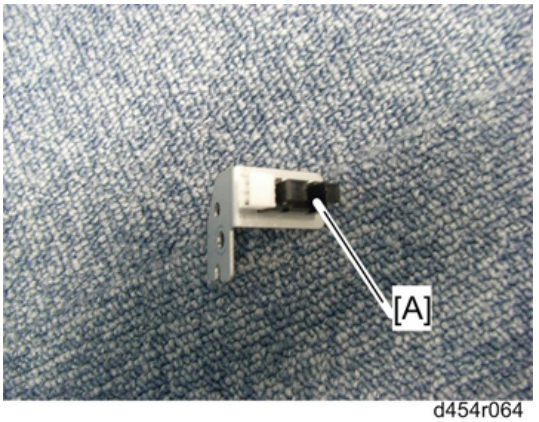


Fold Plate HP Sensor

1. Rear upper cover (page 17)
2. Rear lower cover (page 17)
3. Fold plate HP sensor bracket [A] (x 1, x 1)



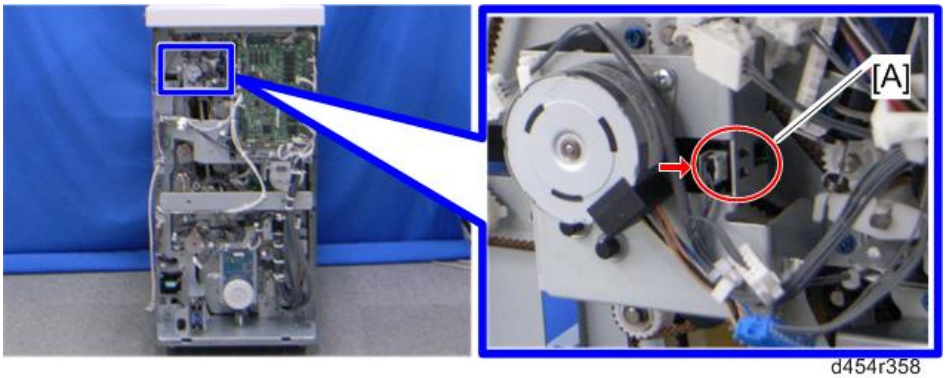
4. Fold plate HP sensor [A] (hooks)



d454r064

Entrance JG (Junction Gate) HP Sensor

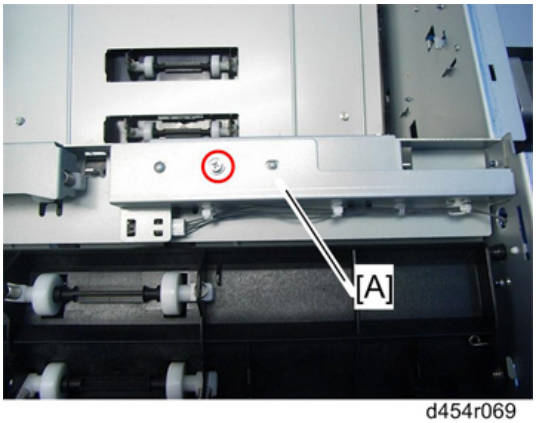
1. Rear upper cover (page 17)
2. Entrance JG HP sensor [A] (hooks, x 1)



d454r358

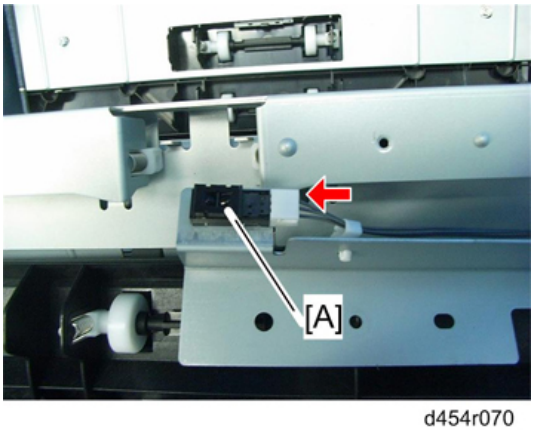
Top Tray Exit Sensor

1. Top cover page 14
2. Top tray exit sensor bracket [A] (x 1)



d454r069

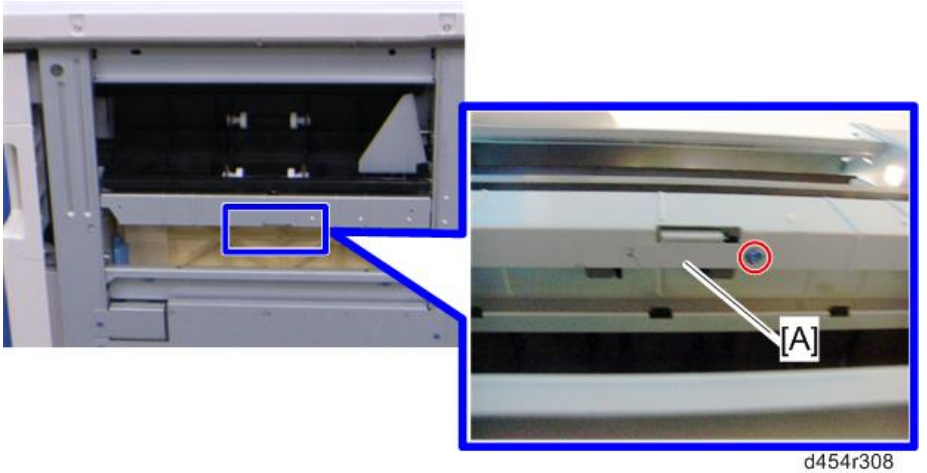
3. Top tray exit sensor [A] (x 1)



d454r070

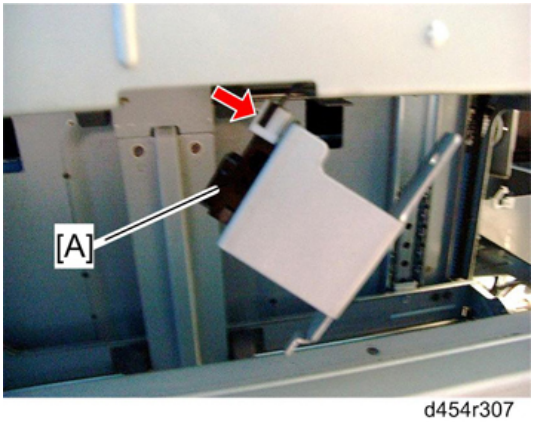
Entrance Sensor

1. Entrance sensor bracket [A] (x 1)



d454r308

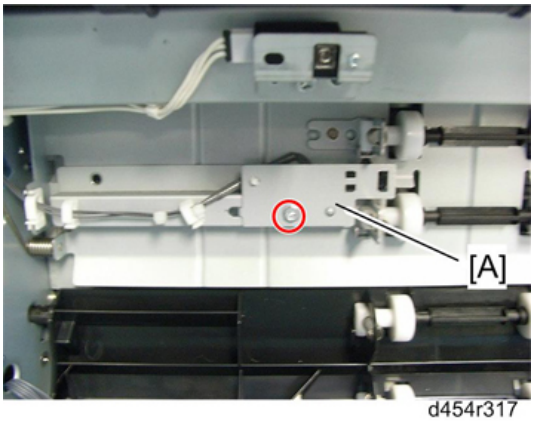
2. Entrance sensor [A] (hooks, x 1)



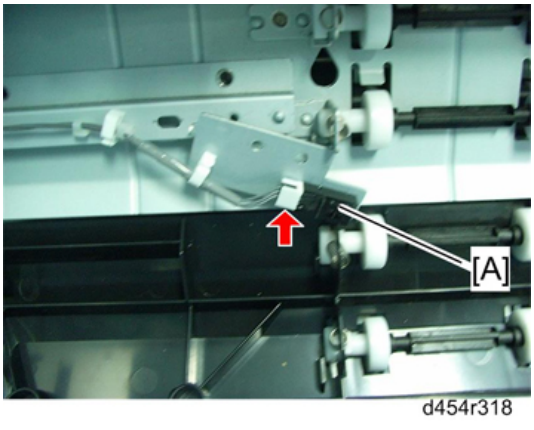
d454r307

Top Tray Paper Path Sensor

1. Top tray right cover (page 19)
2. Top tray paper path sensor bracket [A] (x 1)



3. Top tray paper path sensor [A] (hooks, x 1)

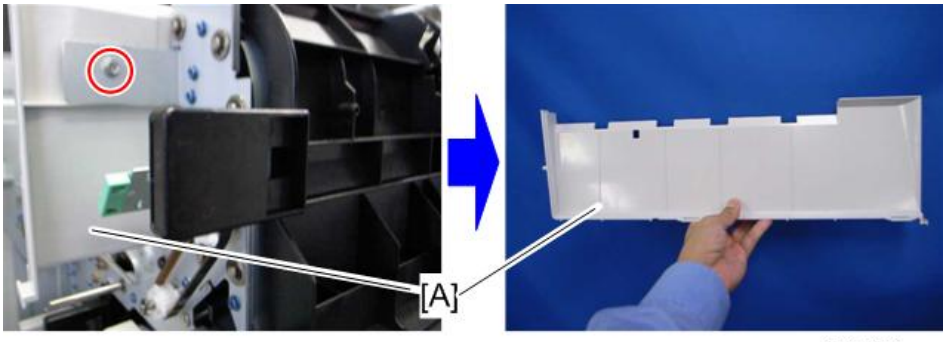


Electrical Components: Main 1

1

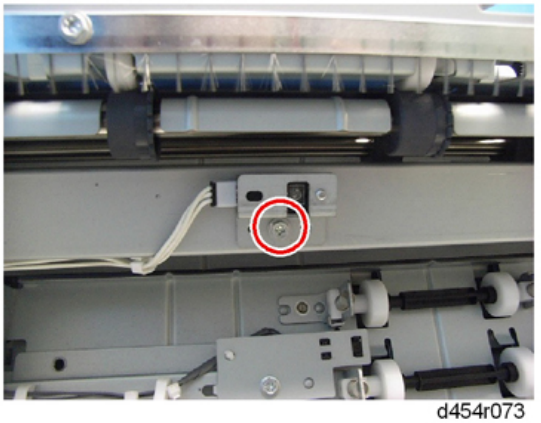
Top Tray Full Sensor (E)

1. Top tray (page 18)
2. Paper exit cover [A] (x 1)



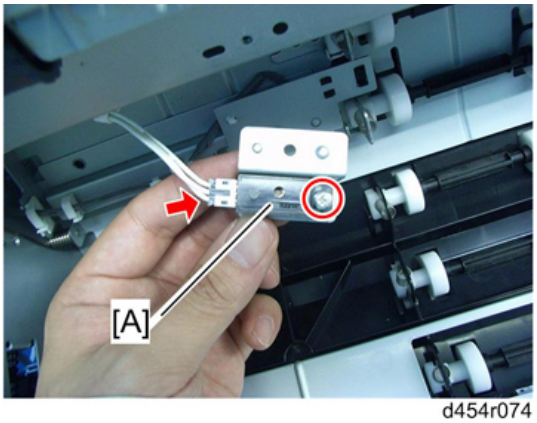
d454r361

3. Top tray full sensor (E) bracket (x 1)



d454r073

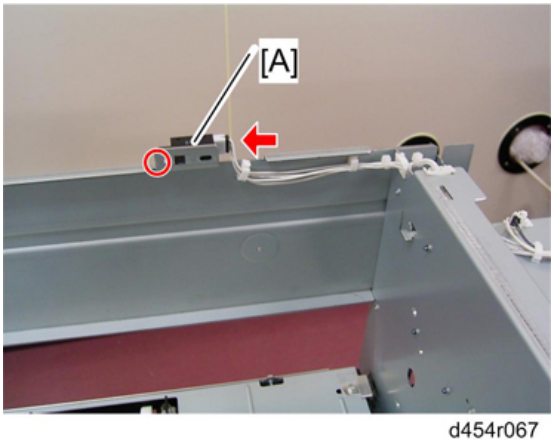
4. Top tray full sensor (E) [A] (x 1, x 1)



d454r074

Top Tray Full Sensor (R)

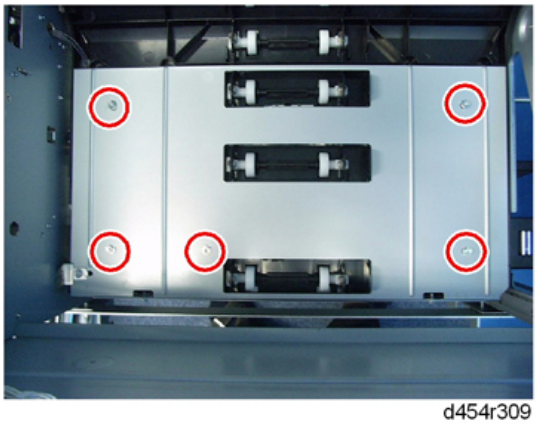
1. Top tray (page 18)
2. Top tray full sensor (R) [A] (x 1, x 1)



d454r067

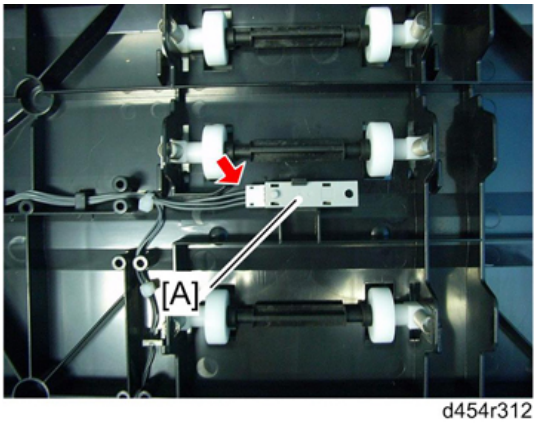
Vertical Path Paper Sensor

1. Top tray (page 18)
2. Remove the bracket (x 5)



d454r309

3. Vertical path paper sensor [A] (x 1, hooks)



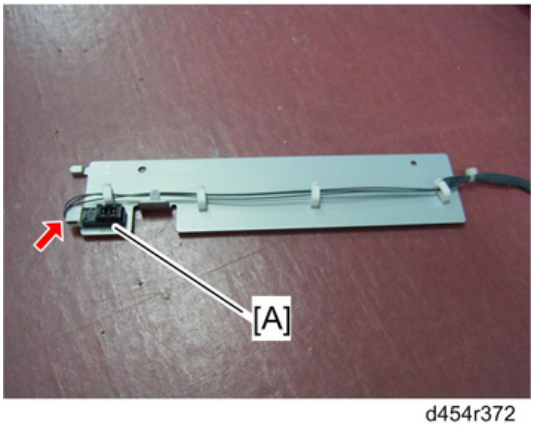
d454r312

Horizontal Path Paper Sensor

1. Top tray (page 18)
2. Remove the bracket (x 2)

d454r371

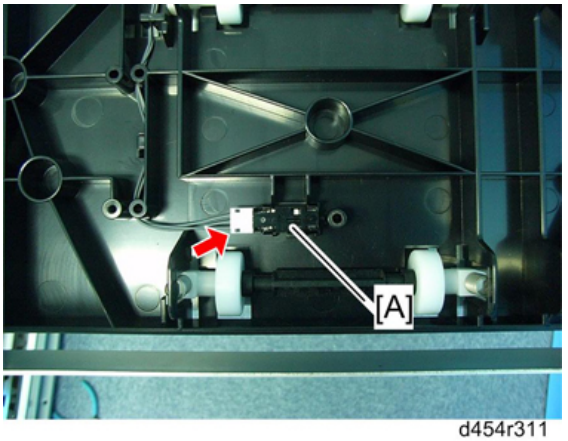
3. Horizontal path paper sensor [A] (x 1)



d454r372

Horizontal Path Exit Sensor

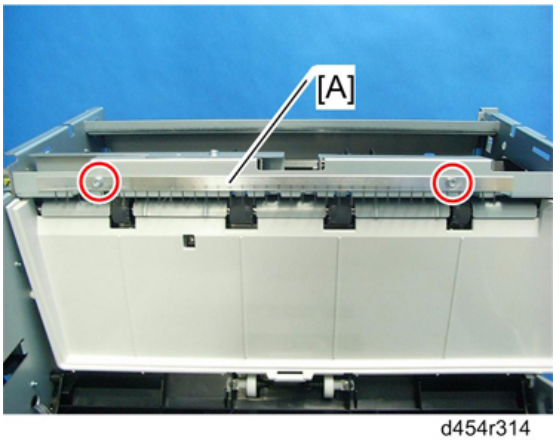
1. Top tray (page 18)
2. Remove the bracket (x 5)
3. Horizontal path exit sensor[A] (x 1)



d454r311

Discharge Brush 1

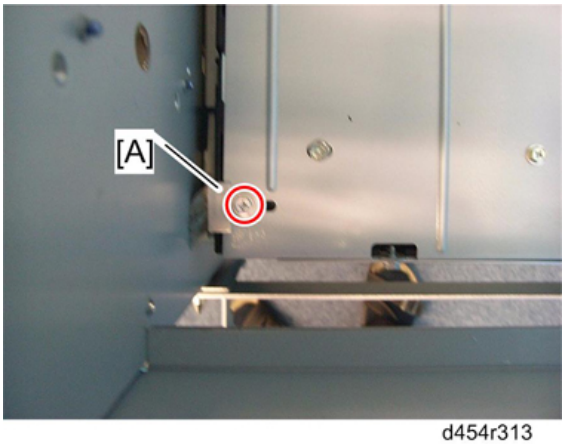
1. Top cover (page 14)
2. Discharge brush 1 [A] (x 2)



d454r314

Discharge Brush 2

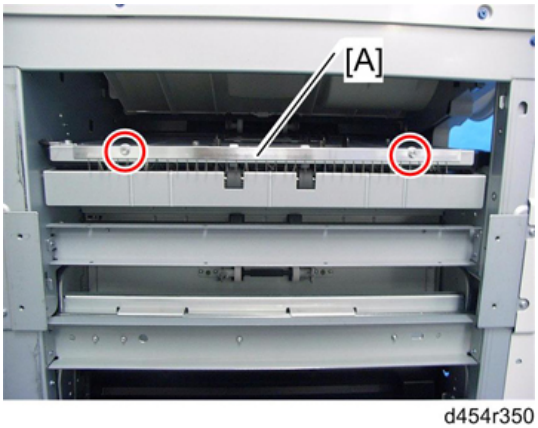
1. Top tray (page 18)
2. Discharge brush 2 [A] (x 1)



d454r313

Discharge Brush 3

1. Discharge brush 3 [A] (x 2)



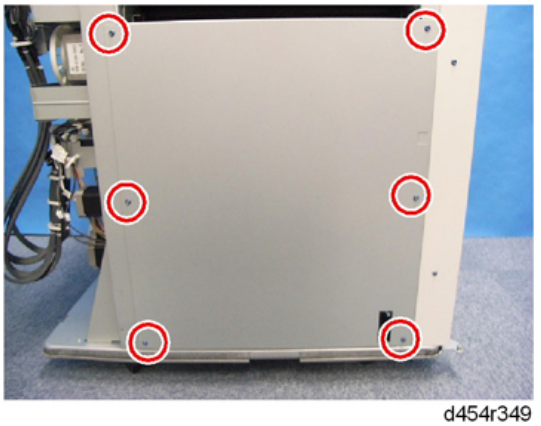
d454r350

PSU

⚠CAUTION

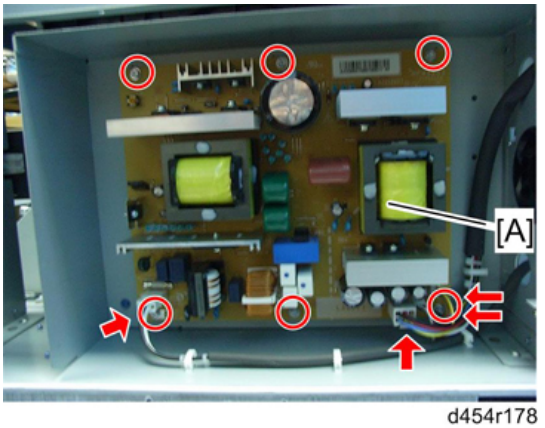
- Never not touch solder connections or electronic parts on the PSU after removing it because electrical charge can remain on the PSU even after it has been removed.
- After removing the PSU, never place put it on a conductive material such as metal.

1. Left lower bracket (x 6)



d454r349

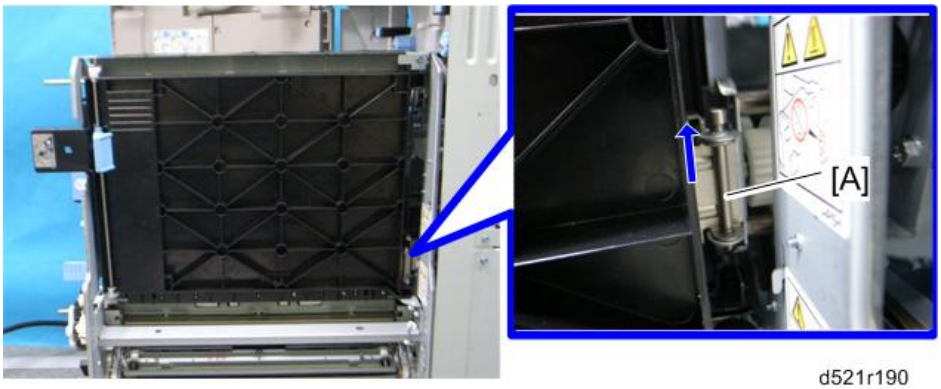
2. PSU [A] (x 6, x 4)



d454r178

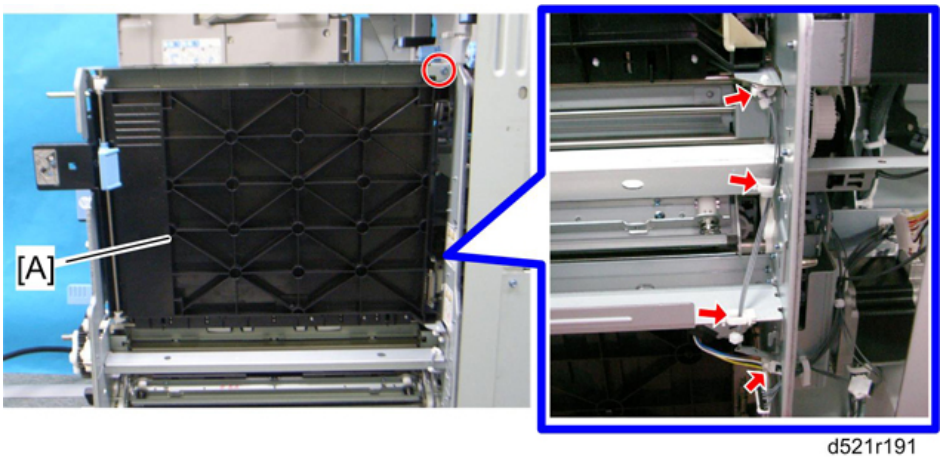
First Fold Unit

1. 1st stopper unit (page 36)
2. Pull out the pin [A] (x 1)



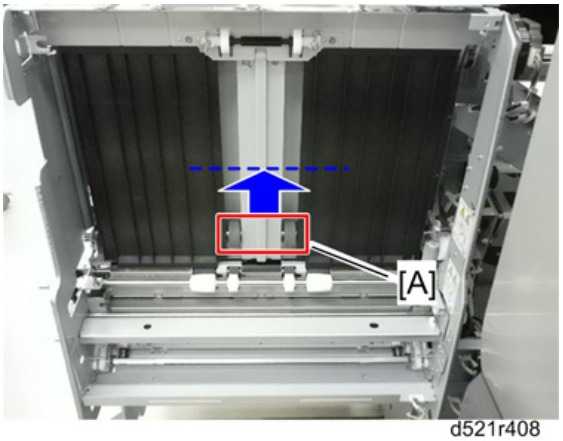
d521r190

1. Jam removal door [A] (x 1, x 3, x 1)



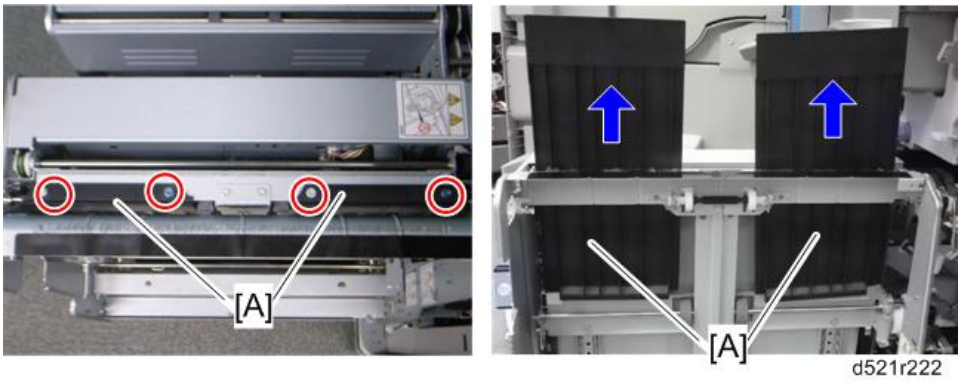
d521r191

2. Lift up the dynamic roller [A].

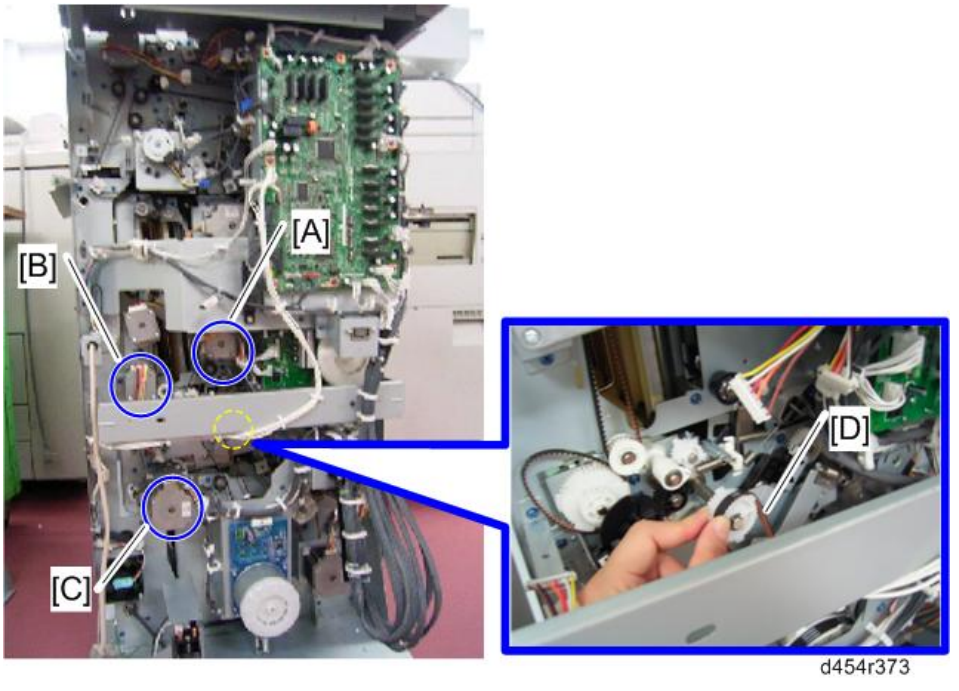


d521r408

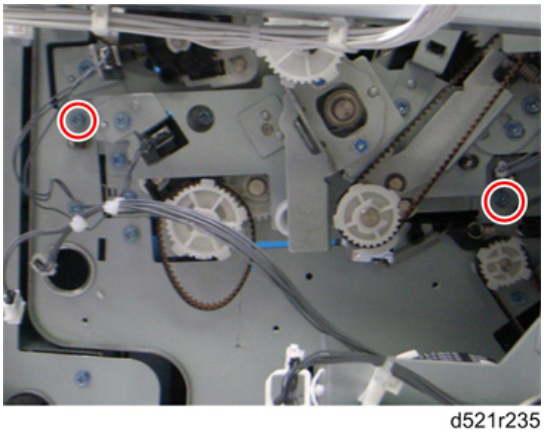
3. Lift up two guide plates [A] (each x 2).



4. Registration roller transport motor bracket [A] (page 29)
5. Registration roller release motor bracket [B] (page 28)
6. Fold plate motor bracket [C] (page 31)
7. Timing belt of the 1st plate motor [D]

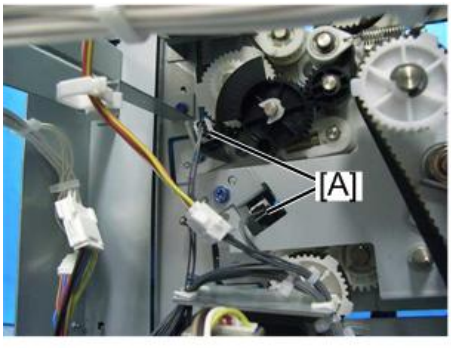


8. Remove two screws on the rear side.

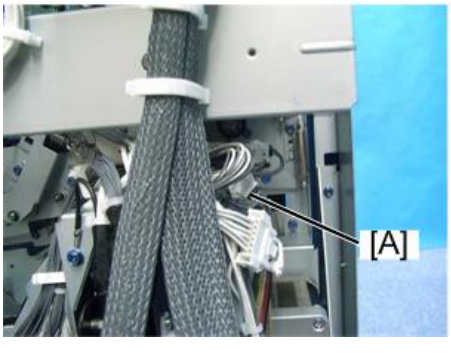


d521r235

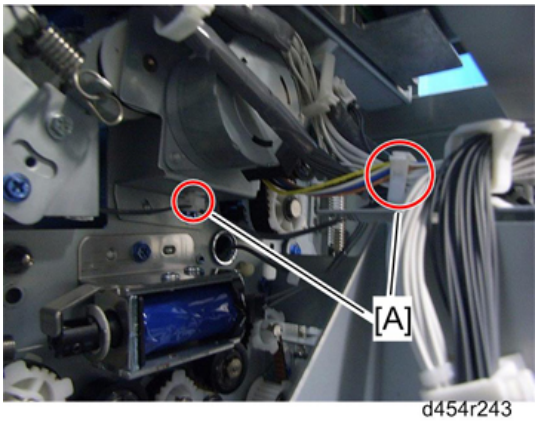
9. Disconnect four harnesses [A] on the rear side.



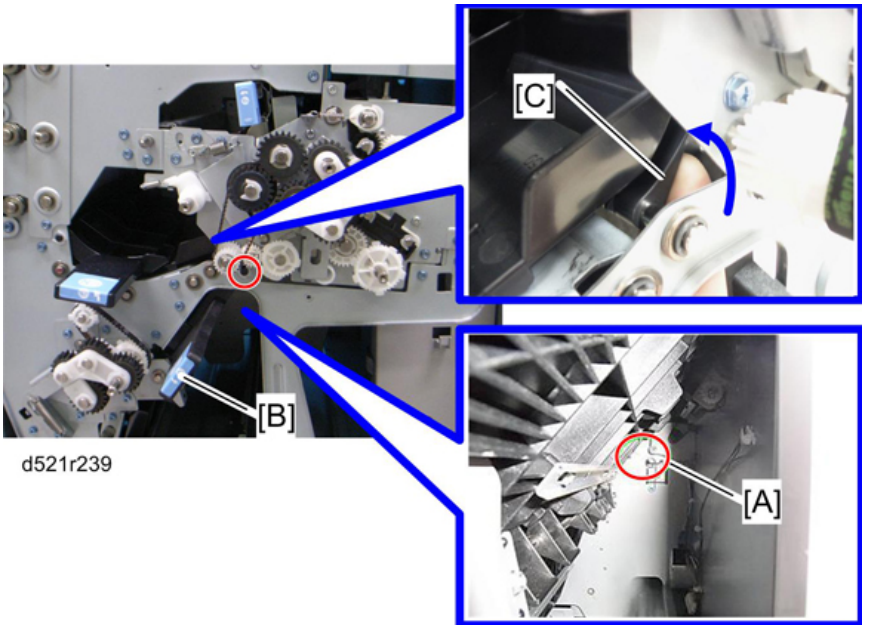
d521r227



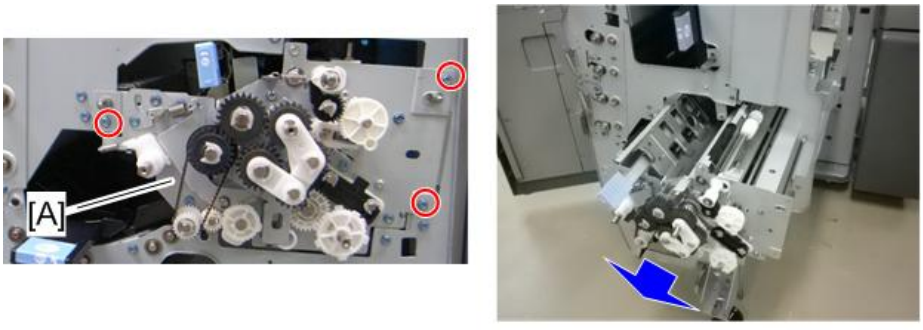
10. Release two clamps [A].



11. Remove the spring [A] at the rear frame of the folding unit drawer.
12. Lower guide plate [B] (x 1)
    - First, push the lower guide plate to the rear side while keeping the upper guide plate [C] open.
    - Secondly, take out the lower guide plate [B].

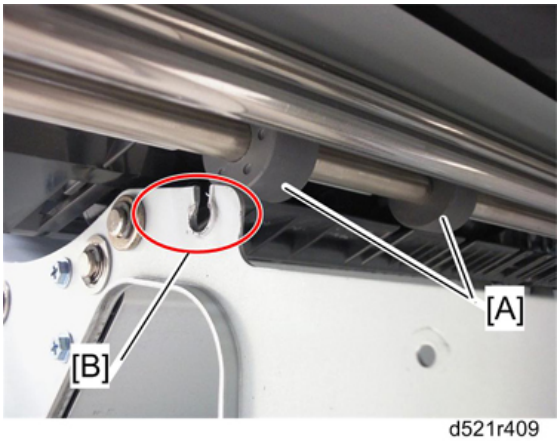


13. Pull the first fold unit [A] until it stops (x 3).



d521r250

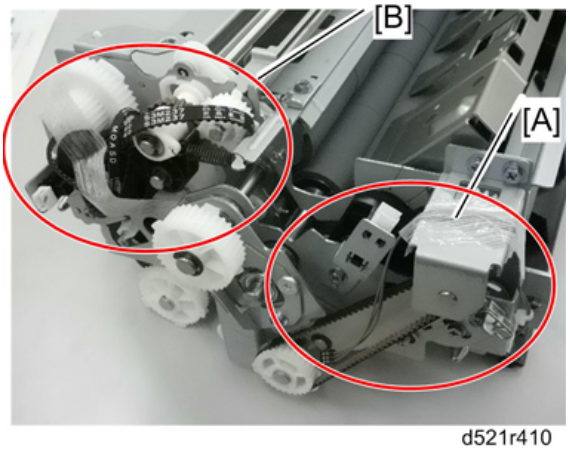
14. If one of the transport rollers [A] at the bottom of the first fold unit hang up in the frame [B] of the fold unit drawer, lift the first fold unit slightly, and then remove it.



d521r409

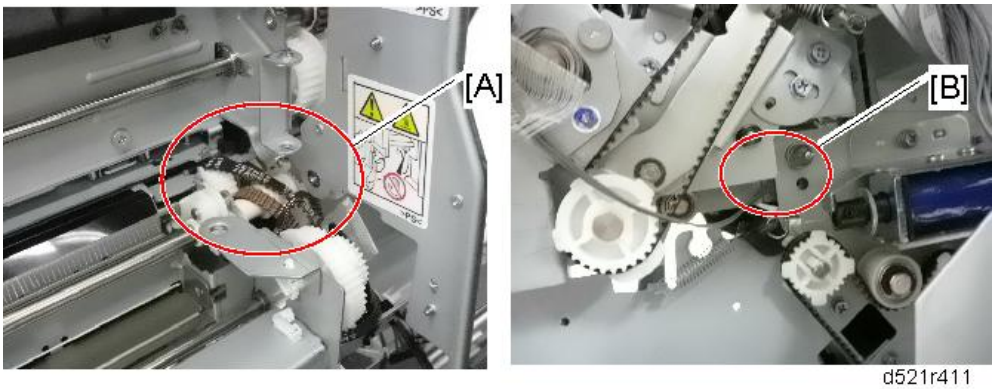
When installing the first fold unit

1. Attach the harness [A] and timing belts [B] tightly to the first fold unit with tapes so that the harness and timing belts are not caught in any parts when installing the first fold unit into the fold unit drawer.



d521r410

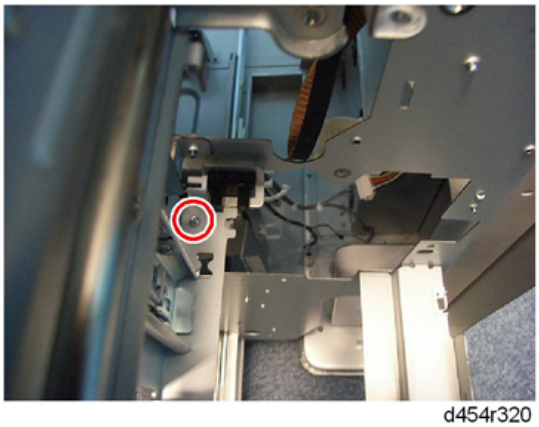
1. If the first fold unit is not completely installed in the fold unit drawer, check the following:
    - The timing belts are not caught [A] between the rear frame of the fold unit drawer and frame of the first fold unit.
    - The harness of the first fold unit is pinched [B] between the rear frame of the fold unit drawer and frame of the first fold unit.



d521r411

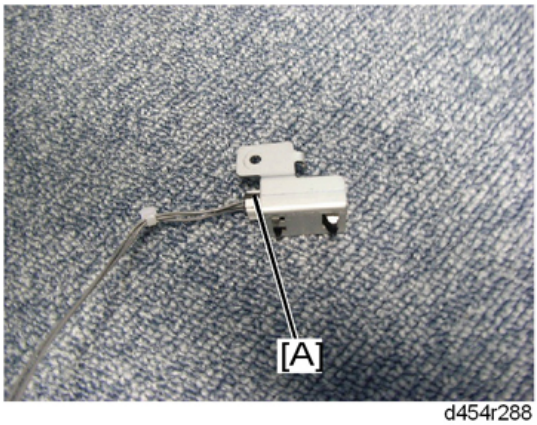
Dynamic Roller HP Sensor

1. First fold unit (page 33)
2. Dynamic roller HP sensor bracket (x 1)



d454r320

3. Dynamic roller HP sensor [A] (x 1)

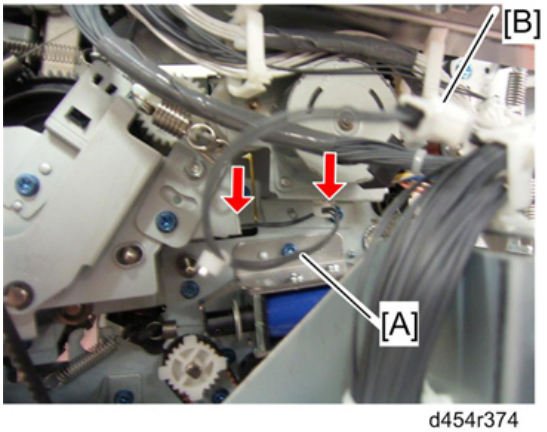


d454r288

Electrical Components: Main 2

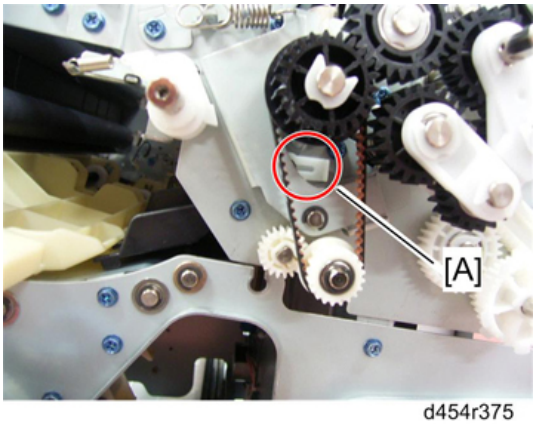
Bypass Entrance Paper Sensor

1. Folding unit cover (page 16)
2. Rear upper cover (page 17)
3. Rear lower cover (page 17)
4. Disconnect the bypass entrance paper sensor harness [A] from the connector [B] (x 2).



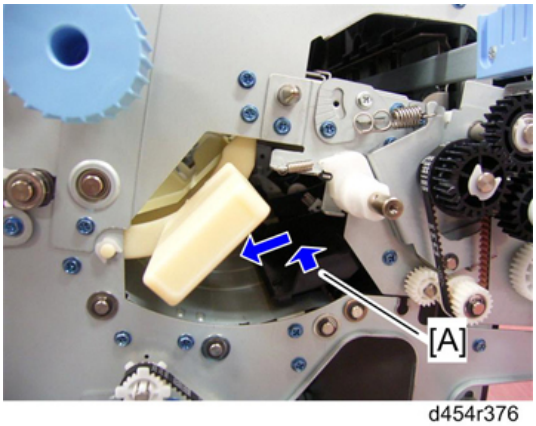
d454r374

5. Remove the clip [A] for the bypass entrance guide plate.



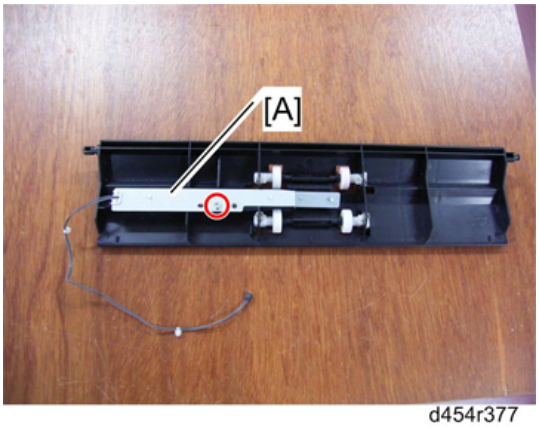
d454r375

6. Push the bypass entrance guide plate [A] to the rear, then slide it to the left, and remove it.



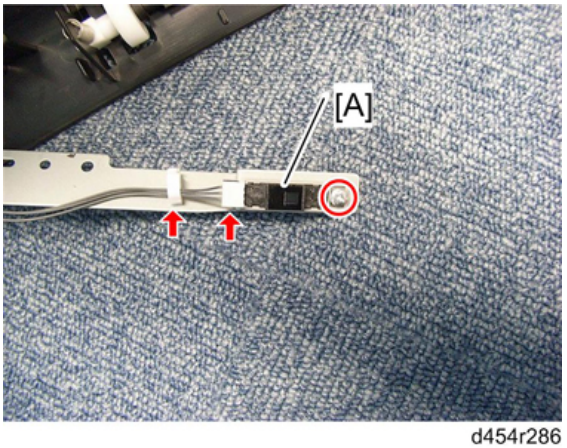
d454r376

7. Bypass entrance paper sensor bracket [A] (x 1)



d454r377

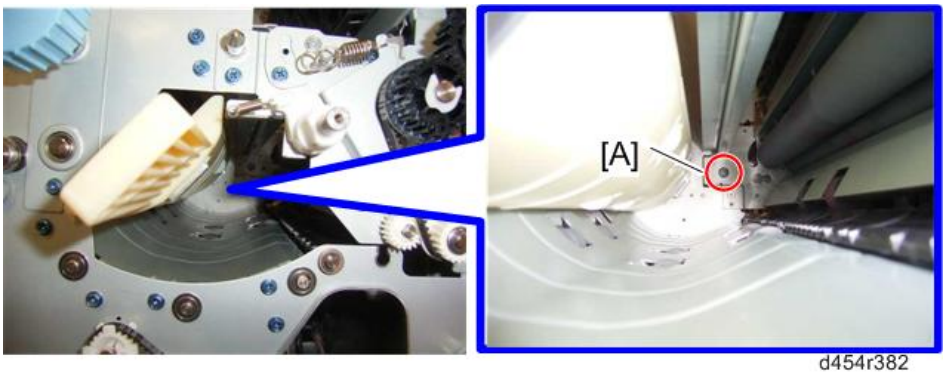
8. Bypass entrance paper sensor [A] (x 1, x 1, x 1)



d454r286

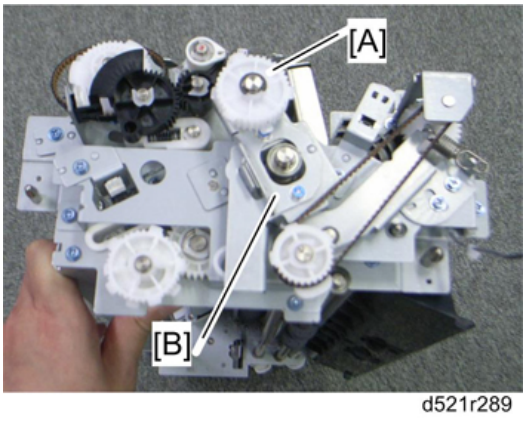
Reinstalling the bypass entrance paper sensor

1. Put the harness of the bypass entrance paper sensor through the hole [A] in the rear frame of the drawer.

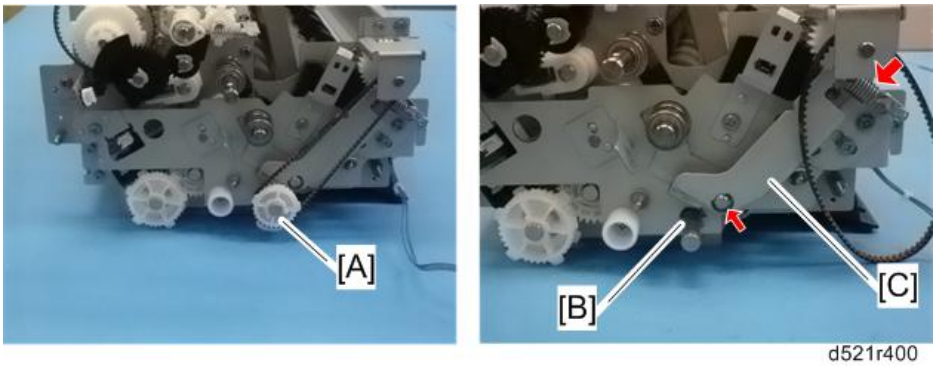


First/ Second/ Third Fold Roller

1. First fold unit (page 66)
2. First fold roller gear [A] (x 1, pin x 1, spacer x 1)
3. Pressure release bracket [B]

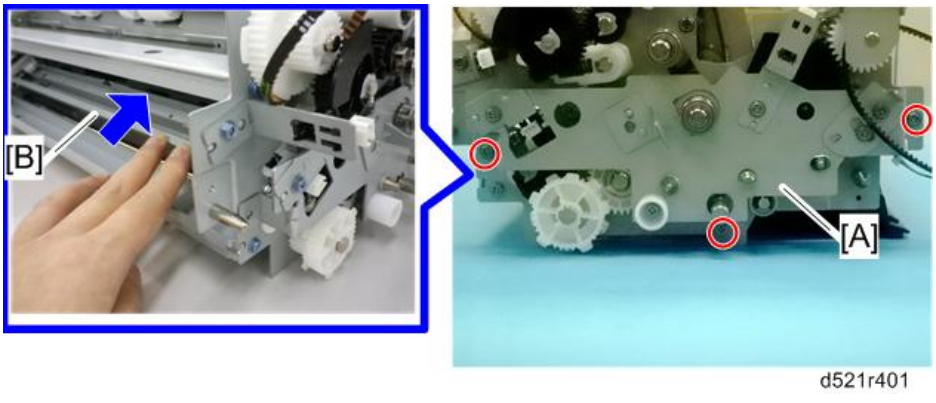


4. Rear cam gear [A] (x 1, timing belt x 1)
5. Bushing [B] (x 1)
6. Rear tension bracket [C] (spring x 1, x 1)



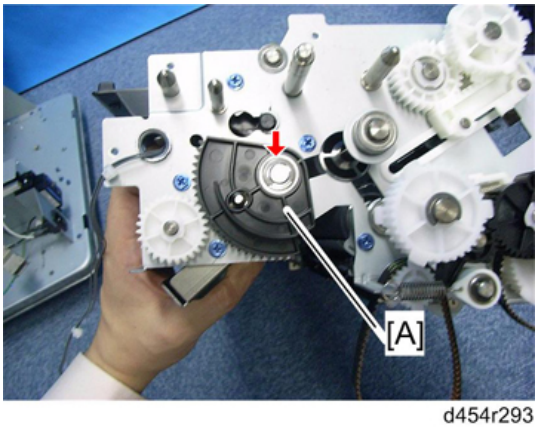
d521r400

7. Rear bracket [A] (x 3)
8. When removing the rear bracket, slide the fold assist plate [B] in the arrow direction.



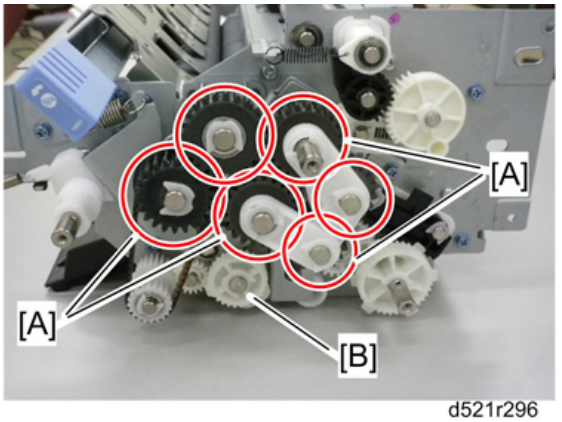
d521r401

9. Remove the gear [A] (x 1)



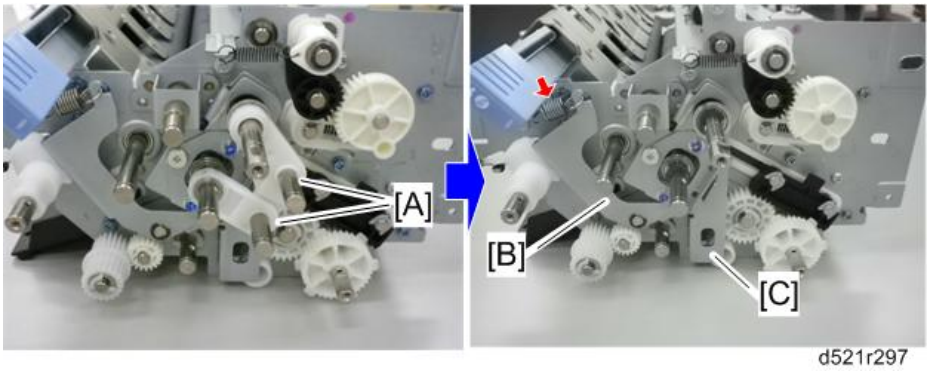
d454r293

10. Remove six gears (clip x 1 each, pin x 1 each for four gears [A]).
11. Cam gear [B] (x 1, pin x 1)



d521r296

12. Remove the gear links [A].
13. Front tension bracket [B] (spring x 1, x 1)
14. Frond shaft holder bracket [C] (x 1, bushing x 1, spacer x 1)



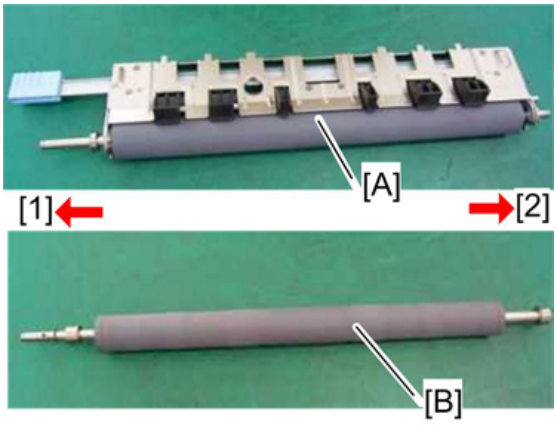
d521r297

15. Front bracket [A] (x 2)
16. Third fold roller with the guide plate and direct send junction gate[B]
17. Second fold roller [C].

d521r299

[1]: Front side, [2]: Rear side

- [A]: Third fold roller with the guide plate and direct send junction gate
- [B]: Second fold roller

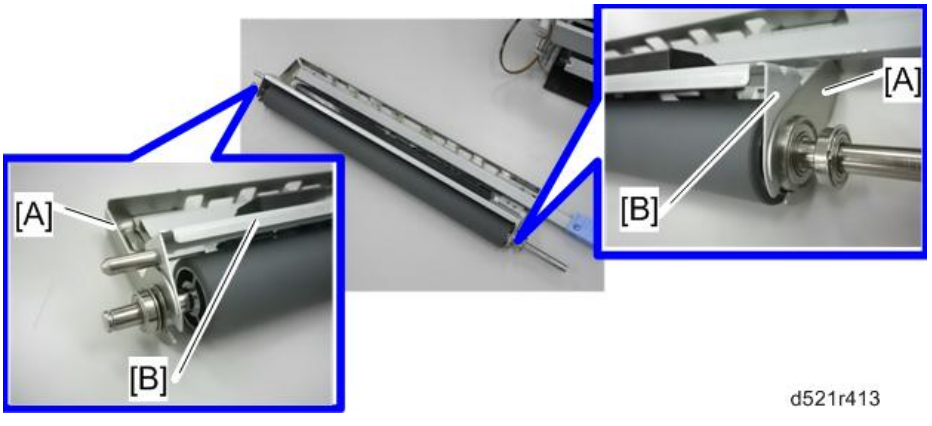


d454r300

18. When assembling the third fold roller with direct send junction gate and guide plate, install the guide plate [A] and direct send junction gate [B] in the third fold roller unit as below.

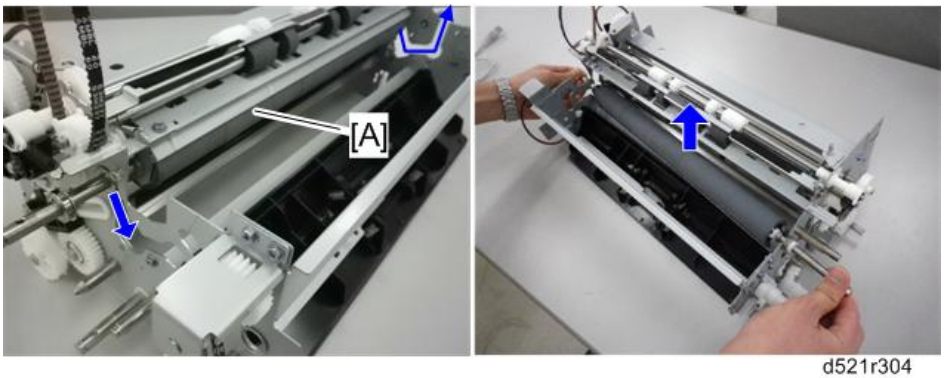
Note

- The arms of the guide plate should be placed on the outer side of the arms of the direct send junction gate.



d521r413

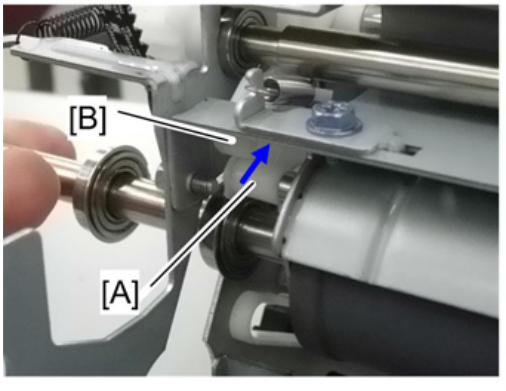
19. First fold roller with roller bracket [A]



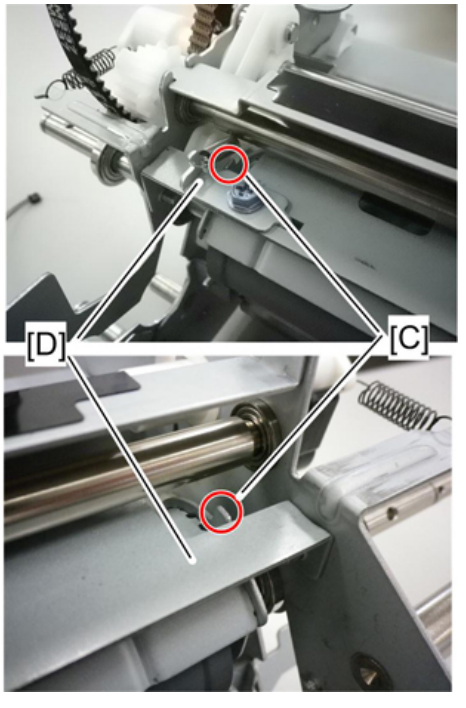
d521r304

Note

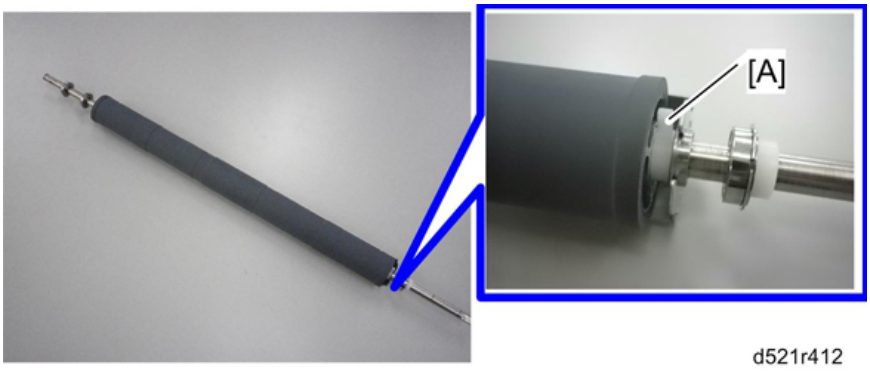
- When reinstalling the first fold roller, insert the white pivot [A] in the rail [B].
- Make sure that two projections [C] hook the stay bracket [D].



d521r414

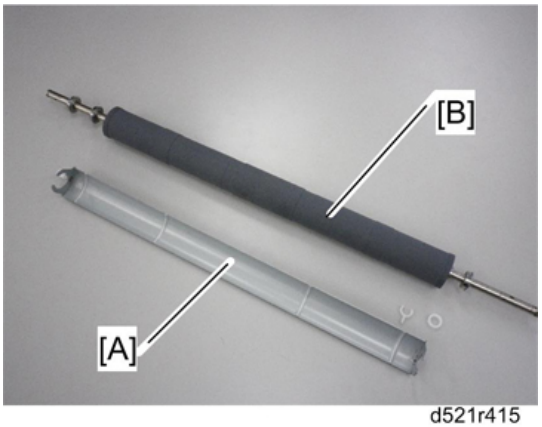


20. Roller stopper [A]



d521r412

21. Roller bracket [A]
22. First fold roller [B] (spacer x 1)

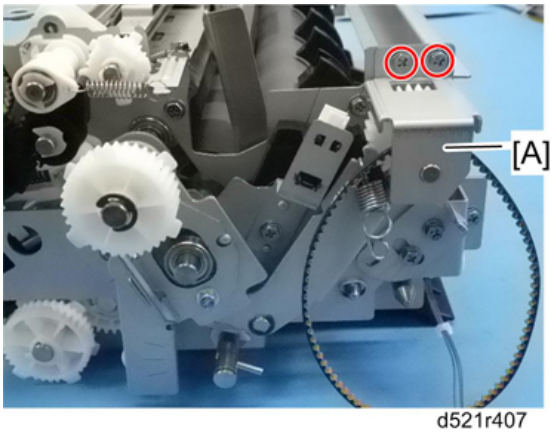


d521r415

When reinstalling the first, second and third fold rollers

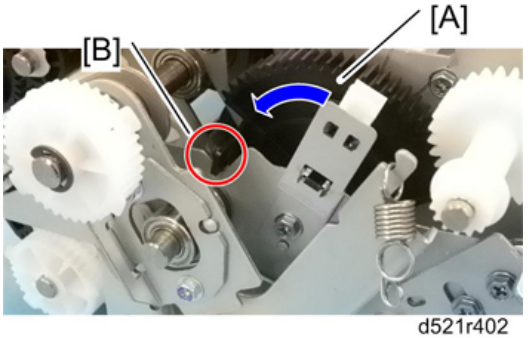
The rear cam gear (removed in step 10) must be adjusted when reinstalling the first, second and third fold rollers. Do the following procedure.

1. Remove the rear gear holder [A] (x 2).



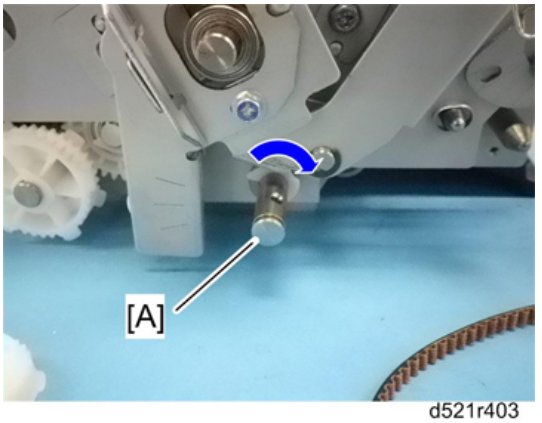
d521r407

2. Turn the direct send junction gate gear [A] to the left until the direct send junction gate gear stops at the edge [B] of the frame.



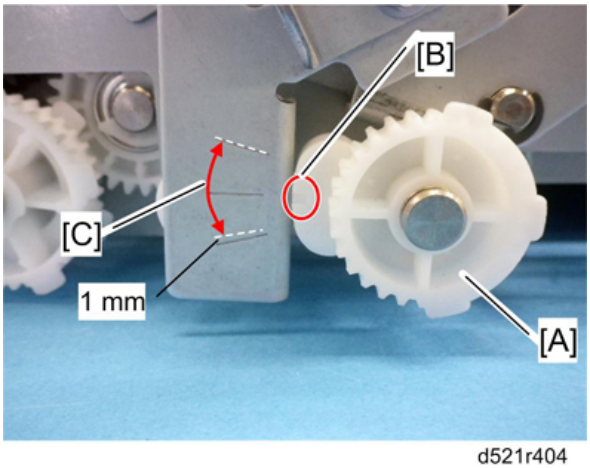
d521r402

3. Turn the cam gear shaft [A] clockwise until the cam gear shaft is stopped.



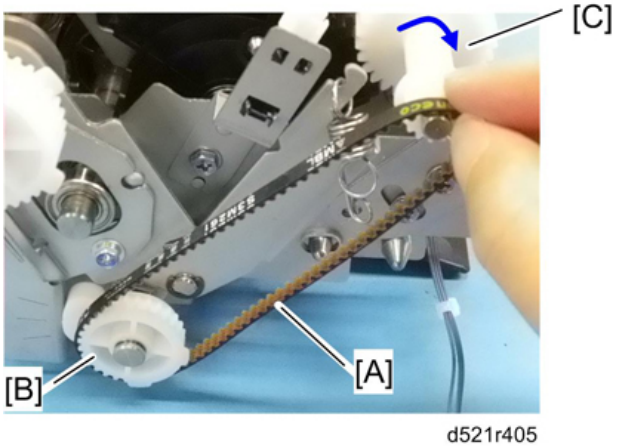
d521r403

4. Set the pin and rear cam gear [A] on the cam gear shaft.
5. Make sure that the notch [B] of the rear cam gear is positioned within the proper range [C]. The lowest position is 1 mm above the lowest of the three lines.



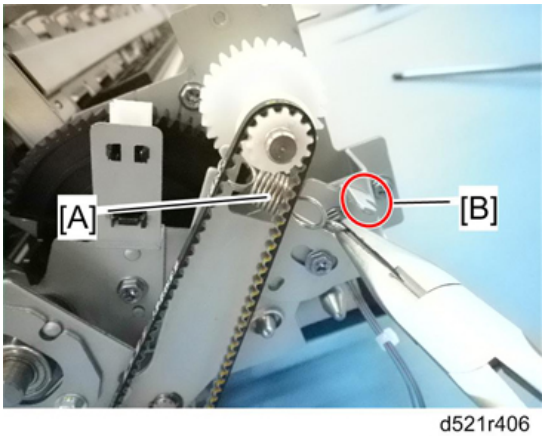
d521r404

6. Hook the timing belt [A] over the rear cam gear [B] first, and then hook the timing belt over the idle gear [C] while rotating the idle gear clockwise.
7. Check if the notch position of the rear cam gear is positioned within the proper range again.



d521r405

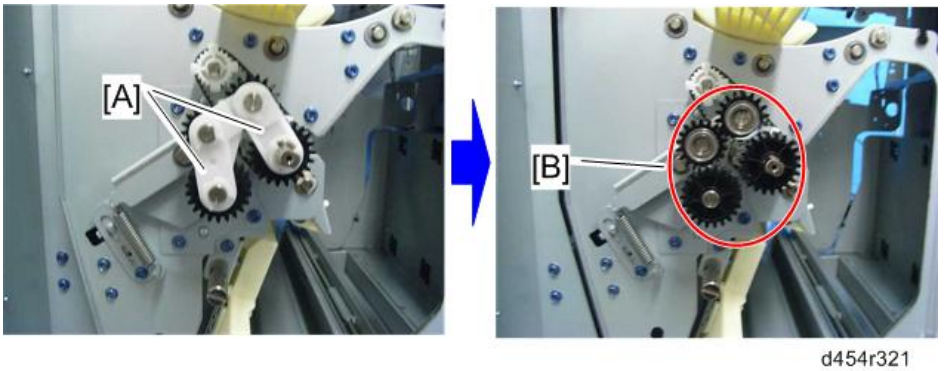
8. Attach the rear cam gear (x 1).
9. Attach the rear idle gear holder (x 2).
10. Hook the tension spring [A].



d521r406

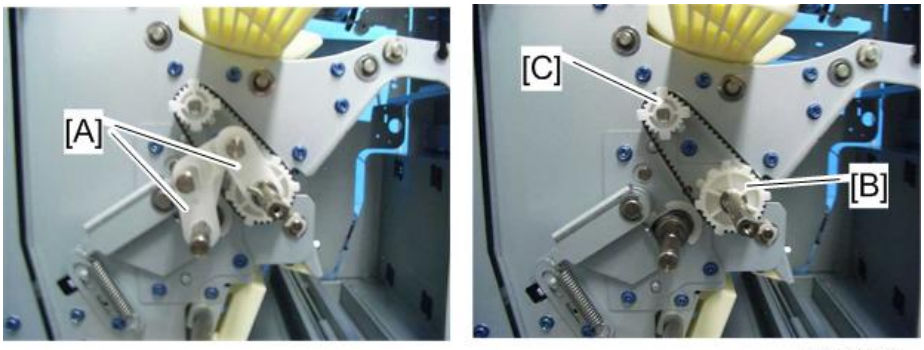
Fourth / Fifth Fold Roller

1. Rear upper cover (page 17)
2. Rear lower cover (page 17)
3. Drawer stopper (page 50)
4. Remove the links [A] on the front side (clip x 2 each).
5. Remove four gears [B].



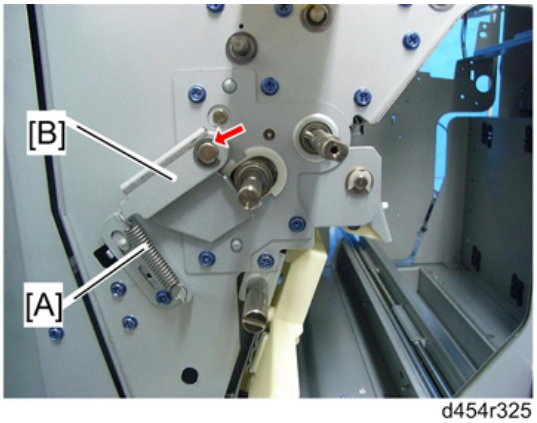
d454r321

6. Remove the links [A] (pin x 1 each)
7. Remove the gear [B] (x 1), and the gear [C] (timing belt x 1).



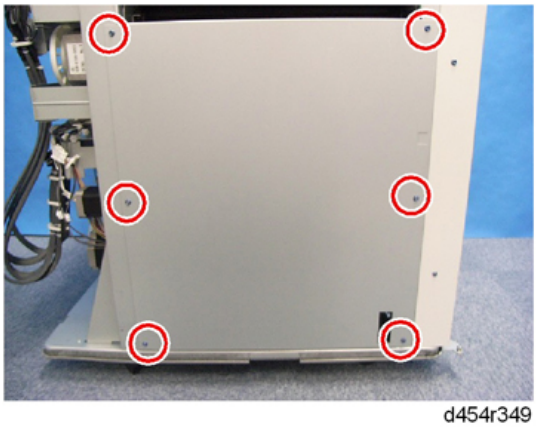
d454r323

8. Remove the spring [A] and the tension bracket [B] (x 1).



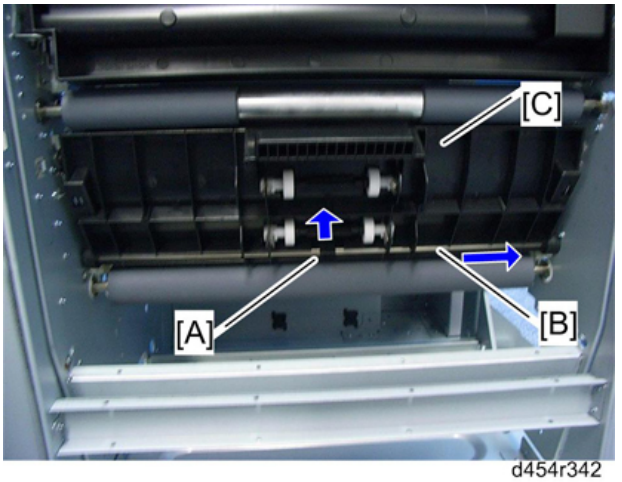
d454r325

9. Left lower bracket (x 6)



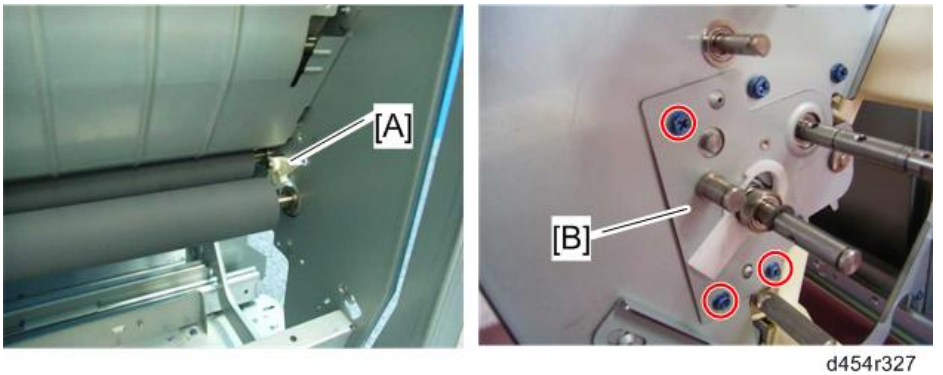
d454r349

10. Lift up the hook [A] to release the guide plate shaft [B].
11. Move the guide plate shaft [B] to the front side (arrow direction), and then remove the guide plate [C].



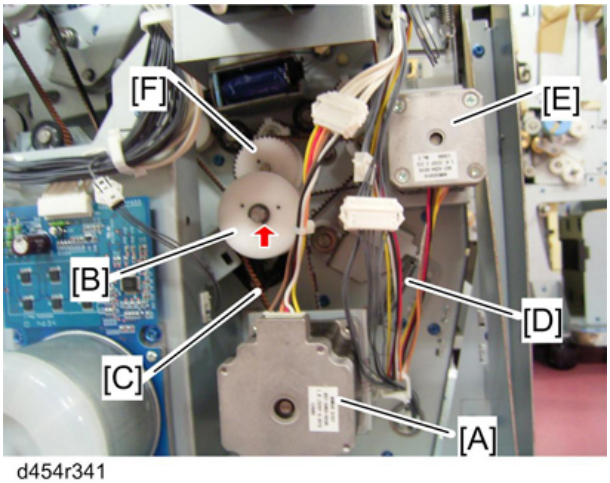
d454r342

12. Remove the cam [A] on the front side.
13. Fold roller fixing front plate [B] (x 3)



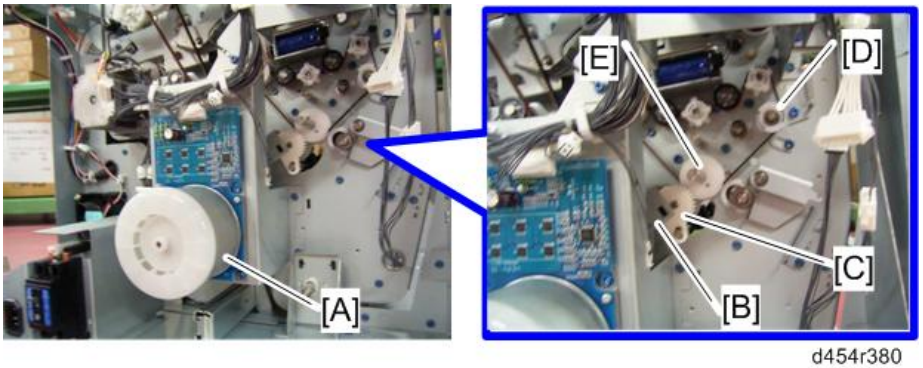
d454r327

14. 2nd fold motor [A] (page 34)
15. 2nd fold pulley gear [B] (x 1) and idle gear
16. Timing belt [C]
17. Spring [D]
18. FM6 pawl motor [E] (page 33
19. Pulley gear [F]



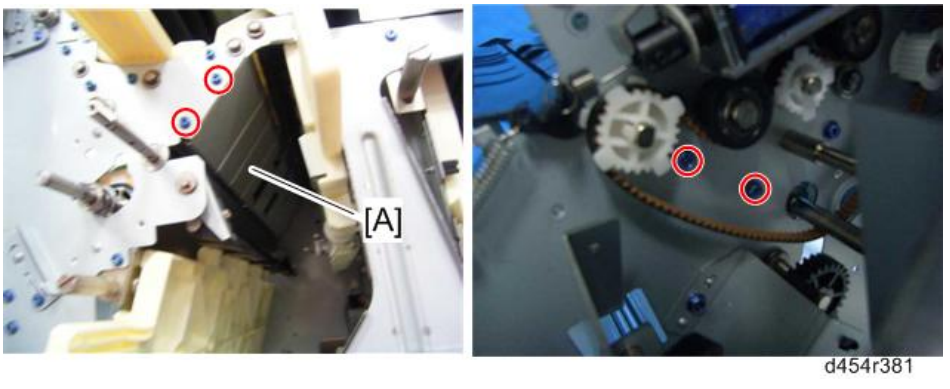
d454r341

20. 1st fold motor [A] (page 33)
21. FM6 pawl HP sensor bracket [B]
22. FM6 pawl cam gear [C]
23. Release the tension bracket [D], and then remove the transmission pulley gear [E] (pin x 1)



d454r380

24. Remove the entrance guide plate [A] at the 2nd fold unit (x 4).



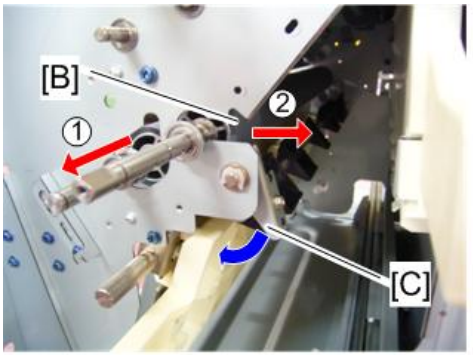
d454r381

25. Hold the fourth fold roller cam [A] at the rear of the drawer unit.

26. Pull the fourth fold roller [B] to the front side ①.
27. Keep the FM6 pawl [C] open, and then remove the fourth fold roller ②.

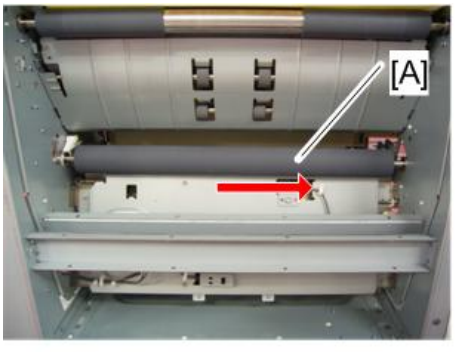
Note

- Hold the holder [A] when pulling the fourth fold roller [B] in the ① direction.



d454r379

28. Remove the fifth fold roller [A].



d454r340

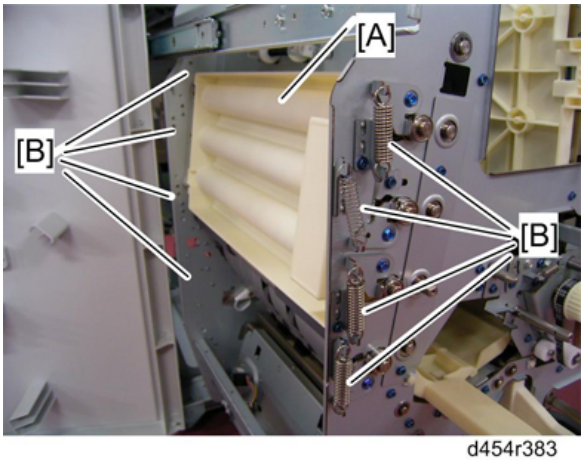
Crease Rollers

Crease Rollers: Idle Rollers

1. Folding Unit Cover (page 16)
2. Drawer stopper (page 50)
3. Pull out the folding unit drawer fully (page 19)
4. Crease jam removal door [A]
5. Tension springs [B] (front: 4, rear: 4)

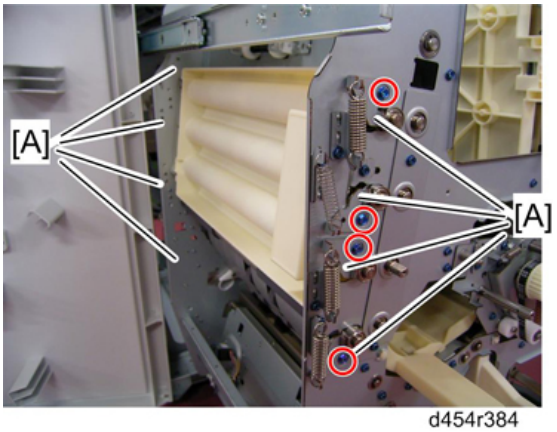
Note

- The lowest spring should be a black one when reinstalling the springs



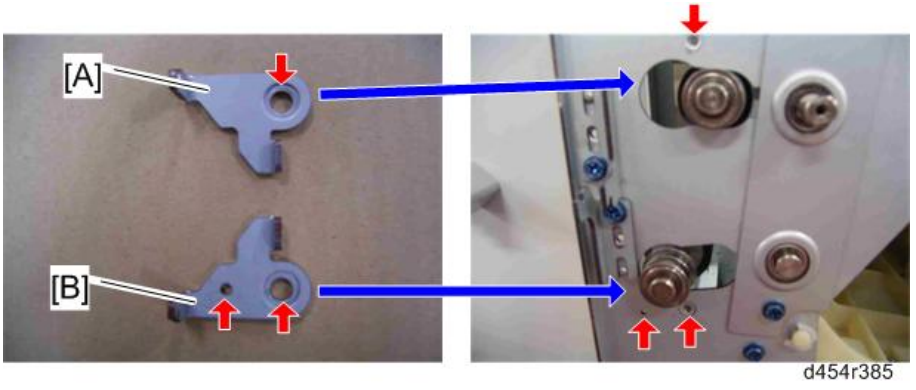
d454r383

6. Tension brackets [A] (x 1 each/ front: 4, rear: 4)



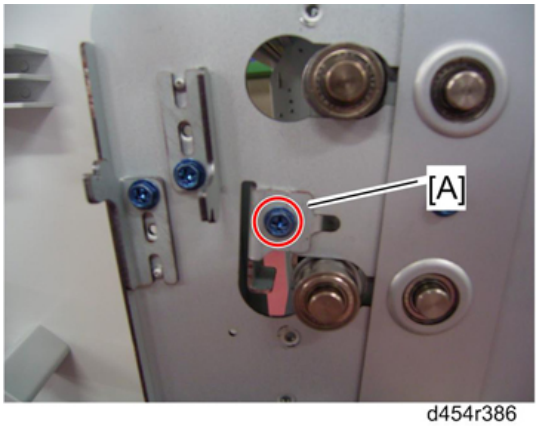
d454r384

7. There are two types of tension brackets at the crease roller area. The difference between these brackets is the number of screw holes ([A]: one hole, [B]: two holes).
   - Attach a bracket [A] with one hole to the crease roller frame with one hole.
   - Attach a bracket [B] with two holes to the crease roller frame with two holes.



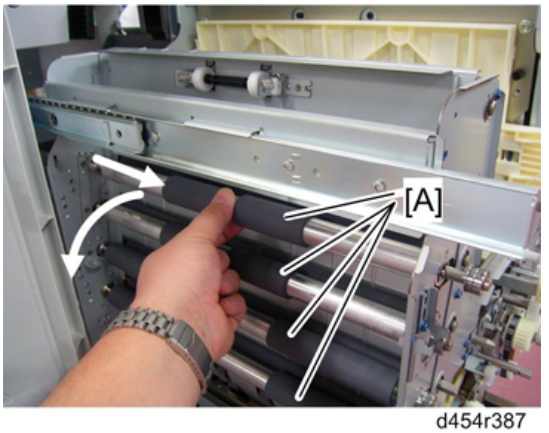
d454r385

8. Magnet attachment bracket [A] (x 1)



d454r386

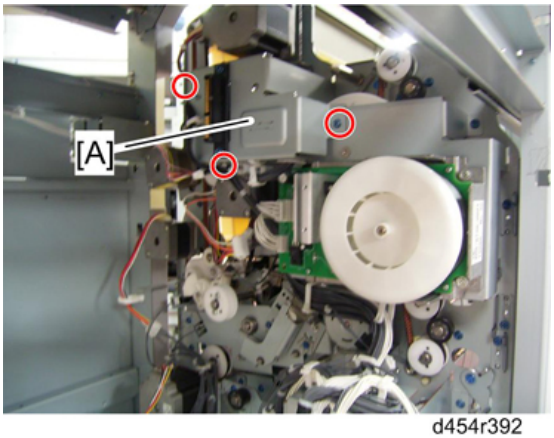
9. Crease rollers: idle rollers [A]



d454r387

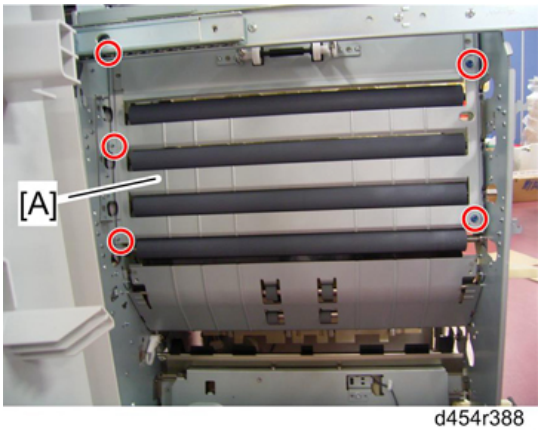
Crease Rollers: Drive Rollers

1. Crease Rollers: Idle Rollers (described above)
2. Rear upper cover (page 17)
3. Rear lower cover (page 17)
4. Main board bracket (page 23)
5. Rear upper stay (page 25)
6. Drawer connector bracket [A] (x 3)



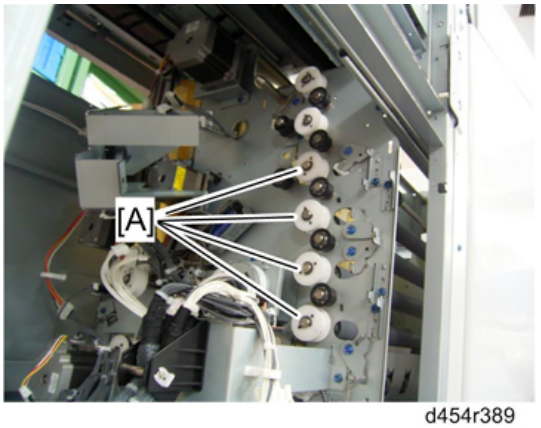
d454r392

7. Crease motor (page 26)
8. Crease path guide plate [A] (x 5)



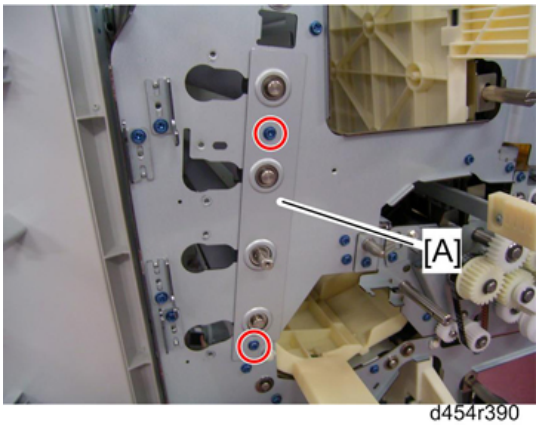
d454r388

9. Crease roller pulley gears [A] (x 1 each)



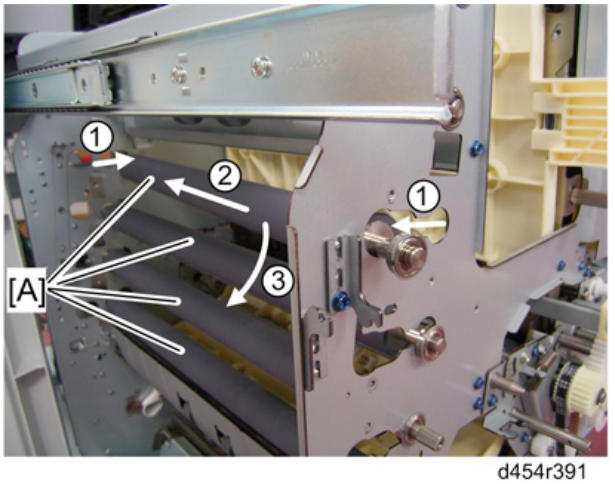
d454r389

10. Crease roller fixing plate [A] (x 2)



d454r390

11. Crease rollers: drive rollers [A]



d454r391

Fold Adjustments

Fine Fold Adjustment

Before You Begin

The fold positions can be adjusted in the User Tools (Operators and Skilled Operators), the engine SP mode and Advanced Settings.

- Administrator Log-in is required to adjust Advanced Settings.
- Advanced Settings is enabled only for Custom Paper.
- Advanced Settings should be specified for each Custom Paper Profile.

Advanced Settings

Mode	Fold	Advanced Settings*1	SP
FM1	1st	54 Adjust Z-fold Position 1	-
	2nd	55 Adjust Z-fold Position 2	-
FM2	1st	56 Half Fold Position: Single-sheet Fold	-
FM3	1st	57 Letter Fold-out Posn 1: Single-sheet Fld	-
	2nd	58 Letter Fold-out Posn 2: Single-sheet Fld	-
FM4	1st	59 Letter Fold-in Posn 1: Single-sheet Fold	-
	2nd	60 Letter Fold-in Posn 2: Single-sheet Fold	-
FM5	1st	61 Double Parallel Fold Position 1	-
	2nd	62 Double Parallel Fold Position 2	-
FM6	1st	63 Adjust Gate Fold Position 1	-
	2nd	64 Adjust Gate Fold Position 2	-
	3rd	65 Adjust Gate Fold Position 3	-

*1: These numbers are the same for the advanced settings of Administrator. These settings can be adjusted for each paper profile.

Adjustment Settings for Skilled Operators and Engine SP modes

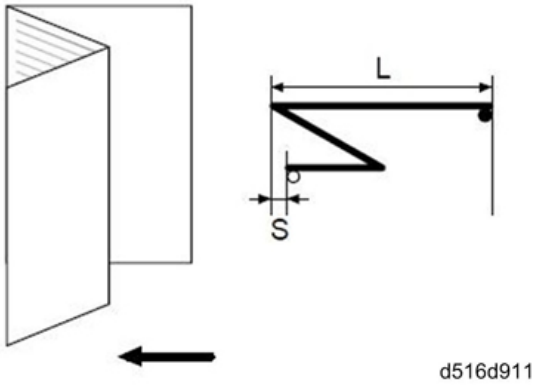
Mode	Fold	User Tools*2	SP
FM3	1st	0601 Half Fold Position (Multi-sheet Fold)	6-752-101 to -111
FM4	1st	0602 Letter Fold-out Position 1 (Multi-sheet Fold)	6-753-101 to -111
	2nd	0603 Letter Fold-out Position 2 (Multi-sheet Fold)	6-754-101 to -111
FM5	1st	0604 Letter Fold-in Position 1 (Multi-sheet Fold)	6-755-101 to -111
	2nd	0605 Letter Fold-in Position 2 (Multi-sheet Fold)	6-756-101 to -111

*2: These numbers are the same for the User Tools (Operators and Skilled Operators).

FM1 Z-Folding

54: Adjust Z-fold Position 1

Adjust the width of the bottom end segment (S) of Z-folded sheets when using the multi-folding unit.



Press [+] to increase and [-] to reduce (S).

The mark ● indicates the leading edge (relative to the paper feed direction), and the mark ○ indicates the trailing edge.

Size	Setting	Default	Range
All sizes	S	0 mm	-4 to 4 mm

Size	Setting	Default	Range
Pitch Adj.	0.2 mm		

55: Adjust Z-fold Position 2

Adjust the overall fold size (L) of Z-folded sheets when using the multi-folding unit. Press [+] to increase and [-] to reduce (L).

The mark ● indicates the leading edge (relative to the paper feed direction), and the mark ○ indicates the trailing edge.

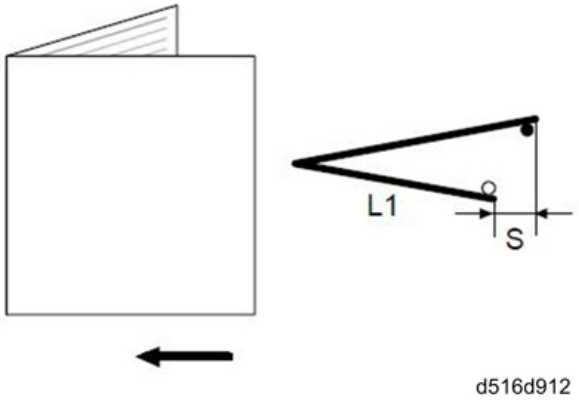
Size	Setting	Default	Range
All sizes	L	0 mm	-4 to 4 mm
Pitch Adj.	0.2 mm		

FM2 Half Fold: Single-sheet Fold and Multi-sheet Fold

56: Half Fold Position: Single-sheet Fold

Adjust the fold position (S) of half folded sheets when using the multi-folding unit.

This setting will not be applied when the multi-sheet fold function is enabled.



Press [+] to increase and [-] to reduce (S).

The mark ● indicates the leading edge (relative to the paper feed direction), and the mark ○ indicates the trailing edge.

Size	Setting	Default	Range
All sizes	L1	0 mm	-4 to 4 mm

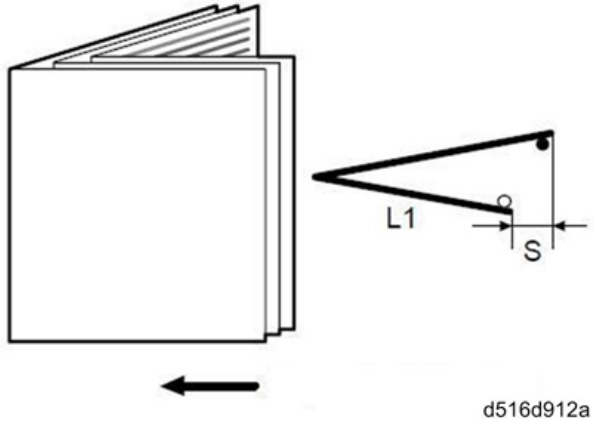
Size	Setting	Default	Range
Pitch Adj.	0.2 mm		

1

0601: Half Fold Position (Multi-sheet Fold)/ SP6-752-101 to -111

Adjust the folded position (S) of half folded sheets when using the multi-folding unit.

This setting will be applied if the multi-sheet fold function is enabled.



Press [+] to increase and [-] to reduce (S).

The mark ● indicates the leading edge (relative to the paper feed direction), and the mark ○ indicates the trailing edge.

Size	Setting	Default	Range	SP
A3 SEF	S	0 mm	±4 mm	6-752-101
B4 SEF	S	0 mm	±4 mm	6-752-102
A4 SEF	S	0 mm	±4 mm	6-752-103
B5 SEF	S	0 mm	±4 mm	6-752-109
13″x19″ SEF	S	0 mm	±4 mm	6-752-110
12″x18″ SEF	S	0 mm	±4 mm	6-752-107
11″x17″ SEF (DLT SEF)	S	0 mm	±4 mm	6-752-104
$8_{1/2}$"x14" SEF (LG SEF)	S	0 mm	±4 mm	6-752-105

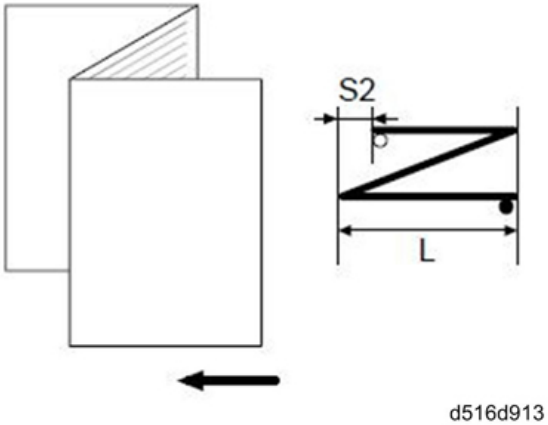
Size	Setting	Default	Range	SP
$8_{1/2}$"x11" SEF (LT SEF)	S	0 mm	±4 mm	6-752-106
8K (8-Kai)	S	0 mm	±4 mm	6-752-108
Other (Custom)	S	0 mm	±4 mm	6-752-111
Pitch Adj.	**0.2 mm**			

FM3 Letter Fold-out: Single-sheet Fold and Multi-sheet Fold

57 Letter Fold-out Posn 1: Single-sheet Fld

Adjust the fold position for the bottom segment (S2) of letter fold-out sheets when using the multi-folding unit.

This setting will not be applied when the multi-sheet fold function is enabled.



d516d913

Press [+] to increase and [-] to reduce (S2).

The mark ● indicates the leading edge (relative to the paper feed direction), and the mark ○ indicates the trailing edge.

Size	Setting	Default	Range
All Sizes	S2	0 mm	±3 mm B5 SEF ±4 Other
Pitch Adj.	**0.2 mm**		

1

58: Letter Fold-out Posn 2: Single-sheet Fld

Adjust the overall fold size (L) of letter fold-out sheets when using the multi-folding unit.

This setting will not be applied when the multi-sheet fold function is enabled.

Press [+] to increase and [-] to reduce (L).

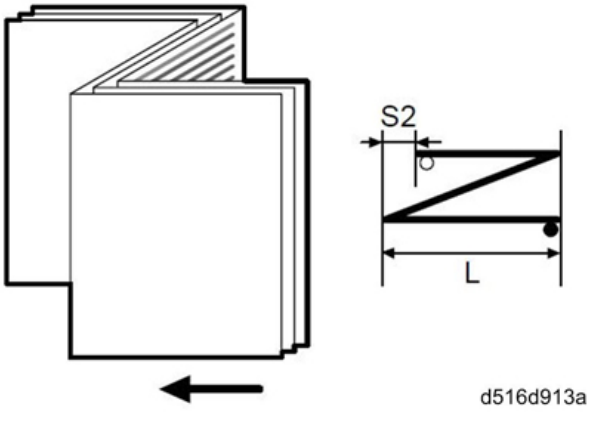
The mark ● indicates the leading edge (relative to the paper feed direction), and the mark ○ indicates the trailing edge.

Size	Setting	Default	Range
All Sizes	L	0 mm	±3 mm B5 SEF ±4 Other
Pitch Adj.	**0.2 mm**		

0602: Letter Fold-out Position 1 (Multi-sheet Fold)/ SP6-753-101 to -108

Adjust the fold position for the bottom segment (S2) of letters fold-out sheets when using the multi-folding unit.

This setting will be applied if the multi-sheet fold function is enabled.



Press [+] to increase and [-] to reduce (S2).

The mark ● indicates the leading edge (relative to the paper feed direction), and the mark ○ indicates the trailing edge.

Size	Setting	Default	Range	SP
B4 SEF	S2	0 mm	±4 mm	6-753-101
A4 SEF	S2	0 mm	±4 mm	6-753-102

Size	Setting	Default	Range	SP
B5 SEF	S2	0 mm	±3 mm	6-753-107
$8_{1/2}$"x14" SEF (LG SEF)	S2	0 mm	±4 mm	6-753-103
$8_{1/2}$"x11" SEF (LT SEF)	S2	0 mm	±4 mm	6-753-104
Other (Custom)	S2	0 mm	±4 mm	6-753-108
Pitch Adj.	**0.2 mm**			

0603: Letter Fold-out Position 2 (Multi-sheet Fold)/ SP6-754-101 to -108

Adjust the overall fold size (L) of letters fold-out sheets when using the multi-folding unit.

This setting will be applied if the multi-sheet fold function is enabled.

Press [+] to increase and [-] to reduce (L).

The mark ● indicates the leading edge (relative to the paper feed direction), and the mark ○ indicates the trailing edge.

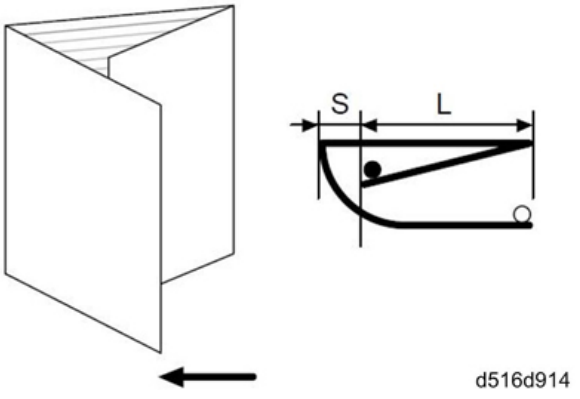
Size	Setting	Default	Range	SP
B4 SEF	L	0 mm	±4 mm	6-754-101
A4 SEF	L	0 mm	±4 mm	6-754-102
B5 SEF	L	0 mm	±3 mm	6-754-107
$8_{1/2}$"x14" SEF (LG SEF)	L	0 mm	±4 mm	6-754-103
$8_{1/2}$"x11" SEF (LT SEF)	L	0 mm	±4 mm	6-754-104
Other (Custom)	L	0 mm	±4 mm	6-754-108
Pitch Adj.	**0.2 mm**			

FM4 Letter Fold-in: Single-sheet Fold and Multi-sheet Fold

59: Letter Fold-in Posn 1: Single-sheet Fold

Adjust the fold position of the bottom segment (S) of letter fold-in sheets when using the multi-folding unit.

This setting will not be applied when the multi-sheet fold function is enabled.



Press [+] to increase and [-] to reduce (S).

The mark ● indicates the leading edge (relative to the paper feed direction), and the mark ○ indicates the trailing edge.

Size	Setting	Default	Range
All Sizes	S	0 mm	±4 mm
Pitch Adj.	**0.2 mm**		

60: Letter Fold-in Posn 2: Single-sheet Fold

Adjust the overall fold size (L) of letter fold-in sheets when using the multi-folding

unit.

This setting will not be applied when the multi-sheet fold function is enabled.

Press [+] to increase and [-] to reduce (L).

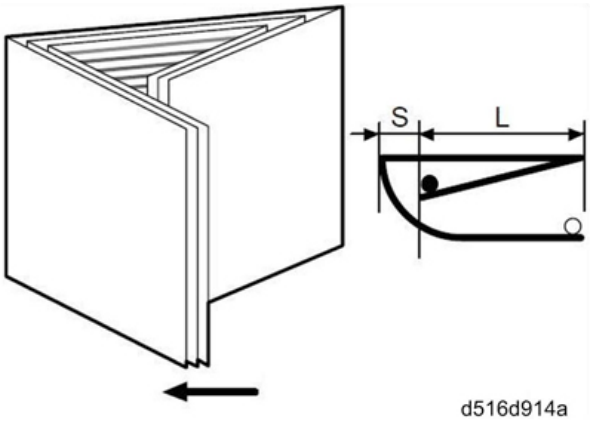
The mark ● indicates the leading edge (relative to the paper feed direction), and the mark ○ indicates the trailing edge.

Size	Setting	Default	Range
All Supported Sizes	L	0 mm	±4 mm
Pitch Adj.	**0.2 mm**		

0604: Letter Fold-in Position 1 (Multi-sheet Fold)/ SP6-755-101 to -111

Adjust the fold position of the bottom segment (S) of letters fold-in sheets when using the multi-folding unit.

This setting will be applied if the multi-sheet fold function is enabled.



Press [+] to increase and [-] to reduce (S).

The mark ● indicates the leading edge (relative to the paper feed direction), and the mark ○ indicates the trailing edge.

Size	Setting	Default	Range	SP
A3 SEF	S	0 mm	±4 mm	6-755-101
B4 SEF	S	0 mm	±4 mm	6-755-102
A4 SEF	S	0 mm	±4 mm	6-755-103
B5 SEF	S	0 mm	±4 mm	6-755-109
12″x18″ SEF	S	0 mm	±4 mm	6-755-107
11″x17″ SEF (DLT SEF)	S	0 mm	±4 mm	6-755-104
$8_{1/2}$"x14" SEF (LG SEF)	S	0 mm	±4 mm	6-755-105
$8_{1/2}$"x11" SEF (LT SEF)	S	0 mm	±4 mm	6-755-106
8K (8-Kai)	S	0 mm	±4 mm	6-755-108
Other (Custom)	S	0 mm	±4 mm	6-755-110
Pitch Adj.	**0.2 mm**			

0605: Letter Fold-in Position 2 (Multi-sheet Fold)/ SP6-756-101 to -111

Adjust the fold position(L) of letters fold-in sheets when using the multi-folding unit.

This setting will be applied if the multi-sheet fold function is enabled.

Press [+] to increase and [-] to reduce (L).

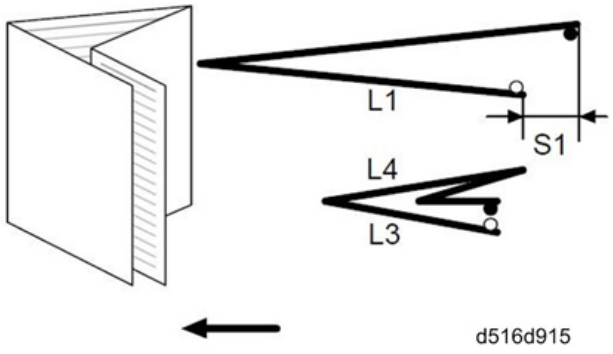
The mark ● indicates the leading edge (relative to the paper feed direction), and the mark ○ indicates the trailing edge.

Size	Setting	Default	Range	SP
A3 SEF	L	0 mm	±4 mm	6-756-101
B4 SEF	L	0 mm	±4 mm	6-756-102
A4 SEF	L	0 mm	±4 mm	6-756-103
B5 SEF	L	0 mm	±4 mm	6-756-109
12″x18″ SEF	L	0 mm	±4 mm	6-756-107
11″x17″ SEF (DLT SEF)	L	0 mm	±4 mm	6-756-104
$8_{1/2}$"x14" SEF (LG SEF)	L	0 mm	±4 mm	6-756-105
$8_{1/2}$"x11" SEF (LT SEF)	L	0 mm	0 to 4 mm	6-756-106
8K (8-Kai)	L	0 mm	±4 mm	6-756-108
Other (Custom)	L	0 mm	±4 mm	6-756-110
Pitch Adj.	**0.2 mm**			

FM5 Double Parallel Fold

61: Double Parallel Fold Position 1

Adjust the fold position of the bottom segment 1 (S1) of double parallel-folded sheets when using the multi-folding unit.]



Press [+] to increase and [-] to reduce (S1).

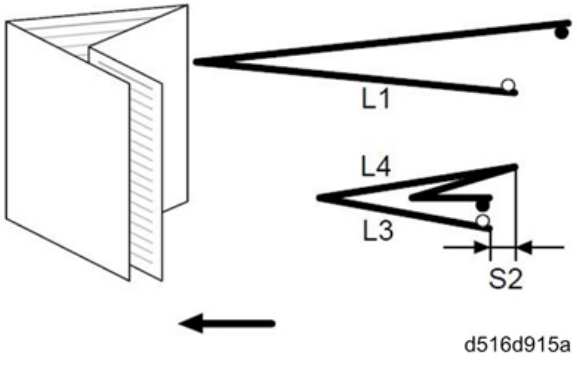
The upper right illustration shows a partly opened, double parallel-folded sheet (folded in half), and the lower right illustration shows a fully folded sheet.

The mark ● indicates the leading edge (relative to the paper feed direction), and the mark ○ indicates the trailing edge.

Size	Setting	Default	Range
All Supported Sizes	S1	0 mm	±4 mm
Pitch Adj.	**0.2 mm**		

62: Double Parallel Fold Position 2

Adjust the fold position of the bottom segment 2 (S2) of double parallel-folded sheets when using the multi-folding unit.



Press [+] to increase and [-] to reduce (S2).

The upper right illustration shows a partly opened, double parallel-folded sheet (folded in half), and the lower right illustration shows a fully folded sheet.

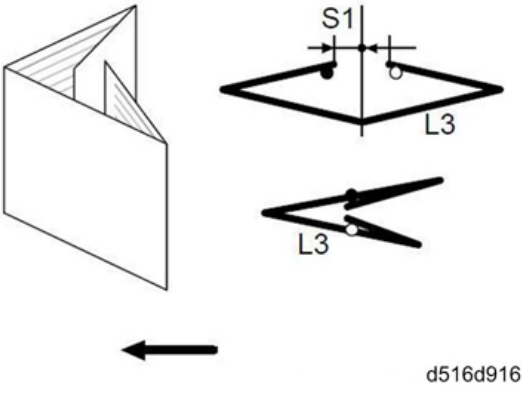
The mark ● indicates the leading edge (relative to the paper feed direction), and the mark ○ indicates the trailing edge.

Size	Setting	Default	Range
All Supported Sizes	S2	0 mm	±4 mm
Pitch Adj.	**0.2 mm**		

FM6 Gate Fold

63: Adjust Gate Fold Position 1

Adjust the fold width of the bottom segment 1 (S1) of gate folded sheets when using the multi-folding unit.



Press [+] to increase and [-] to reduce (S1).

The upper right illustration shows a partly opened, gate folded sheet, and the lower right illustration shows a fully folded sheet.

The mark ● indicates the leading edge (relative to the paper feed direction), and the mark ○ indicates the trailing edge.

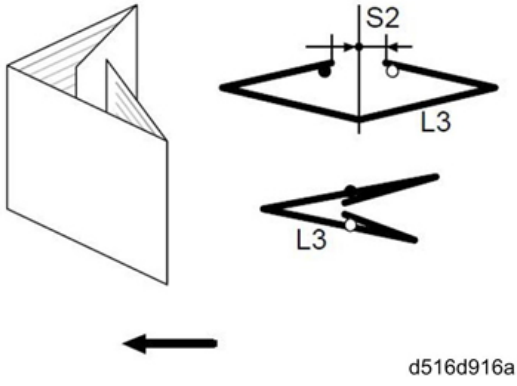
Size	Setting	Default	Range
All Supported Sizes	S1	0 mm	±4 mm
Pitch Adj.	**0.2 mm**		

Note

- You cannot specify this setting when using 12"x 18"L paper.

64: Adjust Gate Fold Position 2

Adjust the fold width of the bottom segment 2 (S2) of gate folded sheets when using the multi-folding unit.



Press [+] to increase and [-] to reduce (S2).

The upper right illustration shows a partly opened, double parallel-folded sheet (folded in half), and the lower right illustration shows a fully folded sheet.

The mark ● indicates the leading edge (relative to the paper feed direction), and the mark ○ indicates the trailing edge.

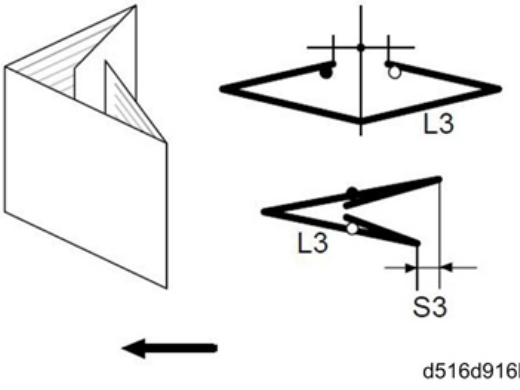
Size	Setting	Default	Range
All Supported Sizes	S2	0 mm	±4 mm
Pitch Adj.	**0.2 mm**		

Note

- You cannot specify this setting when using 12"x 18"L paper.

65: Adjust Gate Fold Position 3

Adjust the fold position of the bottom segment 3 (S3) of gate folded sheets when using the multi-folding unit.



Press [+] to increase and [-] to reduce (S3).

The upper right illustration shows a partly opened, double parallel-folded sheet (folded in half), and the lower right illustration shows a fully folded sheet.

The mark ● indicates the leading edge (relative to the paper feed direction), and the mark ○ indicates the trailing edge.

Size	Setting	Default	Range
All Supported Sizes	S3	0 mm	±4 mm
Pitch Adj.	**0.2 mm**		

Skew Adjustment

Manual Adjustments by Service Technician

Before You Begin

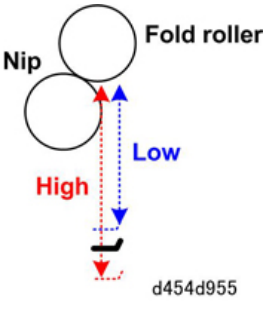
These adjustments can be done by the service technician adjusting the set and adjustment screws on the multi-folder unit.

The illustration above shows the positions of the three stoppers inside the machine. The positioning of the stoppers is critical because this determines the types of folding.

Front and Rear

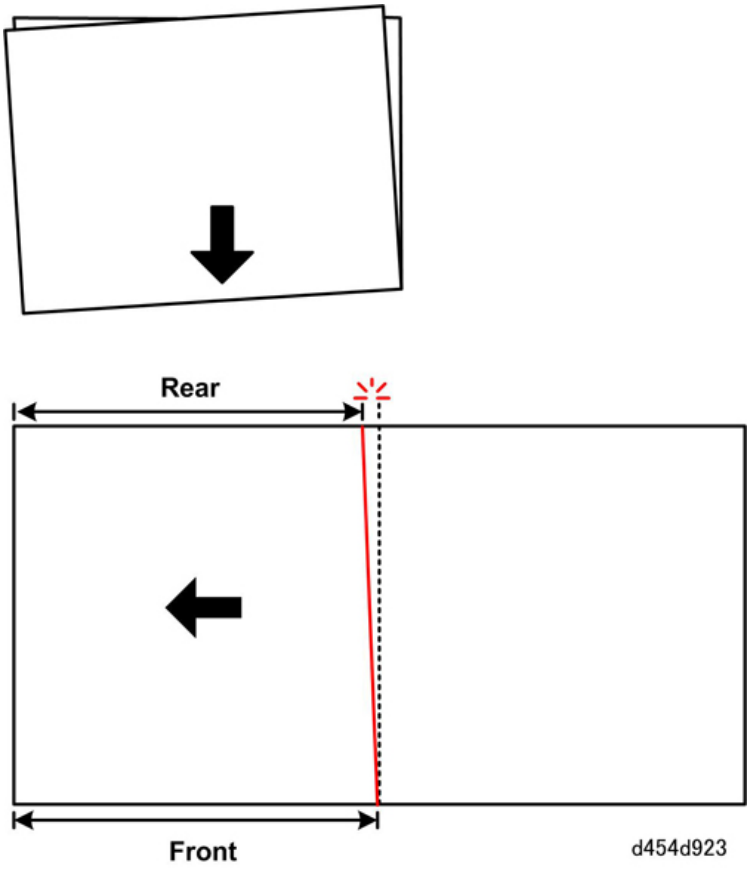
The terms "Front" and "Rear" are critical to understanding how paper is skewing during folding. These terms are defined relative to the positioning of the paper in the paper path as it feeds and exits.

- "High" means the distance from the nip of the fold roller to the stopper is too far on one end of the fence.
- "Low" means the distance from the nip of the fold roller to the stopper is too short.



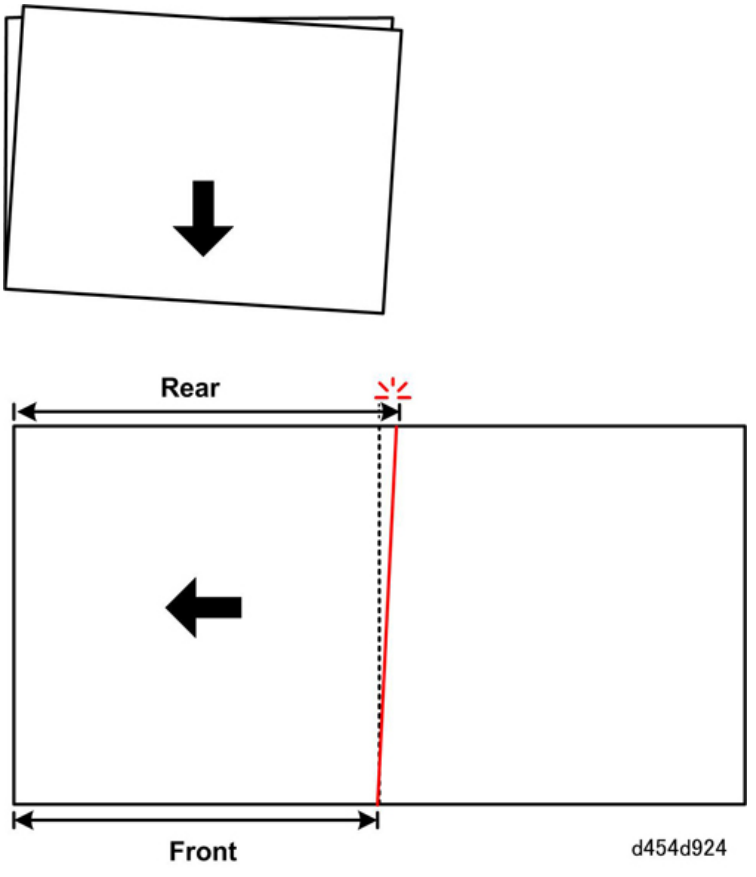
Two examples are shown below.

Example 1: High (Stopper Too Far From The Nip)



The black arrow shows the direction of paper feed from right to left. When the skew sheet is opened the **Front** edge is **longer** than the **Rear** edge.

Example 2: FM2: Low (Stopper to Close to the Nip)



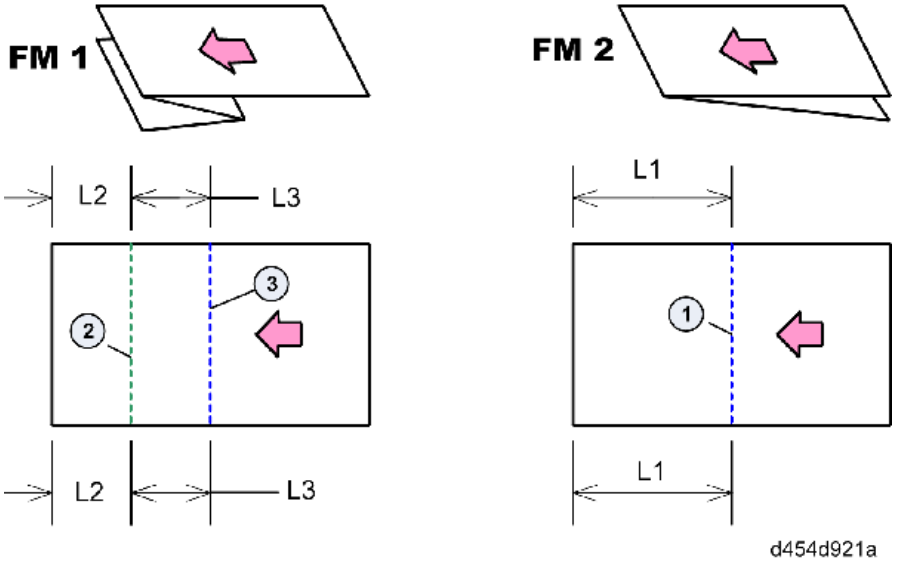
The black arrow shows the direction of paper feed from right to left. When the skew sheet is opened the **Front** edge is **shorter** than the **Rear** edge.

Skew Correction Reference Diagrams and Table

Skew Correction Reference Diagrams

Key

Symbol/Color	What It Means
①	Stopper 1 needs adjustment
②	Stopper 2 needs adjustment
③	Stopper 3 needs adjustment
Blue line	Peak fold (points left)
Green line	Valley fold (points right)


FM 1
L2
L3
3
2
L2
L3
FM 2
L1
1
L1
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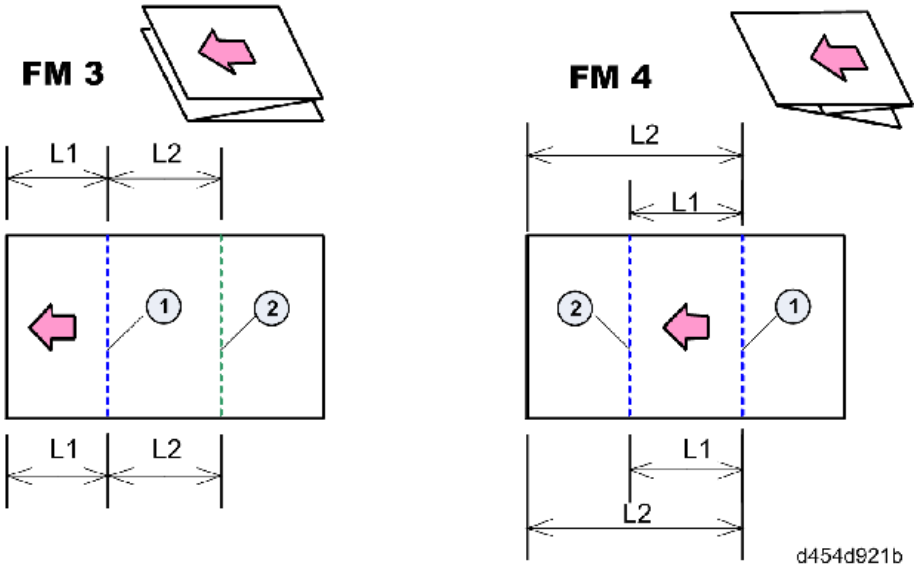
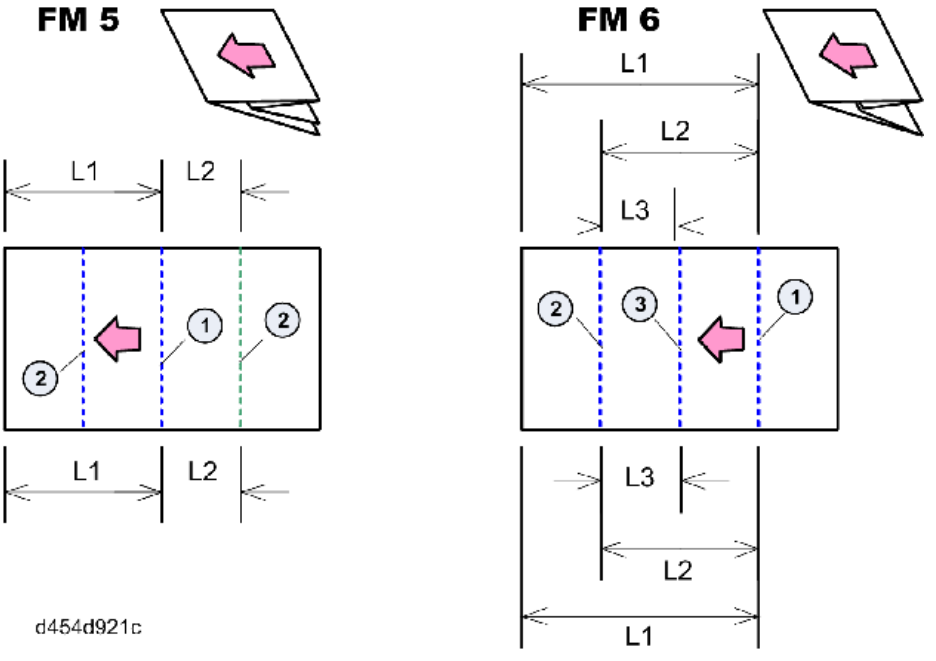

FM 3
L1
L2
1
2
L1
L2
FM 4
L2
L1
2
1
L1
L2
d454d921b



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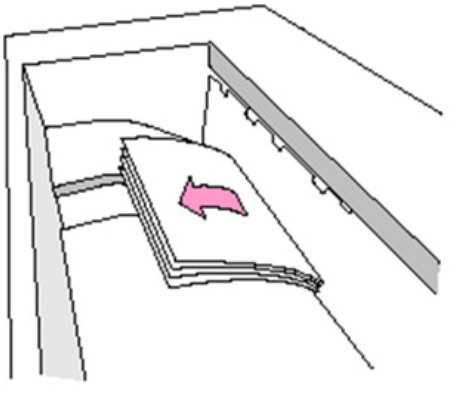
General Procedure



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1. Retrieve the first folded paper from the top of the multi-folder. The first sheet is on the bottom of the stack.
2. If a fold is skewed, spread the paper out in the direction of paper feed shown in the diagrams above.
3. Carefully measure the distances between the folds between L1, L2, L3.
4. Compare the **Front** and **Rear** measurements.

5. Refer to the table below to determine where the paper is skewing and what type of adjustment is required.

Skew Correction Reference Table

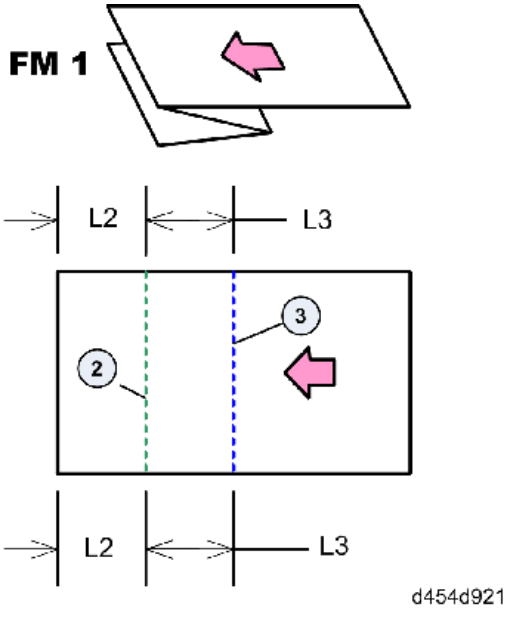
	L1	L2	L3	S1	S2	S3
FM1	---	**F** Long	**F** Long	---	Lower **F**	Raise **F**
	---	**F** Short	**F** Short	---	Raise **F**	Lower **F**
FM2	**F** Long	---	---	Raise **F**	---	---
	F Short	---	---	Lower **F**	---	---
FM3	**F** Long	**F** Long	---	Raise **F**	Lower **F**	---
	F Short	**F** Short	---	Lower **F**	Raise **F**	---
FM4	**F** Long	**F** Long	---	Raise **F**	Lower **F**	---
	F Short	**F** Short	---	Lower **F**	Raise **F**	---
FM5	**F** Long	**F** Long	---	Raise **F**	Lower **F**	---
	F Short	**F** Short	---	Lower **F**	Raise **F**	---
FM6	**F** Long	**F** Long	**F** Long	Lower **F**	Lower **F**	Raise **F**
	F Short	**F** Short	**F** Short	Raise **F**	Raise **F**	Lower **F**

Table Key

You must refer to the "Skew Correction Reference Diagrams". The following abbreviations are used in the table above.

Term	What It Means
F Long	**Front** measurement of L1, L2, or L3 is **longer** than **Rear**..
F Short	**Front** measurement of L1, L2, or L3 is **shorter** than **Rear**..
S1, S2, S3	Refers to Stopper 1, Stopper 2, Stopper. In the diagrams these are annotated as:①, ②, ③ respectively.
Raise **F**	Raise the front end of the stopper fence. For more, see below.
Lower **F**	Lower the front end of the stopper fence. For more, see below.

Example: FM1 (Z-fold)



First, compare the L2 measurements.

- In this example, imagine that L2 is longer at the front than at the rear.
- Look at the table, in the row for FM1, and the column for L2.
  - 'F Long' means Front measurement longer than Rear
  - 'F Short' means Rear measurement longer than Front
- L2 is longer at the front, so we have an 'F Long' situation.
- Then look at the next line, below 'F Long'. It says 'Lower F on S2'.
- This means you must lower the front end of stopper 2.

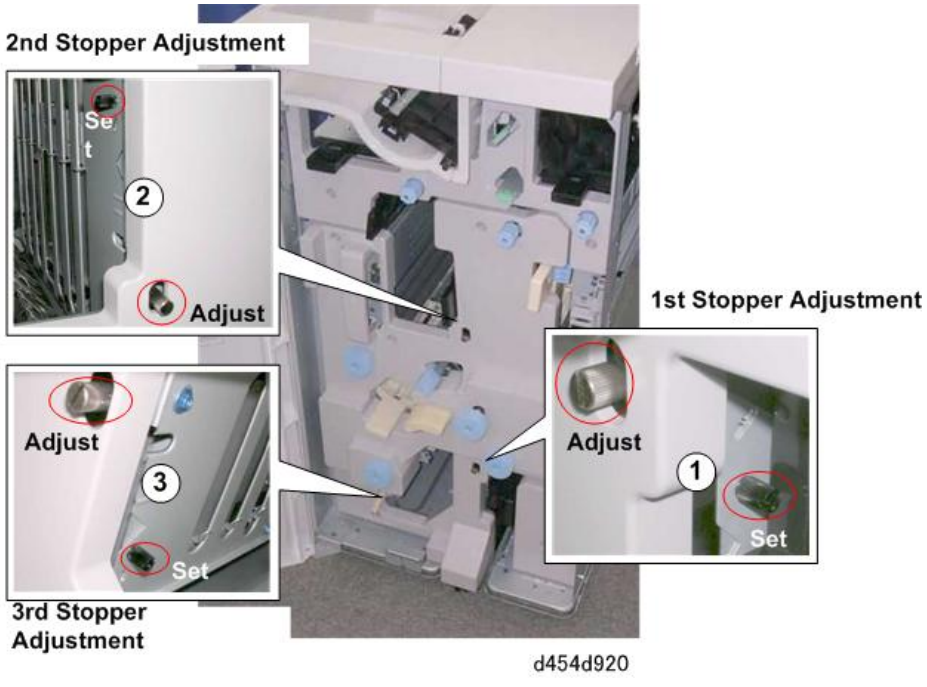
Then, compare the L3 measurements.

- In this example, imagine that L3 is longer at the front than at the rear.
- Look at the table, in the row for FM1, and the column for L3.
  - 'F Long' means Front measurement longer than Rear
  - 'F Short' means Rear measurement longer than Front
- L3 is longer at the front, so we have an 'F Long' situation again.
- Then look at the next line, below 'F Long'. It says 'Raise F on S3'.
- This means you must raise the front end of stopper 3.

Stopper Adjustment Procedures

1. Use the "Skew Correction Reference Diagrams" and "Skew Correction Reference Table" in the previous section to determine the location of the skew and which stopper needs adjustment.

2. Now you are ready to do the adjustment on the multi-folder unit.
3. The illustration below shows the location for each stopper adjustment.
    - Each stopper is equipped with two screws.
    - The black plastic screw is the Set screw and the metal silver screw is the Adjustment screw.



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4. Remove the Set screw.

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5. Turn the Adjustment screw to do the adjustment for the stopper.

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1st, 3rd Stopper

- Turn the Adjustment screw **clockwise** to **lower** the front end of the fence.

  -or-

- Turn the Adjustment screw **counter-clockwise** to **raise** the front of the fence.

2nd Stopper

- Turn the Adjustment screw **clockwise** to **raise** the front end of the fence.

  -or-

- Turn the Adjustment screw **counter-clockwise** to **lower** the front of the fence.

- Fasten the Set screw in the hole of the diagonal cutout near the hole where you removed it.

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Note

- The diagonal cut may be above or below the original hole, depending on which stopper you are adjusting.
- The photo above shows the Set screw for Stopper 2.

1. Tighten the Set screw so the plate holds the adjustment.

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