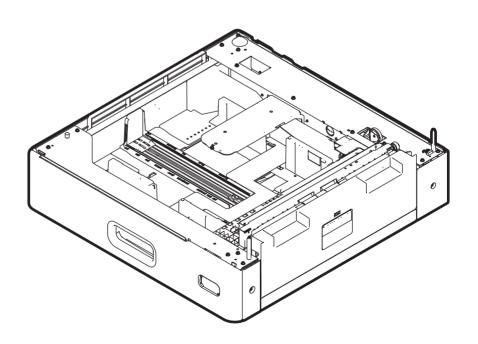
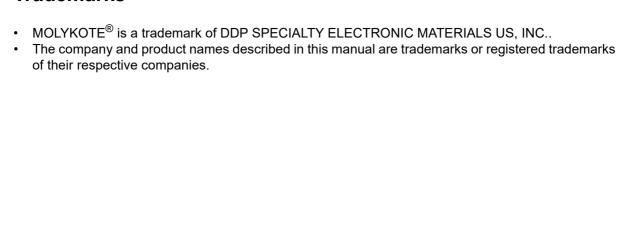
TOSHIBA

SERVICE MANUAL PAPER FEED UNIT MY-1051



Model: MY-1051 Publish Date: December, 2021 File No. SME21002300 R210221X2700-TTEC Ver00 F1 2022-03

Trademarks



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General Precautions for Installation, Servicing and Maintenance for this Option

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

- 1. When installing this option to the MFP, be sure to follow the instructions described in the "Unpacking/Set-Up Procedure for the Equipment" booklet which comes with this option.
- 2. This option shall be installed by an authorized or qualified person.
- 3. This option must be grounded for safety.
- 4. Before starting installation, servicing or maintenance work, be sure unplug the power cable of the MFP first.
- 5. The MFP with this option connected shall be installed near the socket outlet and shall be easily accessible.
- 6. Be sure to fix and plug in the power cable securely after the installation so that no one trips over it.
- 7. 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.
- 8. This option shall be grounded to the specified positions on the MFP frame.
- 9. When servicing or maintaining the MFP with this option connected, be careful about the rotating or operating sections such as gears, pulleys, sprockets, cams, belts, etc.
- 10. When the parts of this option are disassembled, reassembly is the reverse of disassembly unless otherwise noted in this manual or other related documents.
 Be careful not to install small parts such as screws, washers, pins, E-rings, star washers, harnesses in the wrong places.
- 11. Basically, the MFP with this option connected should not be operated with any parts removed or disassembled.
- 12. When servicing the MFP with this option connected while the power is turned ON, be sure not to touch live sections and rotating/operating sections.
- 13.Be careful not to touch high-temperature sections such as the damp heater and areas around them.
- 14.Be careful not to touch high-voltage sections such as the damp heater and areas around them.
- 15. Delicate parts for preventing safety hazard problems (such as fuses, thermofuses, door switches, sensors, etc. if any) should be handled, installed and adjusted correctly.

16. Tools and instruments

- Use designated jigs and tools.
- Use recommended measuring instruments or equivalents.
- 17. 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.
- 18. The ICs on the PC boards tend to be damaged by static electricity. Therefore, the PC boards must be stored in an anti-electrostatic bag and handled carefully using a wristband.

- Before using the antistatic wrist strap, unplug the power cable of the MFP and make sure that there are no charged objects which are not insulated in the vicinity.
- 19. Regarding the recovery and disposal of the MFP with this option connected, supplies, packing materials, follow the relevant local regulations or rules.
- 20.Return the MFP with this option connected to the original state and check the operation when the service is finished.
- 21. Check the procedures and perform them as described in the Service Manual.
- 22. Make sure you do not lose your balance.
- 23. Avoid exposure to your skin and wear protective gloves as needed.
- 24.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.

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1. SPECIFICATION

Function	Automatic paper feeding unit: single drawer front loading
Paper size	A5-R, B5, B5-R, A4, A4-R, B4, A3
Thickness	Plain paper: 60 g/m ² to 163 g/m ² (16 lb. Bond to 90 lb. Index)
Capacity	Stack height: 60.5 mm or lower (Approx. 550 sheets or lower: 80 g/m²)
Dimensions	575 (W) x 583 (D) x 163 (H) mm (protrusions not included)
Weight	9.6 kg
Power supply	DC 3.3 V, 5 V, 24 V (supplied from MFP), AC 100 V (for damp heater)
Appearance color	Jet black

2. OVERVIEW

2.1 Appearance and Main Components

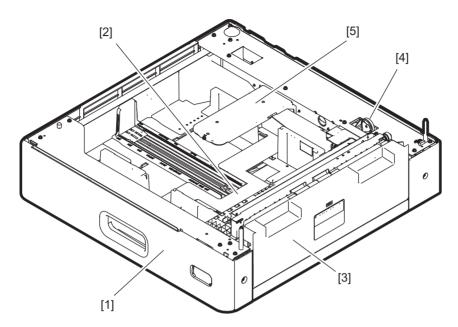


Fig. 2-1

- [1] Drawer
- [2] Drawer tray
- [3] Jam access cover
- [4] Gear
- [5] Drawer damp heater (JPD only)

2.2 Sectional View

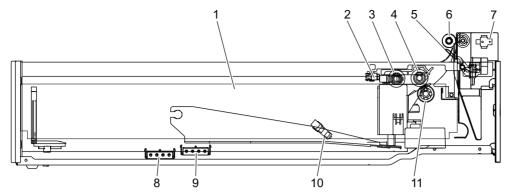


Fig. 2-2

1	Drawer
2	Paper empty sensor
3	Pickup roller
4	Paper feed roller
5	Paper feed sensor
6	Transport roller
7	Jam access cover opening/closing switch
8	2nd drawer paper length detection switch
9	2nd drawer paper width detection switch
10	Paper nearly empty sensor
11	Separation roller

2.3 Electric Parts Layout

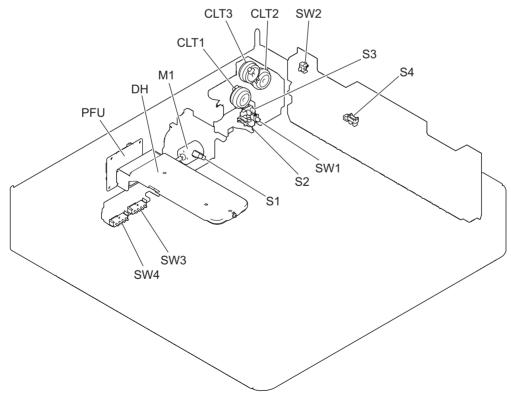


Fig. 2-3

2.4 Symbols and Functions of Various Components

The column "P-I" shows the page and item number in the parts list.

Symbol	Name	Function	Remarks		P-I
M1	Tray-up motor	Lifts up the tray in the drawer.	2.3 Electric Parts Layout	Fig. 2-3	3-34
S1	Paper nearly empty sensor	Detects the paper remaining level in the drawer.	2.3 Electric Parts Layout	Fig. 2-3	3-37
S2	Paper empty sensor	Detects the paper loading level in the drawer.	2.3 Electric Parts Layout	Fig. 2-3	2-3
S3	Drawer tray-up sensor	Detects the lifting status of the tray in the drawer.	2.3 Electric Parts Layout	Fig. 2-3	2-3
S4	Paper feed sensor	Detects paper transportation and paper misfeeding.	2.3 Electric Parts Layout	Fig. 2-3	4-23
SW1	2nd drawer detection switch	Detects the drawer.	2.3 Electric Parts Layout	Fig. 2-3	2-23
SW2	Jam access cover opening/ closing switch	Detects the opening and closing status of the jam access cover.	2.3 Electric Parts Layout	Fig. 2-3	4-25
SW3	2nd drawer paper width detection switch	Detects the paper width.	2.3 Electric Parts Layout	Fig. 2-3	2-1
SW4	2nd drawer paper length detection switch	Detects the paper length.	2.3 Electric Parts Layout	Fig. 2-3	2-1
CLT1	Paper feed clutch	Controls the transmission of the driving force of the pickup roller and the paper feed roller.	2.3 Electric Parts Layout	Fig. 2-3	3-12
CLT2	Transport clutch (H)	Drives the paper feed roller (high speed).	2.3 Electric Parts Layout	Fig. 2-3	3-12
CLT3	Transport clutch (L)	Drives the paper feed roller (low speed).	2.3 Electric Parts Layout	Fig. 2-3	3-12
DH	Drawer damp heater	Prevents condensation inside the drawer (JPD only).	2.3 Electric Parts Layout	Fig. 2-3	-
PFU	PFU PC board	Controls the PFU.	2.3 Electric Parts Layout	Fig. 2-3	2-34

2.5 Signal Block Diagram

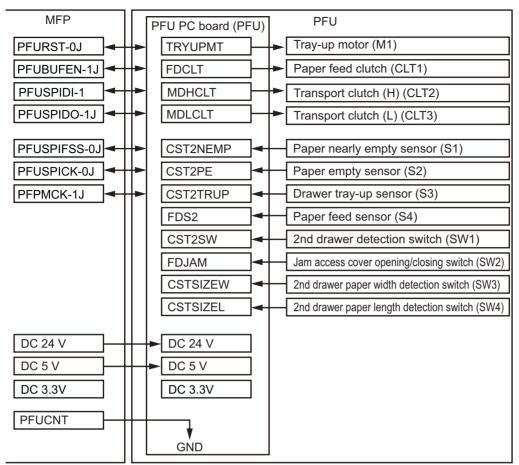


Fig. 2-4

3. OPERATION DESCRIPTION

3.1 Overview

The PFU is an additional paper feed unit installed under the 2nd drawer of the MFP. The PFU consists of 1 drawer, 4 sensors, 4 switches and 3 magnetic clutches.

3.2 Picking Up Mechanism

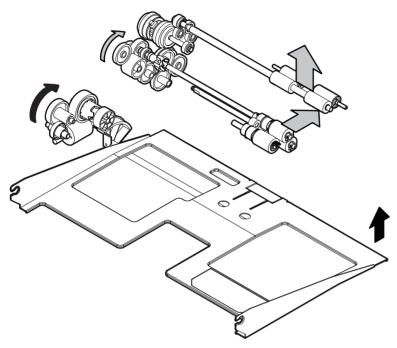


Fig. 3-1

Once the drawer is inserted into the PFU, the drawer tray is lifted up by means of the tray-up motor and then paper can be fed.

Since there is no motor for the paper feeding and transporting in the PFU, paper is fed and transported by transmitting the driving force from the MFP to the gear. The driving force from the MFP is transmitted to the pickup roller, paper feed roller and transport roller through the gear and clutches.

Paper is picked up by the movement of the paper feed clutch. When the pickup clutch is turned ON, the pickup roller and the paper feed roller start rotating and the paper is picked up from the drawer. The paper is separated by the separation roller.

3.3 Paper Feeding Mechanism

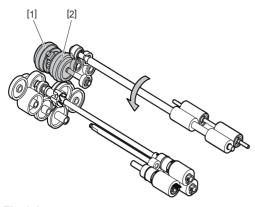


Fig. 3-2

- [1] Transport clutch (L)
- [2] Transport clutch (H)

The transport clutch (L) or (H) is turned ON when it transports paper and transmits the driving force from the MFP to the transport roller through the gear.

The transport clutch (L) is turned ON when the paper is picked up from the PFU drawer and when low speed transportation is performed for printing.

The transport clutch (H) is turned ON when high speed transportation is performed to transport the paper which has passed through the paper feed sensor to the registration position.

High speed transportation is also performed when the paper is transported from the PFP to the registration position. (When the PFP is connected9

3.4 Drawer Damp Heater (JPD only)

A damp heater is located at the upper position of the drawer tray and an AC power supply is connected directly.

The power continues to be supplied when the power cable of the MFP is connected, regardless of its status such as the Energy Saving mode.

When the power is supplied to this damp heater, the temperature variation in the drawer can be decreased and thus the increase of the humidity is avoided.

A heater whose maximum permissible power is 10.8 W is used in the drawer damp heater.

4. DISASSEMBLY AND REASSEMBLY

Notes:

The covers of the actual PFU and pictures differ in the color.

4.1 Rear Cover

(1) Remove 2 screws and take off the rear cover [1].

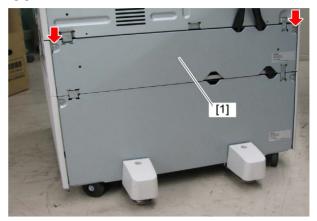


Fig. 4-1

When the PFP, LCF or damp heater is installed

Remove the harness connected in the following order.

1. Remove 1 screw and take off the cover [2].

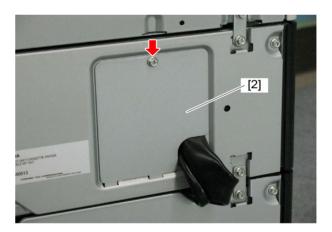


Fig. 4-2

2. Disconnect 1 connector [3], remove 1 screw, and the ground wire [4]. When the damp heater is installed, disconnect its connector [5].

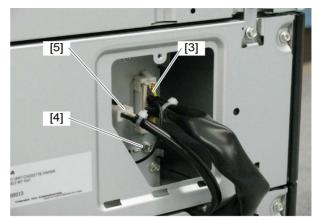


Fig. 4-3

4.2 2nd Drawer Paper Feed Unit

- (1) Pull out the 2nd drawer.
- (2) Turn the locking lever [1] clockwise and take off the 2nd drawer paper feed unit [2].

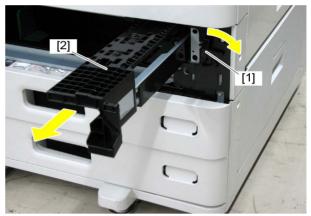


Fig. 4-4

Notes:

When installing it, insert the 2nd drawer paper feed unit by aligning the arrow marked on it to the guide.

4.3 Paper Feed Roller, Separation Roller, Pickup Roller

- (1) Take off the 2nd drawer paper feed unit.

 □ P. 4-2 "4.2 2nd Drawer Paper Feed Unit"
- (2) Slide the guide [1] to the front side.

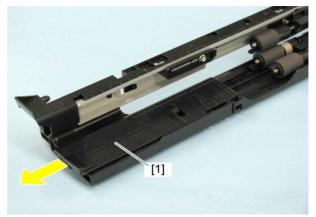


Fig. 4-5

(3) Remove 1 clip [1] and take off the separation roller [2]. Remove 1 clip [3] and take off the paper feed roller [4]. Release the latch and take off the pickup roller [5].

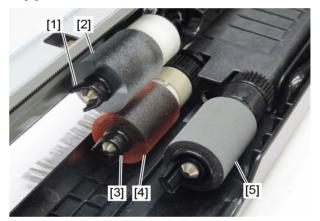


Fig. 4-6

4.4 Drive Unit

- (1) Take off the rear cover.

 P. 4-1 "4.1 Rear Cover"
- (2) Release 2 harness clamps [1], disconnect 1 connector [2] and 1 relay connector [3].

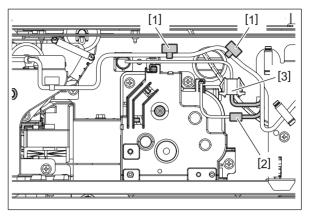


Fig. 4-7

(3) Release the harness from 2 harness clamps [4] and disconnect 2 connectors [5].

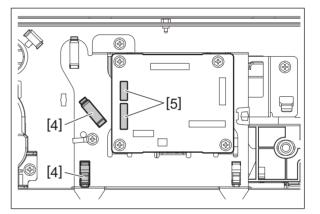


Fig. 4-8

(4) Remove 4 screws and take off the drive unit [3] while pressing the gear [6].

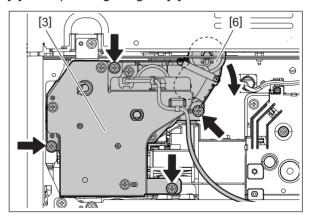


Fig. 4-9

4.5 Paper Feed Clutch

- (1) Take off the drive unit.

 P. 4-4 "4.4 Drive Unit"
- (2) Remove 3 screws. Remove 1 clip [1], 1 bushing [2] and take off the cover [3]. Release the harness from 1 harness clamp [4]. Remove 2 harness clamps [5].

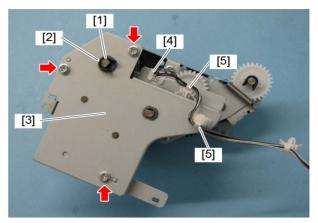


Fig. 4-10

(3) Remove 1 spring [6].Remove 3 screws.Disconnect 1 connector [7] and take off the bracket [8].

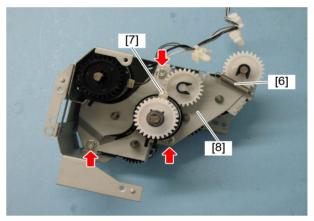


Fig. 4-11

(4) Remove 1 bushing [9], 2 clips [10], 1 gear [11], 1 clip [12] and take off the paper feed clutch [13].

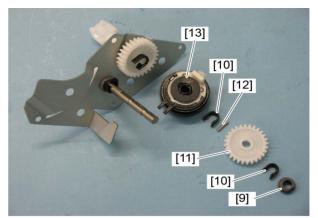


Fig. 4-12

Notes:

Make sure that the direction of the clips is correct when attaching them.

4.6 Transport Clutch (L), Transport Clutch (H)

- (1) Take off the drive unit.

 P. 4-4 "4.4 Drive Unit"
- (2) Remove 3 screws. Remove 1 clip [1] and 1 bushing [2] and take off the cover [3]. Release the harness from 1 harness clamp [4]. Remove 2 harness clamps [5].

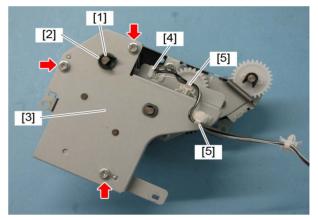


Fig. 4-13

(3) Disconnect 2 connectors [6].

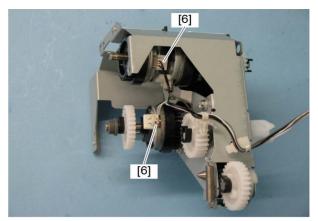


Fig. 4-14

(4) Remove 1 clip [7], 1 gear [8], 1 pin [9] and 1 bushing [10].

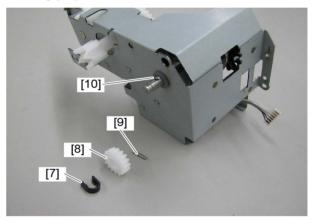


Fig. 4-15

(5) While pulling out the shaft [11], take off the transport clutch (L) [12] and the transport clutch (H) [13].

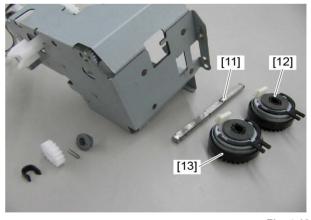


Fig. 4-16

4.7 2nd Drawer Detection Switch (SW1)

- (1) Take off the 2nd drawer paper feed unit.

 P. 4-2 "4.2 2nd Drawer Paper Feed Unit"
- (2) Take off the drive unit.

 P. 4-4 "4.4 Drive Unit"
- (3) Release 2 latches and take off 1 bracket [1].

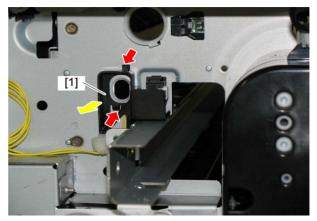


Fig. 4-17

(4) Disconnect 1 connector [2]. Release 2 latches and take off the 2nd drawer detection switch [3] to the front side.

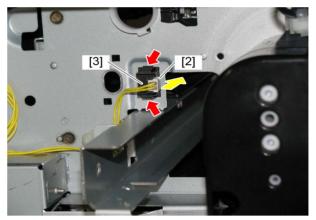


Fig. 4-18

4.8 Tray-up Motor Unit

- (1) Take off the rear cover.

 □ P. 4-1 "4.1 Rear Cover"
- (2) Disconnect 2 connectors [1] and [2].

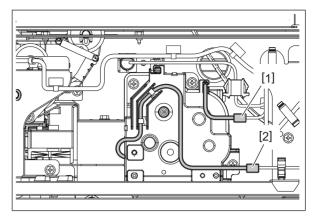


Fig. 4-19

Notes:

Wire the harness after the tray-up motor unit is installed. At that time, be careful not to let the harness get caught.

(3) Remove 3 screws and take off the tray-up motor unit [3].

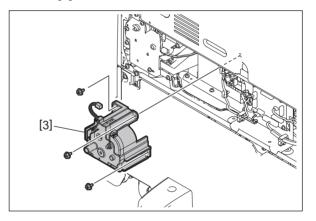


Fig. 4-20

4.9 Tray-up Motor (M1)

- (1) Take off the tray-up motor unit.

 P. 4-9 "4.8 Tray-up Motor Unit"
- (2) Release the harness [1] of the tray-up motor. Release 4 latches [2] and take off the cover [3].

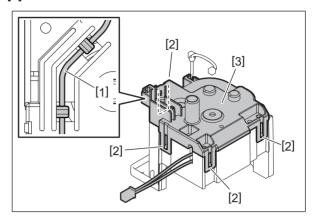


Fig. 4-21

(3) Take off the tray-up motor [4].

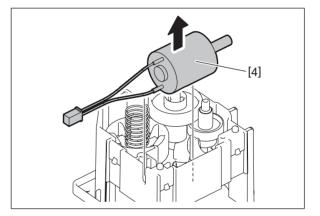


Fig. 4-22

4.10 Paper Nearly Empty Sensor (S1)

- (1) Take off the tray-up motor unit.

 P. 4-9 "4.8 Tray-up Motor Unit"
- (2) Release the harness [1] from the tray-up motor unit.
- (3) Disconnect 1 connector. Release the latch and take off the paper nearly empty sensor [2].

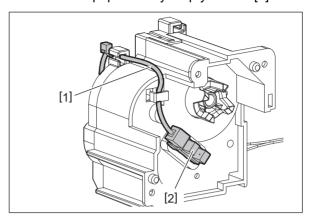


Fig. 4-23

4.11 Paper Empty Sensor (S3), Drawer Tray-up Sensor (S2)

- (1) Take off the 2nd drawer paper feed unit.

 P. 4-2 "4.2 2nd Drawer Paper Feed Unit"
- (2) Take off the tray-up motor unit.

 P. 4-9 "4.8 Tray-up Motor Unit"
- (3) Disconnect 1 relay connector [1] and remove 1 harness clamp [2].

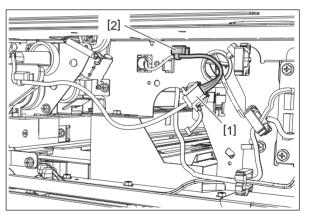


Fig. 4-24

(4) Release 1 latch from the rear side.



Fig. 4-25

(5) Take off the sensor holder [3] from the front side.

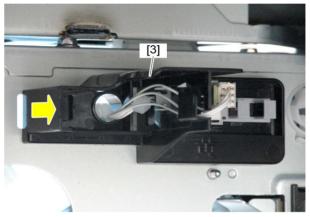


Fig. 4-26

(6) Disconnect 1 connector [4] and take off the paper empty sensor [5]. Disconnect 1 connector [6] and take off the drawer tray-up sensor [7].

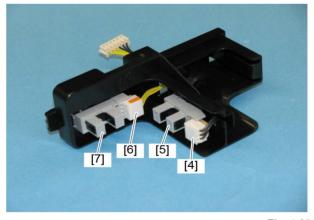


Fig. 4-27

4.12 2nd Drawer Paper Width Detection Switch (SW3), 2nd Drawer Paper Length Detection Switch (SW4)

- (1) Take off the rear cover.
 - P. 4-1 "4.1 Rear Cover"
- (2) Take off the PFU PC board.
 - P. 4-17 "4.16 PFU PC Board (PFU)"
- (3) Remove 1 spring [1]. Disconnect 2 connectors [2].

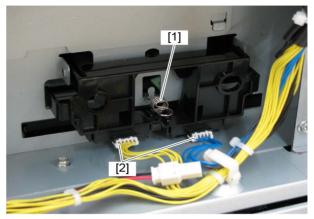


Fig. 4-28

(4) Release 2 latches and take off the switch holder [4].

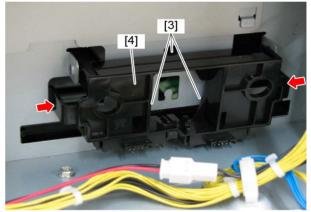


Fig. 4-29

Notes:

When installing the switch holder, align 3 dowels [3] to the frame holes and fix them with the latches.

(5) Release 2 latches and take off the 2nd drawer paper width detection switch [5]. Release 2 latches and take off the 2nd drawer paper length detection switch [6].

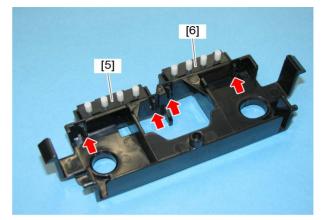


Fig. 4-30

4.13 Jam Access Cover

- (1) Open the jam access cover [1] and disconnect 1 connector [2].
- (2) Remove the block [3].

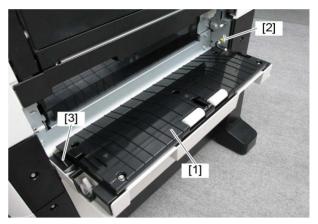


Fig. 4-31

(3) Take off the jam access cover [1] while pushing the fulcrum [4] to the inside.

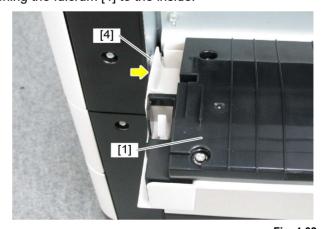


Fig. 4-32

4.14 Jam Access Cover Opening/Closing Switch (SW2)

- (1) Take off the jam access cover.

 P. 4-14 "4.13 Jam Access Cover"
- (2) Remove 5 screws and take off the guide [1].

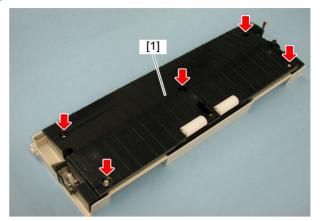


Fig. 4-33

(3) Disconnect 1 connector [2]. Release the latch and take off the jam access cover opening/closing switch [3].

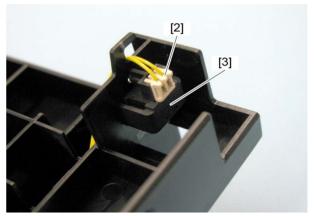


Fig. 4-34

4.15 Paper Feed Sensor (S4)

- (1) Take off the jam access cover.

 P. 4-14 "4.13 Jam Access Cover"
- (2) Remove 5 screws and take off the guide [1].

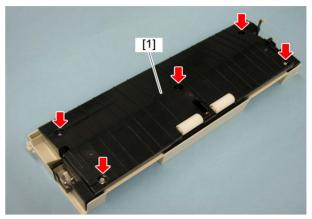


Fig. 4-35

(3) Remove 3 screws and take off the cover [2].

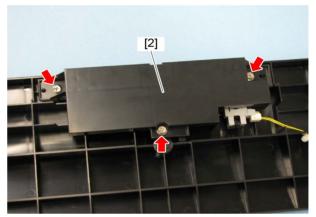


Fig. 4-36

Notes:

There is a spring inside the cover which is subject to pressure. Therefore, pay attention when the cover is taken off as it will come off with great force.

(4) Disconnect 1 connector [3]. Release the latch and take off the paper feed sensor [4].

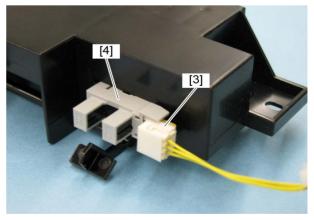


Fig. 4-37

4.16 PFU PC Board (PFU)

- (1) Take off the rear cover.

 □ P. 4-1 "4.1 Rear Cover"
- (2) Disconnect all connectors from the PFU PC board [4]. Release the harness from 5 harness clamps [1].

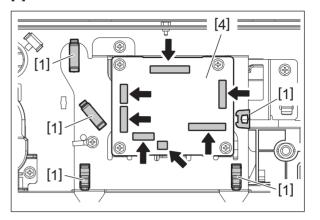


Fig. 4-38

(3) Remove 1 screw and take off the ground wire [2]. Remove 1 screw and take off the bracket [3].

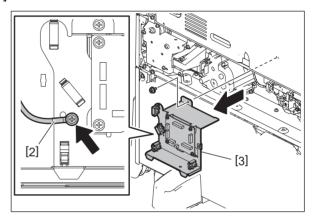


Fig. 4-39

(4) Remove 4 screws and take off the PFU PC board [4].

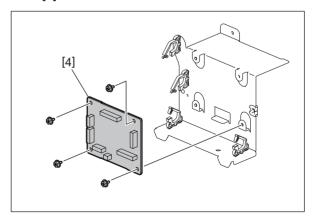


Fig. 4-40

4.17 Damp Heater (DH)

Notes:

Be sure to unplug the power cable before starting this work.

- (1) Pull out the 2nd drawer.
- (2) Remove 2 screws.



Fig. 4-41

(3) Slide the damp heater [1] to the paper feed side. Disconnect 1 connector [2] and take off the damp heater [1].

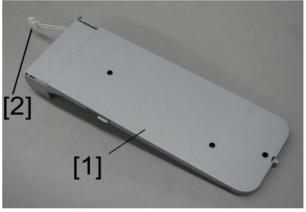


Fig. 4-42

5. ADJUSTMENT

5.1 Adjustment of the clearance of the paper and side guide

If the clearance between the paper and the side guide is too wide, it can be adjusted to between 0 and 1 mm using the following procedure.

- (1) Pull out the drawer.
- (2) Move the side guide [1] and loosen 2 screws.



Fig.5-1



Fig.5-2

(3) Move the side guide lock adjustment piece [1] to the front and tighten the screw. (Move 0.5 mm.)

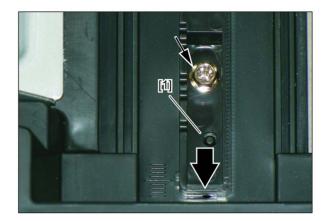


Fig.5-3

5.2 Drawer separation roller pressure force adjustment

If abnormal paper feeding or multiple paper feeding has occurred frequently before the preventive maintenance time of the separation roller, this may be improved by adjusting the pressure force of the separation roller.

Notes:

- Before performing this adjustment, take a memo of the pre-adjustment setting position.
- By performing the adjustment, the occurrence of abnormal paper feeding or multiple paper feeding will increase. If necessary, give sufficient explanation to the users.
- · Perform the adjustment carefully depending on the paper.
- (1) Remove the paper feed unit.

 P. 4-2 "4.2 2nd Drawer Paper Feed Unit"
- (2) Remove 1 screw and then attach it temporarily into the oblong hole next to it.

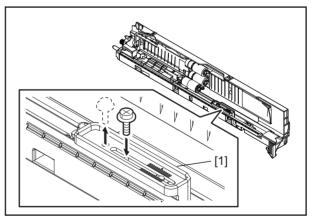


Fig.5-4

Notes:

Make a mark for the installation position of the holder [1] in advance.

- (3) Move the holder [1] and perform the adjustment as below.
 - To solve multiple paper feeding: Move the holder [1] to the rear side (A). (Abnormal paper feeding tends to occur.)
 - To solve abnormal paper feeding: Move the holder [1] to the front side (B). (Multiple feeding tends to occur.)

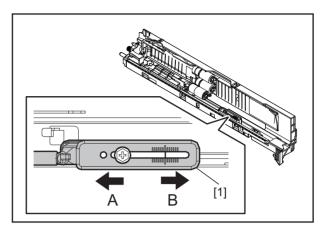


Fig.5-5

Notes:

The recommended moving distance of the holder [1] is within 1 or 2 scale marks.

6. TROUBLESHOOTING

For details about the troubleshooting for the PFU, refer to "ERROR CODE AND TROUBLESHOOTING" in the Service Manual for the MFP.

7. PERIODIC MAINTENANCE

Symbols and values used in the checklist

Item	Explanation		
Cleaning	A: Clean with alcohol		
Lubrication/Coating	W1: White grease (Molykote EM-30L)		
Replacement	Value: Replacement cycle R3: Replace if deformed or damaged		
Operation check	O: After cleaning or replacement, confirm there is no problem.		

Notes:

Cleaning and lubrication should be performed at the time of the preventive maintenance of the MFP. Lubricate the replacement parts according to the replacement cycle.

The replacement cycle of the parts in the feeding section equals to the number of sheets fed from each paper source.

Be careful not to put oil on the rollers, belts and belt pulleys when lubricating.

The column "P-I" shows the page and item number in the parts list.

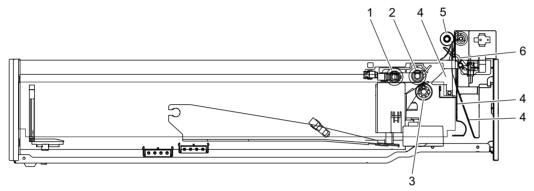


Fig. 7-1

Item		Cleaning	Lubricat ion/ Coating	Replacement		Operation	
				(x 1,000 sheets)	(x 1,000 drive counts)	check	<p-l></p-l>
1	Pickup roller	Α		80			5-26
2	Paper feed roller	Α		80			5-36
3	Separation roller	Α		80			5-30
4	Guide	Α					2-6, 4-1, 4-11
5	Transport roller	Α					4-3
6	Paper feed sensor	А					4-22, 4- 23

8. HARNESS DIAGRAM

8.1 Harness Diagram

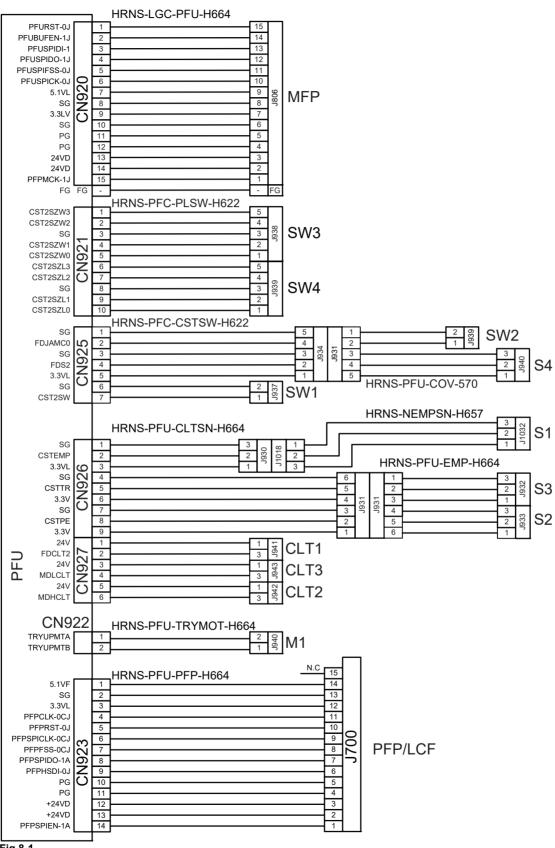


Fig.8-1

REVISION RECORD

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