

Cross Folder
Machine Code: B890-51
Field Service Manual

August 2008
Subject to change

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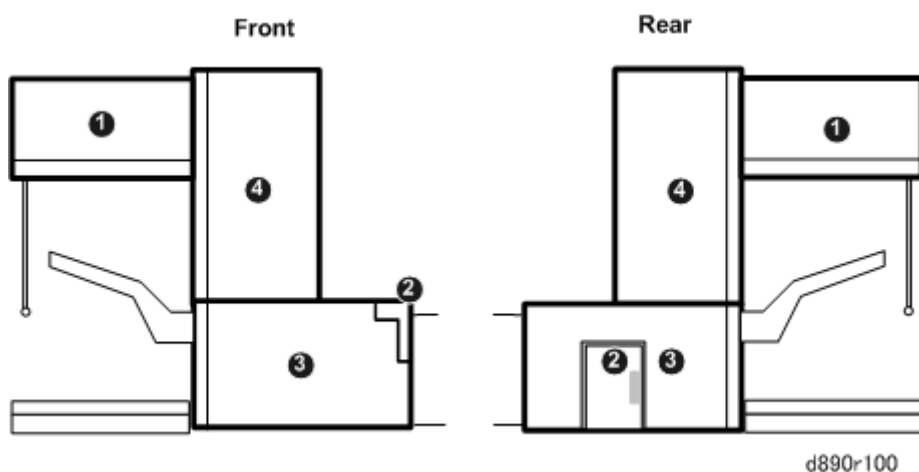
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1. Replacement and Adjustment

Common Procedures

1

Cross Fold Unit Covers



The front covers must be removed in this order:

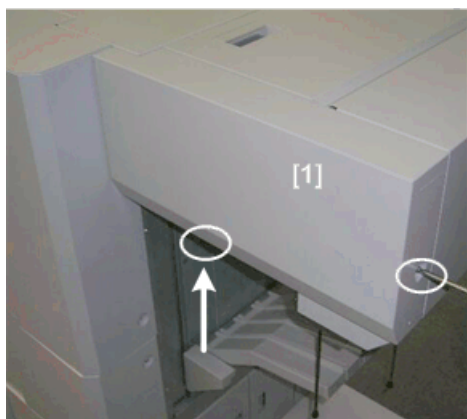
- ① Front exit cover
- ② Spacer
- ③ Front lower cover
- ④ Front upper cover

The rear covers must be removed in this order:

- ① Rear exit cover
- ② Rear door
- ③ Rear lower cover
- ④ Rear upper cover

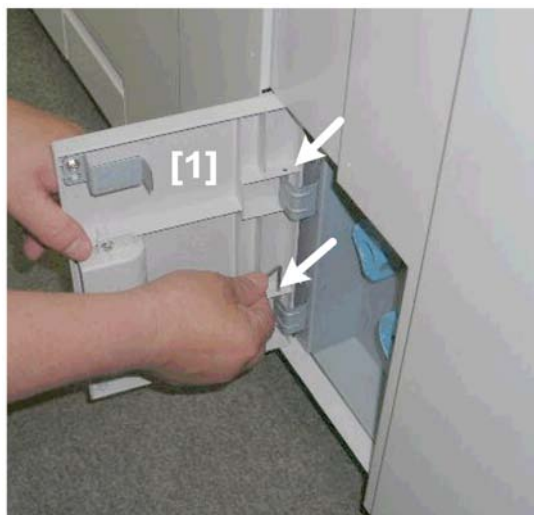
Rear Covers

1



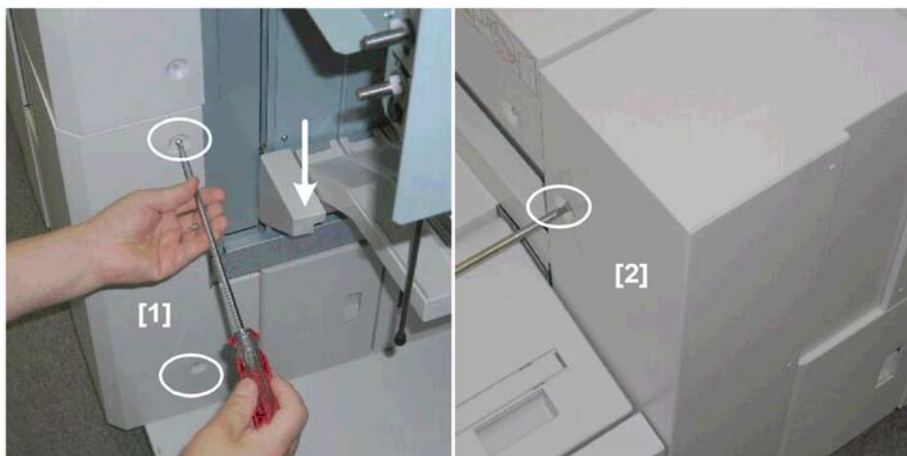
b889r101

1. Rear exit cover [1] (L-pin x2)



b890r102a

2. Rear door [1] (L-pin x2)

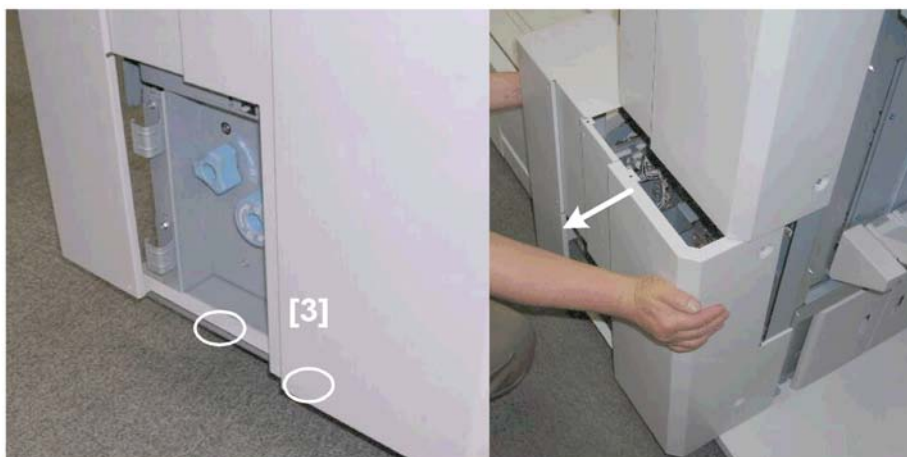


b890r102

3. Rear lower cover:

[1] Left corner (⚙️ x2)

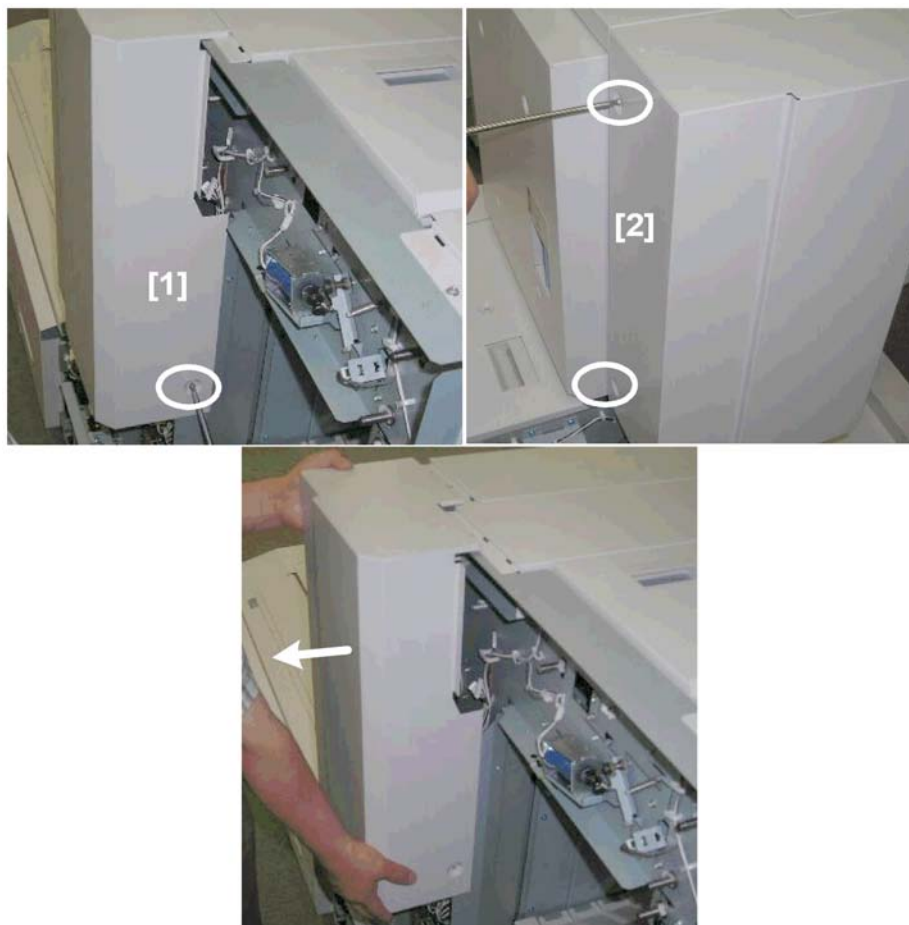
[2] Right corner (⚙️ x1)



b890r103

[3] Bottom screws (⚙️ x2).

1



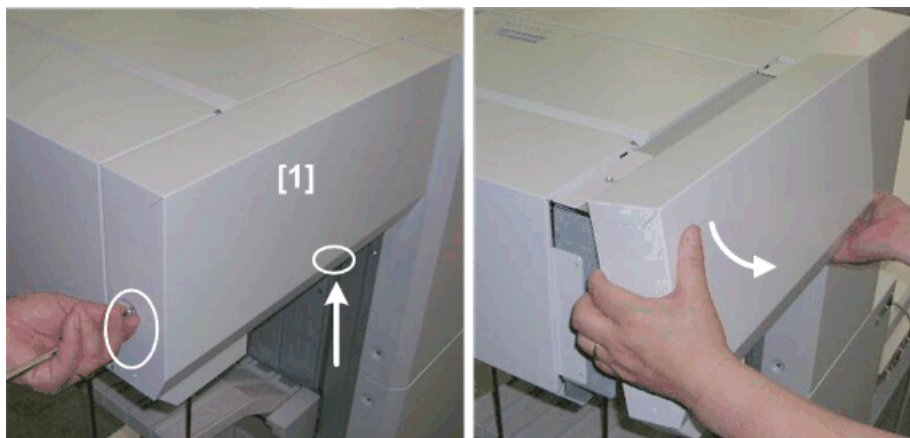
b890r105

4. Rear upper cover:

[1] Left corner (⚙ x1)

[2] Right corner (⚙ x2)

Front Covers



b890r107

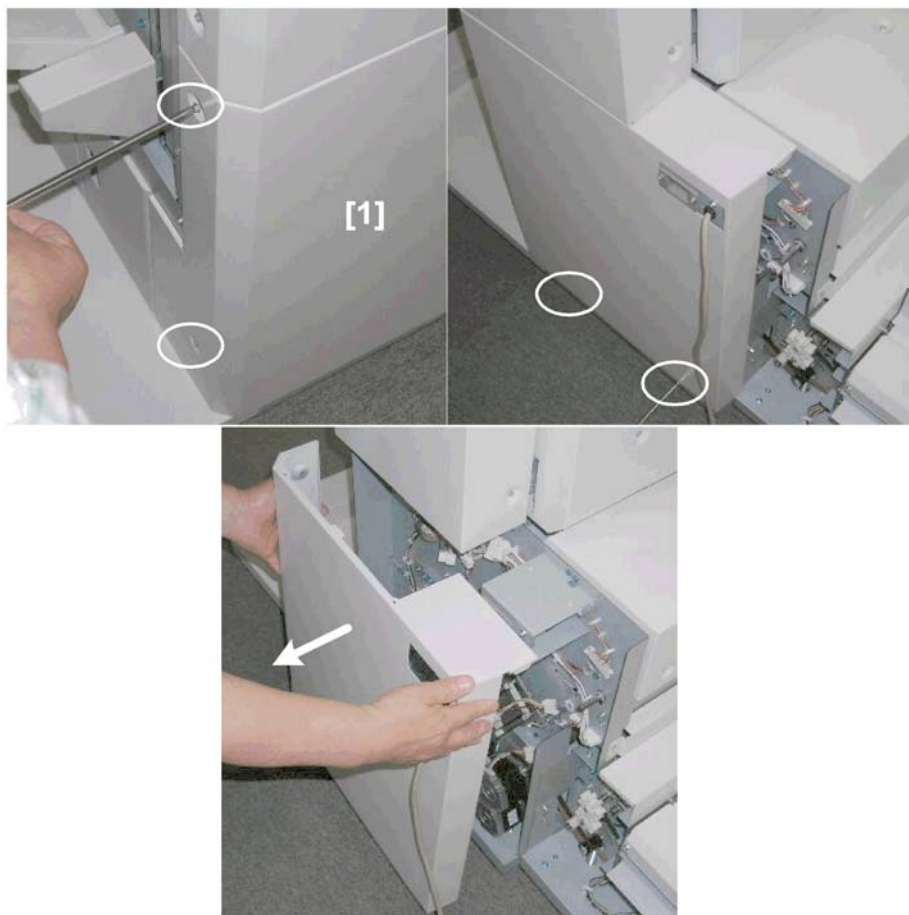
1. Front exit cover [1] (x2)



b890r108

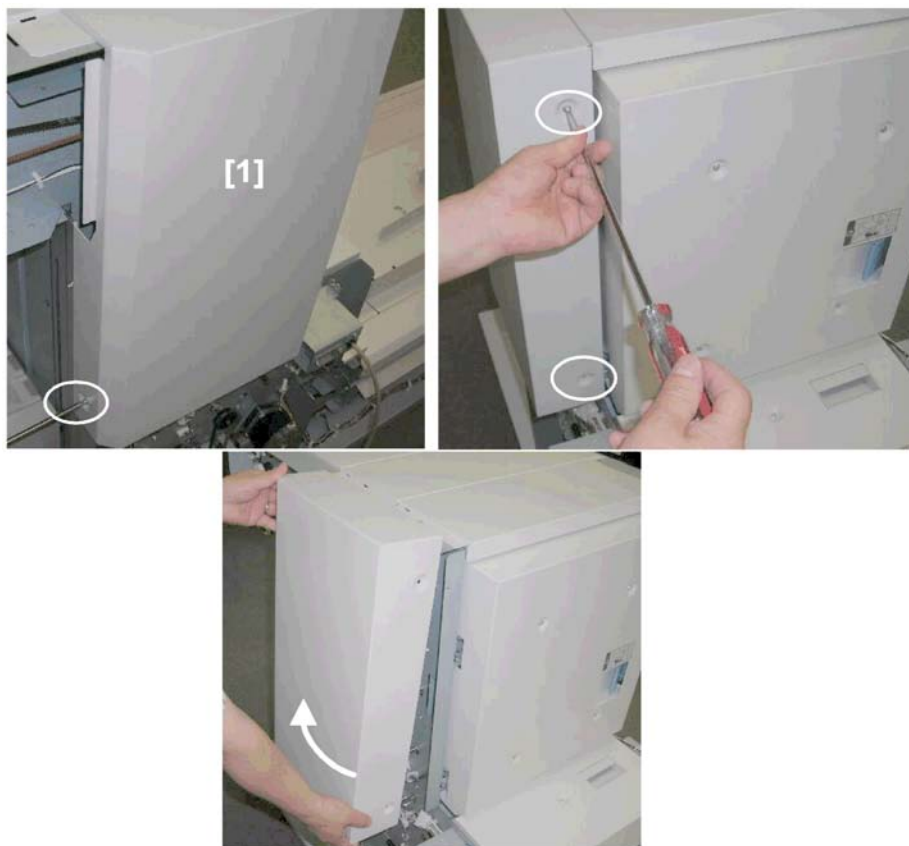
2. Spacer [1] (x1)

1



b890r109

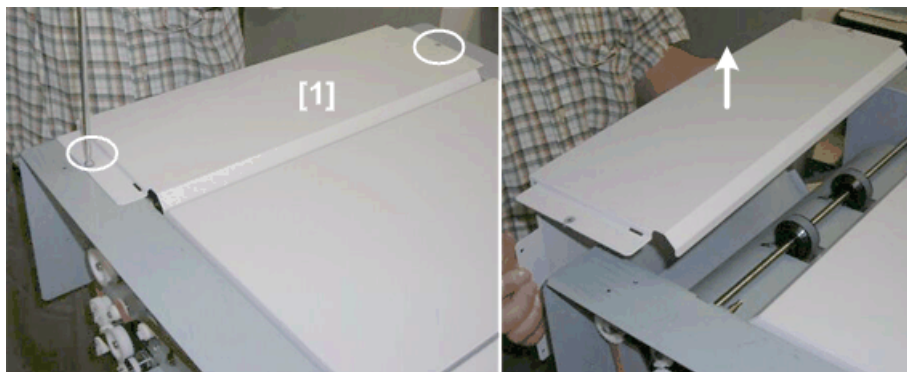
3. Front lower cover [1] (⌀ x4)



b890r111

4. Front upper cover [1] (⌀ x3)

Top Exit Cover



b890r113

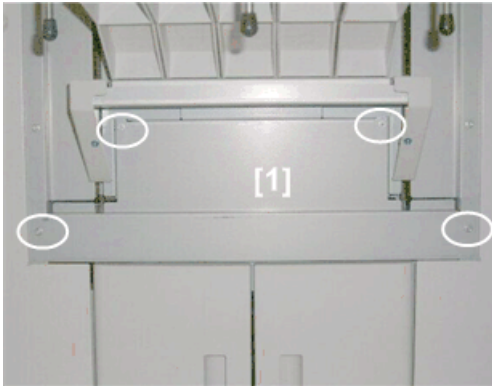
- Front exit cover p.7

- Rear exit cover p.4

1. Top exit cover [1] (🔑 x2)

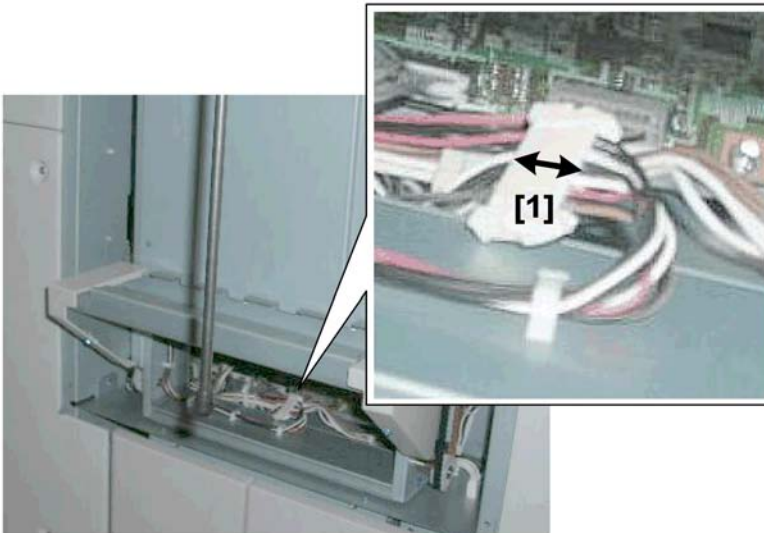
1

Tray Lift Unit



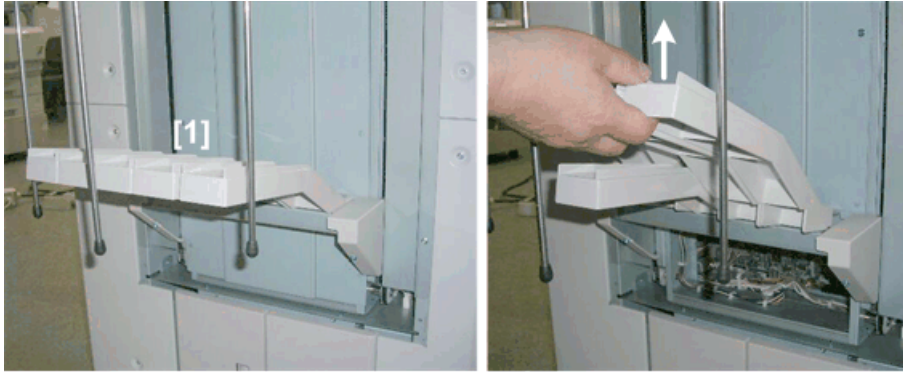
b890r115

1. MCU (Main Control Unit) cover [1] (🔑 x4)



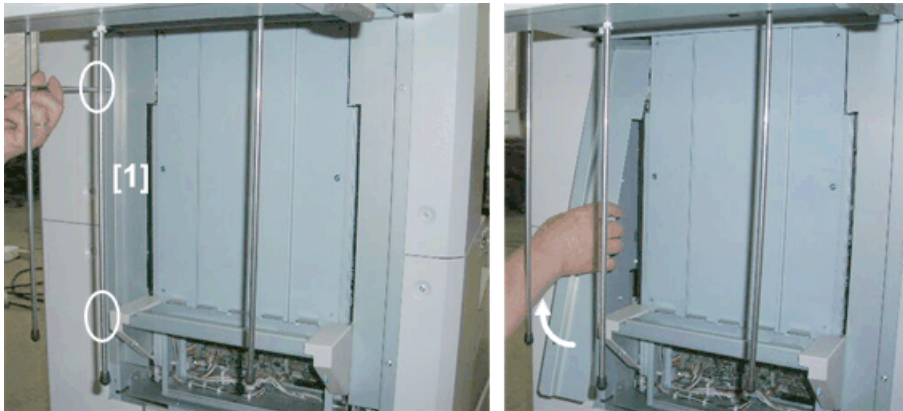
b890r116

2. Connector [1] (🔌 x1)



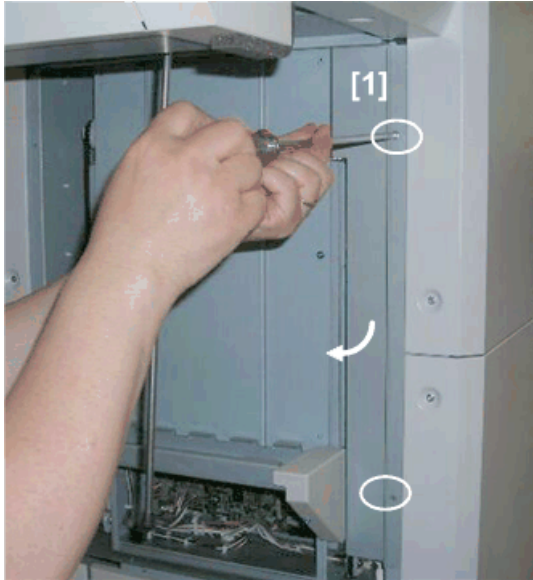
b890r117

3. Exit tray supports [1] (x5)



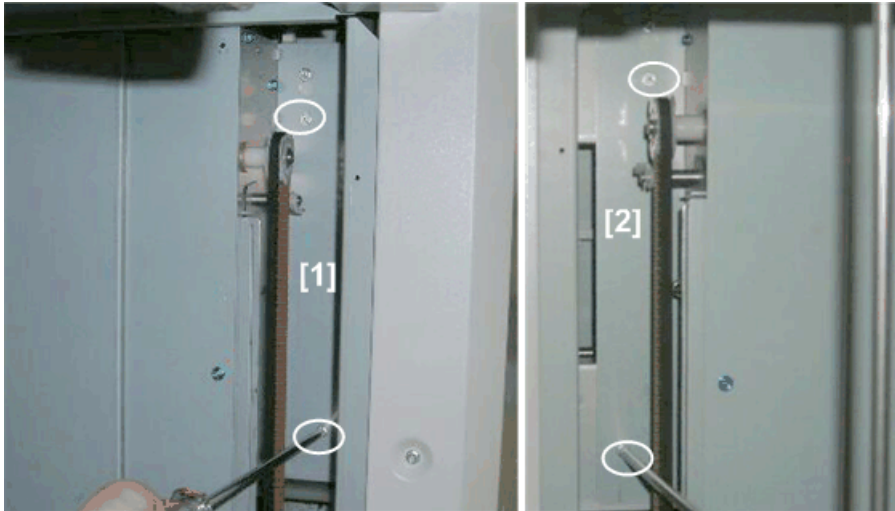
b890r118

4. Rear vertical plate [1] (x2)



b890r119

5. Front vertical plate [1] (⌘ x2)

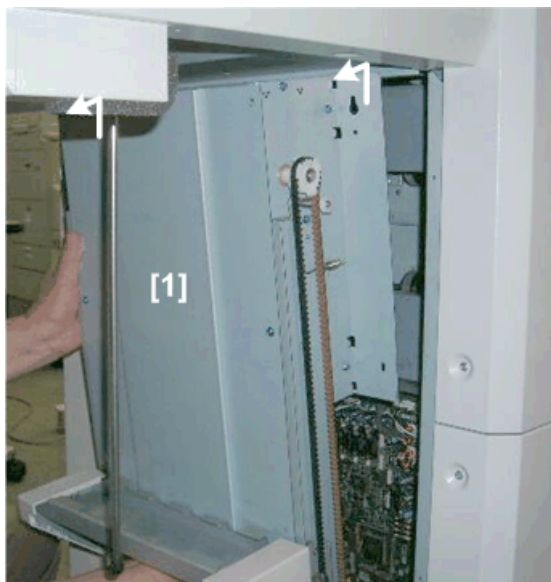


b890r120

6. Tray lift unit set screws:

[1] Front (⌘ x2)

[2] Back (⌘ x2)



b890r121

7. Tray lift unit [1] out.

Separating the Cross Fold Unit and Transport Unit



b890r122

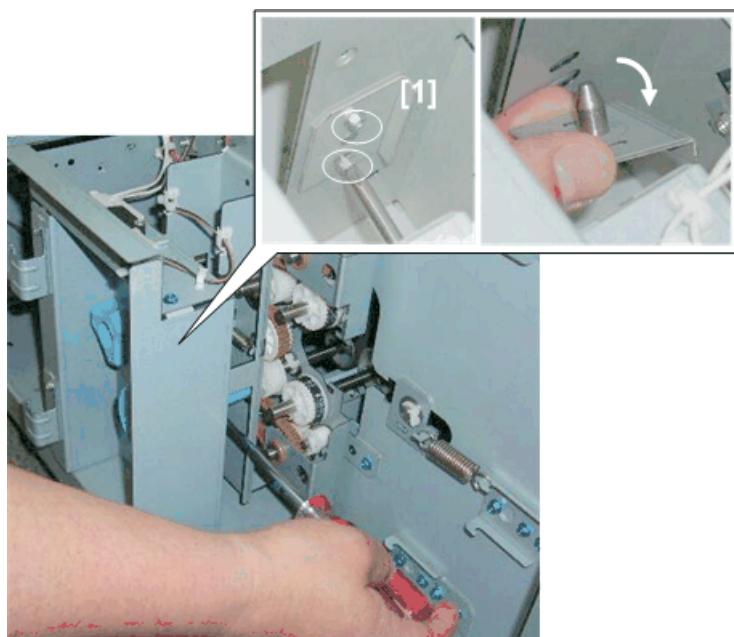
- Remove front lower cover ➡ p.7
- Remove rear lower cover ➡ p.4

1. Rear:

[1] Connectors (🔌 x9)

[2] Connection plate (🔩 x4 M3x8)

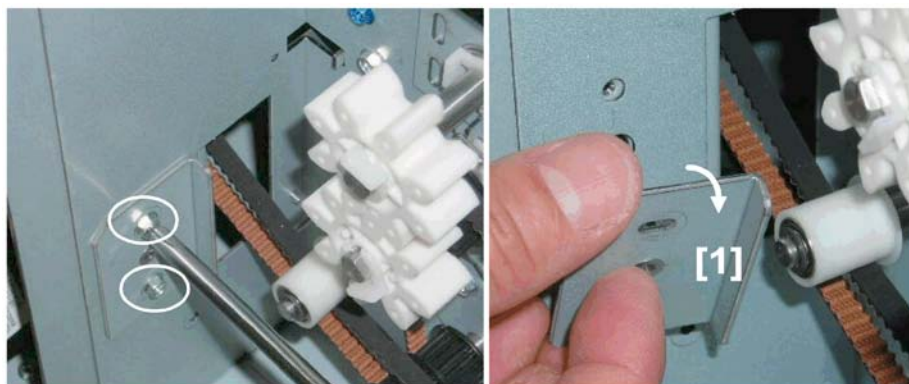
1



b890r123

2. Rear:

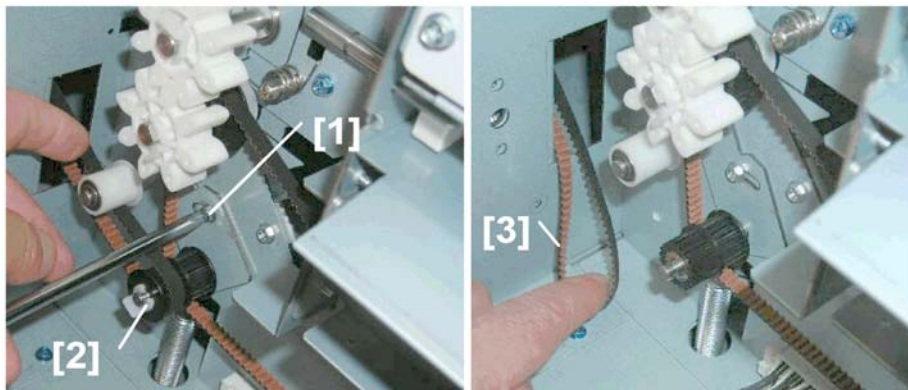
[1] Joint bracket (⌘ x2, M3x8)



b890r124

3. Front:

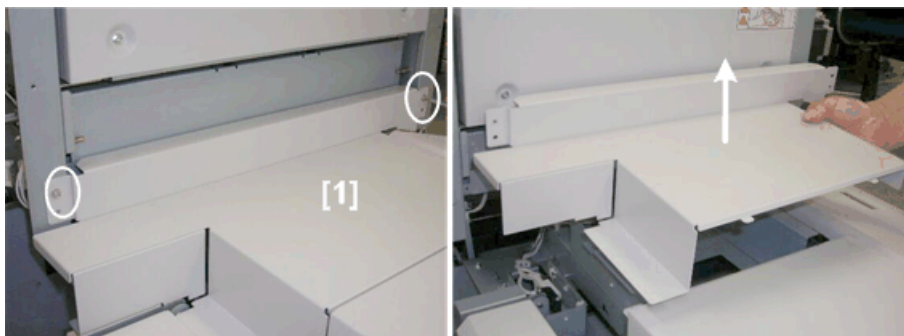
[1] Joint bracket (⌘ x2)



b890r125

4. Front:

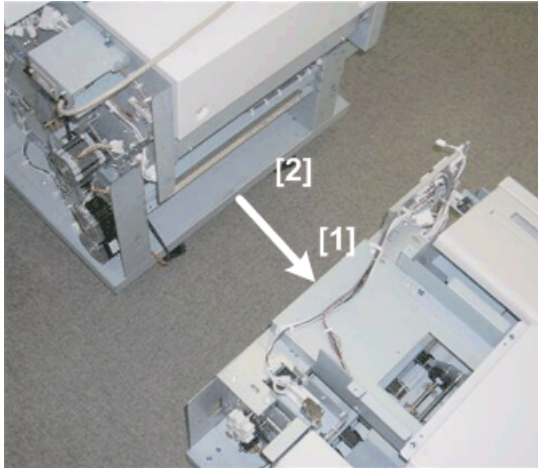
- [1] Release the tension plate (⌘ x1)
- [2] Release timing belt (⌘ x1, Plate x1)
- [3] Pull timing belt off the gear



b890r126

5. Connection cover [1] (⌘ x4)

1

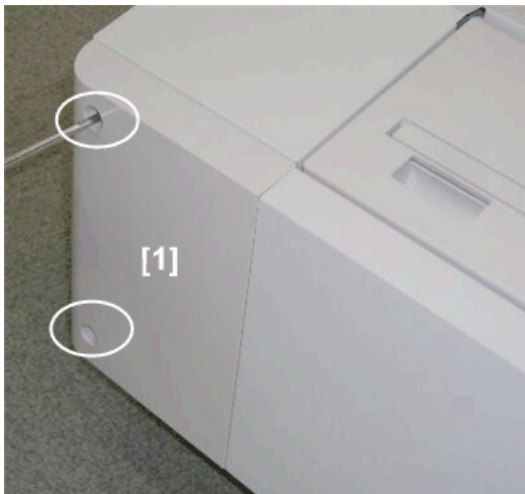


b890r127

6. Pull the transport unit [1] away from the cross fold unit [2].

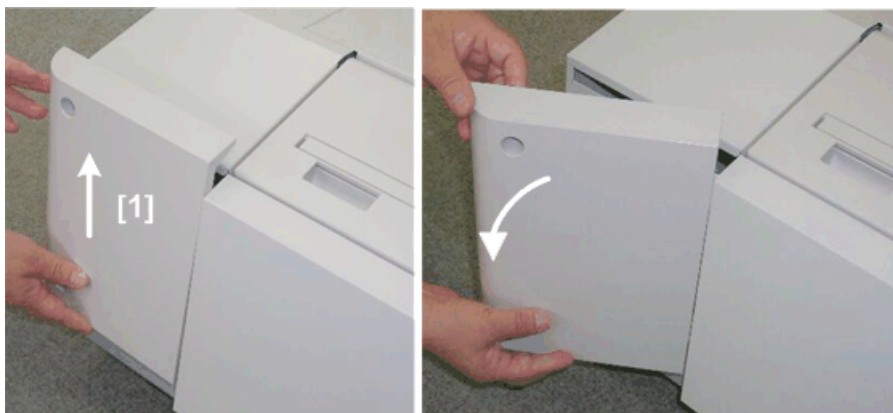
Transport Unit Covers

Transport Unit Rear Corner Cover



b890r128

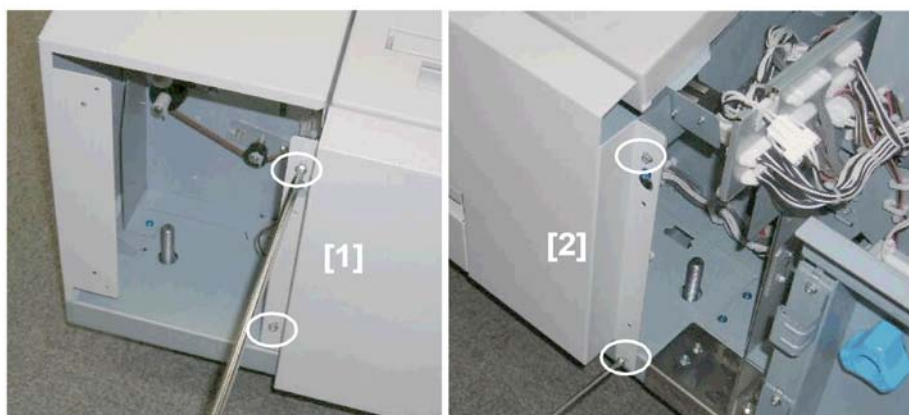
1. Rear corner cover [1] (🔧 x2)



b890r129

2. Raise the rear corner cover [1], then rotate to the front to remove it.

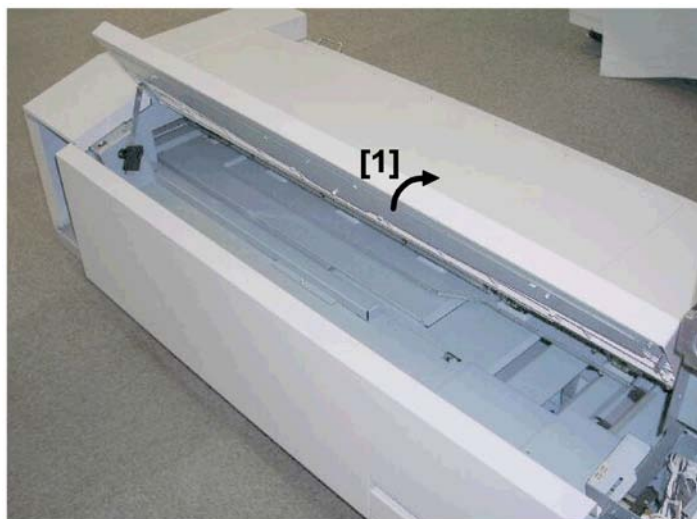
Transport Unit Rear Cover



b890r130

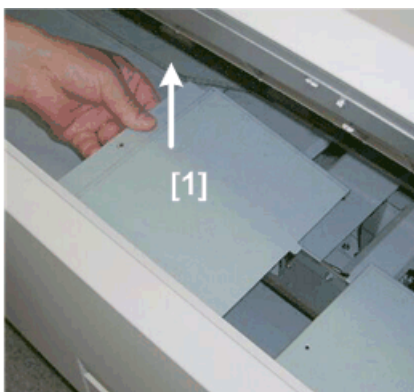
1. Right and left screws:
[1] Right (⌀ x2)
[2] Left (⌀ x2)

1



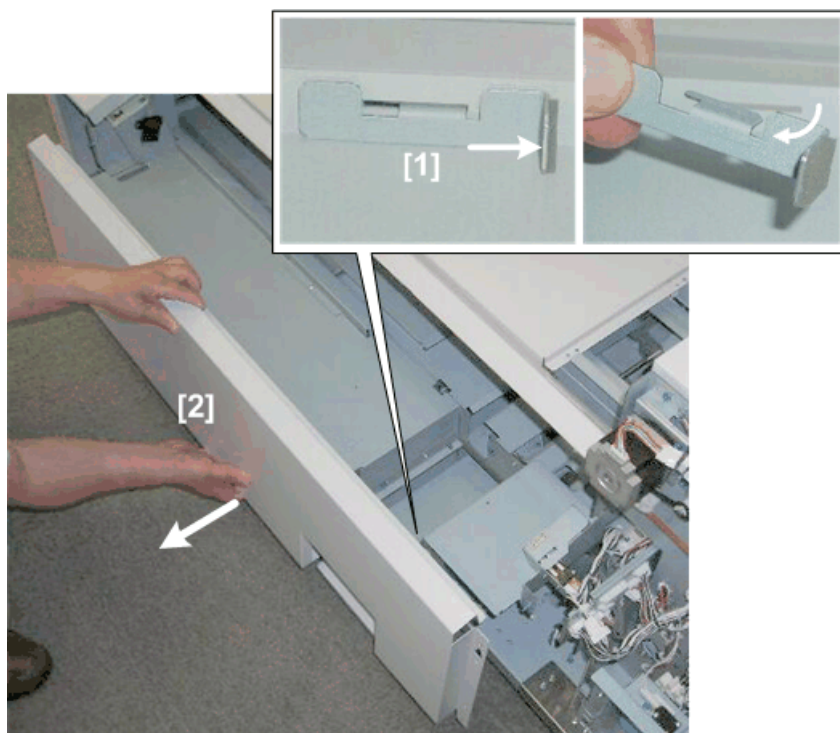
b890r131

2. Raise cover N9 [1].



b890r132

3. Inner cover [1] (🔩 x1)



b890r133

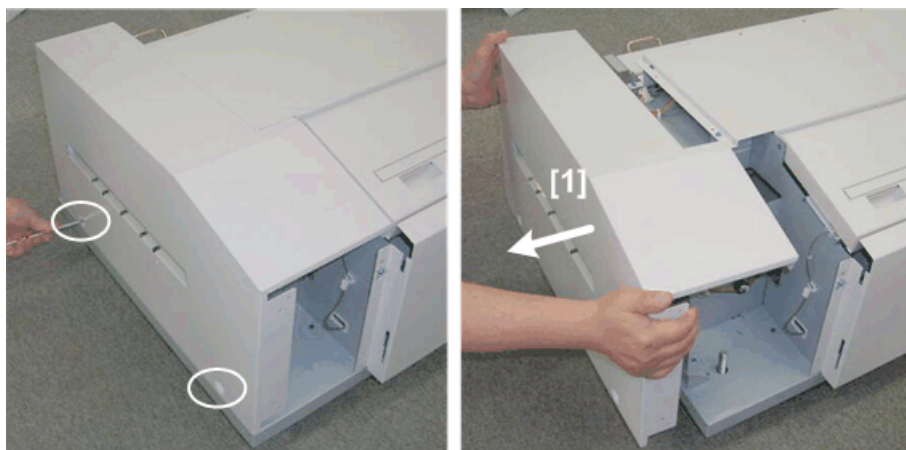
4. Slide bracket [1] to release it then remove it. The door below flips open.
5. Remove the transport unit rear cover [2].

Note

- At reinstallation be sure to set the door before reattaching the slide bracket.

Transport Unit Right Cover

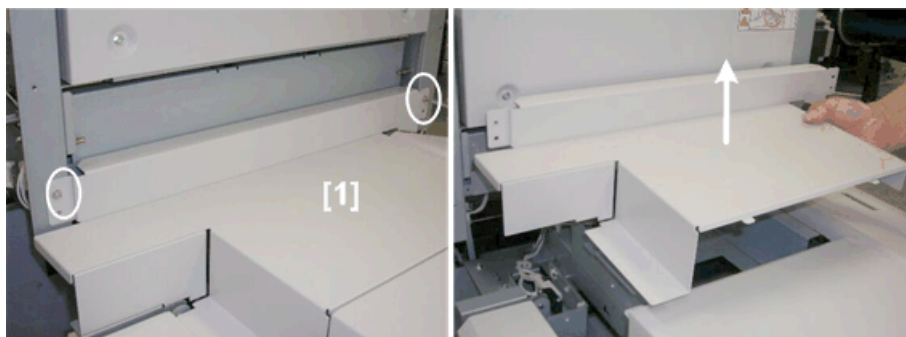
1



b890r134

1. Transport unit right cover [1] (🔩 x2)

Connection Cover



b890r126

1. Connection cover [1] (🔩 x4)

Top Cover



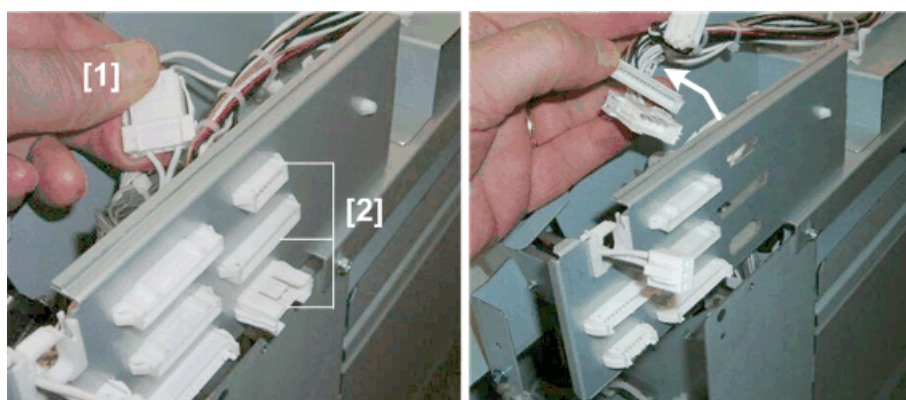
b890r135

- Transport unit rear cover ➡ p.17
- Transport unit right cover ➡ p.20
- Connection cover ➡ p.20

1. Top cover [1] (🔑 x4)

Guide Plate Unit

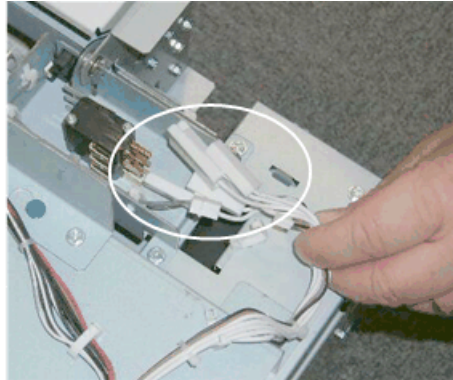
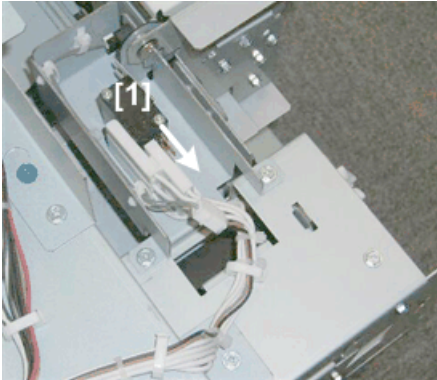
- Separate the cross fold unit and transport unit ➡ p.13
- Transport unit rear cover ➡ p.17
- Transport unit right cover ➡ p.20
- Top cover ➡ p.21



b890r136

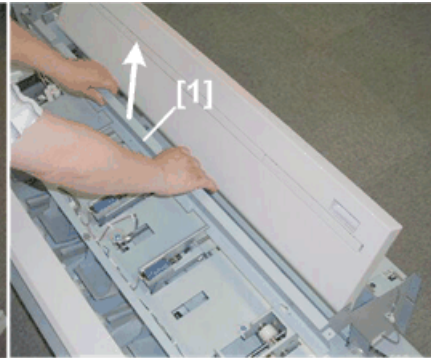
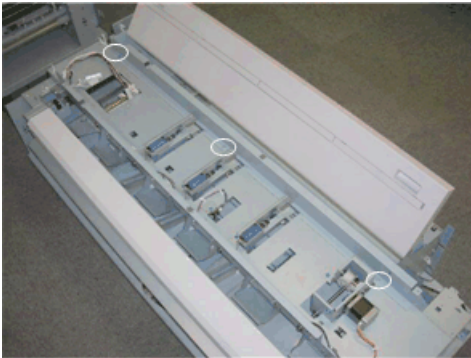
1. Rear: Connector [1], connector heads [2] (🔑 x1, Connector heads x3)

1



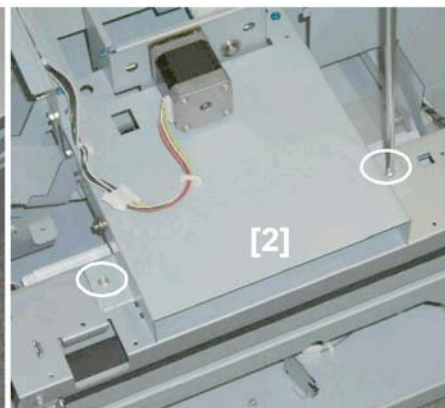
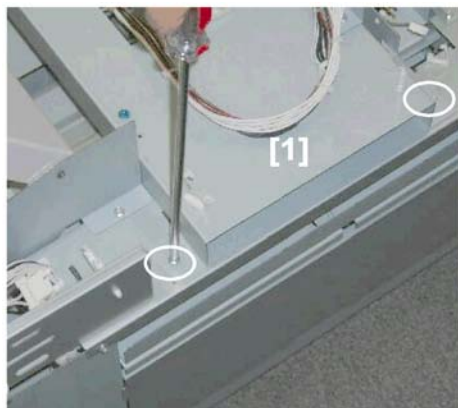
b890r137

2. Front: Front cover switch [1] (🔧 x1, 🛠️ x4)



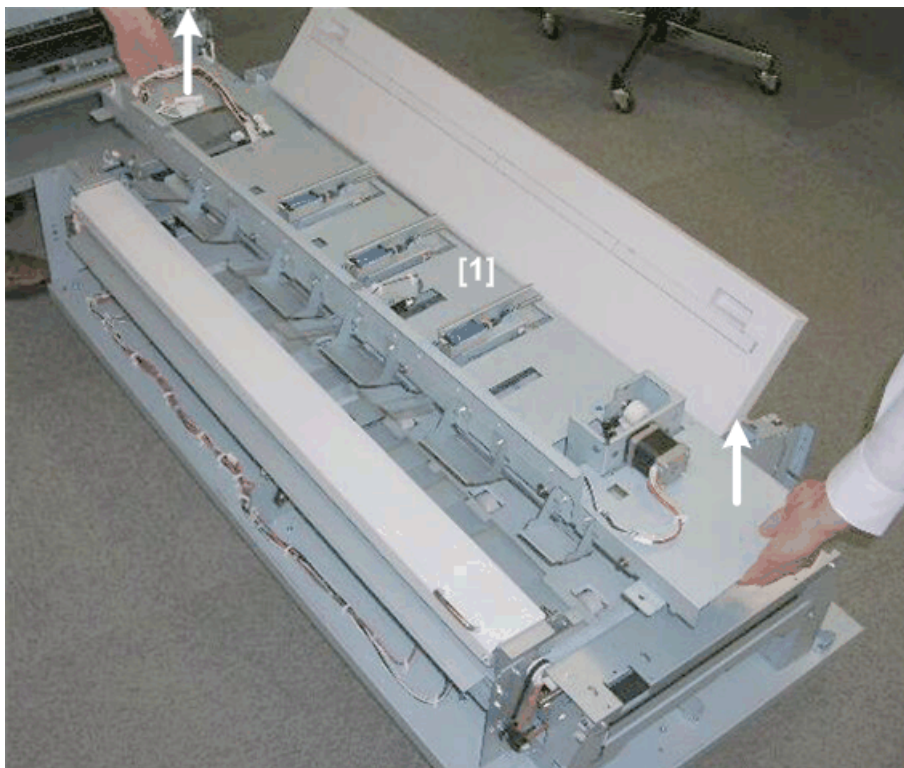
b890r138

3. Support bracket [1] (🔧 x3)



b890r139

4. Left: Transport unit [1] (🔧 x2)
5. Right: Transport unit [2] (🔧 x2)



b890r140

6. Lift the guide plate unit [1] and set it on a flat, clean surface.

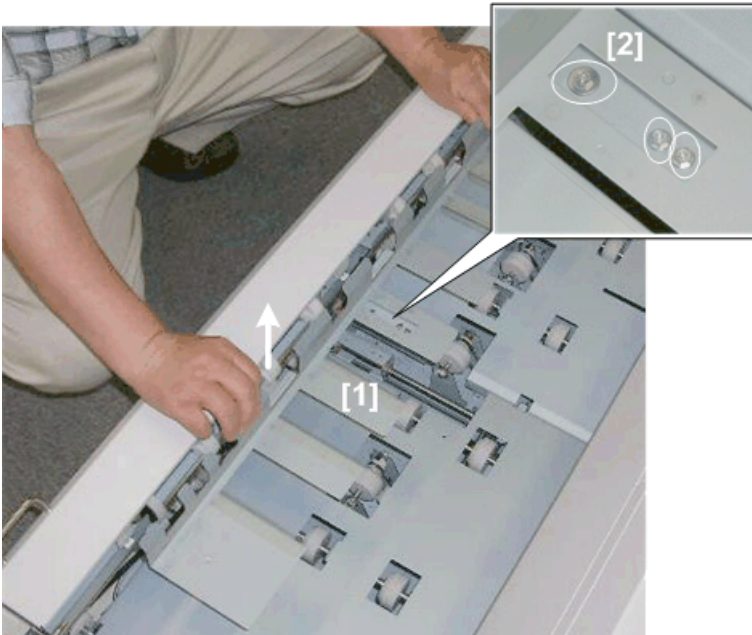
Transport Entrance Unit

- Separate the cross fold unit and transport unit ➡ p.13
- Transport unit rear cover ➡ p.17
- Transport unit right cover ➡ p.20
- Top cover ➡ p.21
- Guide plate unit ➡ p.21

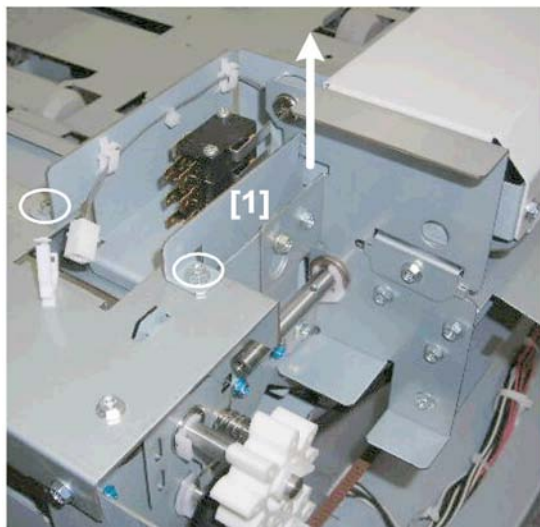


b890r141

1. Lower guide plate [1] (⌀ x2)



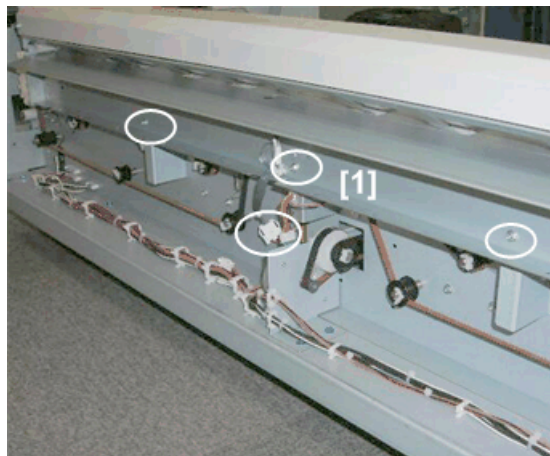
2. Jogger fence [1] (⌀ x3)
3. The large screw [2] is a step screw. It must be re-installed at the same position when the jogger fence is reinstalled.



b890r143

4. Front/Left End:

[1] Switch bracket (🔧 x2)

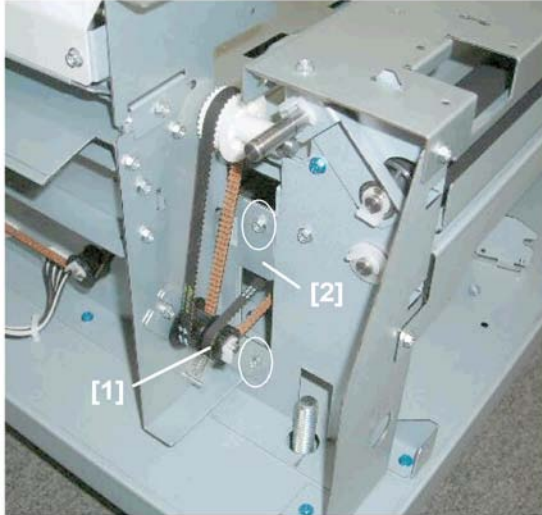


b890r144

5. Front Side:

[1] Transport entrance unit bracket (🔧 x3, 🛠️ x1)

1

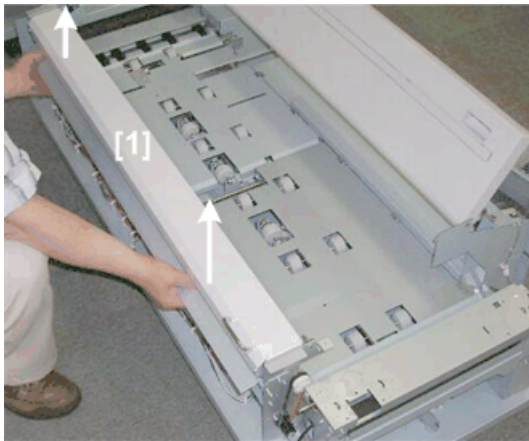


b890r145

6. Front/Right End:

[1] Timing belt (⌚ x1)

[2] Transport entrance unit bracket (⌚ x2)



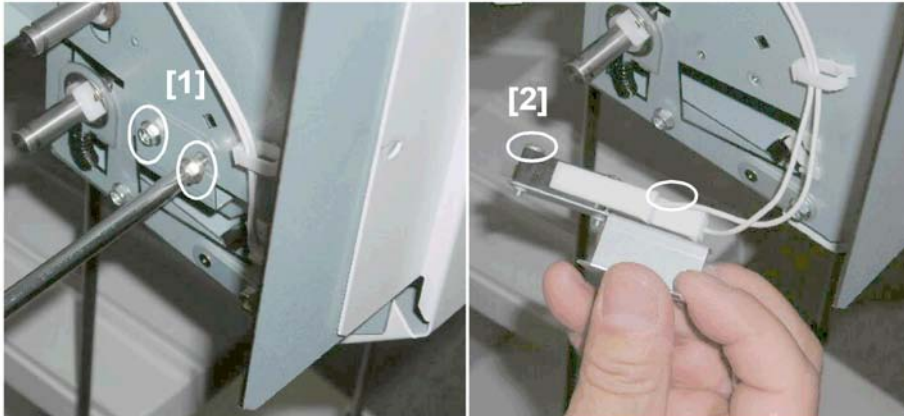
b890r146

7. Transport entrance unit [1]

Cross Fold Unit Sensors, Switches

Exit Safety Switch

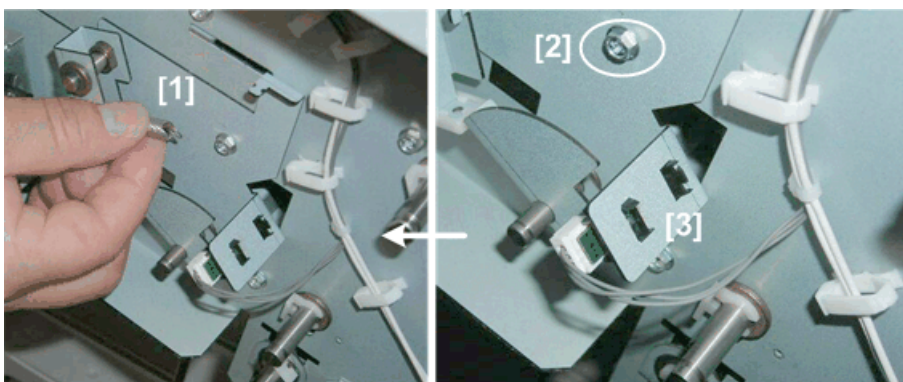
1



b890r114

- Rear exit cover ➔ p.4
- 1. Exit Safety switch bracket [1] (🔩 x2)
- 2. Exit safety switch [2] (🔌 x1, 📏 x2, 🔩 x2)

Tray Upper Limit Sensor



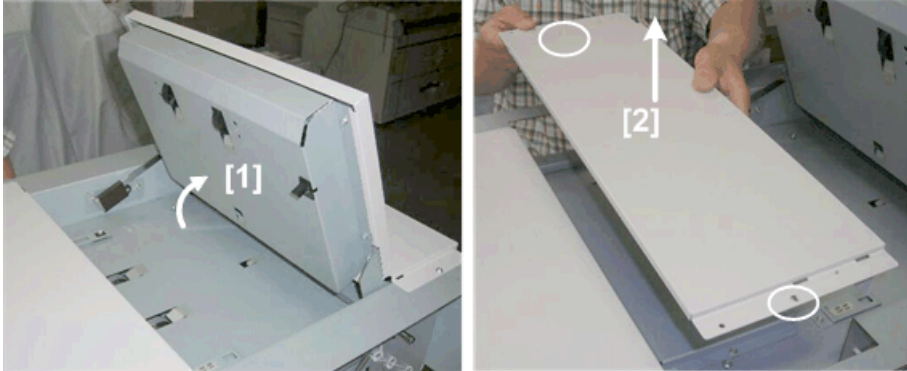
b890r147

- Rear exit cover ➔ p.4
- 1. Release actuator tension spring [1]
- 2. Sensor bracket [2] (🔩 x1)

3. Upper limit sensor [3] (⌘ x1, Pawls x4)

Tray Upper Limit Sensor, Exit Sensor, Top Cover Switches

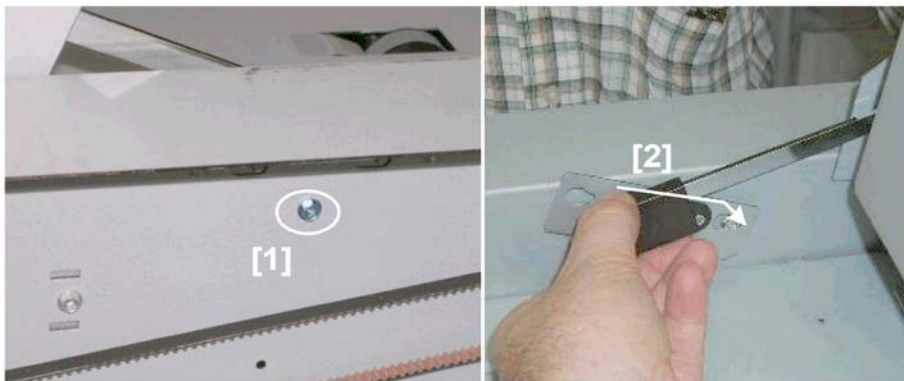
1



b890r148

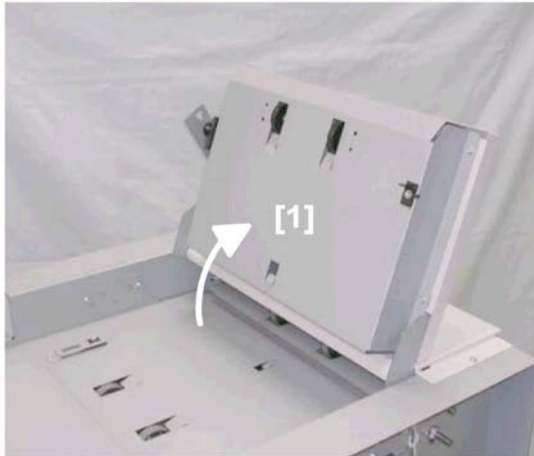
- Front exit cover ➡ p.7
- Rear exit cover ➡ p.4

1. Open top exit cover [1].
2. Remove plate [2] (⌘ x2)



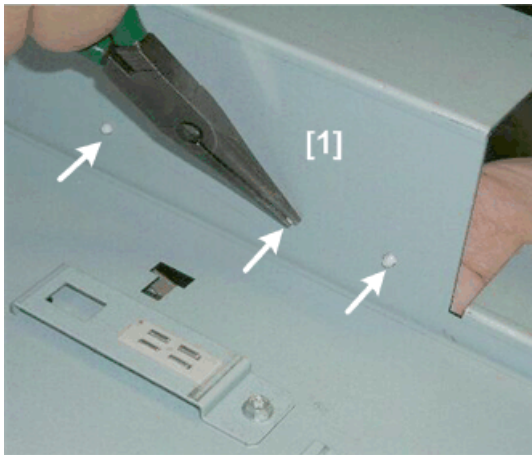
b890r150

3. At the rear, remove screw [1] (⌘ x1).
4. Slide plate [2] off the shoulder screws.



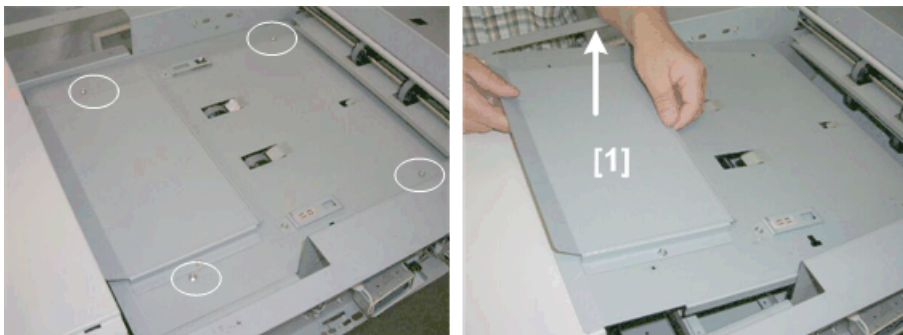
b890r150a

5. Raise the cover [2].



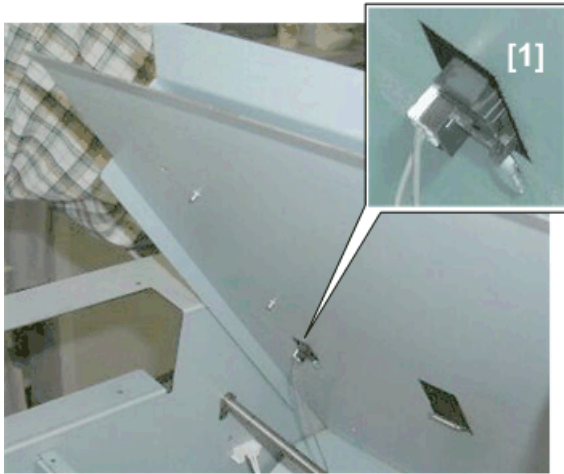
b890r149

6. Disconnect the stand-offs from the panel [1] (x3). (This will make the plate easier to remove.)



b890r151

7. Disconnect exit transport plate [1] (⚙️ x4)



8. Raise the plate carefully so you can see the exit cover switch connector [1].

9. Disconnect the exit cover switch (⚙️ x1)

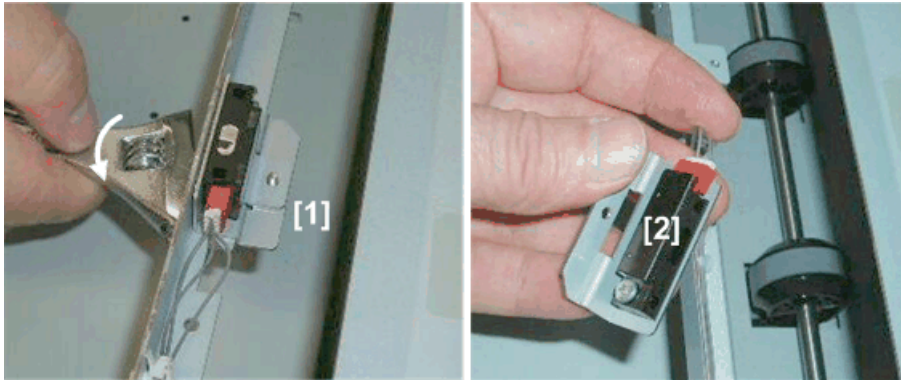
Tray Upper Limit Sensor



b890r153

1. Tray upper limit sensor bracket [1] (⚙️ x1)
2. Tray upper limit sensor [2] (⚙️ x1, ⚙️ x1)

Exit Sensor



b890r154

1. Sensor bracket [1] (🔩 x 1).
2. Exit sensor [2] (🔩 x 1, 📏 x 1)

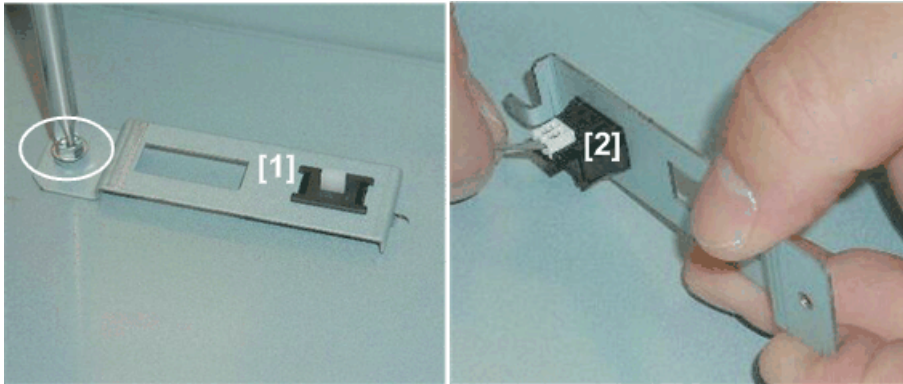
Top Cover Switches



b890r155

1. Rear
 - [1] Top cover micro-switch (🔩 x 2, 📏 x 2)

1

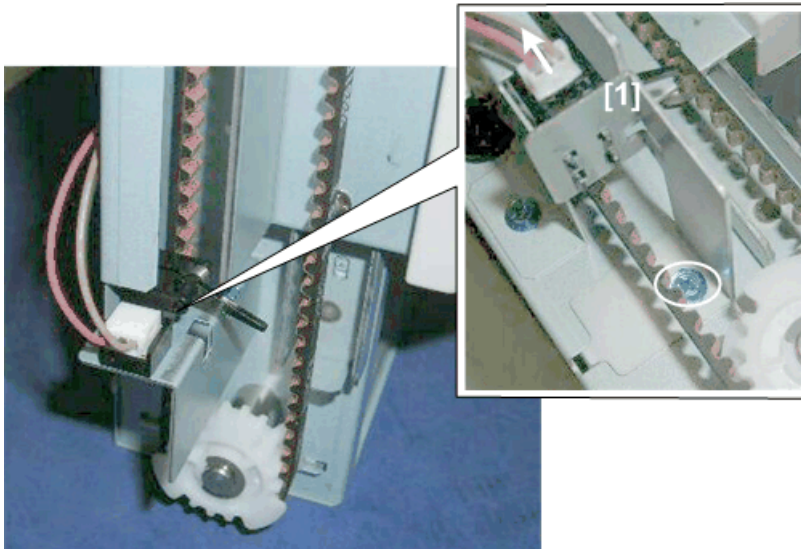


2. Front

[1] Switch bracket (🔧 x1)

[2] Top cover push-switch (🔧 x1)

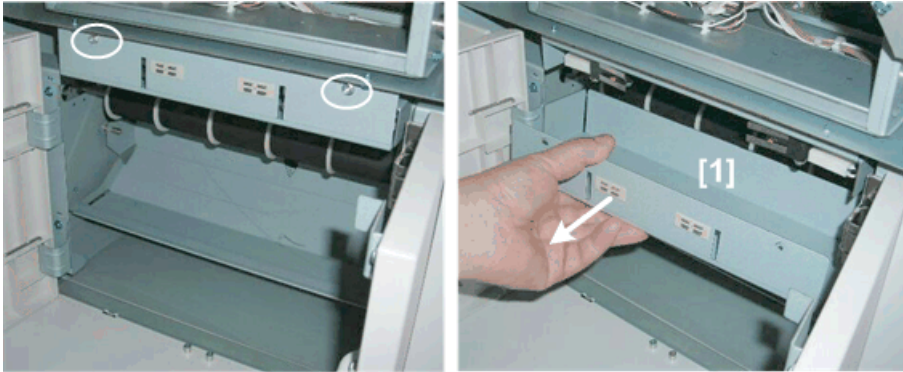
Tray Lower Limit Sensor



b890r169

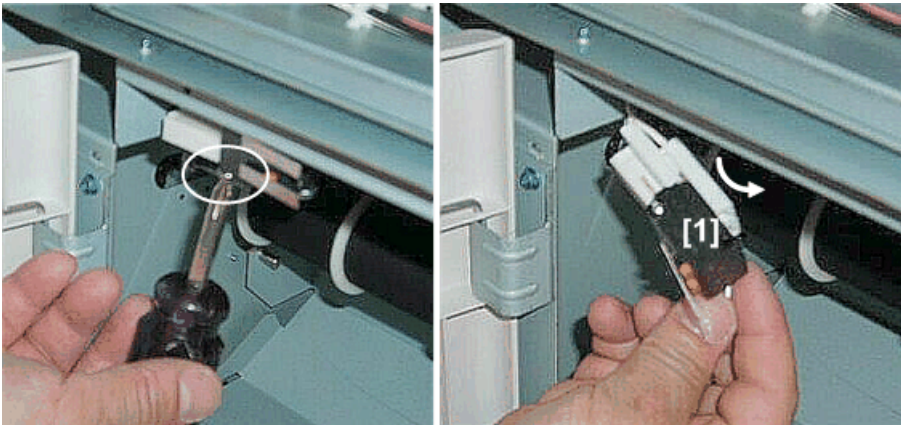
- Tray lift unit 📄p.10
- Front lower cover 📄p.7
- Rear lower cover 📄p.4
- 1. Sensor bracket [1] (🔧 x1)
- 2. Tray lower limit sensor (🔧 x1, Pawls x4)

Left Double-Door Switches



b890r174

1. Square plate [1] (⌘ x2)

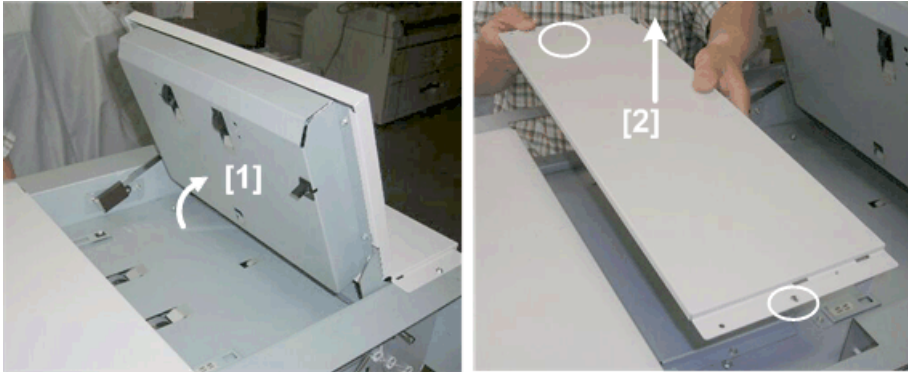


b890r175

2. Rear switch [1] (⌘ x2, ⌘ x2)
3. Repeat Step 2 for the front switch of the other door.

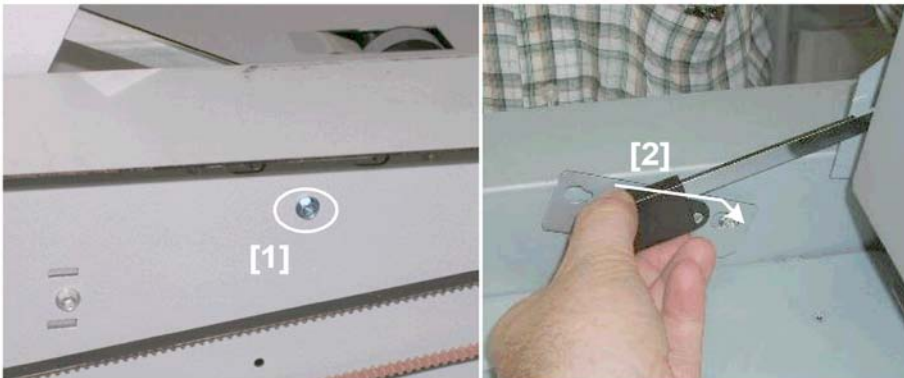
Rotate Unit Door Switch

1



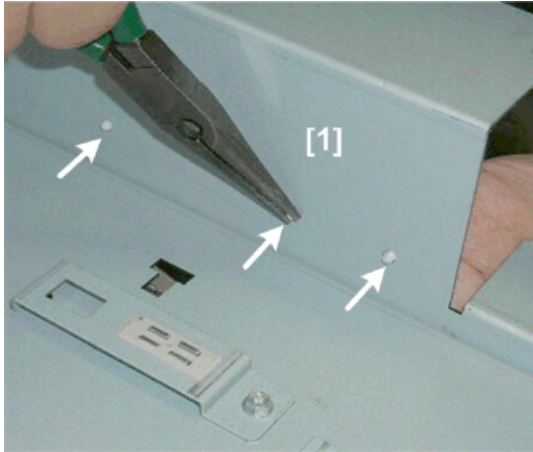
b890r148

- Front upper cover p.7
 - Rear upper cover p.4
1. Open top exit cover [1].
 2. Remove plate [2] (x2)



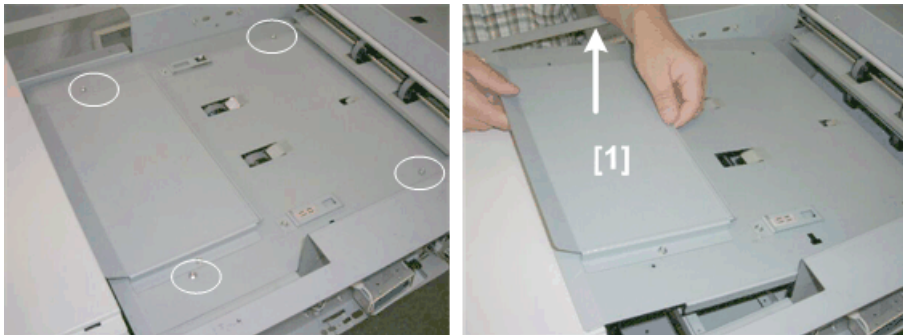
b890r150

3. Remove screw [1] (x1)
4. Slide plate [1] off the shoulder screws.



b890r149

5. Disconnect the stand-offs from the panel [1] (x3). (This will make the plate easier to remove.)
6. Raise the cover [2], lay it flat.

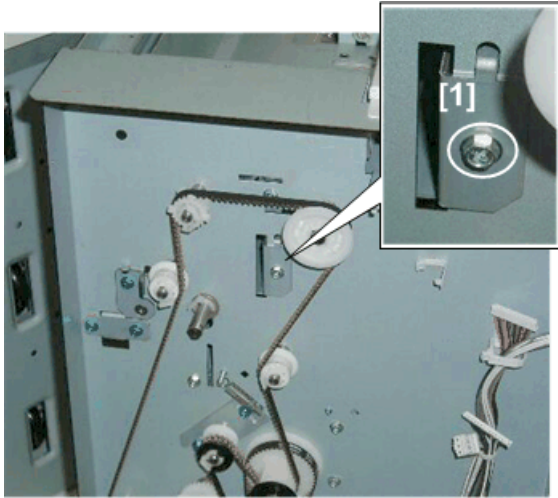


b890r151

7. Disconnect exit transport plate [1] (⚙ x4)

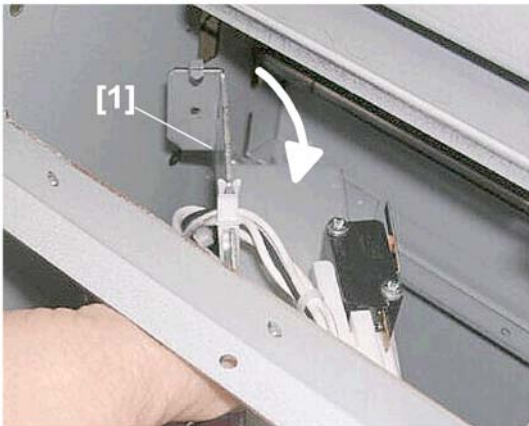


8. Raise the plate carefully so you can see the exit cover switch connector [1].
9. Disconnect the exit cover switch (🔧 x1)



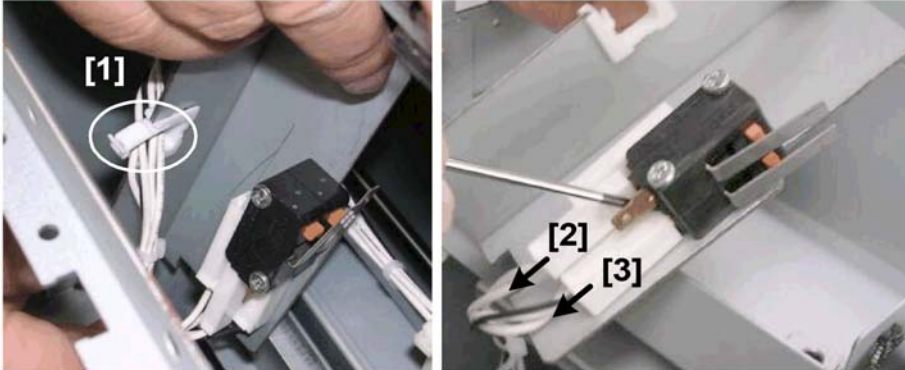
b890r176

10. Remove sensor bracket screw [1] (🔧 x1).



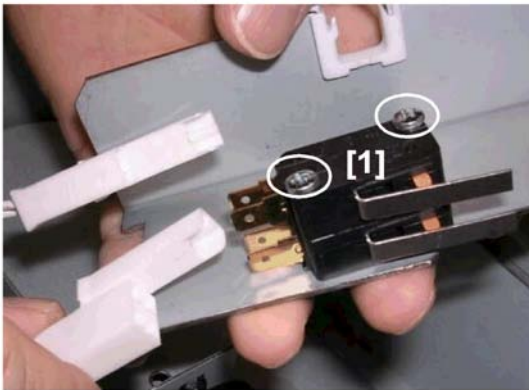
b890r244

11. Disconnect sensor bracket [1] from the side of the unit.



b890r245

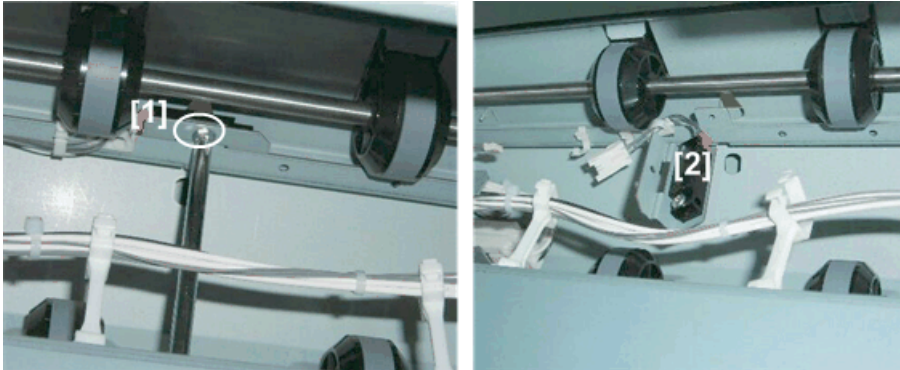
12. Open harness clamp [1] to free the harness (🔧 x1).
13. Use a small screwdriver to disconnect connectors [1], [2] (🔧 x2).



b890r246

14. Remove the switch (🔧 x2).

Exit Registration Sensor

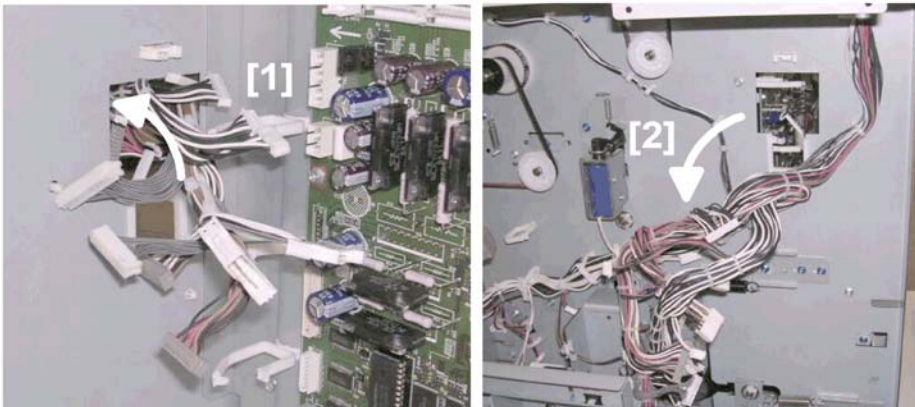


b890r177

- Tray lift unit ➡ p.10
- 1. Sensor bracket [1] (🔧 x1)
- 2. Exit registration sensor [2] (🔧 x1, 📡 x1)

Inverter Entrance Sensor, Rotate Entrance Sensor

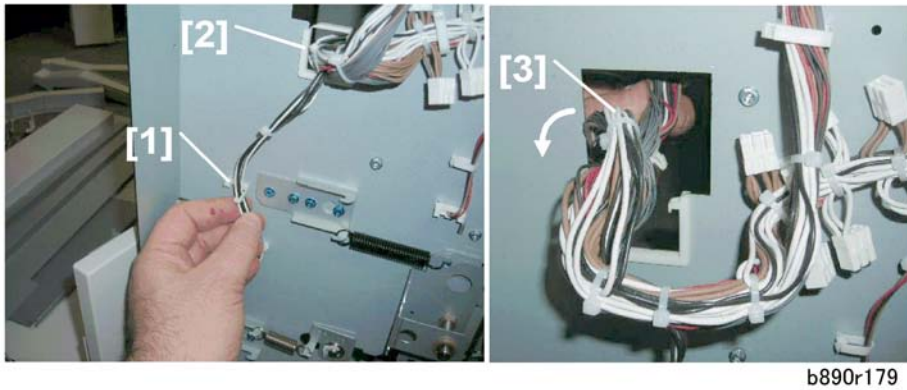
- Remove the tray lift unit ➡ p.10
- Open all MCU harness clamps
- Disconnect all MCU connectors



b890r177a

Rear:

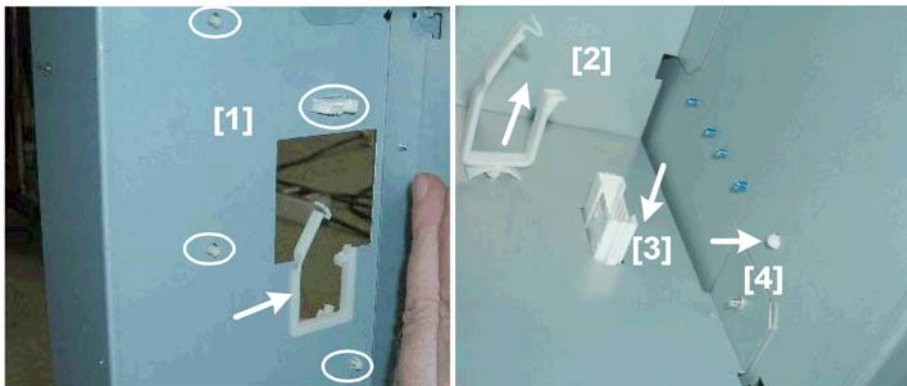
1. Push the disconnected harnesses [1] through the hole.
2. Pull the harnesses [2] out of the fold unit.



b890r179

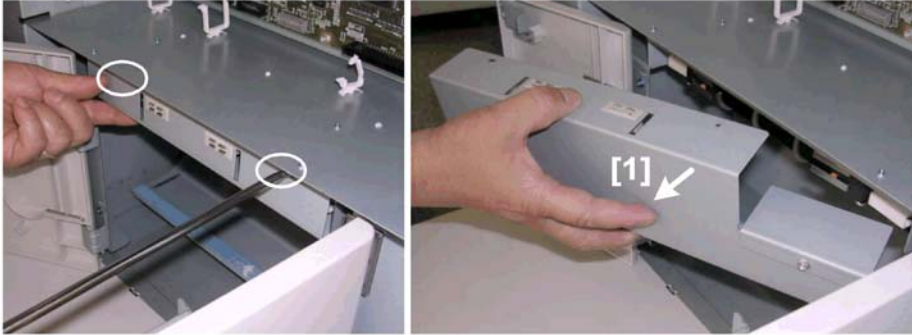
Front:

1. Release clamp [1] (🔧 x1)
2. Remove saddle clamp [2]
3. Pull MCU harnesses [3] out.



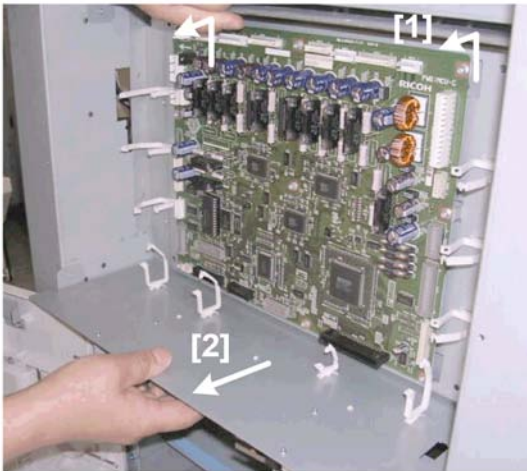
d890r178

4. Front panel: Remove [1] (Standoffs x3, 🛠 x1, Saddle clamp x1)
5. Rear panel:
 - Remove clamp [2]
 - Push down connector [3]
 - Remove standoff [4]



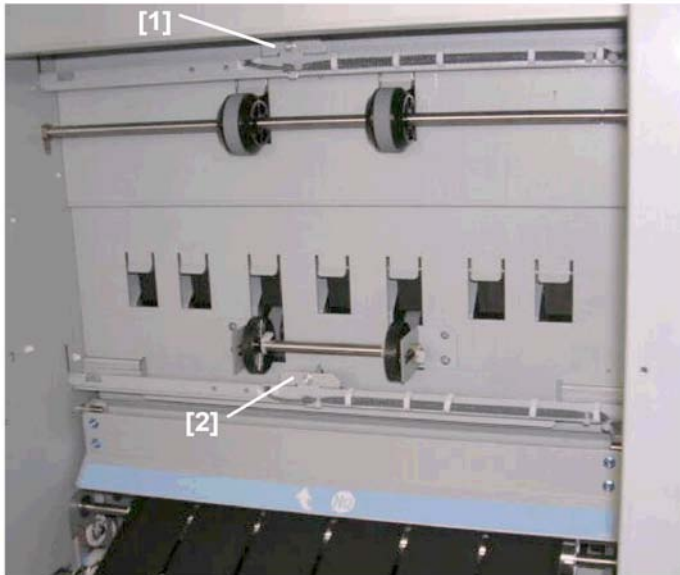
b240r240

6. Remove door switch plate [1] (2 x).



b890r242

7. Push up the MCU bracket [1] to disconnect it from the shoulder screws.
8. Slowly pull the plate [2] forward to remove it.



b890r243

9. With the plate removed you can see:

- [1] Rotate entrance sensor
- [2] Inverter entrance sensor

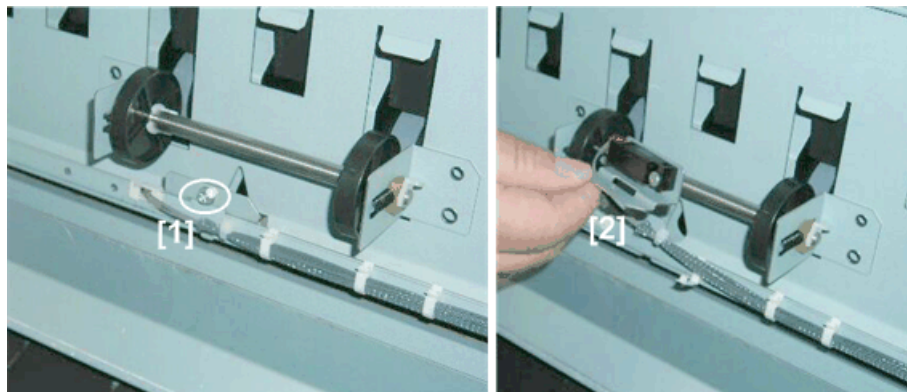
Rotate Entrance Sensor



b890r181

1. Sensor bracket [1] (🔩 x1)
2. Rotate entrance sensor [2] (🔩 x1, 📋 x1)

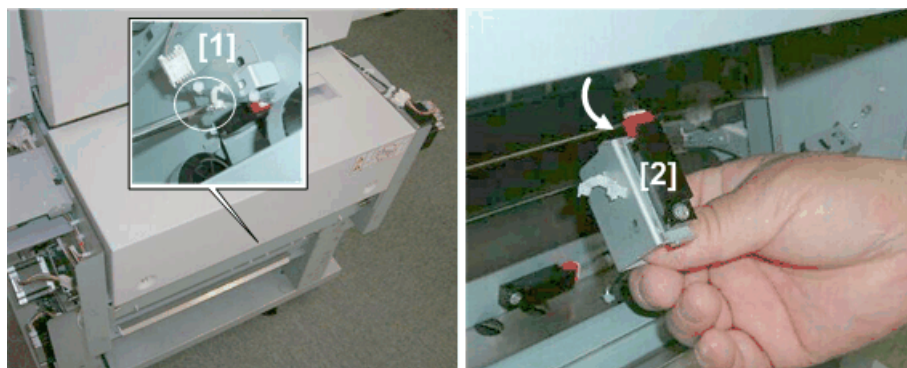
Inverter Entrance Sensor



b890r180

1. Sensor bracket [1] (🔧 x1)
2. Inverter entrance sensor [2] (🔧 x1, 📏 x1)

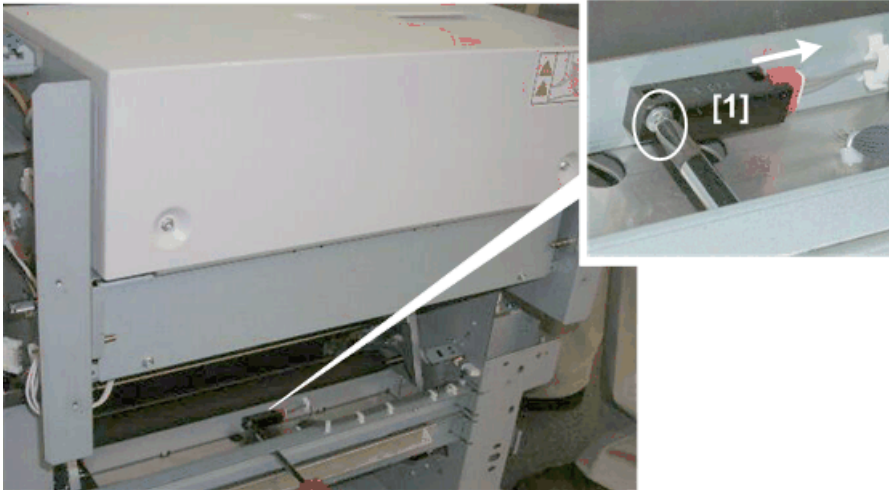
Inverter Exit Sensor



b890r182

- Separate the cross fold unit and transport unit. 📄p.13
1. Sensor bracket [1] (🔧 x1, 📏 x1)
 2. Inverter exit sensor [2] (🔧 x1, 📏 x1)

Cross Fold Unit Entrance Sensor



b890r183

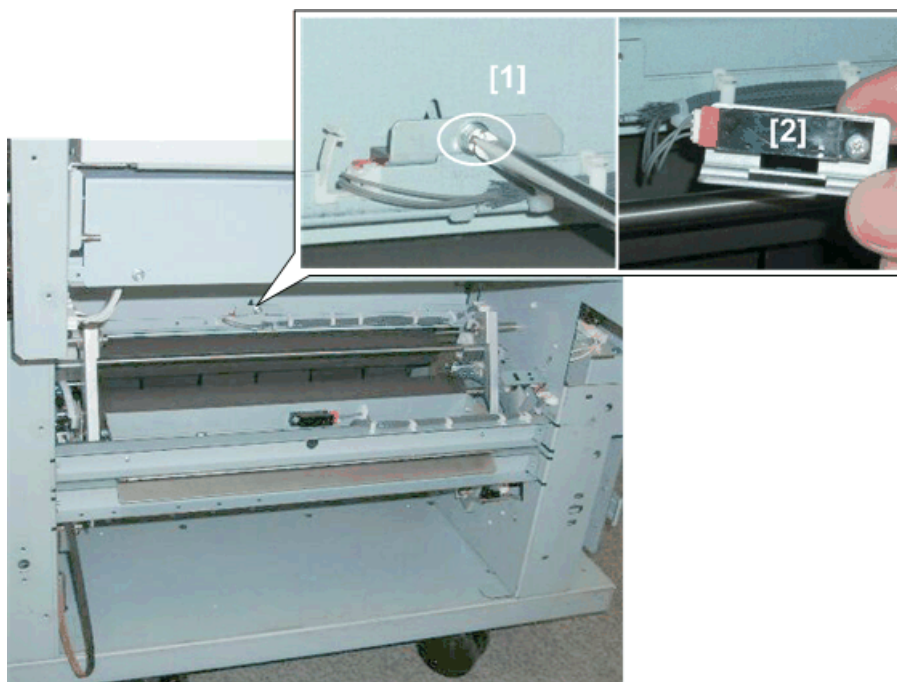
- Separate the cross fold unit and transport unit. ➡ p.13
- Rear lower cover ➡ p.4

1. Cross fold unit entrance sensor [1] (🔧 x1, 🛠️ x1, 📡 x1)

1

Fold Length Sensor (Upper)

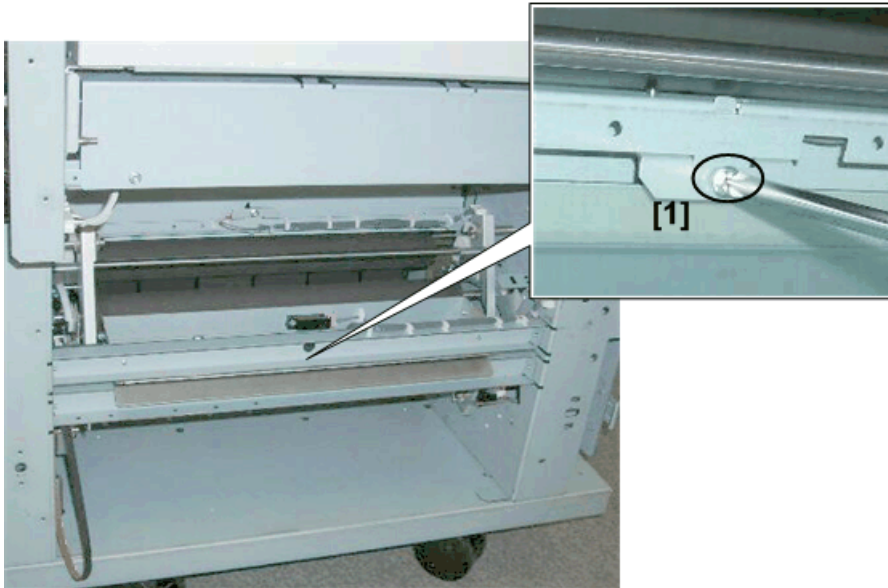
1



b890r184

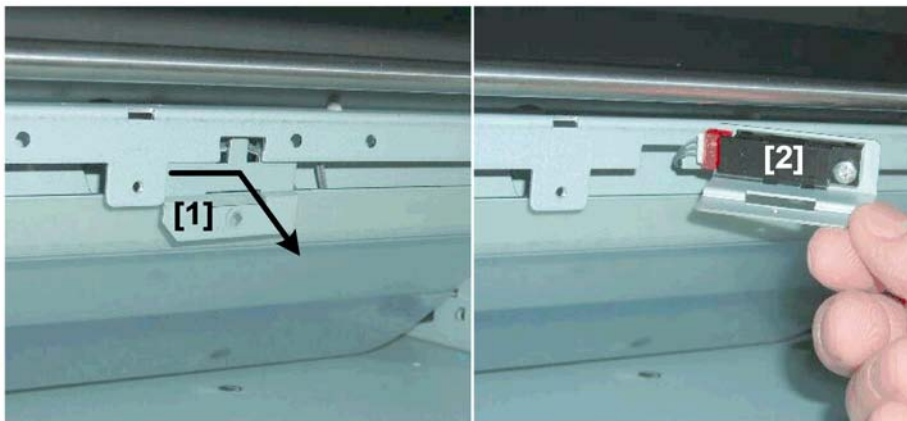
- Separate the cross fold unit and transport unit. ➡ p.13
 - Rear lower cover ➡ p.4
1. Sensor bracket [1] (🔩 x1)
 2. Fold length sensor (upper) [2] (🔩 x1, 📏 x1)

Fold Length Sensor (Lower)



b890r185

- Separate the cross fold unit and transport unit. ➡ p.13
 - Rear lower cover ➡ p.4
1. Sensor bracket [1] (🔧 x1)



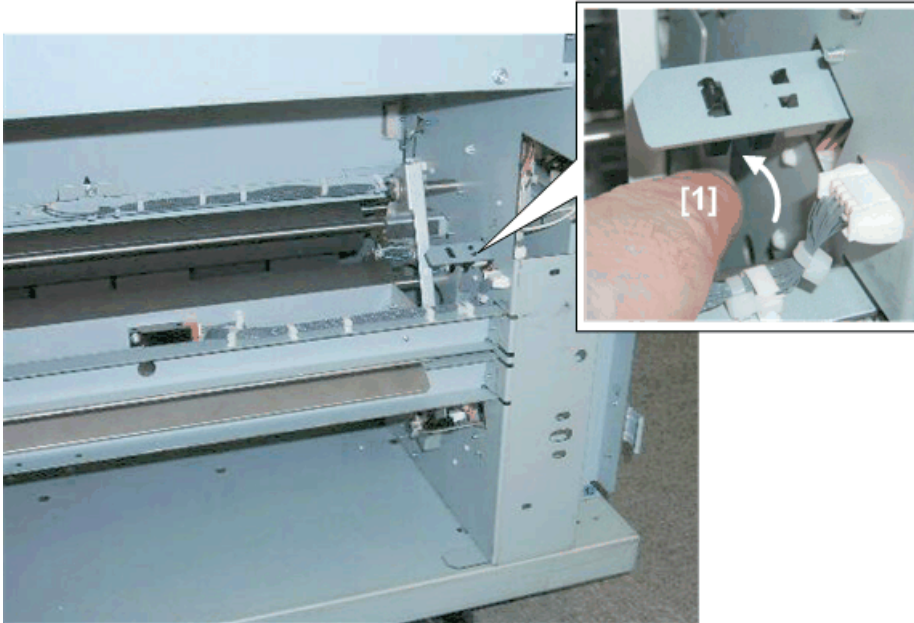
b890r186

2. Slide the bracket tab [1] into the cutout and pull it out.
3. Fold length sensor [2] (lower) (🔧 x1, 🔧 x1)

Fold Plate Sensors

Fold Plate Sensor (Upper)

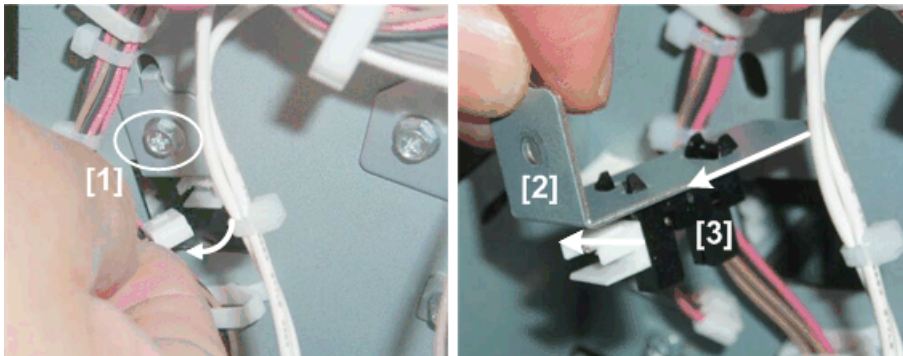
1



b890r187

- Separate the cross fold unit and transport unit. ➔ p.13
- Rear lower cover ➔ p.4

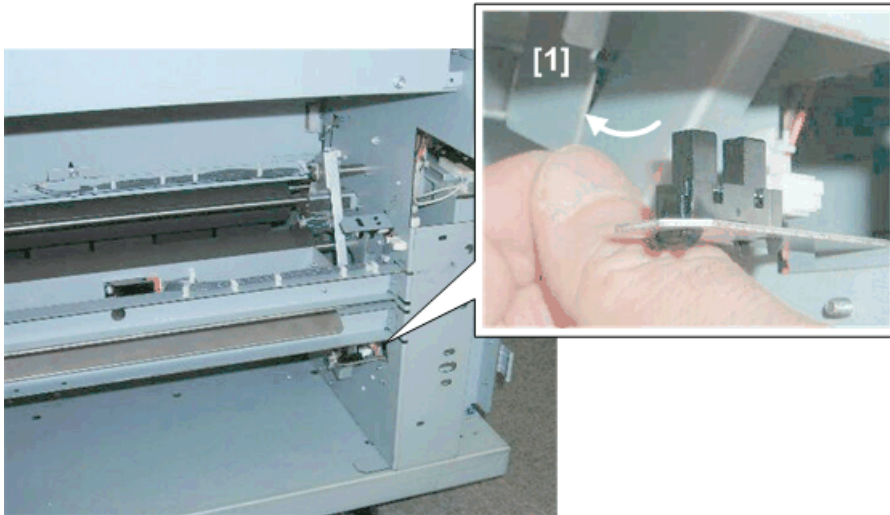
1. Push actuator [1] out of the gap of the sensor.



b890r188

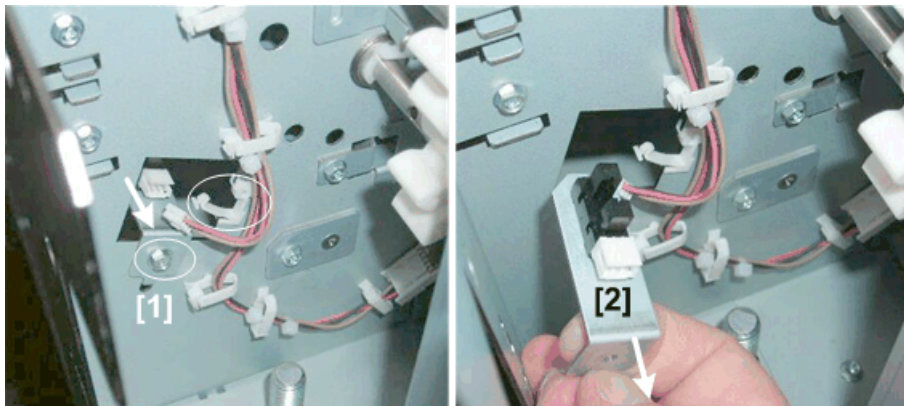
2. Sensor bracket [1] (⌀ x1, ⌘ x1)
3. Pull the sensor bracket [2] through the hole.
4. Fold plate sensor (upper) [3] (Pawls x4)

Fold Plate Sensor (Lower)



b890r189

1. Push the actuator [1] out of the gap of the sensor.
2. Sensor bracket (🔧 x1, 🛠 x1, 🛠 x1)

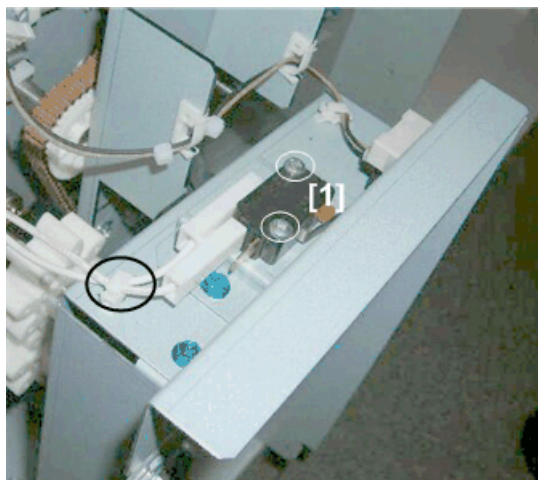


b890r190

3. Pull out the sensor bracket [1].
4. Fold plate sensor (lower) [2] (Pawls x4)




Rear Door Switch

1



b890r191

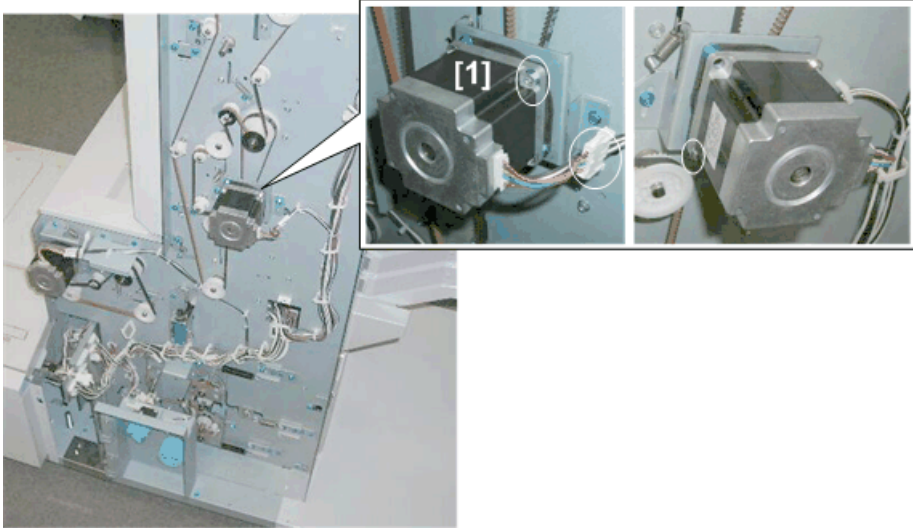
- Rear lower cover  p.4

1. Rear door switch [1] ( x1,  x2,  x2)

Cross Fold Unit Motors

Rotate Transport Motor

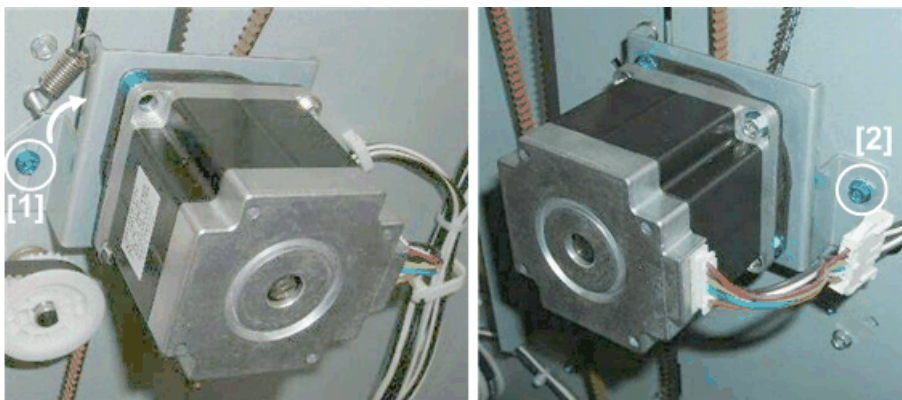
1



b890r157

- Cross fold unit rear covers p.4
- 1. Rotate transport motor [1] (x1, x2)

Reinstallation



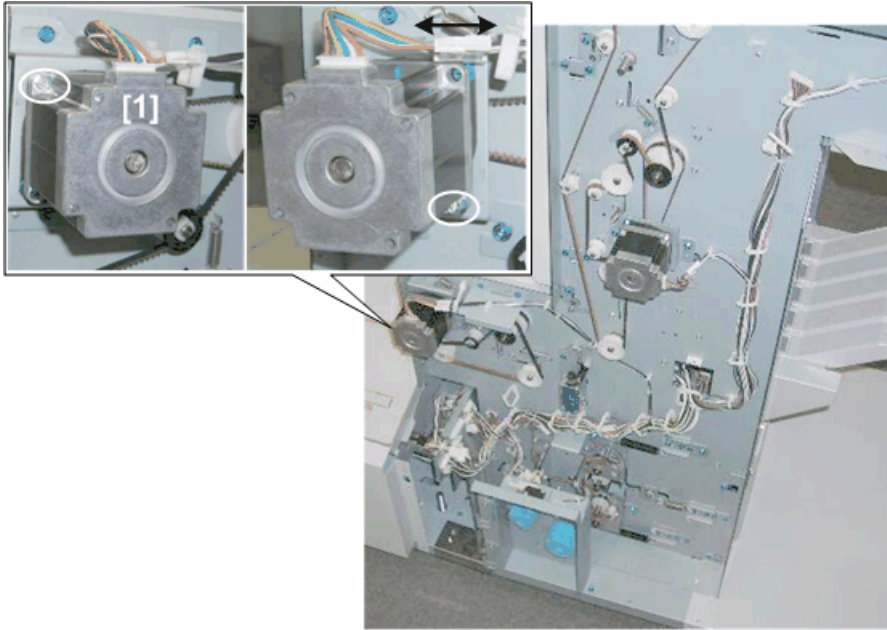
b890r158

1. Loosen the tension bracket screws [1] and [2] (x2).
2. Rotate the bracket up and tighten screw [1].
3. Engage the motor gear with the timing belt, reattach the motor to the bracket (x2).

4. Loosen screw [1], rotate the bracket down to apply tension to the timing belt, then retighten screws [1] and [2].

1

Invert Transport Motor

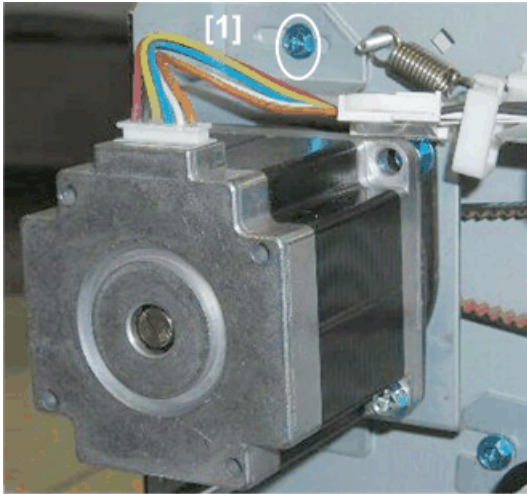


b890r159

- Rear covers ➡ p.4

1. Inverter transport motor [1] (🔧 x1, ⚙️ x2)

Reinstallation

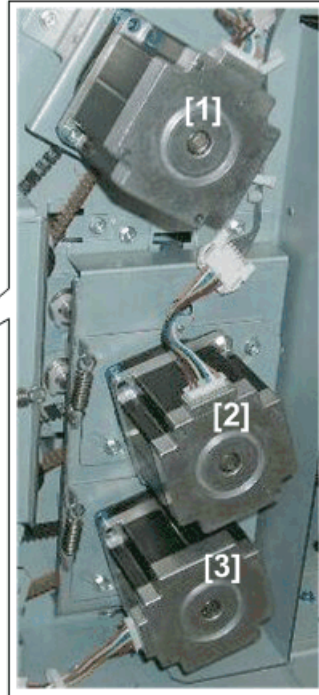


b890r160

1. Loosen the tension bracket screws [1] (⌘ x1).
2. Rotate the bracket clockwise and tighten screw [1].
3. Engage the motor gear with the timing belt, reattach the motor to the bracket (⌘ x2).
4. Loosen screw [1], rotate the bracket counter-clockwise to apply tension to the timing belt, then retighten screw [1].

Fold Plate Motors, Cross Fold Motor

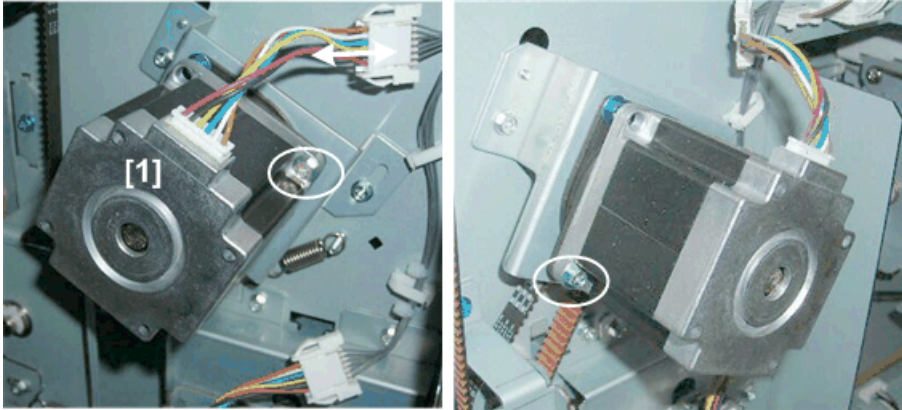
- Rear covers ➡ p.4



b890r161

[1]	Fold Plate Motor (Upper)
[2]	Fold Plate Motor (Lower)
[3]	Cross Fold Motor

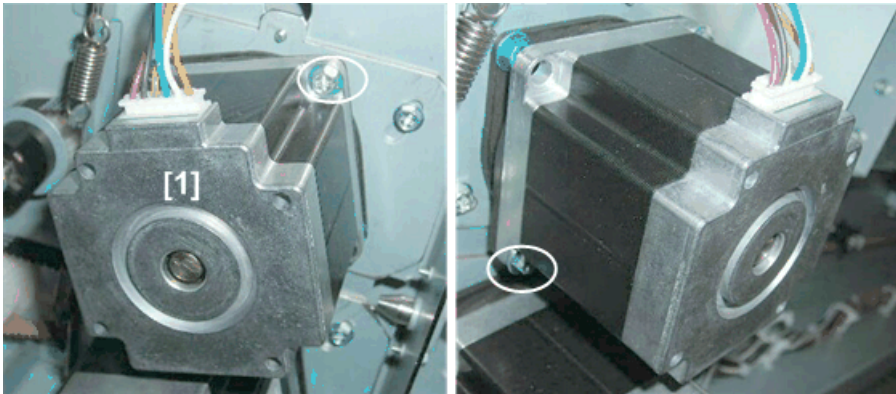
Fold Plate Motor (Upper)



b890r162

1. Fold Plate Motor (Upper) [1] (⌘ x2, ⌘ x2)

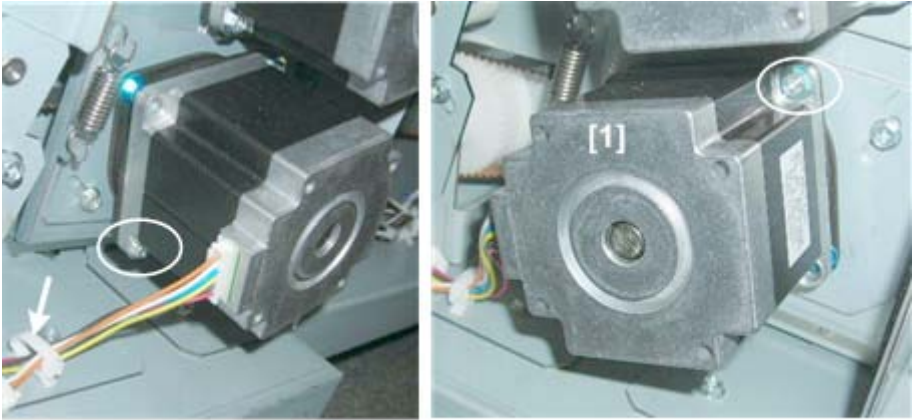
Fold Plate Motor (Lower)



b890r163

1. Fold Plate Motor (Lower) [1] (⌘ x2, ⌘ x2)

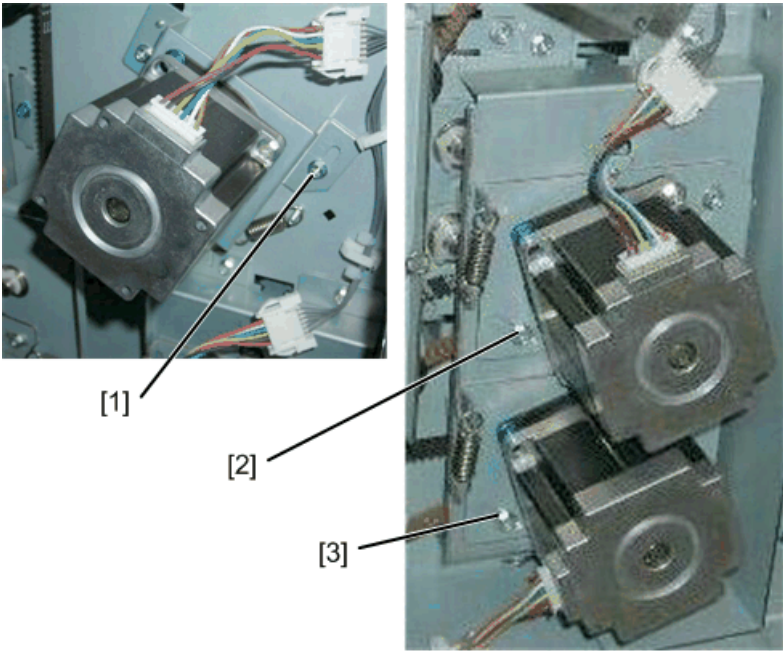
Cross Fold Motor



b890r164

1. Cross fold motor [1] (⚙️ x2, 🛠️ x1, 🔧 x2)

Reinstallation



Tension Bracket Screws

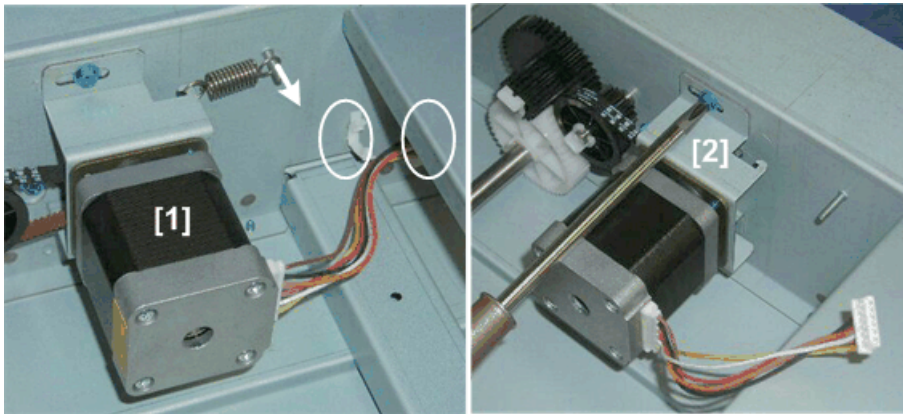
[1]	Fold Plate Motor (Upper)
[2]	Fold Plate Motor (Lower)

[3]	Cross Fold Motor
-----	------------------

1. Loosen the tension bracket screw of the motor that has just been removed (⌘ x1).
2. Rotate the bracket to reduce the spring tension and tighten the bracket screw.
3. Engage the motor gear with the timing belt, reattach the motor to the bracket (⌘ x2).
4. Loosen tension screw, turn the bracket to apply tension to the timing belt, then retighten screw.

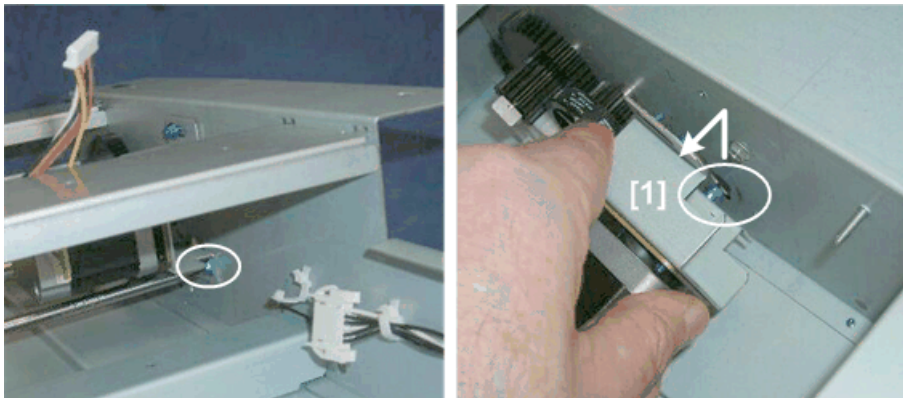
1

Tray Lift Motor



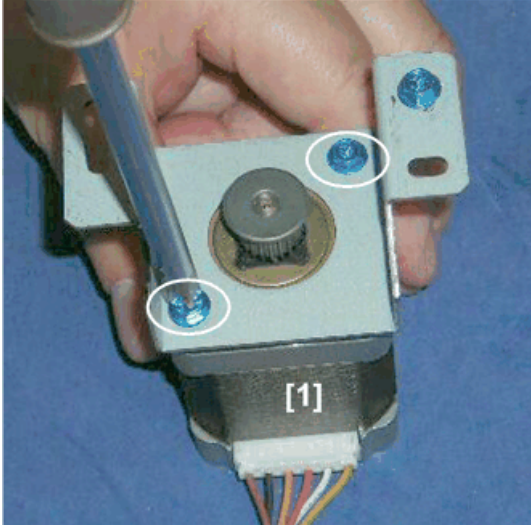
b890r166

- Tray lift unit p.10
 - Lay the tray lift unit on a flat surface.
1. Motor connections [1] (Spring x1, ⌘ x1, ⌘ x1)
 2. Motor bracket [2] (⌘ x1)



b890r167

3. Motor bracket [1] (⌀ x1)
4. Lift the bracket off the step screw and remove it.



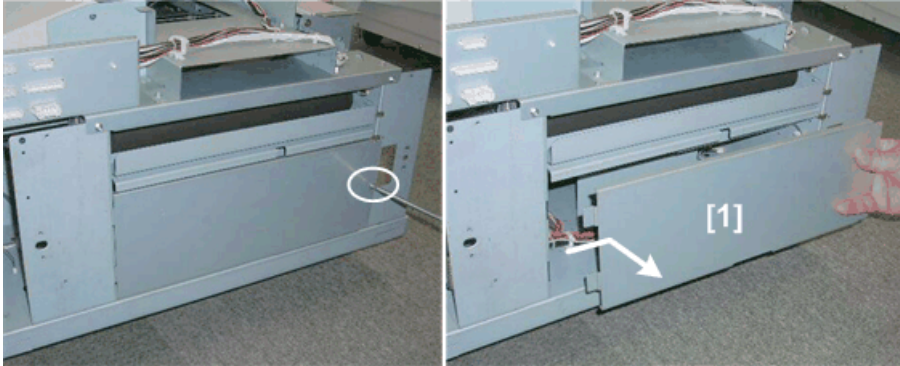
b890r168

5. Tray lift motor [1] (⌀ x2)

Transport Unit Sensors, Switches

Transport Exit Sensor

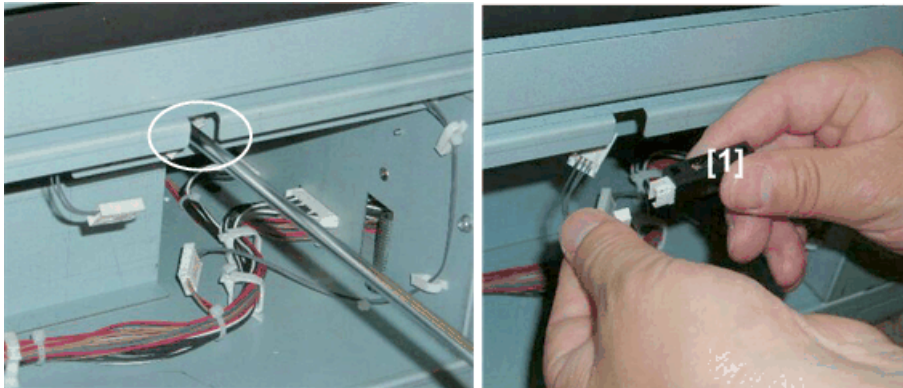
1



b890r192

- Separate the cross fold unit and transport unit. ➡ p.13

1. Cover plate [1] (🔧 x1)

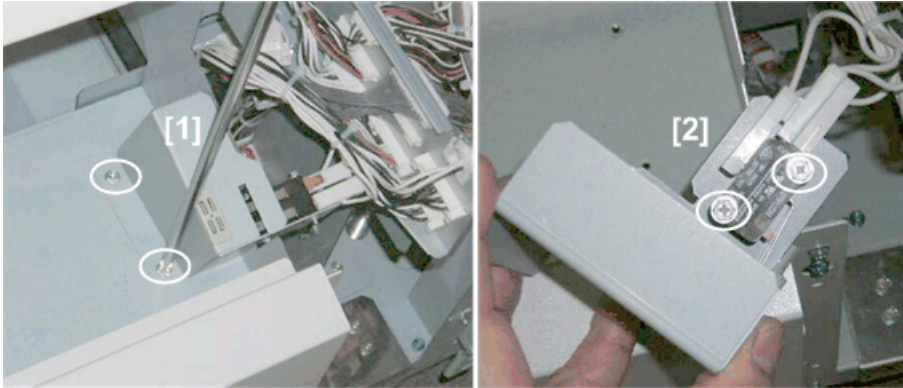


b890r193

2. Transport exit sensor [1] (🔧 x1, 📡 x1)

Rear Upper Door Switches

1



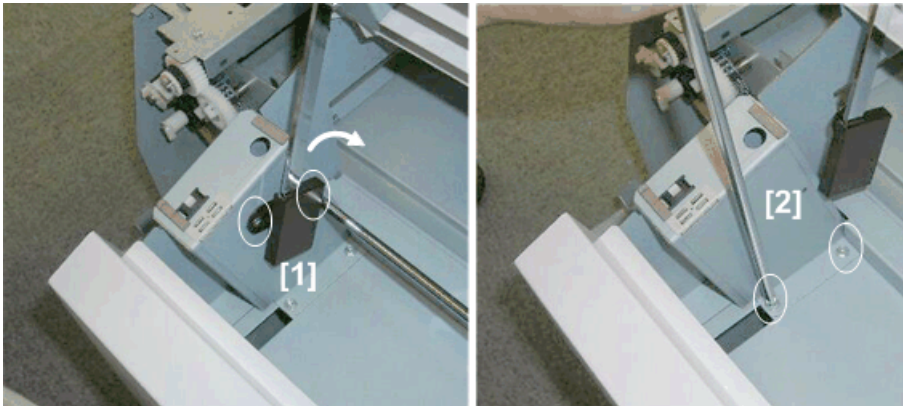
b890r197

- Raise cover N9

Left Switch: Microswitch

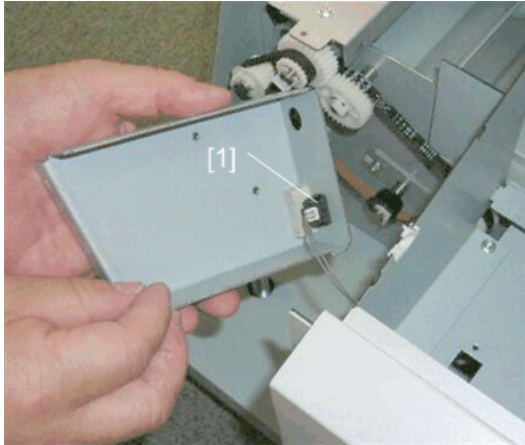
1. Switch bracket [1] (⌘ x2)
2. Cover N9 microswitch [2] (⌘ x2, ⌘ x2)

Right: Push-Switch



b890r198

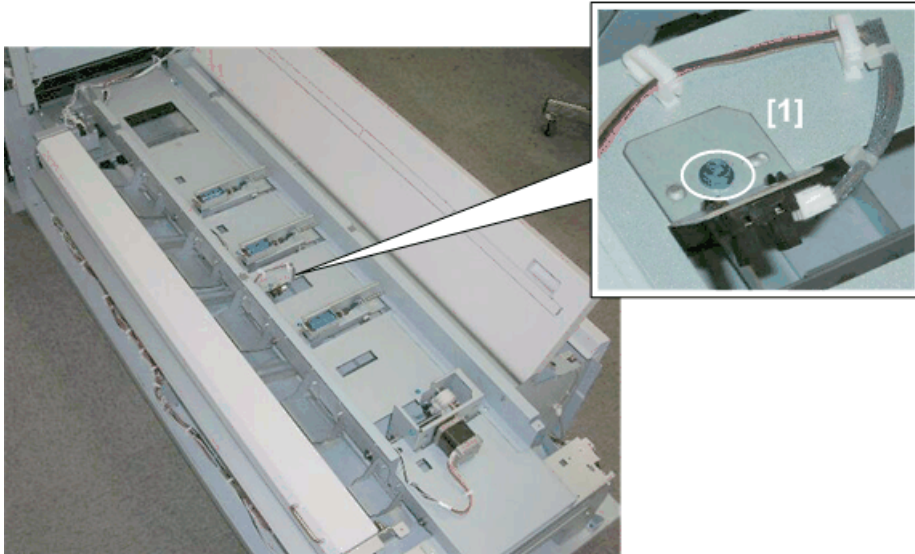
- Transport unit rear corner cover ➡ p.16
- Raise cover N9
- 1. Hinge bracket [1] (⌘ x2)
- 2. Push the disconnected arm away from the bracket.
- 3. Switch bracket [2] (⌘ x2)



b890r199

4. Cover **N9** door push-switch [1] (🔧 x1)

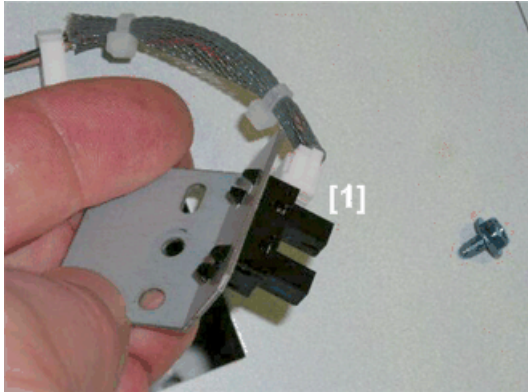
Horizontal Guide HP Sensor



b890r200

- Remove cover **N9**

1. Sensor bracket [1] (🔧 x1)

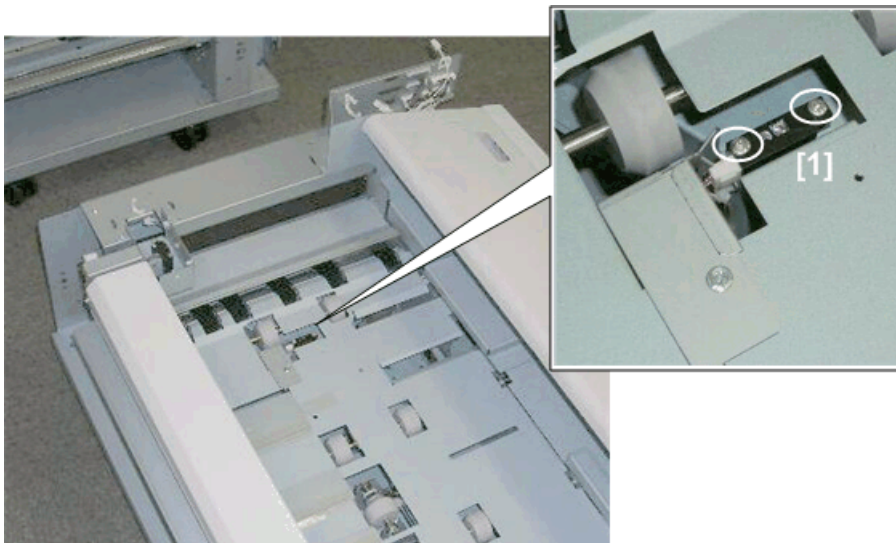


b890r201

2. Horizontal guide HP sensor [1] (HP x1, Pawls x4)

Transport Registration Sensor

1. Separate the cross fold unit and transport unit. ➡ p.13
2. Remove:
 - Transport unit right cover ➡ p.20
 - Connection cover ➡ p.20
 - Top cover ➡ p.21
 - Guide plate unit ➡ p.21
 - Lower guide plate ➡ p.23

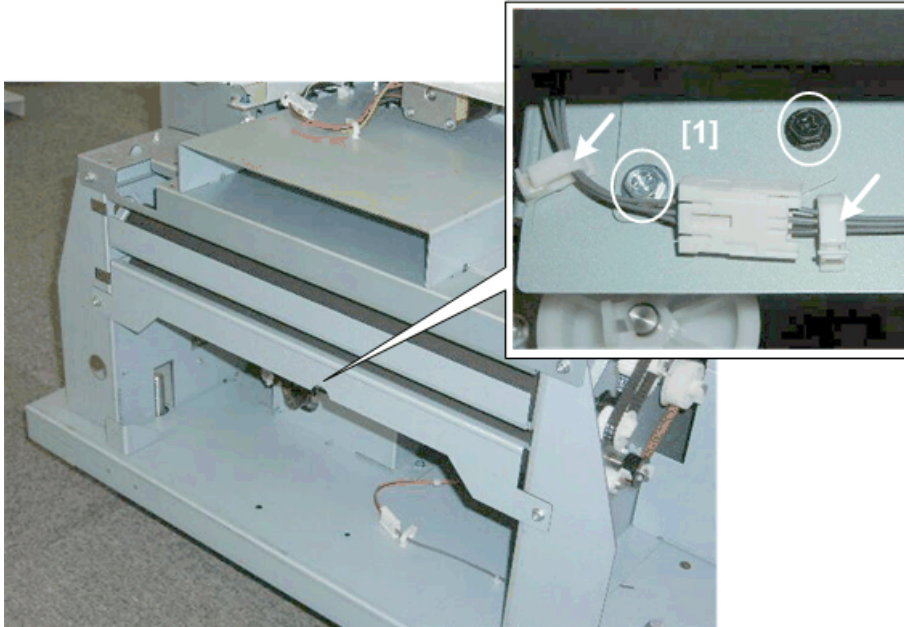


b890r202

3. Transport registration sensor [1] (🔧 x2, 🛠️ x1)

Right Exit Sensor

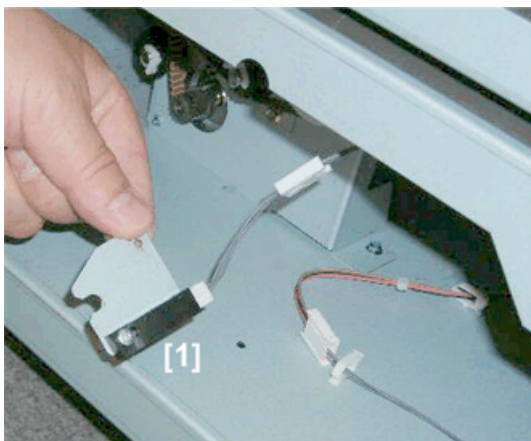
1



b890r206

- Transport unit right cover 🛠️ p.20

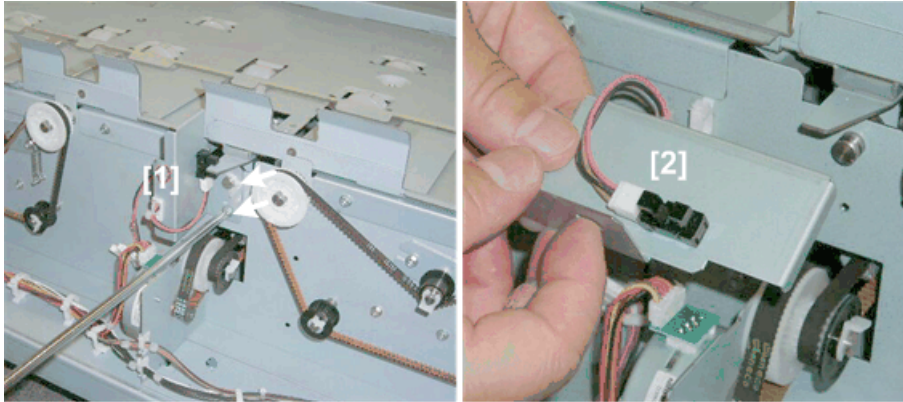
1. Sensor bracket [1] (🔧 x2, 🛠️ x2)



b890r207

2. Right exit sensor [1] (🔧 x1, 🛠️ x1)

Jogger Fence HP Sensor

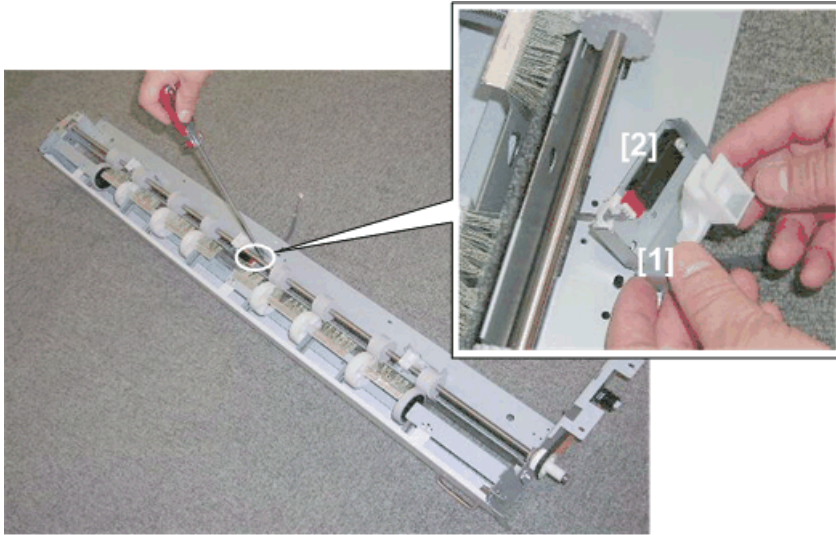


b890r208

- Guide plate unit ➡ p.21
 - Lower guide plate ➡ p.23
1. Sensor bracket [1] (🔧 x1, 🛠️ x1)
 2. Jogger fence HP sensor [2] (🔌 x1, Pawls x4)

Transport Entrance Sensor

1. Separate the cross fold unit and transport unit.
2. Remove:
 - Guide plate unit ➡ p.21
 - Transport entrance unit ➡ p.23



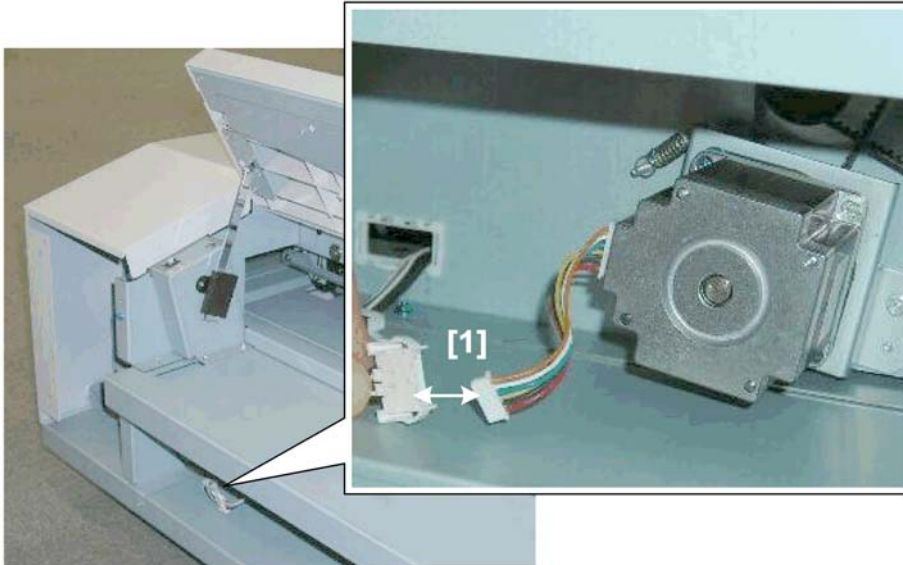
b890r209

1. Sensor bracket [1] (🔩 x1)
2. Transport entrance sensor [2] (🔌 x1, 🔩 x1, 🛠️ x1)

Transport Unit Motors


1

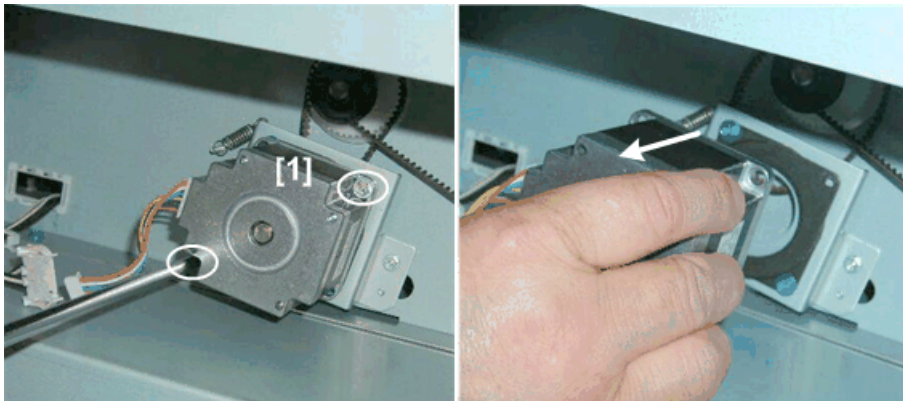
Transport Motor



b890r194

- Transport unit rear cover  p. 17

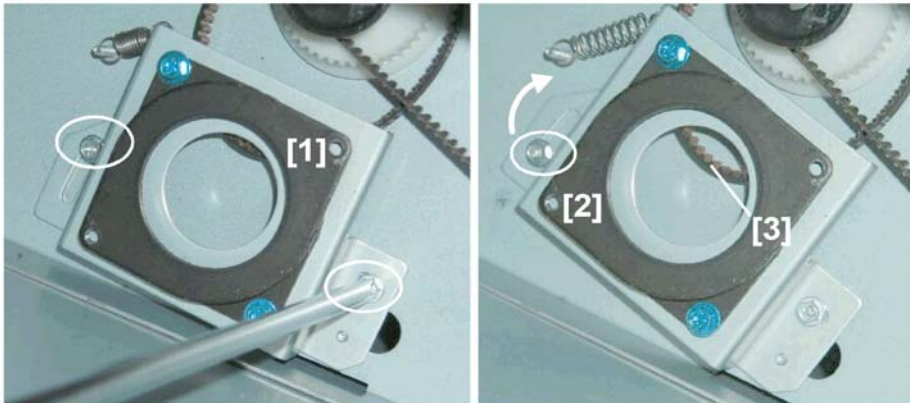
1. Disconnect motor [1] ( x1)



b890r195

2. Remove transport motor [1] ( x2)

Reinstallation



b890r196

1. Loosens screws on bracket [1] (⚙️ x2).
2. Push the bracket [2] up to expose the timing belt [3] then tighten the screw.
3. Refasten the motor on the bracket (⚙️ x2).
4. Loosen screw the left screw, push the bracket down to apply tension to the timing belt, then re-tighten both screws.

Return Roller Motor

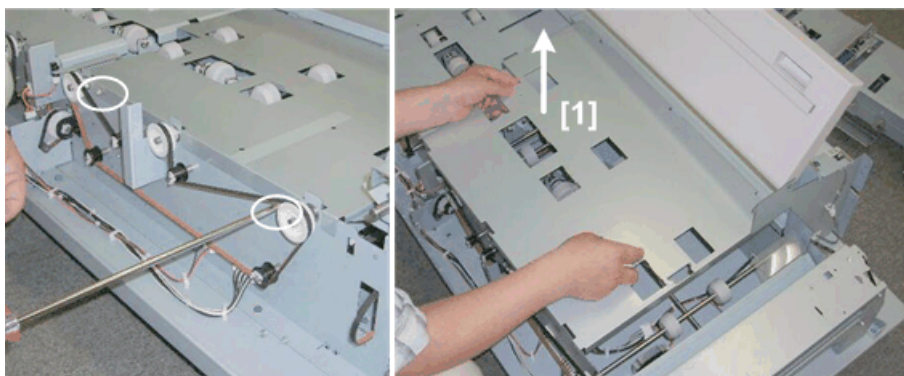
1. Separate the cross fold unit and transport unit.
2. Remove:
 - Guide plate unit ➡ p.21
 - Transport entrance unit, jogger fence ➡ p.23

1

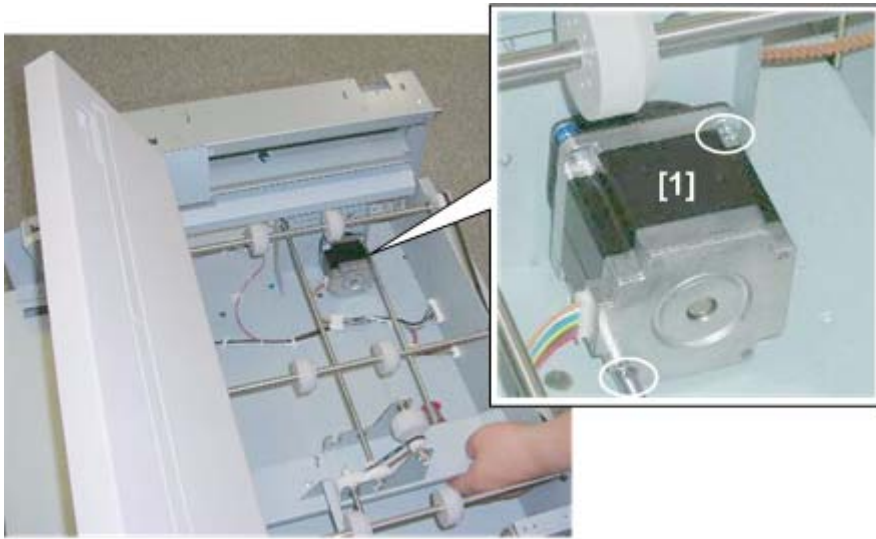


b890r203

3. Rear inner plate [1] (⌀ x3)



4. Front: Right lower guide plate [1] (⌀ x2)

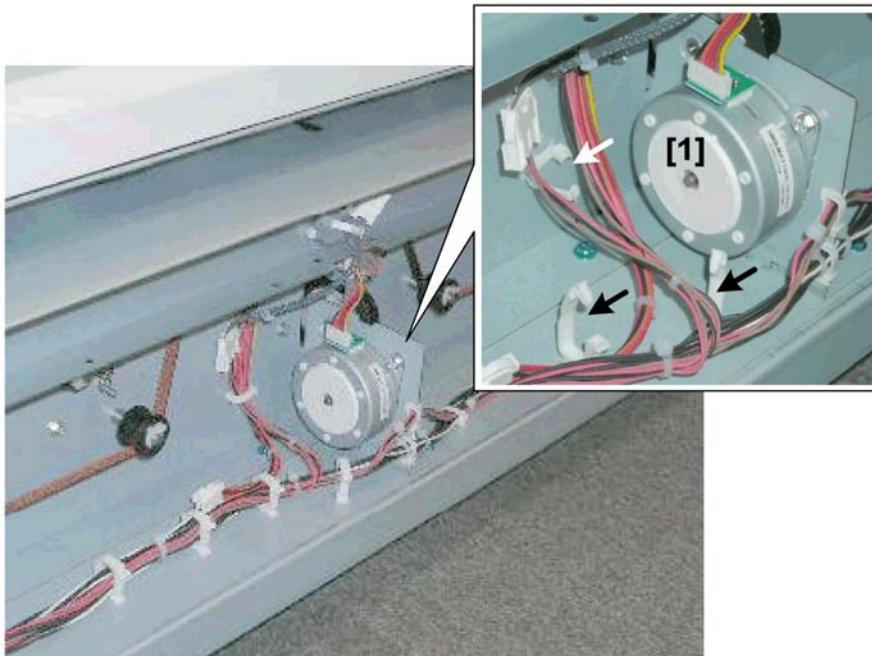


b890r205

5. Return roller motor [1] (🔧 x2, 🛠️ x2)

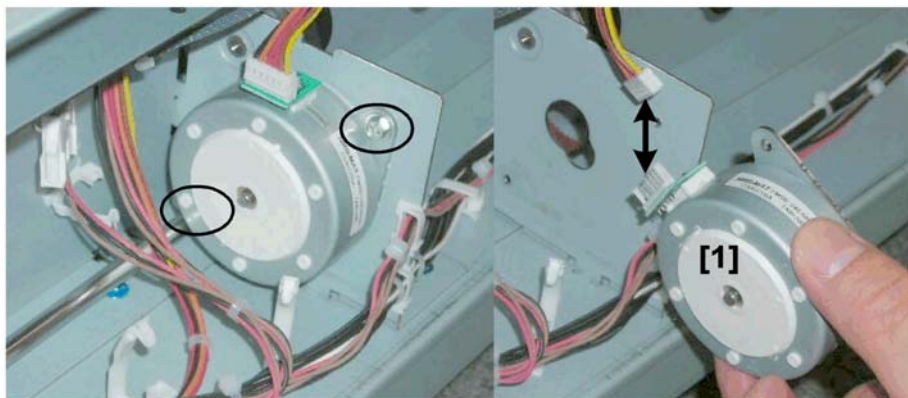
Jogger Motor

- Separate the transport unit and fan fold unit.



b890r210

1. Open the harness clamps around the motor [1] (🔧 x3).



b890r211

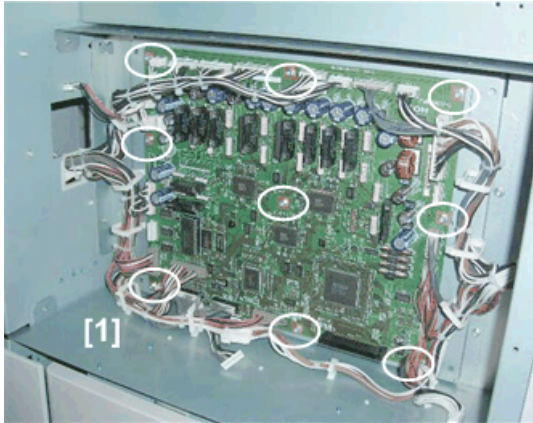
2. Jogger motor [1] (🔧 x2, 🛠️ x1)

MCU, Firmware Update

MCU (Main Control Unit)

1

- Tray lift unit ● p.10



b890r170

1. MCU [1] (🔌 x22, 🌀 x9)

Firmware Update

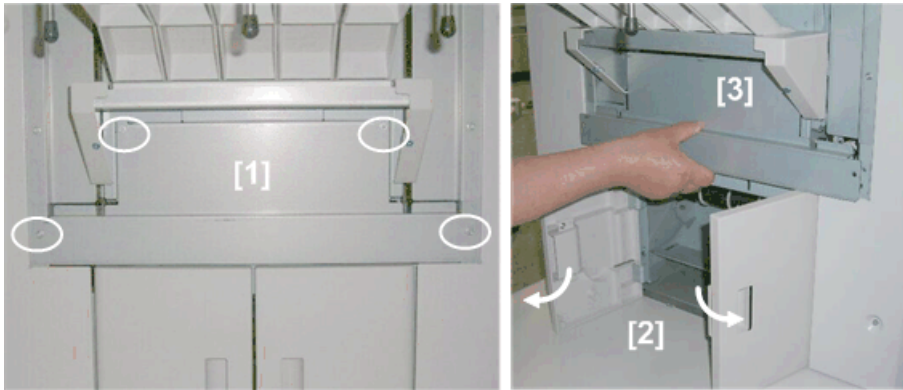
Before You Begin

Prepare an IC card with the update data for the cross fold and transport unit.

- If the fan fold unit firmware needs to be updated as well, the fan fold update data must be on a separate card.
- The update data for the fan fold unit and cross fold/transport unit cannot be on the same card.
- The fan fold unit firmware cannot be updated from the MCU slot of the cross fold unit. The fan fold IC card must be inserted in the main board of the fan fold unit.

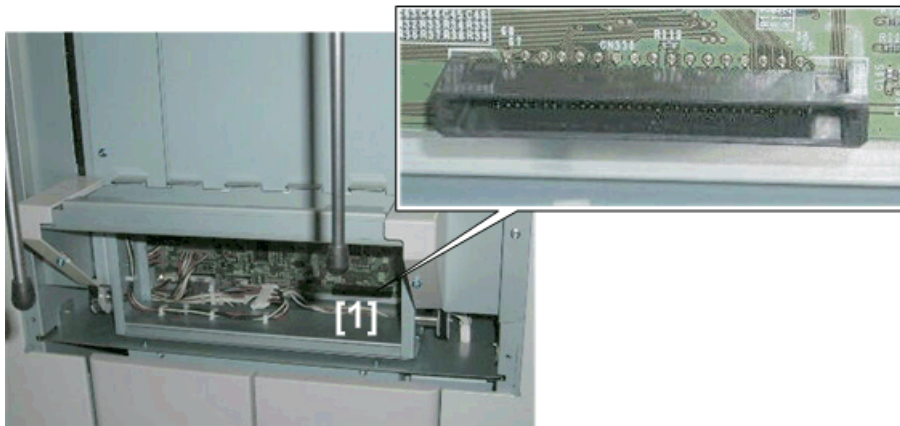
Firmware Update Procedure

1



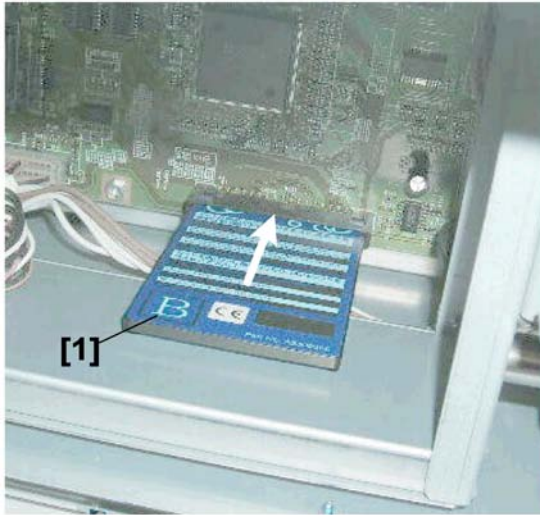
b890r171

1. MCU cover [1] (⌀ x4)
2. Open the double doors [2] .
3. Remove MCU cover [3]



b890r172

4. The IC card connection point [1] is on the MCU.



b890r173

5. Insert the IC card [1] into the slot with the "B" side facing up as shown.
6. Make sure both cables between the cross fold unit and fan fold unit are connected.
7. Turn on the power switch of the fan folder unit.



b890r173a

The firmware download begins.

- While downloading is in progress LED1 [1] on the left remains ON and LED2 [1] on the right flashes rapidly.
- The download requires about 3 min. to finish.

- When downloading is finished, the left LED goes OFF. The right LED continuously flashes twice rapidly followed by a long pause.

8. Switch off the fan fold unit.

9. Remove the IC card from the slot.

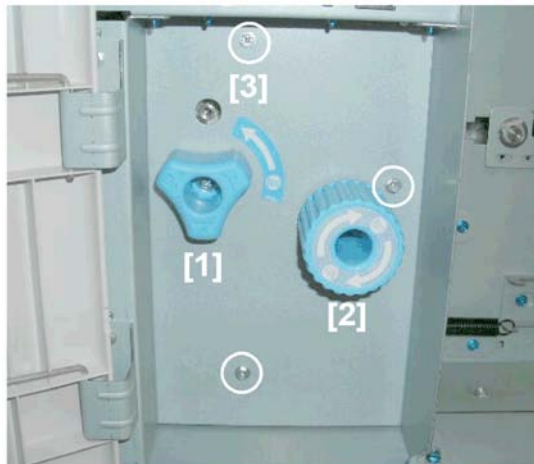
10. Switch the fan fold unit on. The left LED will remain ON and the right LED will flash slowly. This indicates that the unit is in normal mode.

11. Switch off the fan fold unit and reassemble.

PM Parts

Fold Plate Stoppers

1



b890r230

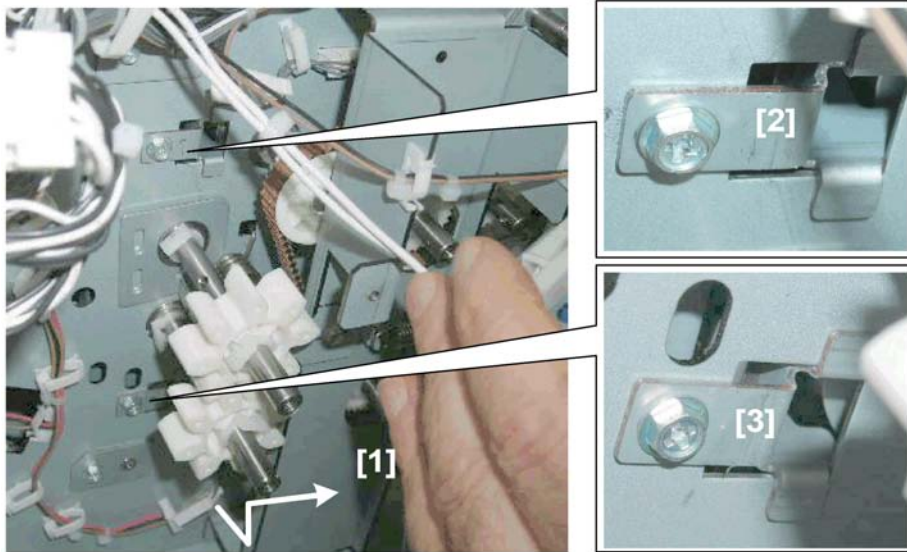
- Rear lower cover p.4
- Open the rear door.

1. Remove:

[1] Knob **N10** (x1)

[2] Knob **N11** (x1)

[3] Screws (x3)



b890r232

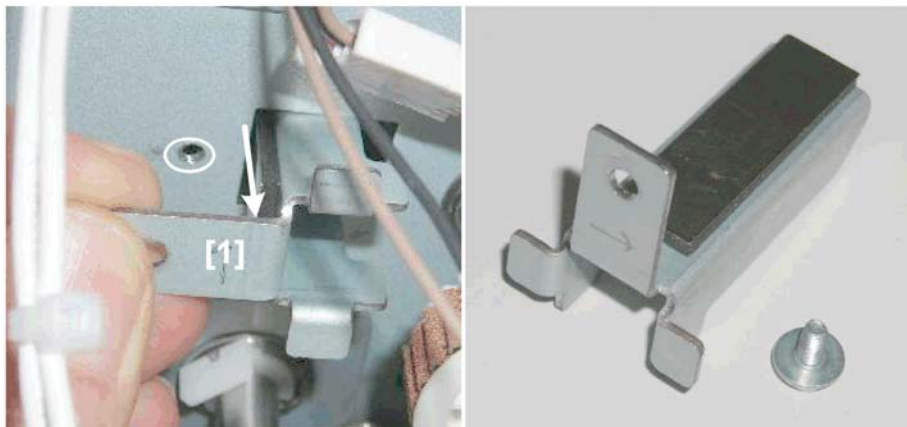
2. Pull the door unit [1] to the rear, lift it off the shoulder screws, and push it to the right so you can see:

[2] Fold plate 1 (upper) stopper bracket

[3] Fold plate 2 (lower) stopper bracket)

Note

- You do not need to remove the door unit.

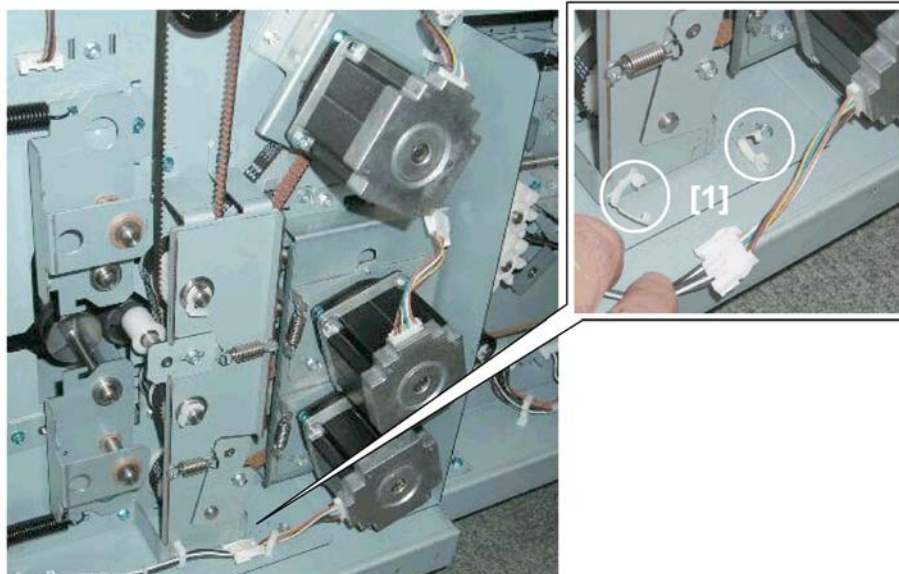


b890r233

3. Remove each bracket [1] (1 x1 ea.)

Fold Plate Motor Torque Limiters

1

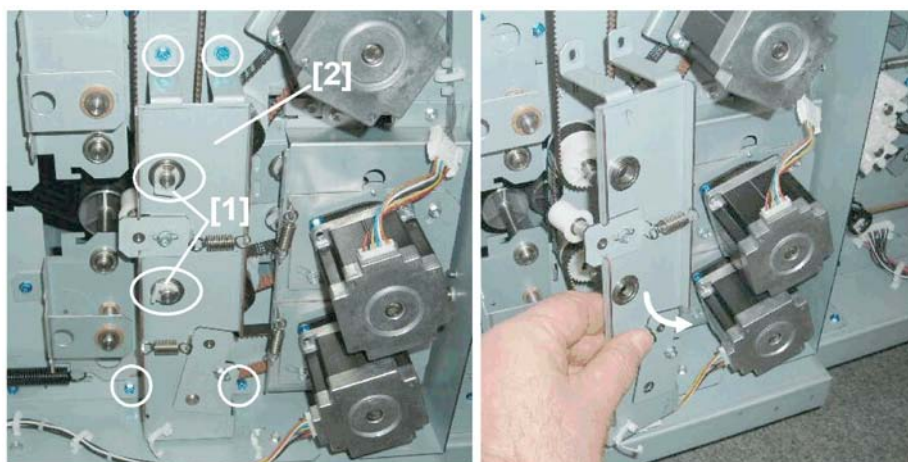


b890r220

- Separate the cross fold unit from the fan fold unit. ➡ p.13

- Front lower cover o ➡ p.7

1. Open harness clamps [1] (🔧 x1).

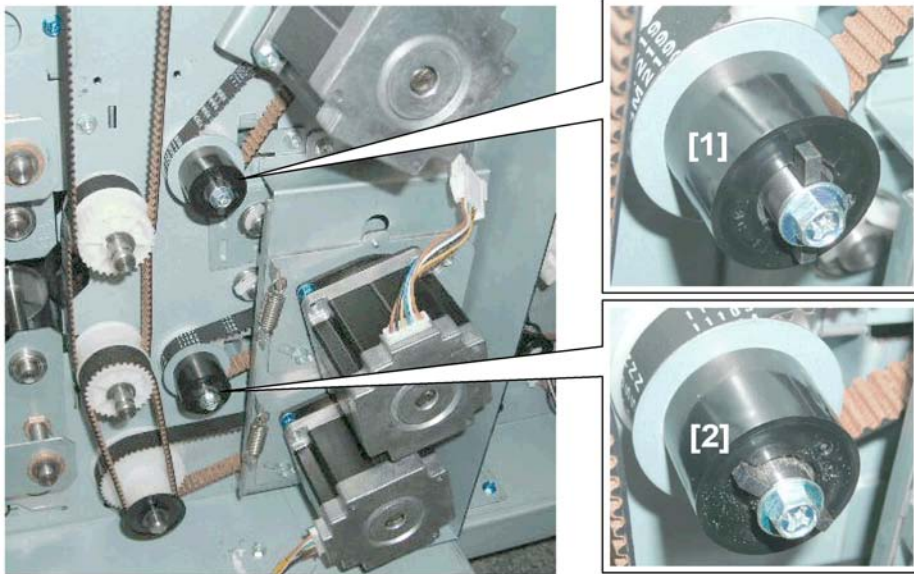


b890r221

2. Remove:

[1] Bearings x2 (🔧 x2)

[2] Pulley cover plate (🔧 x4)



b890r222

3. Remove:

[1] Upper fold plate motor torque limiter (⌀ x1)

[2] Lower fold plate motor torque limiter (⌀ x1)


Reinstallation

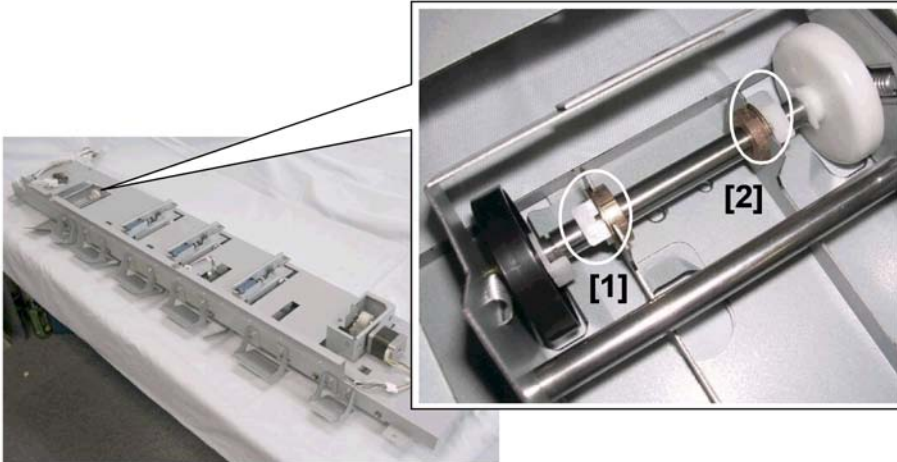


b890r223

1. Make sure that the bracket [1] is flush against the top of the torque limiter.
2. You may have to rotate the torque limiter to the left or right until the bracket is seated completely.

Idle Roller Shafts

1. Remove the guide plate unit and set it on a clean, flat surface.  p.21



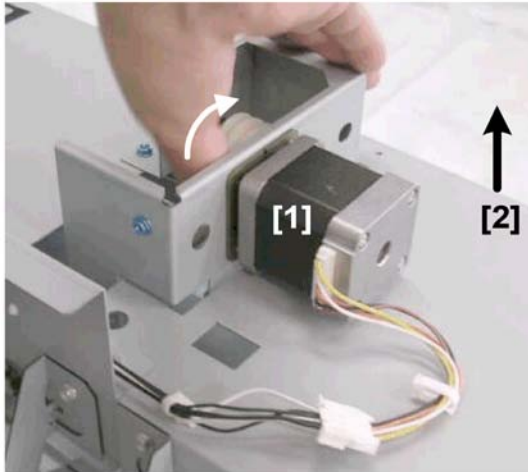
b890r247

2. Remove C-clamps [1] and [2] ( x2).



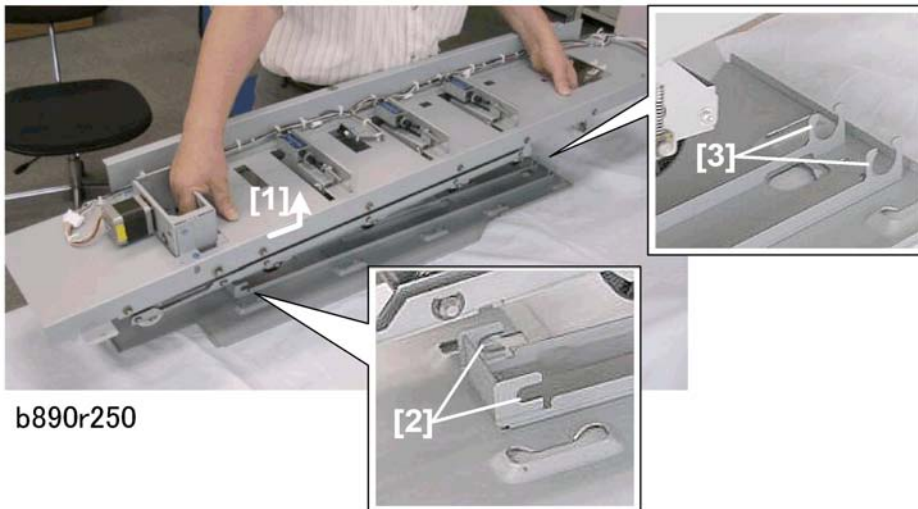
b890r248

3. Push the bushings away from the bracket.



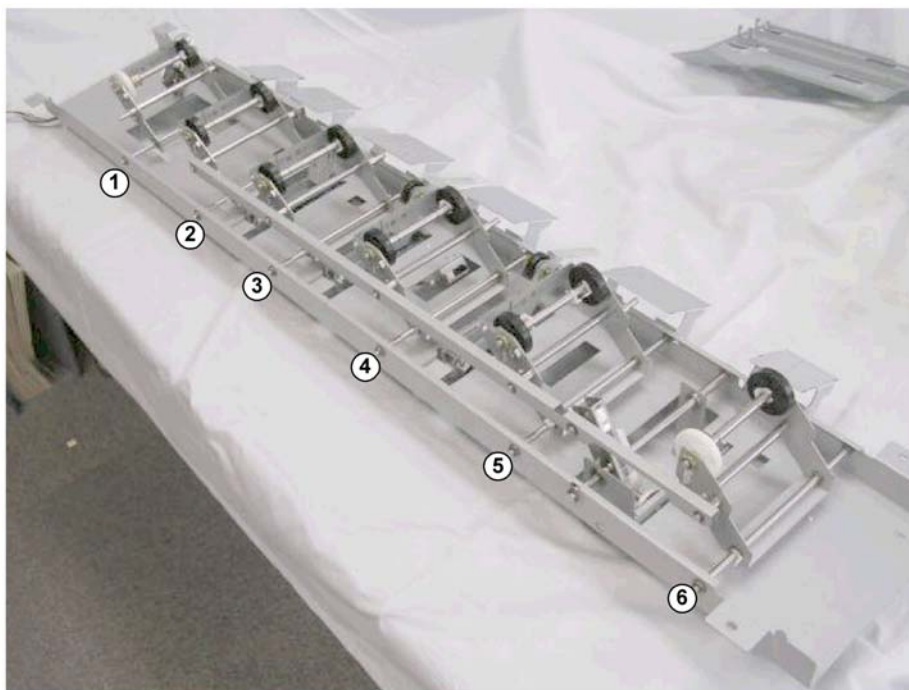
b890r249

4. Rotate drive gear of motor [1] to raise plate [2].



b890r250

5. Shift plate [1] slightly to disengage brackets [2] and [3], then lift the plate to separate the unit.

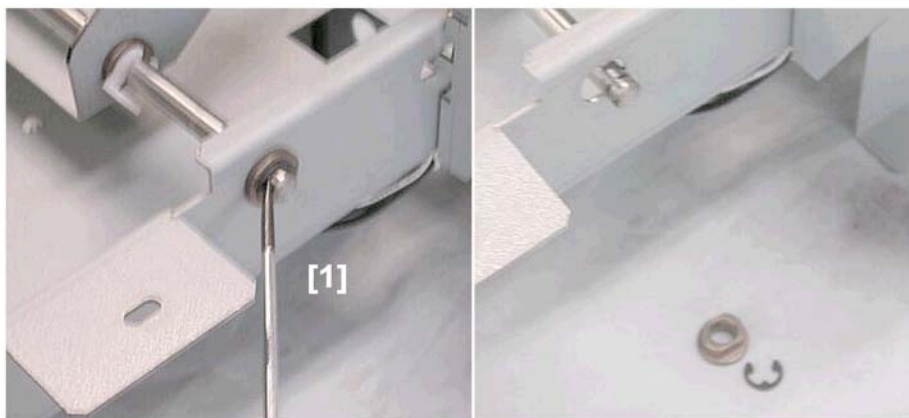


b890r251

6. Six idle roller shafts need to be replaced.

★ Important

- Remove and replace each shaft, one at a time.



b890r252

7. Release one end of a shaft [1] (⌚ x1, Bushing x1).

8. Repeat this procedure to release the other end of the shaft (⌚ x1, Bushing x1).

1



b890r253

9. Remove the C-clamps at each side of the bracket (🔧 x2).



b890r254

10. Remove the shaft.