

**Finisher SR4090 /  
Booklet Finisher SR4100  
Machine Code: D703/D704  
Field Service Manual**

23 May, 2014



---

# Revision History

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

---

## Revision History (V2.00)

---

Chapter	Items
1. Replacement and adjustment	SR4090/SR4100: Stapler unit

---

# Safety and Symbols

---

## Replacement Procedure Safety

---

### **CAUTION**


- Turn off the main power switch and unplug the machine before beginning any of the replacement procedures in this manual.

---

## Symbols Used in this Manual

---


This manual uses the following symbols.

 : See or Refer to

 : Screws

 : Connector

 : Clip ring

 : E-ring

# TABLE OF CONTENTS

Revision History.....	1
Revision History (V2.00).....	1
Safety and Symbols.....	2
Replacement Procedure Safety.....	2
Symbols Used in this Manual.....	2

## 1. Replacement and Adjustment

Exterior Covers.....	5
Rear Upper Cover, Rear Lower Cover, Upper Cover.....	5
Front Cover, Front Left Side Cover.....	7
Paper Exit Cover.....	8
Lower Tray.....	9
Proof Tray.....	9
Upper Tray.....	10
End Fence (D704 Only).....	10
Left Cover (D703 Only).....	12
Boards.....	16
Main Board.....	16
When replacing the main board.....	16
Main Unit (Motor).....	18
Corner Stapling Unit.....	18
Paper Exit Gate Motor.....	23
Leading Edge Guide Motor.....	24
Trailing Edge Pressure Plate Motor.....	25
Stacking Roller Motor.....	25
Feed Out Motor.....	26
Jogger Motor.....	26
Main Unit (Sensor).....	28
Shift Tray Paper Sensor.....	28
Trailing Edge Pressure Plate HP Sensor.....	29
Stacking Roller HP Sensor.....	30
Staple Tray Paper Sensor.....	32
Booklet Unit (Motor).....	34
Booklet Stapler Unit.....	34

---

Press Folding Motor.....	37
Booklet Jogger Motor.....	41
Stapler Unit.....	42
Stapler Unit.....	42
Punch Unit.....	46
Adjustment of the Flat Fold Booklet Unit.....	49
Adjusting the Alignment of the Flat Fold Rollers.....	49
Adjusting the Folding Speed.....	51
Flat Fold Booklet Unit Home Position Adjustment.....	52

# 1. Replacement and Adjustment

## Exterior Covers

1

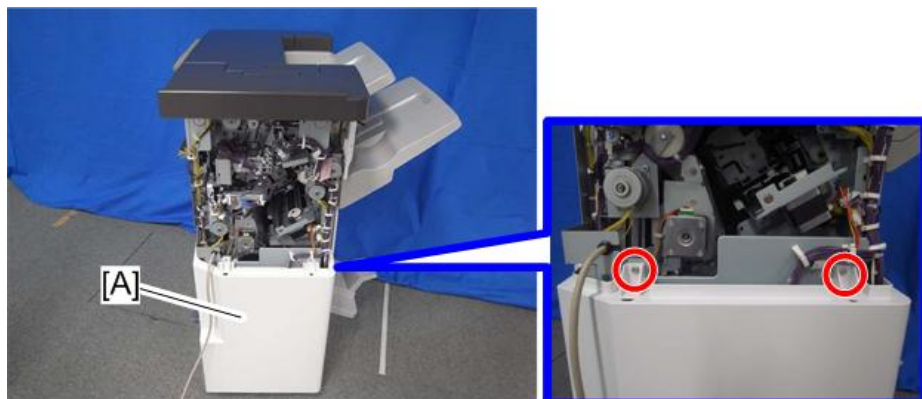
### Rear Upper Cover, Rear Lower Cover, Upper Cover

1. Rear upper cover [A] (⌘ x 2)



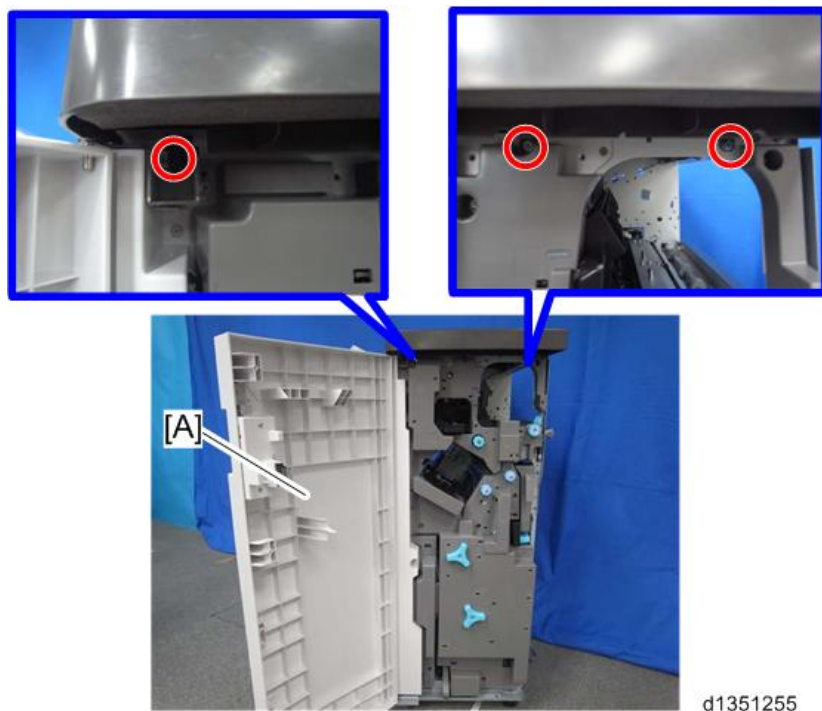
d1351253

2. Rear lower cover [A] (⌘ x 2)

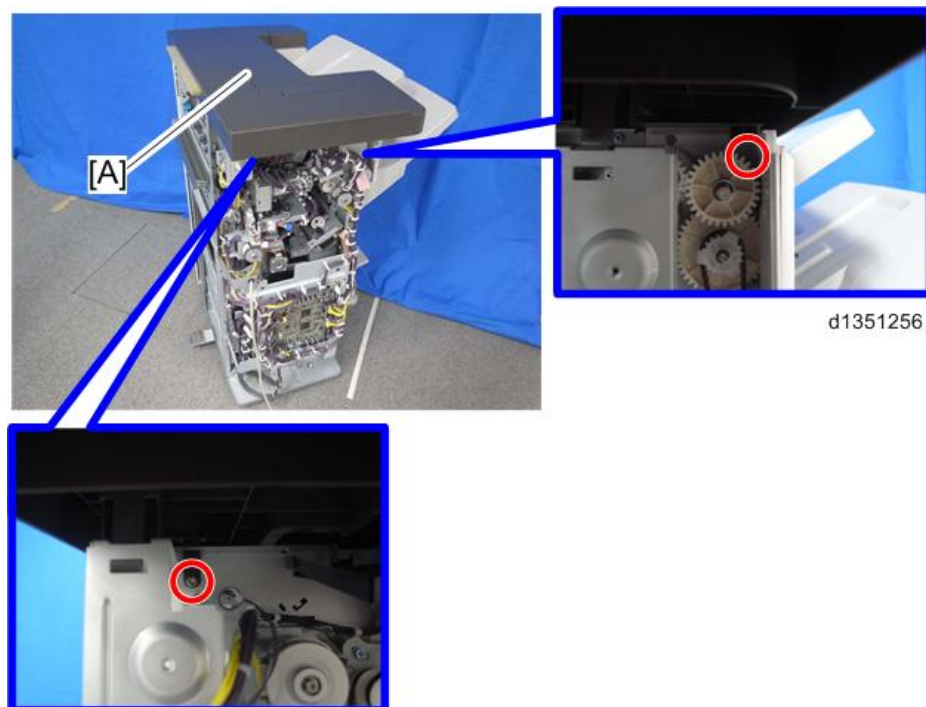


d1351254

3. Open the front door [A], and remove the screws of the upper cover. (⌘ x 3)



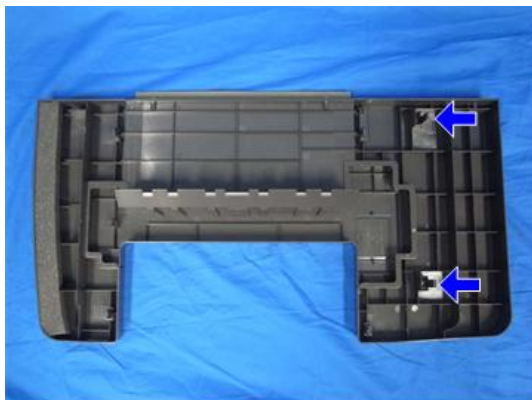
4. Upper cover [A] (⚙ x 2, hook x 2)





**Note**

- Check the positions of the bosses and hooks before removing the upper cover.

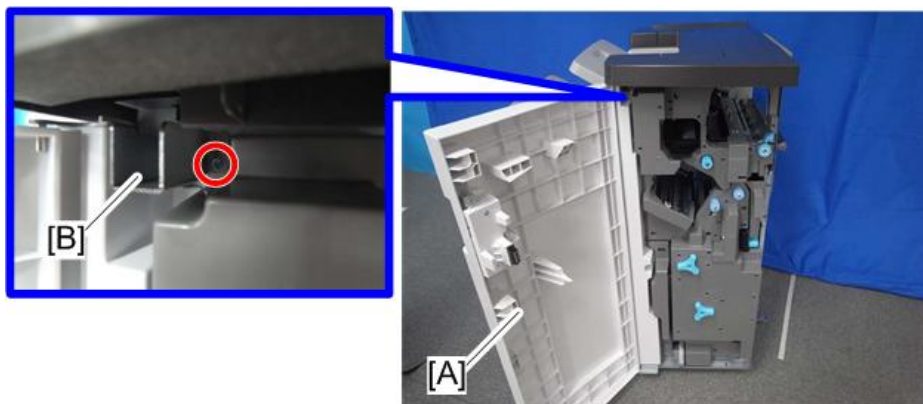


d1351257

1

**Front Cover, Front Left Side Cover**

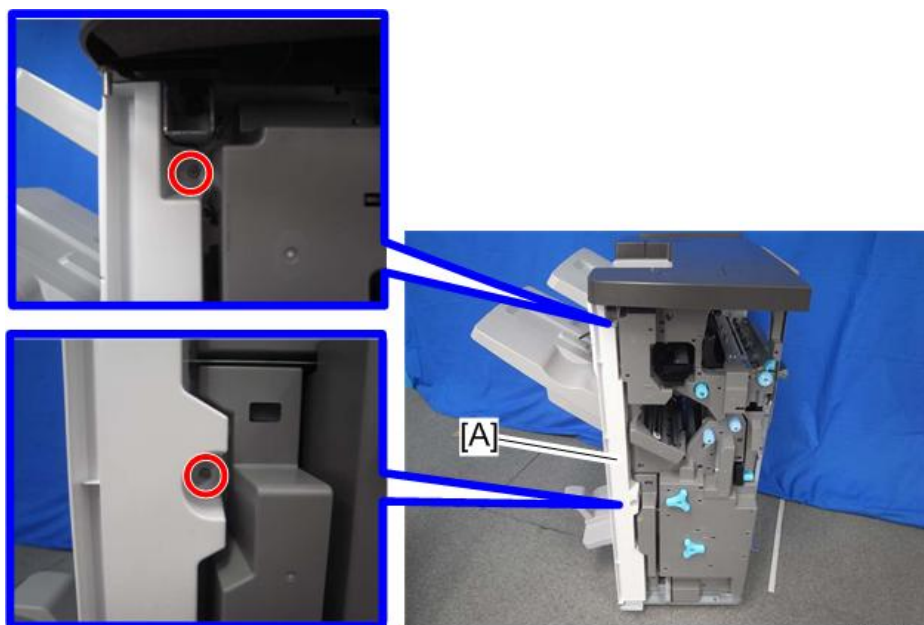
1. Open the front door [A], and then remove the front door bracket [B]. (⌘ x 1)
2. Front door [A]



d1351258

3. Front left side cover [A] (⌘ x 2)

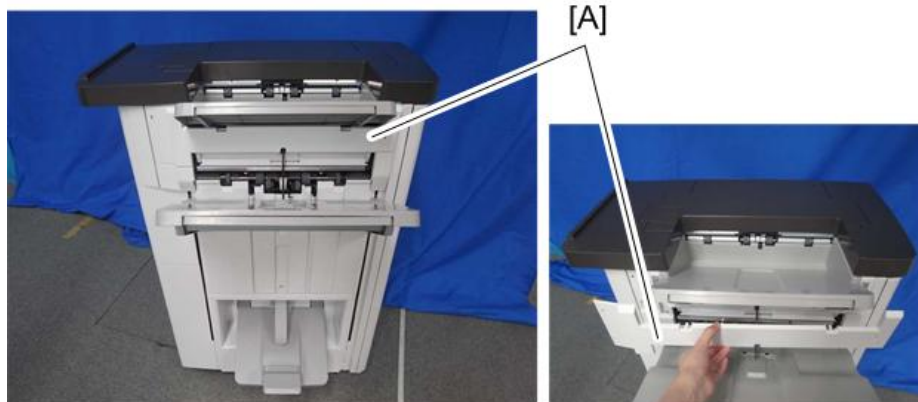
1



d1351259

## Paper Exit Cover

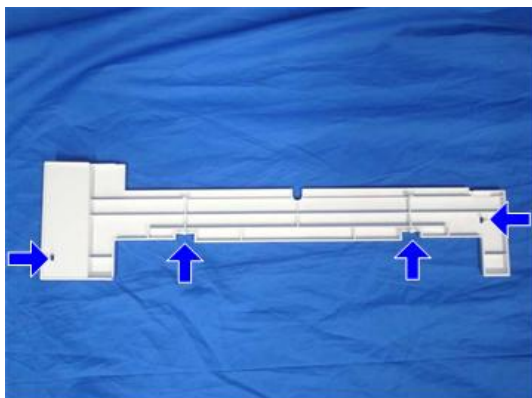
1. Paper Exit Cover [A] (hook x 4)



d1351260

### Note

- Check the positions of the bosses and hooks before removing the paper exit cover.



d1351261

## Lower Tray

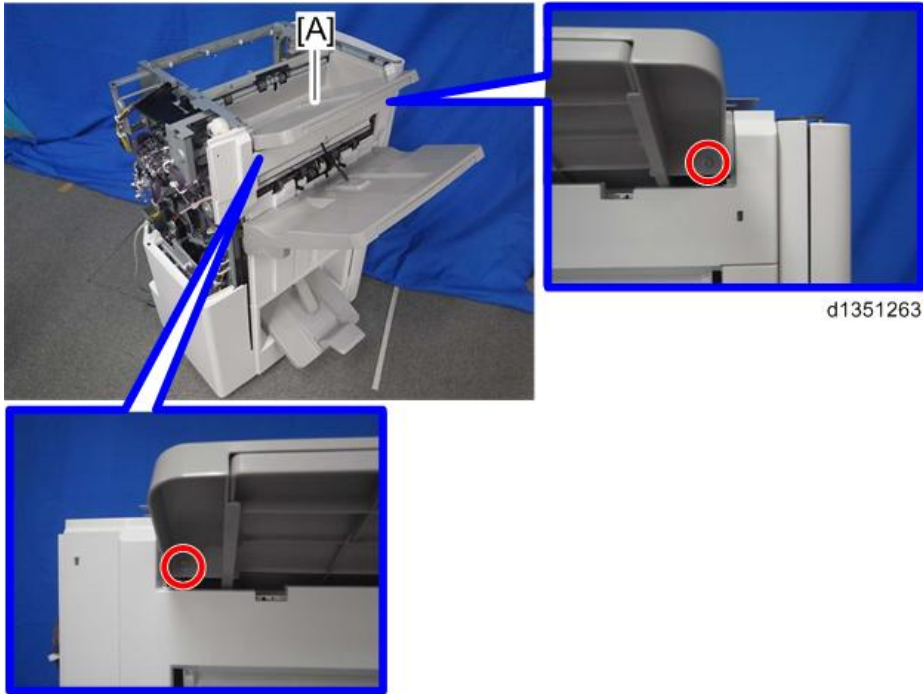
1. Lower tray [A]



d1351262

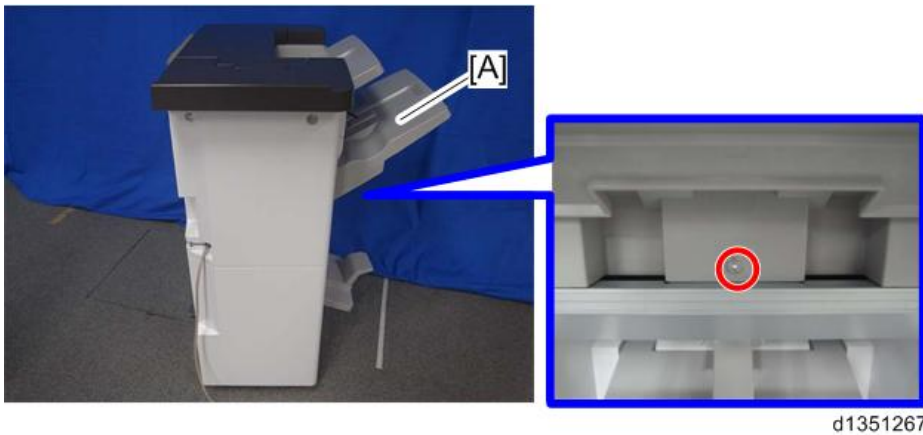
## Proof Tray

1. Remove the following covers. (☛ page 5 "Rear Upper Cover, Rear Lower Cover, Upper Cover")
  - Rear upper cover
  - Upper cover
2. Proof tray [A] (🔑 x 2)



## Upper Tray

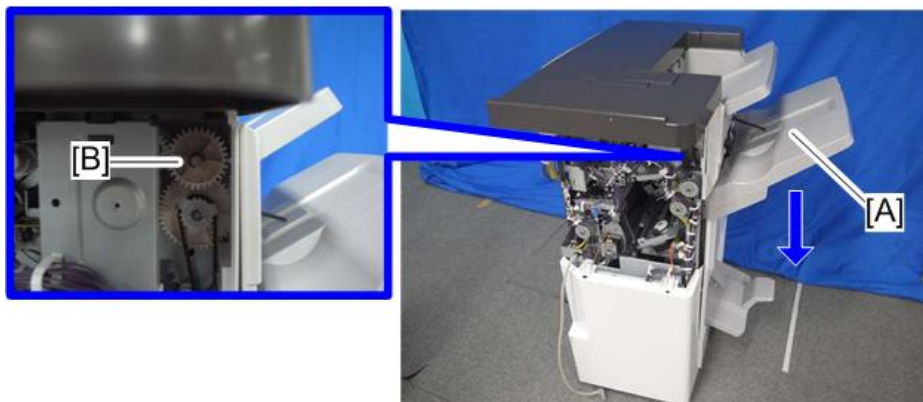
1. Upper tray [A] (🔑 x 1)



## End Fence (D704 Only)

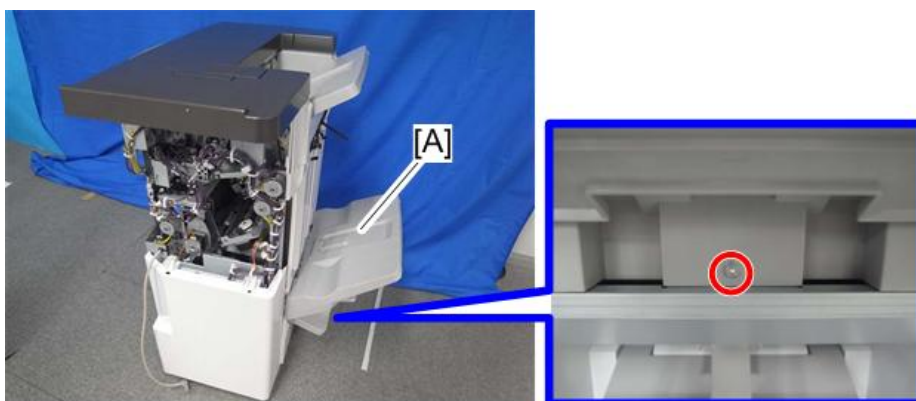
1. Rear Upper Cover (🔑 page 5 "Rear Upper Cover, Rear Lower Cover, Upper Cover")
2. Support the upper tray [A] with your right hand.

3. Pull gear [B] toward you to release.
4. Slowly lower the upper tray until it stops.



d1351264

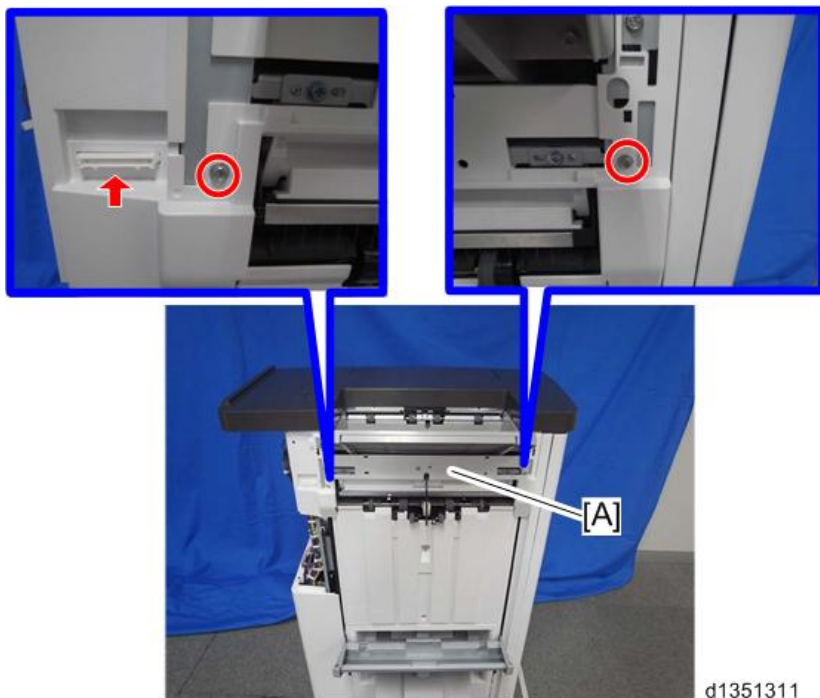
5. Upper tray [A] (🔧 x 1)



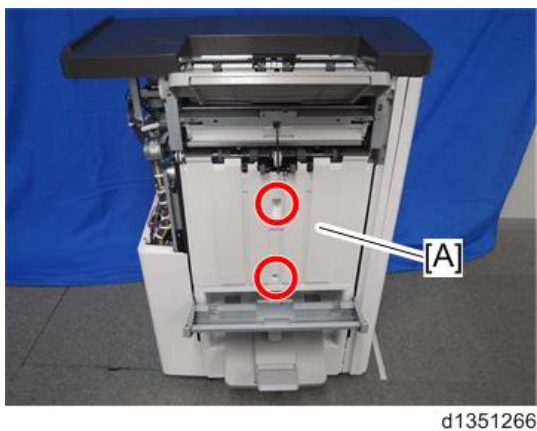
d1351265

6. Lower Tray (🔧 page 9)
7. Right upper cover [A] (🔧 x 2, connector bracket x 1)

1



8. End fence [A] (🔩 x 2)



## Left Cover (D703 Only)

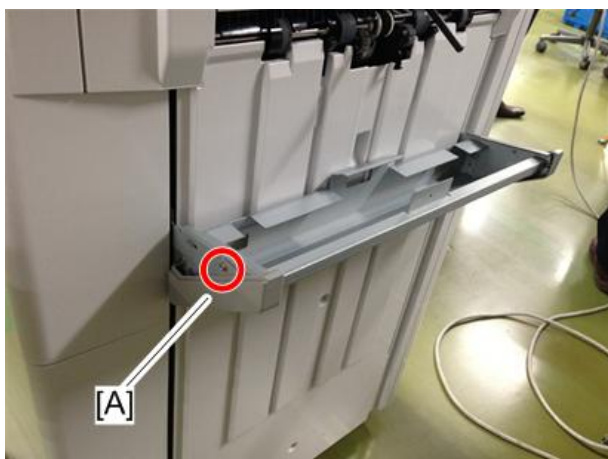
1. Upper Tray [A] (🔩 x 1)





d1351777

2. Rear mold bracket [A] (🔩 x 1)



d1351778

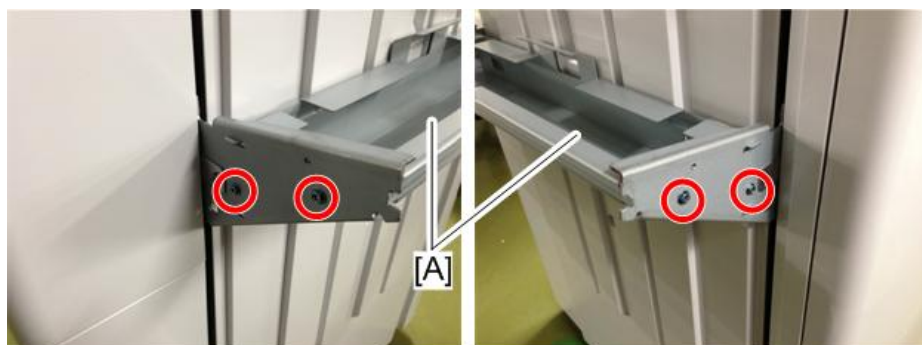
3. Front mold bracket [A] (🔩 x 1)

1



d1351779

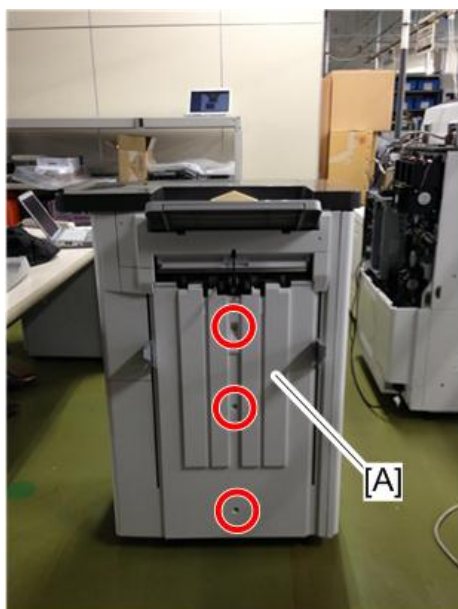
4. Shift tray bracket [A] (🔩 x 4)



d1351780

5. Left cover [A] (🔩 x 3)





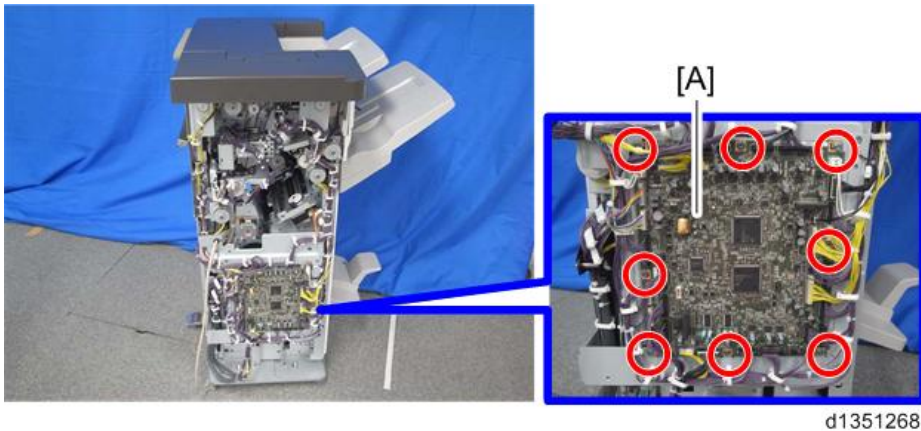
d1351781

# Boards

## 1

### Main Board

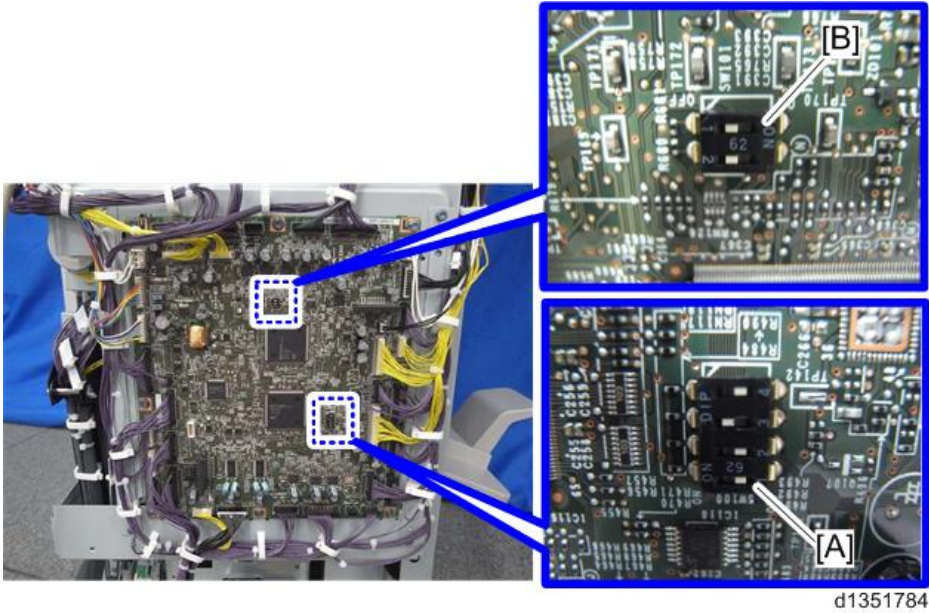
1. Remove the following covers. (☛ page 5 "Exterior Covers")
  - Rear upper cover
  - Rear lower cover
2. Main board [A] (☛ x 4, connector x all)



### When replacing the main board

This board has two blocks of dip switches. When you reinstall the main board, follow the procedure below regarding the dip switch settings.

1. Check the settings of dip switch [A] on the old main board.
2. Replace the main board.
3. Change the settings of dip switch [A] on the new main board to match the settings on the old main board.
4. Make sure the switches of dip switch [B] on the new main board are all OFF.

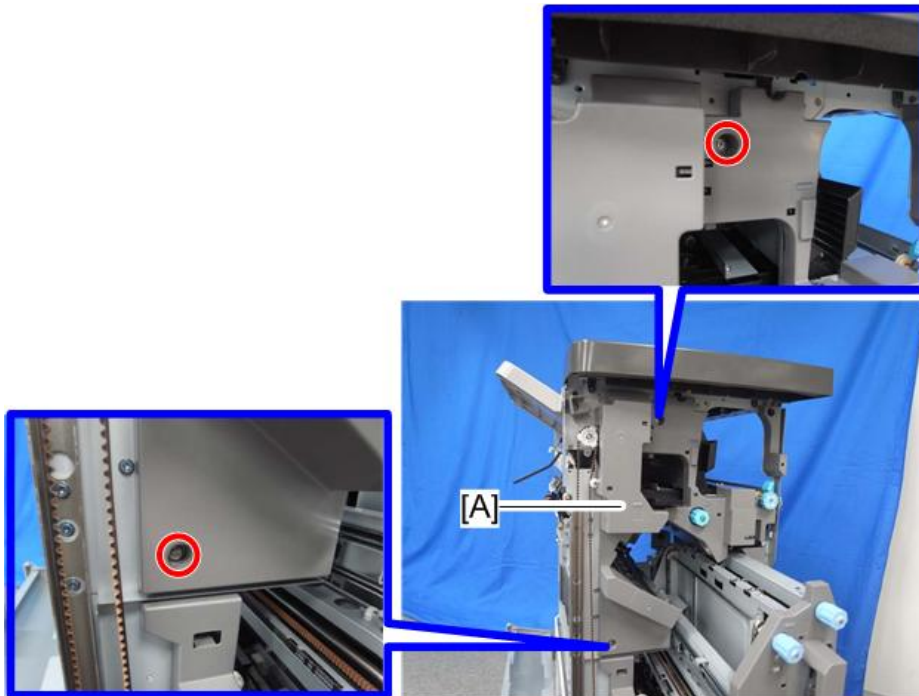


# Main Unit (Motor)

1

## Corner Stapling Unit

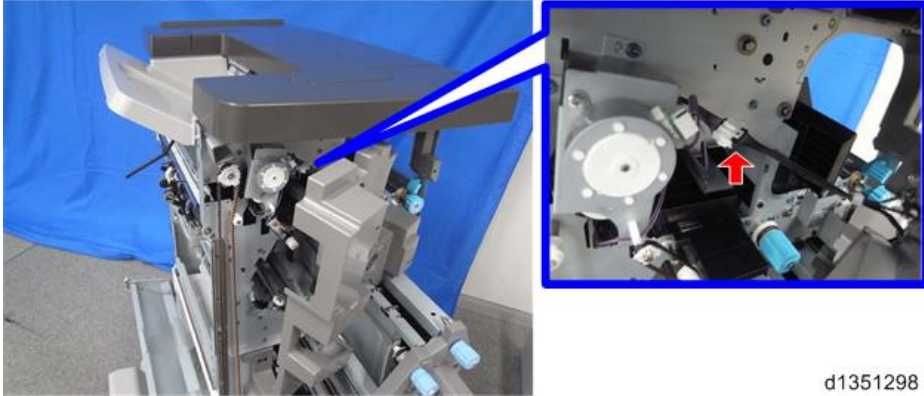
1. Remove the following covers. (☛ page 5 "Exterior Covers")
  - Front door
  - Front left side cover
  - End fence
  - Rear upper cover
  - Rear lower cover
2. Pull out the booklet stapler unit, and remove the inner upper cover [A]. (☛ x 2)



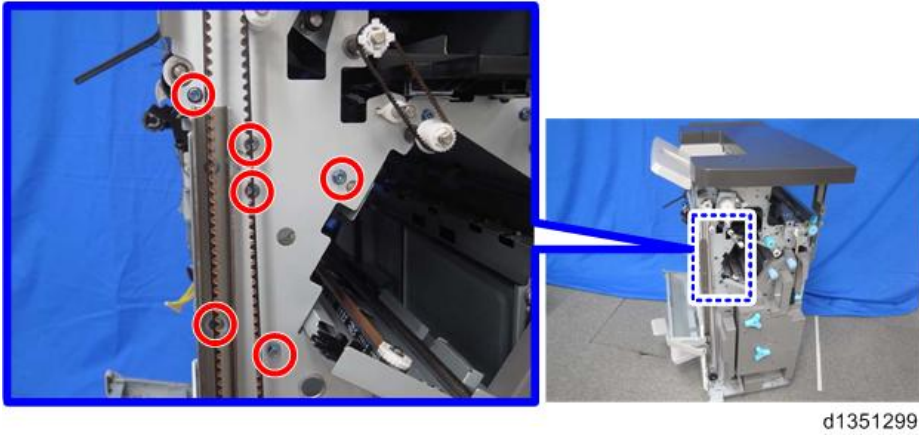
d1351297

### Note

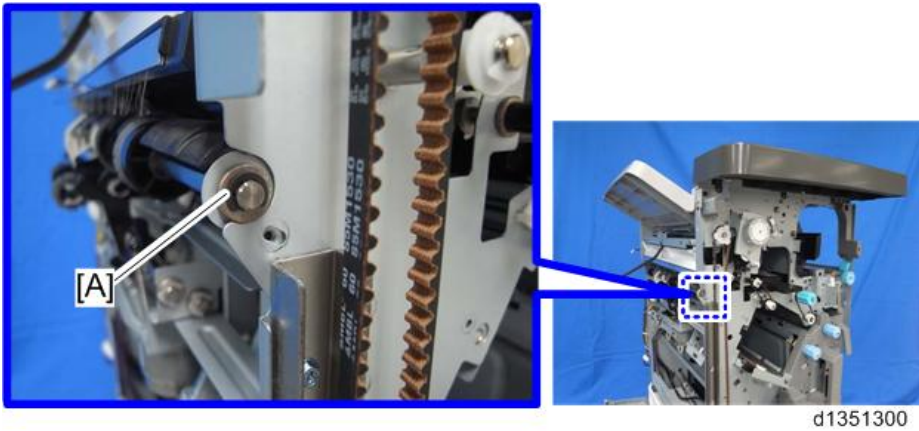
- Disconnect the harness from the back side of the inner upper cover when you remove the inner upper cover.



3. Remove the screws from the front side of the finisher. (⌀ x 6)

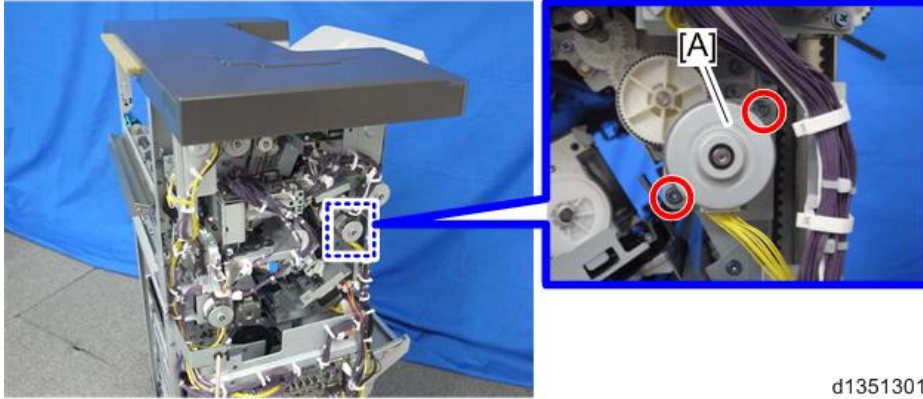


4. Remove the bushing [A] from the front side of the finisher. (C-ring x 1)

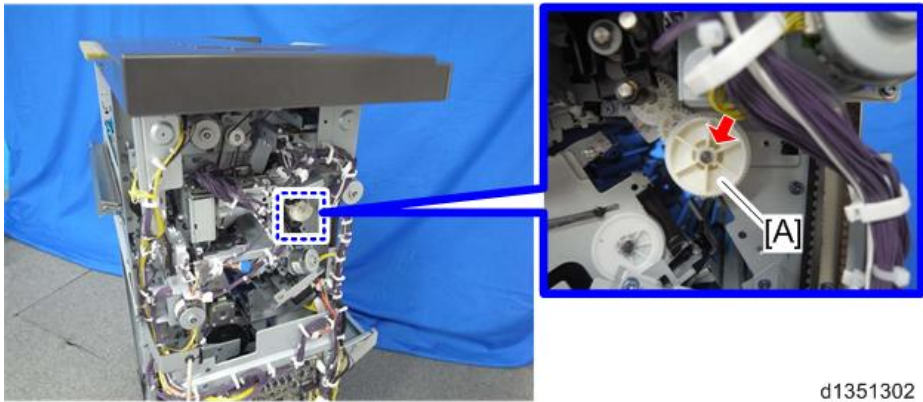


5. Remove the pressure release motor bracket [A] from the rear side of the finisher. (⌀ x 2)

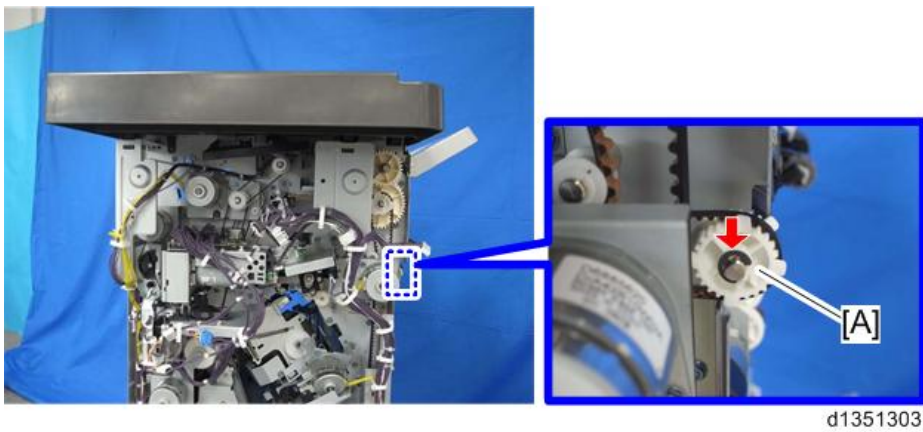




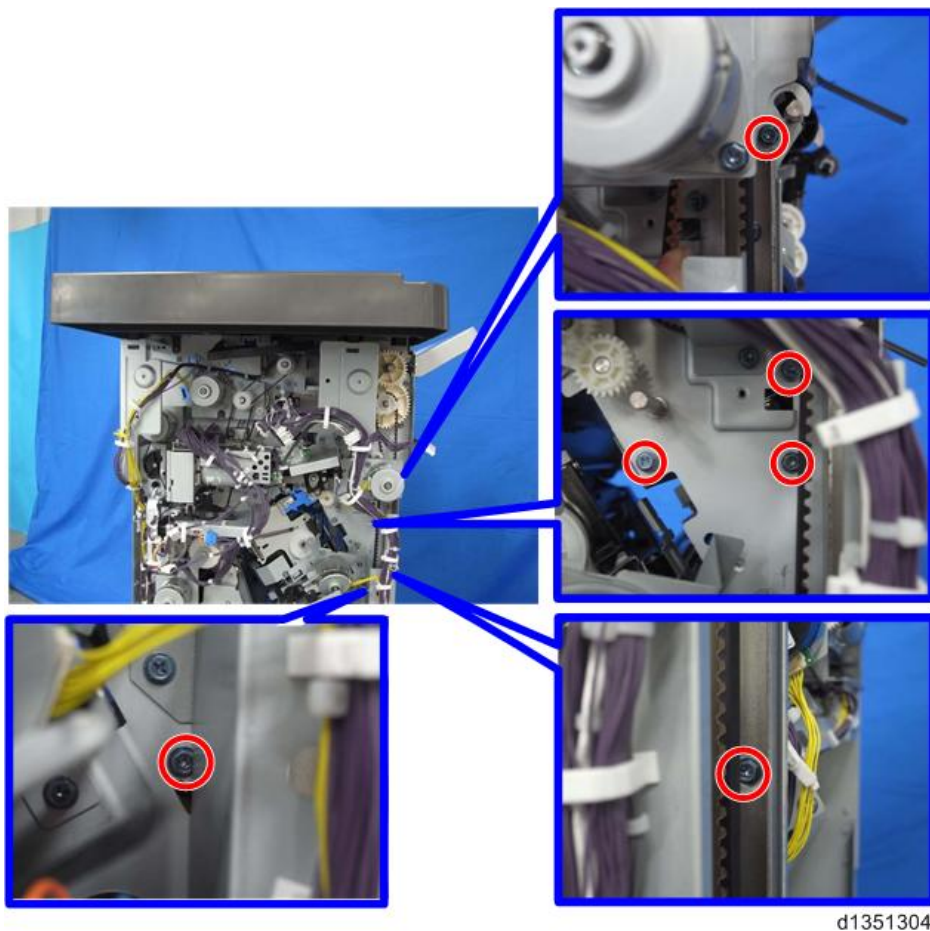
6. Remove the gear [A] from the rear side of the finisher. (snap-fit x 1)



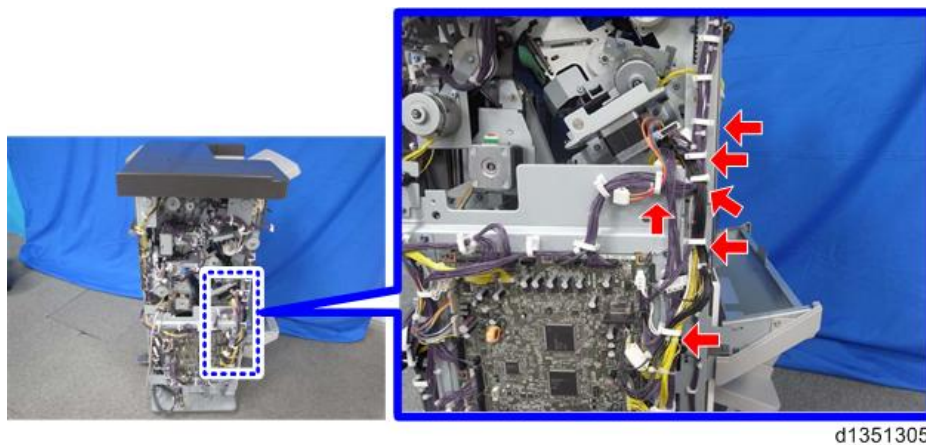
7. Remove the pulley [A] from the rear side of the finisher. (C-ring x 1)



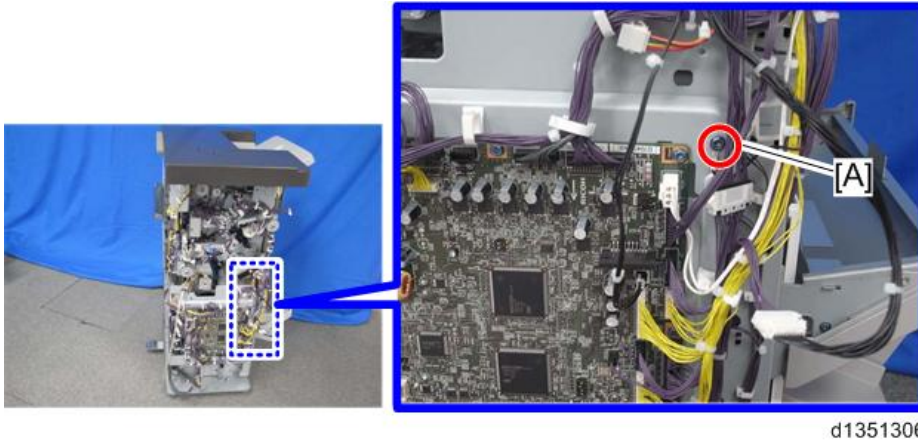
8. Remove 6 screws from the rear side of the finisher. (🔩 x 6)



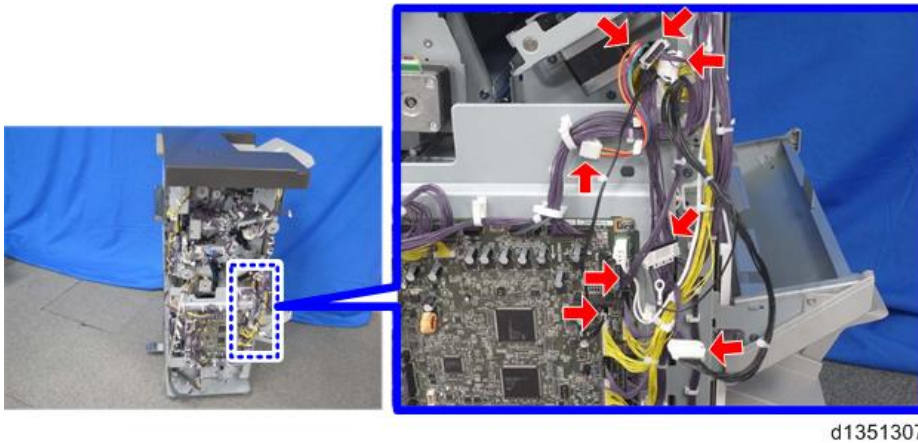
9. Remove the clamps shown below. (🔧 x 6)



10. Remove the ground wire [A] of the main board. (🔧 x 1)

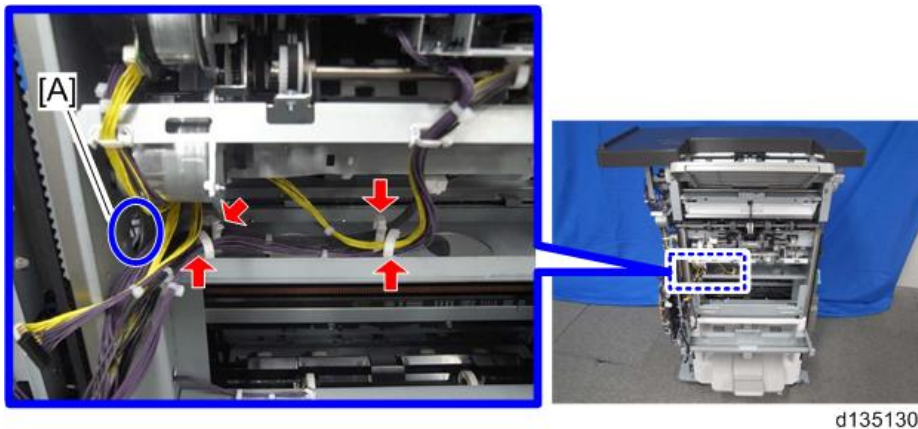


11. Disconnect the connectors shown below. (🔌 x 8)



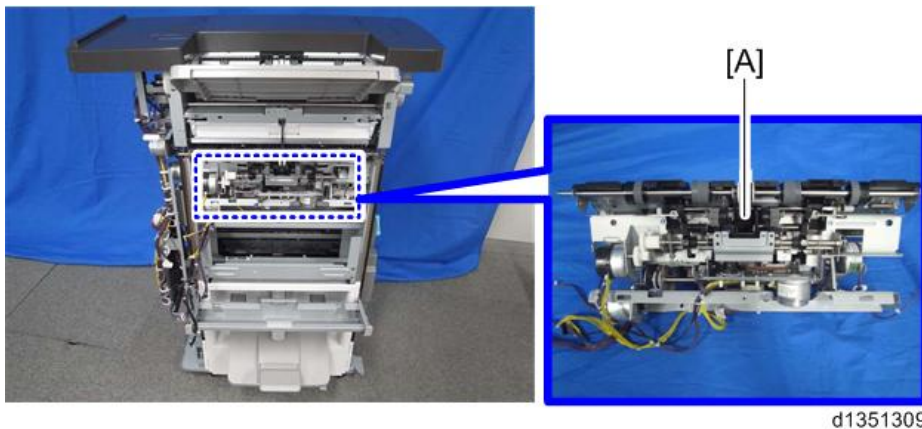
12. Pull out the harnesses disconnected in step 11 to the right side of the finisher through the hole [A].

13. Remove the harness from the clamps. (🔌 x 4)



14. Remove the corner stapling unit [A] from between the front and left plate.

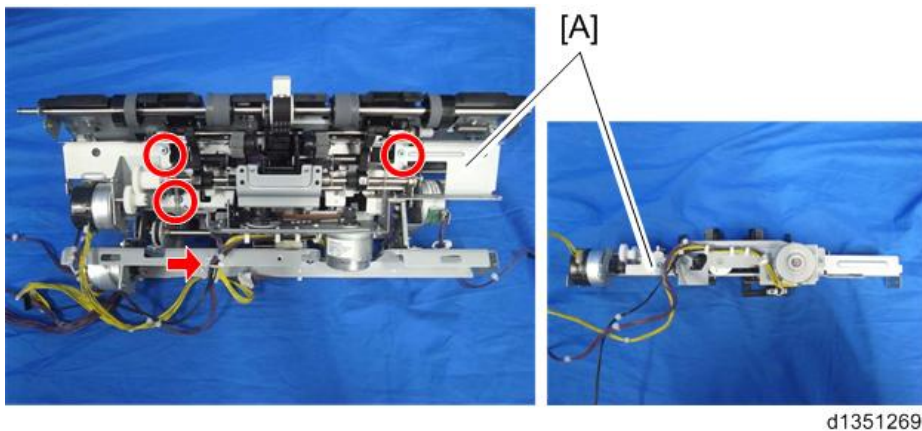




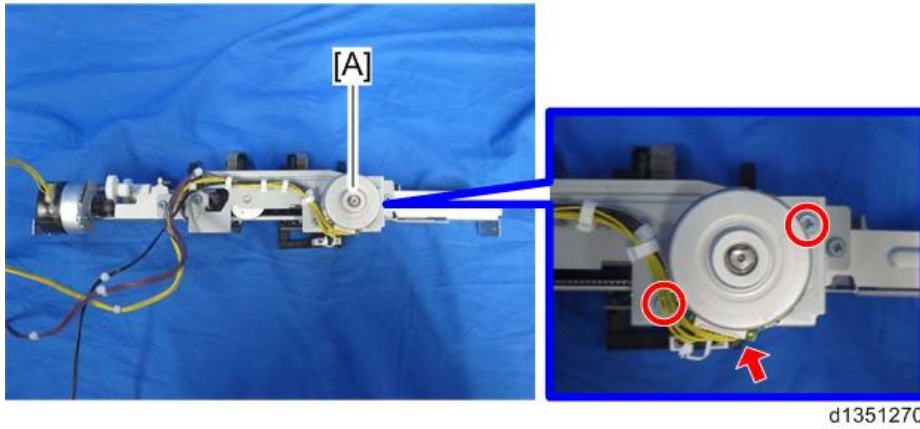
1

## Paper Exit Gate Motor

1. Corner stapling unit (🔧 page 18)
2. Stapler bracket [A] (🔧 x 3, 📐 x 1)

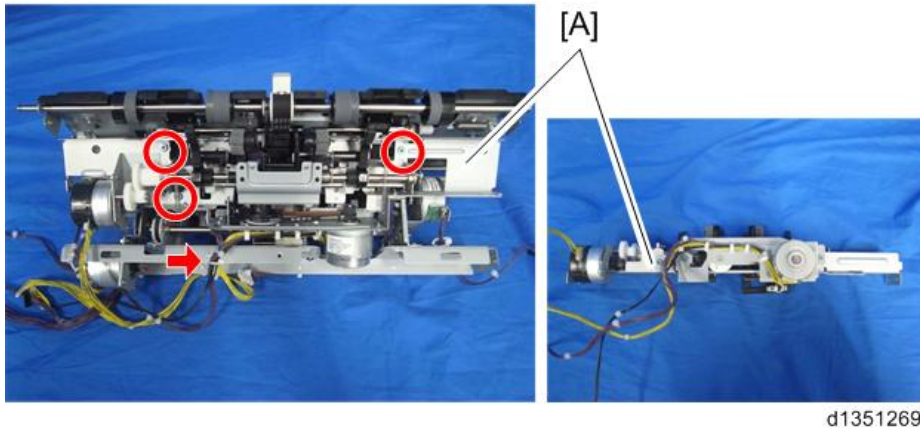


3. Paper exit gate motor [A] (🔧 x 2, 📐 x 1)

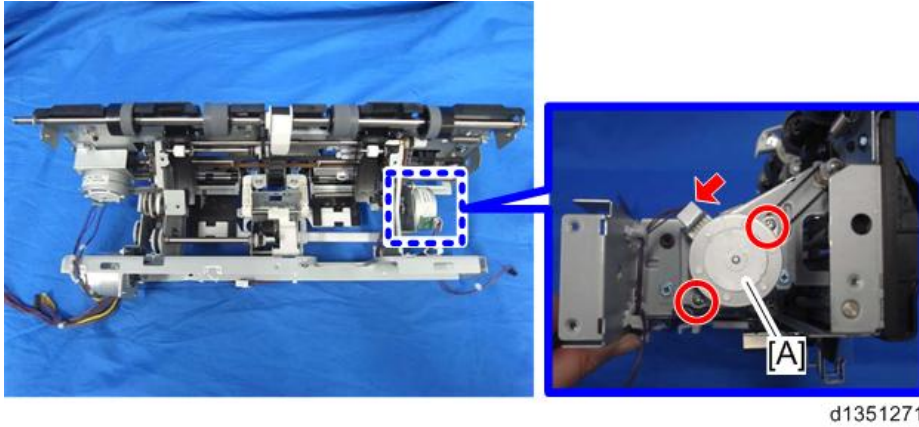


## Leading Edge Guide Motor

1. Corner stapling unit (🔧 page 18)
2. Stapler bracket [A] (🔧 x 3, 📺 x 1)

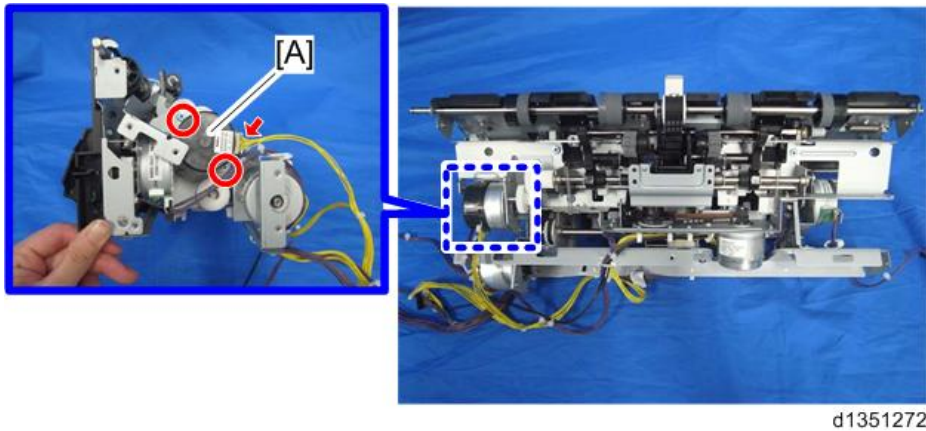


3. Leading edge guide motor [A] (🔧 x 2, 📺 x 1)



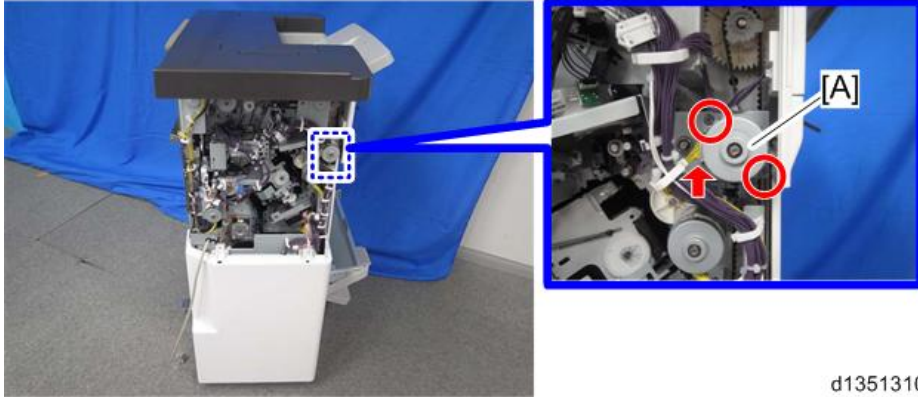
## Trailing Edge Pressure Plate Motor

1. Corner stapling unit (☛ page 18)
2. Trailing edge pressure plate motor [A] (🔧 x 2, 📦 x 1)



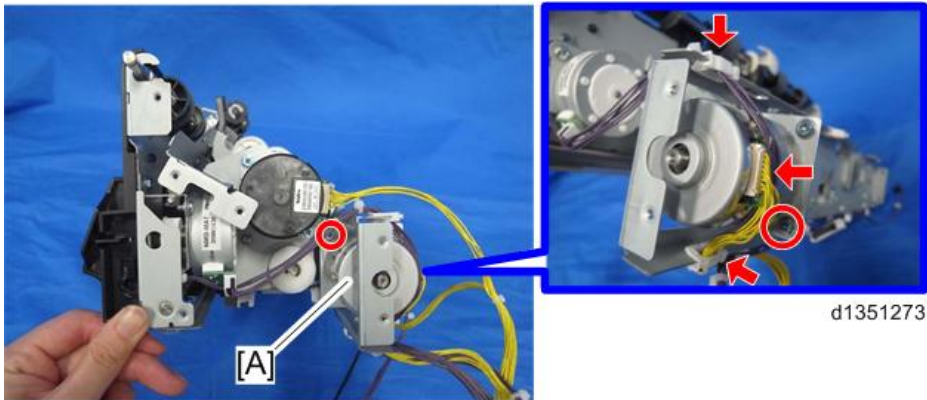
## Stacking Roller Motor

1. Rear upper cover (☛ page 5 "Exterior Covers")
2. Stacking roller motor [A] (🔧 x 2, 📦 x 1)



## Feed Out Motor

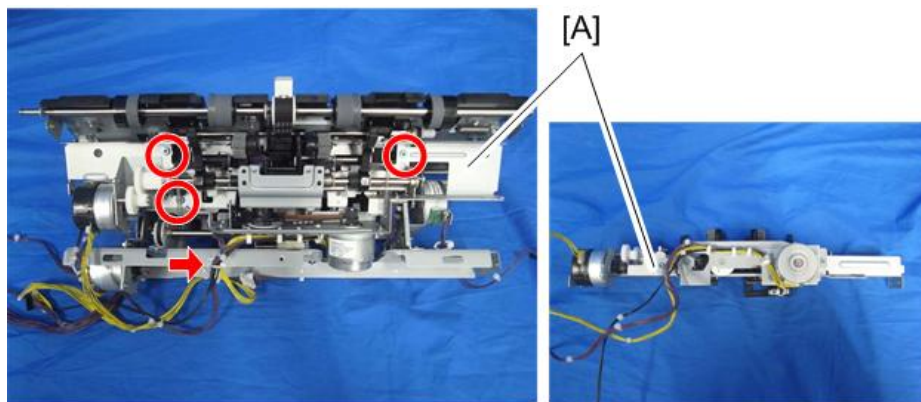
1. Corner stapling unit (☛ page 18)
2. Feed out motor [A] (🔧 x 2, 📏 x 1, 📏 x 2)



## Jogger Motor

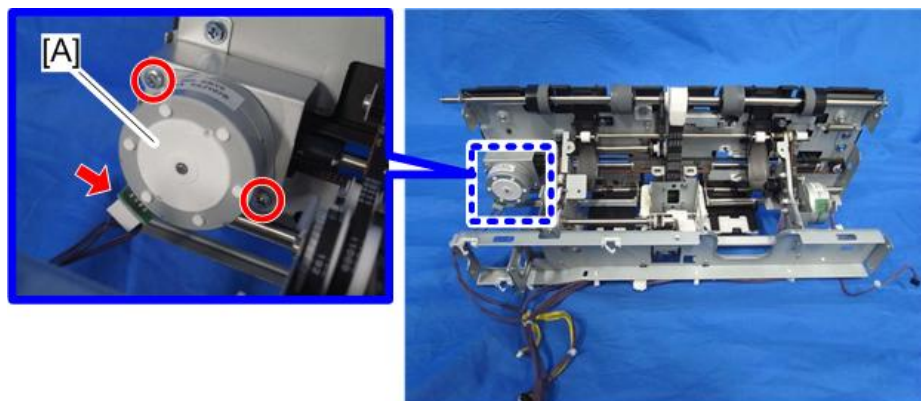
1. Corner stapling unit (☛ page 18)
2. Stapler bracket [A] (🔧 x 3, 📏 x 1)





d1351269

3. Feed out motor (🔌 page 26)
4. Jogger motor [A] (🔌 x 2, 📡 x 1)



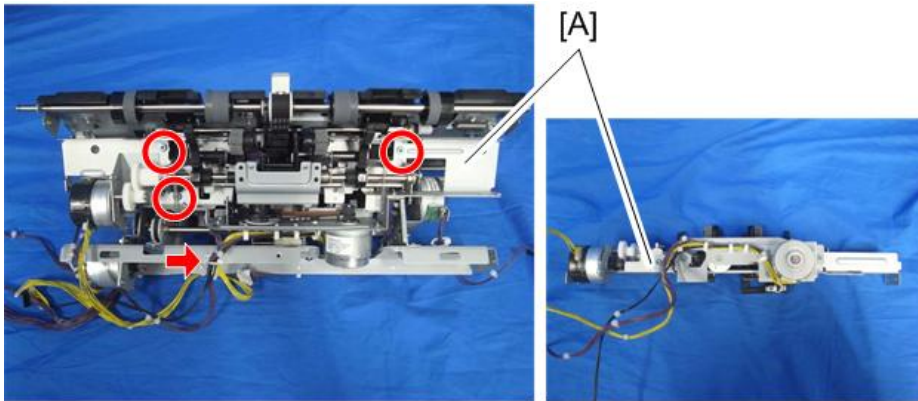
d1351274

## Main Unit (Sensor)

1

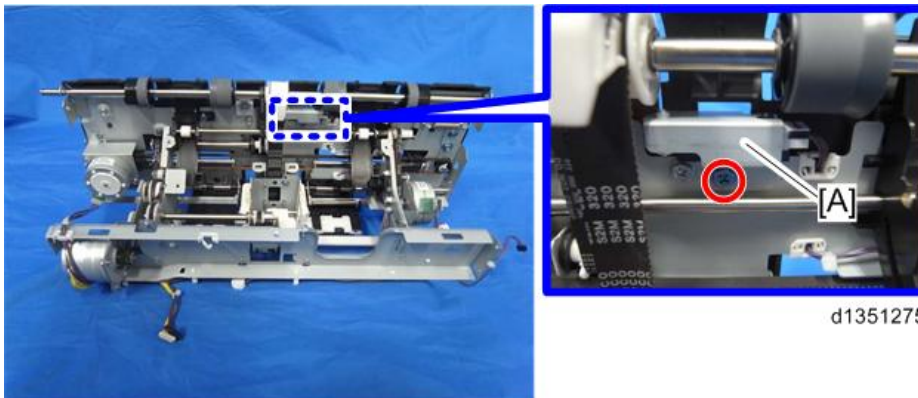
### Shift Tray Paper Sensor

1. Corner stapling unit (☞ page 18)
2. Stapler bracket [A] (🔩 x 3, 📏 x 1)



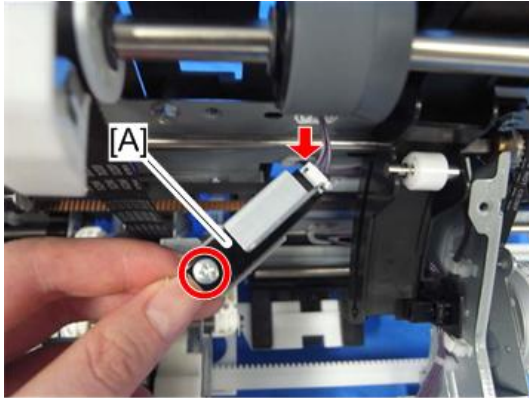
d1351269

3. Shift tray paper sensor bracket [A] (🔩 x 1)



d1351275

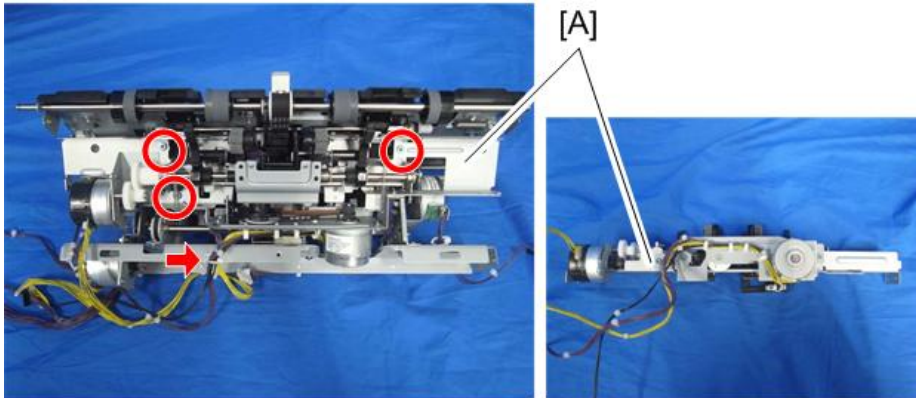
4. Shift tray paper sensor [A] (🔩 x 1, 📏 x 1)



d1351276

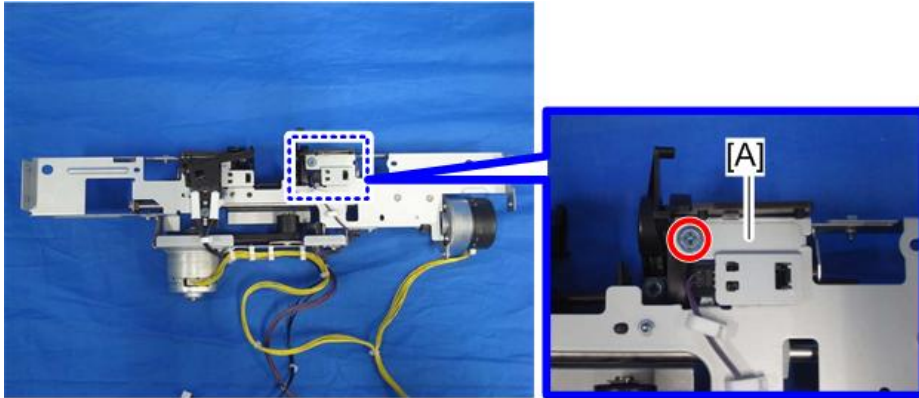
## Trailing Edge Pressure Plate HP Sensor

1. Corner stapling unit (☛ page 18)
2. Stapler bracket [A] (🔩 x 3, 🛠 x 1)



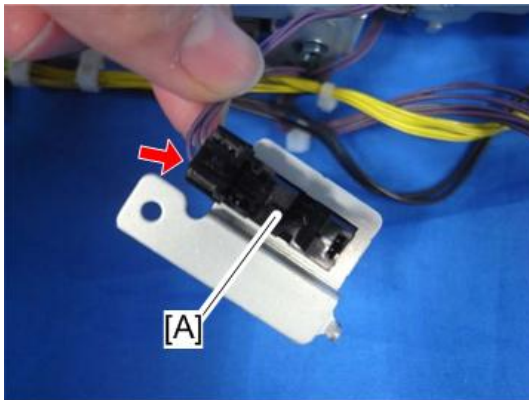
d1351269

3. Turn back the stapler bracket, and remove the trailing edge pressure plate HP sensor bracket [A].  
(🔩 x 1)



d1351290

4. Trailing edge pressure plate HP sensor [A] (🔧 x 1)

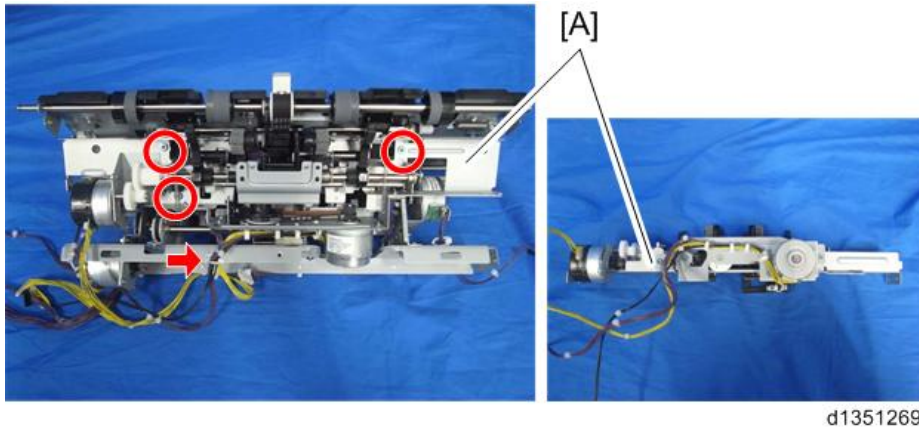


d1351291

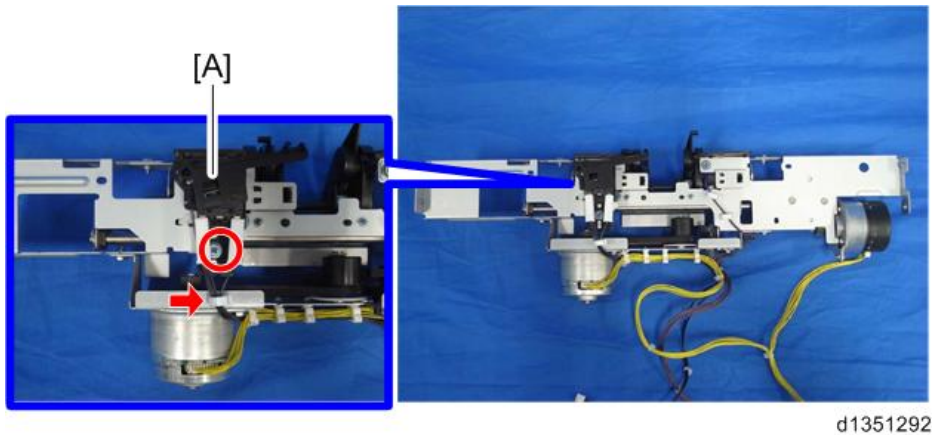
## Stacking Roller HP Sensor

1. Corner stapling unit (🔧 page 18)
2. Stapler bracket [A] (🔧 x 3, 📏 x 1)

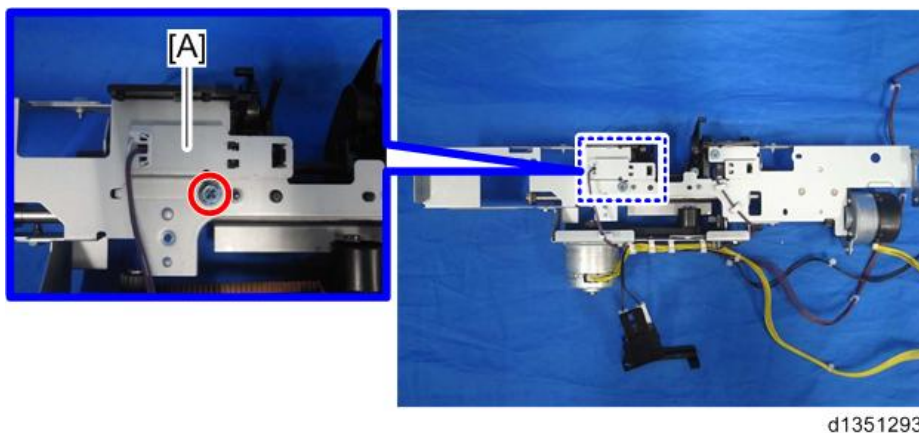




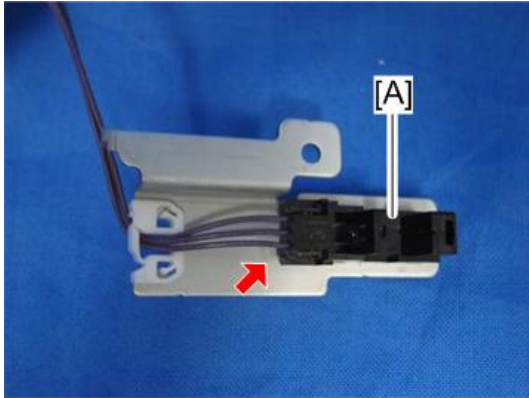
3. Turn back the stapler bracket, and remove the paper exit gate motor bracket [A]. (🔧 x 1, 📏 x 1)



4. Stacking roller HP sensor bracket [A] (🔧 x 1)



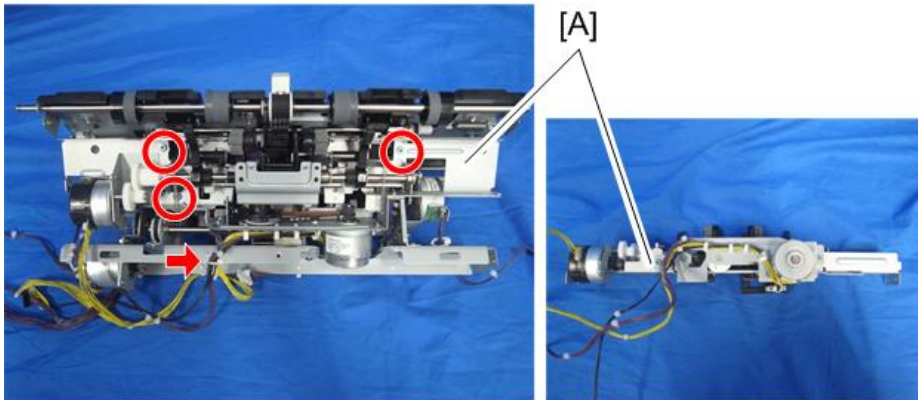
5. Stacking roller HP sensor [A] (📏 x 1)



d1351294

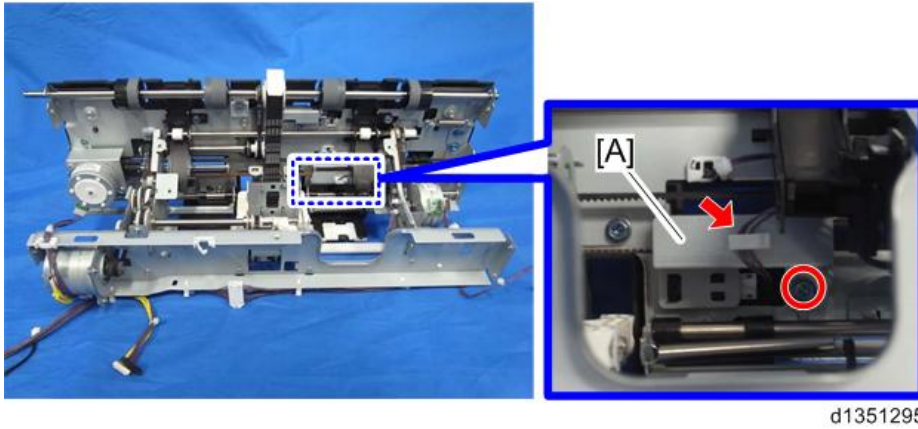
## Staple Tray Paper Sensor

1. Corner stapling unit (☛ page 18)
2. Stapler bracket [A] (🔧 x 3, 🖨️ x 1)

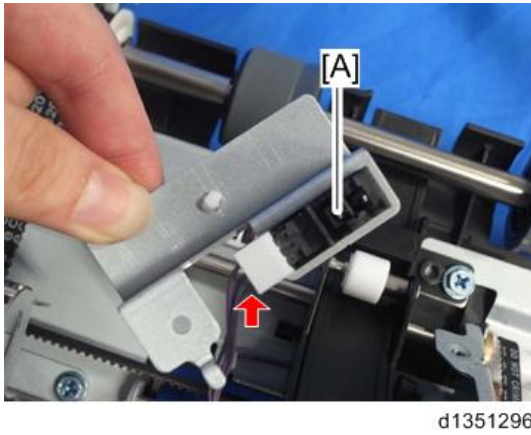


d1351269

3. Staple tray paper sensor bracket [A] (🔧 x 1, 🖨️ x 1)



4. Staple tray paper sensor [A] (🔧 x 1)

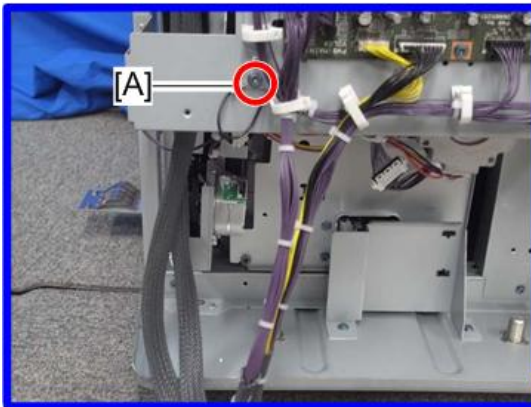


# Booklet Unit (Motor)

1

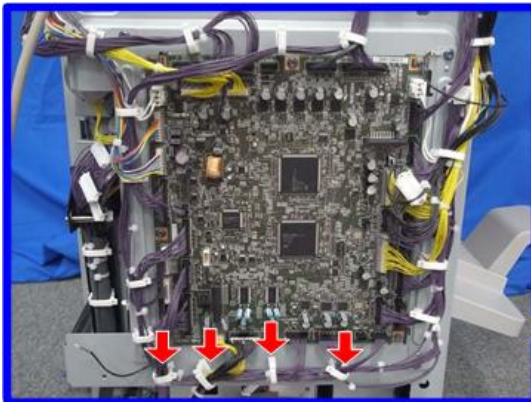
## Booklet Stapler Unit

1. Remove the following covers. (🔧 page 5 "Exterior Covers")
  - Rear Upper Cover
  - Rear Lower Cover
2. Remove the ground wire [A] in the left lower side of the main unit. (🔧 x 1)



d1351316

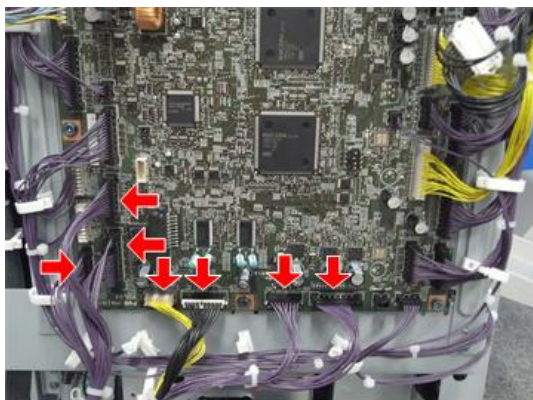
3. Release the harness from the 4 clamps shown below. (🔧 x 4)



d1351317

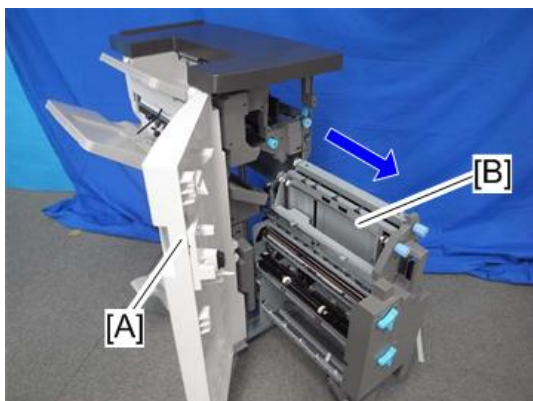
4. Disconnect the following 7 connectors from the main board. (🔧 x 7)





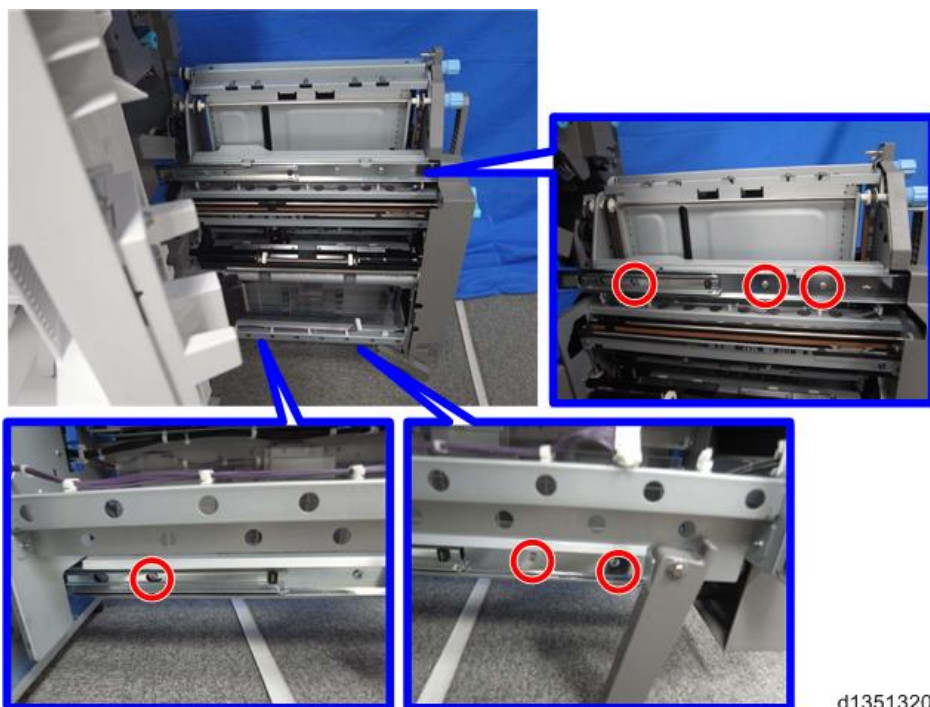
d1351318

5. Open the front door [A] and pull out the booklet stapler unit [B].

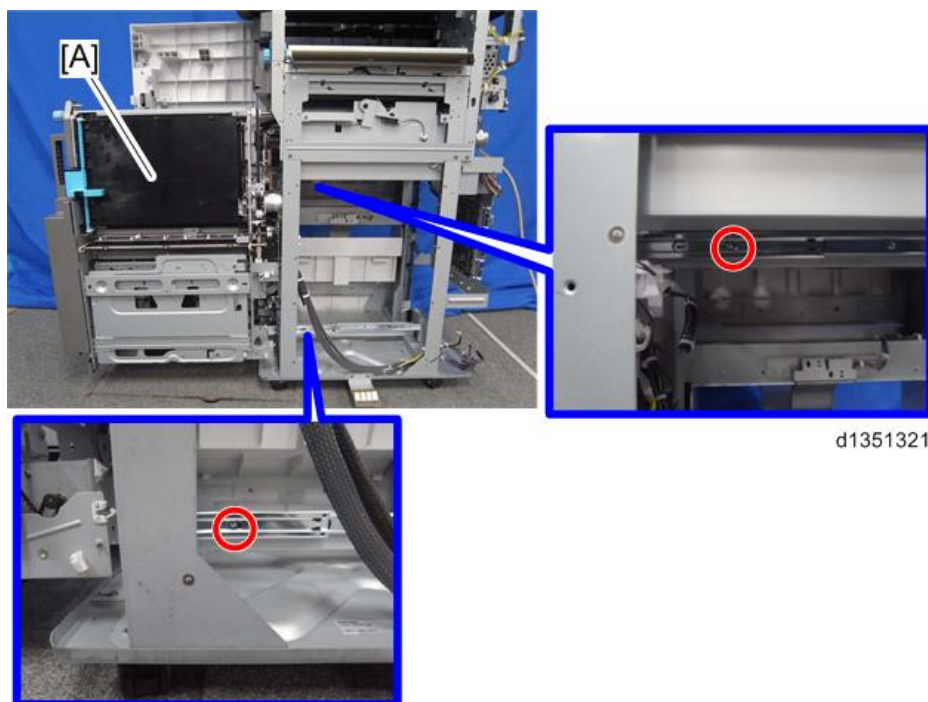


d1351319

6. Remove the following screws. (⌀ x 6)

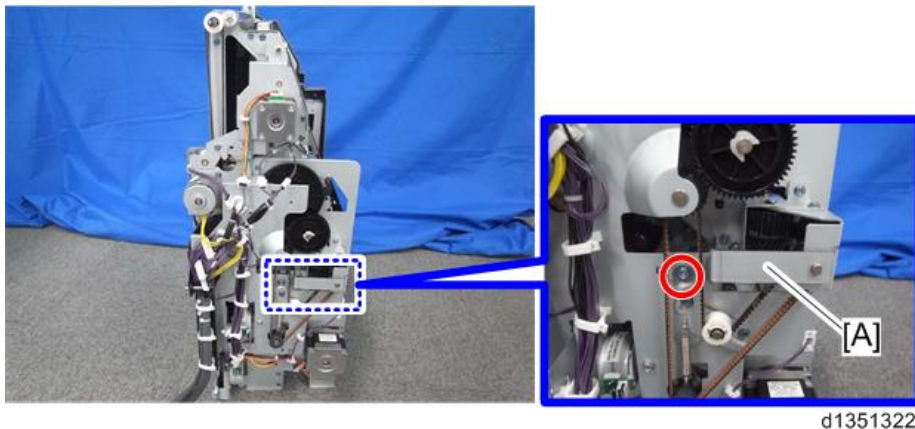


7. Lift up to remove the booklet stapler unit [A]. (x 2)

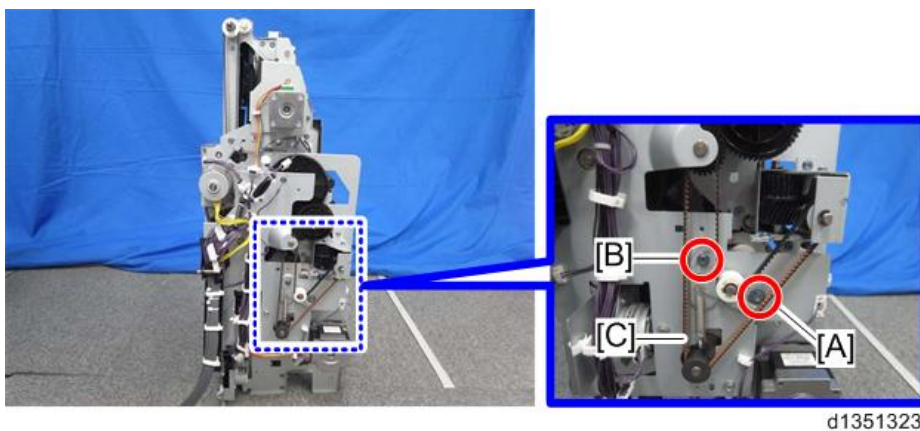


## Press Folding Motor

1. Booklet stapler unit (🔧 page 34)
2. Remove bracket [A]. (🔧 x 1)

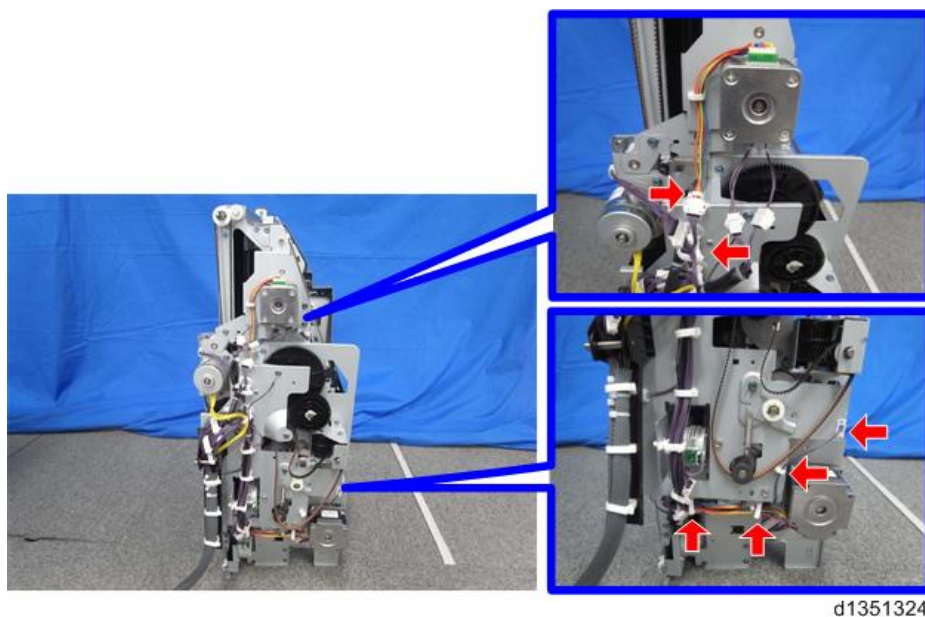


3. Remove the screw [A] described in the photo below. (🔧 x 1)
4. Loosen the screw [B] to loosen the press folding motor belt [C].

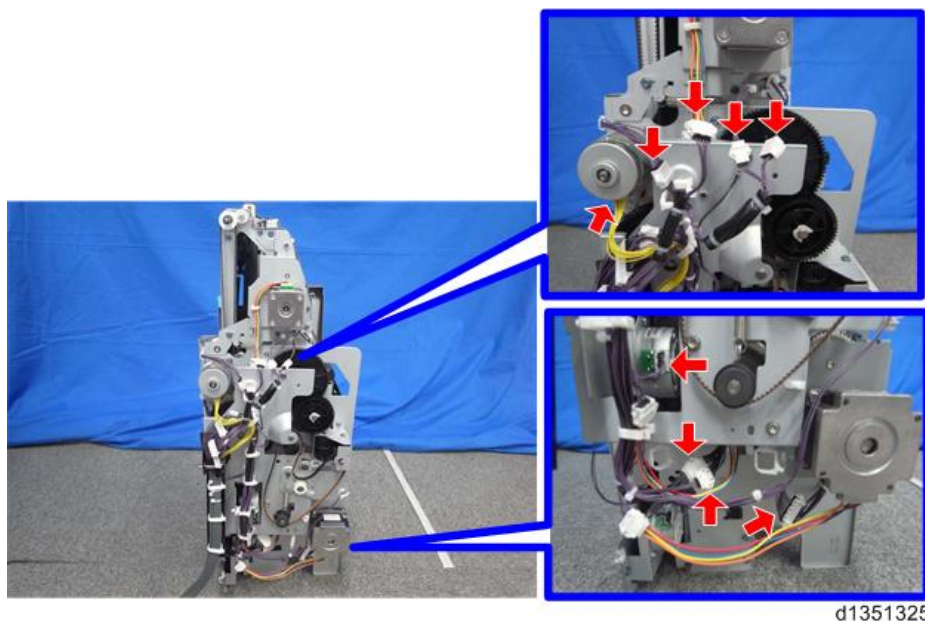


5. Release the harness from the 6 clamps shown below. (🔧 x 6)

1



6. Disconnect the 9 connectors shown below. (🔌 x 9)

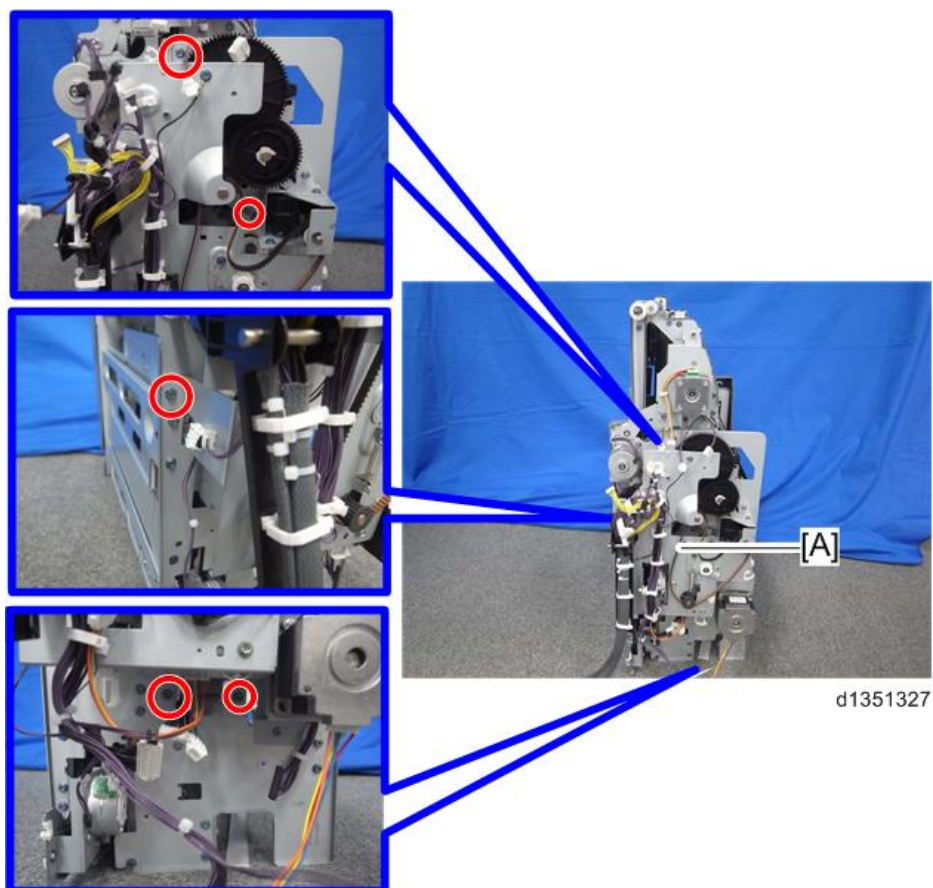


7. Disconnect the 2 connectors shown below. (🔌 x 2)



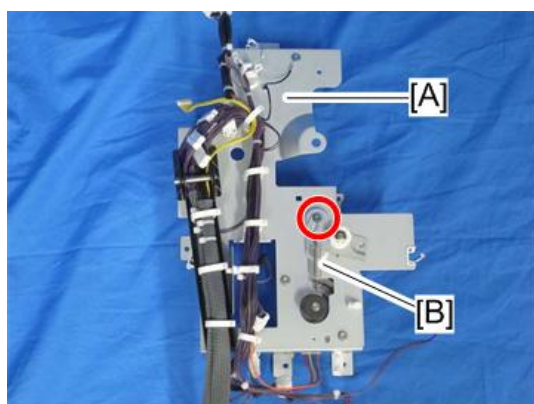


8. Remove the press folding motor bracket [A]. (⚙ x 5)



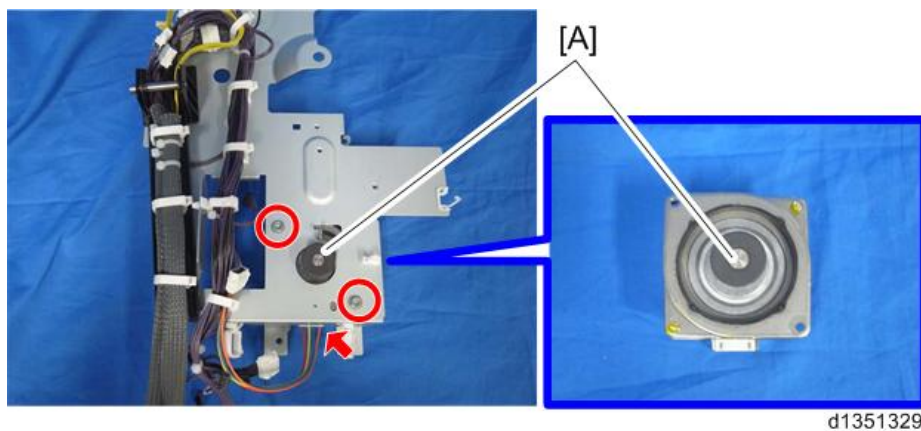
d1351327

9. Remove the spring [B] from the press folding motor bracket [A] (⚙️ x 1, spring x 1)



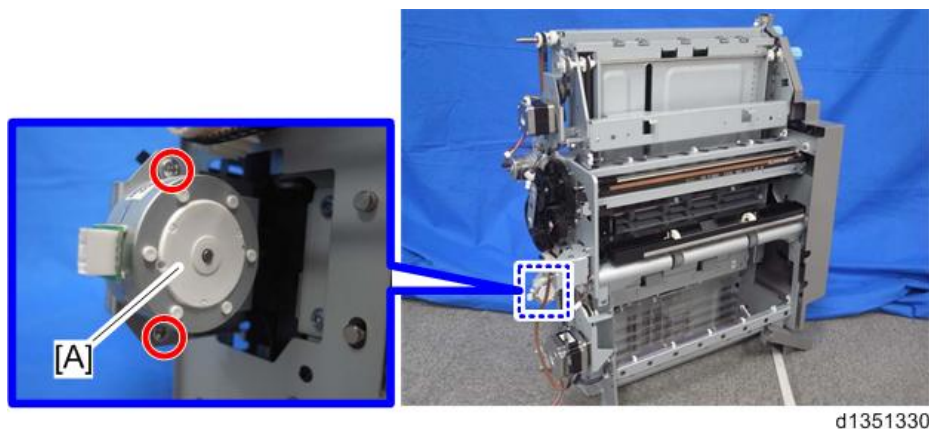
d1351328

10. Remove the press folding motor [A] (⚙️ x 2, 📦 x 1)



## Booklet Jogger Motor

1. Booklet stapler unit (🔧 page 34)
2. Press folding motor bracket (🔧 page 37 "Press Folding Motor")
3. Booklet Jogger Motor [A] (🔧 x 2)

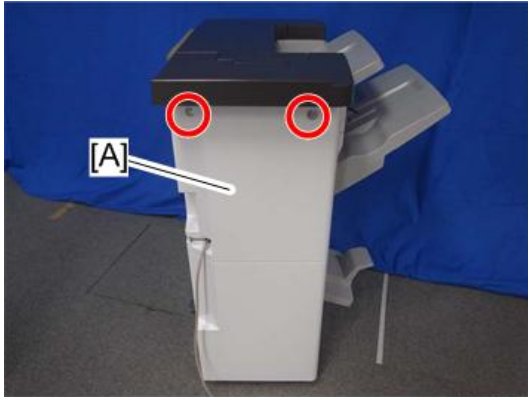


# Stapler Unit

1

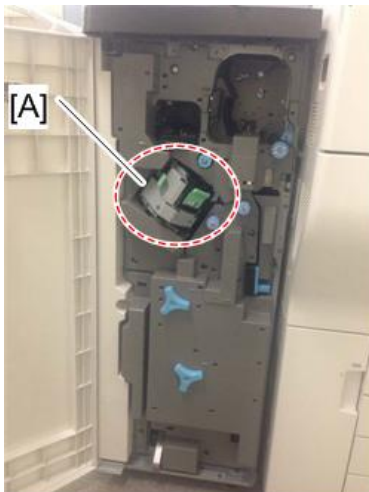
## Stapler Unit

1. Remove the rear upper cover [A]. (⚙ x 2)



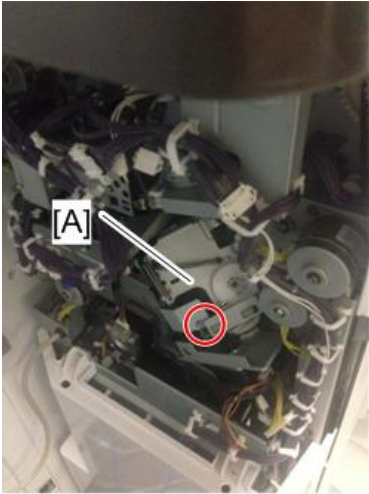
d1351253

2. Open the front door and push the stapler [A] to the rear side of the finisher.



d135a0026

3. At the rear side, remove the screw circled in the photo below from the stapler [A].



d135a0027

4. Push the stapler to the front side of the finisher.
5. Remove the inner upper cover [A]. (2 x 2)

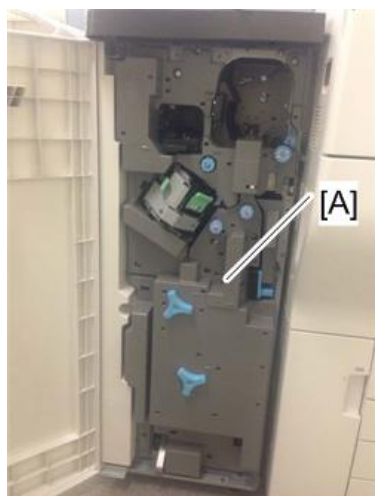


d135a0028

6. Pull out the stapler unit [A].

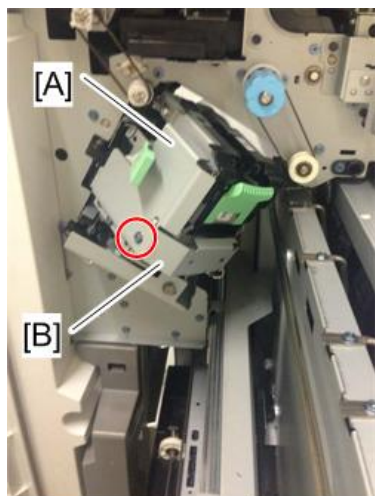


1



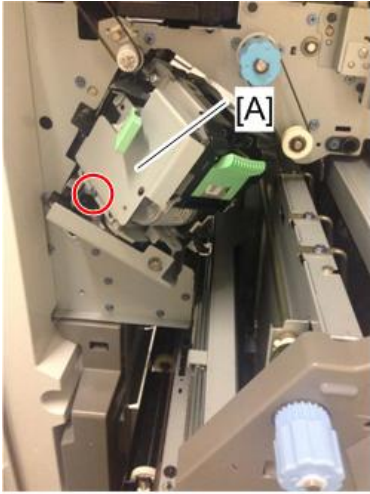
d135a0029

7. Remove the bracket [B] from the stapler [A]. (⚙️ x 1)



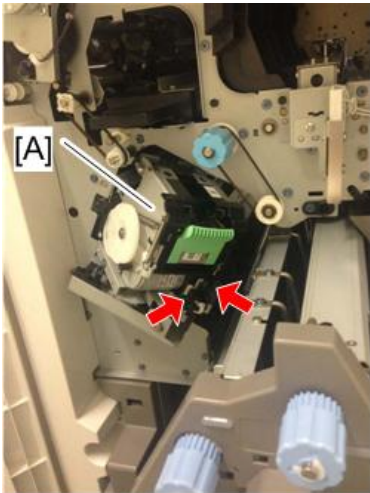
d135a0030

8. Remove bracket [A]. (⚙️ x 1)



d135a0031

9. Remove the stapler [A]. (x 2)



d135a0032

# Punch Unit

1

The punch unit is already adjusted in the factory, so you don't need to adjust it. When you need to replace the parts of the punch unit, replace the whole unit.

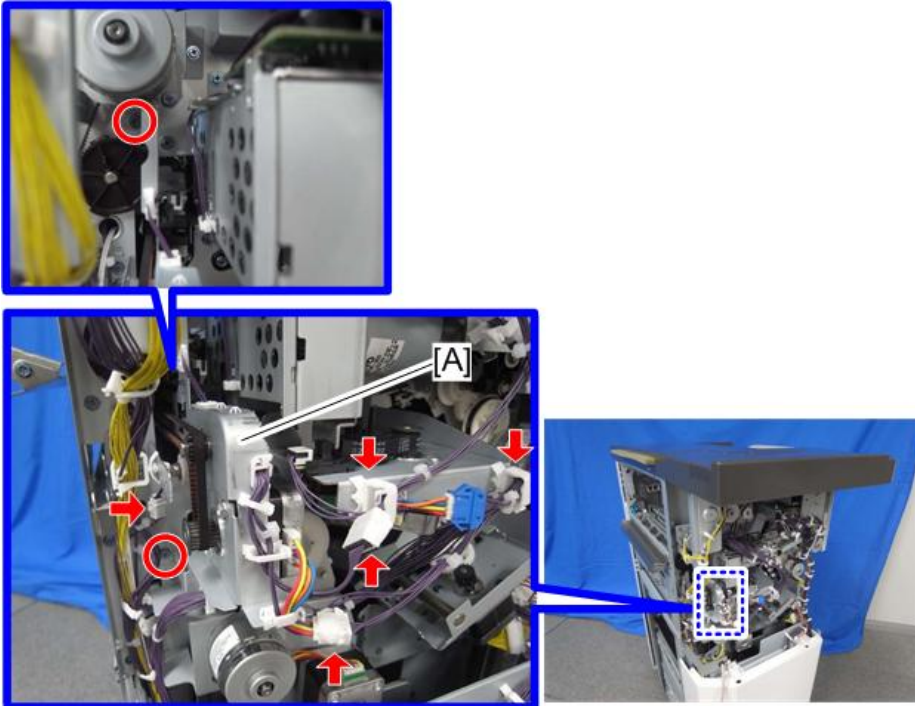
## Note

- Do not disassemble the punch unit. This unit is precisely adjusted in the factory.
- Do not drop or give a shock to the unit when you replace it. The unit could be damaged.

1. Remove the following covers. (☞ page 5 "Exterior Covers")

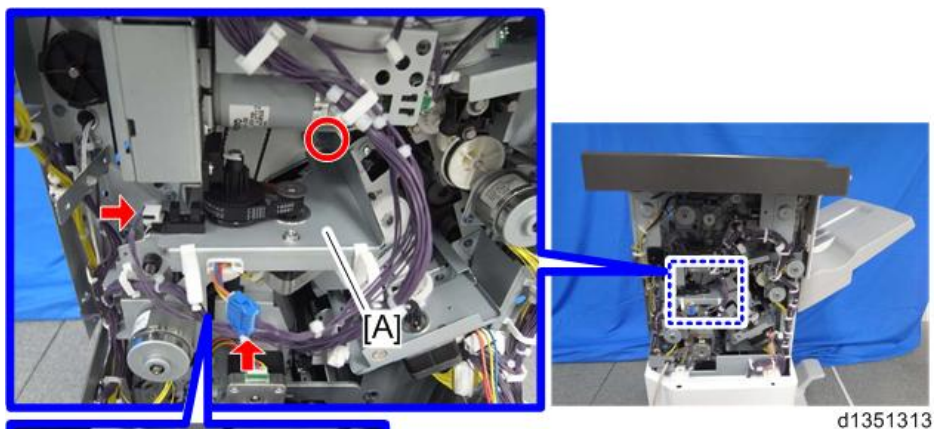
- Rear Upper Cover
- Rear Lower Cover

2. Registration sensor bracket [A] (🔧 x 2, 📏 x 3, 📏 x 2)

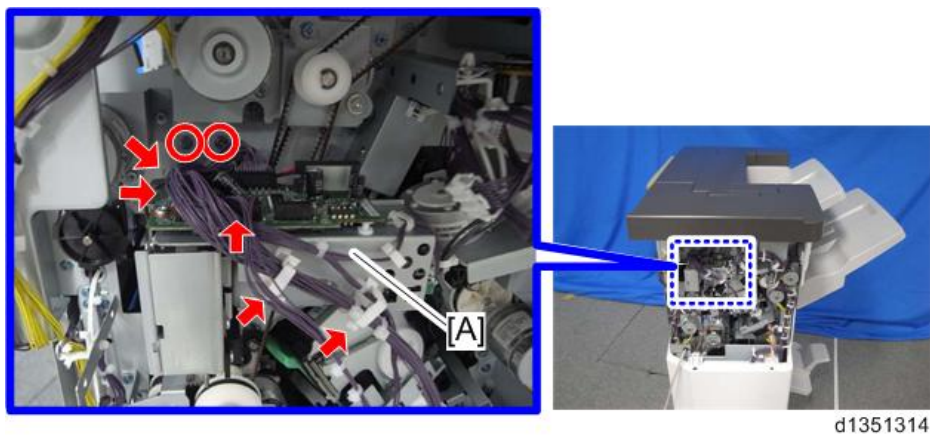


d1351312

3. Stepper motor bracket [A] (🔧 x 1, 📏 x 2)



4. Pull out the punch unit [A] (🔧 x 2, 📏 x 2, 📐 x 2)



1



d1351315



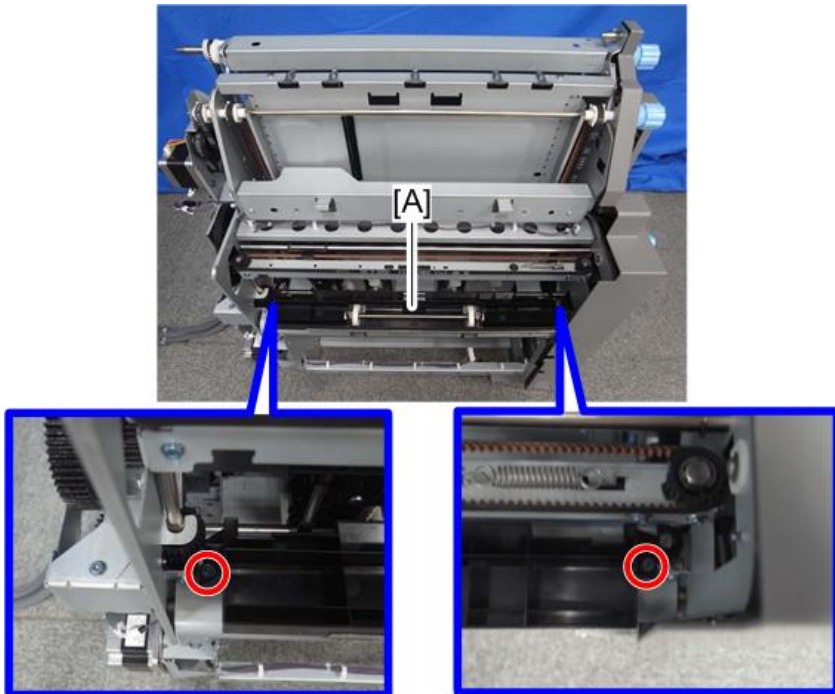
# Adjustment of the Flat Fold Booklet Unit

## Adjusting the Alignment of the Flat Fold Rollers

1

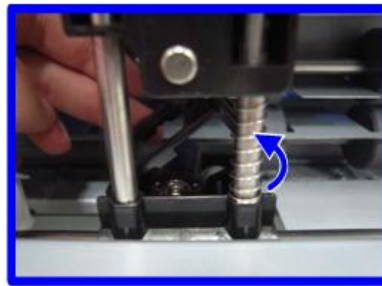
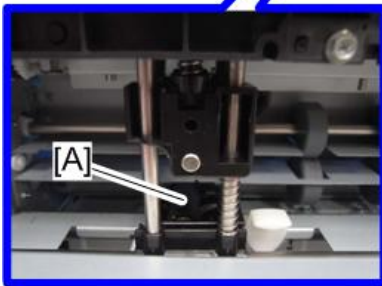
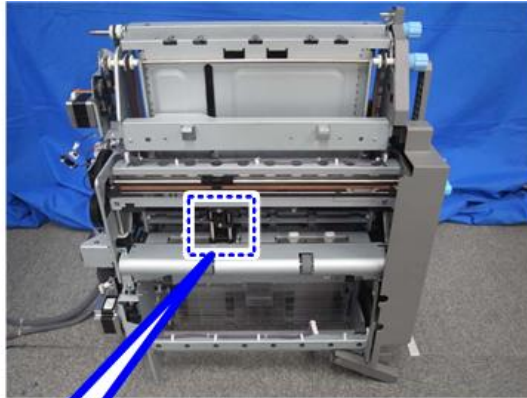
To adjust the folding strength, adjust the difference in vertical alignment between the flat fold rollers.

1. Booklet stapler unit (☛ page 34 "Booklet Stapler Unit")
2. Fold plate bracket [A] (🔧 x 2)



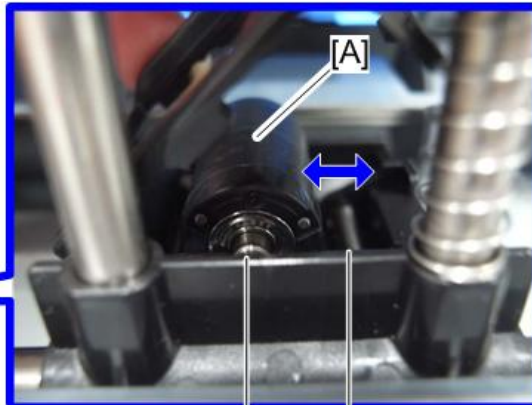
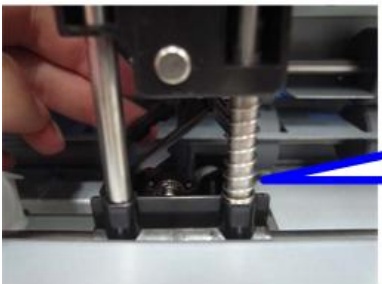
d1351331

3. Open the bracket [A] of the flat fold roller.

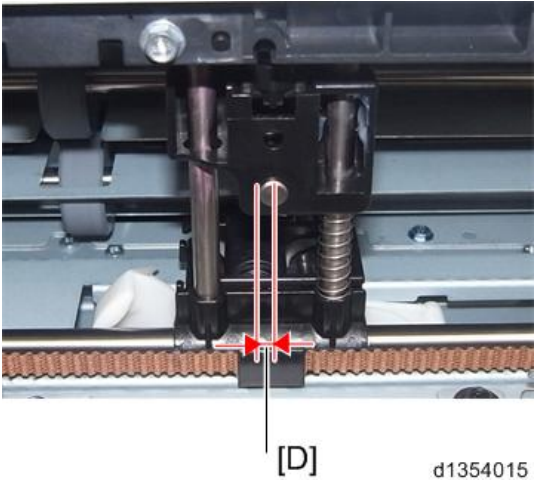


d1351332

4. Adjust the position of the flat fold lower roller [A] to adjust the difference in alignment between the upper and lower rollers of the flat fold booklet unit.



d1351333



**Note**

- With the factory default, the upper and lower rollers of the flat fold booklet unit are not aligned vertically. There is a 3mm difference [D] between the upper and lower rollers. However, you can change the lower roller position from [B] (factory default) to [C]. If you change the lower roller position to [C], the difference becomes 0mm. In this condition, the upper and lower rollers are aligned vertically.
- If the toner does not stick well to the folding line of the booklet due to excessive folding strength, change the lower roller position to [C]. In this position, the booklet will be thicker than the factory default position.
- If you want increase the folding strength, the lower roller position should be [B] (factory default position). In addition, this will make the booklet thinner.  
If you want to reduce the folding strength, the lower roller position should be [C] (the difference in alignment is 0mm). In addition, this will make the booklet thicker.

Difference in Alignment and Folding Strength

Difference in Alignment	Folding Strength	Thickness of the booklet	The amount of toner sticking to the folding line
3mm (default)	Strong	Thin	OK
0mm	Weak	Thick	Good

5. Close the bracket after the adjustment.
6. Reassemble the machine.

## Adjusting the Folding Speed

You can adjust the thickness of the booklet by adjusting the moving speed of the flat fold booklet unit.

If you want to make the booklet thinner, set a slower speed. If you want to make the booklet thicker, set a faster speed.

1. Enter the SP mode.
2. Set the moving speed of the flat fold booklet unit for each paper size with SP6-114-001 to 010 (Fold Speed Adj.: 2K/3K FIN).

SP	Setting Items	Selection	Default Value
SP6-114-001	Fold Speed Adj.: 2K/3K FIN: A3 SEF	<div>0: Standard 1: Middle 2: Low</div> <div><b>Note</b></div> <ul style="list-style-type: none"><li>• [0: Standard] is faster than [1: Middle].</li></ul>	0: Standard
SP6-114-002	Fold Speed Adj.: 2K/3K FIN: B4 SEF		
SP6-114-003	Fold Speed Adj.: 2K/3K FIN: A4 SEF		
SP6-114-004	Fold Speed Adj.: 2K/3K FIN: B5 SEF		
SP6-114-005	Fold Speed Adj.: 2K/3K FIN: DLT SEF		
SP6-114-006	Fold Speed Adj.: 2K/3K FIN: LG SEF		
SP6-114-007	Fold Speed Adj.: 2K/3K FIN: LT SEF		
SP6-114-008	Fold Speed Adj.: 2K/3K FIN: 12"x18"		
SP6-114-009	Fold Speed Adj.: 2K/3K FIN: 8K SEF		
SP6-114-010	Fold Speed Adj.: 2K/3K FIN: Other		

3. Exit the SP mode.

## Flat Fold Booklet Unit Home Position Adjustment

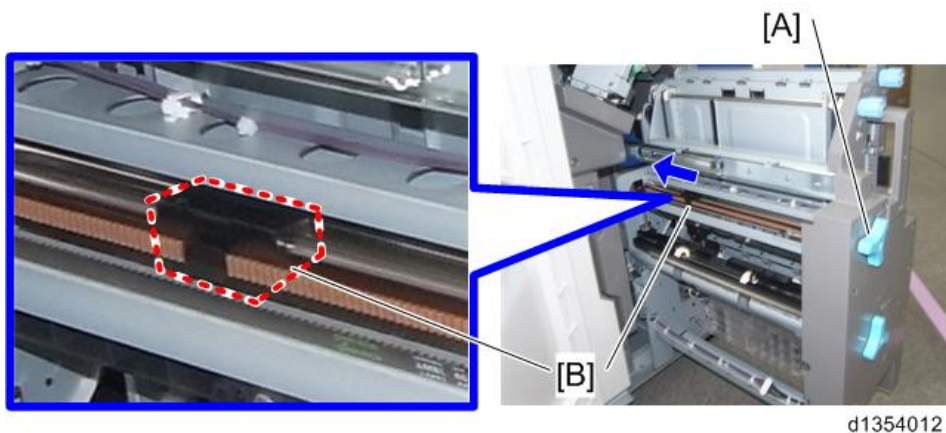
1. Pull out the stapling unit [A].



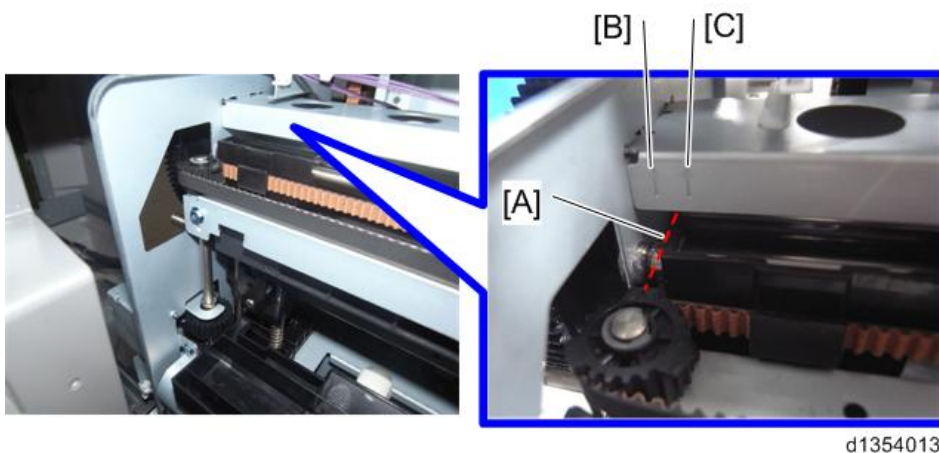
2. Timing gear [A] (⌚ x 1)



3. Turn the knob [A] clockwise to move the flat fold roller unit [B] in the direction of the arrow.

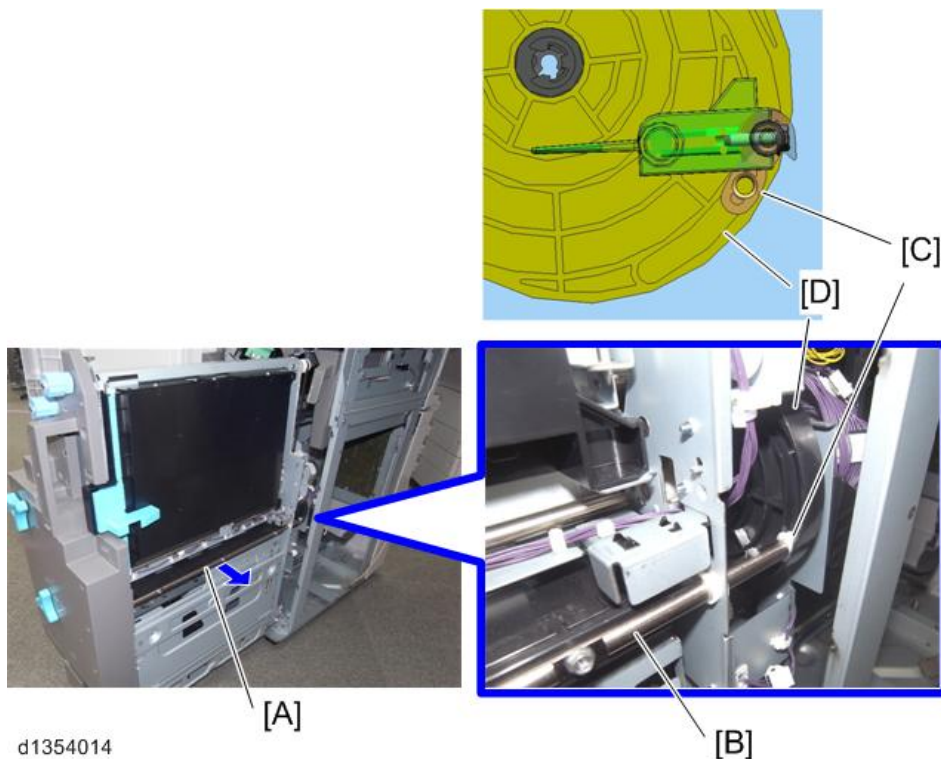


4. Move the flat fold roller unit until the edge of the unit [A] is between the guide lines [B] and [C] inscribed on the bracket.





5. Check that the fold plate [A] has been moved in the direction of the arrow as far as it can go and the bushing on the rear end of the fold plate shaft [B] is aligned with the fold plate positioning cam [D].



6. Re-attach the timing gear [A] (⌚ x 1)



7. Reassemble the finisher and connect it to the copier.
8. Turn on the copier.
9. After the finisher initialization is complete, check that the flat fold roller unit, fold plate and the cam are positioned as described in steps 4 and 5.

---

MEMO

---

MEMO