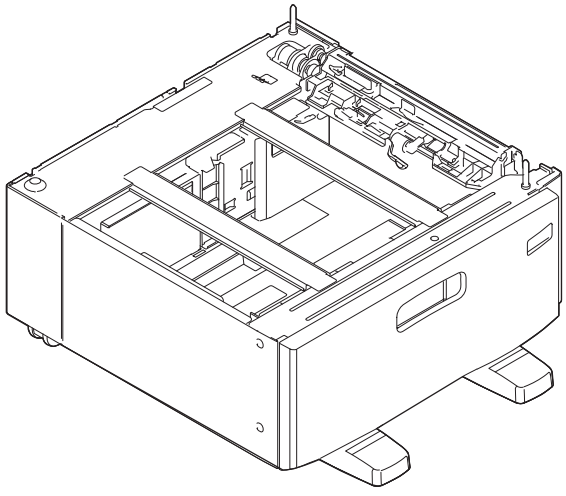
TOSHIBA

# SERVICE MANUAL

## Large Capacity Feeder

# KD-1026/1031/1059



Model: KD-1026/1031/1059
Publish Date: April 2009
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Ver05 F_2018-06

## Trademarks

- MOLYKOTE® is a registered trademark of Dow Corning Corporation.
- Other company names and product names in this manual are the trademarks of their respective companies.

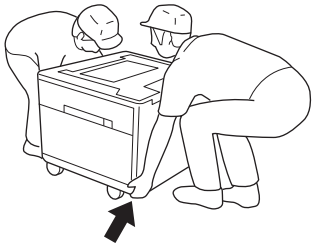
# General Precautions for Installation/Servicing/Maintenance for the equipment

The installation and service should be done by a qualified service technician.

1. When installing the equipment to the MFP, be sure to follow the instructions described in the “Unpacking/Set-Up Procedure for the equipment” booklet which comes with each unit of the equipment.

2. The equipment should be installed by an authorized/qualified person.

3. When transporting/installing equipment, employ two persons and be sure to use the positions as indicated below.
   The equipment is fairly heavy and weights approximately 26 kg (57.3 lb.), therefore pay full attention when handling it.



4. Both the Paper Feed Pedestal and the Large Capacity Feeder have 4 adjusters (antiskid devices) underneath. After the equipment has been moved and installed, be sure to turn and lower them to fix it since the drawers may not be opened or closed smoothly depending on floor conditions.

5. The equipment must be grounded for safety.

6. Before starting installation, servicing or maintenance work, be sure to turn off and unplug the equipment first.

7. The equipment shall be installed near the socket outlet and shall be accessible.

8. Be sure to fix and plug in the power cable securely after the installation so that no one trips over it.

9. Unplug the power cable and clean the area around the prongs of the plug and socket outlet once a year or more. A fire may occur when dust lies on this area.

10. The equipment should be grounded to the specified positions on the machine frame.

11. The equipment is supplied with power from the equipment, requiring no additional power source.

12. When servicing or maintaining the equipment, be careful about the rotating or operating sections such as gears, pulleys, sprockets, cams, belts, etc.

13. When parts are disassembled, reassembly is basically the reverse of disassembly unless otherwise noted in this manual or other related materials. Be careful not to reassemble small parts such as screws, washers, pins, E-rings, toothed washers to the wrong places.

14. Basically, the machine should not be operated with any parts removed or disassembled.

15. When servicing the machines with the power turned ON, be sure not to touch live sections and rotating/operating sections.

16. Delicate parts for preventing safety hazard problems (such as thermofuses, door switches sensors, etc. if any) should be handled/installed/adjusted correctly.

17. Use suitable measuring instruments and tools.

18. During servicing or maintenance work, be sure to check the nameplate and other cautionary labels (if any) to see if they are clean and firmly stuck. If not, take appropriate actions.

19. The PC board must be stored in an anti-electrostatic bag and handled carefully using a wristband, because the ICs on it may be damaged due to static electricity. Before using the wrist band, pull out the power cord plug of the equipment and make sure that there is no uninsulated charged objects in the vicinity.

20. For the recovery and disposal of used the Large Capacity Feeder, consumable parts, packing materials, follow the relevant local regulations/rules.

21. After completing installation, servicing and maintenance of the equipment, return the equipment to its original state, and check operation.

22. Check the procedures and perform them as described in the Service Manual.

23. Make sure you do not lose your balance.

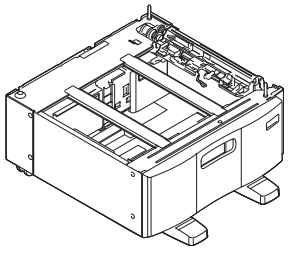
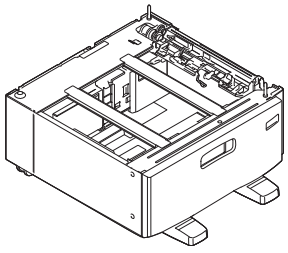
24. Avoid exposure to your skin and wear protective gloves as needed.

25. Do not leave plastic bags where children can get at them. This may cause an accident such as suffocation if a child puts his/her head into a bag. Plastic bags of options or service parts must be brought back.

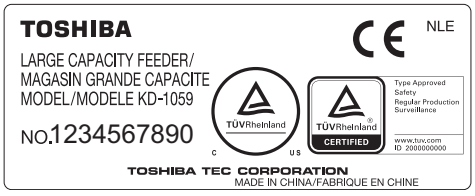
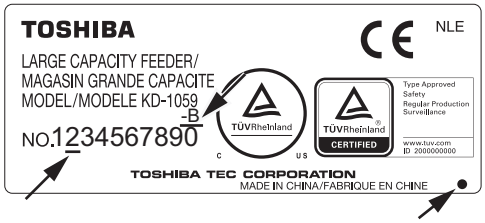
# CONTENTS

# 1. SPECIFICATIONS



| Item | KD-1026 | KD-1031 | KD-1059 |
|---|---|---|---|
| Appearance |  |  | |
| Feeding method | Tandem tray | | |
| Paper | Size: A4, LT<br>Thickness: 64 g/m$^2$ to 105 g/m$^2$ (17 lb. Bond to 28 lb. Bond)<br>* Reused paper not available | | |
| Capacity of drawer | Stack height: 110.0 mm<br>(Approx. 1000 x 2 sheets: 80 g/m$^2$ (22 lb. Bond)) | | |
| Dimensions | 575 (W) × 583 (D) × 292 (H) mm<br>22.64 (W) × 22.95 (D) × 11.50 (H) inch<br>(Height - Floor to top of the paper exiting part)<br>668 (W) × 735 (D) × 292 (H) mm<br>26.30 (W) × 28.94 (D) × 11.50 (H) inch<br>(Including the stabilizer cover) | | |
| Weight | Approx. 26 kg (57.3 lb.) | | |
| Power supply | 5 V, 24 V (supplied from the equipment) | | |
| Accessory | Unpacking Instructions (1)<br>Connecting plates (4)<br>Screws for connecting plates (7)<br>Fixing screw for ground wire (1)<br>Stabilizer brackets (6)<br>Right side stabilizer cover (1)<br>Rear side stabilizer covers (2)<br>Front side stabilizer covers (2)<br>Screws for stabilizer (6)<br>Rubber caps (4) | | |
| Appearance color | Fair white<br>Deep Violet Gray | Fair white | Jet black<br>Shadow Gray |

Comparison of KD-1059 and KD-1059-B

| Model Name | KD-1059 | KD-1059-B |
|---|---|---|
| European safety standards complied with | Safety standard: EN60950-1<br>RoHS2: 2011/65/EU | Safety standard:<br>EN60950-1, EN62368-1<br>RoHS2:<br>2011/65/EU<br>2011/65/EU+(EU)2015/863 |
| Rating label <for identification> |  <br>No mark applied |  <br>Black dot mark and “-B” applied<br>The 2nd digit of the serial number differs |
| Applicable models | e-STUDIO2005AC/2500AC<br>e-STUDIO2505AC/3005AC/3505AC/4505AC/<br>5005AC<br>e-STUDIO2008A/2508A/3008A/3508A/4508A/<br>5008A<br>e-STUDIO3508LP/4508LP/5008LP | e-STUDIO2005AC/2500AC<br>e-STUDIO2505AC/3005AC/3505AC/4505AC/<br>5005AC<br>e-STUDIO2008A/2508A/3008A/3508A/4508A/<br>5008A<br>e-STUDIO3508LP/4508LP/5008LP<br><br>e-STUDIO 2010AC/2510AC<br>e-STUDIO 2015AC/2515AC/3015AC/3515AC/<br>4515AC/5015AC<br>e-STUDIO2018A/2518A/3018A/3518A/3518A/<br>4518A/5018A |
| Notes | Purchasing this is not possible after June, 2019. | |

# 2. OVERVIEW

## 2.1 Front Sectional View



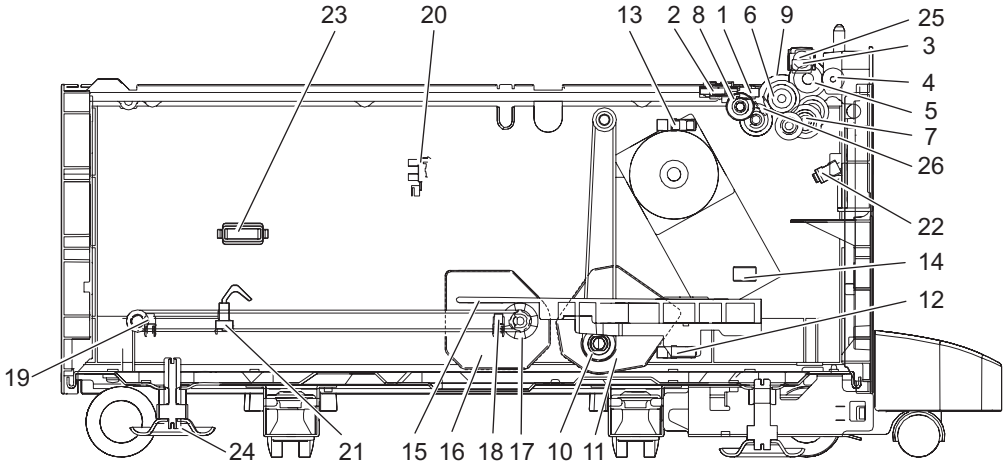



**Fig. 2-1**

| Symbol | Name | Symbol | Name |
|---|---|---|---|
| 1 | Tray-up sensor (S3) | 14 | Feeding side drawer detection switch (S10) |
| 2 | Feeding side empty sensor (S7) | 15 | Elevator tray |
| 3 | Transport sensor (S2) | 16 | End fence motor (M3) |
| 4 | Side cover roller | 17 | End fence coupling |
| 5 | Transport roller | 18 | End fence stop position sensor (S5) |
| 6 | Feed roller | 19 | End fence home position sensor (S6) |
| 7 | Separation roller | 20 | Standby side paper mis-stacking detection sensor (S11) |
| 8 | Pickup roller | 21 | Standby side empty sensor (S8) |
| 9 | Feed clutch (CLT1) | 22 | Jam access cover open/close detection switch (S1) |
| 10 | Tray-up coupling | 23 | Drawer connector |
| 11 | Tray-up motor (M2) | 24 | Adjuster |
| 12 | Feeding side bottom sensor (S4) | 25 | Pickup solenoid (SOL1) |
| 13 | Feeding side paper stock sensor (S9) | 26 | Pickup sensor (S13) |

## 2.2 Layout of Electrical Parts

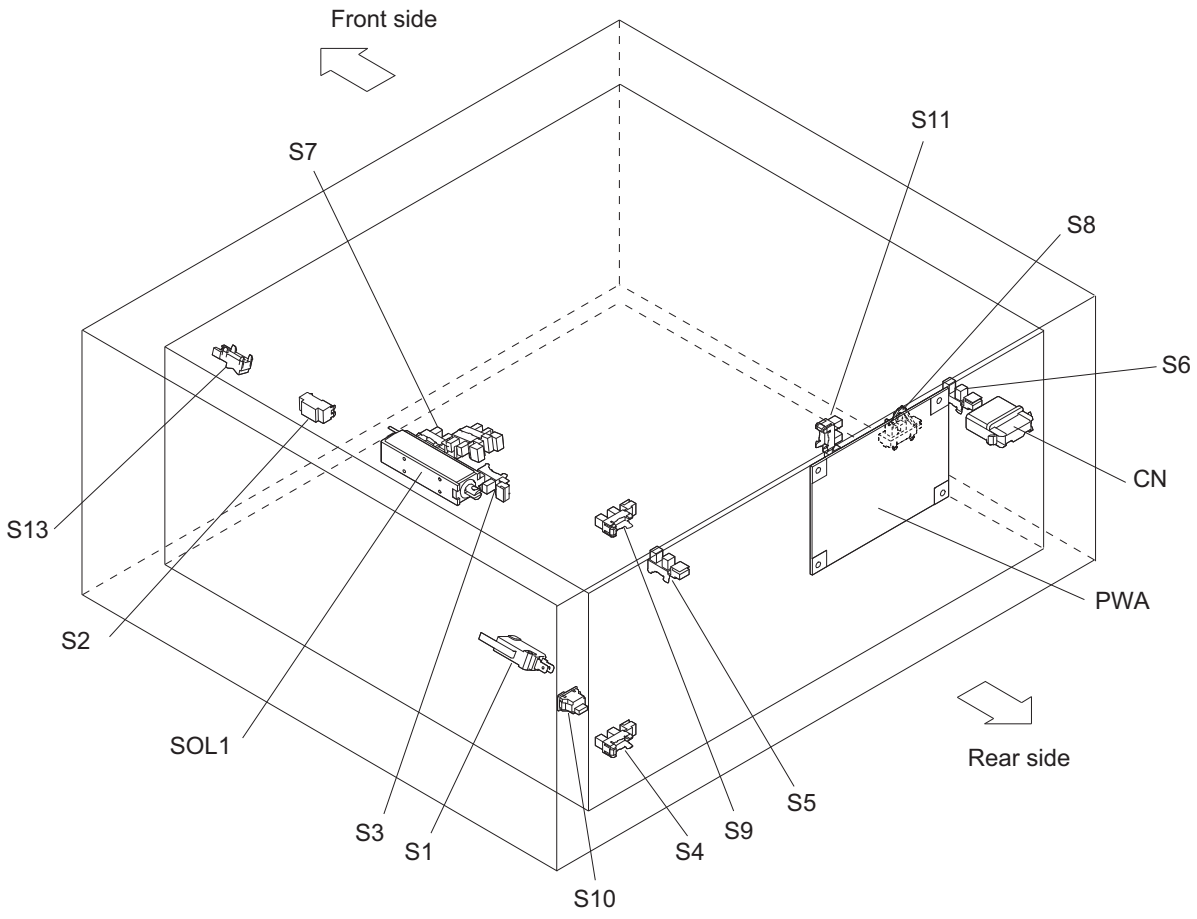



**Fig. 2-2**

| Symbol | Name | Symbol | Name |
|---|---|---|---|
| S1 | Jam access cover open/close detection switch | S9 | Feeding side paper stock sensor |
| S2 | Transport sensor | S10 | Feeding side drawer detection switch |
| S3 | Tray-up sensor | S11 | Standby side paper mis-stacking detection sensor |
| S4 | Feeding side bottom sensor | S13 | Pickup sensor |
| S5 | End fence stop position sensor | PWA | LCF board |
| S6 | End fence home position sensor | SOL1 | Pickup solenoid |
| S7 | Feeding side empty sensor | CN | Drawer connector |
| S8 | Standby side empty sensor | | |

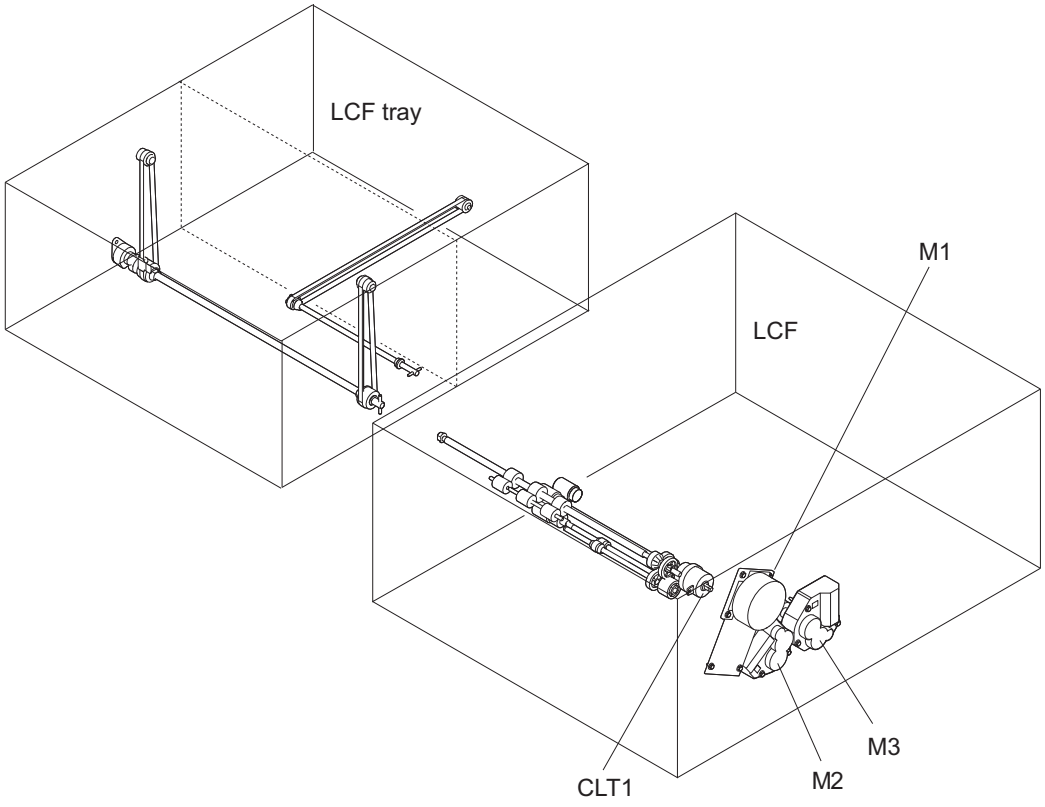



**Fig. 2-3**

| Symbol | Name | Symbol | Name |
|---|---|---|---|
| M1 | LCF transport motor | M3 | End fence motor |
| M2 | Tray-up motor | CLT1 | Feed clutch |

## 2.3 Electrical Parts

1. Motor

| Symbol | Name | Function | Remarks | P-I |
|---|---|---|---|---|
| M1 | LCF-MTR<br>LCF transport motor | Drives feeding and transporting | Brushless motor | 3-4 |
| M2 | T-UP-MTR<br>Tray-up motor | Lifts up the elevator tray | Brush motor | 3-27 |
| M3 | END-F-MTR<br>End fence motor | Drives the movement of the end fence | Brush motor | 3-24 |

2. Electromagnetic clutch

| Symbol | Name | Function | Remarks | P-I |
|---|---|---|---|---|
| CLT1 | FED-CLT<br>Feed clutch | Drives the feeding | | 3-10 |

3. Switches or sensors

| Symbol | Name | Function | Remarks | P-I |
|---|---|---|---|---|
| S1 | SIDE-COV-SW<br>Jam access cover open/close detection switch (24V) | Detects the open/close state of the side cover for interlock | Push switch | 3-37 |
| S2 | FED-SNR<br>Transport sensor | Detects paper misfeeding | Reflective sensor | 4-37 |
| S3 | TOP-SNR<br>Tray-up sensor | Detects if the elevator tray has been raised | Photo interrupter | 4-15 |
| S4 | TRY-BTM-SNR<br>Feeding side bottom sensor | Detects the home position of the elevator tray | Photo interrupter | 3-35 |
| S5 | END-F-STP-SNR<br>End fence stop position sensor | Detects the stop position of the end fence | Photo interrupter | 6-22 |
| S6 | END-F-HP-SNR<br>End fence home position sensor | Detects the home position of the end fence | Photo interrupter | 6-22 |
| S7 | EMP-SNR-FS<br>Feeding side empty sensor | Detects lack of paper of the feeding side | Photo interrupter | 4-15 |
| S8 | EMP-SNR-SS<br>Standby side empty sensor | Detects lack of paper of the standby side | Photo interrupter | 6-19 |
| S9 | PST-SNR-FS<br>Feeding side paper stock sensor | Detects that the paper stock is insufficient | Photo interrupter | 3-35 |
| S10 | TRY-R-SW<br>Feeding side drawer detection switch | Detects the presence/ absence of the drawer | Push switch | 3-46 |
| S11 | PR-MST-SS<br>Standby side paper mis-stacking detection sensor | Detects mis-stacking of paper in the standby side drawer | Photo interrupter | 3-35 |
| S13 | PICKUP-SNR<br>Pickup sensor | Not used | Reflective sensor | ---- |

4. PC board

| Symbol | Name | Function | Remarks | P-I |
|---|---|---|---|---|
| PWA | PWA-F-LCF-647<br>LCF board | Control of LCF devices | | 3-30 |

5. Solenoids

| Symbol | Name | Function | Remarks | P-I |
|---|---|---|---|---|
| SOL1 | PICKUP-SOL<br>Pickup solenoid | Lifts up the pickup roller | | 4-28 |

# 3. GENERAL OPERATION

## 3.1 Configuration and Drive System

The Large Capacity Feeder (LCF) mainly consists of the LCF drawer, pickup roller, feed roller, separation roller, transport roller, and drive system for these components.

- Feeding/transport system
  The LCF transport motor drives the pickup roller, feed roller, and transport roller which are located in the feeding area.

- Drawer tray system
  This system raises and lowers the tray.

- End fence system
  Moves paper in the standby side tray to the feeding side tray when feeding side tray becomes empty.

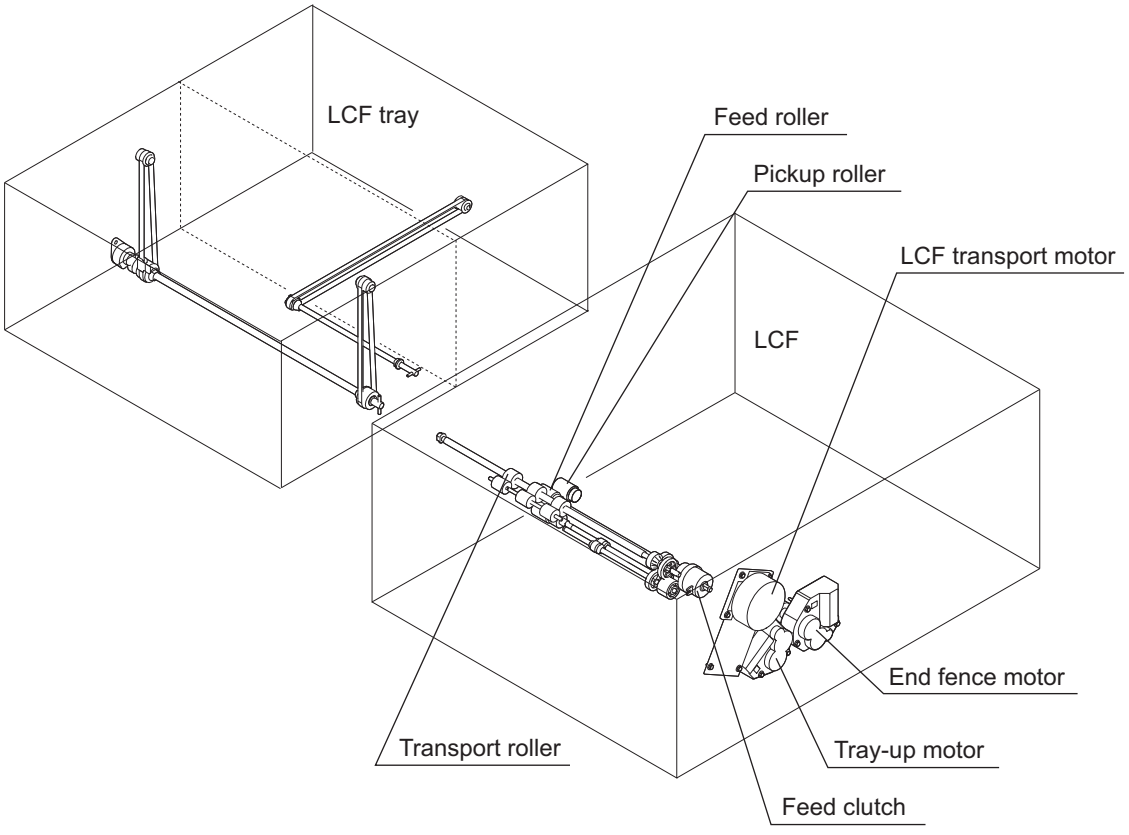



**Fig. 3-1**

## 3.2 Description of Operation

**[A] From power ON to ready**

(1) When the equipment is turned ON, power is also supplied to the feeder unit to start the pre-running operation. The tray-up motor (M2) starts to rotate forward and raises the tray. The tray-up motor (M2) is turned OFF when the tray turns ON the tray-up sensor (S3), then the tray is stopped. At this time, it is judged that there is paper in the feeding side tray when the feeding side empty sensor (S7) is ON. On the other hand, the absence of paper in the feeding side tray is assumed when the feeding side empty sensor (S7) is OFF, and the standby side tray set detection is checked. When the standby side tray set detection is ON, the standby side empty sensor (S8) is checked. When the standby side empty sensor (S8) is OFF, that means there is no paper in the standby side tray, and it is therefore assumed that there is no paper in the LCF. When the standby side empty sensor (S8) is ON, the paper in the standby side tray is moved to the feeding side tray. The tray-up motor (M2) is rotated in reverse and lowers the tray of the feeding side. The lowered tray turns ON the feeding side bottom sensor (S4), and the tray-up motor (M2) is turned OFF to stop the tray. The pickup solenoid (SOL1) is then turned ON. The end fence motor (M3) rotates forward and the paper in the standby side tray is moved onto the tray of the feeding side. The end fence motor (M3) is stopped for a second when the end fence stop position sensor (S5) is turned ON, and the motor (M3) immediately starts to rotate in reverse to return the end fence to the position where the home position sensor (S6) is turned ON. When the returning operation is started, the pickup solenoid is turned OFF, and the tray-up motor (M2) is rotated forward to raise the tray. The tray-up motor (M2) is turned OFF when the tray turns ON the tray-up sensor (S3), then the tray is stopped. At this time, it is judged that there is paper in the feeding side tray when the feeding side empty sensor (S7) is ON.

(2) If the power is turned ON when the feeding side tray has been removed, the tray lifting movement is not operated. The tray is raised as soon as the tray is installed, and it detects if there is paper in the drawer.

(3) If the transport sensor (S2) is ON (there is paper in the transport path) when the power is turned ON, that means a paper jam has occurred and the operation is disabled until the paper is removed.

**[B] Ready status**

(1) Trays detect the paper as described in [A], and the equipment goes into the ready status.

(2) When the tray is pulled out, only the standby side tray is taken out if there is paper in the feeding side. After that, the tray goes down automatically when the feeding side tray is removed and is raised as soon as the feeding side tray is reinstalled then checks if there is paper in the tray. Both the feeding side tray and the standby side tray are taken out if there is no paper in the feeding side.

**[C] From the start to the end of copying**

(1) The main motor of the equipment is turned ON when the [START] button is pressed. The LCF transport motor (M1) is turned ON to drive.

(2) When the equipment judges that the LCF is ready for feeding paper, it turns ON the feed clutch (CLT1) of the selected drawer. This clutch drives the pickup roller and feed roller to feed paper from the tray.

(3) The leading edge of the paper turns the transport sensor (S2) ON. The feed clutch (CLT1) is turned OFF and feeding from the drawer is completed.

(4) A fixed time after the paper turns the resist clutch ON, LCF becomes ready for feeding the next sheet of paper, and the procedures (2) to (3) are repeated.

(5) When the copying operation is completed, the main motor and LCF transport motor (M1) are turned OFF.

## 3.3 Error Detection

**[A] Jam detection**

(1) A paper jam (E190, E3C0, E3D0, E3E0) occurs in the following cases.
- Transport sensor (S2) is not turned ON within a specified period of time after the feeding is started.
- The leading edge of the paper does not pass the drawer feed sensor in the transport path within a specified period of time.

(2) Open the side cover of the LCF, remove all the paper remaining on the transport path and close the side cover to clear the paper jam. If the transport sensor (S2) is still ON when the side cover is closed, it is determined that there is still paper on the transport path and the paper jam status is not cleared.

(3) When a paper jam occurs in the LCF during continuous copying, the sheet that was fed before the jam is copied normally.

**[B] Call for Service**

(1) When the tray-up sensor (S3) is not turned ON even though the specified period of time has passed since the tray started to be raised, it is assumed that the drawer is not operational and the corresponding message is displayed on the control panel.

(2) When the feeding side bottom sensor (S4) is not turned ON even though the specified period of time has passed since the tray started to be lowered, it is assumed that the drawer is not operational and the corresponding message is displayed on the control panel.

(3) When the end fence stop position sensor (S5) is not turned ON even though the specified period of time has passed since the end fence started to move the paper in the standby side drawer, it is assumed that the drawer is not operational and the corresponding message is displayed on the control panel.

(4) When the end fence home position sensor (S6) is not turned ON even though the specified period of time has passed since the end fence started to move the paper in the standby side, it is assumed that the drawer is not operational and the corresponding message is displayed on the control panel.

(5) The states (1) to (4) are cleared by opening the drawer and solving the problems.

# 4. DISASSEMBLY AND REPLACEMENT

**Notes:**
The covers of actual equipment and a picture differs in color.

## 4.1 Installation and Removal of Covers

**[A] Standby side tray**

(1) Pull out the standby side drawer.
(2) Remove 2 screws.

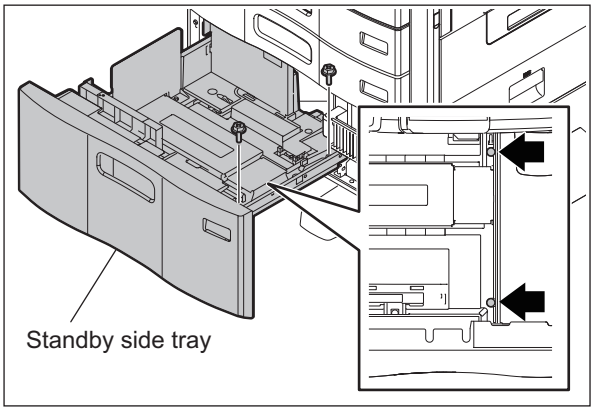



**Fig. 4-1**

(3) Pull out the standby side tray while lifting it up.

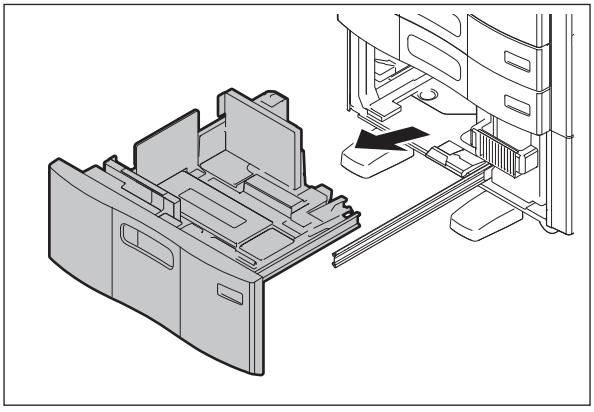


**Fig. 4-2**

### [B] Feeding side tray

(1) Take off the standby side tray.
📖 P. 4-1 "[A] Standby side tray"

(2) Pull out the feeding side tray while pushing the stopper.

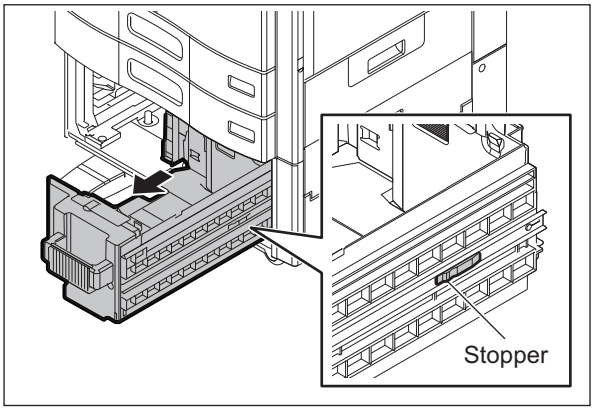



**Fig. 4-3**

### [C] Stabilizer cover

(1) Remove 2 screws and take off the front side stabilizer covers.

(2) Remove 2 screws and take off the feeding side stabilizer cover.

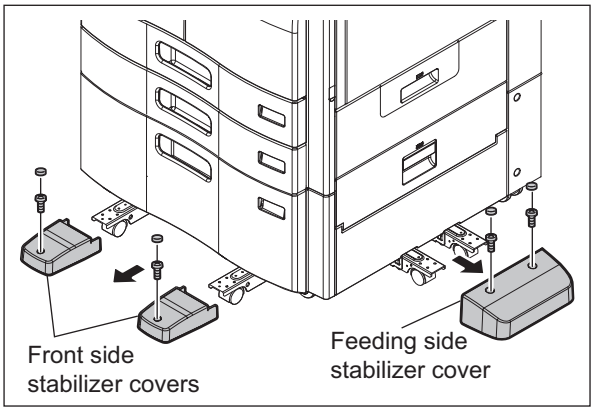



**Fig. 4-4**

(3) Remove 2 screws and take off the rear side stabilizer covers.

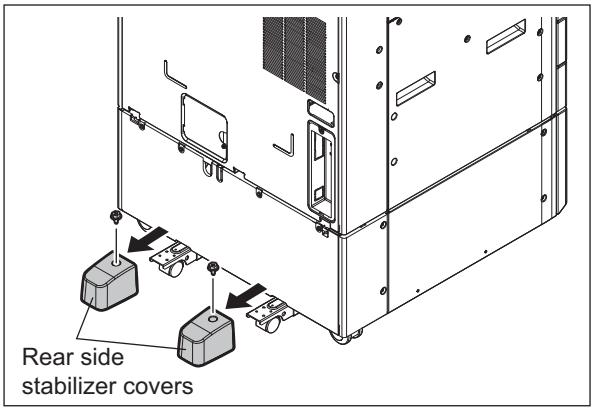



**Fig. 4-5**

**[D] Jam access cover**

(1) Open the jam access cover.
(2) Remove 1 screw and release the stopper.
(3) Take off the jam access cover while pushing the front side fulcrum of the jam handling cover inward.

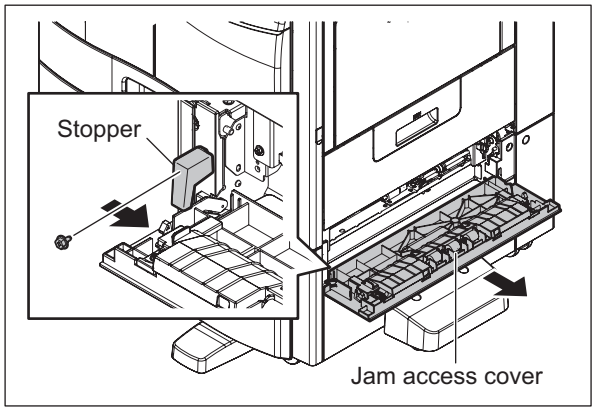



**Fig. 4-6**

**[E] Feeding side front cover (KD-1026)**

(1) Pull out the feeding side tray along with the standby side tray.
(2) Release 2 latches and take off the feeding side front cover.

**Notes:**
To release a latch, insert your finger from the left of the feeding side front cover and push it down.

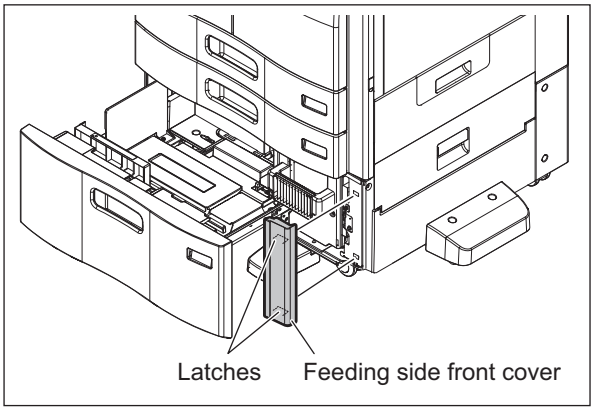



**Fig. 4-7**

### [F] Feeding side front cover (KD-1031/KD-1059)

(1) Pull out the feeding side tray along with the standby side tray.
(2) Release 2 latches and 2 screws.
Take off the feeding side front cover.

**Notes:**
To release a latch, insert your finger from the left of the feeding side front cover and push it down.

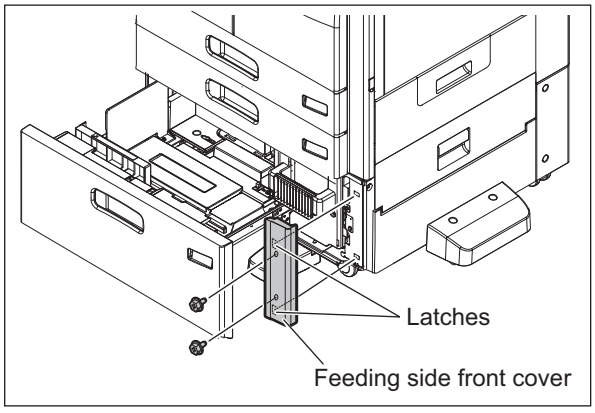



**Fig. 4-8**

### [G] Feeding side rear cover

(1) Remove 2 screws and take off the feeding side rear cover.

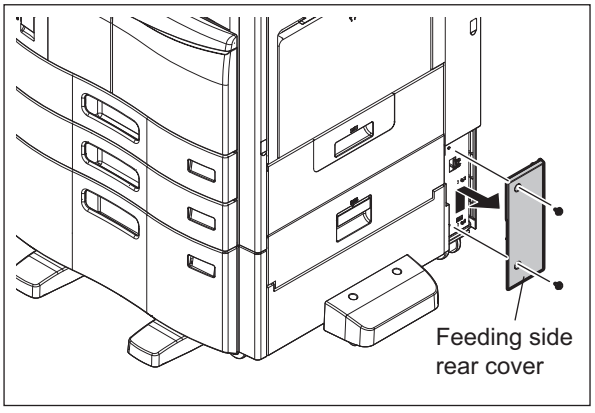



**Fig. 4-9**

### [H] Rear cover

(1) Take off the rear side stabilizer cover.
🕮 P. 4-2 "[C] Stabilizer cover"
(2) Remove 4 screws and take off the rear cover.

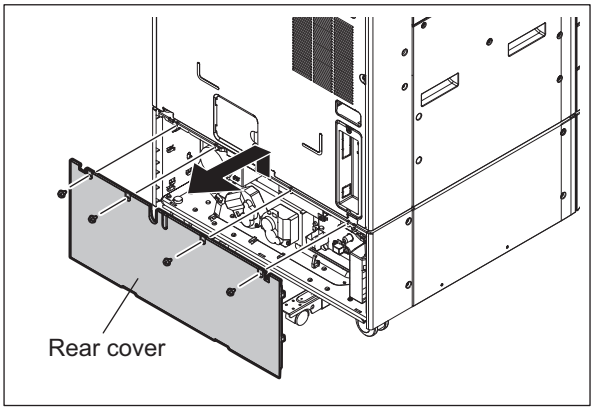



**Fig. 4-10**

### [I] Feeding side cover

(1) Take off the jam access cover.
🕮 P. 4-3 "[D] Jam access cover"
(2) Take off the feeding side front cover.
🕮 P. 4-3 "[E] Feeding side front cover (KD-1026)"
(3) Take off the feeding side rear cover.
🕮 P. 4-4 "[G] Feeding side rear cover"
(4) Take off the feeding side stabilizer cover.
🕮 P. 4-2 "[C] Stabilizer cover"
(5) Remove 1 screw and take off the harness cover.
(6) Remove 2 screws and take off the feeding side cover.

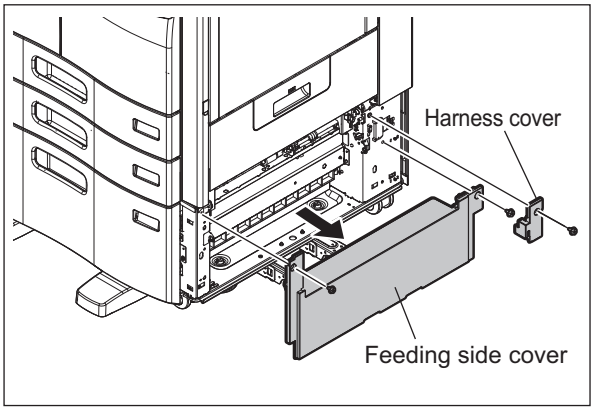



**Fig. 4-11**

## 4.2 LCF Board (PWA)

(1) Take off the rear cover.
🕮 P. 4-5 "[H] Rear cover"
(2) Disconnect 7 connectors.
(3) Remove 3 screws and take off the LCF board.

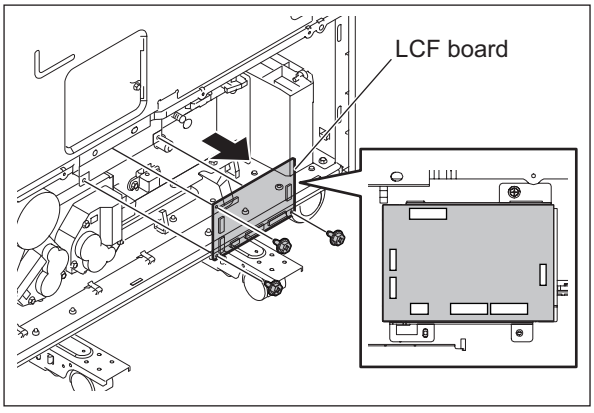



**Fig. 4-12**

# 4.3 Feeding Unit

**[A] Feeding unit**

(1) Take out the drawer.

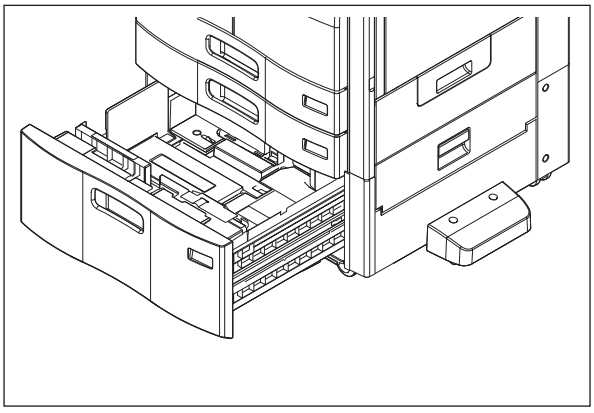


**Fig. 4-13**

(2) Take off the jam access cover.
📖 P. 4-3 "[D] Jam access cover"

(3) Take off the feeding side rear cover.
📖 P. 4-4 "[G] Feeding side rear cover"

(4) Remove 1 screw and take off the harness cover.

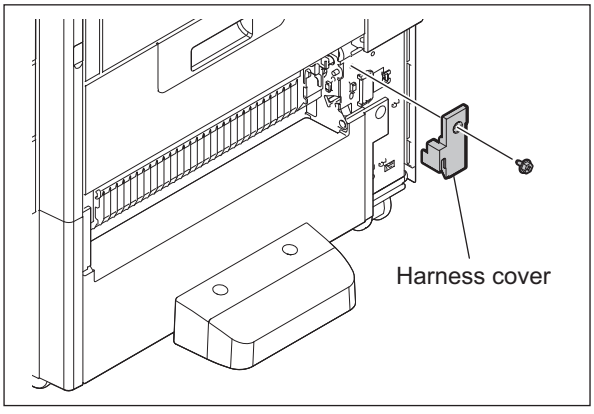



**Fig. 4-14**

(5) Release the harness from the 2 harness clamps. Disconnect 1 connector.

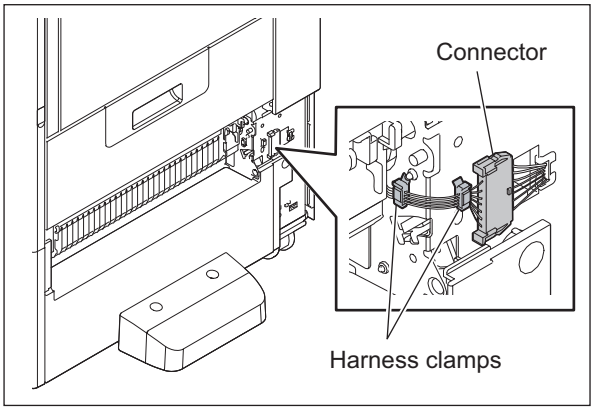



**Fig. 4-15**

(6) Take off the guide while pushing the fulcrum of the front side inward.

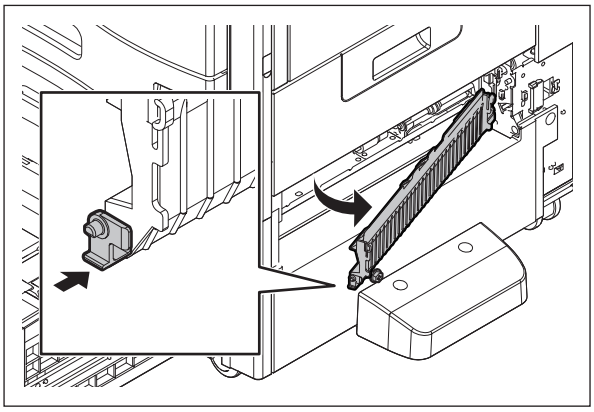


**Fig. 4-16**

(7) Remove 2 screws and take off the feeding unit.

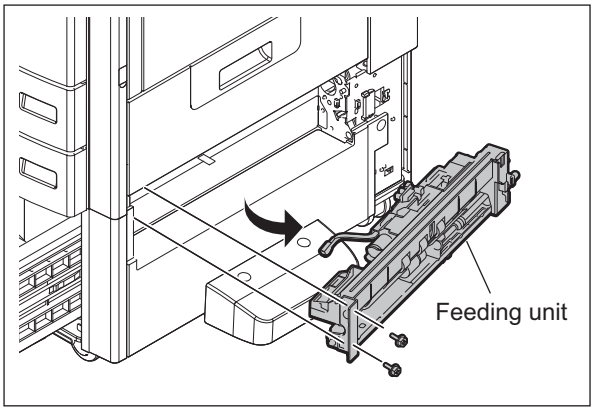



**Fig. 4-17**

**Notes:**

Align the separation roller arbor pin with the slot in the coupling by rotating the separation roller arbor for assembling the feeding unit.

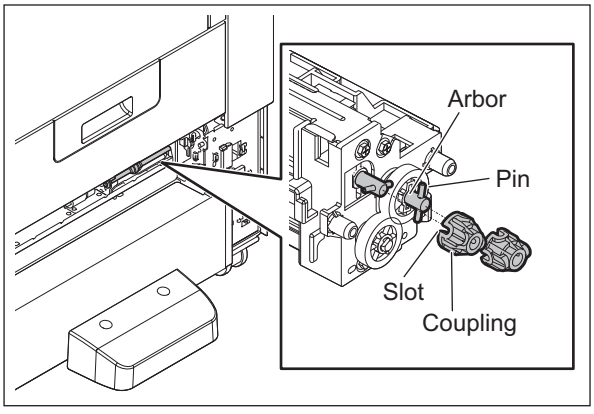



**Fig. 4-18**

**[B] Pickup solenoid**

(1) Take off the feeding unit.
📖 P. 4-7 "4.3 Feeding Unit"

(2) Release the harness from the 1 harness clamp.

(3) Remove 1 screw and take off the solenoid bracket.

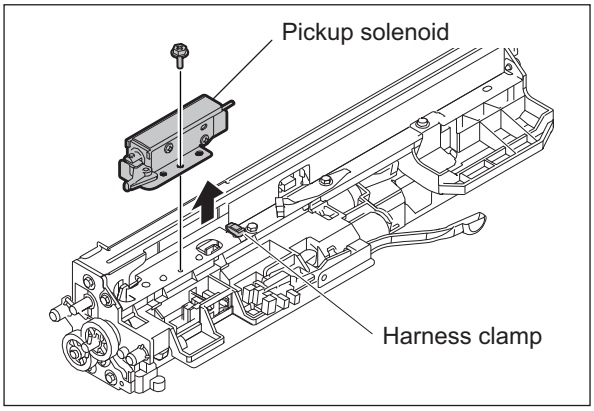



**Fig. 4-19**

(4) Disconnect 1 connector and remove 2 screws to take off the pickup solenoid.

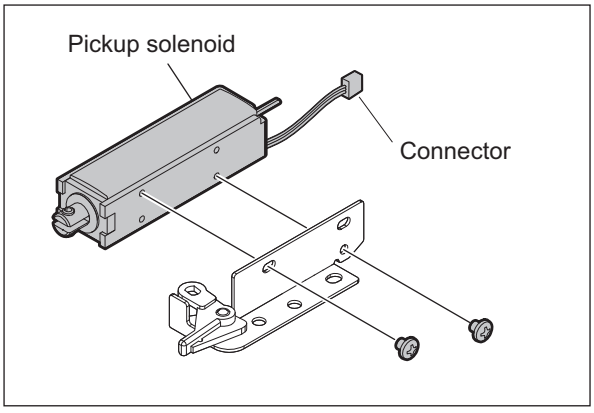



**Fig. 4-20**

## 4.4 Feed/Pickup/Separation Roller

### [A] Separation roller PM

(1) Open the jam access cover.
(2) Remove 1 clip and take off the separation roller.

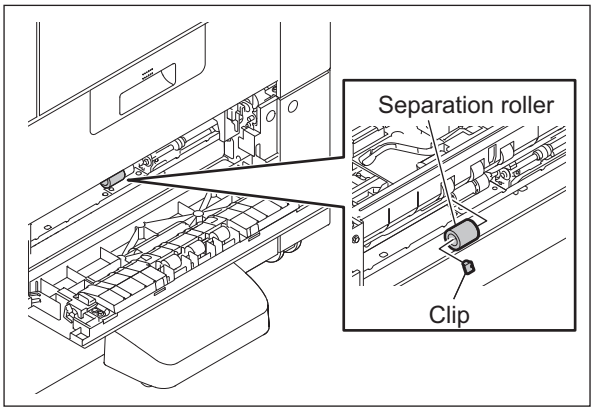



**Fig. 4-21**

### [B] Pickup roller PM

(1) Take off the feeding unit.
📖 P. 4-7 "4.3 Feeding Unit"
(2) Remove 1 clip and take off the cover.

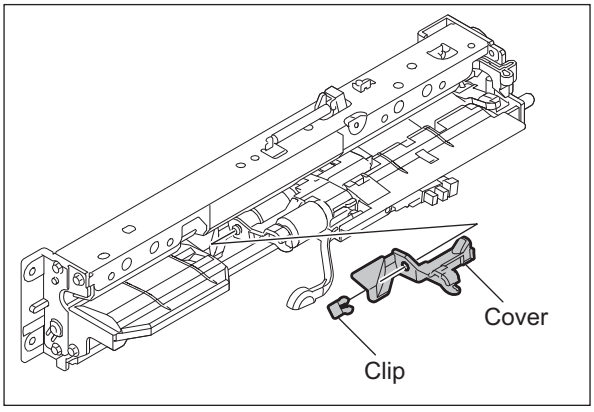



**Fig. 4-22**

(3) Take off the pickup roller.

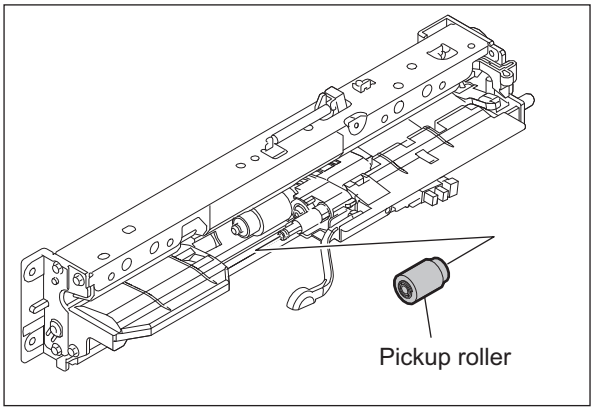



**Fig. 4-23**

**[C] Feed roller** PM

(1) Take off the feeding unit.
P. 4-7 "4.3 Feeding Unit"

(2) Remove 1 clip and take off the cover.

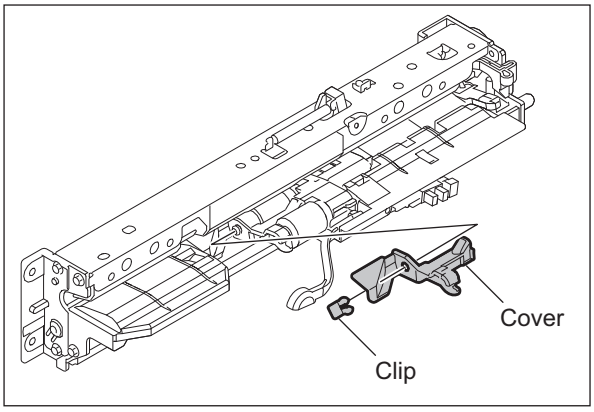



**Fig. 4-24**

(3) Take off the feed roller.

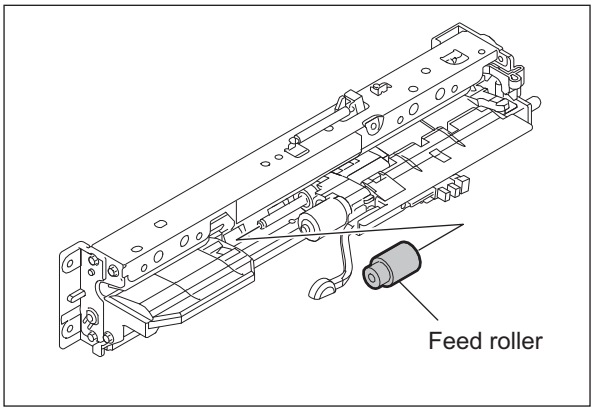



**Fig. 4-25**

# 4.5 Motor

### [A] LCF transport motor assembly

(1) Take off the rear cover.
📖 P. 4-5 "[H] Rear cover"
(2) Release the harness from the 3 harness clamps.
(3) Disconnect 1 connector.

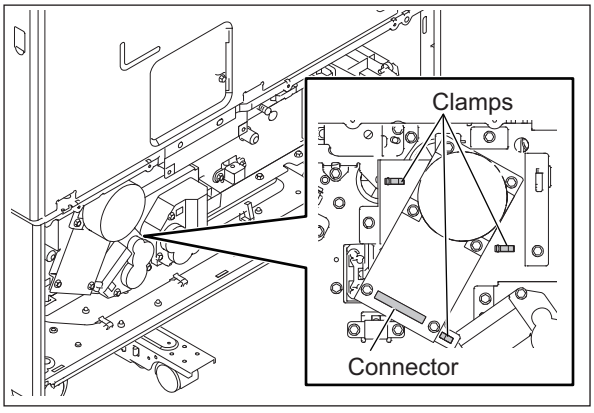



**Fig. 4-26**

(4) Remove 3 screws and take off the LCF transport motor assembly.

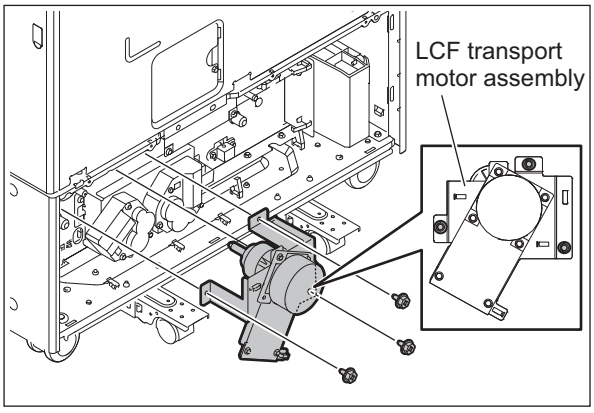



**Fig. 4-27**

### [B] LCF transport motor

(1) Take off the rear cover.
P. 4-5 "[H] Rear cover"
(2) Disconnect 1 connector.
(3) Remove 6 screws and take off the LCF transport motor.

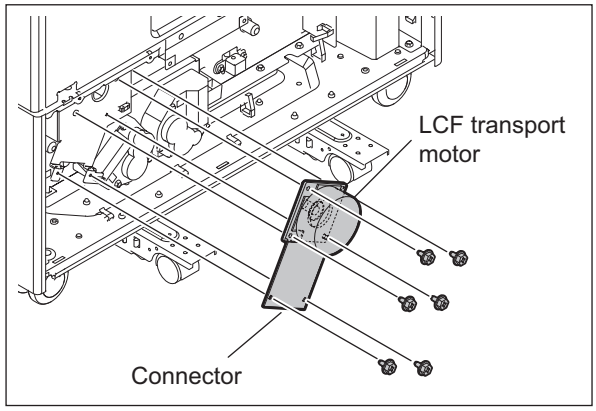



**Fig. 4-28**

### [C] Tray-up motor

(1) Take off the rear cover.
P. 4-5 "[H] Rear cover"
(2) Disconnect 1 connector.
(3) Remove 2 screws and take off the tray-up motor.

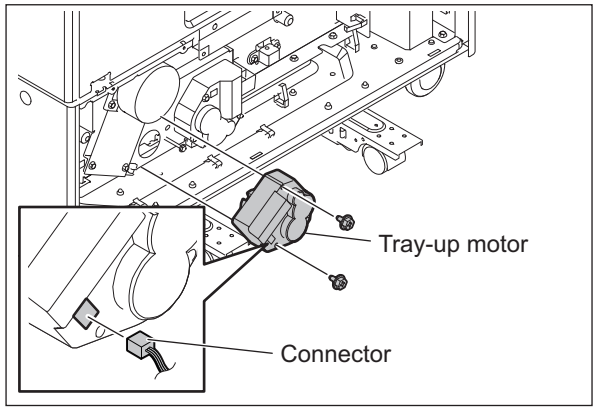



**Fig. 4-29**

### [D] End fence motor

(1) Take off the rear cover.
P. 4-5 "[H] Rear cover"
(2) Disconnect 1 connector.
(3) Remove 2 screws and take off the end fence motor.

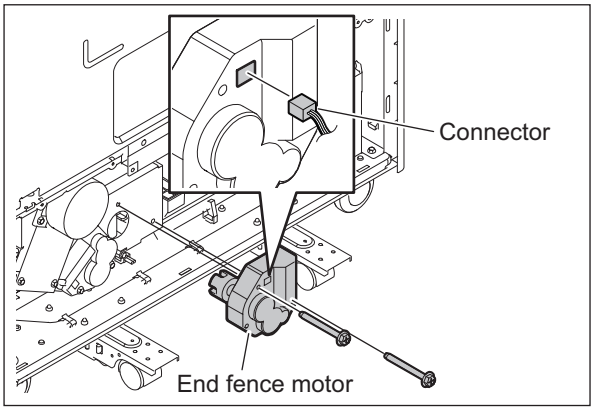



**Fig. 4-30**

## 4.6 Feed Clutch (CLT1)

(1) Take off the feeding unit.
🕮 P. 4-7 "4.3 Feeding Unit"

(2) Take off the rear cover.
🕮 P. 4-5 "[H] Rear cover"

(3) Disconnect 1 connector.

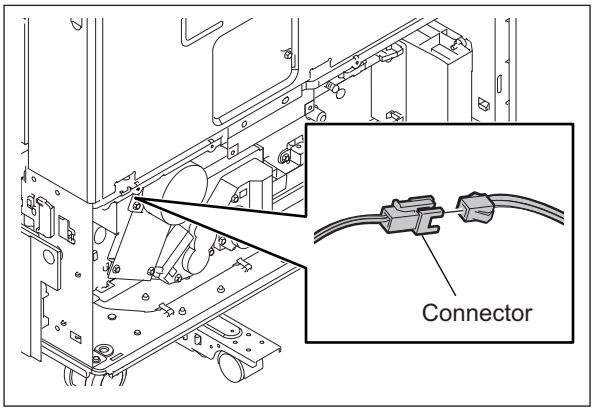



**Fig. 4-31**

(4) Remove 1 clip.

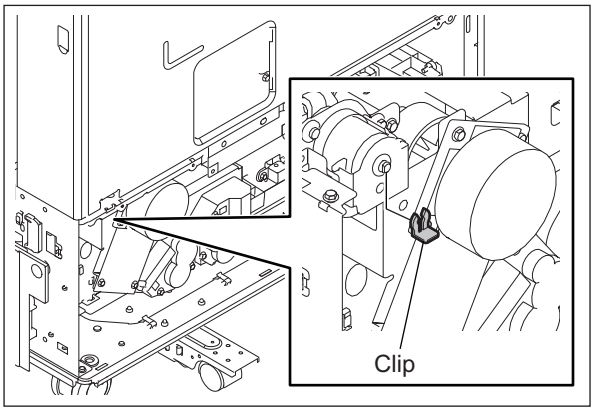



**Fig. 4-32**

(5) Pull out the shaft of the coupling to the front side.

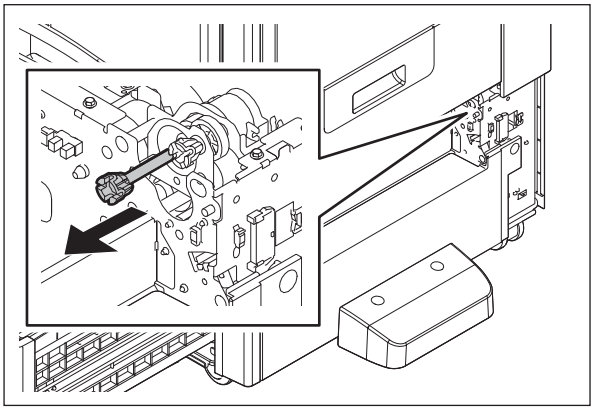


**Fig. 4-33**

(6) Take off 1 bushing. Remove 2 screws and take off the bracket.

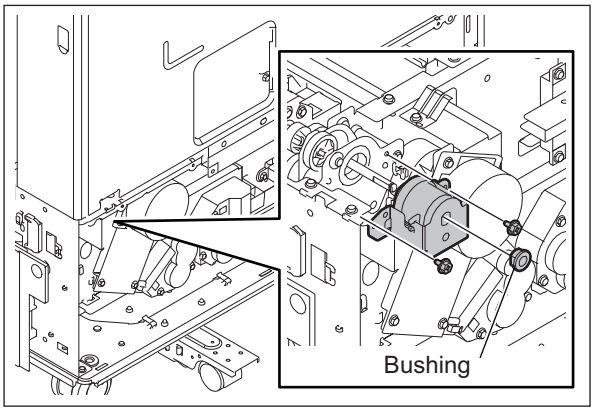



**Fig. 4-34**

(7) Take off the feed clutch from the bracket.

**Notes:**

Align the fitting portion of the clutch with the protruding portion of the bracket for assembling the clutch.

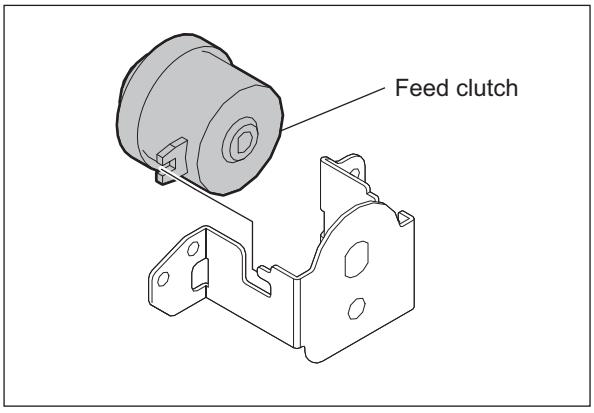



**Fig. 4-35**

# 4.7 Sensor

### [A] Standby side empty sensor (S8)

(1) Take off the standby side tray.
📖 P. 4-1 "[A] Standby side tray"

(2) Remove 1 screw and take off the sensor cover.

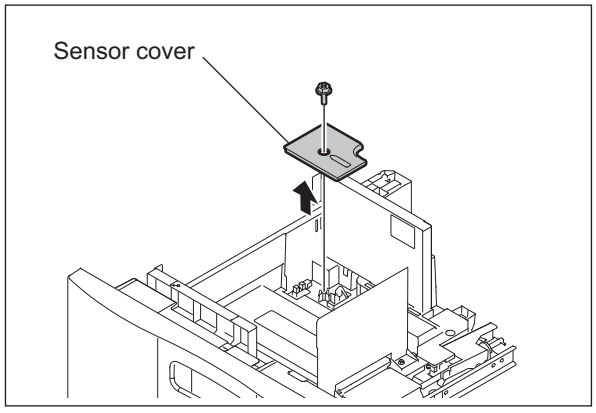



**Fig. 4-36**

(3) Disconnect 1 connector and release 4 latches to remove the standby side empty sensor.

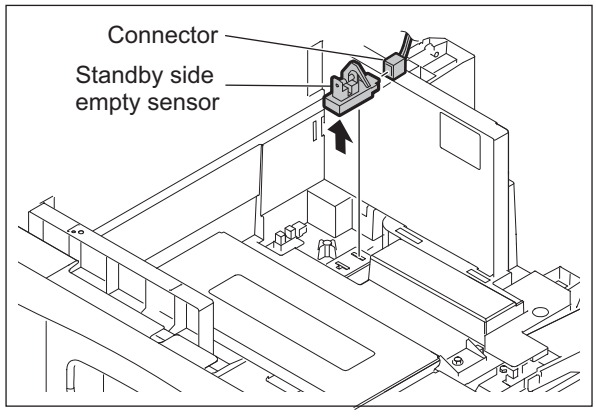



**Fig. 4-37**

### [B] End fence home position sensor (S6)

(1) Take off the standby side tray.
📖 P. 4-1 "[A] Standby side tray"

(2) Remove 1 screw and take off the sensor cover.

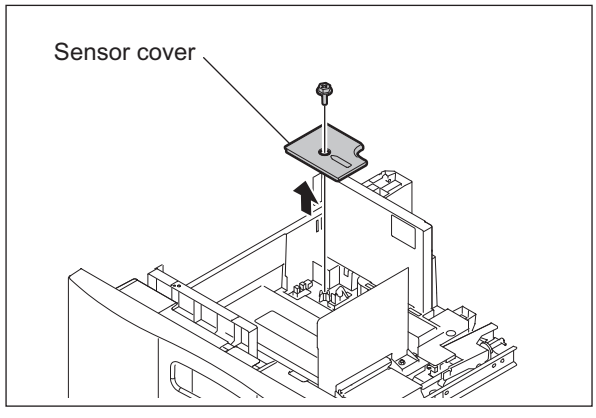



**Fig. 4-38**

(3) Disconnect 1 connector and release 3 latches to remove the end fence home position sensor.

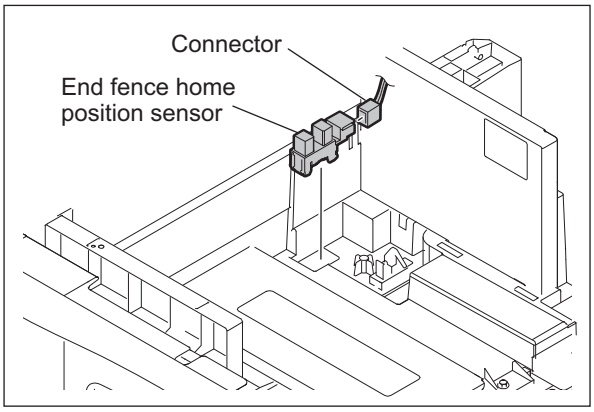



**Fig. 4-39**

**[C] End Fence Stop Position Sensor (S5)**

(1) Remove 1 screw and take off the sensor cover.

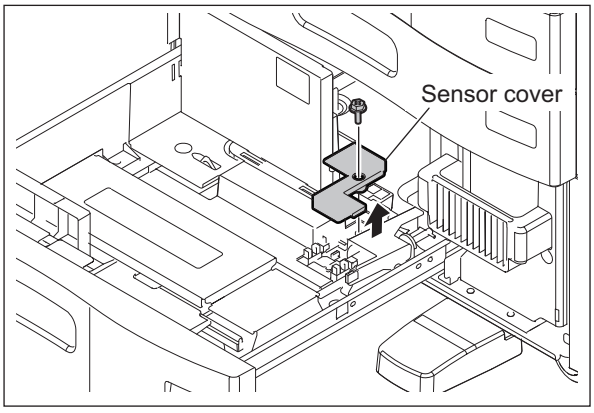



**Fig. 4-40**

(2) Remove 2 screws, and take off the L-shaped plate and sensor bracket.

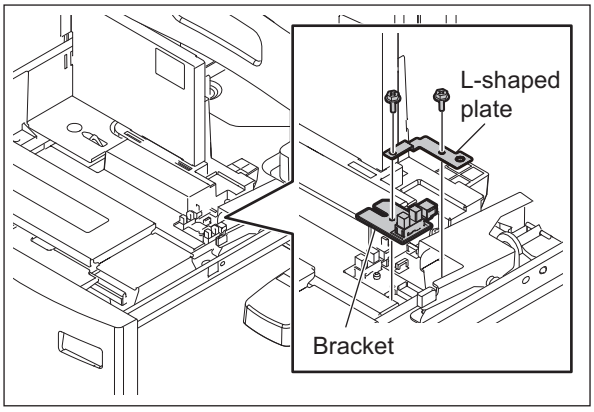



**Fig. 4-41**

(3) Disconnect 1 connector and release 3 latches to remove the end fence stop position sensor.

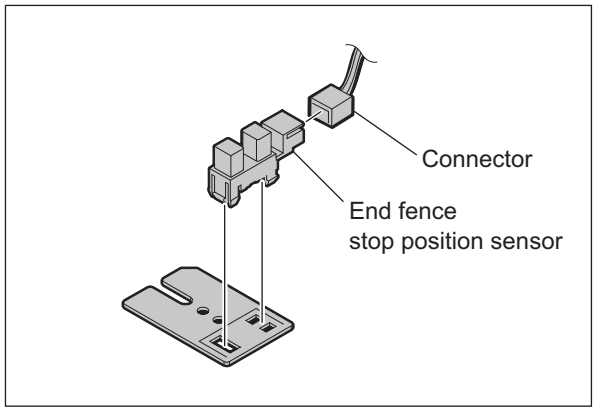



**Fig. 4-42**

**Notes:**

Be careful about the position to attach the end fence stop position sensor as it differs depending on the paper size.

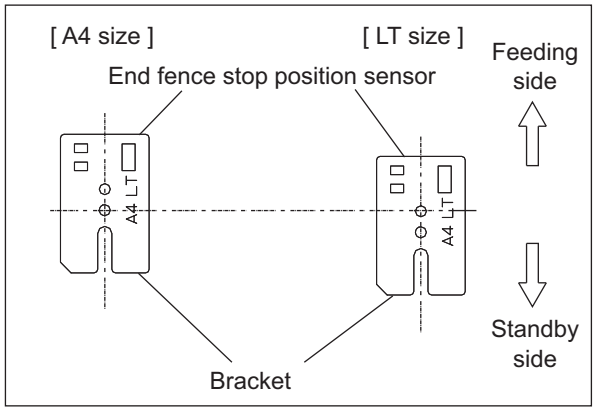



**Fig. 4-43**

### [D] Standby side paper mis-stacking detection sensor (S11)

(1) Take off the standby side tray.
📖 P. 4-1 "[A] Standby side tray"
(2) Pull out the feeding side tray.
(3) Disconnect 1 connector and release 3 latches to remove the standby side paper mis-stacking detection sensor.

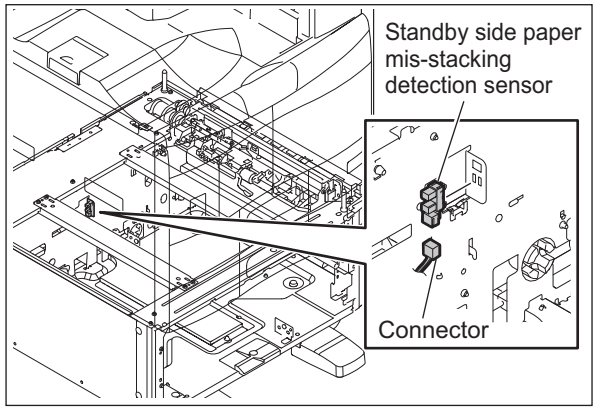



**Fig. 4-44**

### [E] Feeding side bottom sensor (S4)

(1) Take off the standby side tray.
🕮 P. 4-1 "[A] Standby side tray"
(2) Take off the feeding side tray.
🕮 P. 4-2 "[B] Feeding side tray"
(3) Disconnect 1 connector and release 3 latches to remove the feeding side bottom sensor.

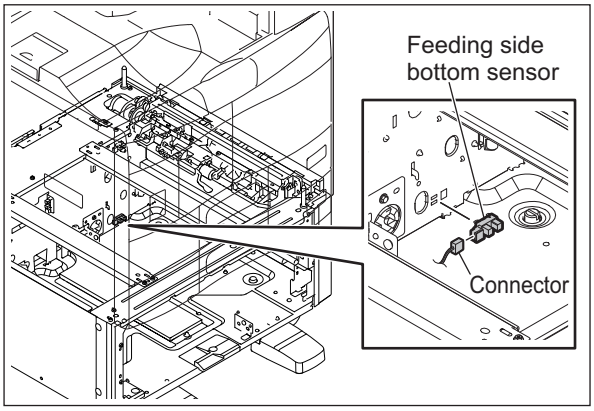



**Fig. 4-45**

### [F] Feeding side paper stock sensor (S9)

(1) Take off the standby side tray.
🕮 P. 4-1 "[A] Standby side tray"
(2) Take off the feeding side tray.
🕮 P. 4-2 "[B] Feeding side tray"
(3) Take off the LCF transport motor assembly.
🕮 P. 4-12 "[A] LCF transport motor assembly"
(4) Disconnect 1 connector and release 3 latches to remove the feeding side paper stock sensor.

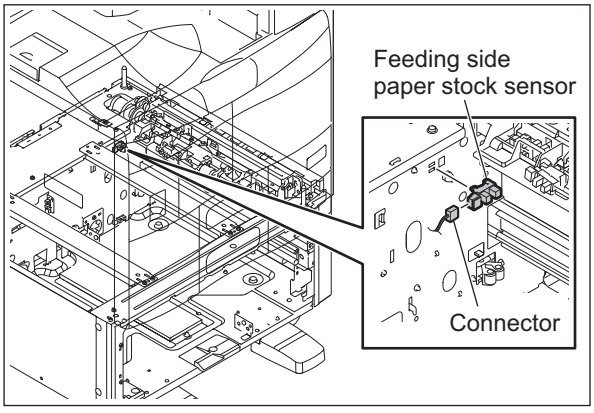



**Fig. 4-46**

### [G] Feeding side empty sensor (S7)

(1) Take off the feeding unit.
📖 P. 4-7 "4.3 Feeding Unit"

(2) Release 3 latches with the actuator activated.

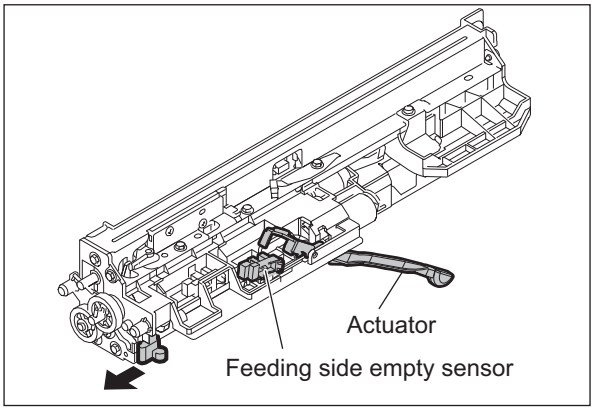



**Fig. 4-47**

(3) Disconnect 1 connector and remove the feeding side empty sensor.

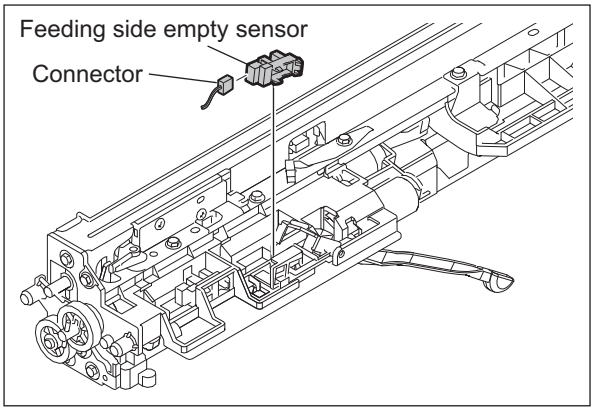



**Fig. 4-48**

### [H] Tray-up sensor (S3)

(1) Take off the feeding unit.
📖 P. 4-7 "4.3 Feeding Unit"

(2) Release 3 latches with the actuator activated.

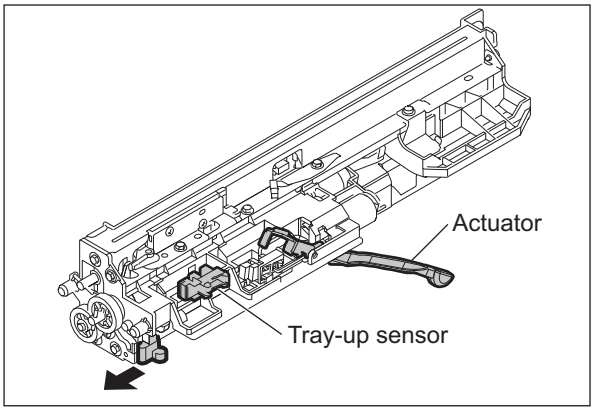



**Fig. 4-49**

(3) Disconnect 1 connector and remove the tray-up sensor.

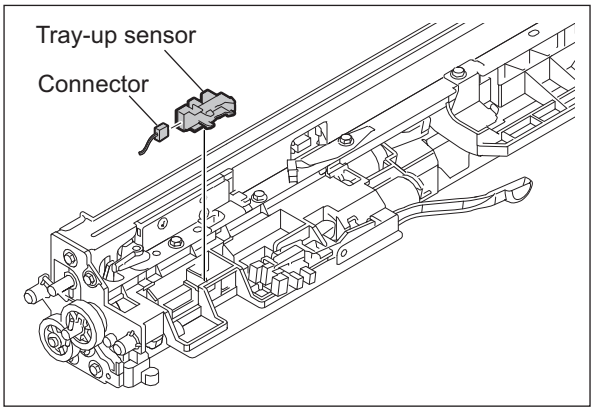



**Fig. 4-50**

**[I] Transport sensor (S2)**

(1) Take off the feeding unit.
📖 P. 4-7 "4.3 Feeding Unit"
(2) Remove 1 screw and take off the sensor bracket.
(3) Release the harness from the 1 harness clamp.

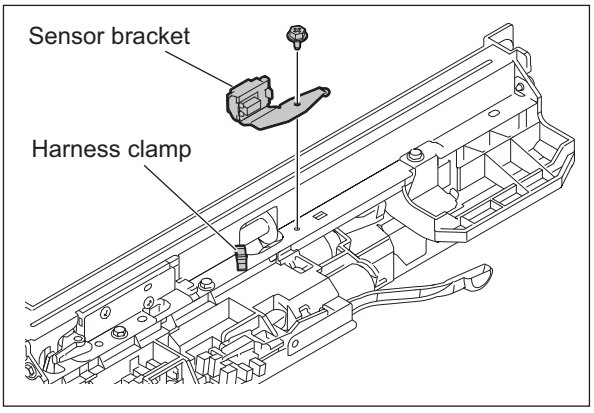



**Fig. 4-51**

(4) Disconnect 1 connector and release 3 latches to remove the transport sensor.

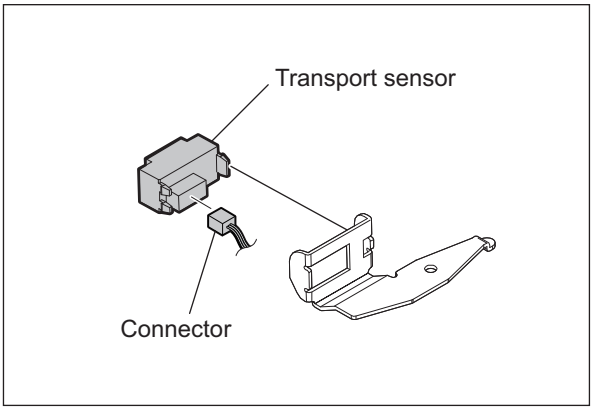



**Fig. 4-52**

# 4.8 Switch

### [A] Feeding side drawer detection switch (S10)

(1) Take off the feeding side tray.
🕮 P. 4-2 "[B] Feeding side tray"
(2) Take off the LCF transport motor assembly.
🕮 P. 4-12 "[A] LCF transport motor assembly"
(3) Disconnect 1 connector and release 2 latches from the rear side to remove the feeding side drawer detection switch.

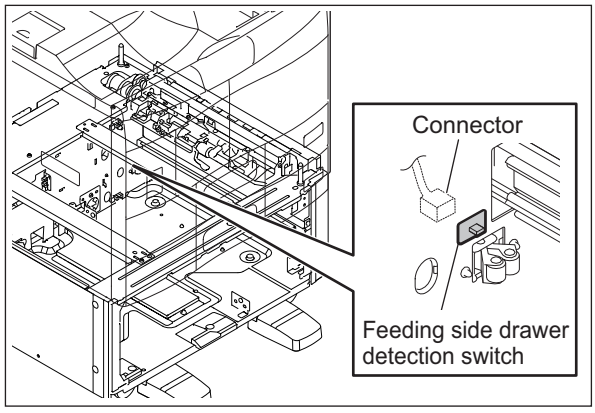



**Fig. 4-53**

### [B] Jam access cover open/close detection switch (S1)

(1) Take off the rear cover.
🕮 P. 4-5 "[H] Rear cover"
(2) Open the jam access cover.
(3) Disconnect 1 connector.
(4) Remove 1 screw and take off the switch bracket.

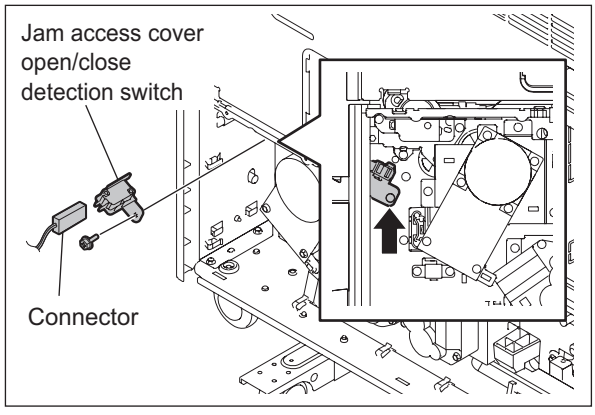



**Fig. 4-54**

(5) Remove 1 screw and remove the jam access cover open/close detection switch.

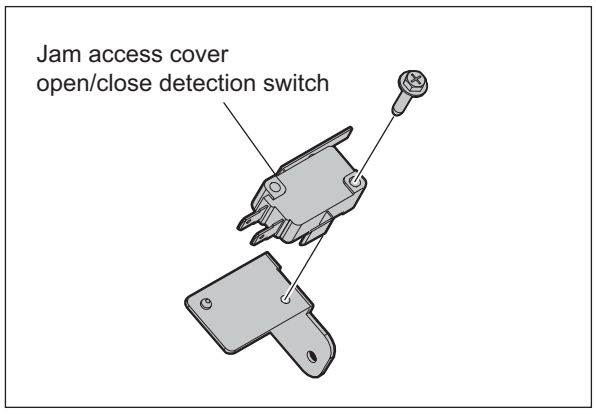



**Fig. 4-55**

# 5. ELECTRIC CIRCUIT

## 5.1 Harness Diagram

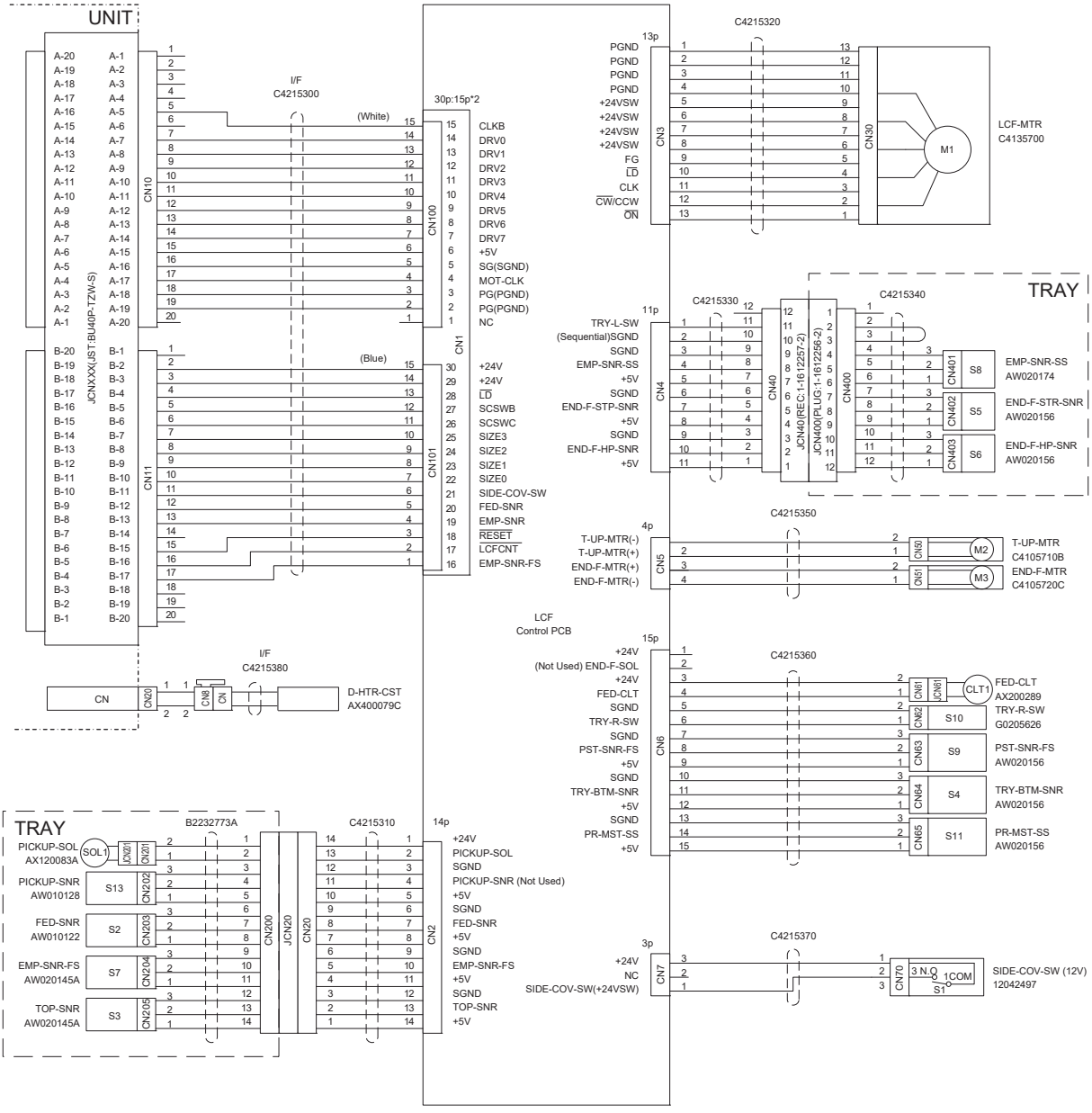



**Fig.5-1**

# 5.2 Circuit Diagram

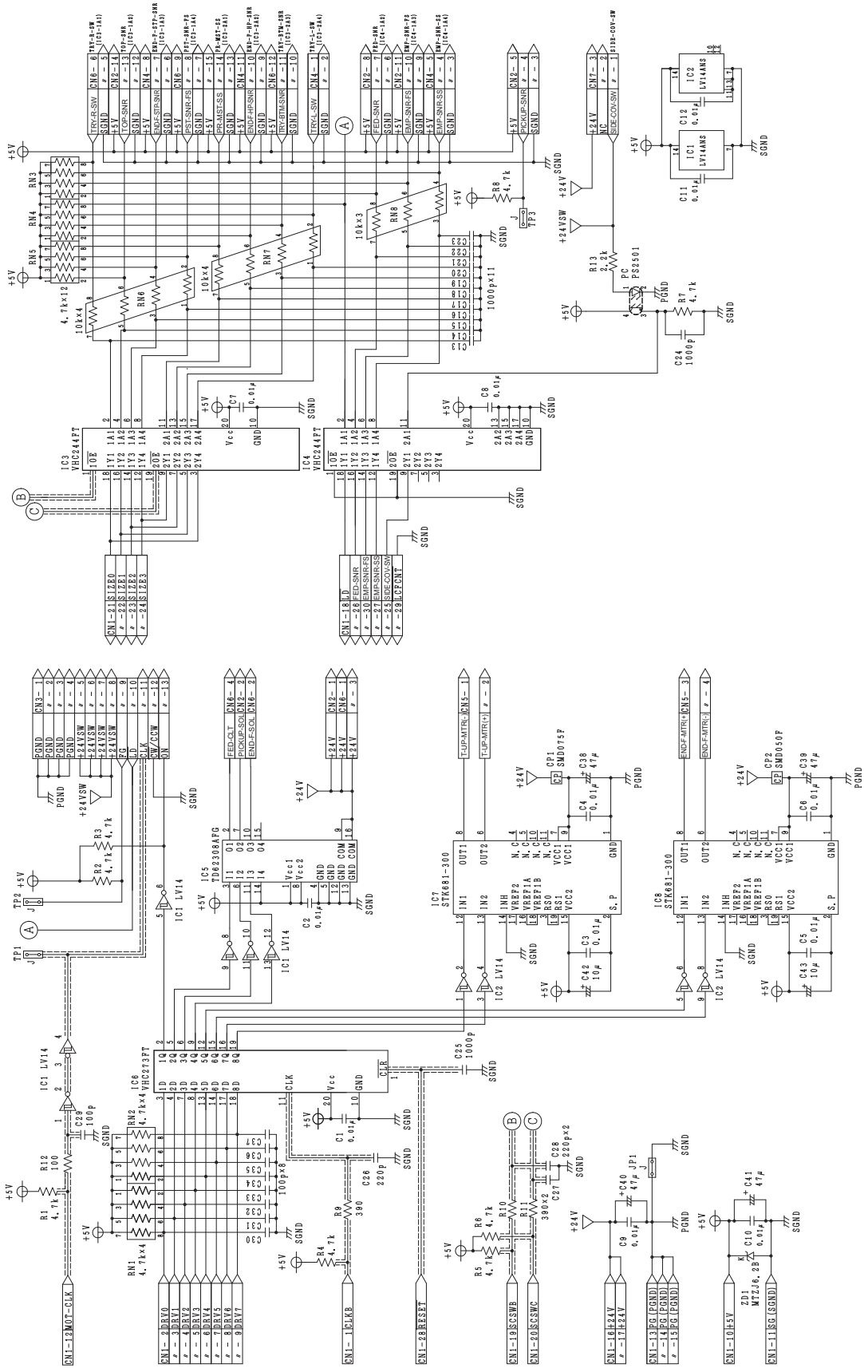


**Fig.5-2**

# 5.3 PC Board

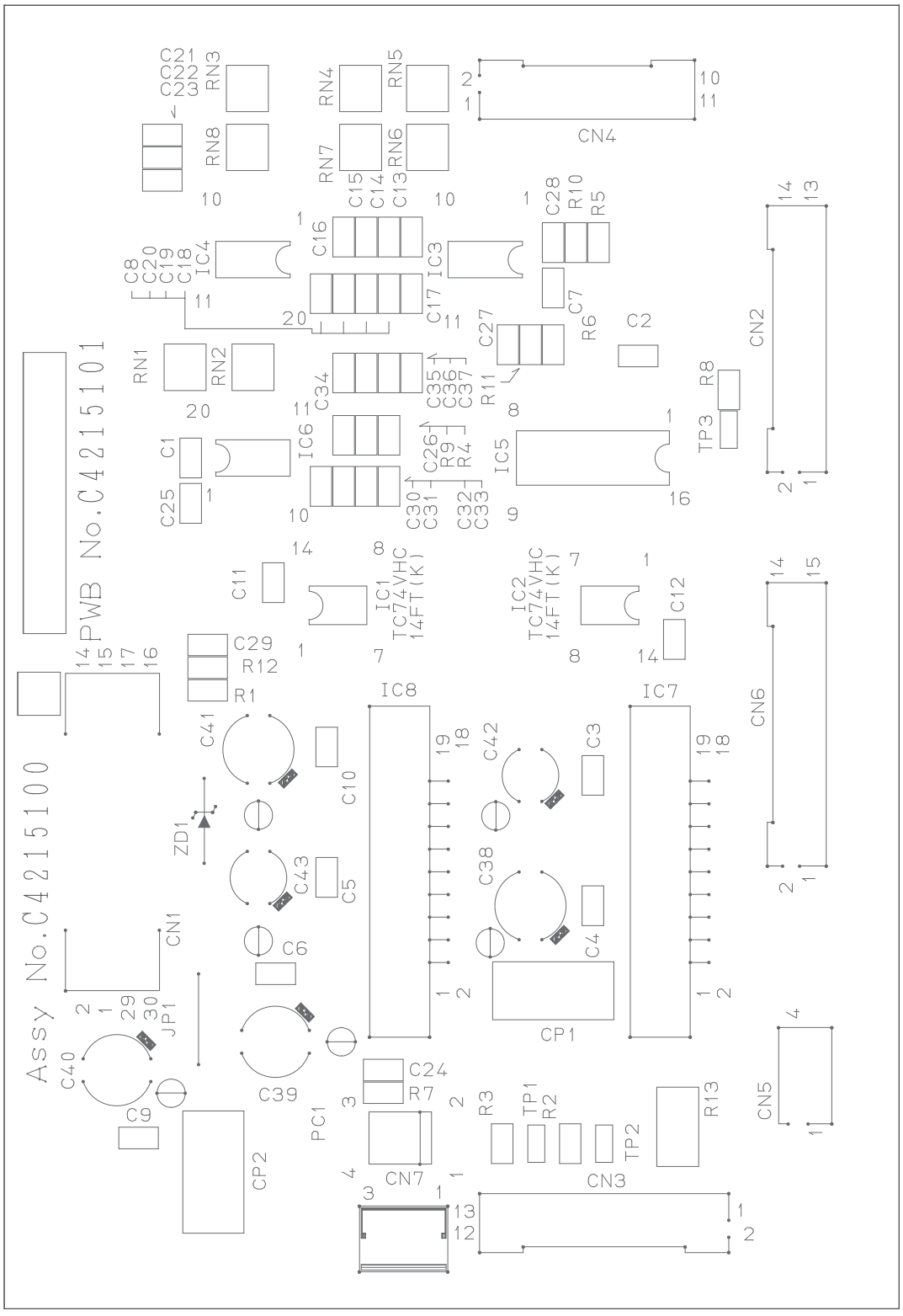



**Fig.5-3**

# 6. PERIODIC MAINTENANCE

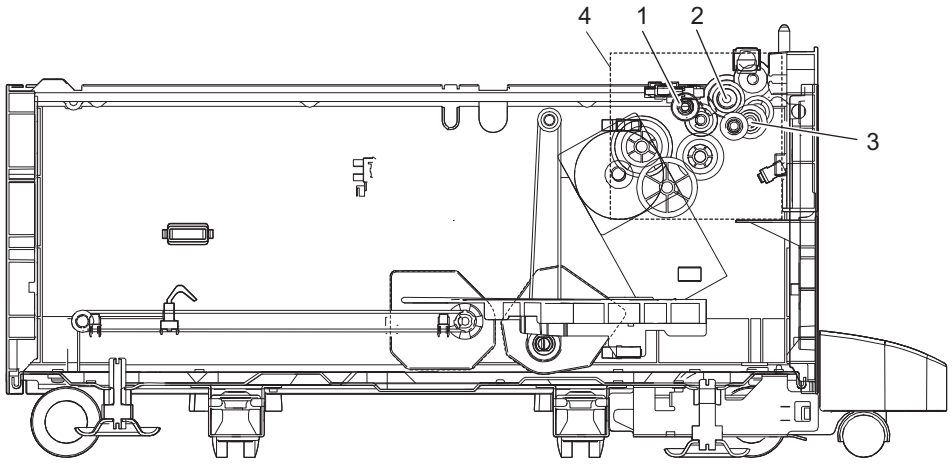



**Fig.6-1**

Symbols used in the checklist

| Cleaning | Lubrication/Coating | Replacement | Operation check |
|---|---|---|---|
| A: Clean with alcohol | W1: White grease (Molykote EM-30L) | Value: Replacement cycle<br>R: Replace if deformed or damaged | O: After cleaning or replacement, confirm there is no problem. |

Preventive Maintenance Checklist

**Notes:**

Page-Item (P-I) is described in the column of the Parts list.

| Items to check | | Cleaning | Lubrication/ Coating | Replacement (x 1,000 sheets) | Operation check | Parts list <P-I> | Remarks |
|---|---|---|---|---|---|---|---|
| 1 | Pickup roller | A | | 160 | | 4-4 | |
| 2 | Feed roller | A | | 160 | | 4-4 | |
| 3 | Separation roller | A | | 160 | | 5-8 | |
| 4 | Drive gear (tooth face) | | W1 | | | | |

# REVISION RECORD

### Ver.05a

| Ver.04 <2017.03.31> | |
|---|---|
| **Page** | **Contents** |
| 4-34 | Corrected information for S13 |

### Ver.05

| Ver05 <2018.06.20> | |
|---|---|
| **Page** | **Contents** |
| 1-2 | The description of KD-1059-B has been added |
| 2-2 to 2-5 | The description of “P-I” has been added. The mistakes have been corrected. |
| 5-1 | Symbols of the electric parts have been added. |

### Ver.04

| Ver.04 <2017.03.31> | |
|---|---|
| **Page** | **Contents** |
| 1-1 | The description has been added. |

### Ver.03

| Ver.03 <2016.11.30> | |
|---|---|
| **Page** | **Contents** |
| 2-2 | Symbol of the “Pickup sensor” has been corrected. |
| 4-21 | Symbol of the “Feeding side drawer detection switch” has been corrected. |

### Ver.02

| Ver.02 <2016.03.11> | |
|---|---|
| **Page** | **Contents** |
| Cover | KD-1059 has been added. |
| General Precautions | The notes have been added. |
| 1-1 | KD-1059 has been added. |
| 3-5 | “3.4 Flow Chart” has been deleted. |

### Ver.01

| Ver.01 <2012.04.01> | |
|---|---|
| **Page** | **Contents** |
| Cover | KD-1031 has been added. |
| - | A note has been added. |
| 1-1 | KD-1031 has been added. |
| 4-3 | KD-1031 has been added. |

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