

# FIXING UNIT

## ⚠ Caution:

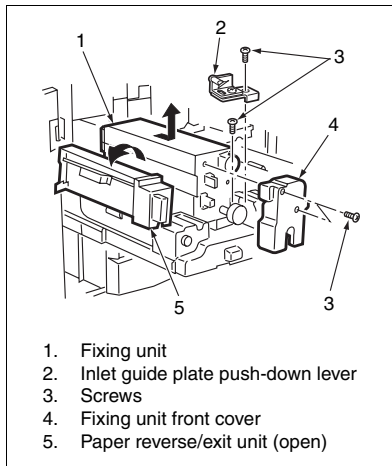
When disassembling and reassembling the machine, Be sure the power cord has been unplugged from the wall outlet.

## [1] Removing and Reinstalling the Fixing Unit

- ⚠ **Caution:** Do not touch the fixing unit immediately after turning OFF the main switch because it is very hot and you may suffer burns. Wait until the fixing unit has cooled down sufficiently before working on it.

### a. Procedure

- (1) Draw out the ADU stand. (See "ADU UNIT.")
- (2) Loosen two screws and detach the fixing unit front cover.
- (3) Open the paper reverse/exit unit.
- (4) Remove one screw to detach the inlet guide plate push-down lever.
- (5) Remove one screw to draw out the fixing unit. Then, remove it upward.



- (1) Reinstall the above parts following the removal steps in reverse.

## [2] Removing and Reinstalling the Fixing Unit Top Cover

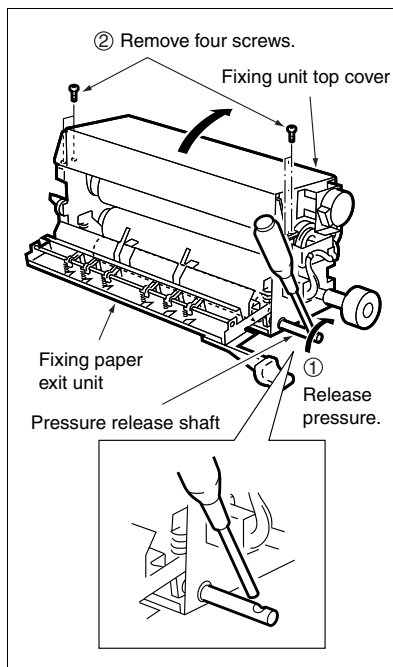
- ⚠ **Caution:** Before opening the fixing unit top cover, be sure to rotate the pressure release shaft clockwise to release the lower roller. After closing the fixing unit top cover, be sure to rotate the pressure release shaft counter-clockwise to apply pressure to the lower roller.

### a. Procedure

- (1) Draw out the ADU stand. (See "ADU UNIT.")
- (2) Insert a screwdriver or the like in the hole in the pressure release shaft and rotate the pressure release shaft to release pressure.

**Caution:** Perform pressure release with the fixing unit top cover closed.

- (3) Remove the four screws to open the fixing unit top cover.



## FIXING UNIT

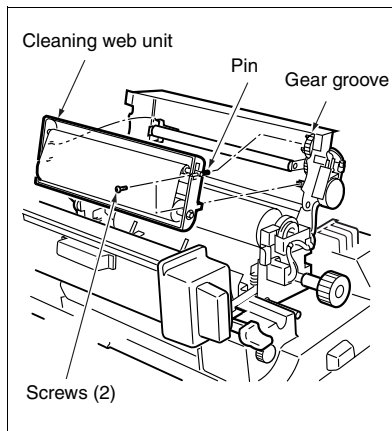
- (4) Close the fixing unit top cover following the opening steps in reverse.

**Caution:** When the fixing unit top cover has been closed and secured with the four screws, pressure must be applied to it without fail.

### [3] Replacing the Cleaning Web

#### a. Procedure

- (1) Draw out the ADU stand. (See "ADU UNIT.")
- (2) Open the fixing unit top cover.
- (3) Remove the two screws to detach the cleaning web unit.



- (4) Reinstall the above parts following the removal steps in reverse.

**Caution1:** When installing the cleaning web, align the groove in the take-up gear with the shaft pin on the unit, keeping its tension.

**Caution2:** After replacing the cleaning web, make sure to reset the count value of the fixing unit cleaning web by "Copy Count by Parts to be Replaced (Fixed Parts)" in the 25 mode.

#### [4] Replacing the Fixing Heater Lamps (Upper/Roller) (L2, L3)

**⚠ Caution:** Do not touch the fixing heater lamp with bare hands.

**Caution1:** Install the heater lamp with the maker mark indication side facing front.

**Caution2:** The heater lamp should not touch the inner surface of the upper roller.

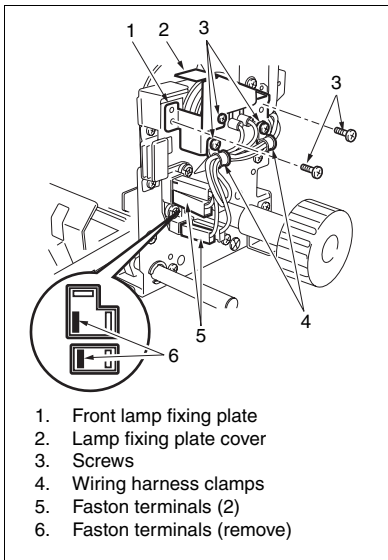
**Caution3:** When replacing a heater lamp, be sure to insert the lamp end in the lamp terminal securely.

##### a. Procedure

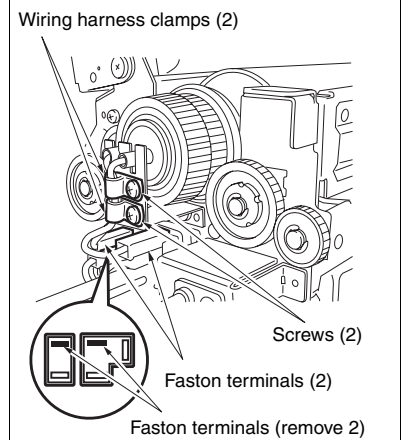
- (1) Remove the fixing unit from the main body.
- (2) Open the fixing unit top cover.
- (3) Remove the two screws at the front to detach the two wire harness clamps.

**Caution:** Install the wiring clamp screws through the lower mounting holes. If installed through a wrong mounting hole, the fixing unit front cover cannot be installed.

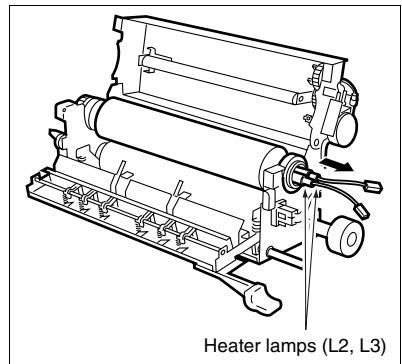
- (4) Remove one screw and detach the lamp fixing plate cover.
- (5) Remove the two screws to detach the front lamp fixing plate.
- (6) Remove the two Faston terminals.



- (7) Remove the two screws at the back to detach two wiring harness clamps.
- (8) Remove the two Faston terminals at the back.



- (9) Pull out the fixing heater lamps (L2, L3) from the front side of the fixing upper roller.



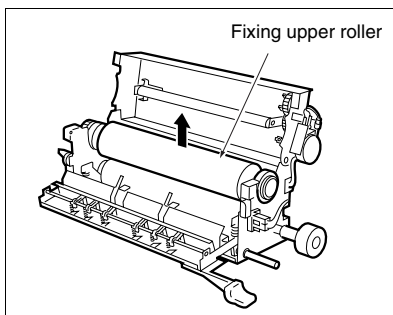
- (10) Reinstall the above parts following the removal steps in reverse.

**Caution:** When installing new lamps, pay attention to their orientation. The size of the lamp terminal mounting hole in the front lamp fixing plate is different from that in the rear lamp fixing plate. The lamp inserted in the fixing upper roller in the opposite direction cannot be secured properly.

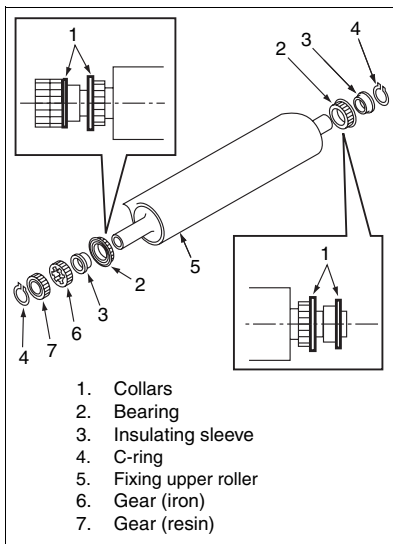
## [5] Removing and Reinstalling the Fixing Upper Roller

### a. Procedure

- (1) Remove the fixing unit from the main body.
- (2) Release the fixing unit lower contact with the upper roller.
- (3) Open the fixing unit top cover.
- (4) Remove the fixing upper roller heater lamps (L2, L3).
- (5) Remove the fixing upper roller upward.



- (6) Remove the two C-rings, two gears, two bearings, and two insulating sleeves from the fixing upper roller.

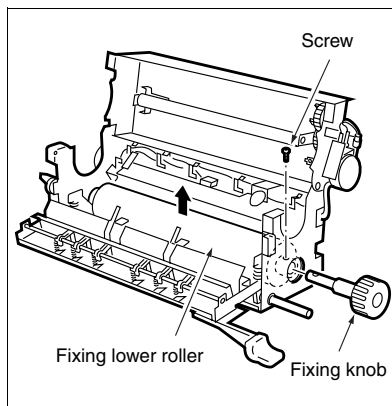


- (1) Reinstall the above parts following the removal steps in reverse.

## [6] Removing and Reinstalling the Fixing Lower Roller

### a. Procedure

- (1) Remove the fixing upper roller.
- (2) Remove one screw to detach the fixing knob.
- (3) Remove the fixing lower roller upward.



- (4) Reinstall the above parts following the removal steps in reverse.

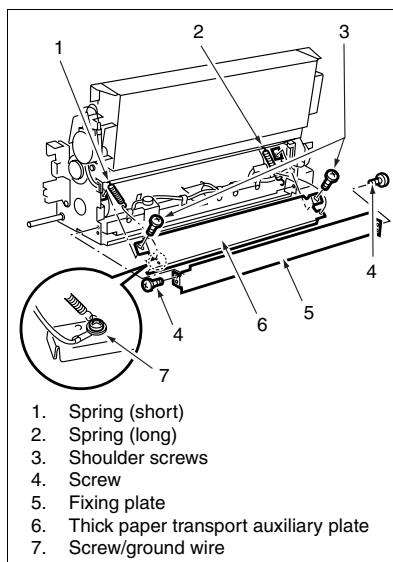
## [7] Removing and Reinstalling the Fixing Heat Roller Assembly

### a. Procedure

- (1) Remove the fixing unit from the main body.
- (2) Remove the two springs and one screw (along with the ground cable) from the thick paper transport auxiliary plate.

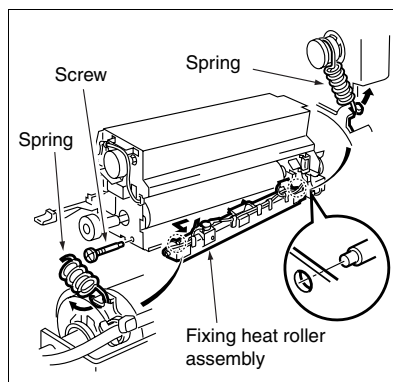
**Caution:** The front and rear springs are different in size and length. Install them properly.

- (3) Remove the two shoulder screws to detach the thick paper transport auxiliary plate.
- (4) Remove the two screws to detach the fixing plate.



1. Spring (short)
2. Spring (long)
3. Shoulder screws
4. Screw
5. Fixing plate
6. Thick paper transport auxiliary plate
7. Screw/ground wire

- (1) Remove the two springs and one screw to detach the fixing heat roller assembly.



**Caution:** When installing the fixing heat roller assembly, be sure to fit the guide pin in the guide hole on the rear side.

- (2) Reinstall the above parts following the removal steps in reverse.

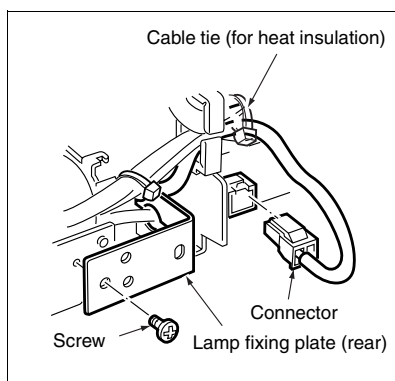
## [8] Replacing the Heater Lamp (Heat roller) (L4)

**⚠ Caution:** Do not touch the fixing heater lamp (heat roller)(L4) with bare hands.

**Caution:** Install the heater lamp (heat roller) (L4) with the maker mark indication side facing front.

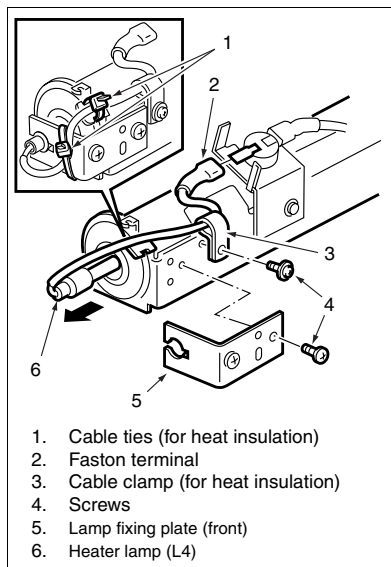
### a. Procedure

- (1) Remove the fixing heat roller assembly.
- (2) Cut the insulating cable tie to disconnect the connector (CN462).
- (3) Remove one screw to detach the lamp fixing plate (rear).



- (4) Cut two insulating cable ties and remove the screw securing the cable clamp to remove the Faston terminal.
- (5) Remove one screw to detach the lamp fixing plate (front).

- (6) Remove the heater lamp (L4) from the front side.



- (1) Reinstall the above parts following the removal steps in reverse.

**Caution:** When reinstalling the lamp, pay attention to its orientation.

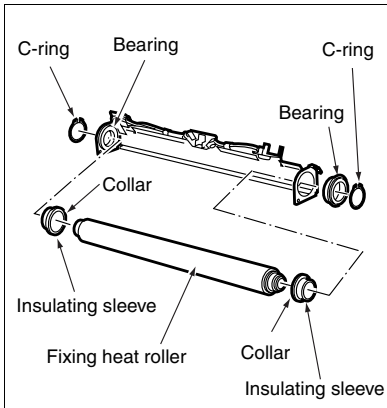
## [9] Removing and Reinstalling the Fixing Heat Roller

**⚠ Caution:** Do not touch the fixing heater lamp (lower)(L4) with bare hands.

### a. Procedure

- (1) Remove the fixing heat roller assembly.
- (2) Remove the heater lamp (lower) (L4).
- (3) Remove the two C-rings and the front bearing to remove the fixing heat roller.
- (4) Remove two insulating sleeves from the fixing heat roller.

**Caution:** Reinstall the front and rear insulating sleeves with the collars facing toward the fixing heat roller.

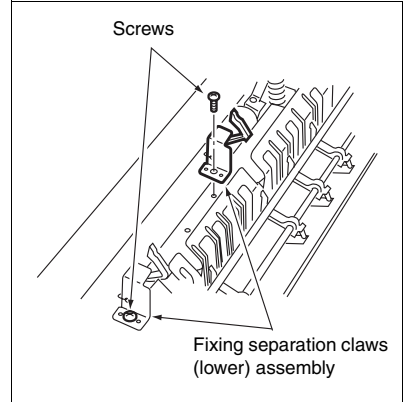


- (5) Reinstall the above parts following the removal steps in reverse.

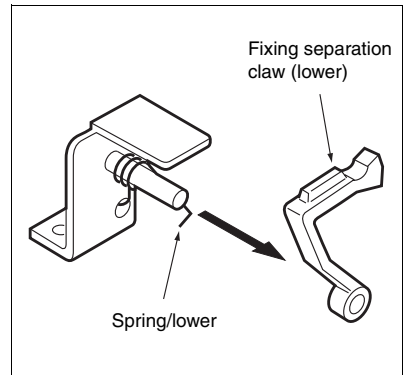
## [10] Removing and Reinstalling the Fixing Separation Claws (Lower)

### a. Procedure

- (1) Open the fixing paper exit unit.
- (2) Remove the two screws to detach the fixing separation claws (lower) assembly.



- (3) Remove the spring supporting each fixing separation claw (lower).
- (4) Remove the fixing separation claws (lower).

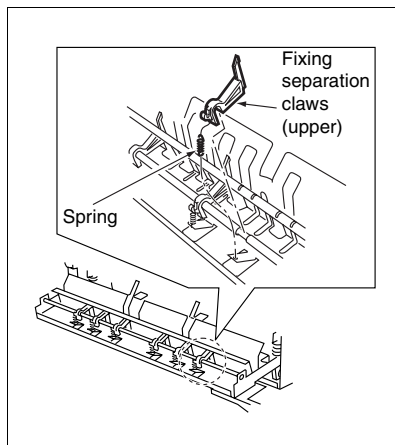


- (5) Reinstall the above parts following the removal steps in reverse.

## [11] Removing and Reinstalling the Fixing Separation Claws (Upper)

### a. Procedure

- (1) Open the fixing paper exit unit.
- (2) Remove the six springs connected to the fixing separation claws.
- (3) Remove the six fixing separation claws.

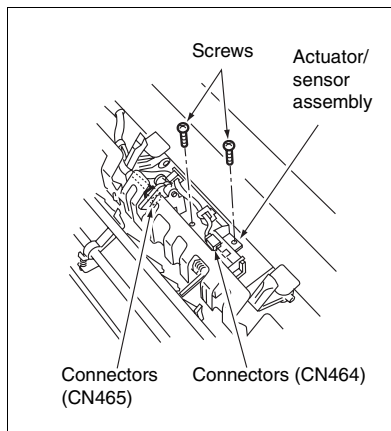


- (4) Reinstall the above parts following the removal steps in reverse.

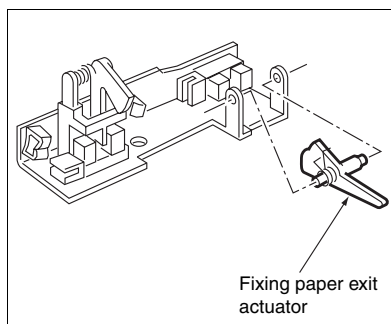
## [12] Removing and Reinstalling the Actuator for Fixing Exit PS (PS2)

### a. Procedure

- (1) Open the fixing paper exit unit.
- (2) Disconnect the two connectors (CN464, 465).
- (3) Remove one screw to detach the fixing separation claw (lower) (on the drive side).
- (4) Remove the two screws to detach the actuator/sensor assembly.



- (5) Remove the spring from the actuator/sensor assembly to detach the actuator for fixing exit PS (PS2).



- (6) Reinstall the above parts following the removal steps in reverse.



### [13] Removing and Reinstalling Fixing Temperature Sensors 1 and 2

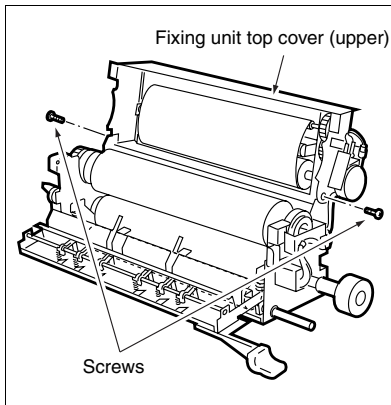
**Caution1:** After reinstalling fixing temperature sensor 2, make sure that the sensor touches the fixing upper roller.

**Caution2:** Make sure the sensor wires do not touch the fixing upper roller.

**Caution3:** When reinstalling fixing temperature sensor 1, adjust its position using the positioning jig (4014-5001-01) and secure it with screws. Be sure to apply screw lock agent to the screws.

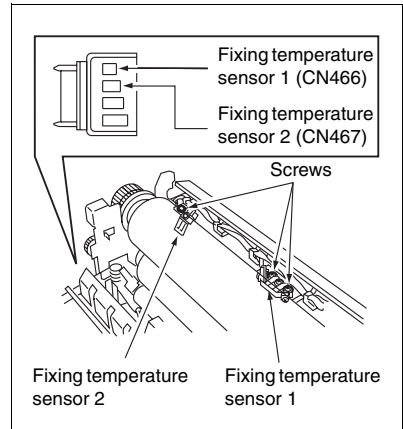
#### a. Removal procedure

- (1) Open the fixing unit top cover.
- (2) Remove the two screws to detach the fixing unit top cover.



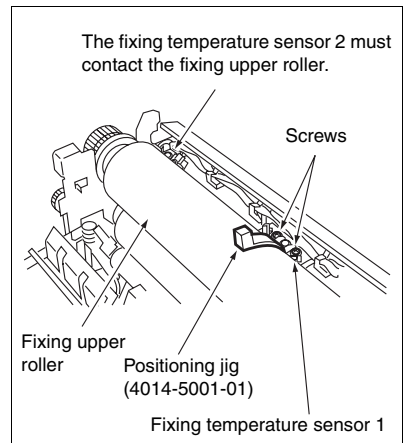
- (3) Disconnect the two connectors (fixing temperature sensor 1, CN466; fixing temperature sensor 2, CN467) and release the sensor wires from the cable guides.
- (4) Remove the two screws to detach fixing temperature sensor 1.

- (5) Remove one screw (on the fixing plate side) to detach fixing temperature sensor 2.

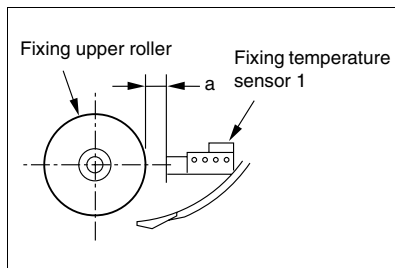


#### b. Reinstallation procedure

- (1) Secure fixing temperature sensor 2 with a screw.
- (2) Make sure that fixing temperature sensor 2 touches the fixing upper roller. If they do not touch each other, be sure to bring the sensor in touch with the roller.
- (3) Set a fixing temperature sensor positioning jig between fixing temperature sensor 1 and fixing upper roller, and secure fixing temperature sensor 1 with two screws so that the distance between the sensor and roller is equal to the thickness of the jig.



- a) Set the distance "a" between the fixing temperature sensor 1 and fixing upper roller so that it is equal to the thickness of the positioning jig.



Standard value of a:  $0.75 \pm 0.1$  mm

- (4) Apply screw lock agent to the two screws securing fixing temperature sensor 1.
- (5) Secure the wires of fusion temperature sensors 1 and 2 in the wire guides, and connect their connectors.
- (6) Reinstall other parts following the removal steps in reverse.

## [14] Removing and Reinstalling Fixing Temperature Sensors 3 and 4

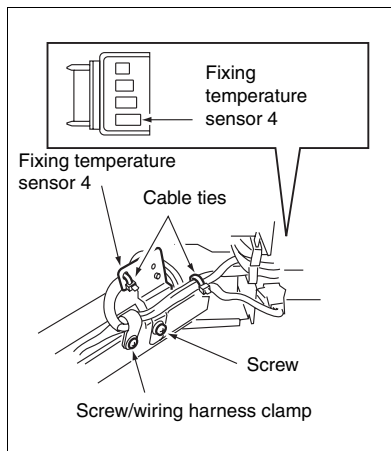
**Caution1:** After reinstalling fixing temperature sensor 4, make sure that the sensor touches the fixing heat roller (upper).

**Caution2:** Make sure the sensor wires do not touch the fixing heat roller.

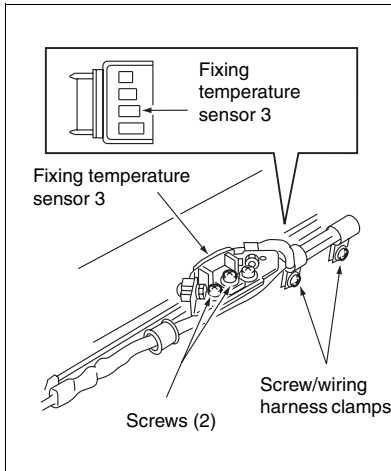
**Caution3:** When reinstalling fixing temperature sensor 3, adjust its position using the positioning jig (4014-5002-01) and secure it with screws. Be sure to apply screw lock agent to the screws.

### a. Removal procedure

- (1) Remove the fixing heat roller assembly.
- (2) Disconnect one connector (CN469), remove the screw to detach the cable clamp, and cut insulating ties.
- (3) Remove one screw (on the fixing plate side) to remove fixing temperature sensor 4.

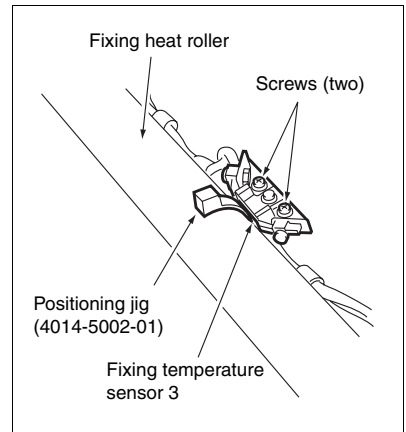


- (4) Disconnect one connector (CN468) and remove four screws to detach two wire clamps.
- (5) Remove the two screws to detach fixing temperature sensor 3.

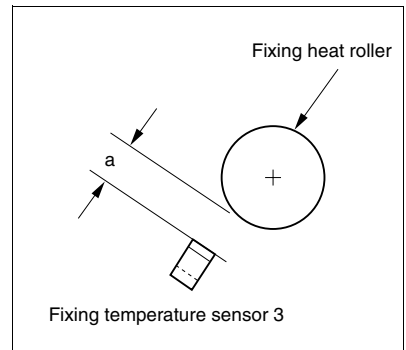


#### b. Reinstallation procedure

- (1) Secure fixing temperature sensor 4 with a screw.
- (2) Make sure that fixing temperature sensor 4 touches the fixing heat roller (upper). If they do not touch each other, be sure to bring the sensor in touch with the roller.
- (3) Set a fixing temperature sensor positioning jig between fixing temperature sensor 3 and fixing heat roller, and secure fixing temperature sensor 3 with two screws so that the distance between the sensor and roller is equal to the thickness of the jig.



- a) Set the distance "a" between the fixing temperature sensor 3 and fixing heat roller so that it is equal to the thickness of the positioning jig.



Standard value of  $a = 0.7 \pm 0.1$  mm

- (4) Apply screw lock agent to the two screws securing fixing temperature sensor 3.
- (5) Secure the wires of fixing temperature sensors 3 and 4 with wire clamp and ties, and connect the connectors.
- (6) Reinstall other parts following the removal steps in reverse.

### [15] Removing and Reinstalling the Thermostat (Upper)

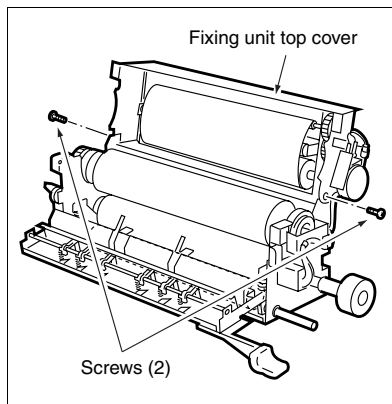
**⚠ Caution:** This is an important safety part. Be sure to observe the following cautions and steps when removing or reinstalling.

**Caution1:** After reinstalling the thermostat (upper), make sure that its wires do not touch the fixing upper roller.

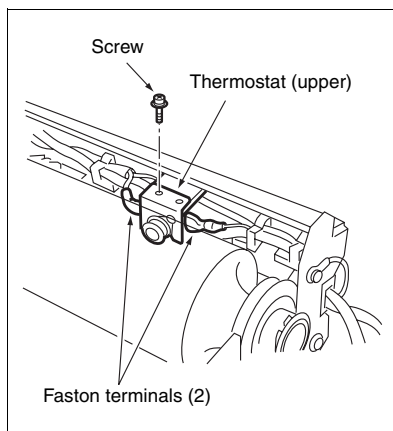
**Caution2:** When reinstalling the thermostat (upper), adjust its position using the thermostat PS jig/A (4014-5003-01) and secure it with screws. Be sure to apply screw lock agent to the screws. Make this adjustment with pressure applied.

#### a. Removal procedure

- (1) Open the fixing unit top cover.
- (2) Remove the two screws to detach the fixing unit top cover.

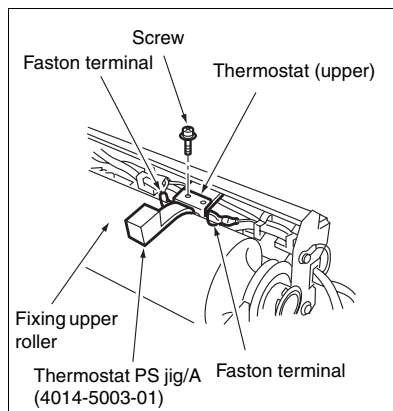


- (3) Remove one screw and remove two Faston terminals to detach the thermostat.

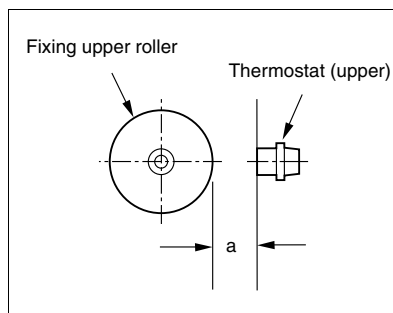


#### b. Reinstallation procedure

- (1) Connect two Faston terminals to the thermostat (upper).
- (2) Set a thermostat positioning jig between the thermostat (upper) and fixing upper roller, and secure the thermostat (upper) with one screw so that the distance between the roller and thermostat equal to the thickness of the jig.



- a) Set the distance "a" between the thermostat (upper) and fixing upper roller so that it is equal to the thickness of the thermostat PS jig/A.



Standard value of  $a = 3.0 \pm 0.2$  mm

- (3) Apply screw lock agent to the screw securing the thermostat (upper).
- (4) Reinstall other parts following the removal steps in reverse.

## [16] Removing and Reinstalling the Thermostat (Lower)

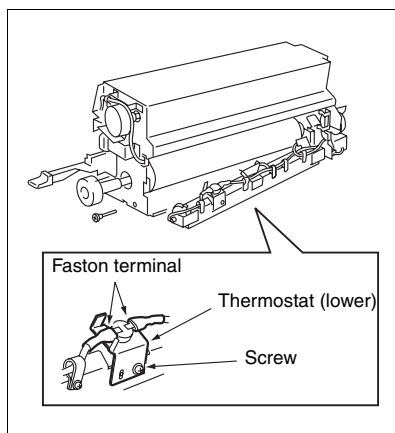
**⚠ Caution:** This is an important safety part. Be sure to observe the following cautions and steps when removing or reinstalling.

**Caution1:** After reinstalling the thermostat (upper), make sure that its wires do not touch the fixing heat roller.

**Caution2:** When reinstalling the thermostat (upper), adjust its position using the thermostat PS jig/B (4014-5004-01) and secure it with screws. Be sure to apply screw lock agent to the screws.

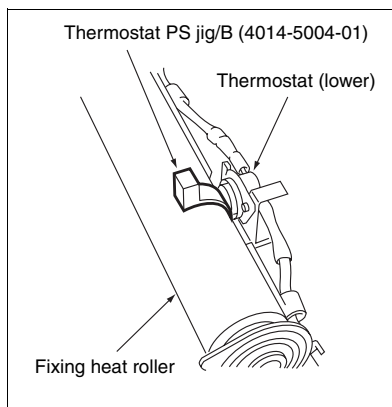
### a. Removal procedure

- (1) Remove the fixing heat roller assembly.
- (2) Remove two Faston terminals from the thermostat (lower).
- (3) Remove one screw to detach the thermostat (lower).

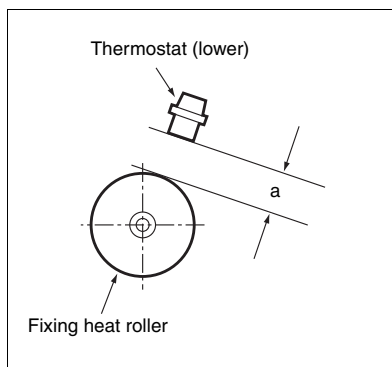


### b. Reinstallation procedure

- (1) Set a thermostat PS jig/B between the thermostat (lower) and fixing heat roller, and secure the thermostat (lower) with one screw so that the distance between the roller and thermostat equal to the thickness of the jig.



- a) Set the distance "a" between the thermostat (lower) and fixing heat roller so that it is equal to the thickness of the thermostat PS jig/B.



Standard:  $a = 3.0 \pm 0.20 \text{ mm}$

- (2) Connect two Faston terminals to the thermostat (lower).
- (3) Apply screw lock agent to the screw securing the thermostat (lower).
- (4) Reinstall other parts following the removal steps in reverse.

# EXTERNAL SECTION



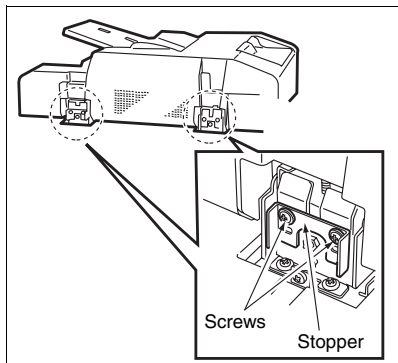
## Caution:

When disassembling and reassembling the machine, Be sure the power cord has been unplugged from the wall outlet.

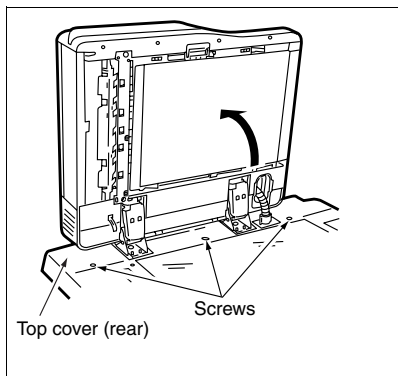
## [1] Removing the RADF

### a. Procedure

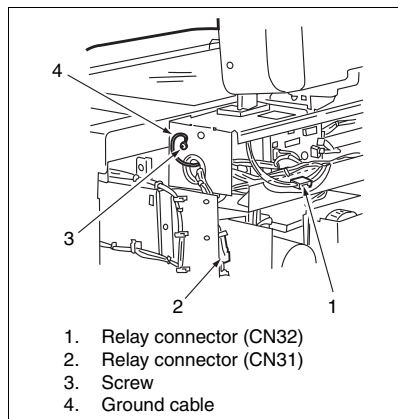
- (1) Remove the rear cover.
- (2) Remove two screws to detach the two stoppers.



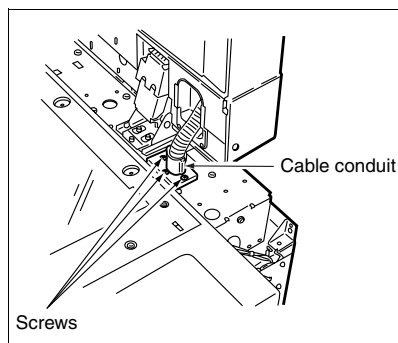
- (3) Open the RADF to the upright position.
- (4) Remove the three screws to detach the top cover (rear) of the main unit.



- (5) Remove the screw to disconnect the ground cable.
- (6) Remove the two relay connectors (CN31, CN32).

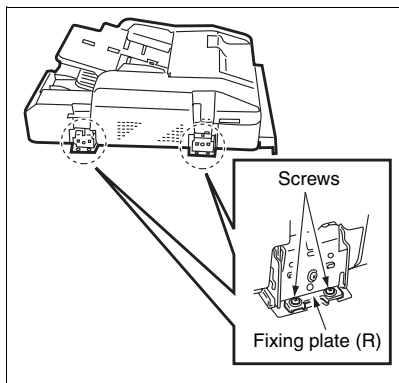


- (7) Remove the three screws to detach the cable conduit.



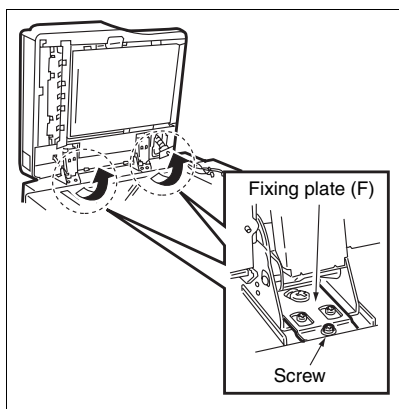
- (8) Draw the cable to the top of the main unit.

- (9) Close the RADF. Remove the two screws to detach each of the two fixing plates (R).



- (10) Open the RADF up to the upright position.  
 (11) Holding the RADF, remove one screw to detach each of two fixing plates.  
 (12) Holding the RADF, remove it from the main unit.

**Caution:** When the fixing plates (F) are removed, the RADF may fall down to the rear side. Be sure to hold the RADF while performing steps 11 and 12.



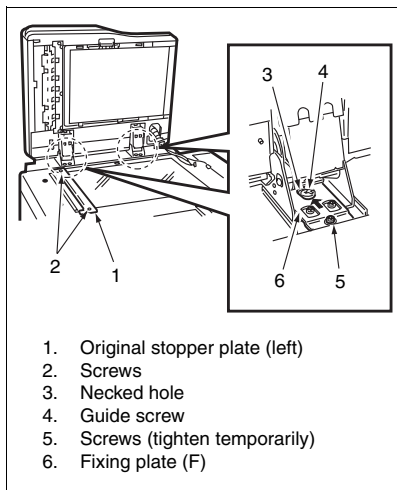
## [2] Reinstalling the RADF

### a. Procedure

- (1) Place the RADF on the top of the main unit and loosely secure each of the two fixing plates (F) with one screw.

**Note:** The necked hole in the fixing plate (F) must fit over the guide screw.

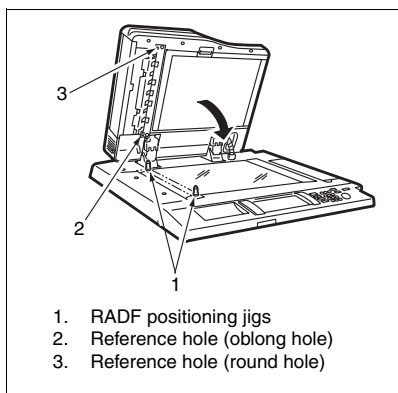
- (2) Remove the two screws to detach the original stopper plate (left).



- (3) Following the removal procedure in reverse, install the cable conduit, two relay connectors (CN31, CN32), ground cable, and top cover (rear) of the main unit.  
 (4) Install two RADF positioning jigs in the mounting holes of the original stopper plate (left).

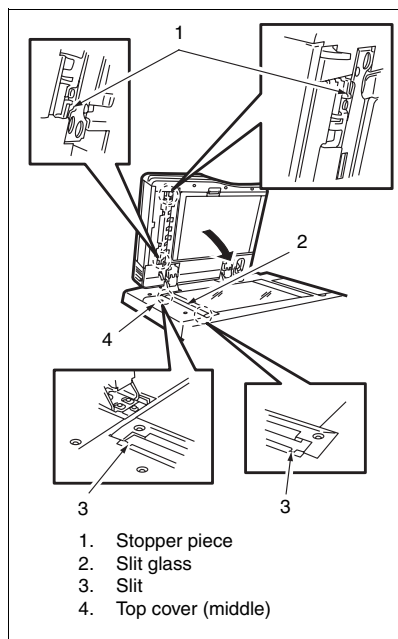


- (5) Close the RADF to mate the reference holes and RADF positioning jigs.

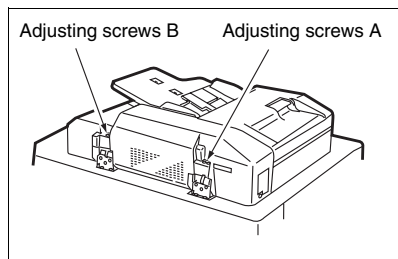


- (6) Install two screws to secure each of the two fixing plates (R) following the removal procedure in reverse.  
(7) Open the RADF, install the other screw for each of the two fixing plates (F), and finally tighten all the four screws to secure the two fixing plates (F).  
(8) Remove the RADF positioning jigs and install the original stopper plate (left) with two screws.  
(9) Close the RADF and check whether both stopper pieces on the RADF-side touch the slit glass.

**Note:** The state of contact between the stopper pieces and the slit glass can be checked by looking into the slits in the top cover of the main unit.



- (10) If both stopper pieces do not touch the slit glass at the same time, make adjustments using adjusting screws A and B alternately.



- (11) Perform steps (9) and (10) repeatedly until the two stopper pieces touch the slit glass at the same time.  
(12) Install the rear cover of the main unit.

# ORIGINAL FEED/CONVEYANCE/EXIT SECTION



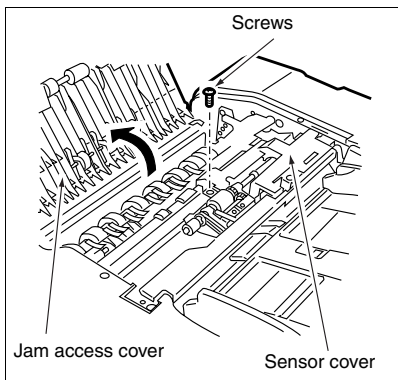
## Caution:

When disassembling and reassembling the machine, Be sure the power cord has been unplugged from the wall outlet.

## [1] Replacing the Pickup Roller and Conveyance Roller Rubber

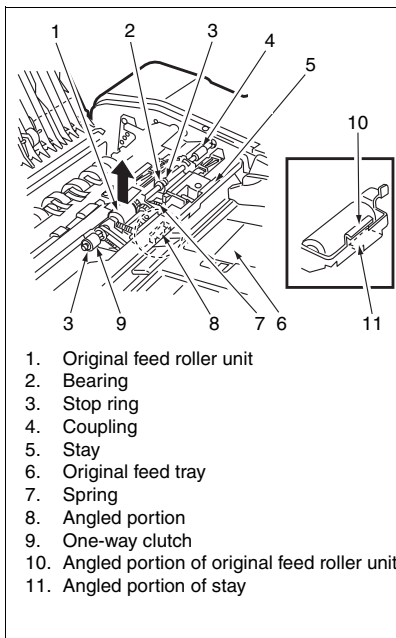
### a. Procedure

- (1) Open the Jam access cover.
- (2) Remove the screw to detach the sensor cover.



- (3) Remove the spring.
- (4) Remove the two stop rings to slide the bearing and one-way clutch outward.
- (5) Slide the original feed roller unit to the front to release it from the coupling, then remove it upward.

- (6) Remove the original feed roller rubber from the original feed roller.



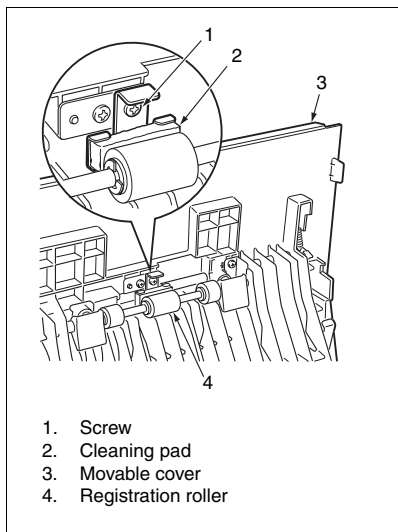
1. Original feed roller unit
2. Bearing
3. Stop ring
4. Coupling
5. Stay
6. Original feed tray
7. Spring
8. Angled portion
9. One-way clutch
10. Angled portion of original feed roller unit
11. Angled portion of stay

- (7) Clean rollers using a blower brush or the like.
- (8) Reinstall the original feed roller unit in the reverse order of the removal procedure.

**Note:** Caution: Make sure the angled portion of the original feed roller unit is positioned above the angled portion of the stay. If the angled portion of the original feed roller unit is positioned below the angled portion of the stay, originals are not fed properly.

**[2] Cleaning the Cleaning Pad****a. Procedure**

- (1) Open the movable cover.
- (2) Remove one screw to detach the cleaning pad.
- (3) Using a blower brush, clean the cleaning pad.

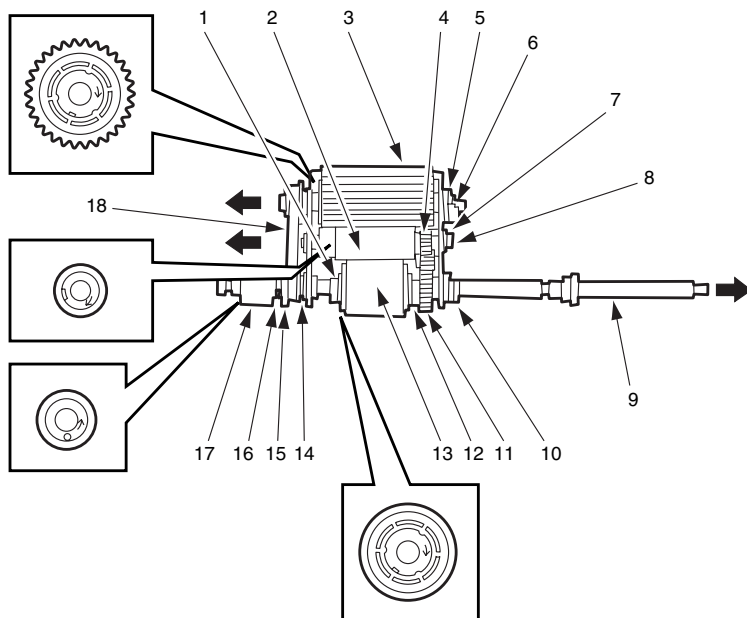


- (4) Reinstall the above parts following the removal steps in reverse.

**[3] Replacing the Original Feed Roller/ Separation Roller/Auxiliary Separation Roller****a. Procedure**

- (1) Remove the original feed roller unit.
- (2) Remove the one-way clutch.
- (3) Remove stop ring (1) to detach gear (1) and belt.
- (4) Remove stop ring (2) and pull out shaft (1) to detach the original feed roller.
- (5) Pull the pin for gear (1) and the spacer from shaft (2).
- (6) Remove stop rings (3), (4), and (5) to pull the pin for gear (2) from shaft (2).
- (7) Pull out shaft (2) to detach the separation roller.
- (8) Remove stop ring (6) to pull the pin for gear (3) from shaft (3).

- (9) Pull out shaft (3) to detach the auxiliary separation roller.



- |                                |                           |
|--------------------------------|---------------------------|
| 1. Stop ring (3)               | 10. Stop ring (5)         |
| 2. Auxiliary separation roller | 11. Gear (2) (with a pin) |
| 3. Original feed roller        | 12. Stop ring (4)         |
| 4. Gear (3) (with a pin)       | 13. Separation roller     |
| 5. Shaft (1)                   | 14. Spacer                |
| 6. Stop ring (2)               | 15. Gear (1) (with a pin) |
| 7. Stop ring (6)               | 16. Stop ring (1)         |
| 8. Shaft (3)                   | 17. One-way clutch        |
| 9. Shaft (2)                   | 18. Belt                  |

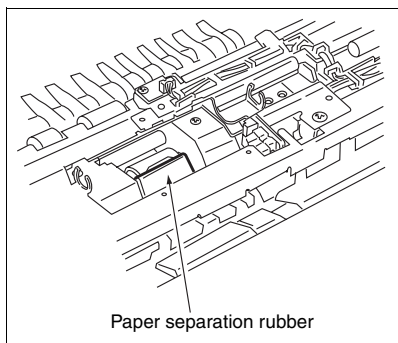
- (10) Reinstall the original feed roller/separation roller/auxiliary separation roller in the reverse order of the removal procedure.

**Caution:** Make sure the one-way clutch and rollers are oriented properly when reinstalling them.

#### [4] Cleaning the Paper Separation Rubber

##### a. Procedure

- (1) Remove the original feed roller unit.
- (2) Clean the paper separation rubber using a drum cleaner and cleaning pad.

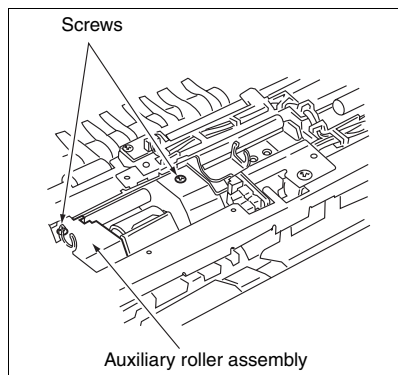


- (3) Reinstall the cleaning roller in the reverse order of the removal procedure.

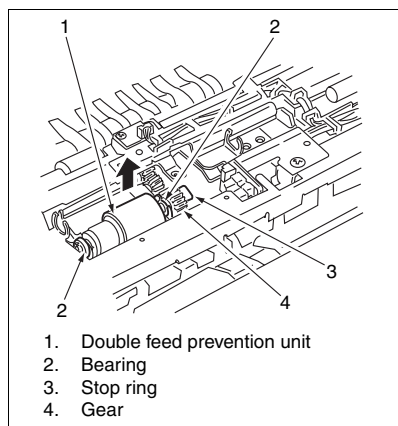
#### [5] Replacing the Double Feed Prevention Roller/Torque Limiter

##### a. Procedure

- (1) Remove the original feed roller unit.
- (2) Remove the two screws to detach the auxiliary roller assembly.

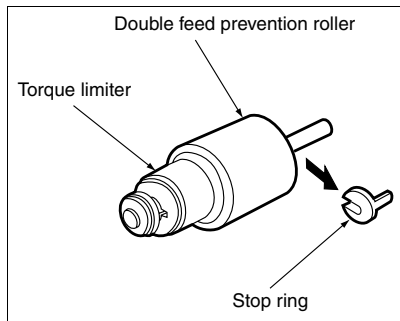


- (3) Remove the stop ring to detach the gear.
- (4) Slide the two bearings outward to detach the double feed prevention roller unit.



- (5) Remove the stop ring to detach the double feed prevention roller and torque limiter.
- (6) Reinstall the double feed prevention roller and torque limiter in the reverse order of the removal procedure.

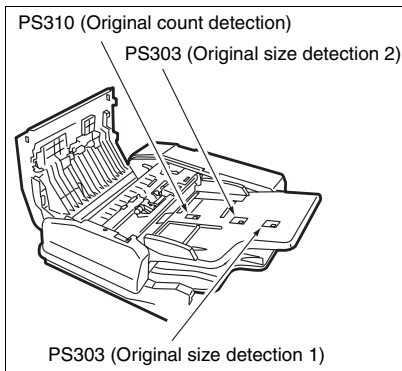
**Note:** Make sure the double feed prevention roller is oriented properly when reinstalling it.



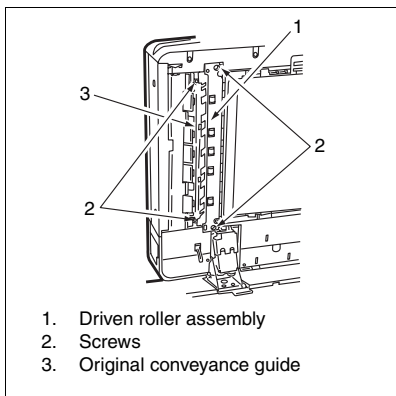
## [6] Cleaning Photo Sensors/Mirrors for Photo Sensors

### a. Procedure

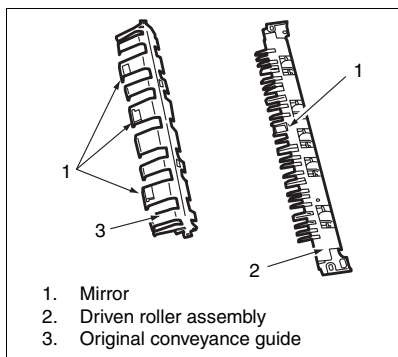
- (1) Close the RADF.
- (2) Clean sensors using a blower brush or the like.



- (3) Open the RADF.
- (4) Remove the two screws to detach the driven roller assembly.
- (5) Remove the two screws to detach the original conveyance guide.

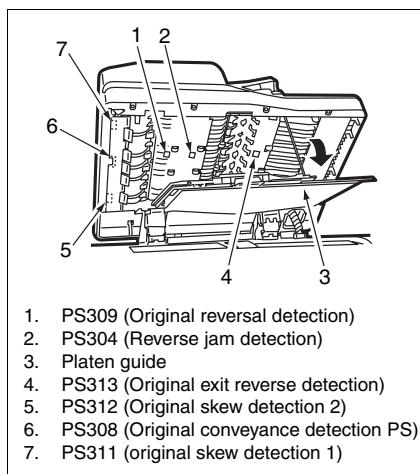


- (6) Using a blower brush or the like, clean the mirror on the driven roller assembly and the three mirrors on the original conveyance guide.

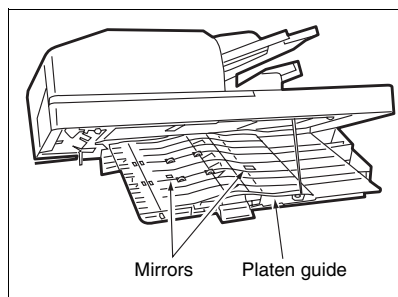


- (7) Open the platen guide.

- (8) Clean sensors using a blower brush or the like.



- (9) Clean the two mirrors on the back of the platen guide using a blower brush or the like.



- (10) Reinstall the photo sensors/mirrors for photo sensors in the reverse order of the removal procedure.





# PAPER FEED SECTION



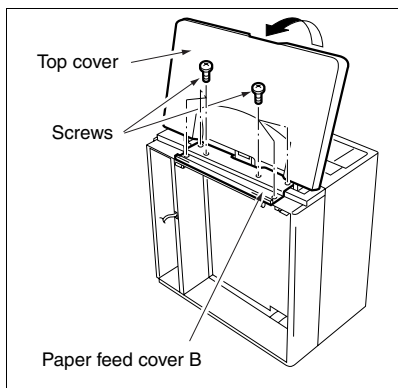
## Caution:

If LCT is connected to the main body, make sure that main body power plug is disconnected from the power outlet.

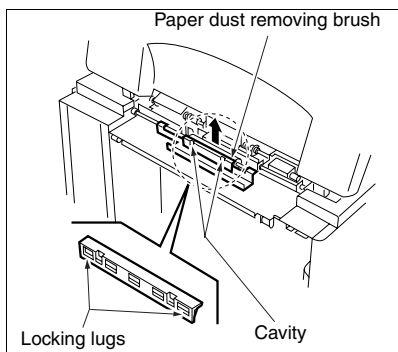
## [1] Cleaning the Paper Dust Removing Brush

### a. Procedure

- (1) Open the top cover.
- (2) Remove six screws to detach the paper feed cover B.



- (3) Insert a flat bladed screwdriver in the cavities (in two locations) for paper dust removing brush to release the locking lugs, then remove the paper dust removing brush.

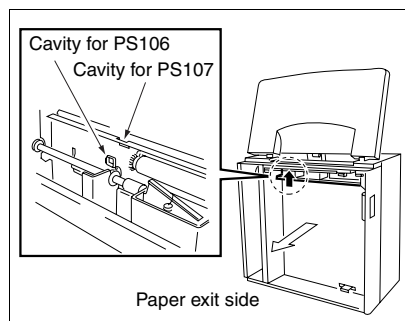


- (4) Clean the paper dust removing brush using a blower brush.
- (5) Reinstall the above parts following the removal steps in reverse.

## [2] Cleaning the LT feed PS (PS106)/LT first paper feed PS (PS107)

### a. Procedure

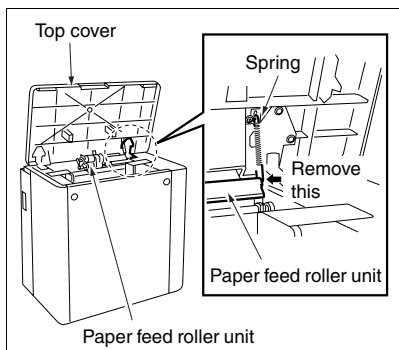
- (1) Looking into the paper exit side of the LCT from below, and clean sensors through the cavity for LT feed PS (PS106) and the cavity for LT first paper feed (PS107) using a blower brush.



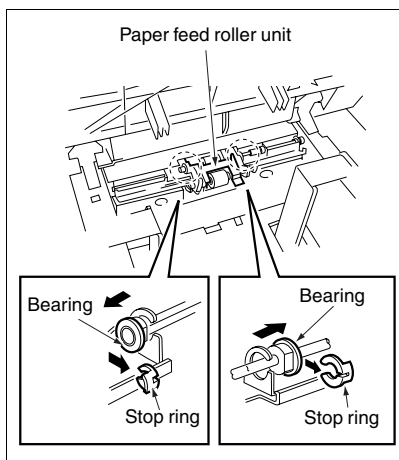
### [3] Removing and Reinstalling the Paper Feed Roller Unit

#### a. Procedure

- (1) Open the top cover.
- (2) Remove the spring from the paper feed roller unit.



- (3) After removing two stop rings, remove the two bearings outward to remove the paper feed roller unit.

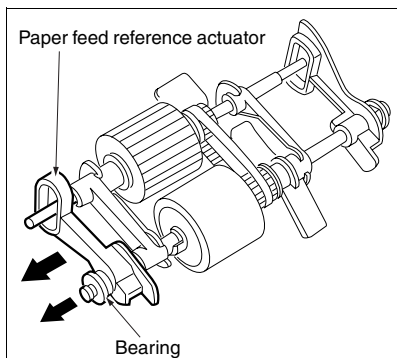


- (4) Reinstall the above parts following the removal steps in reverse.

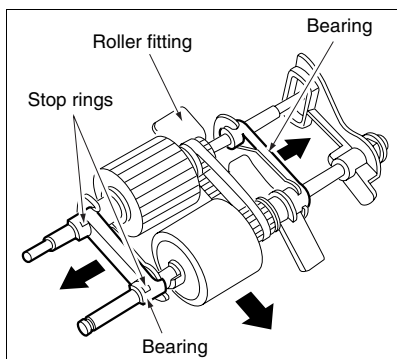
### [4] Replacing the Paper Feed Roller Rubber/Feed Roller Rubber

#### a. Procedure

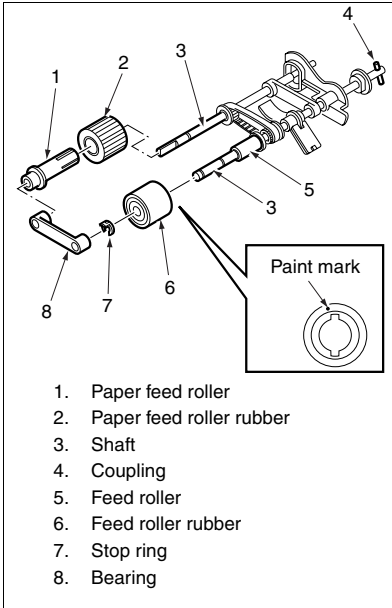
- (1) Remove the paper feed roller unit.
- (2) Remove the bearing and paper feed reference actuator.



- (3) Remove two stop rings.
- (4) Remove two bearings outward to detach the roller section from the roller fitting.



- (5) Remove the bearing from the opposite side of the coupling, then remove the paper feed roller from the shaft.
- (6) Remove the stop ring to pull the feed roller from the shaft.
- (7) Remove the rubber from each roller.



- (8) Reinstall the above parts following the removal steps in reverse.

**Caution1:** Make sure rollers and rubber portions are oriented properly when reinstalling them.

**Caution2:** Make sure the one-way clutch direction is correct.

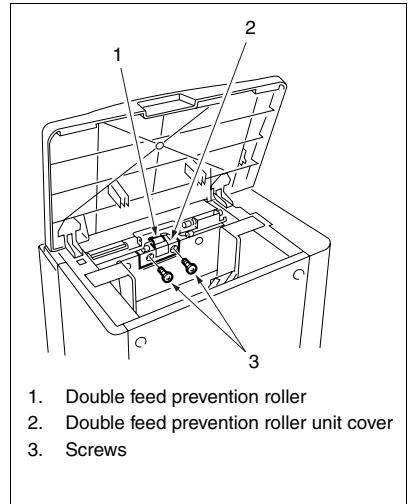
**Caution3:** Check whether grease or the like is present on each roller.

## [5] Replacing the Double Feed Prevention Roller Rubber

### a. Procedure

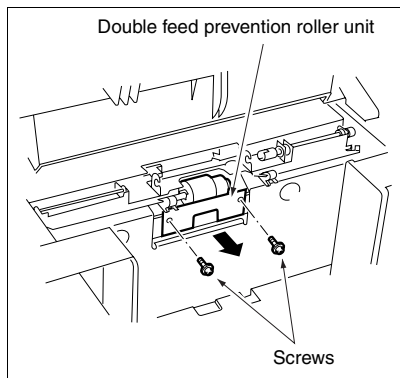
**Caution:** With the power held on, press the LT tray down switch (SW100) to move the up/down plate down to the bottom in advance.

- (1) Remove the paper feed roller unit.
- (2) Remove two screws to detach the double feed prevention roller unit cover.

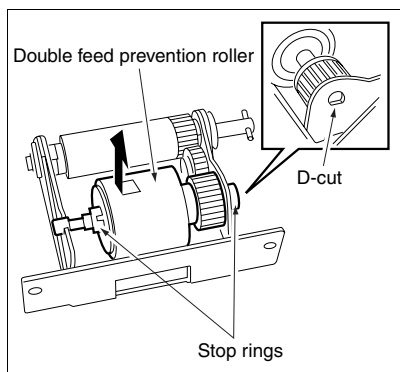


- (3) Remove two screws to detach the double feed prevention roller unit.

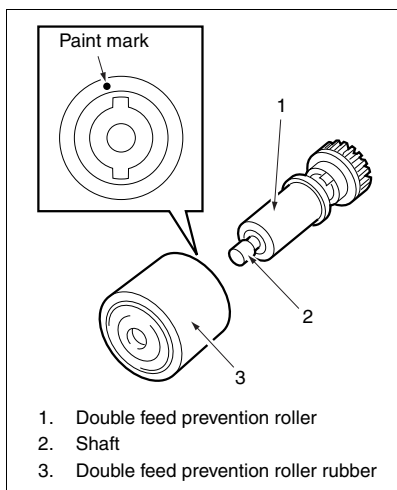
**Caution:** When reinstalling the double feed prevention roller unit, tighten the screws on the rear side first.



- (4) Remove two stop rings, fit the shaft into the D-cut in the fitting, and remove the double feed prevention roller together with the shaft.



- (5) Remove the double feed prevention roller rubber from the double feed prevention roller.



- (6) Reinstall the double feed prevention roller in the reverse order of the removal procedure.

**Caution1:** Make sure the double feed prevention roller rubber is oriented properly when reinstalling it.

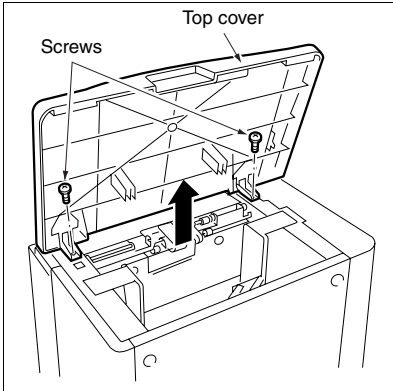
**Caution2:** Check whether scratch or the like is visible on the pet cover for the drive gear.

**Caution3:** Check whether grease or the like is present on double feed prevention roller.

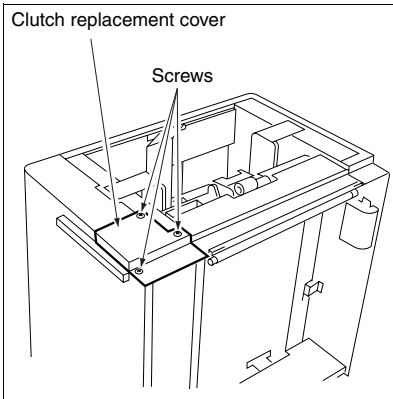
## [6] Replacing the LT feed MC (MC101)/LT first paper feed MC (MC102)

### a. Procedure

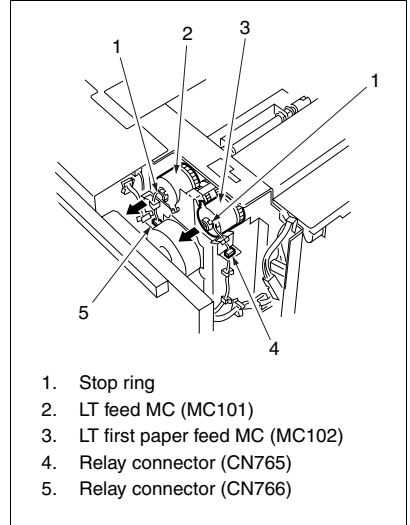
- (1) Open the top cover.
- (2) Remove the spring from the paper feed roller unit.
- (3) Remove two screws to detach the top cover.



- (4) Remove three screws to detach the clutch replacement cover.



- (5) Disconnect two relay connectors (CN765, CN766) of the clutches.
- (6) Remove the stop ring to detach each clutch.



- (7) Reinstall the above parts following the removal steps in reverse.

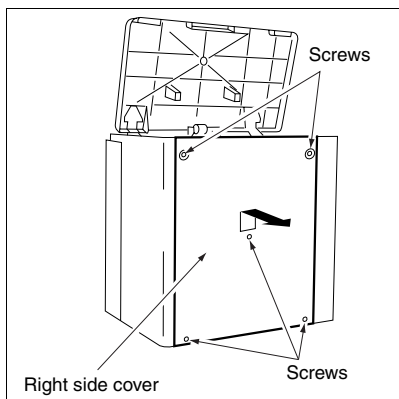
**Caution:** When installing each MC, make sure that the stopper of each clutch is on the predefined position.

## [7] Replacing the C-403 Up/Down Wires

**Caution:** With the power held on, press the LT tray down switch (SW100) to move the up/down plate down to the bottom in advance.

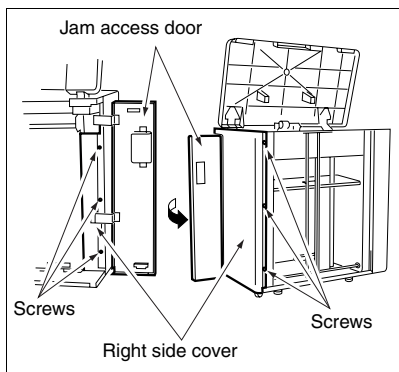
### a. Procedure

- (1) Open the top cover.
- (2) Remove the clutch replacement cover.
- (3) Remove five screws to detach the right side cover.

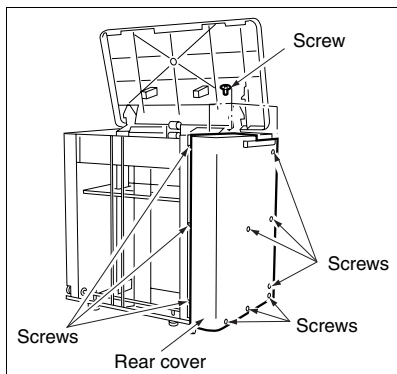


- (4) After opening the jam access door, remove six screws to detach the front cover.

**Caution:** When removing the front cover, close the jam access door after removing the screws.

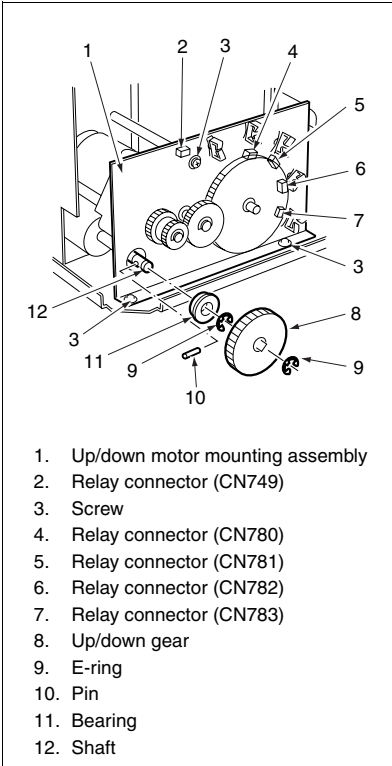


- (5) Remove twelve screws to detach the rear cover.



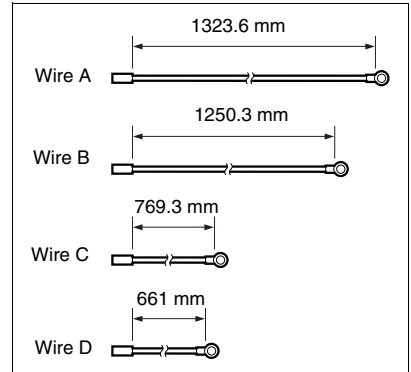
- (6) Remove the five relay connectors (CN749, CN780, CN781, CN782, CN783) to disconnect the wiring harness from the up/down motor mounting assembly.
- (7) Remove the E-ring to detach the up/down gear.
- (8) Pull the pin from the shaft.
- (9) Remove the E-ring to detach the bearing.

- (10) Remove three screws to detach the up/down motor assembly.

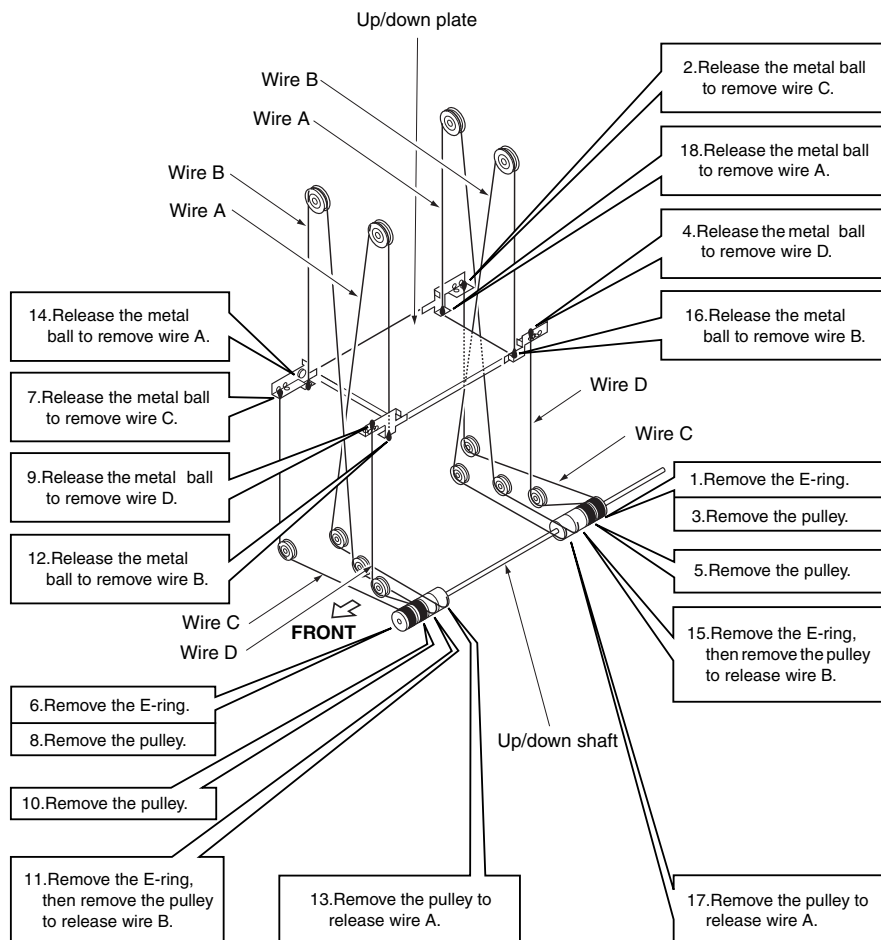


- (11) Replace the up/down wire following the instructions in "Removing Up/Down Wires" and "Installing Up/Down Wires."

**Caution:** Two sets of four up/down wires with different length, one set at the front and the other at the back, are used. Wires with the same length can be used either at the front or back if they are used in the same location.

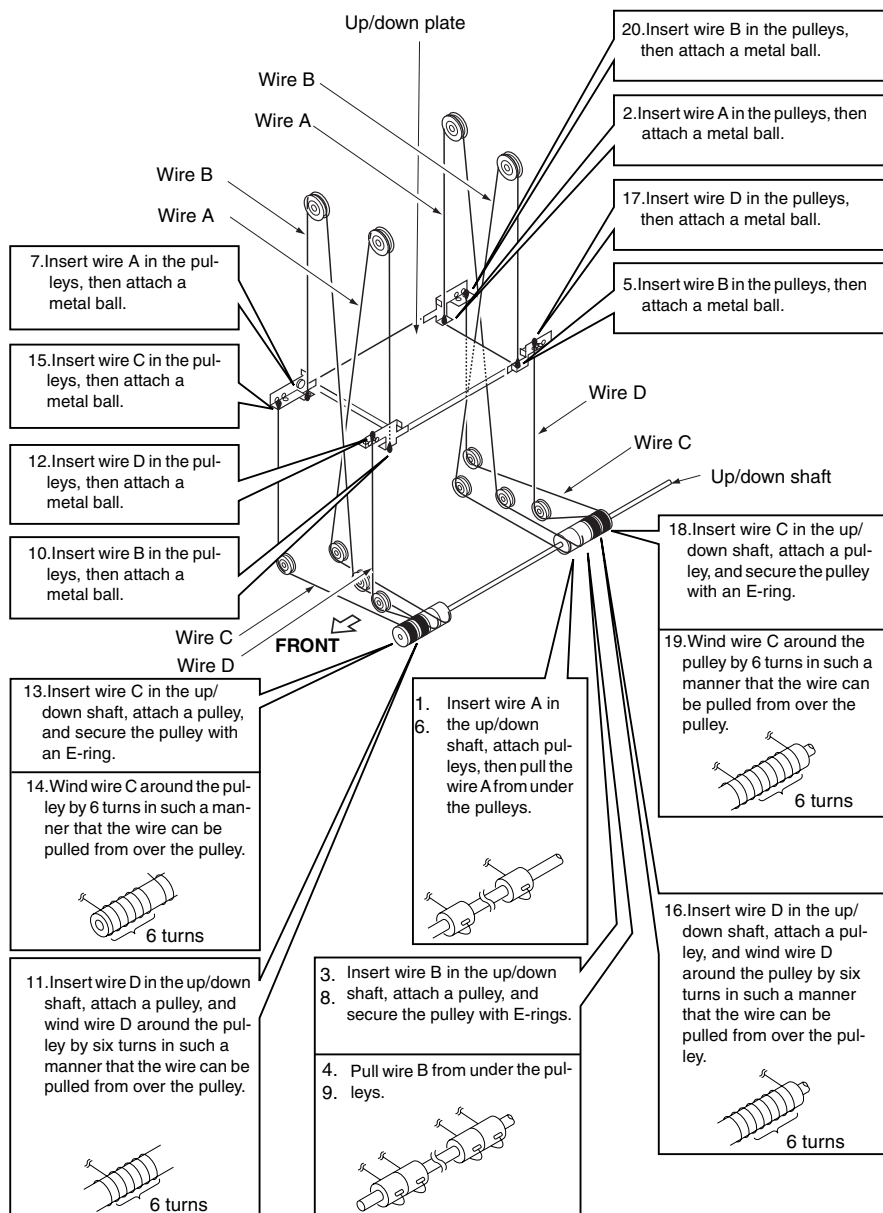


## &lt;Removing the Up/Down Wires&gt;





## &lt;Installing the Up/Down Wires&gt;

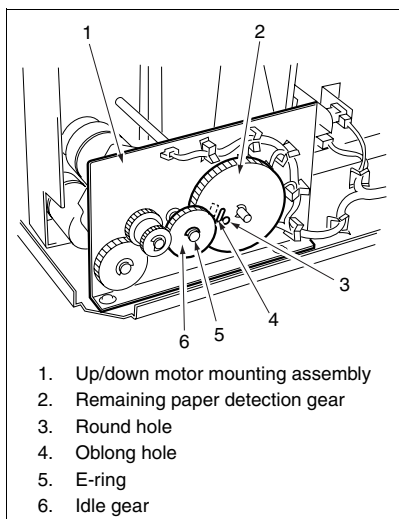


- (12) After installing the up/down wires, make sure the up/down wires are passed in the grooves in the pulleys properly and wires do not run on the sides of the pulleys. Also make sure the up/down plate can be moved up and down smoothly by hand.

**Caution:** If the up/down plate does not move up and down smoothly, reinstall the up/down wires.

- (13) Install the up/down wire drive motor assembly, up/down gear, and relay connectors, following the removal steps in reverse.
- (14) Remove the E-ring to detach the idle gear.
- (15) Rotate the remaining paper detection gear until the round hole in this gear is aligned with the oblong hole in the up/down motor mounting assembly.

**Caution:** Align when the up/down plate is in lowest position.



- (16) Install the idle gear.
- (17) Attach the covers following the removal steps in reverse.

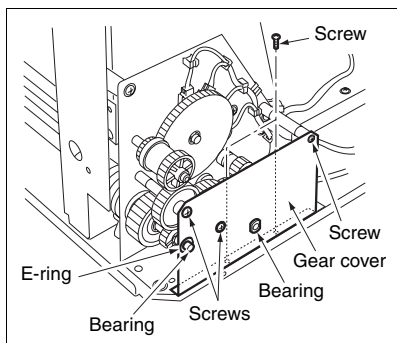
**Caution1:** After replacing the up/down wires, make horizontal and centering adjustment of the up/down plate. (Refer to "ADJUSTMENT SECTION.")

## [8] Replacing the C-404 Up/Down Wires

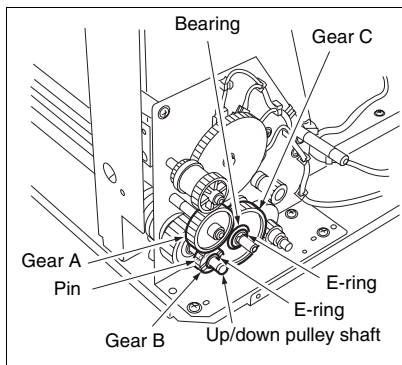
### a. Procedure

**Caution:** With the power held on, press the LT tray down switch (SW100) to move the up/down plate down to the bottom in advance.

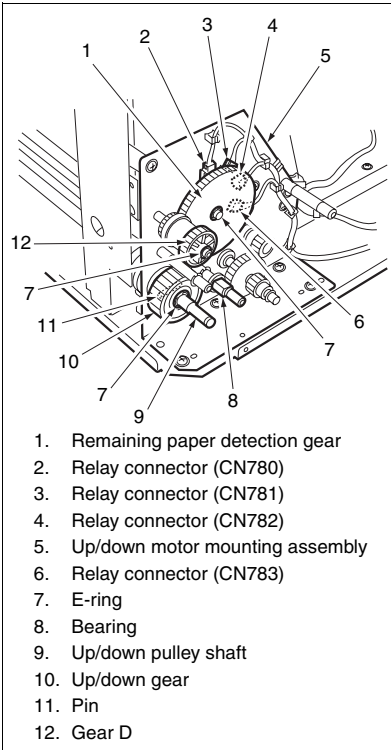
- (1) Remove the clutch replacement cover, side cover (right), front cover, and rear cover following the steps (1) to (5) in [7] Replacing the C-404 Up/Down Wires.
- (2) Remove the E-ring.
- (3) Remove the five screws to detach the gear cover.
- (4) Remove the two bearings.



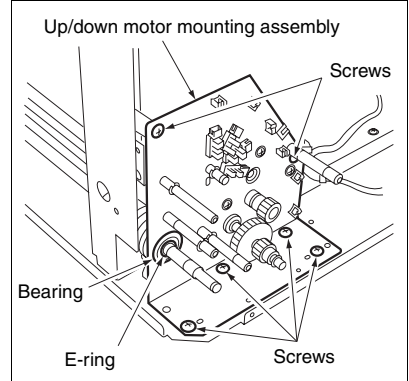
- (5) Remove the gear A.
- (6) Remove the E-ring to remove gear B.
- (7) Remove the detent pin for gear B from the up/down pulley shaft.
- (8) Remove the E-ring and bearing to remove gear C.



- (9) Remove the bearing behind gear C.
- (10) Remove the E-ring to remove the up/down gear.
- (11) Remove the detent pin for up/down gear from the up/down pulley shaft.
- (12) Remove the E-ring to remove gear D.
- (13) Remove the E-ring to remove the remaining paper detection gear.
- (14) Remove four relay connectors (CN780, CN781, CN782, and CN783) to disconnect the wiring harness from the up/down motor mounting assembly.

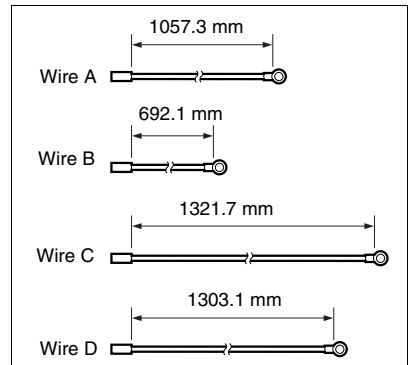


- (15) Remove the E-ring to remove the bearing.
- (16) Remove the six screws to remove the up/down motor mounting assembly.

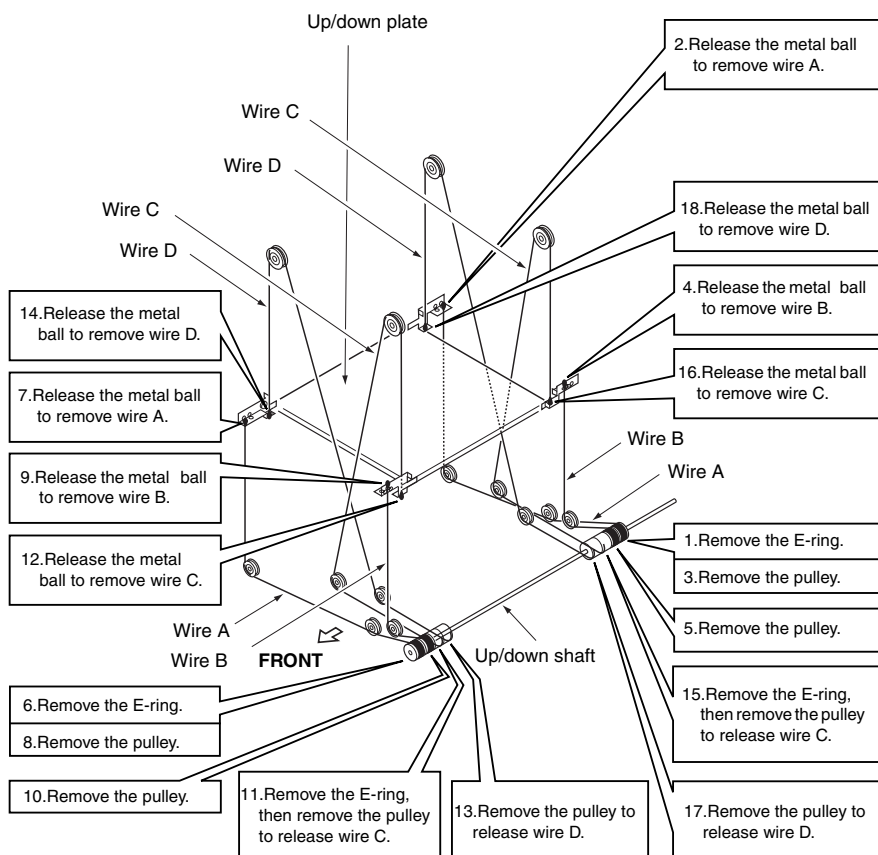


- (17) Replace the up/down wires following the instructions in "Removing the Up/Down Wires" and "Installing Up/Down Wires."

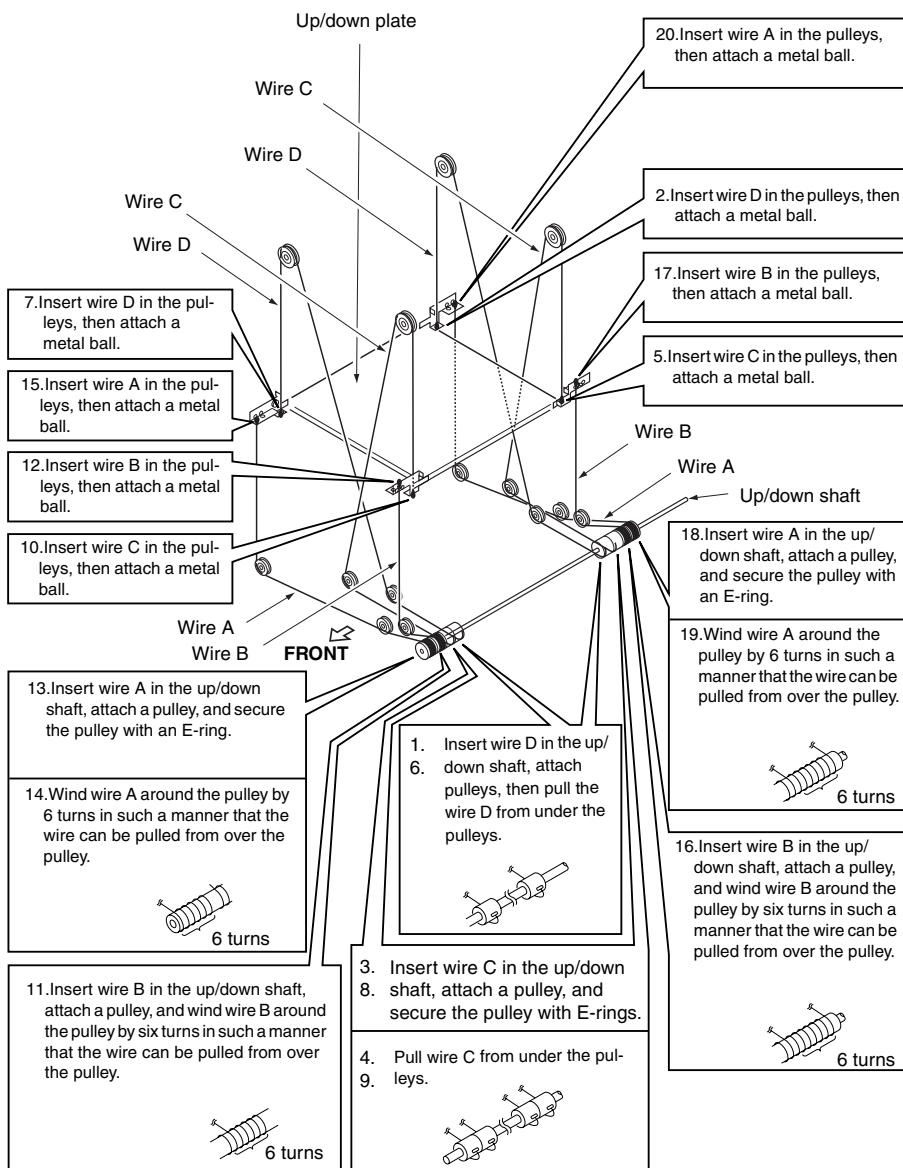
**Caution:** Two sets of four up/down wires with different length, one set at the front and the other at the back, are used. Wires with the same length can be used either at the front or back if they are used in the same location.



## &lt;Removing the Up/Down Wires&gt;



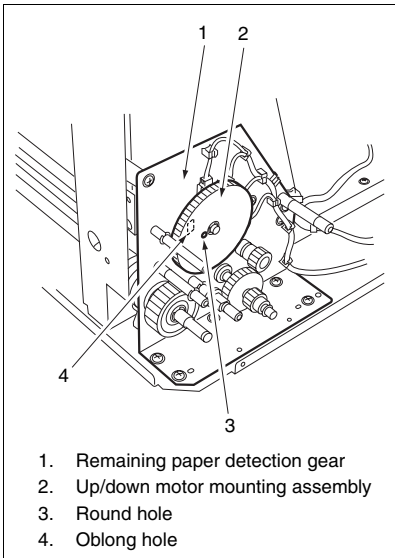
## &lt;Installing the Up/Down Wires&gt;



- (18) After installing the up/down wires, check whether they are engaged with the pulleys properly and whether they do not ride over the pulleys. Next, move the up/down plate manually to check whether it moves up and down smoothly.

**Caution:** If the up/down plate does not move smoothly, remove the up/down wires and install them again.

- (19) Install the up/down motor mounting assembly, relay connectors, remaining paper detection gear, gear D, and up/down gear following the removal steps in reverse.
- (20) Rotate the remaining paper detection gear until the round hole in this gear is aligned with the oblong hole in the up/down motor mounting assembly.



**Caution:** Align them when the up/down plate is at the bottom.

- (21) Install gear C.
- (22) Attach the other gears, gear cover, and external covers following the removal steps in reverse.

**Caution:** After replacing the up/down wires, make horizontal and centering adjustment of the up/down plate. (Refer to "ADJUSTMENT SECTION.")

# EXTERNAL SECTION



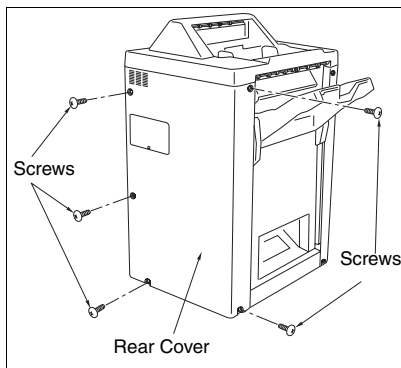
## Caution:

When disassembling and reassembling the machine, Be sure the power cord has been unplugged from the wall outlet.

## [1] Removing and Reinstalling the Rear Cover

### a. Procedure

- (1) Remove the five set screws holding the rear cover in place, and take off the cover.

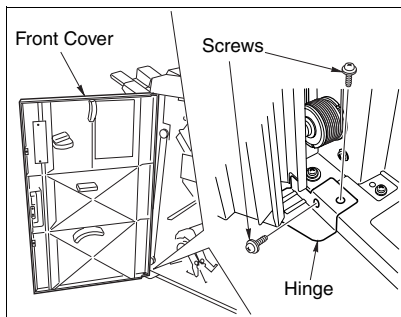


- (2) Reinstall the rear cover in the opposite sequence to removal.

## [2] Removing and Reinstalling the Front Cover

### a. Procedure

- (1) Open the front cover.
- (2) Remove the two set screws holding the bottom hinge in place, and take off the front cover.

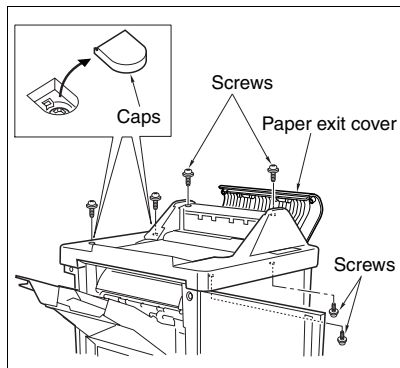


- (3) Reinstall the front cover in the opposite sequence to removal.

## [3] Removing and Reinstalling the Top Cover

### a. Procedure

- (1) Remove the sub-tray.
- (2) Open the paper exit cover.
- (3) Remove the two caps.
- (4) Open the front cover.
- (5) Remove the six set screws holding the top cover in place, and take off the cover.

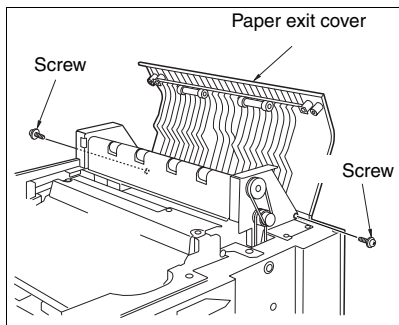


- (6) Reinstall the top cover in the opposite sequence to removal.

#### [4] Removing and Reinstalling the Paper Exit Cover

##### a. Procedure

- (1) Remove the top cover.
- (2) Remove the two set screws holding the paper exit cover in place, and take off the paper exit cover.



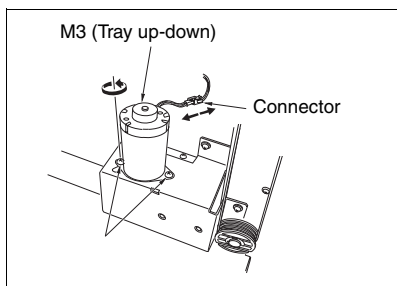
- (3) Reinstall the paper exit cover in the opposite sequence to removal.

#### [5] Removing and Reinstalling the Main Tray

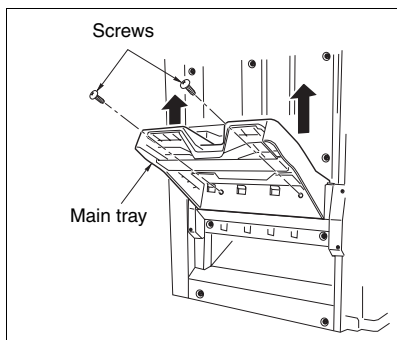
##### a. Procedure

- (1) Remove the rear cover.
- (2) Detach the connector and remove the two set screws holding motor M3 (tray up-down) in place. Remove M3.

**Note:** Support the main tray with your hand when removing M3.



- (3) Remove the two set screws holding the main tray in place, and lift the main tray up and off.



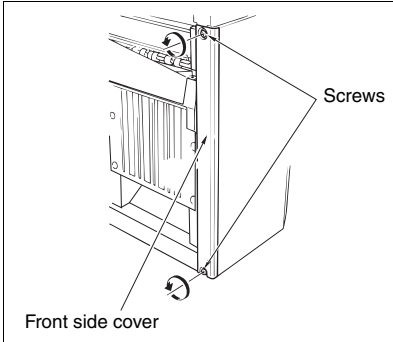
- (4) Reinstall the main tray in the opposite sequence to removal.



## [6] Removing and Reattaching the Front Side Cover

### a. Procedure

- (1) Remove the two set screws holding the front side cover in place, and take off the front side cover.



- (2) Reinstall the front side cover in the opposite sequence to removal.

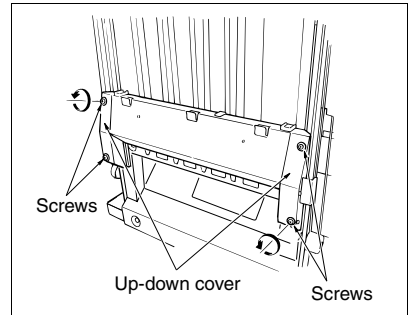
## [7] Removing and Reinstalling the Paper Exit Stopper Plate

### a. Procedure

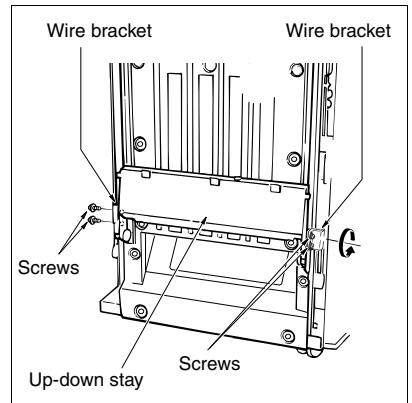
- (1) Remove the following parts.

- Rear cover
- Main tray
- Booklet tray
- Front cover
- Front side cover

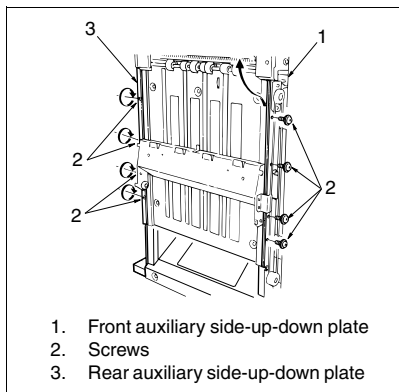
- (2) Remove the four set screws holding the left and right up-down covers in place, and remove these two covers.



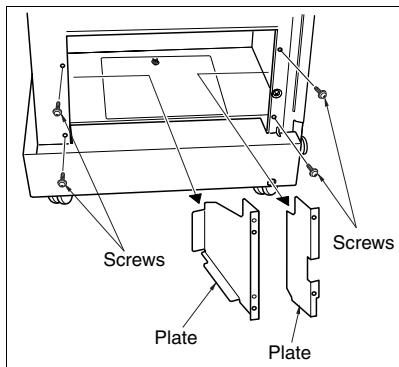
- (3) Remove the two set screws holding the wire bracket in place, and release the lock of the up-down stay.



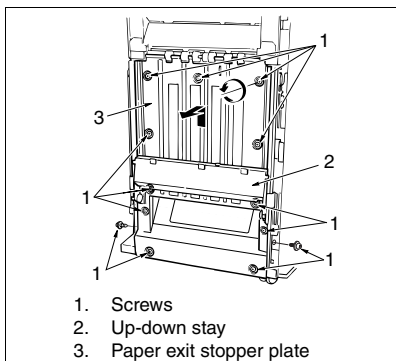
- (4) Remove eight set screws and take off the front and rear auxiliary side-up-down plates.



- (5) Remove four set screws and detach the two plates (front and back plates) at the booklet exit.

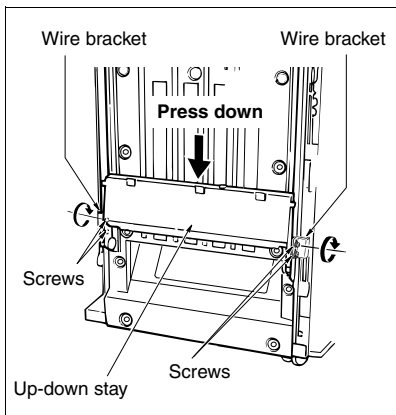


- (6) Remove thirteen more set screws, and take off the paper exit stopper plate.



- (7) Remove the up-down stay. (See "Removing and Reinstalling the Up-Down Stay".)  
(8) Reinstall the stopper in the opposite sequence to removal. But note the following caution.

**Note:** Be sure to press down on the up-down stay while tightening the four screws for the wire brackets.



# PAPER FEED UNIT



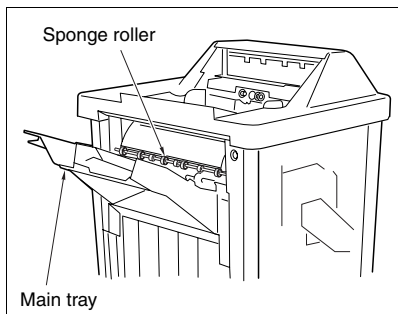
## Caution:

When disassembling and reassembling the machine, Be sure the power cord has been unplugged from the wall outlet.

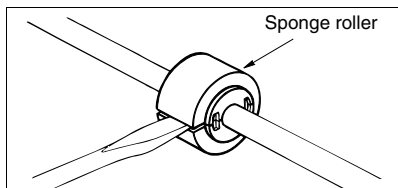
## [1] Replacing a Paper Exit Roller (Sponge Roller)

### a. Procedure

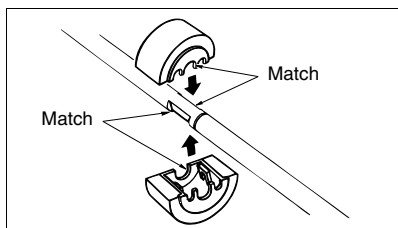
- (1) Run the copier in mode 47 (code 75-06) to lower the main tray.



- (2) Insert the end of a screwdriver into the slot in the sponge roller, and twist the screwdriver to pry the roller off.



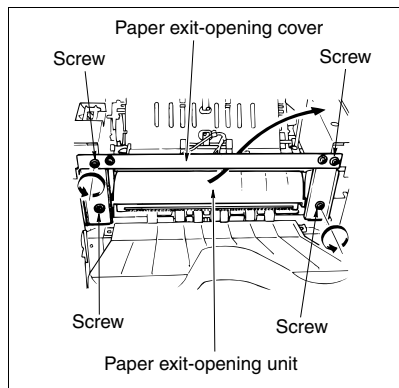
- (3) Take the two halves of the new sponge roller and align their indentations with the indentations on the roller shaft.
- (4) Press the two halves of the roller together until the click into place.



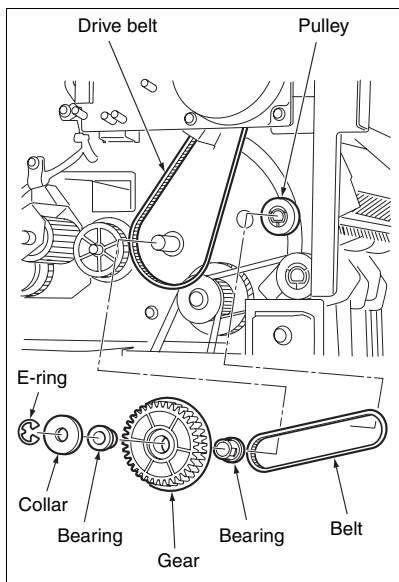
## [2] Removing and Reinstalling the Paper Exit Unit/Shift Unit

### a. Procedure

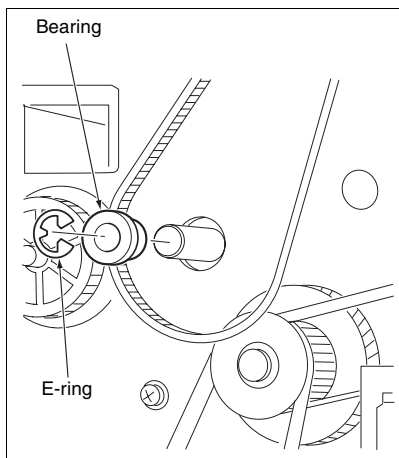
- (1) Remove the following parts:
  - Rear cover
  - Top cover
  - Front side cover
  - Cover Inserter C (when installing Cover Inserter C)
- (2) Remove the four screws and detach the paper exit cover.



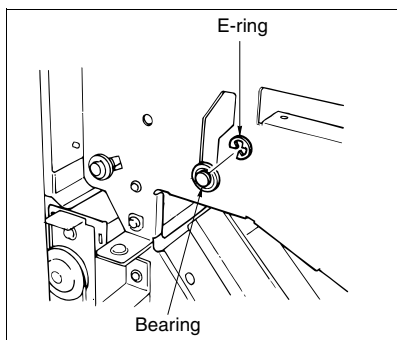
- (3) Remove the pulley and the belt.
- (4) Remove the E-ring, and detach the collar, drive belt, two bearings, and gear.



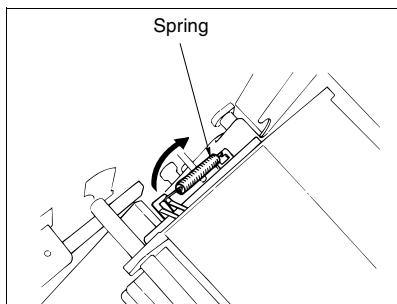
- (5) Detach the E-ring and the bearing.



- (6) Open the front cover, and detach the front E-ring and the bearing.



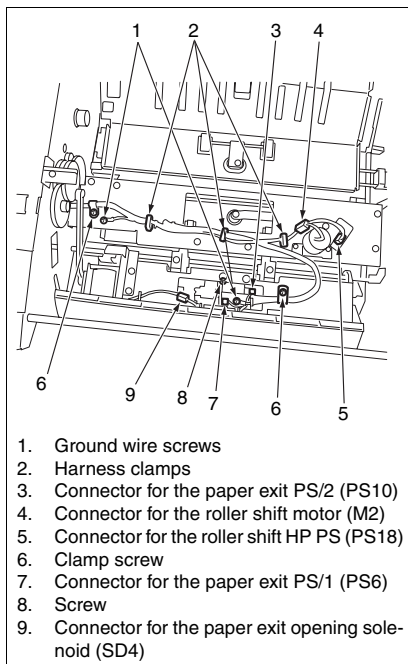
- (7) Remove the spring.



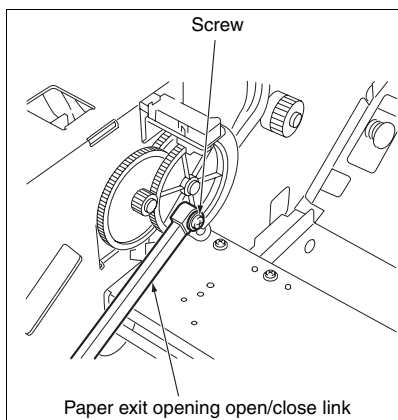
- (8) Remove two clamp screws and two ground wire screws.
- (9) Remove the connectors of roller shift motor (M2), roller shift PS (PS18), paper exit opening SD (SD4), and paper exit PS/1 (PS6).
- (10) Remove one screw and detach the paper exit PS/2 (PS10) from the unit, then remove the connector.

**Note:** When detaching the paper exit PS/2 (PS10), beware not to add too much stress onto the actuator located under the paper exit PS/2.

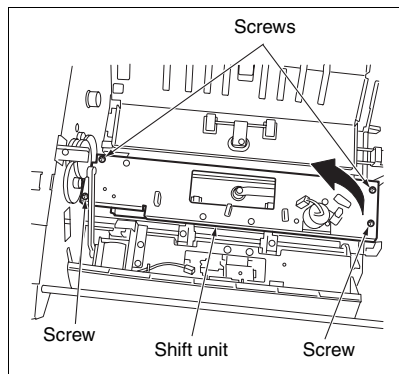
(11) Remove harnesses from three clamps.



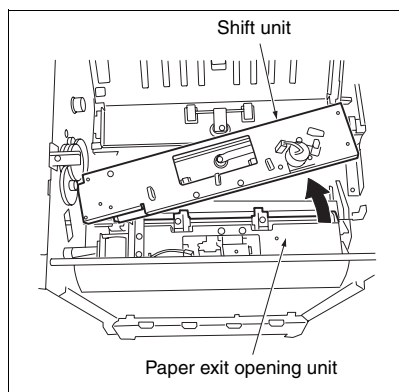
(12) Remove one screw and release the paper exit opening open/close link.



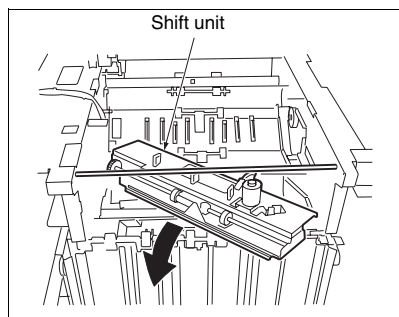
(13) Remove four screws and tilt the shift unit.



(14) Lift and detach the paper exit opening unit.



(15) Remove the shift unit from the paper exit side.

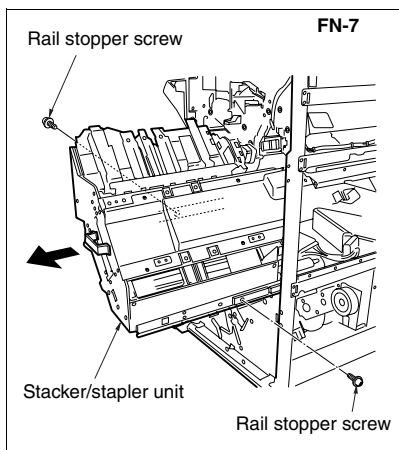
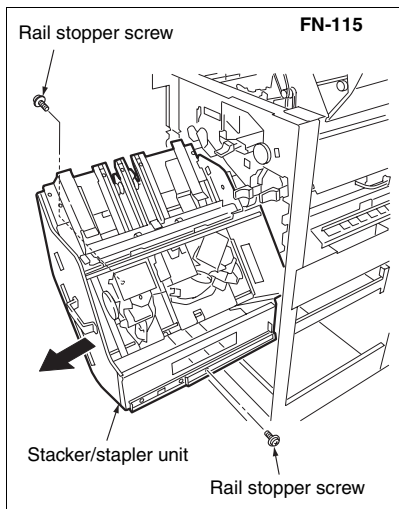


(16) Reinstall the parts by following the removal steps in reverse.

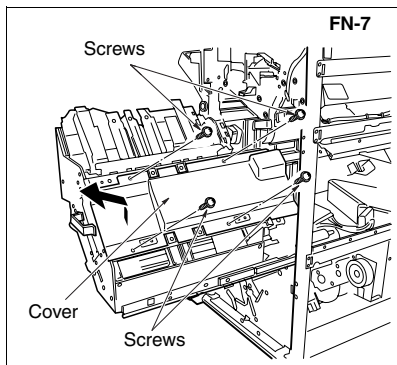
### [3] Removing and Reinstalling the Stacker/Stapler Unit

#### a. Procedure

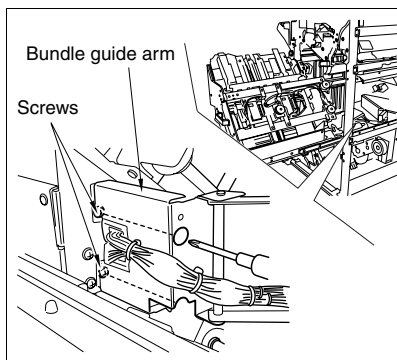
- (1) Open the front cover and pull the stacker/stapler unit part of the way out.
- (2) Remove the two rail-stopper set screws. Then pull the stacker/stapler unit all of the way out.



- (3) Remove four set screws holding the cover in place, and remove the cover. (FN-7 only)

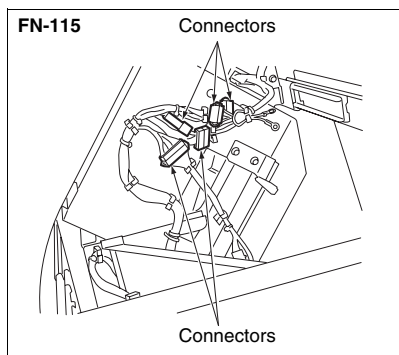


- (4) Remove the two set screws holding the bundle guide arm to the stacker/stapler unit.



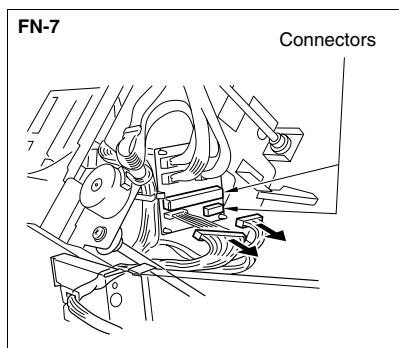
- (5) For FN-115

Remove five relay connectors (FN-115 only).

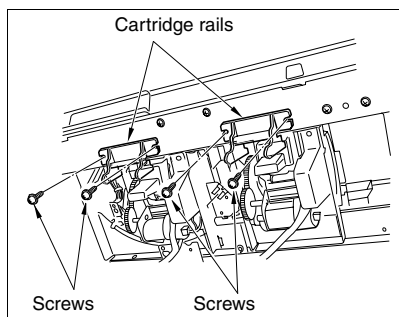


- (5) For FN-7

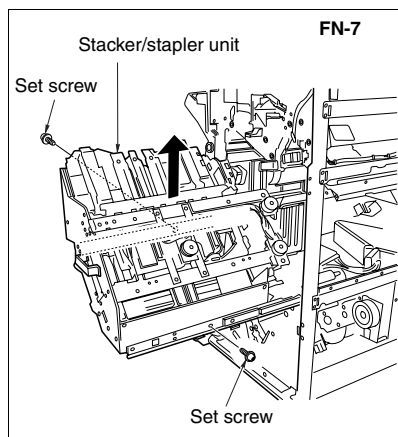
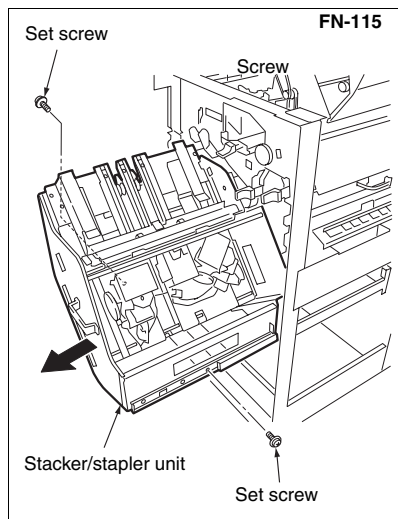
Detach the two connectors from the connector board at the rear of the stacker/stapler unit. (FN-7 only)



- (6) Remove two screws from each side of the cartridge rails to remove the cartridge rails.



- (7) Remove the final two set screws holding the stacker/stapler unit in place. Remove the stacker/stapler unit.



- (8) Reinstall the stacker/stapler unit in the opposite sequence to removal.

# STAPLER UNIT



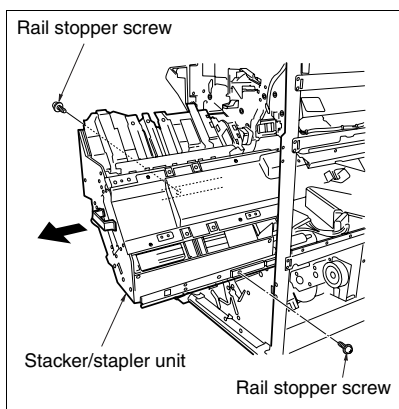
## Caution:

When disassembling and reassembling the machine, Be sure the power cord has been unplugged from the wall outlet.

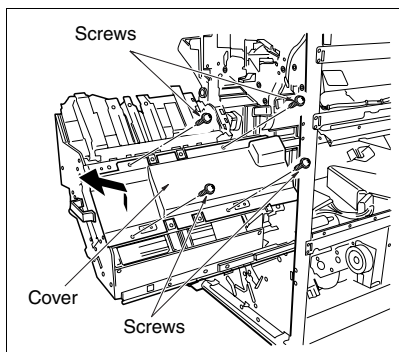
### [1] Exchanging the clincher (FN-7 only)

#### a. Procedure

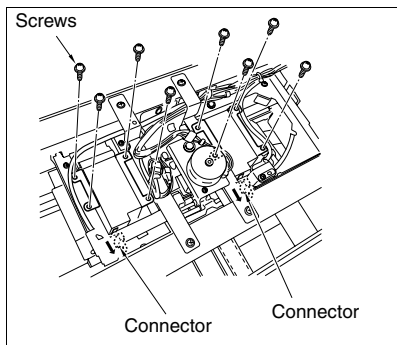
- (1) Remove the front cover.
- (2) Pull out the stacker/stapler unit by pulling on the handle.
- (3) Remove the two rail-stopper set screws.



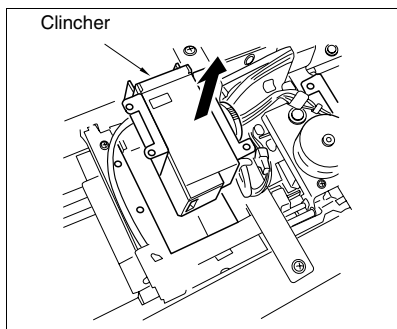
- (4) Remove four set screws holding the cover in place, and remove the cover.



- (5) Detach the connector from the clincher you wish to replace, and remove the four set screws holding the clincher in place.



- (6) Lift the clincher up and out.



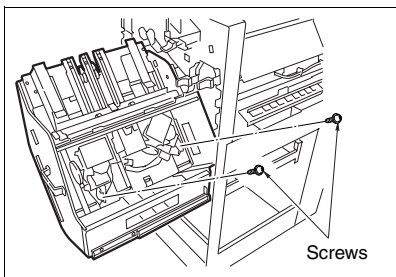
- (7) To install the new clincher, carry out the above sequence in reverse.
- (8) Adjust the stapler vertical positioning.



## [2] Removing and Reinstalling a Stapler (For FN-115)

### a. Procedure

- (1) Open the front cover.
- (2) Pull out the stacker/stapler unit by pulling on the handle.
- (3) Remove the cartridge from the stapler.
- (4) Detach the two connector (if stapler-R, CN 201 and CN 202; if stapler-F, CN 203 and CN 204).
- (5) Remove the set screw holding the stapler unit in place, and remove the stapler unit.

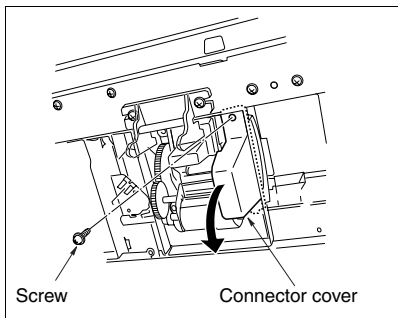


- (6) Reinstall in the opposite sequence to removal.

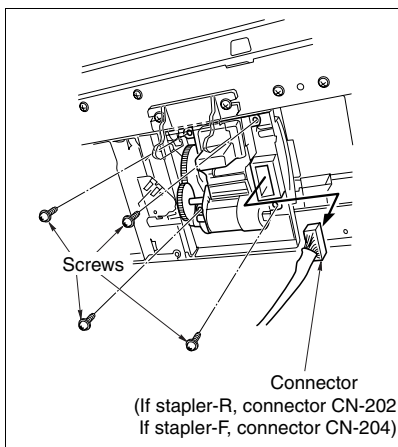
### [3] Removing and Reinstalling a Stapler (For FN-7)

#### a. Procedure

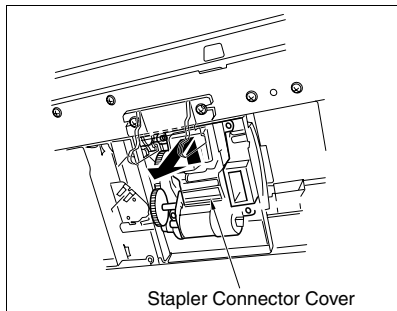
- (1) Open the front cover.
- (2) Pull out the stacker/stapler unit by pulling on the handle.
- (3) Remove the cartridge from the stapler.
- (4) Remove the set screw holding the connector cover in place, and remove the connector cover.



- (5) Detach the stapler connector (if stapler-R, CN-202; if stapler-F, CN-204), and remove the 4 set screws holding the stapler in place.



- (6) Lift the stapler slightly and remove it.



- (7) Reinstall in the opposite sequence to removal.
- (8) Adjust the stapler vertical positioning.

# MAIN TRAY SECTION



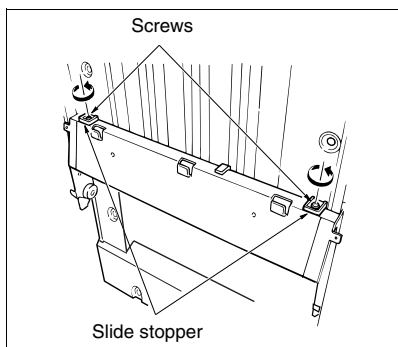
## Caution:

When disassembling and reassembling the machine, Be sure the power cord has been unplugged from the wall outlet.

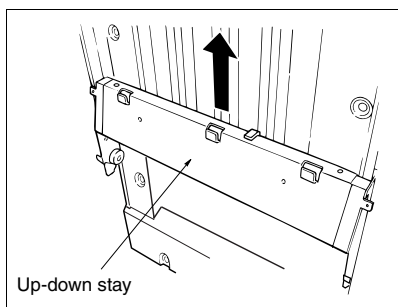
## [1] Removing and Reinstalling the Up-Down Stay

### a. Procedure

- (1) Remove the following parts.
  - Rear cover
  - Front cover
  - Front side cover
  - Main tray
- (2) With the up-down stay and exit-stopper plate in contact, remove the exit-stopper plate. (See "Removing and Reinstalling the Exit Stopper Plate.")
- (3) Remove the two slide stoppers (removing one screw at each stopper).



- (4) Slide the up-down stay upward to remove it.



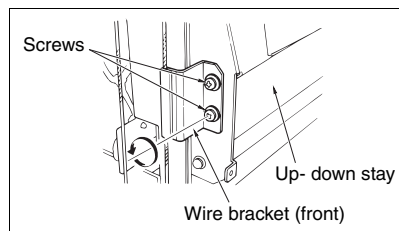
- (5) Reinstall the stay in the opposite sequence to removal.

## [2] Exchanging the Up-Down Wire

**Caution:** The following procedure shows replacement of the rear wire. Removal of the front wire is similar, but relationships are inverted (mirror image).

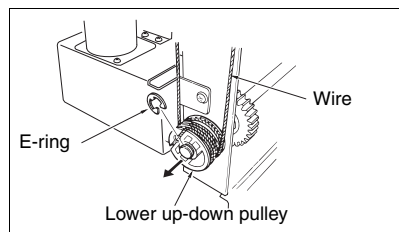
### a. Procedure

- (1) Remove the following parts.
  - Rear cover
  - Front cover
  - Front side cover
  - Main tray
- (2) Remove the four wire-bracket set screws (two screws at the front wire bracket and two screws at the rear wire bracket), and take off the up-down stay.

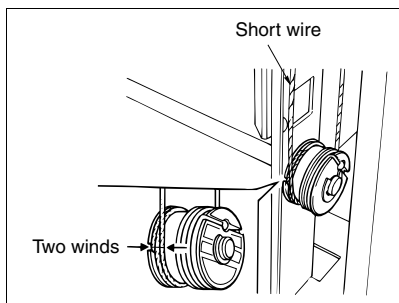


- (3) Remove the E-ring and the lower up-down pulley, and remove the wire you are replacing.

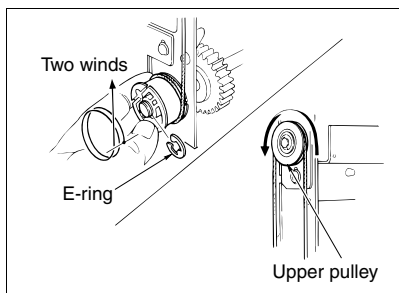
**Caution:** There is a pin located in the inside of the pulley. Take care to avoid losing the pin when removing the pulley.



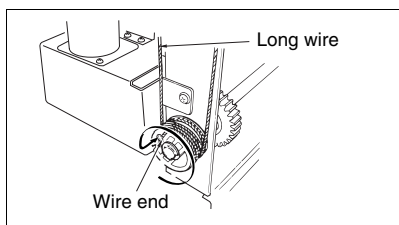
- (4) Move the up-down stay as necessary so that front inner wire (the shorter side from the wire bracket) is wound twice around the pulley.



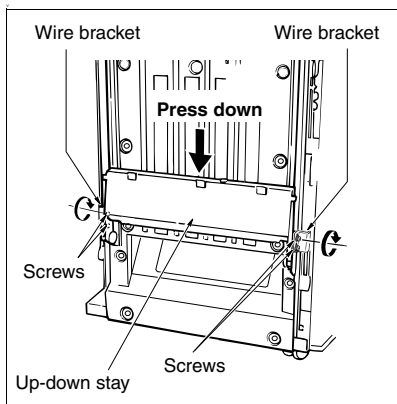
- (5) Wind the shorter side of the rear wire (relative to the wire bracket) twice around the up-down pulley.  
 (6) Adjust the wire-bracket position so that it is even with the front wire bracket. Insert the pin, and then fasten the pulley into place with the E-ring.  
 (7) Fit the wire onto the upper pulley.



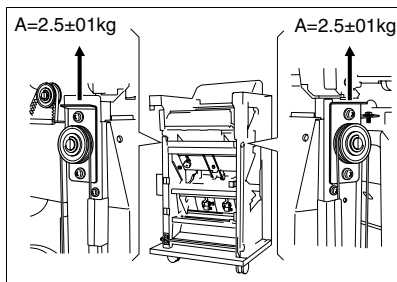
- (8) Wind the opposite side of the wire (the long side) from the inside of the up-down pulley toward the outside, and fix the wire end in place.



- (9) Press down on the up-down stay and refasten the four wire-bracket set screws.



- (10) Loosen the two belt-tensioner set screws.  
 (11) Using a tension gauge or spring balance, pull the belt tensioner so that tension A is at the value indicated below. Maintain this tension while retightening the screws.  
 Spec value for tension:  $A = 2.5 \pm 0.1 \text{ kg}$



# FOLDING UNIT (FN-7 ONLY)



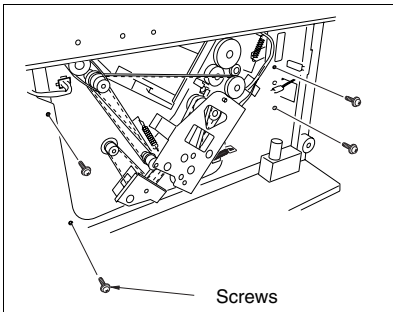
## Caution:

When disassembling and reassembling the machine, Be sure the power cord has been unplugged from the wall outlet.

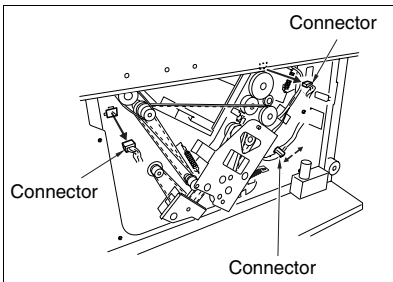
## [1] Removing and Reinstalling the Folding Unit

### a. Procedure

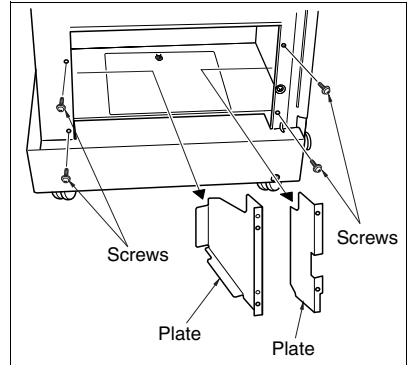
- (1) Remove the plate on the fold exit side.
- (2) Remove the rear cover.
- (3) Remove four set screws at the rear, as illustrated below.



- (4) Detach three connectors.



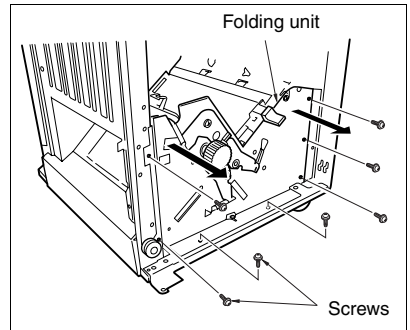
- (5) Remove four set screws and detach the two plates (front and back plates) at the booklet exit.



- (6) Remove seven set screws at the front. Pull stacker unit out slightly.
- (7) Pull the folding unit out and off.

**Note1:** Be careful to keep the unit clear of the up/down wires when removing it.

**Note2:** Be careful to keep the harness from catching on the FNS body.



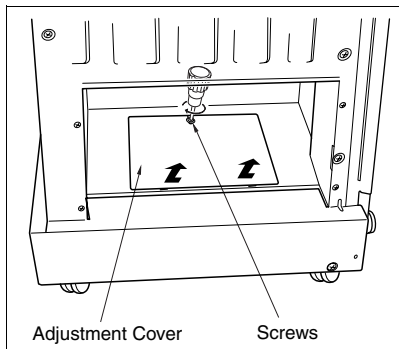
- (8) Reinstall the unit in the opposite sequence to removal.

**Note:** When reinstalling the folding unit, take care to keep the connectors and harness from getting caught between the unit and the FNS body.

## [2] Removing and Reinstalling the Adjustment Cover

### a. Procedure

- (1) Use a stubby screwdriver to remove the set screw holding the cover in place, and take the cover off.



- (2) Reinstall the cover in the opposite sequence to removal.

# PAPER FEED UNIT

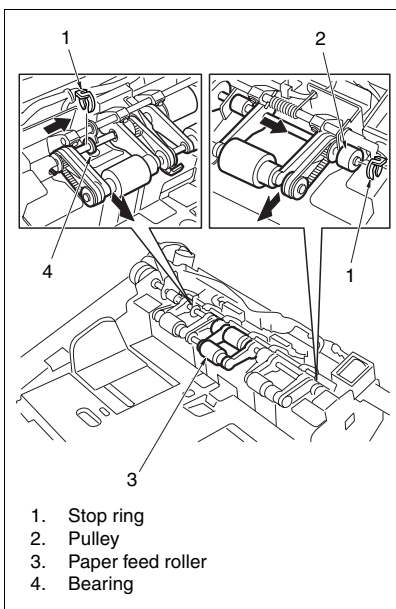
**⚠ Caution:**

When disassembling and reassembling the machine, Be sure the power cord has been unplugged from the wall outlet.

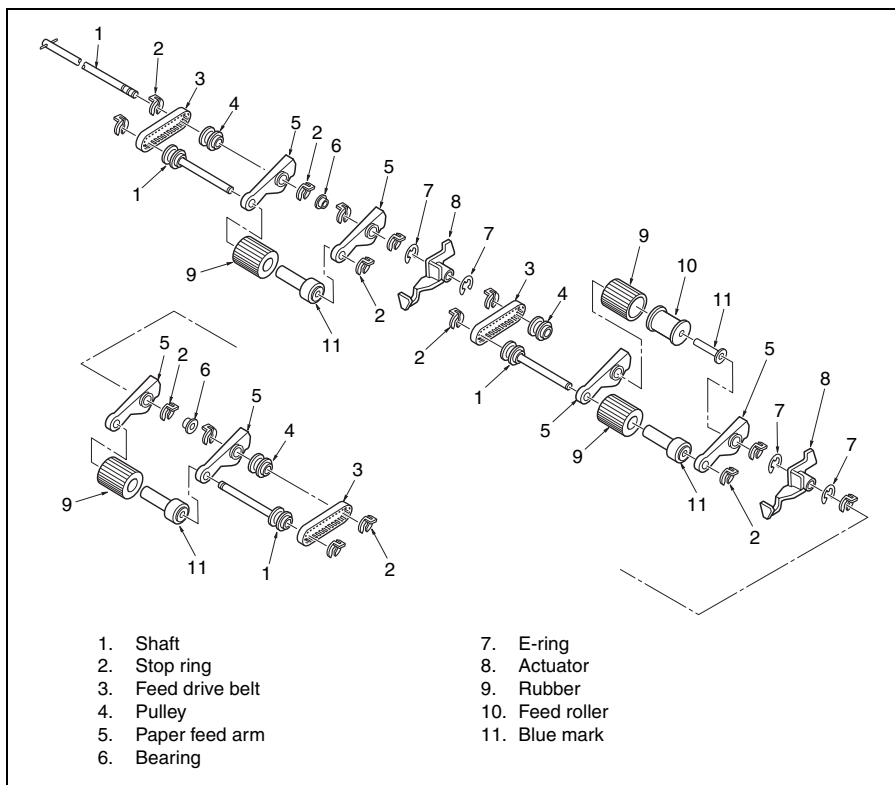
## [1] Replacing a Paper-Feed Roller and Feed Roller

### a. Procedure

- (1) Remove the cover.
- (2) Remove the two stop rings, then shift the bearing and pulley outward, and remove the feed roller unit.



- (3) Pull out eighteen stop rings, the bearing, the two actuators and four shaft of the feed-roller unit then remove each roller.



- (4) Re-install the paper-feed roller and feed roller in the opposite sequence to removal.

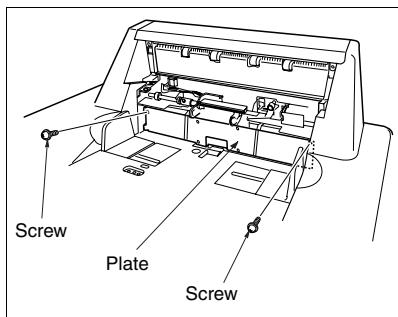
**Note:** Ensure that the mounting direction of the rubber is correct.



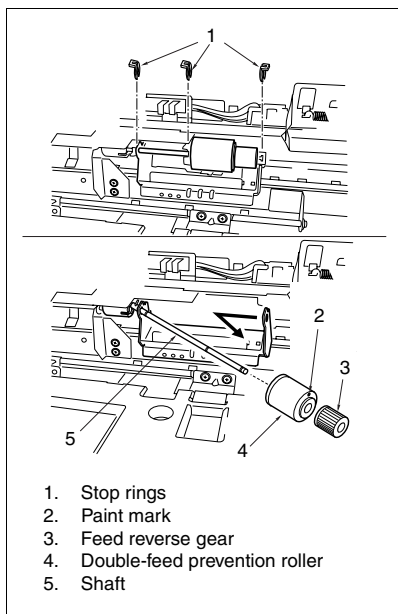
## [2] Replacing the Rubber, Double-Feed Prevention Roller

### a. Procedure

- (1) Remove the cover.
- (2) Remove the feed-roller unit. Refer to the previous procedure for instructions on removing the unit.
- (3) Remove the two set screws, Then remove the plate.



- (4) Remove the 3 stop rings, then pull out the shaft, and remove the double-feed-prevention roller together with the feed-reverse gear.



- (5) Remove the rubber from the double-feed-prevention roller.
- (6) Re-install the removed parts in the reverse sequence to removal.

**Note:** Ensure that the mounting direction of the rubber is correct.



# PAPER FEED UNIT

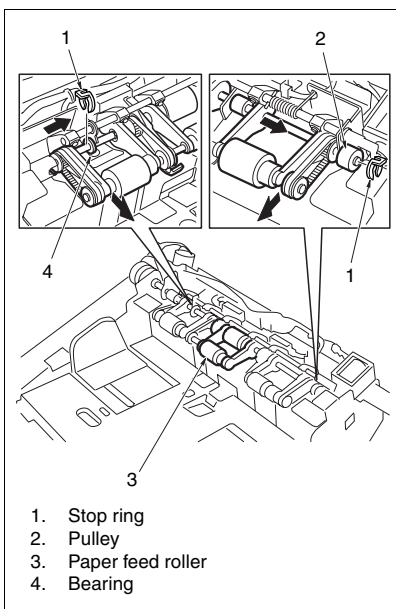
**⚠ Caution:**

When disassembling and reassembling the machine, Be sure the power cord has been unplugged from the wall outlet.

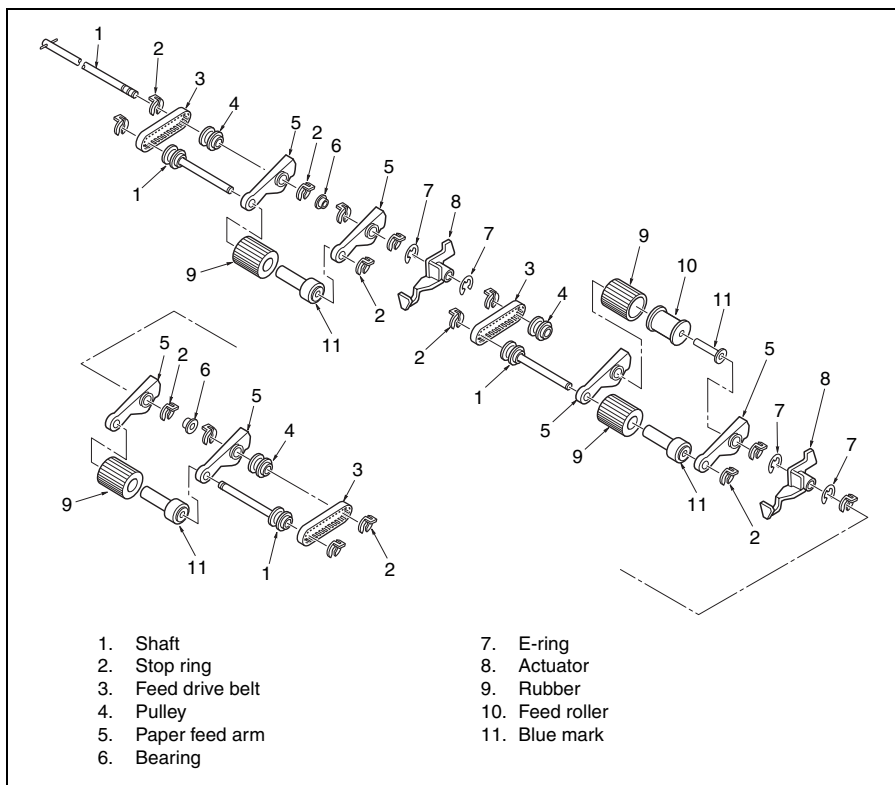
## [1] Replacing a Paper-Feed Roller and Feed Roller

### a. Procedure

- (1) Remove the cover.
- (2) Remove the two stop rings, then shift the bearing and pulley outward, and remove the feed roller unit.



- (3) Pull out eighteen stop rings, the bearing, the two actuators and four shaft of the feed-roller unit then remove each roller.



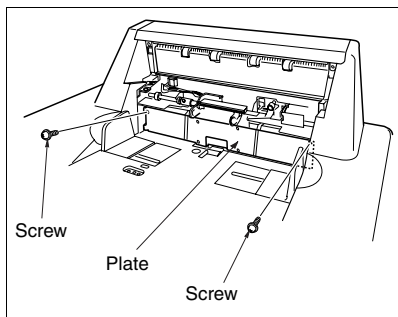
- (4) Re-install the paper-feed roller and feed roller in the opposite sequence to removal.

**Note:** Ensure that the mounting direction of the rubber is correct.

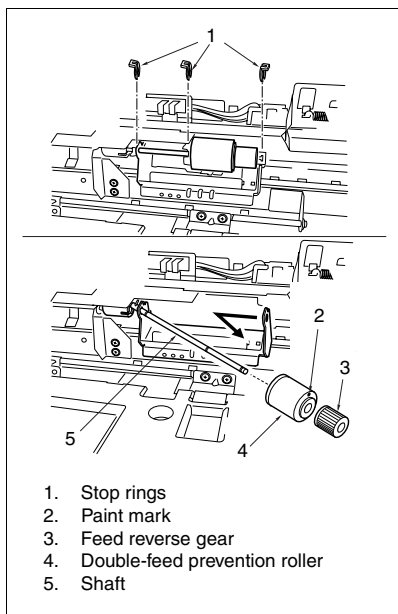
## [2] Replacing the Rubber, Double-Feed Prevention Roller

### a. Procedure

- (1) Remove the cover.
- (2) Remove the feed-roller unit. Refer to the previous procedure for instructions on removing the unit.
- (3) Remove the two set screws, Then remove the plate.



- (4) Remove the 3 stop rings, then pull out the shaft, and remove the double-feed-prevention roller together with the feed-reverse gear.



- (5) Remove the rubber from the double-feed-prevention roller.
- (6) Re-install the removed parts in the reverse sequence to removal.

**Note:** Ensure that the mounting direction of the rubber is correct.



# EXTERNAL SECTION



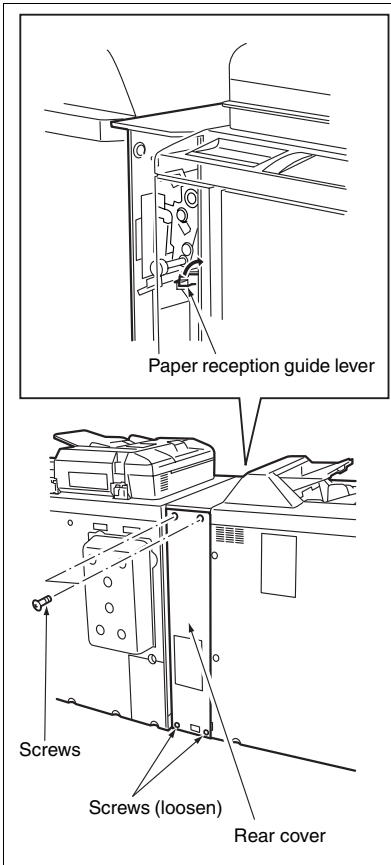
## Caution:

When disassembling and reassembling the machine, Be sure the power cord has been unplugged from the wall outlet.

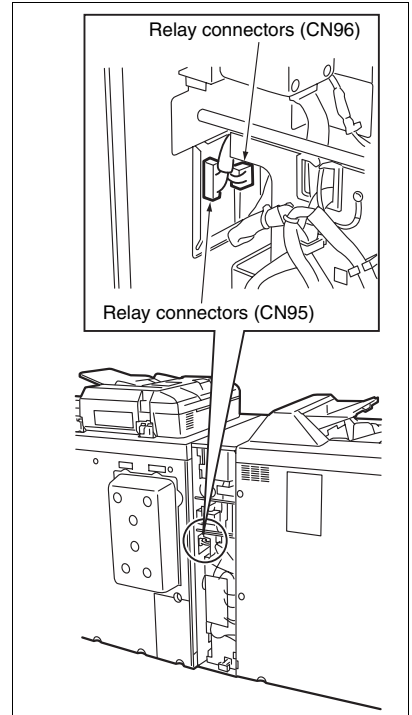
### [1] Removing the PU (Puncher)

#### a. Procedure

- (1) Loosen the two screws in the lower part of the rear cover of the PU, then remove the two screws in the upper part to remove the rear cover.
- (2) Open the front door of the FNS and raise the paper reception guide lever of the PU to retract the paper reception guide in the PU.



- (3) Remove the three screws securing the PU to the main body, draw out the PU, and remove the two relay connectors (CN95 and CN96) of the PU from the main body.



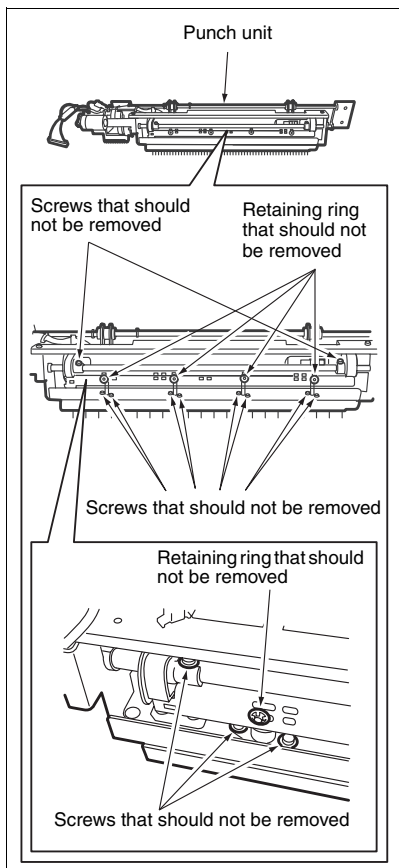
- (4) Remove the two screws (front side) fixing the PU and the FNS, and remove two screws (rear side) fixing the positioning plate.
- (5) Pull the lever of the FNS installation stay to release the fixing the PU and the FNS, and detach the PU by lifting.
- (6) Remove the two relay connectors of the FNS from the PU.
- (7) Reinstall the above parts following the removal steps in reverse.

# PUNCH SECTION

## [1] Replacing the Punch unit

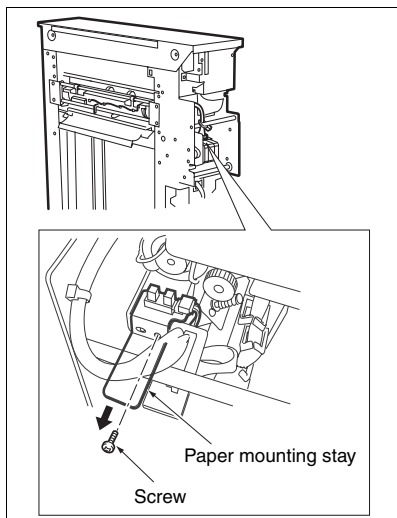
**Note:** Be sure to unplug the power cords of the main body and this machine from the wall outlet.

**Note:** The following screws should not be removed. If you do, punching cannot be done as designed.

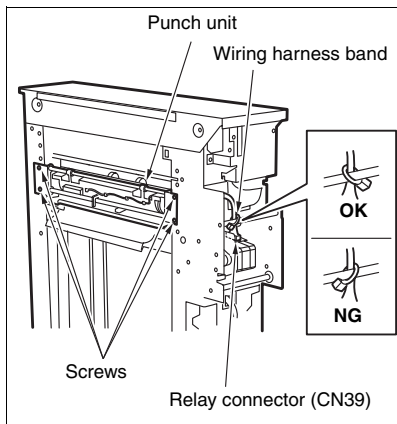


### a. Procedure

- (1) Remove the sensor mounting stay by removing a screw.



- (2) Cut the wiring harness band and disconnect the relay connector (CN39) upward.
- (3) Remove the punch unit by removing four screws.



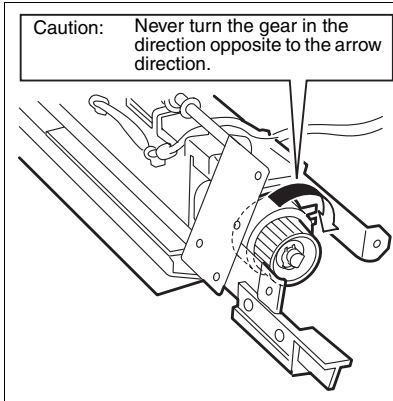
- (4) Reinstall the above parts following the removal steps in reverse.

**Note:** When reinstalling, harness the band in same direction. (see the figure is step (3))



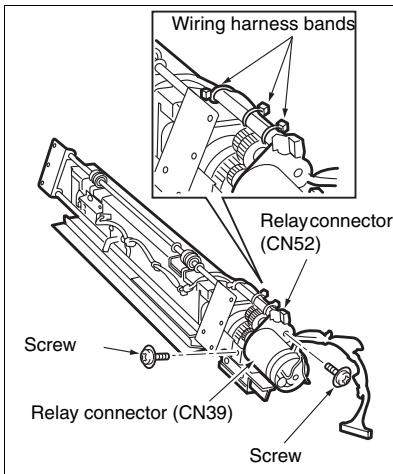
## [2] Replacing the Punch Clutch (MC1)

**Note:** The punch unit gear rotates only in the direction of the arrow.  
Never turn it in the direction opposite to the arrow direction. If you do so, the MC1 (punch clutch) will break.

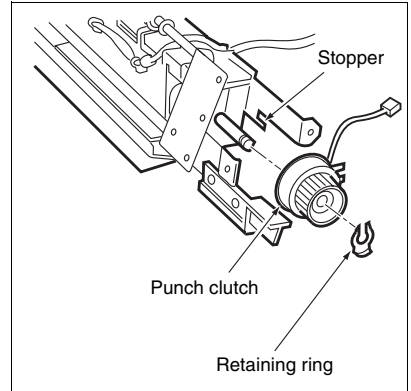


### a. Procedure

- (1) Remove the punch unit. See "[1] Replacing the Punch unit."
- (2) Remove the punch motor unit by removing two screws.
- (3) Cut the three wiring harness bands and disconnect the punch clutch relay connector (CN52).



- (4) Remove the punch clutch by removing the retaining ring.



- (5) Reinstall the above parts following the removal steps in reverse.

**Caution1:** Fasten all the three wiring harness bands with the tightening part oriented as shown in the illustration. See the figure in step (3).

**Caution2:** When installing the punch motor unit, push the punch motor gear against the punch clutch gear. After installing the punch motor unit, check for backlash.

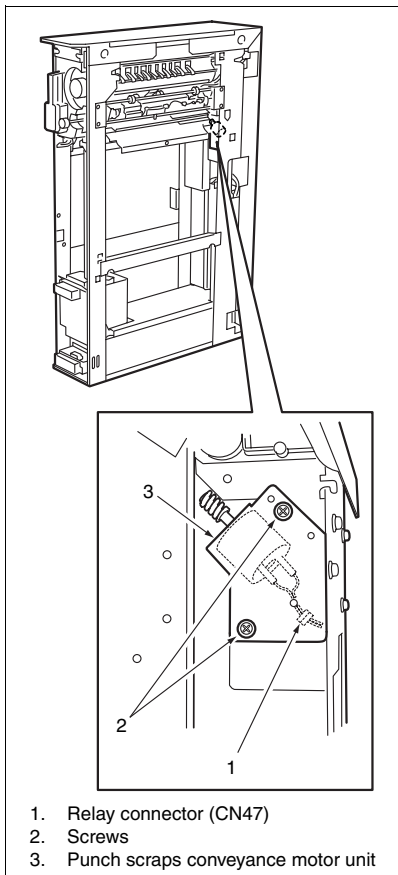
**Caution3:** When installing the punch clutch, take care of the position of the stopper.

# PUNCH SCRAPS CONVEYANCE SECTION

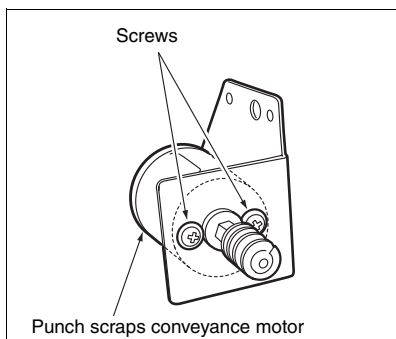
## [1] Replacing the Punch Scraps Conveyance motor (M7)

### a. Procedure

- (1) Disconnect the relay connector (CN47)
- (2) Remove the punch scraps conveyance motor unit by removing the two screw.



- (3) Remove the punch scraps conveyance motor from the bracket by removing the two screws.



- (4) Apply grease (Plus guard No.2) to the worm gear of the new punch scraps conveyance worm gear.
- (5) Reinstall the above parts following the removal steps in reverse.

**Caution:** When installing the M7 (with a bracket), provide backlash. Installing the M7 too closely to the right end will reduce backlash to zero.

# EXTERNAL SECTION



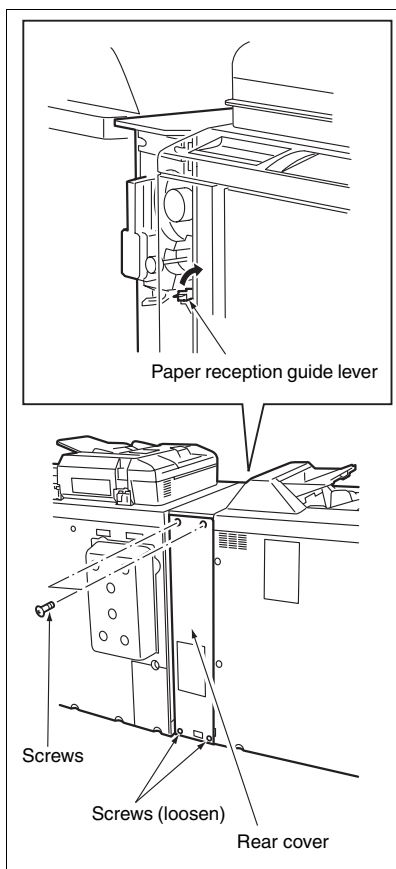
## Caution:

When disassembling and reassembling the machine, Be sure the power cord has been unplugged from the wall outlet.

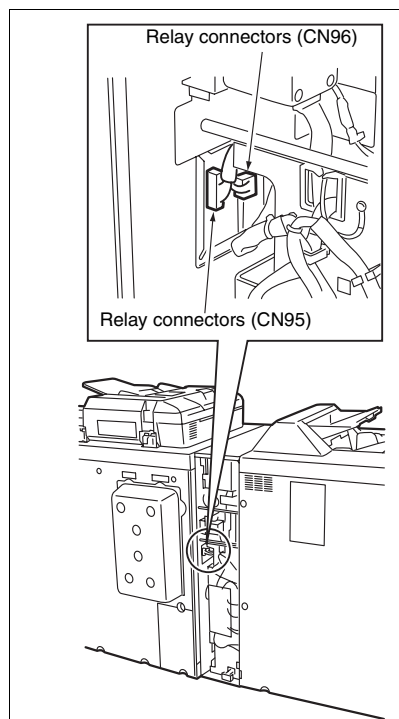
## [1] Removing the PZ

### a. Procedure

- (1) Loosen the two screws in the lower part of the rear cover of the PZ, then remove the two screws in the upper part to remove the rear cover.
- (2) Open the front door of the FNS and raise the paper reception guide lever of the PZ to retract the paper reception guide in the PZ.



- (3) Remove the three screws securing the PZ to the main body, draw out the PZ, and remove the two relay connectors (CN95 and CN96) of the PZ from the main body.



- (4) Remove the two screws (front side) fixing the PZ and the FNS, and remove two screws (rear side) fixing the positioning plate.
- (5) Pull the lever of the FNS installation stay to release the fixing the PZ and the FNS, and detach the PZ by lifting.
- (6) Remove the two relay connectors of the FNS from the PZ.
- (7) Reinstall the above parts following the removal steps in reverse.

# PUNCH SECTION

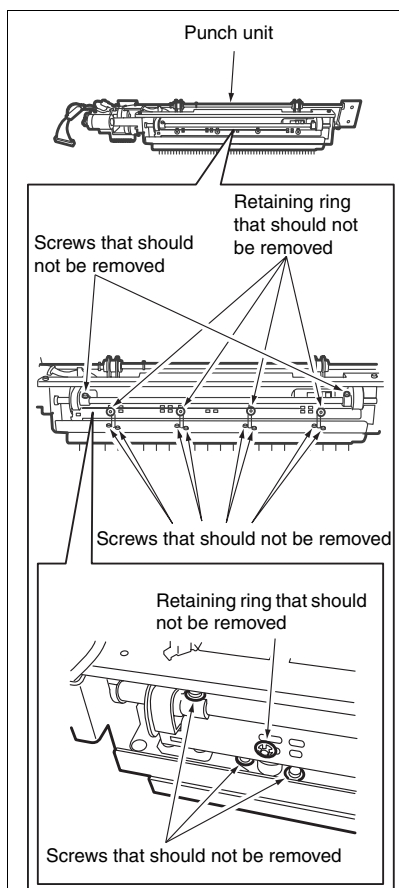


## Caution:

When disassembling and reassembling the machine, Be sure the power cord has been unplugged from the wall outlet.

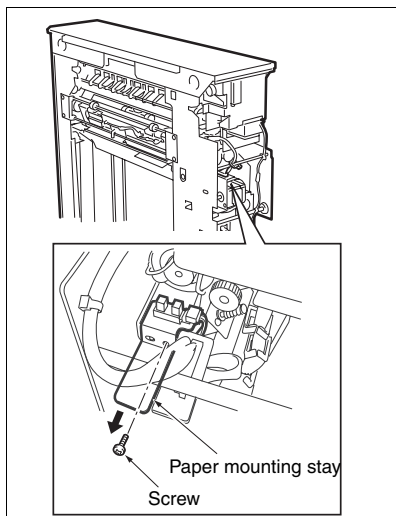
## [1] Replacing the Punch unit

**Note:** The following screws should not be removed. If you do, punching cannot be done as designed.

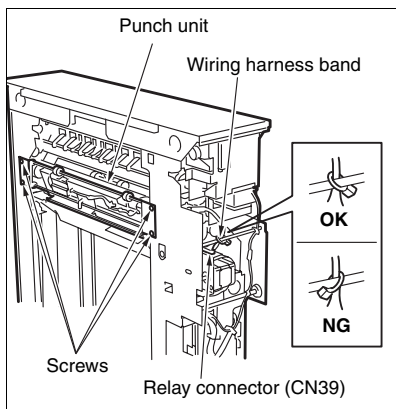


## a. Procedure

- (1) Remove the sensor mounting stay by removing a screw.



- (2) Cut the wiring harness band and disconnect the relay connector (CN39) upward.
- (3) Remove the punch unit by removing four screws.

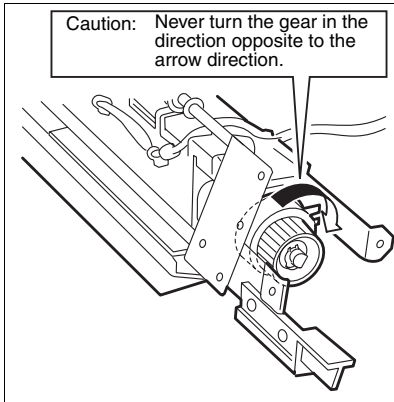


- (4) Reinstall the above parts following the removal steps in reverse.

**Note:** When reinstalling, harness the band in same direction. (see the figure is step (3))

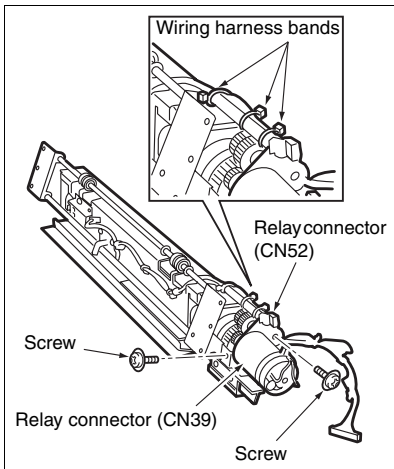
## [2] Replacing the Punch Clutch (MC1)

**Note:** The punch unit gear rotates only in the direction of the arrow.  
Never turn it in the direction opposite to the arrow direction. If you do so, the MC1 (punch clutch) will break.

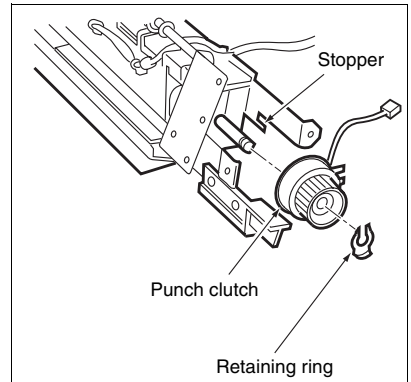


### a. Procedure

- (1) Remove the punch unit. See "[1] Replacing the Punch unit."
- (2) Remove the punch motor unit by removing two screws.
- (3) Cut the three wiring harness bands and disconnect the punch clutch relay connector (CN52).



- (4) Remove the punch clutch by removing the retaining ring.



- (5) Reinstall the above parts following the removal steps in reverse.

**Note1:** Fasten all the three wiring harness bands with the tightening part oriented as shown in the illustration. See the figure in step (3).

**Note2:** When installing the punch motor unit, push the punch motor gear against the punch clutch gear. After installing the punch motor unit, check for backlash.

**Note3:** When installing the punch clutch, take care of the position of the stopper.

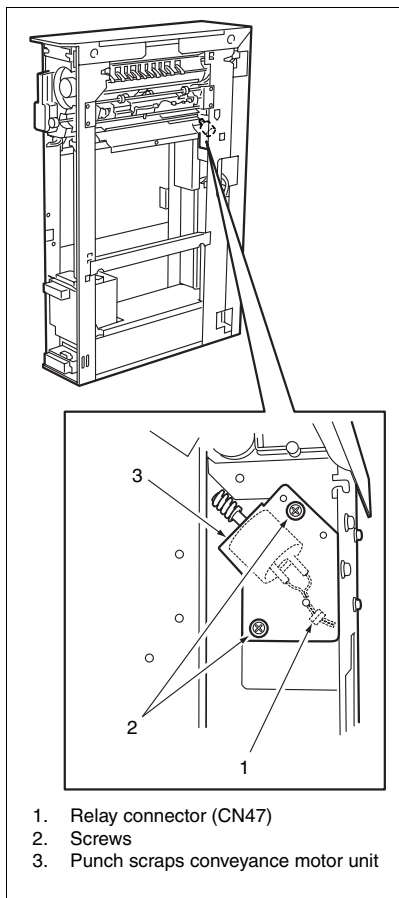
# PUNCH SCRAPS CONVEYANCE SECTION

## [1] Replacing the Punch Scraps Conveyance Motor (M7)

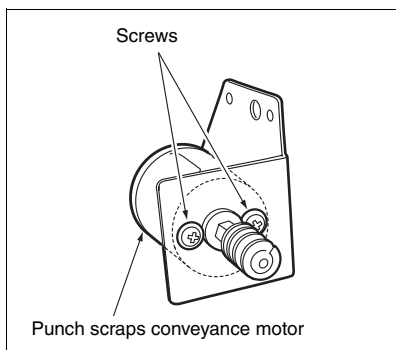
**Note:** Be sure to unplug the power cords of the main body and this machine from the wall outlet.

### a. Procedure

- (1) Disconnect the relay connector (CN47)
- (2) Remove the punch scraps conveyance motor unit by removing the two screw.



- (3) Remove the punch scraps conveyance motor from the bracket by removing the two screws.



- (4) Apply grease (Plus guard No.2) to the worm gear of the new punch scraps conveyance worm gear.
- (5) Reinstall the above parts following the removal steps in reverse.

**Note:** When installing the M7 (with a bracket), provide backlash. Installing the M7 too closely to the right end will reduce backlash to zero.

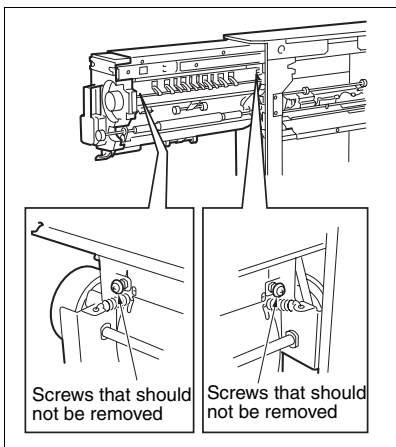
# Z-FOLDING SECTION

## [1] Removing and Installing the Z-fold-ing/Conveyance Unit

**Note:** Be sure to unplug the power cords of the main body and this machine from the wall outlet.

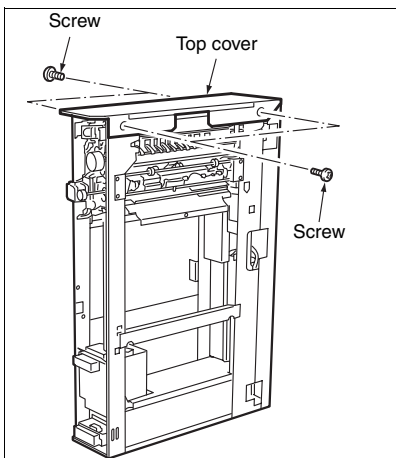
**Note1:** Take care of the z-folding/conveyance unit dropping since it is heavy.

**Note2:** The following screws should not be removed. If you do z-folding cannot be done as designed.



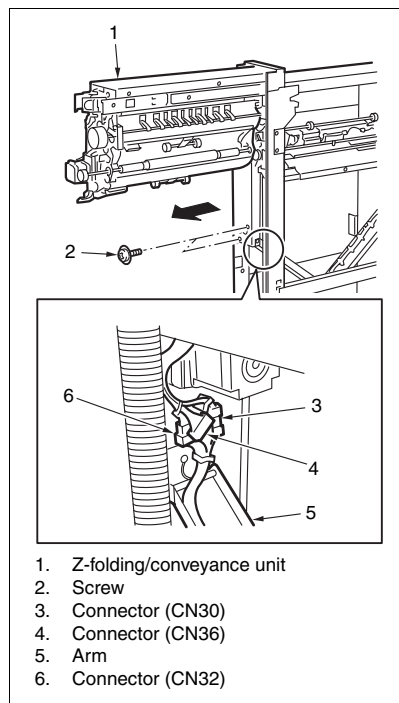
### a. Procedure

- (1) Remove the PZ from the main body and FNS.
- (2) Remove four screws to remove the top cover.



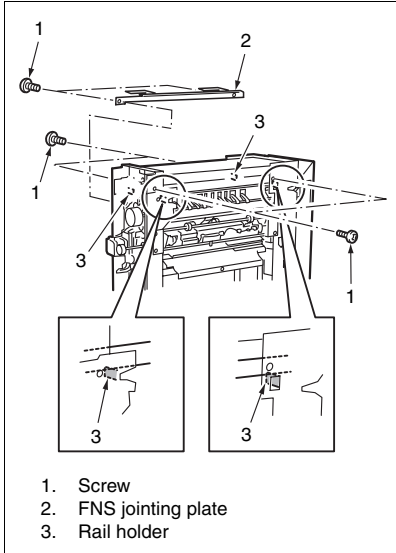
- (3) Pull out the z-folding/conveyance unit.
- (4) Disconnect three connectors (CN30, CN32, CN36) at the arm joint section.
- (5) Remove two screws to remove the arm.

**Note:** The arm should be held by the hand when removal, since it falls.



- (6) Return the z-folding/conveyance unit to the basis.

- (7) Remove two screws to remove the FNS jointing plate.
- (8) Remove four screws to remove the z-folding/conveyance unit with the rails pulling out to the front.



- (9) Install the above parts following the removal steps in reverse.

**Note:** Put the z-folding/conveyance unit on four rail holders certainly when installing. (For fall prevention)



# TRIMMER SECTION



## Caution:

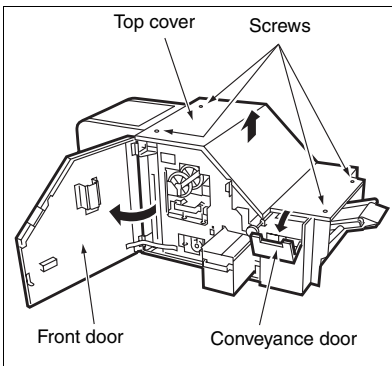
When disassembling and reassembling the machine, Be sure the power cord has been unplugged from the wall outlet.

## [1] Replacing the Upper and Lower Knives

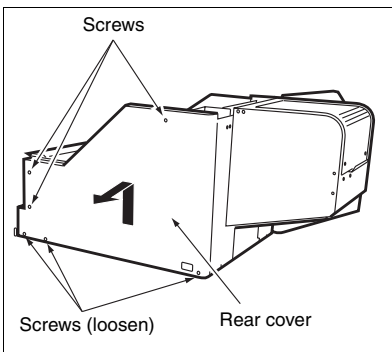
**Caution:** Trimming knives (upper and lower) are used in this machine. Be extremely careful in handling these knives.

### a. Procedure

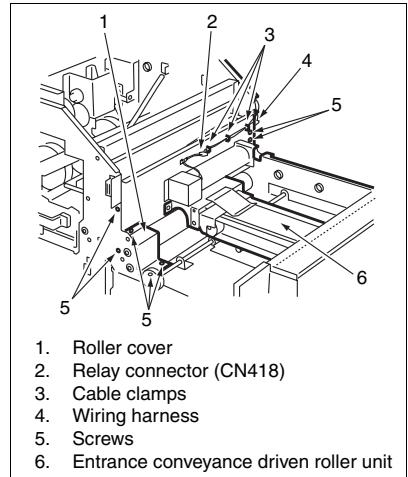
- (1) Open the front door and conveyance door.
- (2) Remove the four screws to detach the top cover



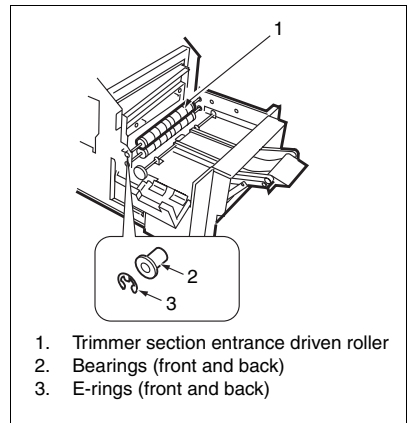
- (3) Remove the securing screw of cable clamp which holds the power cable, then unplug the power plug.
- (4) Loosen the three lower screws, then remove the three upper screws to detach the rear cover.



- (5) Remove the three screws to detach the roller cover.
- (6) Disconnect the relay connector (CN418) and release the wiring harness from cable clamps.
- (7) Remove the two screws at the front and the two screws at the back to remove the entrance conveyance roller unit.



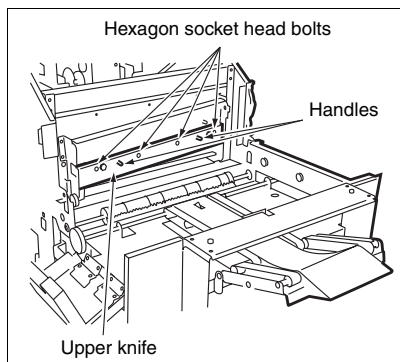
- (8) Remove the E-ring and bearing at the front and the E-ring and bearing at the back to remove the trimmer section entrance driven roller.



- (9) Remove the four hexagon socket head bolts to remove the upper knife.

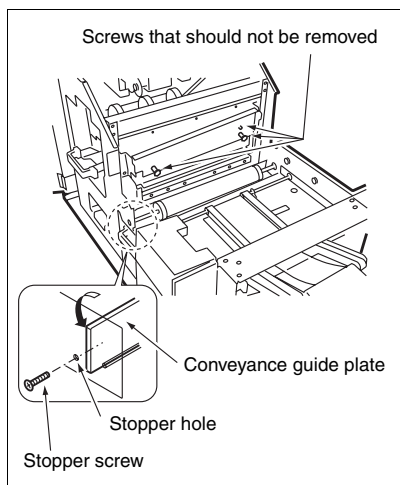
**Caution1:** Remove the upper knife holding the two handles.

**Caution2:** Take care not to drop the upper knife or chip the knife by hitting a solid component.



- (10) Turn down the conveyance guide plate. Then, insert a small shaft such as a screw (longer than M4 x 16) into the stopper hole to prevent the guide plate from returning to the original position.

**Caution:** Do not touch the three screws that should not be removed.

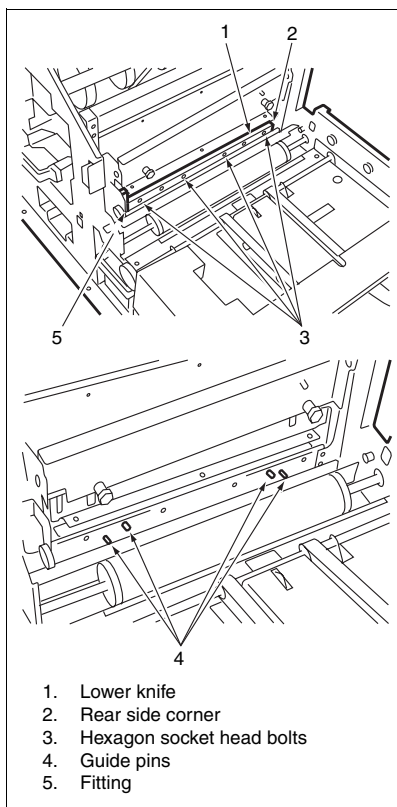


- (11) Remove the four hexagon socket head bolts to remove the lower knife.

**Caution1:** Remove the lower knife holding the fitting at the front and the corner at the back.

**Caution2:** Take care not to drop the lower knife or chip the knife by hitting a solid component.

**Caution3:** To install the lower knife, insert it with its holes aligned with the four guide pins.



- (12) Reinstall the above parts following the removal steps in reverse.