SERVICE MANUAL

Monochrome Laser Printer

EPSON EPL-N2050 Optional Units

COLOR IMAGING EPSON

EPSON®

SEPG99010

Notice:

- All rights reserved. No part of this manual may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SEIKO EPSON CORPORATION.
- The contents of this manual are subject to change without notice.
- All efforts have been made to ensure the accuracy of the contents of this manual. However, should any errors be detected, SEIKO EPSON would greatly appreciate being informed of them.
- The above not withstanding SEIKO EPSON CORPORATION can assume no responsibility for any errors in this manual or the consequences thereof.

PRECAUTIONS

Precautionary notations throughout the text are categorized relative to 1) Personal injury and 2) Damage to equipment.

Signals a precaution which, if ignored, could result in serious or fatal personal injury. Great caution should be exercised in performing procedures preceded by a WARNING heading.

Signals a precaution which, if ignored, could result in damage to equipment.

The precautionary measures itemized below should always be observed when performing repair/maintenance procedures.

DANGER

1. ALWAYS DISCONNECT THE PRODUCT FROM THE POWER SOURCE AND PERIPHERAL DEVICES PERFORMING ANY MAINTENANCE OR REPAIR PROCEDURES.
2. NOWORK SHOULD BE PERFORMED ON THE UNIT BY PERSONS UNFAMILIAR WITH BASIC SAFETY MEASURES AS DICTATED FOR ALL ELECTRONICS TECHNICIANS IN THEIR LINE OF WORK.
3. WHEN PERFORMING TESTING AS DICTATED WITHIN THIS MANUAL, DO NOT CONNECT THE UNIT TO A POWER SOURCE UNTIL INSTRUCTED TO DO SO. WHEN THE POWER SUPPLY CABLE MUST BE CONNECTED, USE EXTREME CAUTION IN WORKING ON POWER SUPPLY AND OTHER ELECTRONIC COMPONENTS.

WARNING

1. REPAIRS ON EPSON PRODUCT SHOULD BE PERFORMED ONLY BY AN EPSON CERTIFIED REPAIR TECHNICIAN.
2. MAKE CERTAIN THAT THE SOURCE VOLTAGES IS THE SAME AS THE RATED VOLTAGE, LISTED ON THE SERIAL NUMBER/RATING PLATE. IF THE EPSON PRODUCT HAS A PRIMARY AC RATING DIFFERENT FROM AVAILABLE POWER SOURCE, DO NOT CONNECT IT TO THE POWER SOURCE.
3. ALWAYS VERIFY THAT THE EPSON PRODUCT HAS BEEN DISCONNECTED FROM THE POWER SOURCE BEFORE REMOVING OR REPLACING PRINTED CIRCUIT BOARDS AND/OR INDIVIDUAL CHIPS.
4. IN ORDER TO PROTECT SENSITIVE MICROPROCESSORS AND CIRCUITRY, USE STATIC DISCHARGE EQUIPMENT, SUCH AS ANTI-STATIC WRIST STRAPS, WHEN ACCESSING INTERNAL COMPONENTS.
5. REPLACE MALFUNCTIONING COMPONENTS ONLY WITH THOSE COMPONENTS BY THE MANUFACTURE; INTRODUCTION OF SECOND-SOURCE ICs OR OTHER NONAPPROVED COMPONENTS MAY DAMAGE THE PRODUCT AND VOID ANY APPLICABLE EPSON WARRANTY.

PREFACE

This manual describes basic functions, theory of electrical and mechanical operations, maintenance and repair procedures of EPL-N2050 Optional Units. The instructions and procedures included herein are intended for the experienced repair technicians, and close attention should be given to the precautions on the preceding page. Chapters are organized as follows:

Revision Status

Revision	Date of Issue	Description
A	December 2 , 1999	First Release

Contents

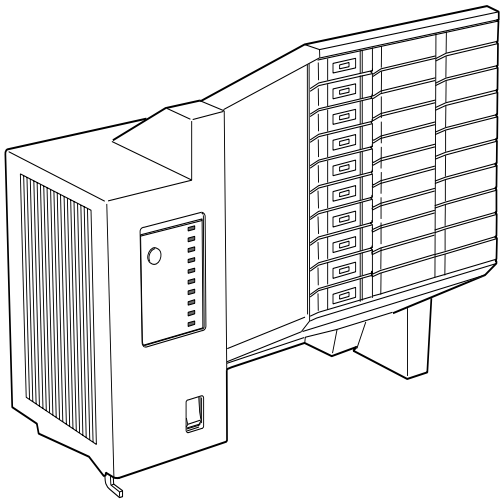
Chapter 1 Multibin Unit

Chapter 2 Duplex Unit

Chapter 3 Shifter

Chapter 4 Envelope Feeder

Chapter 5 Large Capacity Paper Unit



CHAPTER

1

MULTIBIN UNIT

1.1 Installation and Removal of Multibin Unit

1.1.1 Installation

1. Switch off the printer's power.
2. Place one hand under the *Multibin Unit* Bins and the other hand on the *Chute Rear* handle.
3. Position the *Multibin Unit* over the printer.
4. Slide the positioning hook into the slot on the printer *Cover Assy Top*.
5. Lower the rear of the *Multibin Unit* onto the *Cover Assy Top*, carefully lining up the P/J at the bottom rear of the *Multibin Unit* with the corresponding P/J in the open *Cover Option* hole.
6. Press down on the rear of *Multibin Unit* until it snaps into place on the *Cover Assy Top*.
7. Reconnect all AC power cords to the rear of the *Multibin Unit*.

1.1.2 Removal

1. Make sure the printer is off.

NOTE: *Place a thick plate under the bottom plate of Multibin Unit to protect metallic hook and the Chute Lower and the P/J connector at the bottom of Multibin Unit.*

2. Disconnect all AC power cords from the rear of the *Multibin Unit*.
3. Press the two latches that are located at the bottom-rear of the *Multibin Unit* while you lift up the rear of the *Multibin Unit*.
4. Slide the positioning hook out of the *Cover Assy Top* and remove the *Multibin Unit*.

NOTE: *Mount the Cover Option on the Cover Assy Top, if the Multibin Unit is removed from the printer for a long time.*

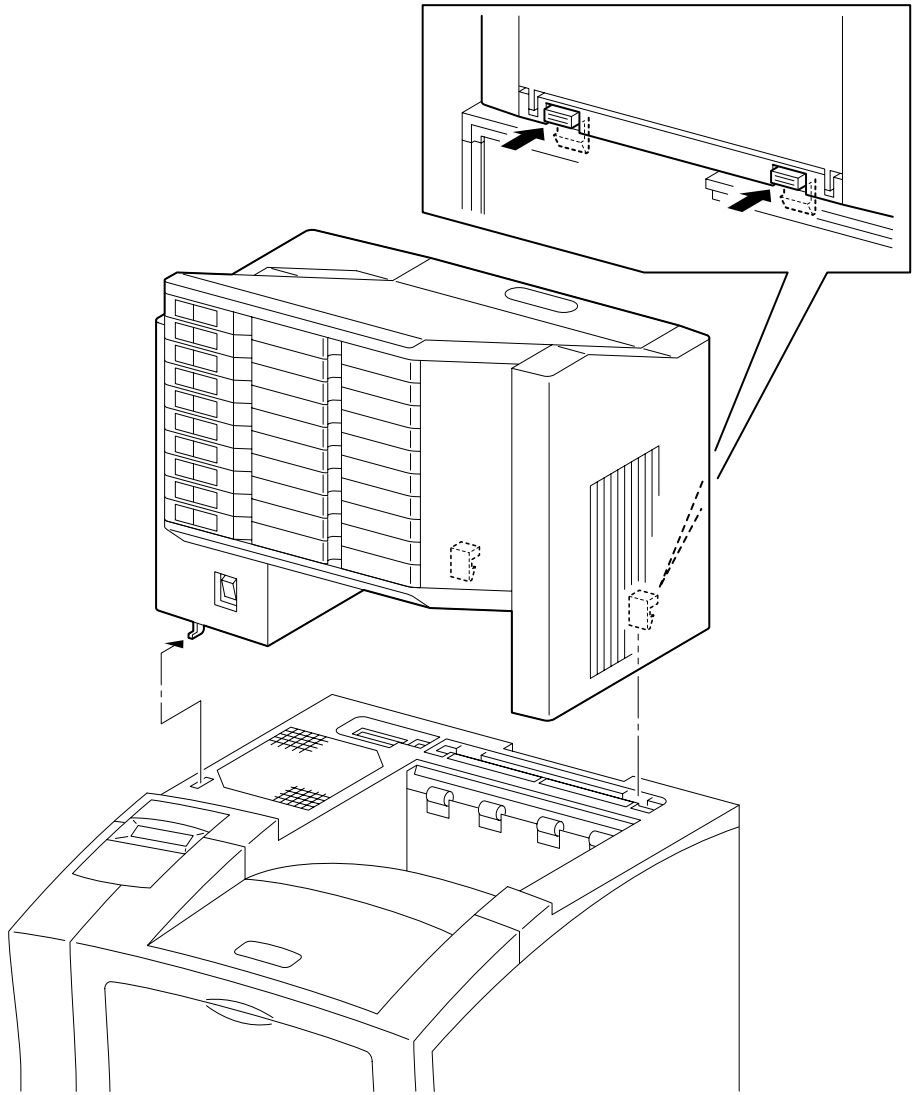


Figure 1-1. Multibin Unit

1.2 Specifications

1.2.1 Features

- The Multibin Unit is installed on top of the printer. This Unit is electrically connected to the printer by connectors, and when the printer is switched on, it can automatically detect if the Multibin Unit is installed, and each bin is full or not full, on condition that the switch of the Multibin Unit is on before the printer is turned on.
- The Multibin Unit has independent drive and logic. The switching flap installed in the upper part of the printer switches the paper path between the printer output tray and the Multibin Unit.
- Each bin can hold up to 45 sheets of paper, and the entire Unit can hold a total of 450 sheets (See Table 1-1 on the right).
- Bins are drawer-type trays that are locked by solenoid and lock levers all the time. All ten bins can be unlocked by pressing the Multibin Open button.
- Password to open each bin can be set. Once passwords are set for the bins, only the authenticated bin can be unlocked.

1.2.2 Basic Specification

- Name: Multibin Unit
- Paper Output Method
  Straight Output, Switching Flap
- Installation: Installed on top of the printer exit (desk top type installed by users)
- Drive Method: Built-in Motor Drive
- Interface: Transmit: Installation of the Unit, bin full, bin open/closed.
  Receive: Signal to determine which bin paper should be output to.
- Paper Type / Size: Standard paper, normal paper (60-105g/m^2: 16-28lb), special paper, and A4 or Letter (LT)
- Capacity

Table 1-1. Capacity

Condition	Capacity of Each Bin	Total Capacity (10 bins)
10°C/30% to 27°C/65%	45 sheets	450 sheets
28°C/85%	30 sheets	300 sheets

NOTE: *When standard paper is used.*

- Paper Feed Standard: Center-line reference for each paper size
- Detection Structure
  - Paper Full: Automatic detection by Photo Sensor + Actuator
  - Bin Open/Closed: Automatic detection by Micro Switch
- Dimension: 403mm (W) x 360mm (D) x 364 mm (H)*
  *Protrusions at the bottom of the Unit are not included.
- Weight: 9.2 kg
- Acoustic Noise: Max. of 51.5db (A) when instald on the printer. (Based on ISO7779)

☐ Power Consumption

Table 1-2. Power Consumption

		100V/115V	220V/240V
Maximum		74W	69W
Average (Continuous Printing)		36W	37W
Average (Stand-by)	All bins closed*	8W	12W
	1 bin open	17W	20W
	5 bin open	33W	34W
	All bins open	(TBD)	(TBD)

*When Energy Star Mode is used.

☐ Power Supply
Universal type which meets the following specifications:

100V Model: 100V/120V 90V-140V (50/60Hz ±3%)
200V Model: 220V/240V 198V-264V (50Hz ±3%)

1.2.3 Paper Specification

☐ Supported Paper Type

- Standard Paper: LT: Xerox-4024
  A4: Xerox-RX80, FX-L
- Normal Paper: 60-105g/m^2 (16-28lb)
  Commonly used copy paper, bond paper, and recycled paper
- Special Paper: Labels, OHP Films

☐ Supported Paper Size

- Letter (216 x 279mm: 8.5 x 11")
- A4 (210 x 297mm)

NOTE: *Use of paper other than the above size will cause paper jam, or such paper cannot be removed from the paper exit tray easily.*
It is therefore necessary to reject such paper the controller operation.

1.2.4 Reliability, Durability, Serviceability

- ☐ MPBF 300,000 pages
- ☐ Printing Volume Maximum 25,000 pages/month
  Average 5,000 pages/month
- ☐ Paper Feeding Reliability
- ☐ Jam Rate (Condition: 18-27°C/20-65%)

	One-side Printing	Duplex Printing
Standard Paper	1/5000	1/3333

- ☐ Durability 600,000 pages or 5 years, whichever comes earlier.
- ☐ Serviceability MTTR: Within 30 minutes

1.2.5 Operating Conditions

Refer to Chapter 1 of the printer's Service Manual.

1.2.6 Electrical Characteristics

- ☐ Leak Current Maximum of 3.5mA (100V/115V)
  Maximum of 3.5mA (220V/240V)

Refer to Chapter 1 of the printer's Service Manual for other items.

1.2.7 Applicable Standards and Regulations

When connected to the printer;

- ☐ Safety Regulations (Laser Radiation)
  None

Refer to Chapter 1 of the printer's Service Manual for other items.

1.2.8 External Dimension

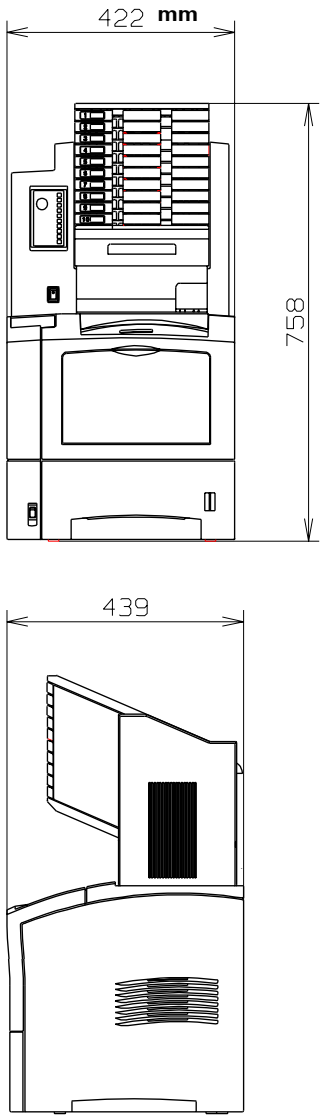


Figure 1-2. External Dimension

1.2.9 Operating Specification

1.2.9.1 How to Open Bins

1. Display is changed to user authentication mode when the Open button on the Multibin Unit is pressed.

   Display: *Enter Password = XXXX*

NOTE: *When the Open button on the Multibin Unit is pressed, the LED of the bin(s) for which password is disabled goes on. At this time, this bin(s) can be opened. If there is no bin for which password is enabled,* ***Enter Password=XXXX*** *is not displayed, and* ***Open Multibin Unit*** *is displayed.*

2. Enter password by pressing 4 switches, and all bins which matched the password will open. The LED of the bin(s) that can be opened goes on, and *Open Multibin Unit* is displayed on the LCD.
   If the entered password is incorrect, *Password Error* is displayed for two seconds, and *Enter Pasword=XXXX* is once again displayed afterwards.
3. The bin(s) will be automatically locked 20 seconds after the Open button is pressed. The Unit goes Off-Line when the Open button is pressed, and for the next 20 seconds, no operation on the panel except for entering password is possible.

   The bin which is opened at that time will be locked immediately after it is closed.
   If no password is entered and 20 seconds passed after *Enter Password=XXXX* is displayed, LCD display returns to the normal state.

NOTE: *Bins can be opened during the following period:*
20 seconds minus time required from the moment the Open button is pressed until the password is authenticated.

From the moment the password is authenticated until the bin will automatically locked, no operation on the panel is possible.

1.2.9.2 Period in which the Multibin Unit can be opened

- ☐ Can be opened — When the printer is in a status of lower priority than XXX Error yyy.
- ☐ Cannot be opened — During the printer is in SelecType mode, or during printing.

NOTE: *Bins can be opened when the Multibin Unit is not installed on the printer (mechanical specification).*

1.2.9.3 Display of Each Bin's LED

- ☐ Paper Loaded: -
- ☐ Locked: Off
- ☐ Unlocked: On
- ☐ Full: Flash

1.3 Troubleshooting

1.3.1 If Paper Jam Occured Inside a Tray

1. Switch off the Multibin Unit and disconnect the power cable.
2. Remove the Unit from the printer.
3. Remove the housing parts (Cover Left, Cover Right, and Cover Top) by releasing the screws.
4. Remove the Stopper Tray (L & R).
5. Unlock the corresponding Stopper Key by releasing the solenoid.
6. Draw out the corresponding tray and take out the jammed paper.
7. Reassemble and install the Unit.

CAUTION

This operation is for service personnel only.

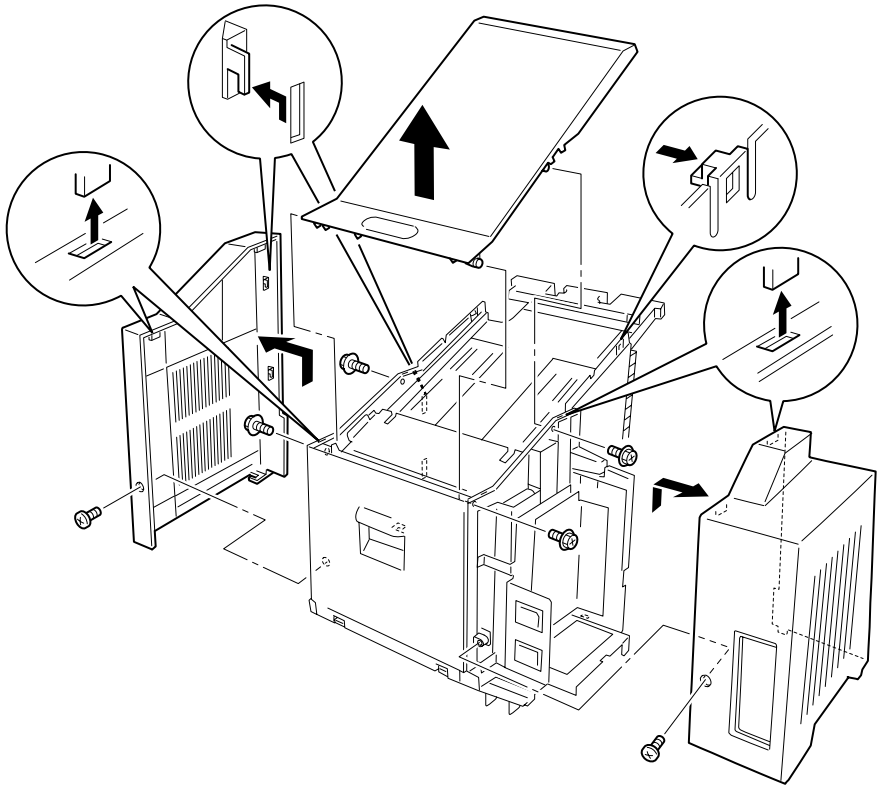


Figure 1-3. Cover Left, Cover Right, Cover Top

1.4 Disassembly and Assembly

This section contains the removal and assembly procedures for the Multibin Unit option.

1.4.1 Preparation

Before you begin any Removal and Assembly Procedure;

1. Switch OFF the main power.
2. If this manual instructs you to remove the Multibin Unit from the base engine, place the Multibin Unit on a stable worktable.
3. Unless otherwise specified, position the Multibin Unit so the rear, including the Low Chute and the P/J connector, hang over the edge of the worktable.
4. Wear an electrostatic discharge wrist strap to protect sensitive Multibin Unit parts from damage.

1.4.2 Notations in the Manual

- Arrows in an illustration show direction of movement when removing a component.
- Slashes in a part name indicate that numerous components share the same heading and function. For example, “Gears In/Feed/Out” refers to Gear In, Gear Feed, and Gear Out.

1.4.3 Cover Left, Cover Top and Cover Right

1.4.3.1 Removal

1. Remove the *Multibin Unit* from the base engine. (See "Removal" on page 10)
2. Remove the screw (located at the rear of the *Cover Left*) that is securing the *Cover Left* to the *Multibin Unit*.
3. Slide the *Cover Left* up, and remove it. (See "Cover Left, Cover Top and Cover Right" on page 17)
4. Remove the screw (located at the rear of the *Cover Right*) that is securing the *Cover Right* to the *Multibin Unit*.
5. Slide the *Cover Right* up, and remove it.
6. Remove the four screws that secure the *Cover Top* to the *Multibin Unit*.
7. Open the *Chute Rear*.
8. Open the *Stopper Key Lock R*, and push a screwdriver into a square hole in the *Stopper Key Lock R*.
9. Press the *Solenoid Assy Link* to unlock the *Multibin Unit* Bins and pull out the top Bin.
10. Release the two *Cover Top* latches (accessed through the open Bin), and carefully lift the front of the *Cover Top* off of the *Multibin Unit*.
11. Remove the *Cover Top*. (See "Cover Left, Cover Top and Cover Right" on page 17)

1.4.3.2 Assembly

1. Remove the screwdriver wedging open *Stopper Key Lock R* and allow the Lock to close.
2. Open the *Chute Rear.*
3. Position the rear of the *Cover Top* at the rear of the *Multibin Unit*.
4. Snap the rear into place first, the lower the *Cover Top* onto the *Multibin Unit*.
5. Press down on the *Cover Top* until it snaps into place.
6. Use four screws to secure the *Cover Top* to the *Multibin Unit*.
7. Position the *Cover Left* at the top of the right side of the *Multibin Unit*.
8. Slide the *Cover Left* down, repositioning as necessary to clear the LCD Panel at the front, and the AC receptacles at the rear.
9. Use one screw to secure the *Cover Left* to the *Multibin Unit*.
10. Position the *Cover Right* at the top of the left side of the *Multibin Unit*.
11. Slide the *Cover Right* down.
12. Use one screw to secure the *Cover Right* to the *Multibin Unit*.
13. Close the *Chute Rear*.
14. Reinstall the *Multibin Unit* onto the base engine. (See "Installation" on page 10)

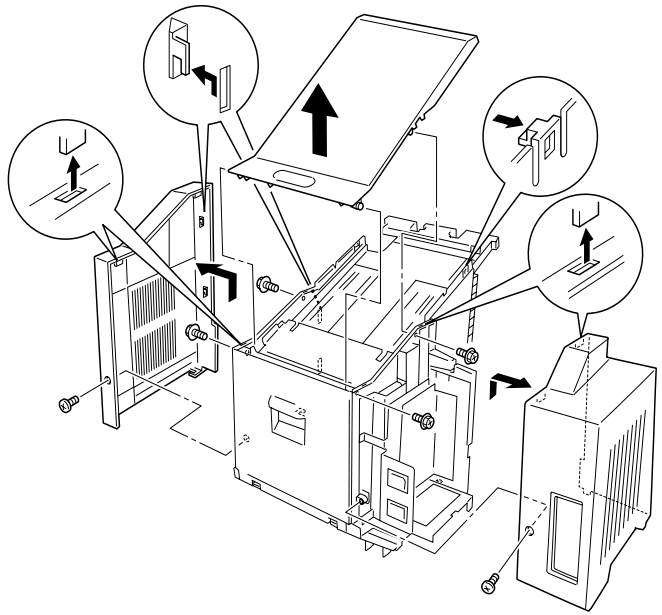


Figure 1-4. Cover Left, Cover Top, Cover Right

1.4.4 Chute Rear and Chute Assy Lower (with 7-10, 24)

1.4.4.1 Removal

1. Remove the *Multibin Unit* from the base engine. (See "Removal" on page 10)
2. Remove the *Cover Left* and *Cover Right.* (See "Cover Left, Cover Top and Cover Right" on page 17)
3. Position the *Multibin Unit* so the rear of the *Multibin Unit* hangs over the edge of the worktable.
4. Open the *Chute Rear.*
5. Remove the screw that is securing the *Support Tape* to the *Chute Rear*.
6. Remove two screws securing the *Eliminator S* to the *Chute Assy Lower*, and remove the *Eliminator S*.
7. Remove two screws securing the *Eliminator* to the *Chute Assy Lower*,and remove the *Eliminator*.
8. Close the *Chute Rear*.
9. Remove the two screws (one at each end of the *Chute Assy Lower)* that are securing the *Chute Assy Lower* to the *Multibin Unit*.
10. Remove the *Chute Assy Lower*. (See "Chute Rear and Chute Assy Lower (with 7-10, 24)" on page 18)
11. Remove the *Chute Rear*.

1.4.4.2 Assembly

1. Reinstall the *Chute Rear* (See the illustration for correct positioning). (See "Chute Rear and Chute Assy Lower (with 7-10, 24)" on page 18)
2. Reinstall the *Chute Assy Lower* (See the illustration for correct positioning).
3. Use two screws to secure the *Chute Assy Lower* to the *Multibin Unit*.
4. Open the *Chute Rear*.
5. Secure the *Eliminator* to the *Chute Assy Lower* with two screws.
6. Secure the *Eliminator S* to the *Chute Assy Lower* with two screws.
7. Use one screw to secure the *Support Tape* to the *Chute Rear*.
8. Close the *Chute Rear*.
9. Reinstall the *Cover Left* and *Cover Right*. (See "Cover Left, Cover Top and Cover Right" on page 17)
10. Reinstall the *Multibin Unit* onto the base engine. (See "Installation" on page 10)

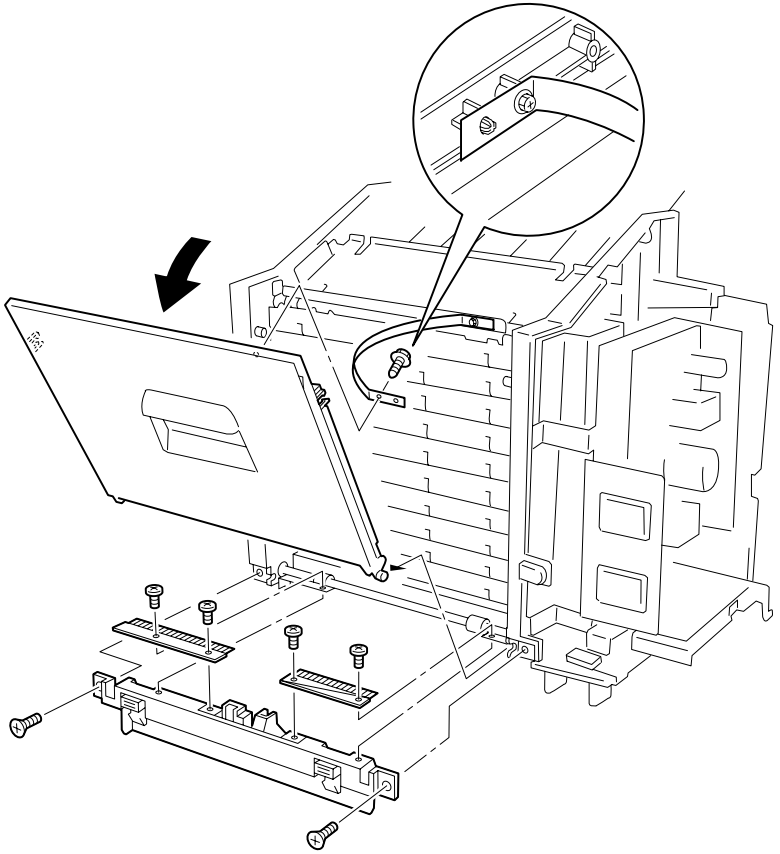


Figure 1-5. Chute Rear and Chute Assy Lower

1.4.5 Sensor Pass INT

1.4.5.1 Removal

1. Remove the *Multibin Unit* from the base engine. (See "Removal" on page 10)
2. Position the *Multibin Unit* so it is resting on the *Chute Rear*.
3. Disconnect J375 from the *Sensor Pass INT*.
4. Use a small, flat screwdriver blade to pry the upper part of the *Sensor Pass INT* away from the *Multibin Unit*, and remove the Sensor.

1.4.5.2 Assembly

1. Position the *Multibin Unit* so it is resting on the *Chute Rear*.
2. Reinstall the lower part of the *Sensor Pass INT* (the bottom clip and the sensor actuator arm) into the corresponding holes in the *Multibin Unit*.
3. Press the upper part of the Sensor against the *Multibin Unit*.
4. Use a small, flat screwdriver blade to press down on the upper clip so it slips into the corresponding hole in the *Multibin Unit*.
5. Make sure the Sensor actuator moves freely and does not bind.
6. Reconnect J375.
7. Reinstall the *Multibin Unit* onto the base engine. (See "Installation" on page 10)

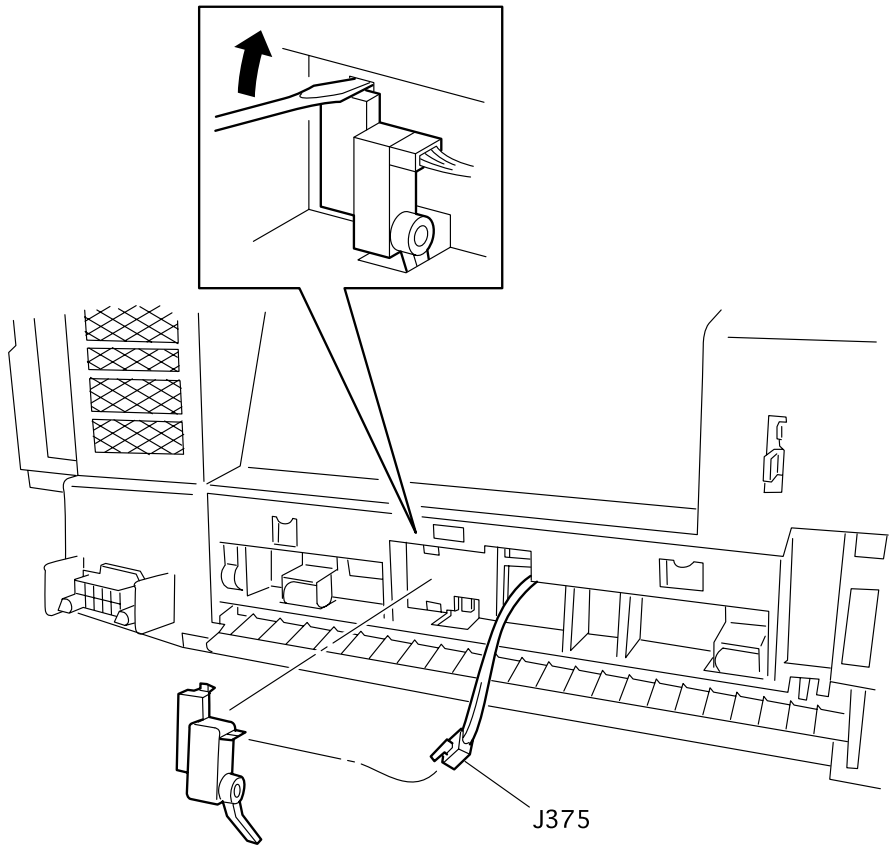


Figure 1-6. Sensor Pass INT

1.4.6 Tray Assy Multibin Unit 2 (with 36-38): Tray1-9 and Tray Assy Multibin Unit 1 (with 37, 38, 42): Tray10

1.4.6.1 Removal

1. Remove the *Multibin Unit* from the base engine. (See "Removal" on page 10)
2. Remove the *Left*, *Right,* and *Cover Tops*.
3. Remove the two screws that are securing the *Stopper Tray: Left* to the *Multibin Unit* frame.
4. Squeeze the latches at the top of the Stopper and remove the *Stopper Tray: Left* from the frame.
5. Remove the two screws that are securing the *Stopper Tray: Right* to the *Multibin Unit* frame.
6. Squeeze the latches at the top of the Stopper and remove the *Stopper Tray: right* from the frame.
7. Remove the four screws that secure the *Plate Assy Top* to the *Multibin Unit*.
8. Keep the *Chute Rear* closed during the remainder of this Removal Procedure.

NOTE: *With the Plate Assy Top removed, the ten Gates and ten Roll Exits tend to slip out of place unless the Chute Rear is closed.*

9. Press in on the *Solenoid Assy R* plunger to open the *Stopper Key Lock R*.
10. Use a screwdriver to wedge the *Stopper Key Lock R* open.
11. Starting with the top *Solenoid Assy L*, press in and hold the Solenoid plunger as you slide out the top *Multibin Unit* tray.
12. Repeat step 10 until you have removed all, or the necessary, *Multibin Unit* trays.

1.4.6.2 Assembly

1. Open the *Chute Rear.*
2. Slide the first Tray half-way into the lowest vacant slot in the *Multibin Unit*.
3. Lift the *Link Assy Paper L and Link Assy Paper R* out of the way.
4. Slide the first Tray all the way into the slot, making sure the *Sensor Stack Full* actuator does not hang up on the edge of the Tray.
5. Lower one *Link Assy Paper L* and one *Link Assy Paper R* onto the bed of the reinstalled Tray.
6. Slide the next Tray all the way into the slot, making sure the *Sensor Stack Full* actuator does not hang up on the edge of the Tray.
7. Lower one *Link Assy Paper L* and one *Link Assy Paper R* onto the bed of the reinstalled Tray.
8. Repeat this process until all of the Trays are reinstalled in the Multibin Unit.
9. Remove the screwdriver wedging open *Stopper Key Lock R* and allow the Lock to close.
10. Reinstall the *Plate Assy Top*.
11. Use four screws to secure the *Plate Assy Top* to the *Multibin Unit*.

NOTE: *Do not fully tighten the screws at this time.*

12. Carefully examine the *Gates* and *Roll Exit*s.
13. Replace any *Gates* or *Roll Exit*s that may have been dislodged during Tray removal or reinstallation.
14. Once all of the *Gate* and *Roll Exit*s are in place, tighten the four screws that secure the *Plate Assy Top* to the *Multibin Unit*.
15. Reinstall the *Stopper Tray: right* into the cutouts in the *Multibin Unit* frame.

16. Use two screws to secure the *Stopper Tray: right*.
17. Reinstall the *Stopper Tray: left* into the cutouts in the *Multibin Unit* frame.
18. Use two screws to secure the *Stopper Tray: left*.
19. Reinstall the *Left*, *Right*, and *Cover Tops*.
20. Reinstall the *Multibin Unit* onto the base engine. (See “Installation” on page 10)

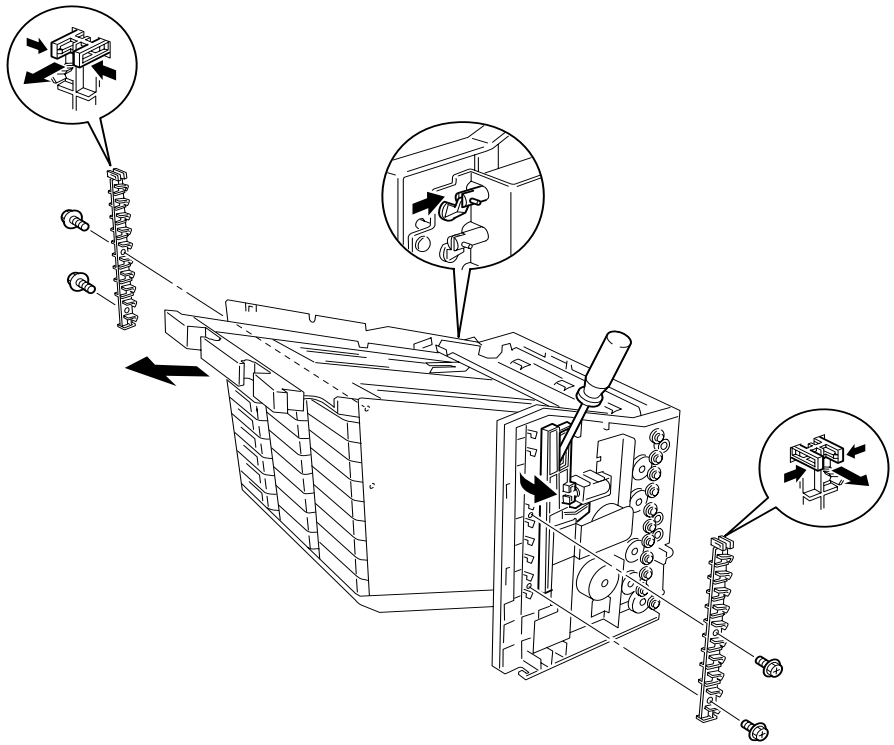


Figure 1-7. Tray Assy Multibin Unit 2 (with 36-38): Tray1-9 and Tray Assy Multibin Unit 1 (with 37, 38, 42): Tray10

1.4.7 Panel Assy, PWBA LED, and Switch Main

1.4.7.1 Removal

1. Remove the *Multibin Unit* from the base engine. (See "Removal" on page 10)
2. Remove the *Cover Left*. (See "Cover Left, Cover Top and Cover Right" on page 17)
3. Remove the two screws that are securing the *Panel Assy Indicator* to the *Multibin Unit* frame.
4. Disconnect J359 from the *PWBA Main*.
5. Disconnect the P/J that is attached to the *Switch Main*.
6. Remove the *Panel Assy Indicator*.
7. Remove the two screws that are securing the *PWBA LED* to the *Panel Assy Indicator*, and remove the *PWBA LED*.
8. Disconnect J360 from the *PWBA LED*
9. Press in on the latches that secure the *Switch Main* to the *Panel Assy Indicator*, and remove the Switch.

1.4.7.2 Assembly

1. Reinstall the *Switch Main* into the opening in the *Panel Assy Indicator.* Position the *Switch Main* so the O is at the bottom and the I is on the top.
2. Reinstall the Button into the opening in the *Panel Assy Indicator*.
3. Reconnect the *PWBA LED* Harness to J360 on the *PWBA LED*.
4. Reinstall the *PWBA LED* into the *Panel Assy Indicator*, making sure the LEDs on the PWB fit into the square opening on the back of the *Panel Assy Indicator*.
5. Use two screws to secure the *PWBA LED* to the *Panel Assy Indicator*.
6. Reconnect the four wire P/J to the *Switch Main*.
7. Reconnect J359 to the *PWBA Main*.
8. Reinstall the *Panel Assy Indicator* onto the *Multibin Unit* frame, by first sliding the tab that is located at the bottom of the Panel into the corresponding hole in the *Multibin Unit* frame, then sliding the Panel into position.
9. Use two screws to secure the *Panel Assy Indicator* to the *Multibin Unit* frame.
10. Reinstall the *Cover Left*. (See "Cover Left, Cover Top and Cover Right" on page 17)
11. Reinstall the *Multibin Unit* onto the base engine. (See "Installation" on page 10)

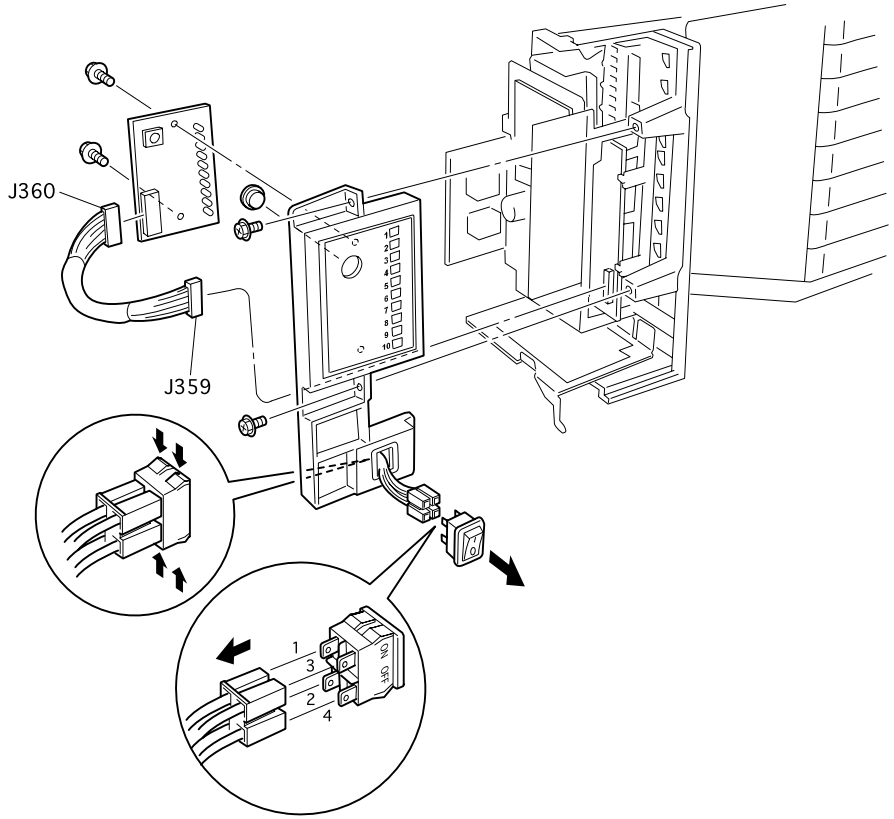


Figure 1-8. Panel Assy, PWBA LED, and Switch Main

1.4.8 Frame Assy LVPS

1.4.8.1 Removal

1. Remove the *Multibin Unit* from the base engine. (See "Removal" on page 10)
2. Remove the *Cover Left*. (See "Cover Left, Cover Top and Cover Right" on page 17)
3. Remove the *Panel Assy Indicator*. (See "Panel Assy, PWBA LED, and Switch Main" on page 22)
4. Squeeze the tie wrap latch to release the tie wrap from the *Multibin Unit* frame, and remove the tie wrap and harness from the frame.
5. Disconnect J350 from the *PWBA LVPS*.
6. Remove the four screws (1 through 4) that are securing the *Frame Assy LVPS* to the *Multibin Unit* frame.
7. Remove ground wires T351 and T355 from the *PWBA LVPS* (secured by screw 3).
8. Remove the screw that is securing ground wire T300 (item I) to the *PWBA LVPS* and remove the wire.

NOTE: *The screw that secures T300 to the PWBA LVPS is different from the other screws on the PWBA LVPS. Do not substitute screws.*

9. Remove the screw that is securing ground wire T353 (item S) to the *PWBA LVPS* and remove the wire.
10. Remove the *Frame Assy LVPS* from the *Multibin Unit* frame.

1.4.8.2 Assembly

1. Reinstall the *Frame Assy LVPS* onto the *Multibin Unit* frame.
2. Reinstall ground wire T353 (item S) onto the *PWBA LVPS* and secure it with one screw.
3. Reinstall ground wire T300 (item I) onto the *PWBA LVPS* and secure it with one screw.

NOTE: *The screw that secures T300 onto the PWBA LVPS is different from the other screws on the PWBA LVPS. Do not substitute screws.*

4. Reinstall the ground wires T351 and T355 onto the *PWBA LVPS* at screw hole 3, and secure them with one screw.
5. Use the other three screws to secure the *PWBA LVPS* to the *Multibin Unit* frame.
6. Reconnect J350 to the *PWBA LVPS*.
7. Press the tie wrap, with the wire harness, into the hole in the *Multibin Unit* frame.
8. Reinstall the *Panel Assy Indicator*. (See "Panel Assy, PWBA LED, and Switch Main" on page 22)
9. Reinstall the *Cover Left*. (See "Cover Left, Cover Top and Cover Right" on page 17)
10. Reinstall the *Multibin Unit* onto the base engine. (See "Installation" on page 10)

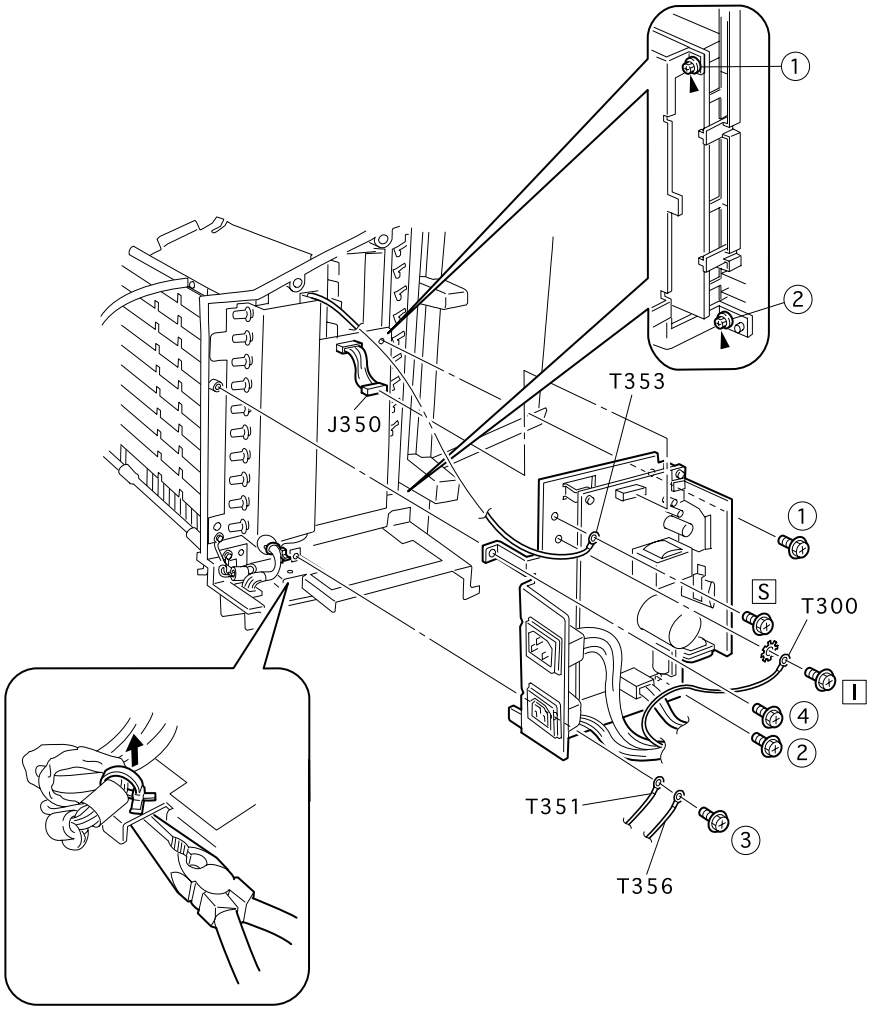


Figure 1-9. Frame Assy LVPS

1.4.9 PWBA Main

1.4.9.1 Removal

1. Remove the *Multibin Unit* from the base engine. (See "Removal" on page 10)
2. Remove the *Cover Left*. (See "Cover Left, Cover Top and Cover Right" on page 17)
3. Remove the *Panel Assy Indicator*. (See "Panel Assy, PWBA LED, and Switch Main" on page 22)
4. Remove the *Frame Assy LVPS*. (See "Frame Assy LVPS" on page 23)
5. Disconnect all of the P/Js that are attached to the *PWBA Main*.

   P/Js 351, 352, 353, 354, 355, 356, 357, 358
6. Press in on the two latches that secure the left side of the *PWBA Main* to the *Multibin Unit* frame, and pull free the left side of the PWB.
7. Slide the right side of the PWB out from under the two tabs that are located on the right.
8. Remove the *PWBA Main*.

1.4.9.2 Assembly

1. Slide the right side of the *PWBA Main* under the two tabs that are located on the right.
2. Position the two holes in the left side of the *PWBA Main* with the two latches on the Multibin Unit frame.
3. Press the left side of the *PWBA Main* onto the tabs until the PWB snaps into place.
4. Reconnect all of the P/Js that were attached to the *PWBA Main*.

   P/Js 351, 352, 353, 354, 355, 356, 357, 358
5. Reinstall the *Frame Assy LVPS*. (See "Frame Assy LVPS" on page 23)
6. Reinstall the *Panel Assy Indicator*. (See "Panel Assy, PWBA LED, and Switch Main" on page 22)
7. Reinstall the *Cover Left*. (See "Cover Left, Cover Top and Cover Right" on page 17)
8. Reinstall the *Multibin Unit* onto the base engine. (See "Installation" on page 10)

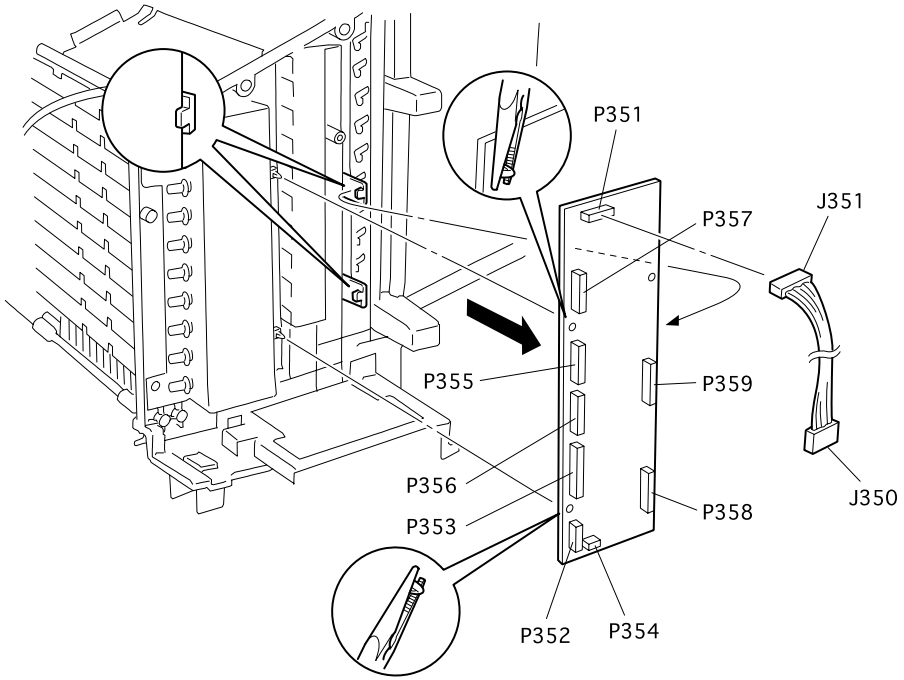


Figure 1-10. PWBA Main

1.4.10 Solenoid Assy Link (with 23-25)

1.4.10.1 Removal

1. Remove the *Multibin Unit* from the base engine. (See "Removal" on page 10)
2. Remove the *Cover Left*. (See "Cover Left, Cover Top and Cover Right" on page 17)
3. Remove the *Panel Assy Indicator*. (See "Panel Assy, PWBA LED, and Switch Main" on page 22)
4. Remove the *Frame Assy LVPS*. (See "Frame Assy LVPS" on page 23)
5. Remove the *PWBA Main*. (See "PWBA Main" on page 25)
6. Remove the four screws that are securing the *Solenoid Assy L* to the *Multibin Unit* frame.

NOTE: *The top right screw also secures the ground wire T354 to the Assembly.*

NOTE: *The bottom left screw also secures the ground wire T358 to the Assembly.*

7. Pull the *Solenoid Assy Link* straight out, and remove it from the *Multibin Unit* frame.

1.4.10.2 Assembly

1. Reinstall the *Solenoid Assy Link* onto the *Multibin Unit* frame.
2. Slide the plunger out of each of the ten solenoids.
3. Align each of the ten *LInk Solenoids* with the ten corresponding openings in the Gates.

NOTE: *If any one of the ten Links fails to line up with the corresponding Gate opening, you will not be able to correct seat the Solenoid Assy Link.*

4. Press the *Solenoid Assy Link* against the *Multibin Unit* frame.
5. Use two screws to secure the *Solenoid Assy Link* to the *Multibin Unit* frame.
6. Reinstall the green ground wire T354 against the top right screw hole in the *Solenoid Assy Link*.
7. Use one screw to secure the ground wire and the Assembly to the *Multibin Unit* frame (item 1).
8. Reinstall the ground wire T358 against the bottom left screw hole in the *Solenoid Assy Link*.
9. Use one screw to secure the ground wire and the Assembly to the *Multibin Unit* frame (item 4).
10. Reinstall the *PWBA Main*. (See "PWBA Main" on page 25)
11. Reinstall the *Frame Assy LVPS*. (See "Frame Assy LVPS" on page 23)
12. Reinstall the *Panel Assy Indicator*. (See "Panel Assy, PWBA LED, and Switch Main" on page 22)
13. Reinstall the *Cover Left*. (See "Cover Left, Cover Top and Cover Right" on page 17)
14. Reinstall the *Multibin Unit* onto the base engine. (See "Installation" on page 10)

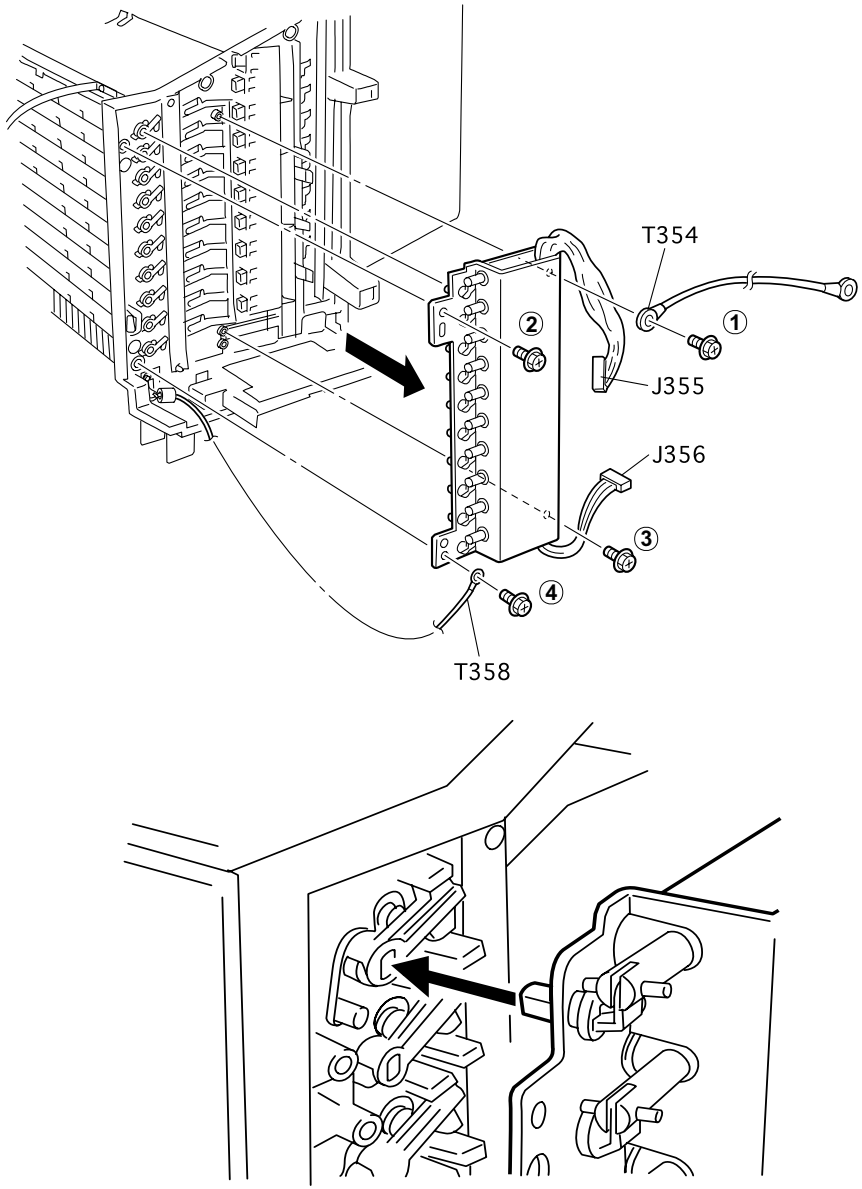


Figure 1-11. Solenoid Assy Link (with 23-25)

1.4.11 Sensor Stack Full

1.4.11.1 Removal

1. Remove the *Multibin Unit* from the base engine. (See "Removal" on page 10)
2. Remove the *Cover Left*. (See "Cover Left, Cover Top and Cover Right" on page 17)
3. Remove the *Panel Assy Indicator*. (See "Panel Assy, PWBA LED, and Switch Main" on page 22)
4. Remove the *Frame Assy LVPS*. (See "Frame Assy LVPS" on page 23)
5. Remove the *PWBA Main*. (See "PWBA Main" on page 25)
6. Remove the *Solenoid Assy Link*.
7. Remove all of the Multibin Unit Trays necessary to access the *Sensor Stack Full* that you want to remove.
8. Disconnect the P/J that is attached to the *Sensor Stack Full* you want to remove.
9. Press in on the latches that secure the *Sensor Stack Full* to the *Multibin Unit* frame and pull the *Sensor Stack Full* in the direction of the Multibin Unit Trays.
10. Remove the *Sensor Stack Full*.

1.4.11.2 Assembly

1. Reinstall the *Sensor Stack Full* by sliding it from the Tray side, into the correct Sensor slot. (See the illustration for correct positioning).
2. Press the two tabs and two latches located on the back of the *Sensor Stack Full*, into the corresponding holes in the *Sensor Stack Full* slot.

   The *Sensor Stack Full* snaps into place.
3. Reconnect the P/J to the Sensor.

   The P/Js are numbered:

   P/J361 goes to *Sensor Stack Full* 1 (the top Sensor).

   P/J362 goes to *Sensor Stack Full* 2.

   P/J363 goes to *Sensor Stack Full* 3.

   P/J364 goes to *Sensor Stack Full* 4.

   P/J365 goes to *Sensor Stack Full* 5.

   P/J366 goes to *Sensor Stack Full* 6.

   P/J367 goes to *Sensor Stack Full* 7.

   P/J368 goes to *Sensor Stack Full* 8.

   P/J369 goes to *Sensor Stack Full* 9.

   P/J370 goes to *Sensor Stack Full* 10 (the bottom Sensor).
4. Reinstall the Multibin Unit Trays.
5. Reinstall the *Solenoid Assy Link*.
6. Reinstall the *PWBA Main*. (See "PWBA Main" on page 25)
7. Reinstall the *Frame Assy LVPS*. (See "Frame Assy LVPS" on page 23)
8. Reinstall the *Panel Assy Indicator*. (See "Panel Assy, PWBA LED, and Switch Main" on page 22)
9. Reinstall the *Cover Left*. (See "Cover Left, Cover Top and Cover Right" on page 17)
10. Reinstall the *Multibin Unit* onto the base engine. (See "Installation" on page 10)

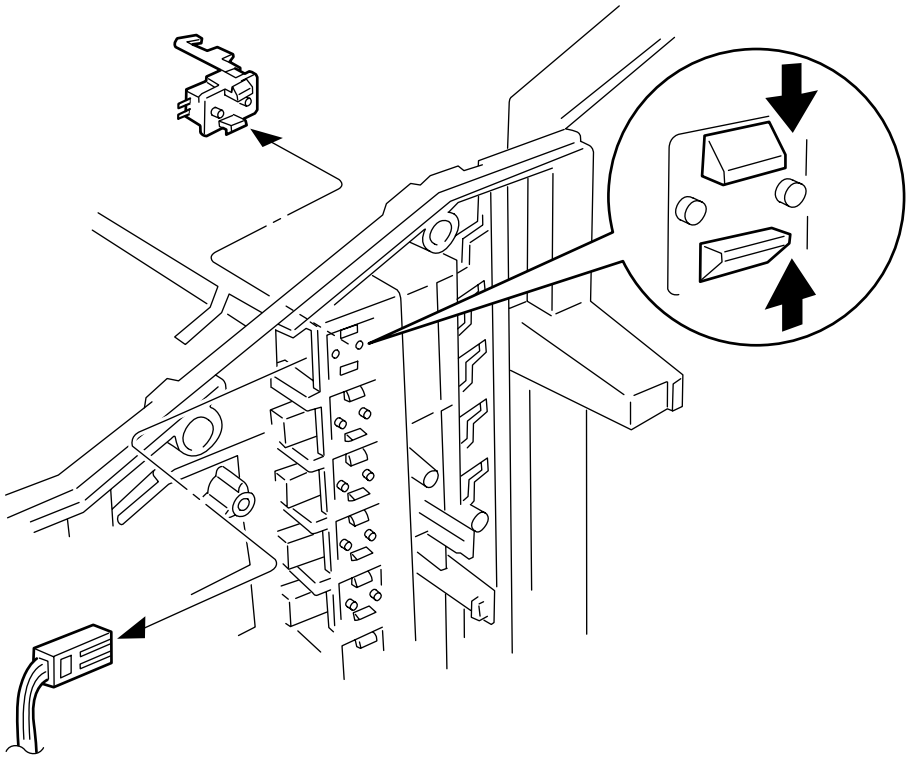


Figure 1-12. Sensor Stack Full

1.4.12 Stopper Key Lock L

1.4.12.1 Removal

1. Remove the *Multibin Unit* from the base engine. (See "Removal" on page 10)
2. Remove the *Cover Left*. (See "Cover Left, Cover Top and Cover Right" on page 17)
3. Remove the *Panel Assy Indicator*. (See "Panel Assy, PWBA LED, and Switch Main" on page 22)
4. Remove the *Frame Assy LVPS*. (See "Frame Assy LVPS" on page 23)
5. Remove the *PWBA Main*. (See "PWBA Main" on page 25)
6. Remove the *Solenoid Assy L*ink. (See "Solenoid Assy Link (with 23-25)" on page 26)
7. Remove the two screws that are securing the *Support Key Lock L* to the *Multibin Unit* frame, and remove the Support.
8. Remove a specific *Stopper Key Lock L* by lifting it from its slot.

1.4.12.2 Assembly

1. Reinstall the *Stopper Key Lock L*. (See the illustration for correct positioning).
2. Reinstall the *Support Key Lock L*. (See the illustration for correct positioning).
3. Use two screws to secure the *Support Key Lock L*.
4. Reinstall the *Solenoid Assy Link*. (See "Solenoid Assy Link (with 23-25)" on page 26)
5. Reinstall the *PWBA Main*. (See "PWBA Main" on page 25)
6. Reinstall the *Frame Assy LVPS*. (See "Frame Assy LVPS" on page 23)
7. Reinstall the *Panel Assy Indicator*. (See "Panel Assy, PWBA LED, and Switch Main" on page 22)
8. Reinstall the *Cover Left*. (See "Cover Left, Cover Top and Cover Right" on page 17)
9. Reinstall the *Multibin Unit* onto the base engine. (See "Installation" on page 10)

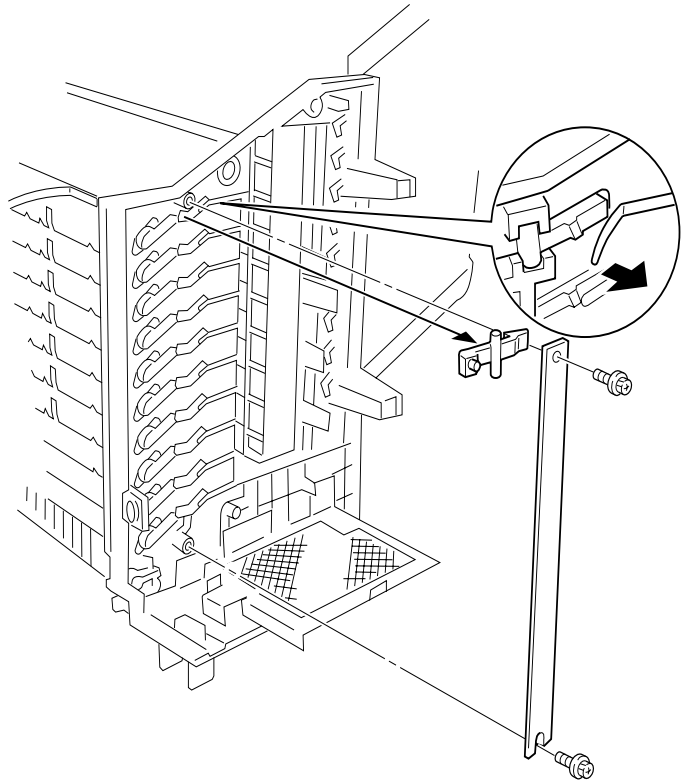


Figure 1-13. Stopper Key Lock L

1.4.13 Gate

1.4.13.1 Removal

1. Remove the *Cover Right*, *Cover Top*, and *Cover Left*.
2. Remove the *Chute Rear*. (See "Chute Rear and Chute Assy Lower (with 7-10, 24)" on page 18)
3. Slide the *Gate* to the left.
4. Pull out on the center of the *Gate* and slide the other end of the *Gate* out of the bearing in the Multibin Unit frame and remove the *Gate*.
5. Repeat this procedure for all of the *Link Gate*s and *Gate*s you want to remove.

1.4.13.2 Assembly

1. Reinstall the *Gate* by first inserting the left end of the *Gate* into the bearing in the Multibin Unit frame. (See the illustration for correct positioning).
2. Bow the *Gate* enough to allow you to slide the right end of the *Gate* into the *Link Gate*.
3. Press down on the *Link Gate* to make sure the *Gate* opens and closes correctly.
4. Reinstall the *Chute Rear*. (See "Chute Rear and Chute Assy Lower (with 7-10, 24)" on page 18)
5. Reinstall the *Cover Right*, *Cover Top*, and *Cover Left*.

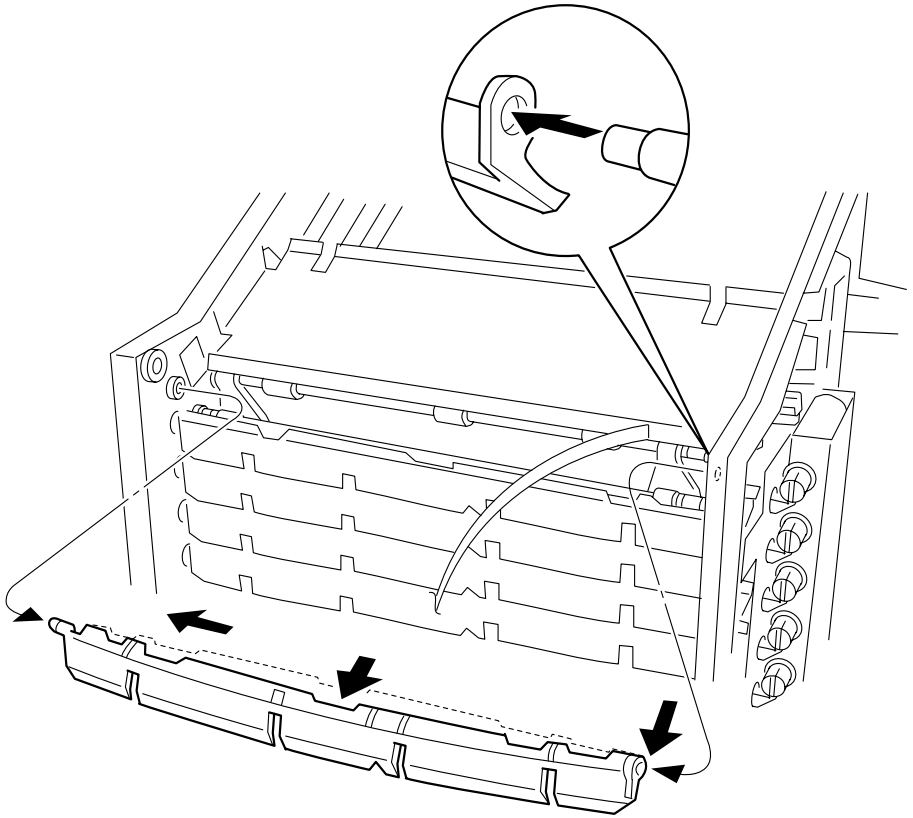


Figure 1-14. Gate

1.4.14 Harness Assy MCU

1.4.14.1 Removal

1. Remove the *Multibin Unit* from the base engine. (See "Removal" on page 10)
2. Remove the *Cover Left*. (See "Cover Left, Cover Top and Cover Right" on page 17)
3. Remove the *Panel Assy Indicator*. (See "Panel Assy, PWBA LED, and Switch Main" on page 22)
4. Remove the *Frame Assy LVPS*. (See "Frame Assy LVPS" on page 23)
5. Disconnect P352 on the *PWBA Main*. (See "PWBA Main" on page 25)
6. Remove the screw that is securing ground wire T355 to the frame, and remove the wire.
7. Position the *Multibin Unit* on the *Cover Left*.
8. Use a screwdriver blade to pry up the two *Support MCU* that secure the *Harness Assy MCU* to the *Multibin Unit* frame.
9. Remove the *Harness Assy MCU* from the frame.

1.4.14.2 Assembly

1. Orient the *Harness Assy MCU* J202 so it mates with P202 on the base engine.
2. Thread the Harness through the opening in the *Multibin Unit* frame.
3. Reinstall the J202 into the opening in the *Multibin Unit* frame.
4. Use two *Support MCU* to secure J202 to the frame.
5. Reconnect P352 on the *PWBA Main*. (See "PWBA Main" on page 25)
6. Reinstall the *Frame Assy LVPS*. (See "Frame Assy LVPS" on page 23)
7. Reinstall the *Panel Assy Indicator*. (See "Panel Assy, PWBA LED, and Switch Main" on page 22)
8. Reinstall the *Cover Left*. (See "Cover Left, Cover Top and Cover Right" on page 17)
9. Reinstall the *Multibin Unit* onto the base engine. (See "Installation" on page 10) Make sure J202 mates with P202.

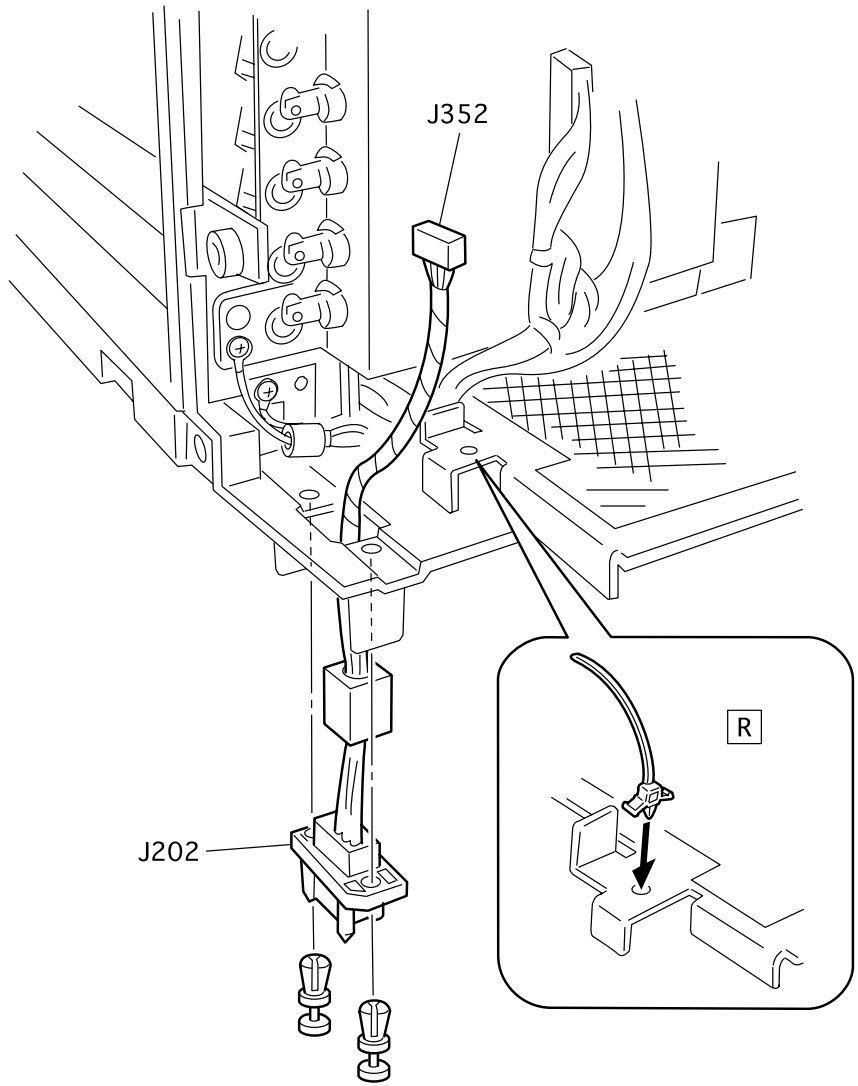


Figure 1-15. Harness Assy MCU

1.4.15 Motor Bracket Assembly (with 19, 23, 24, 34)

1.4.15.1 Removal

1. Remove the *Multibin Unit* from the base engine. (See "Removal" on page 10)
2. Remove the *Cover Right*. (See "Cover Left, Cover Top and Cover Right" on page 17)
3. Cut the tie wrap that secures the wire harness to the *Bracket Motor*.
4. Disconnect J372 and J373 from the *Motor Assys*.
5. Disconnect the J374-1 from J374 leading to the *Solenoid Assy R*.
6. Remove the *Solenoid Assy R* harness from the *Motor Bracket Assembly*.
7. Remove the screw that is securing the ground wire T352 to the *Motor Bracket Assembly*, and remove the wire.
8. Remove the four screws that are securing the *Motor Bracket Assembly* to the *Multibin Unit* frame.
9. Pull the *Motor Bracket Assembly* away from the frame and slightly to the right to free the two *Belt Synchronous* from the *Gear Pulley 19/42T* on the Motor shafts.
10. Remove the *Motor Bracket Assembly* by pulling it away from the frame.

1.4.15.2 Assembly

1. Hold the *Solenoid Assy R* harness out of the way so it does not get trapped between the *Motor Bracket Assembly* and the *Multibin Unit* frame.
2. Position the *Motor Bracket Assembly* slightly away from the *Multibin Unit* frame. (See the illustration for correct positioning).
3. Thread the wire harness through the opening located at the bottom of the Bracket.
4. Reposition the *Motor Bracket Assembly* so the two *Belt synchronous* loop the two *Gear Pulley 19/42T* on the Motor shafts.
5. Maintain tension on the *Motor Bracket Assembly*, so the belts do not slip out of place, and start to press the *Motor Bracket Assembly* against the frame.
6. Press down on the ground strap that is located at the top of the Bracket, and continue pressing the Bracket against the frame so the ground strap goes under the metal tab that is protruding out of the frame.
7. Press the Bracket firmly against the frame and reposition the Bracket so all of the screw holes in the Bracket line up with the screw holes in the frame.
8. Use four screws to secure the *Motor Bracket Assembly* to the *Multibin Unit* frame.
9. Use one screw to secure ground wire T352 to the *Motor Bracket Assembly*.
10. Reconnect the J374-1 to J374 leading to the *Solenoid Assy R*.
11. Reconnect J372 and J373 to the *Motor Assy*.
12. Dress all of the wires so they are clear of all moving parts and use a tie wrap to secure the harness (item R).
13. Reinstall the *Cover Right*. (See "Cover Left, Cover Top and Cover Right" on page 17)
14. Reinstall the *Multibin Unit* onto the base engine. (See "Installation" on page 10)

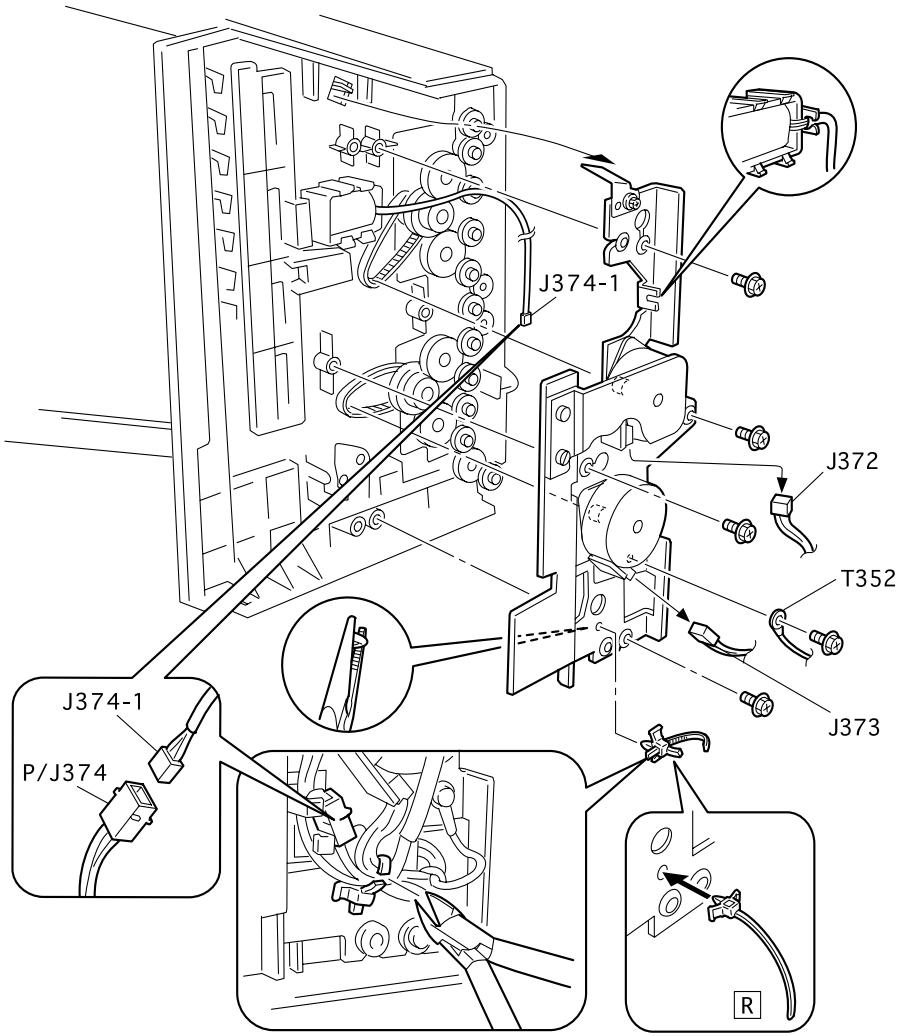


Figure 1-16. Motor Bracket Assy (with 19, 23, 24, 34)

1.4.16 Solenoid Assy R

1.4.16.1 Removal

1. Remove the *Multibin Unit* from the base engine. (See “Removal” on page 10)
2. Remove the *Cover Right*. (See “Cover Left, Cover Top and Cover Right” on page 17)
3. Disconnect J374-1 from the in-line connector located near the bottom Motor.
4. Spread the four latches and pull the *Solenoid Assy R* way from the frame.

1.4.16.2 Assembly

1. Reinstall the *Solenoid Assy R*. (See the illustration for correct positioning).
2. Reposition the Solenoid plunger so the pin is vertical and fits into the slot in the *Stopper Key Lock R*.
3. Press the *Solenoid Assy R* against the *Multibin Unit* frame so the four latches snap into place.
4. Press and release the Solenoid plunger to make sure the *Stopper Key Lock R* opens and closes correctly.
5. Reconnect J374-1.
6. Reroute the Solenoid Harness so it is away from all moving parts.
7. Reinstall the *Cover Right*. (See “Cover Left, Cover Top and Cover Right” on page 17)
8. Reinstall the *Multibin Unit* onto the base engine. (See “Installation” on page 10)

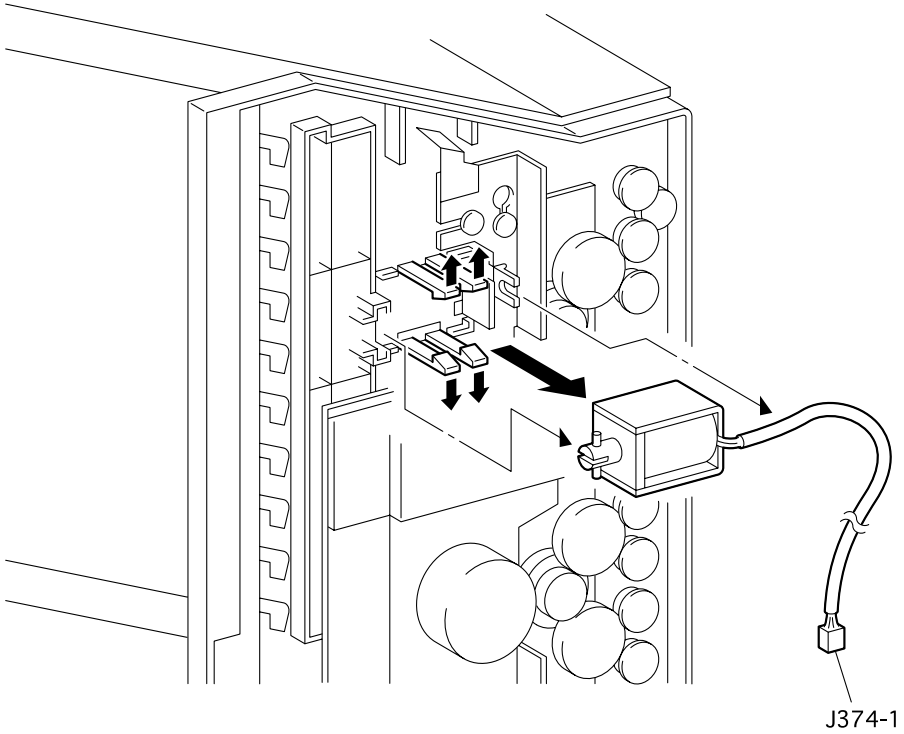


Figure 1-17. Solenoid Assy R

1.4.17 Belt Synchronous

1.4.17.1 Removal

1. Remove the *Multibin Unit* from the base engine. (See "Removal" on page 10)
2. Remove the *Cover Right*. (See "Cover Left, Cover Top and Cover Right" on page 17)
3. Remove the *Motor Bracket Assembly*. (See "Harness Assy MCU" on page 32)
4. To remove the *Belt Synchronous Top*:
5. Open the gear latches and remove the *Gear Idler 16T* 2, 3, 4, and 5 (number 1 is the top gear in the line).
6. Remove the two *Gear Idler 30T* that contact the *Gear Pulley 19/42T:Top*.
7. Remove the *Gear Pulley 19/42T:Top* that is driving the *Belt Synchronous: Top*.
8. Remove the *Belt Synchronous: Top*.
9. To remove the *Belt Synchronous Bottom*:
10. Open the gear latches and remove the *Gear Idler 16T* numbers 7, 8, 9, and 10 (number 10 is the bottom gear in the line).
11. Remove the two *Gear Idler 30T* that contact the *Gear Pulley 19/42T: Bottom*.
12. Remove the *Gear Pulley 19/42T: Bottom* that is driving the *Belt Synchronous: Bottom*.
13. Remove the *Belt Synchronous: Bottom*.

1.4.17.2 Assembly

1. To reinstall the *Belt Synchronous Bottom*:
2. Loop the belt over the *Gear Pulley 19/42T: Bottom*. (See the illustration for correction positioning).
3. Slide the belt and *Gear Pulley 19/42T: Bottom* onto the large diameter shaft.

NOTE: *The belt should rest against the Multibin Unit frame.*

4. Slide two *Gear Idler 30T* onto the two shafts that are located next to the *Gear Pulley 19/42T: Bottom*.

NOTE: *The teeth of the Gear Idler 30T should mesh with the teeth of Gear Pulley 19/42T: Bottom.*

5. Position *Gear Idler 16T* number 10 (the bottom gear in the line) so the latch faces away from the *Multibin Unit* frame and the gear teeth face the *Multibin Unit* frame.
6. Line up the flat part of the gear hole with the flat part of the shaft, and slide the Idler Gear onto the shaft.

The Gear latch snaps into place.

7. Repeat these steps and reinstall *Gear Idler 16T* numbers 9, 8, and 7.
8. To reinstall the *Belt Synchronous Top*:
9. Loop the belt over the *Gear Pulley 19/42T:Top*. (See the illustration for correction positioning).
10. Slide the belt and *Gear Pulley 19/42T:Top* onto the large diameter shaft.

NOTE: *The belt should rest against the Multibin Unit frame.*

11. Slide two *Gear Idler 30T* onto the two shafts that are located next to the *Gear Pulley 19/42T:Top*.

NOTE: *The teeth of the Gear Idler 30T should mesh with the teeth of Gear Pulley 19/42T:Top.*

12. Position *Gear Idler 16T* number 2 (number 1 is the top gear in the line) so the latch faces away from the *Multibin Unit* frame and the gear teeth face the *Multibin Unit* frame.
13. Line up the flat part of the gear hole with the flat part of the shaft, and slide the *Gear Idler 16T* onto the shaft.

NOTE: *The Gear latch snaps into place.*

14. Repeat these steps and reinstall *Gear Idler 16T* numbers 3, 4, and 5.
15. Reinstall the *Motor Bracket Assembly*. (See "Harness Assy MCU" on page 32)
16. Reinstall the *Cover Right*. (See "Cover Left, Cover Top and Cover Right" on page 17)
17. Reinstall the *Multibin Unit* onto the base engine. (See "Installation" on page 10)

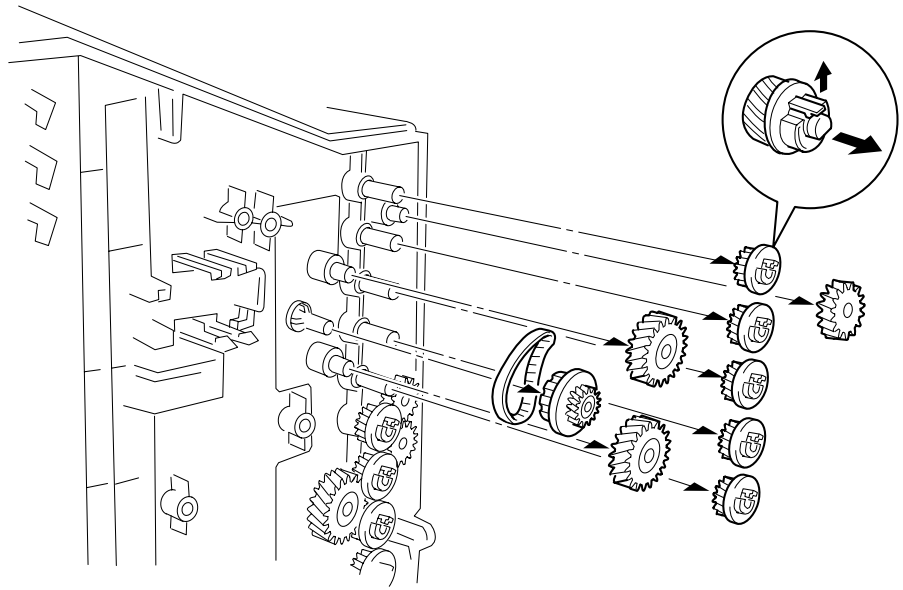


Figure 1-18. Belt Synchronous

1.4.18 Stopper Key Lock R

1.4.18.1 Removal

1. Remove the *Multibin Unit* from the base engine. (See "Removal" on page 10)
2. Remove the *Cover Right*. (See "Cover Left, Cover Top and Cover Right" on page 17)
3. Remove the *Motor Bracket Assembly*. (See "Harness Assy MCU" on page 32)
4. Remove the *Solenoid Assy R*. (See "Solenoid Assy R" on page 35)
5. Bow the *Stopper Key Lock R* and slide the top pivot out of the pivot hole in the *Multibin Unit* frame.
6. Remove the *Stopper Key Lock R* and the attached *Spring Lock*.

1.4.18.2 Assembly

1. Reinstall the *Spring Lock* onto the back of the *Stopper Key Lock R*.
2. Insert the bottom pivot of the *Stopper Key Lock R* into the pivot hole in the *Multibin Unit* frame. (See the illustration for correct positioning).
3. Press the *Stopper Key Lock R* against the *Multibin Unit* frame, making sure the free end of the *Spring Lock* fits over the tab on the *Multibin Unit* frame.
4. Bow the *Stopper Key Lock R* and slide the top pivot into the pivot hole in the *Multibin Unit* frame.
5. Press and release the *Stopper Key Lock R* to make sure it moves freely and has a spring-action return.
6. Reinstall the *Solenoid Assy R*. (See "Solenoid Assy R" on page 35)
7. Reinstall the *Motor Bracket Assembly*. (See "Harness Assy MCU" on page 32)
8. Reinstall the *Cover Right*. (See "Cover Left, Cover Top and Cover Right" on page 17)
9. Reinstall the *Multibin Unit* onto the base engine. (See "Installation" on page 10)

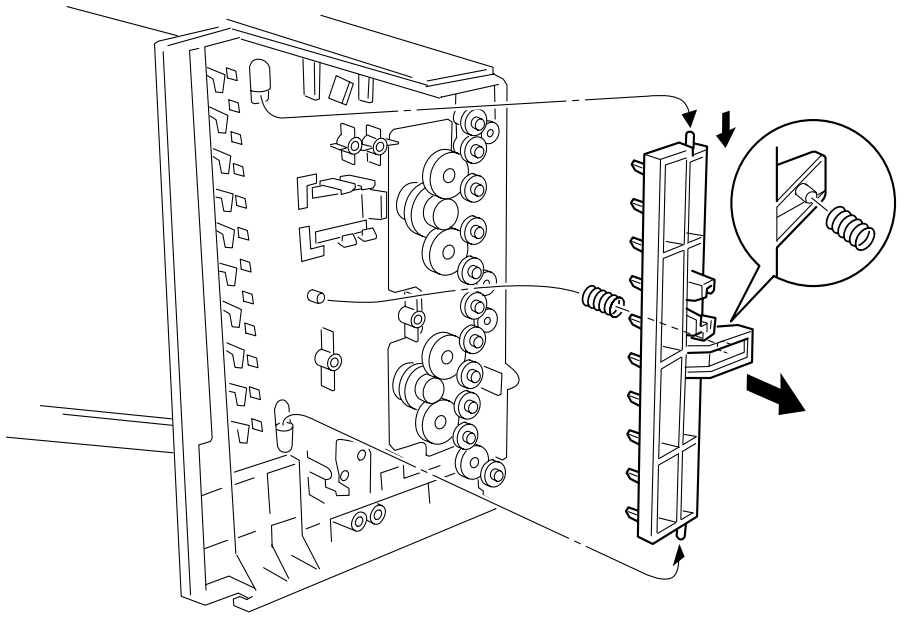


Figure 1-19. Stopper Key Lock R

1.4.19 Roll Assy Transport

1.4.19.1 Removal

1. Remove the *Multibin Unit* from the base engine. (See "Removal" on page 10)
2. Remove the *Cover Left* and *Cover Right*. (See "Cover Left, Cover Top and Cover Right" on page 17)
3. Remove the *Chute Rear* and *Chute Assy Lower*.
4. Open the gear latch and remove the *Gear Idler 16T* that is attached to the *Roll Assy Transport* (1).
5. Remove the E Ring from the *Roll Assy Transport* (2).
6. Slide the *Bearing* out of the bearing hole (3).
7. Slide the *Roll Assy Transport* to the Right (4), then pull it away from the *Multibin Unit* frame (5).
8. Remove an E-ring attached to the left side of *Roll Assy Transport*. (6)
9. Remove the *Roll Assy Transport*.

1.4.19.2 Assembly

1. Attach an E-ring to the left side of *Roll Assy Transport*.
2. Reinstall the *Bearing 6* into the left bearing hole. (See the illustration for correct positioning).
3. Slide the *Bearing* onto the right end of the *Roll Assy Transport*. (See the illustration for correct positioning).
4. Slide the right end of the *Roll Assy Transport* into the right bearing hole.
5. Slide the left end of the *Roll Assy Transport* into the left bearing.
6. Slide the *Bearing* along the shaft and into the right bearing hole.
7. Use an E Ring to secure the right end of the *Roll Assy Transport*.
8. Reinstall the *Gear Idler 16T* on the right end of the *Roll Assy Transport*.
9. Reinstall the *Chute Rear* and *Chute Assy Lower*.)
10. Reinstall the *Cover Left* and *Cover Right*. (See "Cover Left, Cover Top and Cover Right" on page 17)
11. Reinstall the *Multibin Unit* onto the base engine. (See "Installation" on page 10)

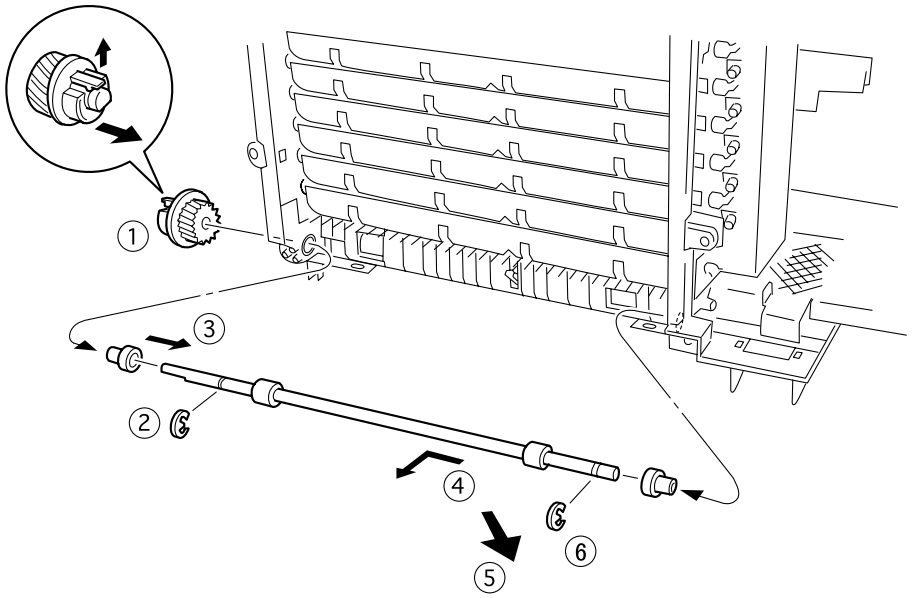


Figure 1-20. Roll Assy Transport

1.4.20 Roll Exit

1.4.20.1 Removal

1. Remove the *Multibin Unit* from the base engine. (See "Removal" on page 10)
2. Remove the *Cover Left* and *Cover Right*. (See "Cover Left, Cover Top and Cover Right" on page 17)
3. Remove the *Chute Rear* and *Chute Assy Lower*. (See "Chute Rear and Chute Assy Lower (with 7-10, 24)" on page 18)
4. Press in on the *Solenoid Assy R* plunger to open the *Stopper Key Lock R*.
5. Use a screwdriver to wedge the *Stopper Key Lock R* open.
6. Press in the *Solenoid Assy L* plunger to open the Bins, and slide the *Multibin Unit* trays out as far as they go.
7. Remove the *Gate* that is associated with the *Roll Exit* you want to remove.
8. Remove the *Gate* just above the *Gate* you removed in step 2.
9. Open the gear latch and remove the *Gear Idler 16T* from the *Roll Exit* you want to remove (1).
10. Unhook the *Link Assy Paper L* (2) and the *Link Assy Paper R* from the *Roll Exit* shaft.
11. Remove the E Ring from Right end of the shaft (3).
12. Slide *Bearing 6* out of the bearing hole.
13. Slide the *Roll Exit* to the right (4), then pull it away from the *Multibin Unit* frame (5).
14. Remove the *Roll Exit* (6).

1.4.20.2 Assembly

1. Remove the screwdriver wedging open *Stopper Key Lock R* and allow the Lock to close.
2. Reinstall the *Bearing 6* into the left bearing hole. (See the illustration for correct positioning).
3. Slide the *Bearing* onto the right end of the *Roll Exit*. (See the illustration for correct positioning).
4. Slide the right end of the *Roll Exit* into the right bearing hole.
5. Slide the left end of the *Roll Exit* into the *Bearing 6*.
6. Slide the *Bearing* along the shaft and into the right bearing hole.
7. Use an E Ring to secure the right end of the *Roll Exit*.
8. Reattach the *Link Assy Paper L* (2) and the *Link Assy Paper R* to the *Roll Exit* shaft.
9. Reinstall the *Gear Idler 16T* on the right end of the *Roll Exit*.
10. Reinstall the *Gate*s. (See "Gate" on page 31)
11. Reinstall the *Chute Rear* and *Chute Assy Lower*. (See "Chute Rear and Chute Assy Lower (with 7-10, 24)" on page 18)
12. Reinstall the *Cover Left* and *Cover Right*. (See "Cover Left, Cover Top and Cover Right" on page 17)
13. Reinstall the *Multibin Unit* onto the base engine. (See "Installation" on page 10)

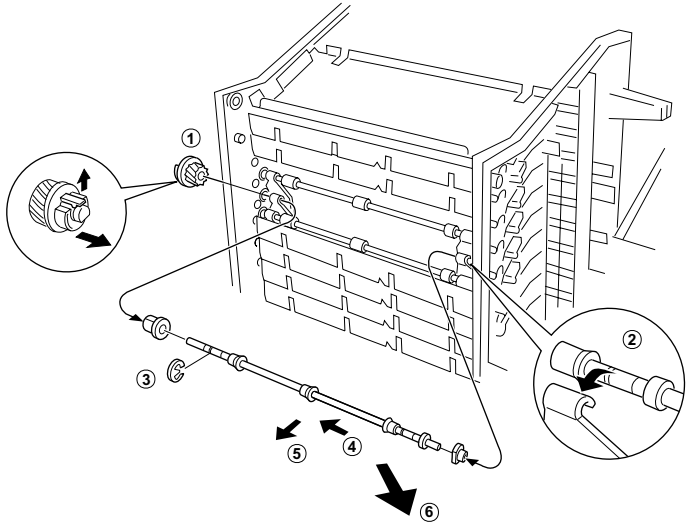


Figure 1-21. Roll Exit

1.4.21 Solenoid Direction

1.4.21.1 Removal

1. Remove the *Multibin Unit* from the base engine. (See "Removal" on page 10)
2. Remove the *Cover Left* and *Cover Right*. (See "Cover Left, Cover Top and Cover Right" on page 17)
3. Remove the *Chute Rear* and *Chute Assy Lower*.
4. Press in on the *Solenoid Assy R* plunger to open the *Stopper Key Lock R*.
5. Use a screwdriver to wedge the *Stopper Key Lock R* open.
6. Press the *Solenoid Assy L* plunger to open the Bins, and slide the bottom three *Multibin Unit* trays out as far as possible.
7. Remove the bottom four *Gate*s. (See "Gate" on page 31)
8. Remove the bottom three *Roll Exit*s. (See "Roll Exit" on page 40)
9. Remove the two screws that secure the *Solenoid Direction* to the *Multibin Unit* frame.

NOTE: *The two screws are located just below the bottom Motor, and are accessed through the cutouts in the Bracket Motor.*

10. Slide the *Solenoid Direction* forward to free the plunger from the frame.
11. Disconnect J371-1 from J371.
12. Remove the *Solenoid Direction*.

1.4.21.2 Assembly

1. Remove the screwdriver wedging open *Stopper Key Lock R* and allow the Lock to close.
2. Reconnect J371-1 to J371.
3. Slide the *Solenoid Direction* plunger into the slot in the Multibin Unit frame.
4. Position the *Solenoid Direction* so the two screw holes in the *Solenoid Direction* line up with the two screw holes in the *Multibin Unit* frame.
5. Use two screws to secure the *Solenoid Direction* to the frame.
6. Route the Solenoid wire harness under the plastic clip.
7. Reinstall the bottom three *Roll Exit*s. (See "Roll Exit" on page 40)
8. Reinstall any other *Roll Exit*s that may have been dislodged during the removal of the *Solenoid Direction*.
9. Reinstall the bottom four *Gate*s. (See "Gate" on page 31)
10. Reinstall any other *Gate*s that may have been dislodged during the removal of the *Solenoid Direction*.
11. Close all of the *Multibin Unit* trays.
12. Reinstall the *Chute Rear* and *Chute Assy Lower*.
13. Reinstall the *Cover Left* and *Cover Right*. (See "Cover Left, Cover Top and Cover Right" on page 17)
14. Reinstall the *Multibin Unit* onto the base engine. (See "Installation" on page 10)

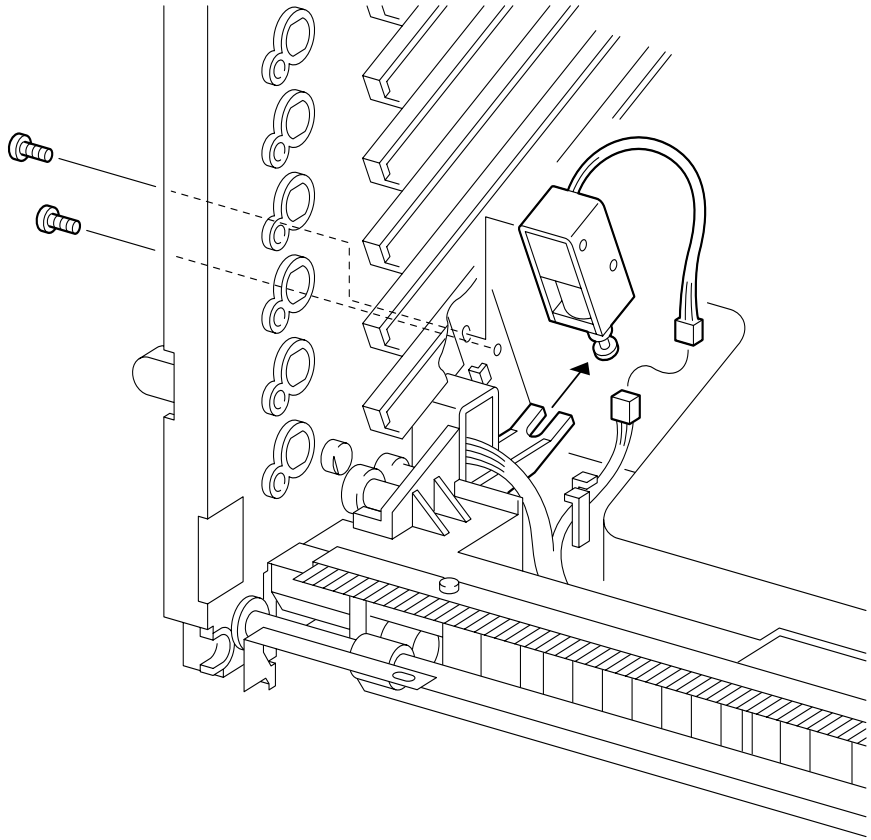


Figure 1-22. Solenoid Direction

1.5 Parts List and Exploded Diagram

1.5.1 Multibin Unit I

Table 1-3. Parts List for Multibin Unit I

No. in Figure	Unit / Parts Name
1	MULTIBIN UNIT (with 2~28)
2	COVER LEFT
3	COVER TOP
4	CHUTE REAR
5	PLATE ASSY TOP
6	CHUTE ASSY LOWER (with 7~10, 24)
7	CHUTE LOWER
8	COVER INT
9	LINK INT
10	SPRING INT
11	COVER RIGHT
12	FRAME ASSY BOTTOM (with 13~17, 19, 20, 25~27)
13	FRAME BOTTOM
14	ROLLER ASSY PINCH (with 15, 16)
15	ROLL PINCH
16	SPRING PINCH
17	SENSOR PASS INT
18	PLATE BOTTOM
19	HARNESS EARTH
20	ELIMINATOR
21	SUPPORT TAPE
22	ELIMINATOR S

Table 1-3. Parts List for Multibin Unit I

No. in Figure	Unit / Parts Name
23	ELIMINATOR
24	SPRING GND 2
25	SPRING GND 1
26	STOPPER SENSOR
27	SPRING GND 3
28	PLATE

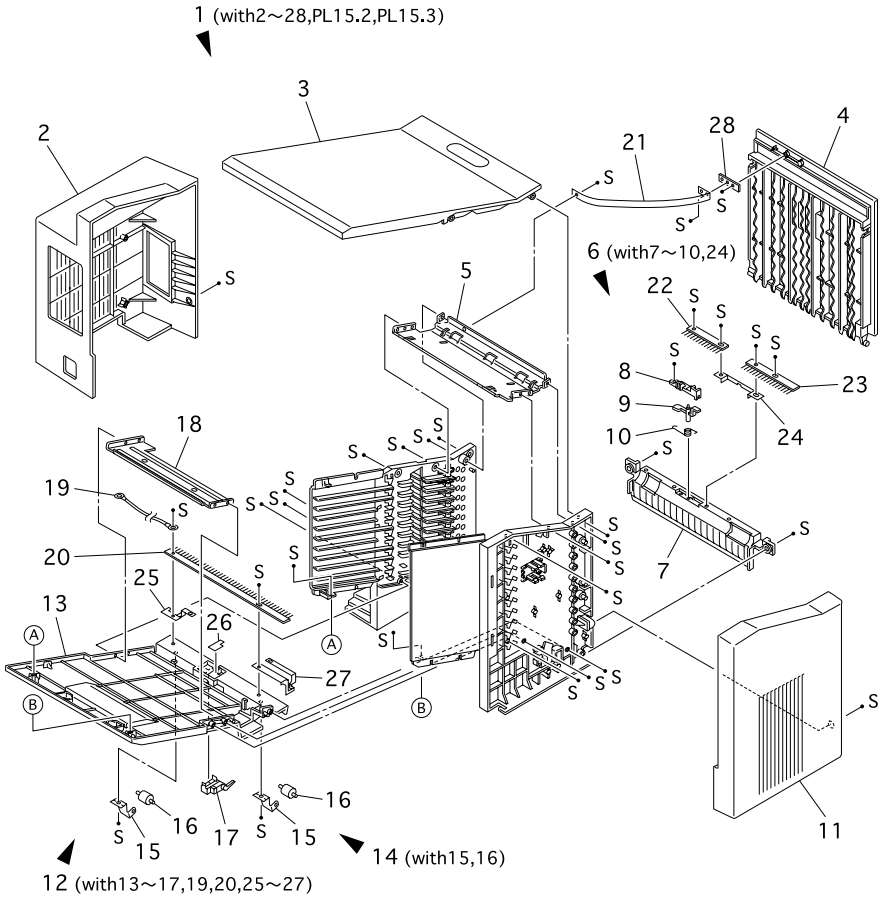


Figure 1-23. Exploded Diagram for Multibin Unit I

1.5.2 Multibin Unit II

Table 1-4. Parts List for Multibin Unit II

No. in Figure	Unit / Parts Name
1	FRAME ASSY LEFT (with 2~13, 29, 30)
2	PANEL ASSY INDICATOR (with 3~7)
3	SWITH MAIN
4	PANEL ASSY
5	BUTTON
6	HARNESS LED (J359-J360)
7	PWBA LED
8	COVER ASSY BOTTOM
9	SPRING LATCH L
10	SUPPORT KEY LOCK L
11	STOPPER KEY LOCK L
12	FRAME LEFT
13	SENSOR STACK FULL
14	FRAME ASSY LVPS (with 15~17,46Å`50)
15	PWBA LVPS
16	FRAME LVPS
17	HARNESS ASSY INLET (J300-J301)
18	HARNESS LVPS (J350-J351)
19	HARNESS EARTH
20	PWBA MAIN
21	SUPPORT PWB
22	SOLENOID ASSY LINK (with 23~25)
23	SOLENOID ASSY L
24	PIN SPRING

Table 1-4. Parts List for Multibin Unit II

No. in Figure	Unit / Parts Name
25	LINK SOLENOID
26	LINK GATE
27	SPRING TOP
28	GATE
29	HARNESS S SNR 1 (J357-J361,J362,J363,J364,J365)
30	HARNESS S SNR 2 (J358-J366,J367,J368,J369,J370)
31	HARNESS ASSY MCU (J202-J352)
32	SUPPORT MCU
33	HARNESS ASSY MAIN (J353,J354-J371,J372,J373,J374,J375)
34	STOPPER TRAY
35	TRAY ASSY Multibin Unit 2 (with 36~38,45)
36	TRAY Multibin Unit
37	ROLL PINCH
38	SPRING PINCH
39	PLATE EARTH
40	CABLE TIE
41	TRAY ASSY Multibin Unit 1 (with 37,38,42)
42	TRAY Multibin Unit
43	HARNESS EARTH CORE
44	BRACKET Multibin Unit
45	ELIMINATOR-TRAY
46	PWBA NOISE FILTER
47	SUPPORT PWB CAP
48	BRACKET FILTER

Table 1-4. Parts List for Multibin Unit II

No. in Figure	Unit / Parts Name
49	PWB POST
50	PLATE INSULATOR
99	KIT HARNESS ASSY MCU (with 31, 32x2)

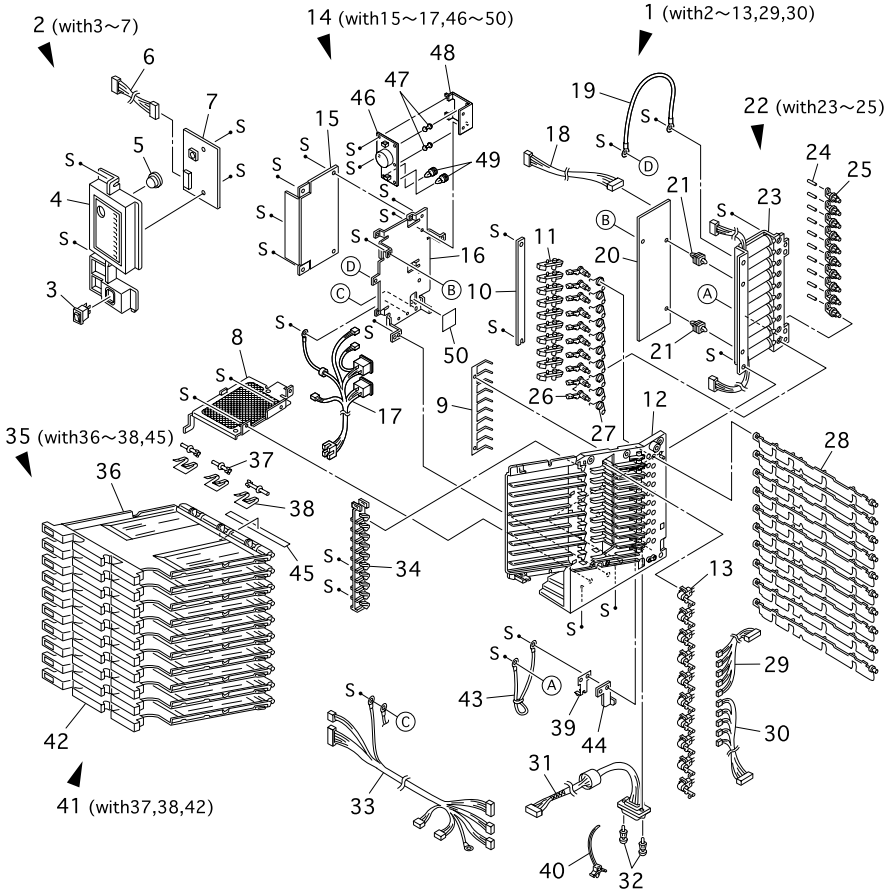


Figure 1-24. Exploded Diagram for Multibin Unit II

1.5.3 Multibin Unit III

Table 1-5. Parts List for Multibin Unit III

No. in Figure	Unit / Parts Name
1	LINK ASSY PAPER L
2	LINK ASSY PAPER R
3	BEARING 6
4	ROLL EXIT
5	BEARING
6	ROLL ASSY TRANSPORT
7	FRAME ASSY RIGHT (with 8~10,15~28,33~36)
8	FRAME RIGHT
9	STOPPER KEY LOCK R
10	SPRING LOCK
11	LINK ASSY GATE SOL. (with 12,13)
12	LINK PUSH
13	LINK GATE SOLENOID
14	SOLENOID DIRECTION
15	SOLENOID ASSY R
16	BRACKET GEAR
17	BELT SYNCHRONOUS
18	GEAR PULLY 19/42T
19	BRACKET ASSY MOTOR (with 20~22)
20	BRACKET MOTOR
21	SPRING EARTH R
22	DAMPER
23	PLATE ASSY MOTOR 2 (with 25~27)
24	PLATE ASSY MOTOR 1 (with 25,26,27)

Table 1-5. Parts List for Multibin Unit III

No. in Figure	Unit / Parts Name
25	MOTOR ASSY
26	SPRING EXTENSION
27	PLATE MOTOR 2
28	PLATE MOTOR 1
29	GEAR IDLER 30T
30	GEAR IDLER 16T
31	GEAR IDLER 18T
32	STOPPER TRAY
33	CABLE TIE
34	SLEEVE 3x5.5
35	INSULATOR
36	BRACKET MOT TEMP

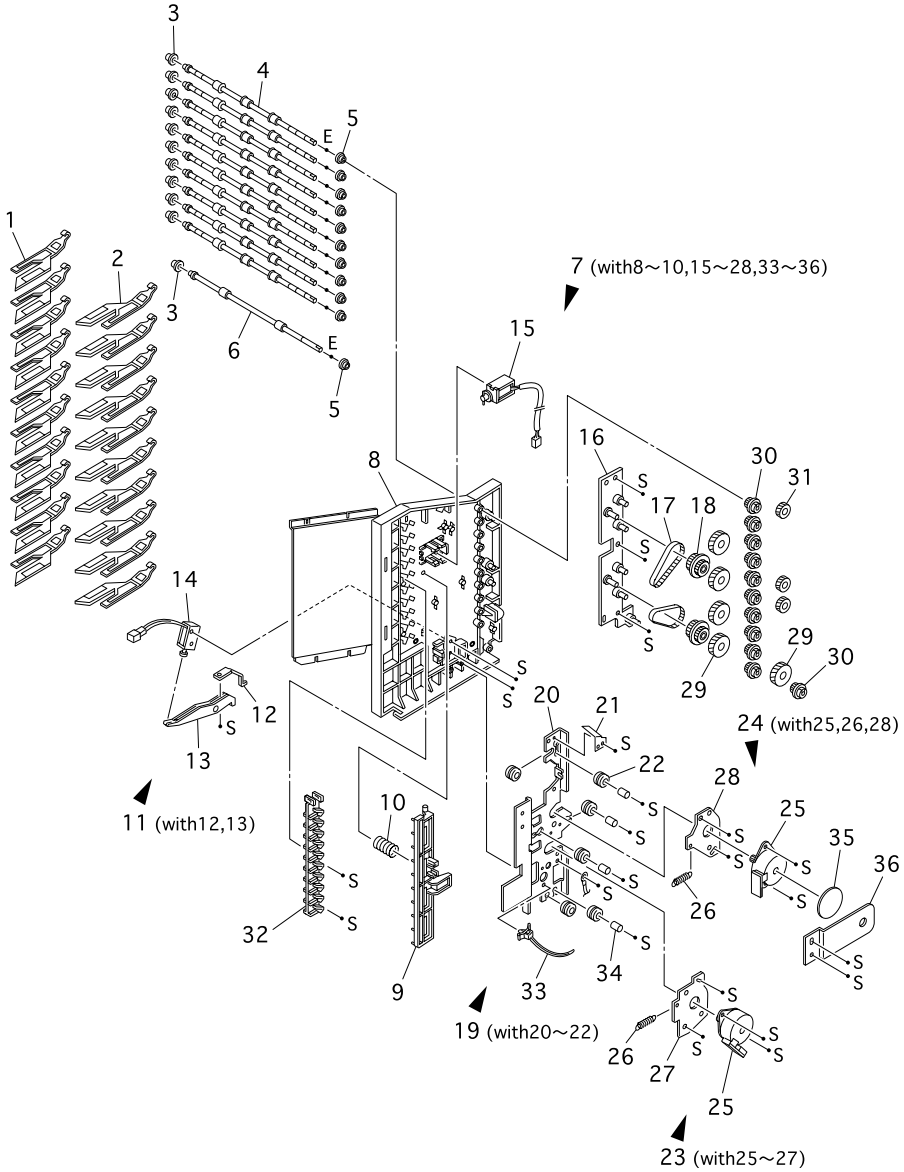
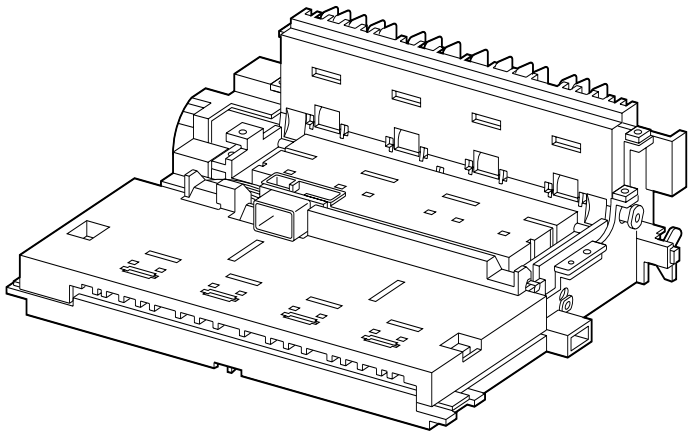


Figure 1-25. Exploded Diagram for Multibin Unit III



CHAPTER

2

DUPLEX UNIT

2.1 Installation and Removal of Duplex Unit

2.1.1 Installation

1. Make sure the printer's power is off.
2. Pushing in the left and right levers of Duplex Unit, mount the Duplex Unit on the printer.
3. Close the Cover Assy Rear from the printer.

2.1.2 Removal

1. Switch off printer's power.
2. Open the Cover Assy Rear from the printer.
3. Pushing in the left and right levers of Duplex Unit, draw the Duplex Unit from the printer.

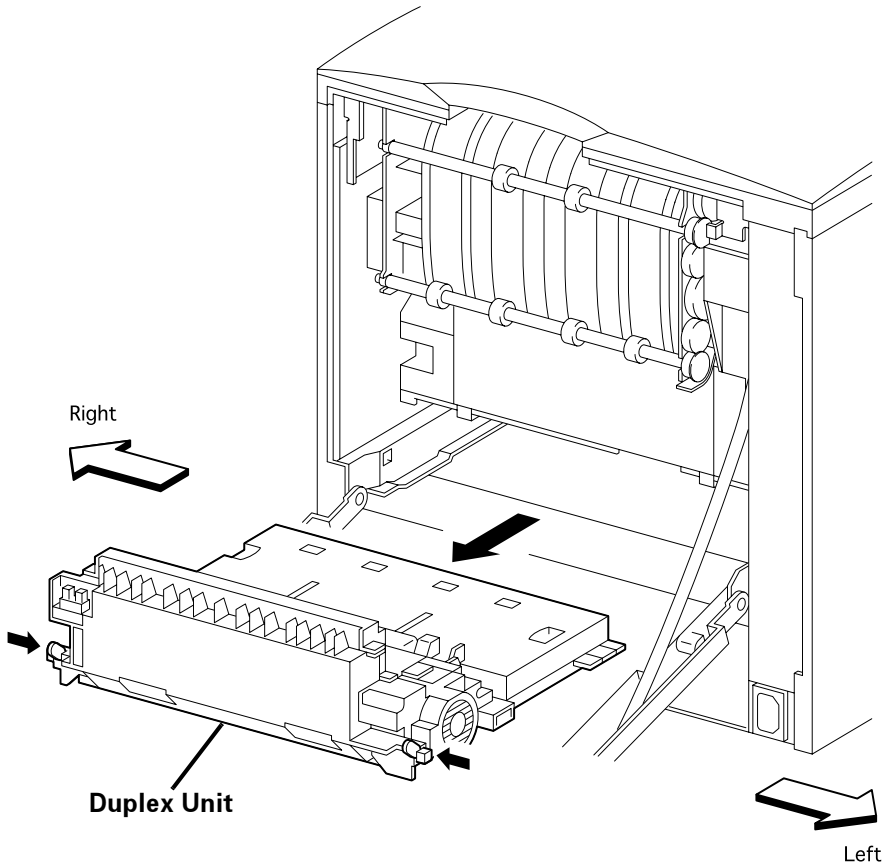


Figure 2-1. Duplex Unit Removal

2.2 Introduction

This section contains the removal and assembly procedure for main parts of the Duplex.

2.2.1 Preparation

Before you begin any disassembly and assembly procedure;

1. Switch OFF the main power.
2. Disconnect the AC power cord from the wall outlet, then start work.
3. Remove the EP cartridge and store it at a dark and safety place free from direct sunlight.
4. In performing work for the FUSER ASSY periphery, wait until the FUSER ASSY and its periphery have become cool enough.
5. Disconnect all interface cables from the rear panel of printer.
6. In performing work, to eliminate static electricity in your body, wear wristbands, etc. to take grounding properly.

2.2.2 Precautions

CAUTION !

- **Many kinds of screws are used, and do not confuse where they are used. Using wrong screws could cause the tapped holes to be broken, or troubles to occur.**
- **In performing work with parts that are managed as spare parts but its procedure is not given, make sure how the parts have been mounted before starting work.**
- **Optional parts, as a rule, should be removed, but they may be left in the printer, on condition that they do not obstruct your work.**

2.2.3 Notations in the Manual

The printer orientation expressed in the procedure is defined as follows.

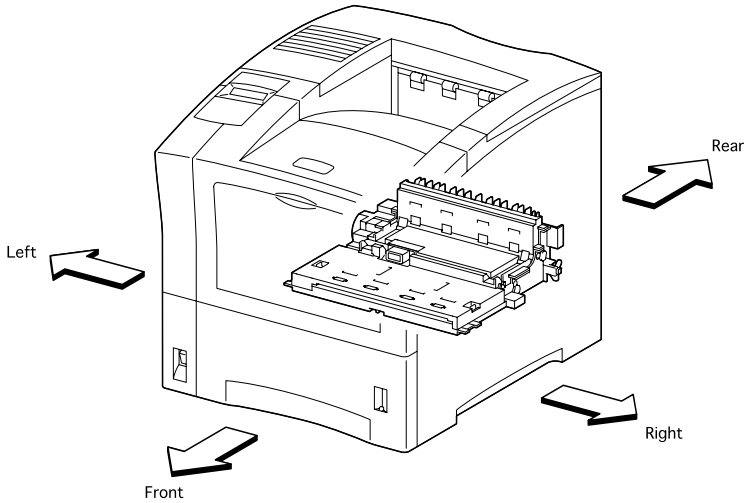


Figure 2-2. Definition of Printer Orientation

- ☐ The screws in the illustration imply that they should be loosened and removed using a cross-tip screw-driver, unless otherwise specified.
- ☐ A black arrow in the illustration implies that the part should be moved in the arrow direction, and when numbers are assigned to black arrows, the parts should be moved in the order of given numbers.

2.3 Disassembly and Assembly

2.3.1 Chute Assy Turn DUP

2.3.1.1 Removal

1. Remove the Duplex Unit. (See “Removal” on page 51)
2. Remove the two screws securing the Chute Assy Turn DUP to the Duplex Unit.
3. Remove the Chute Assy Turn DUP from the Duplex Unit.

2.3.1.2 Assembly

1. Align the Chute Assy Turn DUP with its mount position to the Duplex Unit.
2. Secure the Chute Assy Turn DUP to the Duplex Unit with two screws.
3. Mount the Duplex Unit. (See “Installation” on page 51)

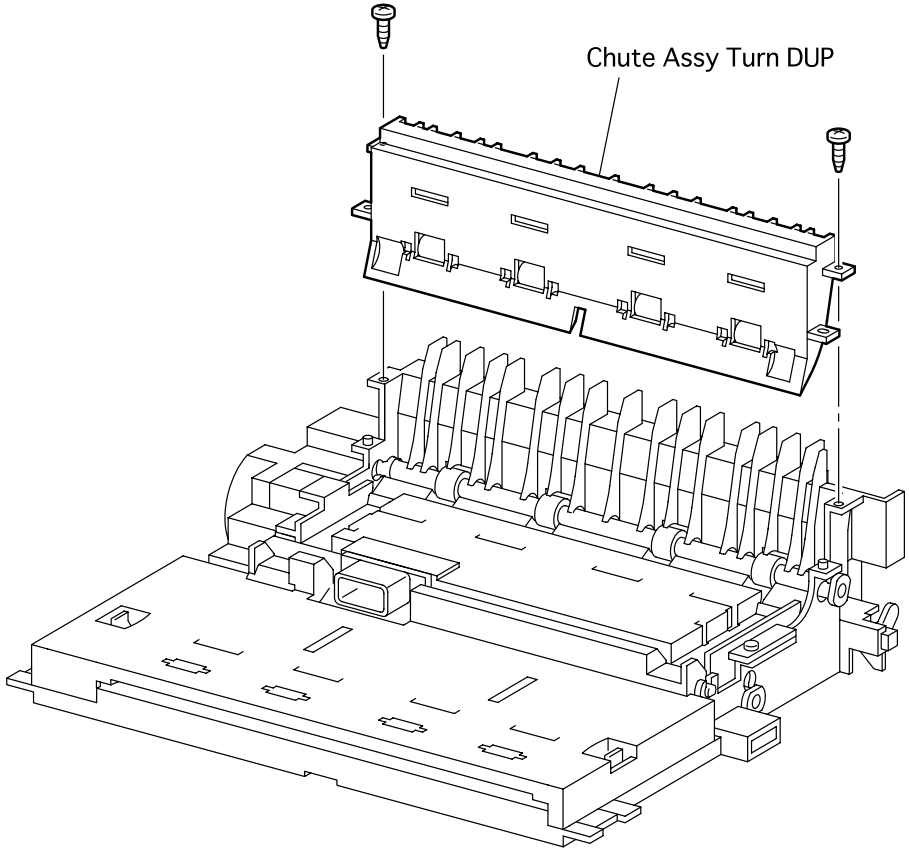


Figure 2-3. Chute Assy Turn DUP Removal

2.3.2 Chute Assy Connector DUP

2.3.2.1 Removal

1. Remove the Duplex Unit. (See “Removal” on page 51)
2. Remove the Cover DUP. (See “Cover DUP” on page 68)
3. Remove the Cover Drive DUP. (See “Cover Drive DUP” on page 56)
4. Unplug the connector of the Chute Assy Connector DUP from the PWBA DUP.
5. Disengage the Harness of Chute Assy Connector DUP from three hooks of Duplex Unit.
6. Remove the two screws securing the Chute Assy Connector DUP to the Duplex Unit.
7. Draw the harness of Chute Assy Connector DUP from the hole in the Duplex Unit.
8. Remove the Chute Assy Connector DUP to the Duplex Unit.

2.3.2.2 Assembly

1. Align the Chute Assy Connector DUP with its mount position to the Duplex Unit.
2. Insert the harness of Chute Assy Connector DUP into the hole in the Duplex Unit.
3. Secure the Chute Assy Connector DUP to the Duplex Unit with two screws.
4. Secure the harness of Chute Assy Connector DUP with three hooks of Duplex Unit.
5. Plug the connector (P/J39) of the Chute Assy Connector DUP to the PWBA DUP.
6. Mount the Cover Drive DUP. (See “Cover Drive DUP” on page 56)
7. Mount the Cover DUP. (See “Cover DUP” on page 68)
8. Mount the Duplex Unit. (See “Installation” on page 51)

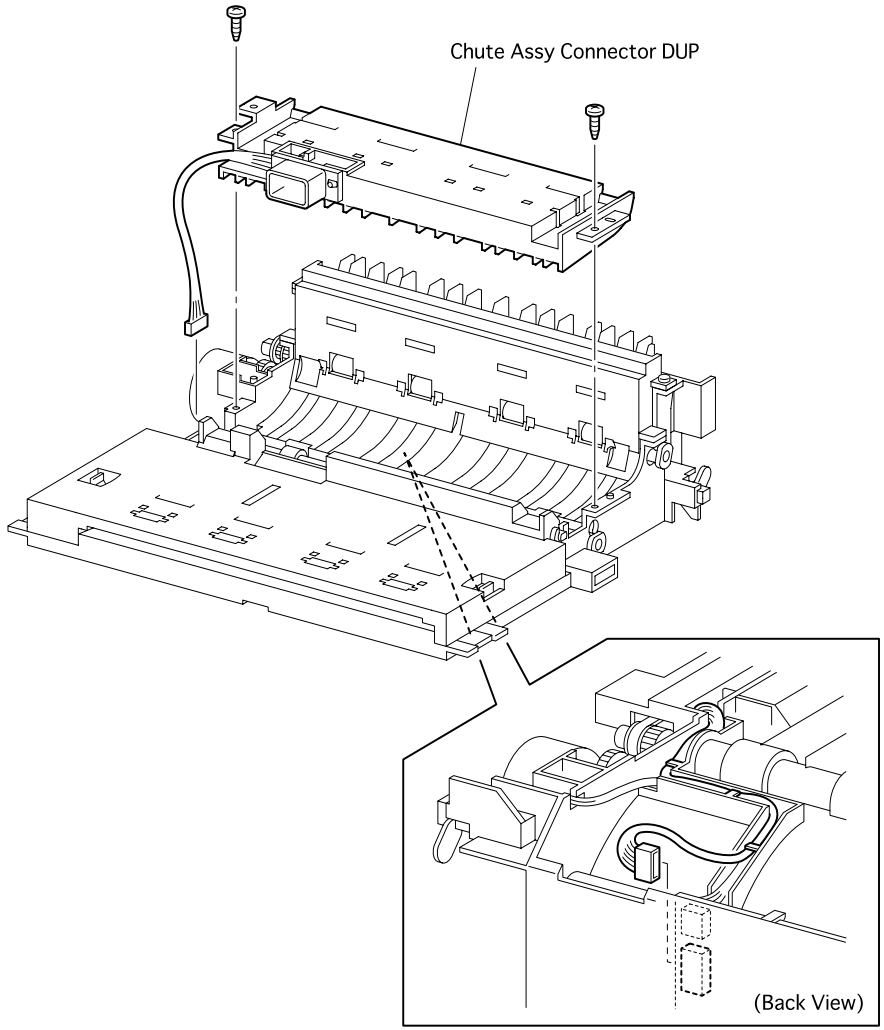


Figure 2-4. Chute Assy Connector DUP Removal

2.3.3 Chute Assy Upper DUP

2.3.3.1 Removal

1. Remove the Duplex Unit. (See “Removal” on page 51)
2. Remove the Cover DUP. (See “Cover DUP” on page 68)
3. Remove the Cover Drive DUP. (See “Cover Drive DUP” on page 56)
4. Remove the Chute Assy Connector DUP. (See “Chute Assy Connector DUP” on page 54)
5. Push two levers securing the Chute Assy Upper DUP to the Duplex Unit in the arrow direction to disengage two hooks.
6. Rotate the Chute Assy Upper DUP by about 90 degrees upward from the Duplex Unit.
7. Release the right shaft of Chute Assy Upper DUP from the bearing, and draw the Chute Assy Upper DUP toward upper right from the Duplex Unit.

2.3.3.2 Assembly

1. Insert the left shaft of Chute Assy Upper DUP into the left bearing bore of Duplex Unit.
2. Insert the right shaft of Chute Assy Upper DUP into the right bearing of Duplex Unit.
3. Rotate the Chute Assy Upper DUP by about 90 degrees toward the front from the Duplex Unit.
4. Secure the Chute Assy Upper DUP to the Duplex Unit with two levers.
5. Mount the Chute Assy Connector DUP. (See “Chute Assy Connector DUP” on page 54)
6. Mount the Cover Drive DUP. (See “Cover Drive DUP” on page 56)
7. Mount the Cover DUP. (See “Cover DUP” on page 68)
8. Mount the Duplex Unit. (See “Installation” on page 51)

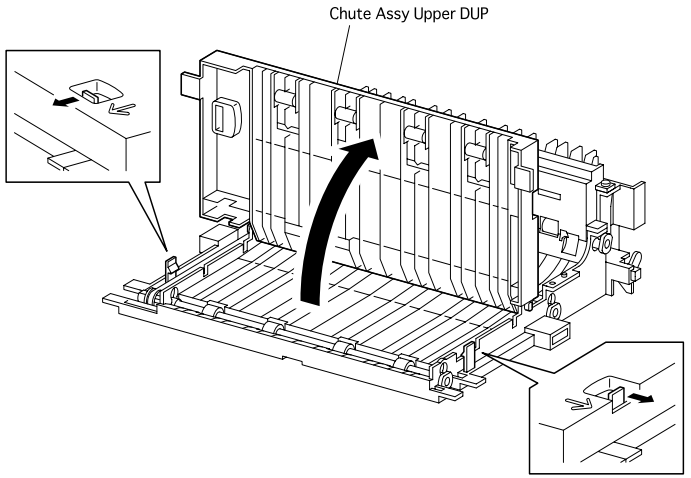


Figure 2-5. Chute Assy Upper DUP Removal (1)

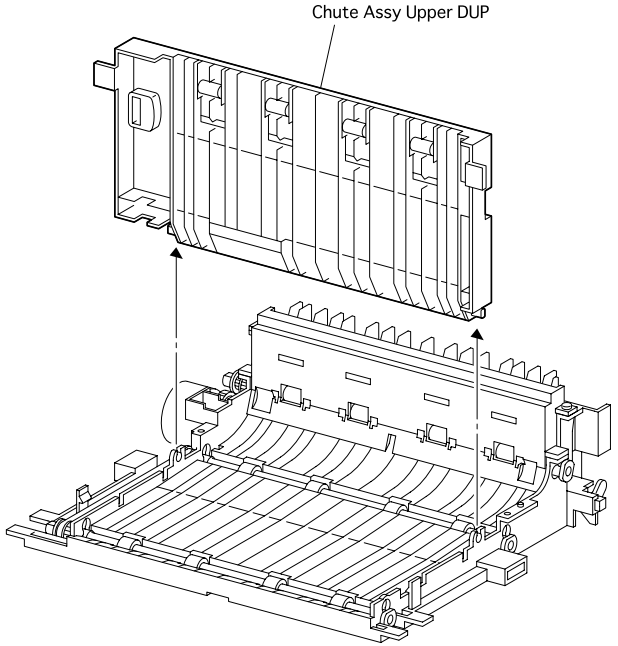


Figure 2-6. Chute Assy Upper DUP Removal (2)

2.3.4 Cover Drive DUP

2.3.4.1 Removal

1. Remove the Duplex Unit. (See “Removal” on page 51)
2. Remove the two screws securing the Cover Drive DUP to the Duplex Unit.
3. Remove the Cover Drive DUP from Duplex Unit.

2.3.4.2 Assembly

1. Align the Cover Drive DUP with its mount position to the Duplex Unit.
2. Secure the Cover Drive DUP to the Duplex Unit with two screws.
3. Mount the Duplex Unit. (See “Installation” on page 51)

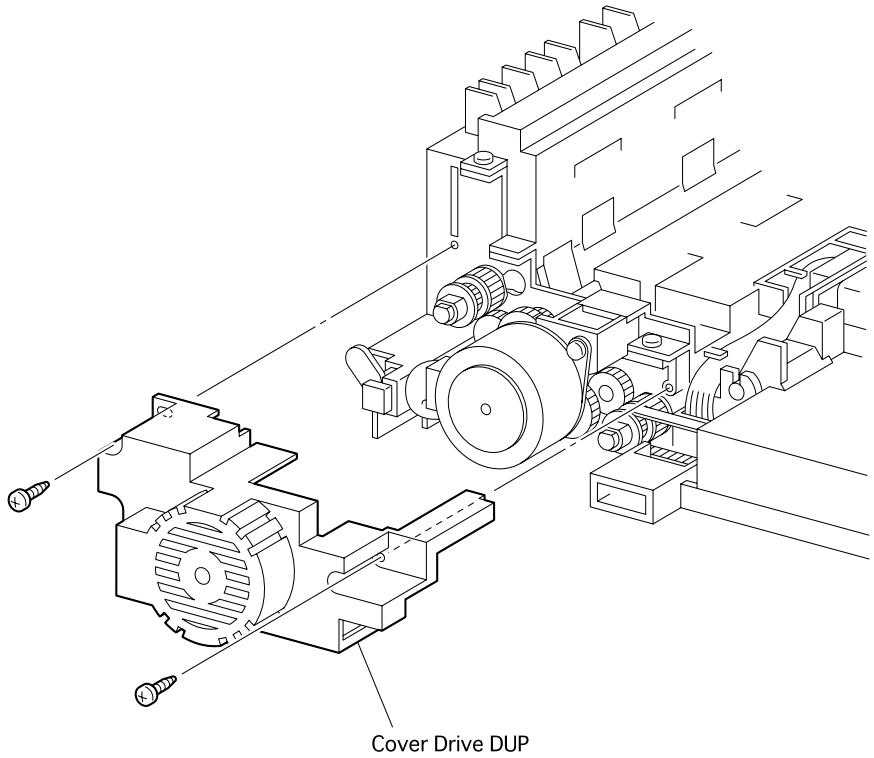


Figure 2-7. Cover Drive DUP Removal

2.3.5 Roll Assy DUP: Rear

2.3.5.1 Removal

1. Remove the Duplex Unit. (See “Removal” on page 51)
2. Remove the Cover DUP. (See “Cover DUP” on page 68)
3. Remove the Cover Drive DUP. (See “Cover Drive DUP” on page 56)
4. Remove the Chute Assy Connector DUP. (See “Chute Assy Connector DUP” on page 54)
5. Remove the Motor Assy DUP.
6. Remove the Chute Assy Turn DUP. (See “Chute Assy Turn DUP” on page 53)
7. Remove the Stopper Belt DUP: Rear. (See “Stopper Belt DUP” on page 63)
8. Draw the Gear DUP 17/Pulley from the Roll Assy DUP: Rear of the Duplex Unit.
9. Draw the Gear DUP 17/39 from the shaft of Duplex Unit.
10. Draw the Gear DUP 18/39 from the shaft of Duplex Unit.
11. Disengage one hook of left Bearing DUP securing the left shaft of Roll Assy DUP: Rear to the Duplex Unit, and draw off the Bearing DUP.
12. Disengage one hook of right Bearing DUP securing the right shaft of Roll Assy DUP: Rear to the Duplex Unit, and draw off the Bearing DUP.
13. Shift the Roll Assy DUP: Rear to the front bearing from the Duplex Unit.
14. Shifting the Roll Assy DUP: Rear to the left from the Duplex Unit, draw the right shaft of Roll Assy DUP: Rear off the right bearing of Duplex Unit.
15. Raising the right shaft of Roll Assy DUP: Rear, draw the Roll Assy DUP: Rear off the Duplex Unit in the upper right direction.

2.3.5.2 Assembly

1. Insert the left shaft of Roll Assy DUP: Rear into the left bearing of Duplex Unit.
2. Insert the right shaft of Roll Assy DUP: Rear into the right bearing of Duplex Unit.
3. Align the Roll Assy DUP: Rear with its mount position to the Duplex Unit.
4. Insert the Bearing DUP into the right shaft of Roll Assy DUP: Rear, and hook it to the Duplex Unit.
5. Insert the Bearing DUP into the left shaft of Roll Assy DUP: Rear, and hook it to the Duplex Unit.
6. Insert the Gear DUP 18 into the shaft of Duplex Unit.
7. Insert the Gear DUP 17/39 into the shaft of Duplex Unit.
8. Insert the Gear DUP 17/Pulley into the left shaft of Roll Assy DUP: Rear.
9. Mount the Stopper Belt DUP: Rear. (See “Stopper Belt DUP” on page 63)
10. Mount the Chute Assy Turn DUP. (See “Chute Assy Turn DUP” on page 53)
11. Mount the Motor Assy DUP.
12. Mount the Chute Assy Connector DUP. (See “Chute Assy Connector DUP” on page 54)
13. Mount the Cover Drive DUP. (See “Cover Drive DUP” on page 56)
14. Mount the Cover DUP. (See “Cover DUP” on page 68)
15. Mount the Duplex Unit. (See “Installation” on page 51)

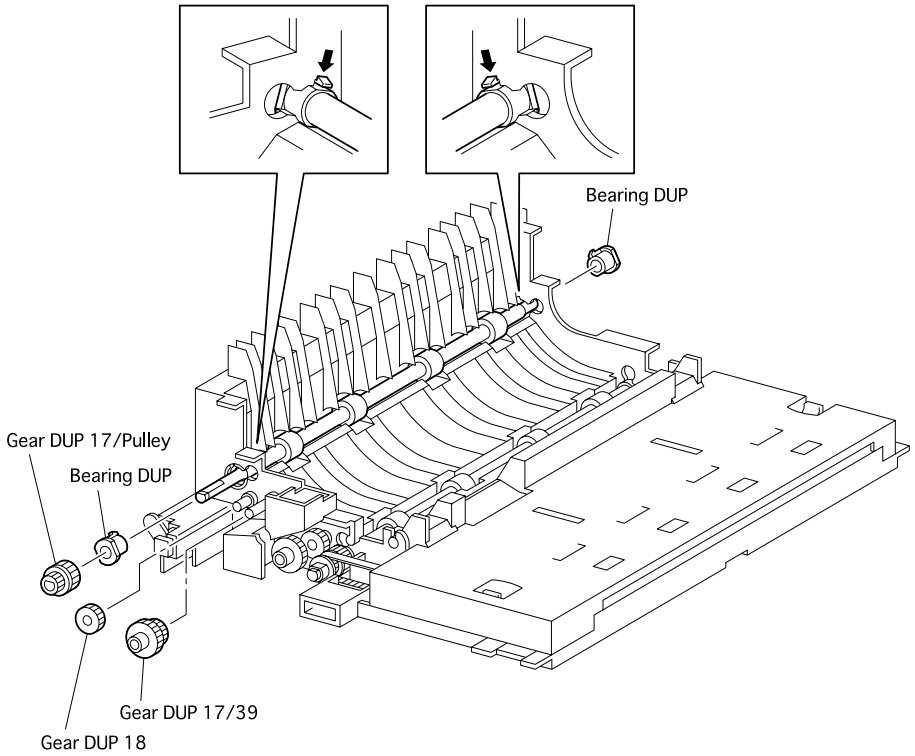


Figure 2-8. Roll Assy DUP: Rear Removal (1)

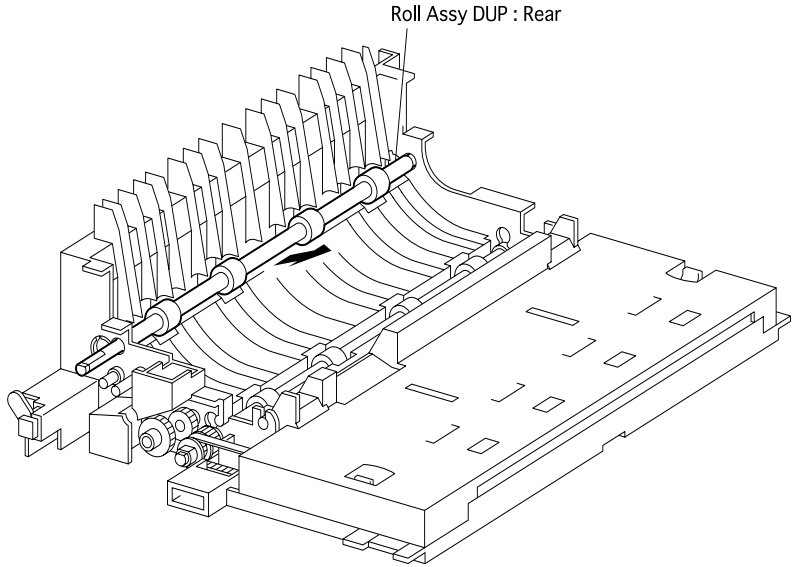


Figure 2-9. Roll Assy DUP: Rear Removal (2)

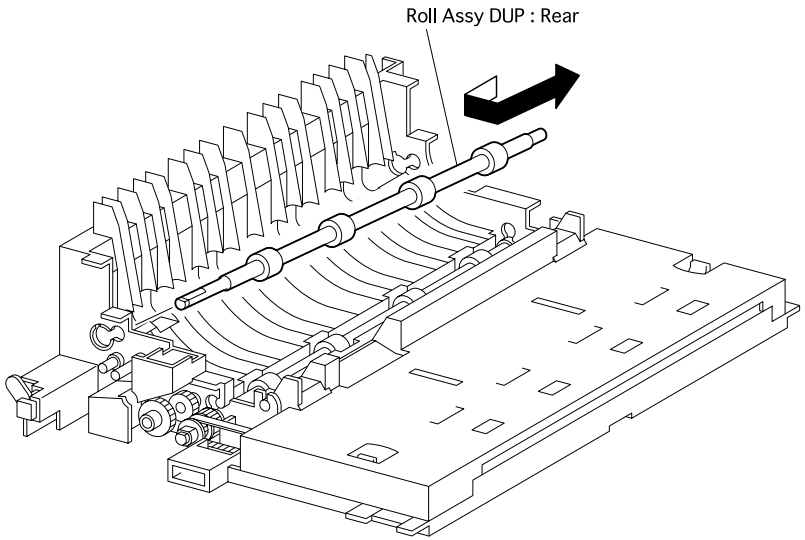


Figure 2-10. Roll Assy DUP: Rear Removal (3)

2.3.6 Roll Assy DUP: Middle

2.3.6.1 Removal

1. Remove the Duplex Unit. (See "Removal" on page 51)
2. Remove the Cover DUP. (See "Cover DUP" on page 68)
3. Remove the Cover Drive DUP. (See "Cover Drive DUP" on page 56)
4. Remove the Chute Assy Connector DUP. (See "Chute Assy Connector DUP" on page 54)
5. Remove the Chute Assy Upper DUP. (See "Chute Assy Upper DUP" on page 55)
6. Remove the Motor Assy DUP.
7. Remove the Stopper Belt DUP: Middle. (See "Stopper Belt DUP" on page 63)
8. Remove the Stopper Belt DUP: Front.
9. Remove the Belt Synchronous.
10. Draw the Gear DUP 17/Pulley from the Roll Assy DUP: Middle of the Duplex Unit.
11. Draw the Gear DUP 17/39 from the shaft of Duplex Unit.
12. Draw the Gear DUP 18 from the shaft of Duplex Unit.
13. Using a small screwdriver, disengage one hook of left Bearing DUP securing the left shaft of Roll Assy DUP: Middle to the Duplex Unit, and draw off the Bearing DUP.
14. Using a small screwdriver, disengage one hook of right Bearing DUP securing the right shaft of Roll Assy DUP: Middle to the Duplex Unit, and draw off the Bearing DUP.
15. Shift the Roll Assy DUP: Middle to the upper bearing from the Duplex Unit.
16. Shifting the Roll Assy DUP: Middle to the left from the Duplex Unit, draw the right shaft of Roll Assy DUP: Middle off the right bearing of Duplex Unit.
17. Raising the right shaft of Roll Assy DUP: Middle, draw the Roll Assy DUP: Middle off the Duplex Unit in the upper right direction.

2.3.6.2 Assembly

1. Insert the left shaft of Roll Assy DUP: Middle into the left bearing of Duplex Unit.
2. Insert the right shaft of Roll Assy DUP: Middle into the right bearing of Duplex Unit.
3. Align the Roll Assy DUP: Middle with its mount position to the Duplex Unit.
4. Insert the Bearing DUP into the right shaft of Roll Assy DUP: Middle, and hook it to the Duplex Unit.
5. Insert the Bearing DUP into the left shaft of Roll Assy DUP: Middle, and hook it to the Duplex Unit.
6. Insert the Gear DUP 18 into the shaft of Duplex Unit.
7. Insert the Gear DUP 17/39 into the shaft of Duplex Unit.
8. Insert the Gear DUP 17/Pulley into the left shaft of Roll Assy DUP: Rear.
9. Mount the Stopper Belt DUP: Middle. (See "Stopper Belt DUP" on page 63)
10. Mount the Stopper Belt DUP: Front.
11. Mount the Belt Synchronous.
12. Mount the Motor Assy DUP.
13. Mount the Chute Assy Upper DUP. (See "Chute Assy Upper DUP" on page 55)
14. Mount the Chute Assy Connector DUP. (See "Chute Assy Connector DUP" on page 54)
15. Mount the Cover Drive DUP. (See "Cover Drive DUP" on page 56)
16. Mount the Cover DUP. (See "Cover DUP" on page 68)
17. Mount the Duplex Unit. (See "Installation" on page 51)

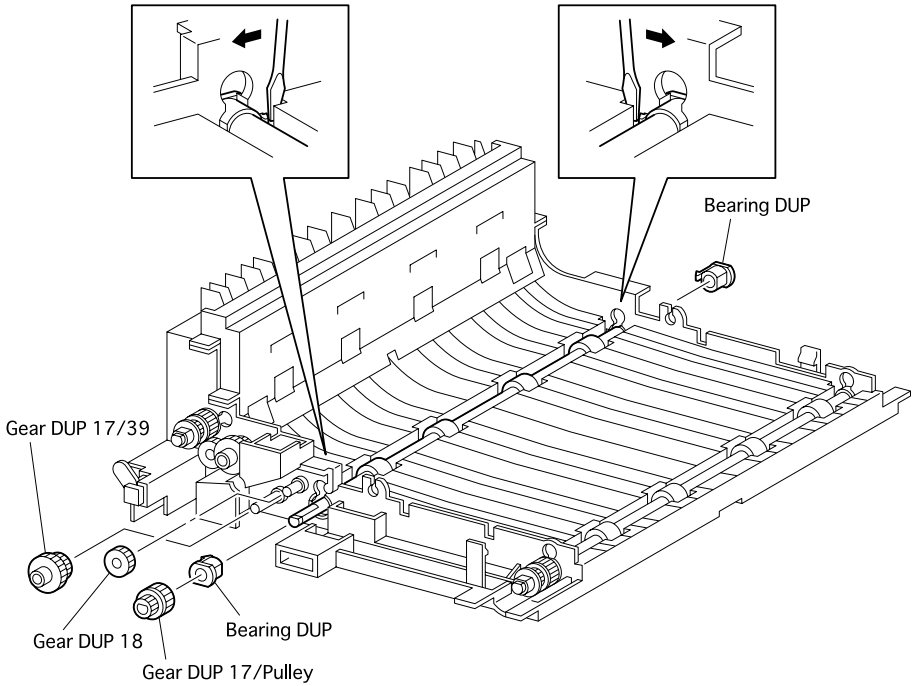


Figure 2-11. Roll Assy DUP: Middle Removal (1)

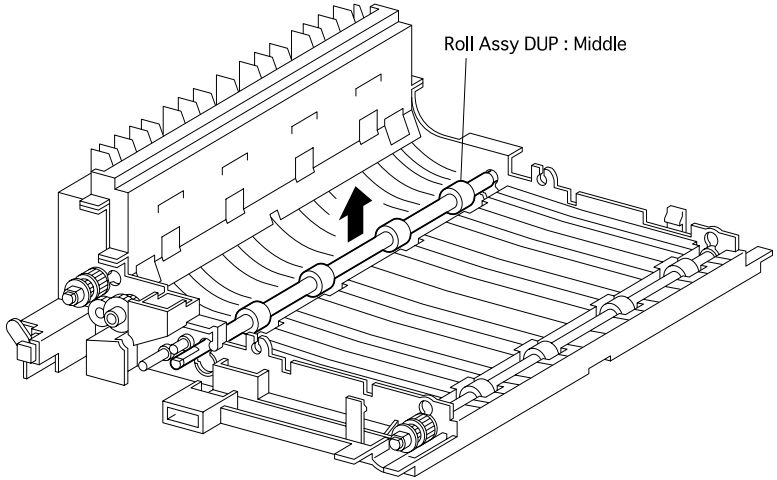


Figure 2-12. Roll Assy DUP: Middle Removal (2)

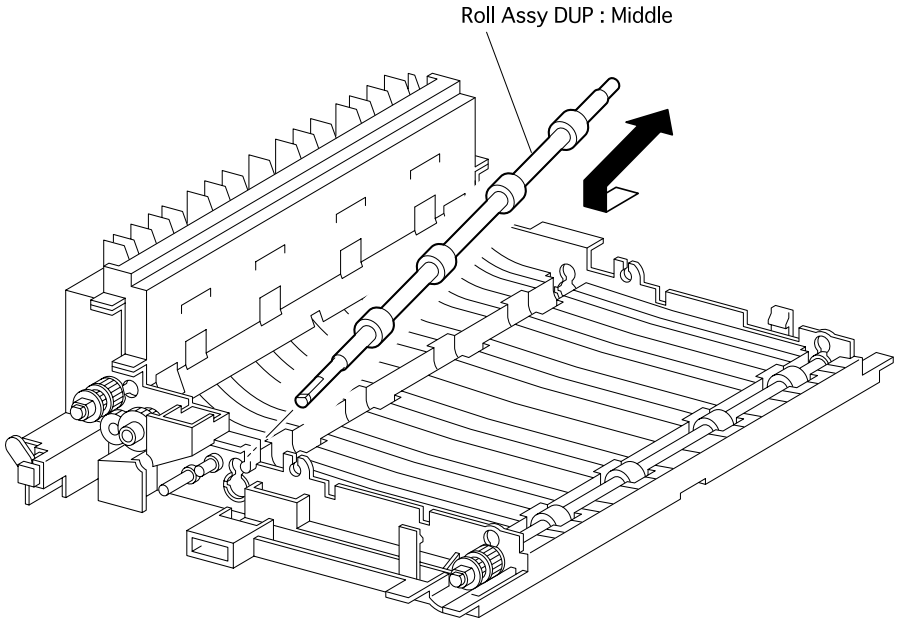


Figure 2-13. Roll Assy DUP: Middle Removal (3)

2.3.7 Roll Assy DUP: Front

2.3.7.1 Removal

1. Remove the Duplex Unit. (See “Removal” on page 51)
2. Remove the Cover DUP. (See “Cover DUP” on page 68)
3. Remove the Cover Drive DUP. (See “Cover Drive DUP” on page 56)
4. Remove the Chute Assy Connector DUP. (See “Chute Assy Connector DUP” on page 54)
5. Remove the Chute Assy Upper DUP. (See “Chute Assy Upper DUP” on page 55)
6. Remove the Motor Assy DUP.
7. Remove the Stopper Belt DUP: Middle. (See “Stopper Belt DUP” on page 63)
8. Remove the Stopper Belt DUP: Front.
9. Remove the Belt Synchronous.
10. Draw the Gear DUP 17/Pulley from the Roll Assy DUP: Front of the Duplex Unit.
11. Using a small screwdriver, disengage one hook of left Bearing DUP securing the left shaft of Roll Assy DUP: Front to the Duplex Unit, and draw off the Bearing DUP.
12. Using a small screwdriver, disengage one hook of left Bearing DUP securing the right shaft of Roll Assy DUP: Front to the Duplex Unit, and draw off the Bearing DUP.
13. Shift the Roll Assy DUP: Front to the upper bearing from the Duplex Unit.
14. Shifting the Roll Assy DUP: Front to the left from the Duplex Unit, draw the right shaft of Roll Assy DUP: Front off the right bearing of Duplex Unit.
15. Raising the right shaft of Roll Assy DUP: Front, draw the Roll Assy DUP: Front off the Duplex Unit in the upper right direction.

2.3.7.2 Assembly

1. Insert the left shaft of Roll Assy DUP: Front into the left bearing of Duplex Unit.
2. Insert the right shaft of Roll Assy DUP: Front into the right bearing of Duplex Unit.
3. Align the Roll Assy DUP: Front with its mount position to the Duplex Unit.
4. Insert the Bearing DUP into the right shaft of Roll Assy DUP: Front, and hook it to the Duplex Unit.
5. Insert the Bearing DUP into the left shaft of Roll Assy DUP: Front, and hook it to the Duplex Unit.
6. Insert the Gear DUP 17/Pulley into the left shaft of Roll Assy DUP: Rear.
7. Mount the Stopper Belt DUP: Middle. (See “Stopper Belt DUP” on page 63)
8. Mount the Stopper Belt DUP: Front.
9. Mount the Belt Synchronous.
10. Mount the Motor Assy DUP.
11. Mount the Chute Assy Upper DUP. (See “Chute Assy Upper DUP” on page 55)
12. Mount the Chute Assy Connector DUP. (See “Chute Assy Connector DUP” on page 54)
13. Mount the Cover Drive DUP. (See “Cover Drive DUP” on page 56)
14. Mount the Cover DUP. (See “Cover DUP” on page 68)
15. Mount the Duplex Unit. (See “Installation” on page 51)

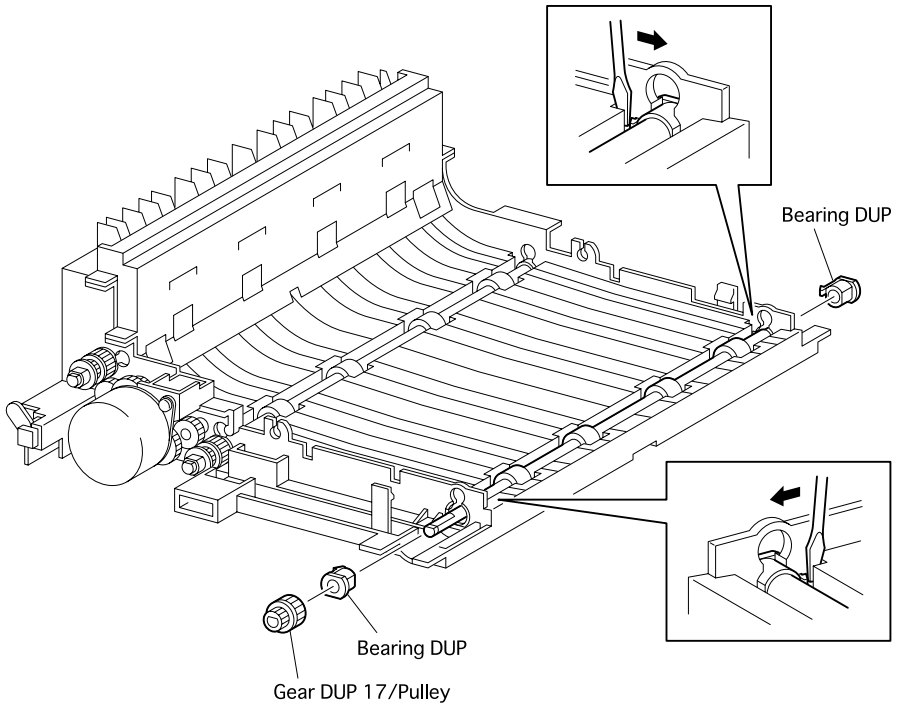


Figure 2-14. Roll Assy DUP: Front Removal (1)

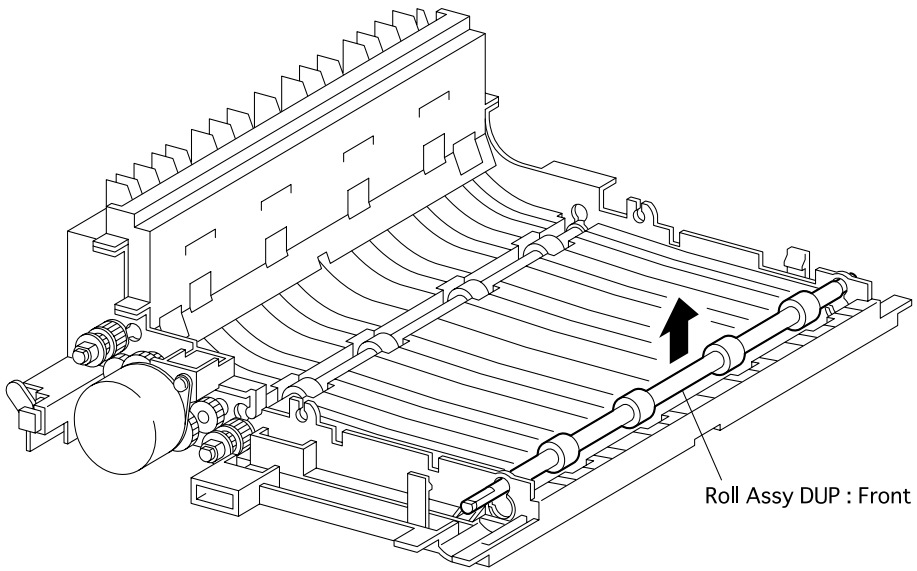


Figure 2-15. Roll Assy DUP: Front Removal (2)

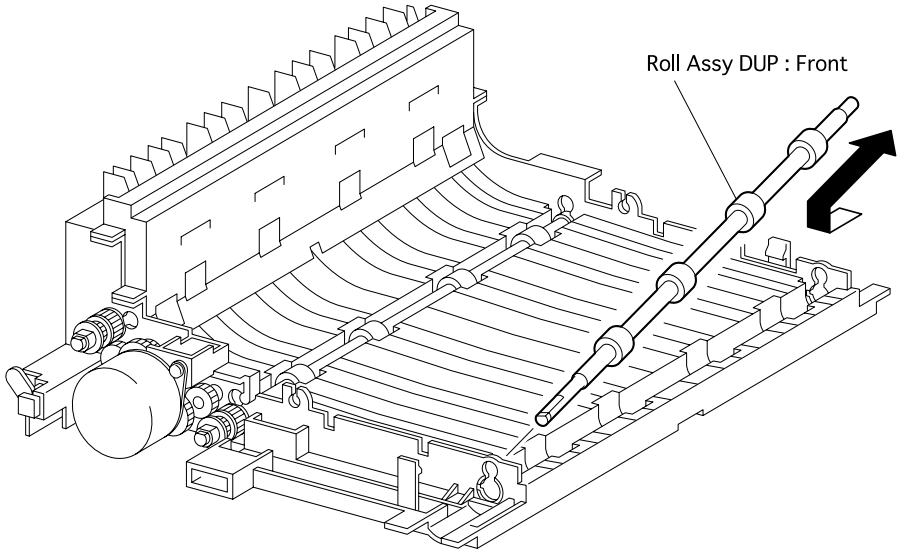


Figure 2-16. Roll Assy DUP: Front Removal (3)Removal

2.3.8 Stopper Belt DUP

2.3.8.1 Removal

1. Remove the Duplex Unit. (See “Removal” on page 51)
2. Remove the Cover DUP. (See “Cover DUP” on page 68)
3. Remove the Cover Drive DUP. (See “Cover Drive DUP” on page 56)
4. Remove the Chute Assy Connector DUP. (See “Chute Assy Connector DUP” on page 54)
5. Remove the Chute Assy Upper DUP. (See “Chute Assy Upper DUP” on page 55)
6. Disengage one hook that secures the Stopper Belt DUP: Rear to the Roll Assy DUP: Rear of Duplex Unit, and draw off the Stopper Belt DUP: Rear.
7. Disengage one hook that secures the Stopper Belt DUP: Middle to the Roll Assy DUP: Middle of Duplex Unit, and draw off the Stopper Belt DUP: Middle.
8. Disengage one hook that secures the Stopper Belt DUP: Front to the Roll Assy DUP: Front of Duplex Unit, and draw off the Stopper Belt DUP: Front.

2.3.8.2 Assembly

1. Insert the Stopper Belt DUP: Front into the Roll Assy DUP: Front of Duplex Unit, and fix the Roll Assy DUP: Front with one hook.
2. Insert the Stopper Belt DUP: Middle into the Roll Assy DUP: Middle of Duplex Unit, and fix the Roll Assy DUP: Front with one hook.
3. Insert the Stopper Belt DUP: Front into the Roll Assy DUP: Front of Duplex Unit, and fix the Roll Assy DUP: Front with one hook.
4. Mount the Chute Assy Upper DUP. (See “Chute Assy Upper DUP” on page 55)
5. Mount the Chute Assy Connector DUP. (See “Chute Assy Connector DUP” on page 54)
6. Mount the Cover Drive DUP. (See “Cover Drive DUP” on page 56)
7. Mount the Cover DUP. (See “Cover DUP” on page 68)
8. Mount the Duplex Unit. (See “Installation” on page 51)

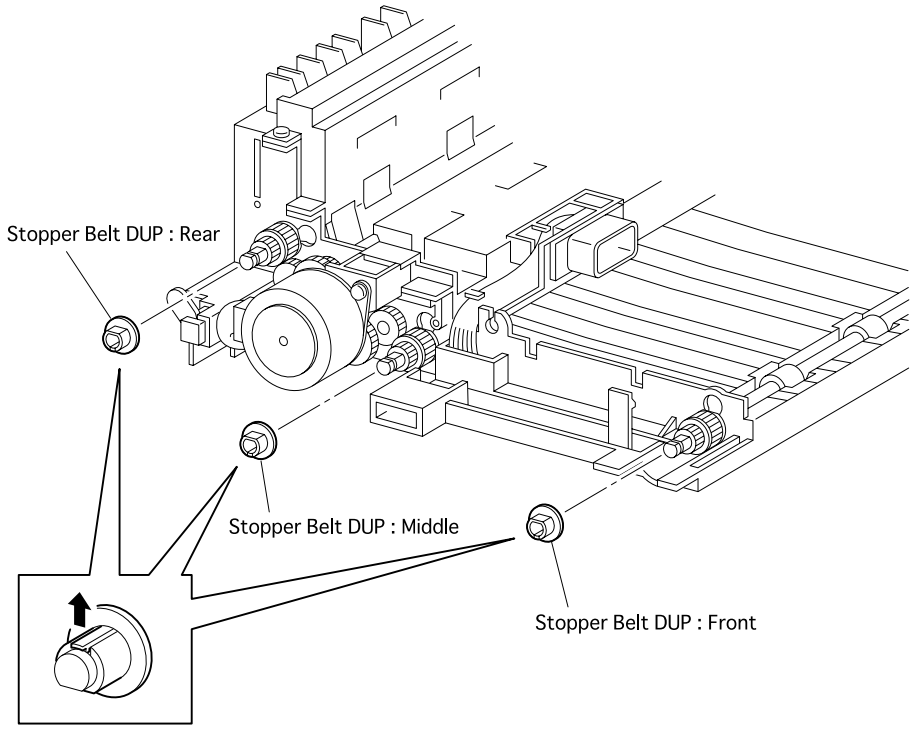


Figure 2-17. Stopper Belt DUP Removal

2.3.9 Motor Assy DUP

2.3.9.1 Removal

1. Remove the Duplex Unit. (See “Removal” on page 51)
2. Remove the Cover DUP. (See “Cover DUP” on page 68)
3. Remove the Cover Drive DUP. (See “Cover Drive DUP” on page 56)
4. Unplug the connector (P/J38) of the Motor Assy DUP from the PWBA DUP.
5. Disengage the Motor Assy DUP harness from two hooks of Duplex Unit.
6. Remove the two screws securing the Motor Assy DUP to the Duplex Unit.
7. Remove the Motor Assy DUP from Duplex Unit.

2.3.9.2 Assembly

1. Align the Motor Assy DUP with its mount position to the Duplex Unit.
2. Secure the Motor Assy DUP to the Duplex Unit with two screws.
3. Plug the connector (P/J38) of the Motor Assy DUP to the PWBA DUP.
4. Secure the Motor Assy DUP harness to two hooks on the back of Duplex Unit.
5. Mount the Cover Drive DUP. (See “Cover Drive DUP” on page 56)
6. Mount the Cover DUP. (See “Cover DUP” on page 68)
7. Mount the Duplex Unit. (See “Installation” on page 51)

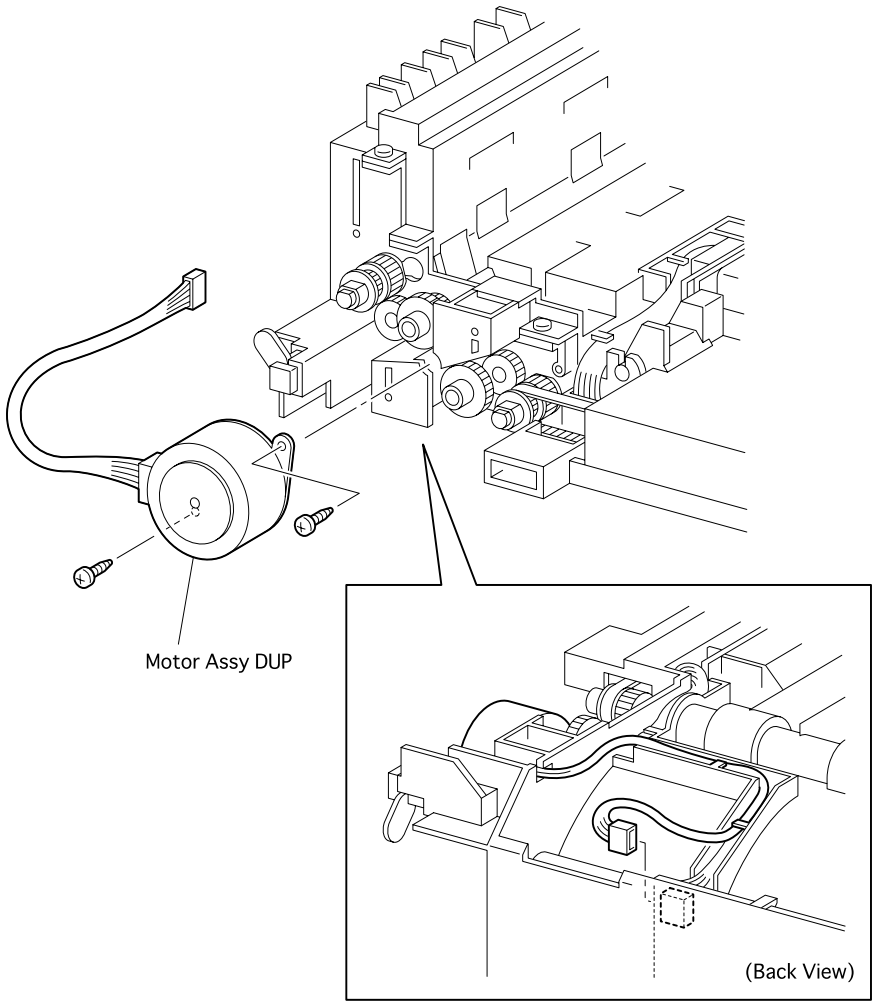


Figure 2-18. Motor Assy DUP Removal

2.3.10 Belt Synchronous

2.3.10.1 Removal

1. Remove the Duplex Unit. (See “Removal” on page 51)
2. Remove the Cover DUP. (See “Cover DUP” on page 68)
3. Remove the Cover Drive DUP. (See “Cover Drive DUP” on page 56)
4. Remove the Chute Assy Connector DUP. (See “Chute Assy Connector DUP” on page 54)
5. Remove the Chute Assy Upper DUP. (See “Chute Assy Upper DUP” on page 55)
6. Remove the Motor Assy DUP.
7. Remove the Stopper Belt DUP: Middle. (See “Stopper Belt DUP” on page 63)
8. Remove the Stopper Belt DUP: Front.
9. Disengage the rear side of Belt Synchronous from the gear of Gear DUP 17/Pulley of the Duplex Unit.
10. Disengage the front side of Belt Synchronous from the gear of Gear DUP 17/Pulley, and remove the Belt Synchronous from the Duplex Unit.

2.3.10.2 Assembly

1. Engage the Belt Synchronous with the front gear of Gear DUP 17/Pulley of the Duplex Unit.
2. Engage the rear of Belt Synchronous with the middle gear of Gear DUP 17/Pulley of the Duplex Unit.
3. Mount the Stopper Belt DUP: Front. (See “Stopper Belt DUP” on page 63)
4. Mount the Stopper Belt DUP: Middle.
5. Mount the Motor Assy DUP.
6. Mount the Chute Assy Upper DUP. (See “Chute Assy Upper DUP” on page 55)
7. Mount the Chute Assy Connector DUP. (See “Chute Assy Connector DUP” on page 54)
8. Mount the Cover Drive DUP. (See “Cover Drive DUP” on page 56)
9. Mount the Cover DUP. (See “Cover DUP” on page 68)
10. Mount the Duplex Unit. (See “Installation” on page 51)

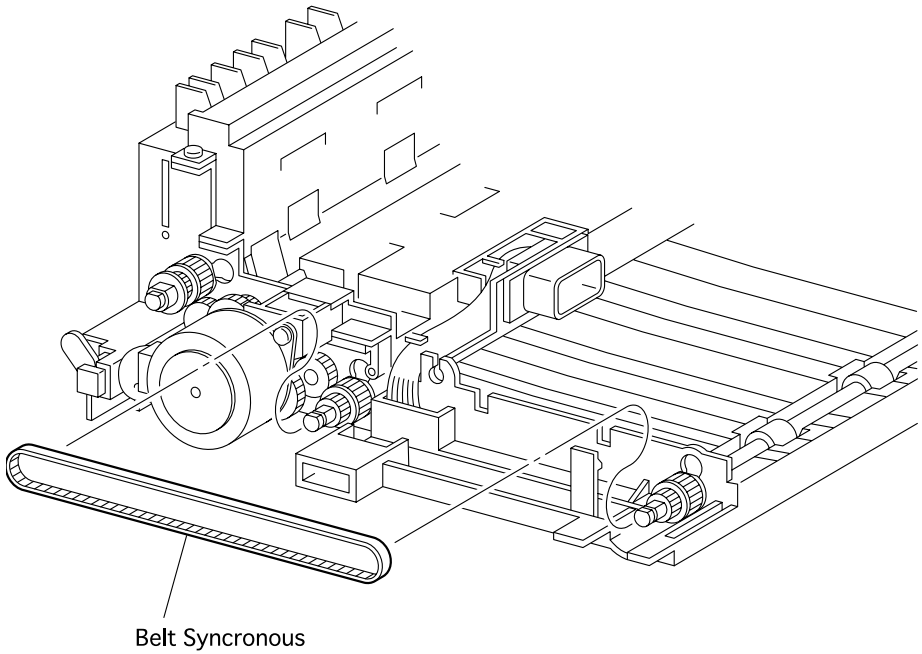


Figure 2-19. Belt Synchronous Removal

2.3.11 Sensor Photo IN-H (L)

2.3.11.1 Removal

1. Remove the Duplex Unit. (See "Removal" on page 51)
2. Disengage five hooks that secure the Sensor Photo IN-H(L) to the Duplex Unit.

NOTE: *In the following steps, do not detach the Duplex Unit and Sensor Photo IN-H (L) far away because they are connected with the harness.*

3. Detach the Sensor Photo IN-H (L) a little from Duplex Unit.
4. Unplug the connector (P/J361) from the Sensor Photo IN-H(L).

2.3.11.2 Assembly

1. Plug the connector (P/J361) to the Sensor Photo IN-H(L).
2. Align the Sensor Photo IN-H (L) with its mount position to the Duplex Unit.
3. Secure the Sensor Photo IN-H (L) to the Duplex Unit with five hooks.
4. Mount the Duplex Unit. (See "Installation" on page 51)

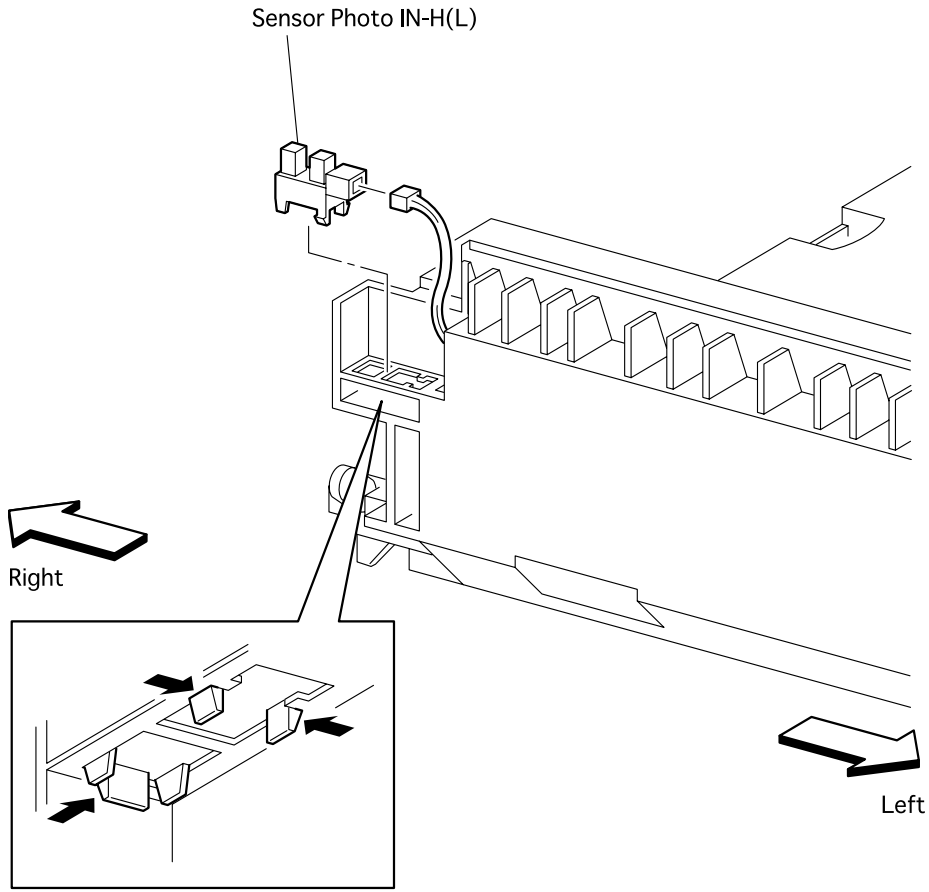


Figure 2-20. Sensor Photo IN-H (L) Removal

2.3.12 PWBA DUP

2.3.12.1 Removal

1. Remove the Duplex Unit. (See “Removal” on page 51)
2. Remove the Cover DUP. (See “Cover DUP” on page 68)

NOTE: *In the following steps, do not detach the Duplex Unit and PWBA DUP far away because they are connected with the harness.*

3. Disengaging one hook that secures the PWBA DUP to the Duplex Unit, draw off the PWBA DUP.
4. Unplug the connector (P/J36) from the PWBA DUP.
5. Unplug the connector (P/J37) from the PWBA DUP.
6. Unplug the connector (P/J38) from the PWBA DUP.
7. Unplug the connector (P/J39) from the PWBA DUP.

2.3.12.2 Assembly

1. Plug the connector (P/J39) in the PWBA DUP.
2. Plug the connector (P/J38) in the PWBA DUP.
3. Plug the connector (P/J37) in the PWBA DUP.
4. Plug the connector (P/J36) in the PWBA DUP.
5. Disengaging one hook of the Duplex Unit, mount the PWBA DUP in exact position.
6. Mount the Cover DUP. (See “Cover DUP” on page 68)
7. Mount the Duplex Unit. (See “Installation” on page 51)

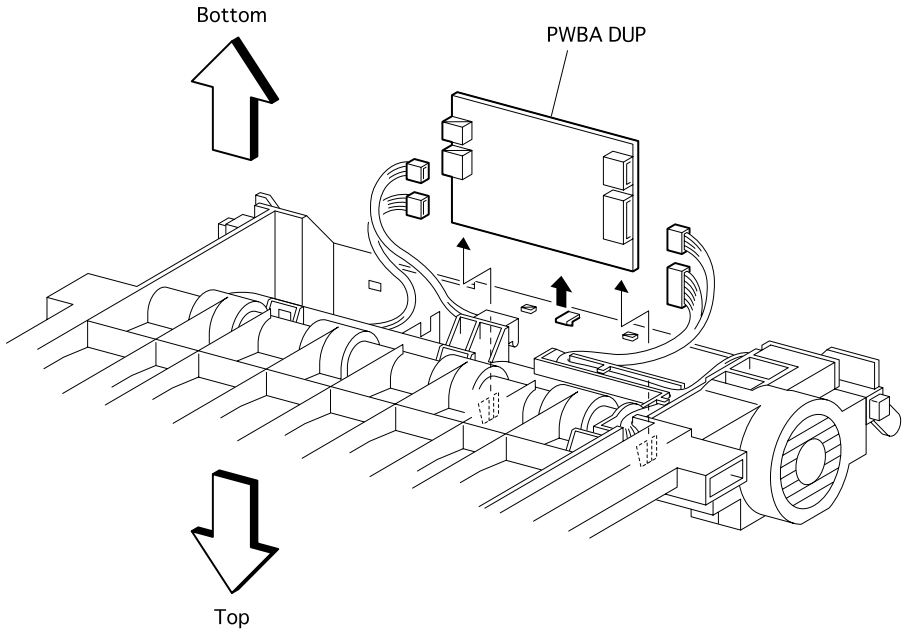


Figure 2-21. PWBA DUP Removal

2.3.13 Cover DUP

2.3.13.1 Removal

1. Remove the Duplex Unit. (See “Removal” on page 51)
2. Disengage three hooks that secure the Cover DUP to the Duplex Unit.
3. Remove the Cover DUP from the Duplex Unit. (See “Cover DUP” on page 68)

2.3.13.2 Assembly

1. Engaging two hooks on the rear side of Cover DUP with two holes on the rear side of Duplex Unit, mount the Cover DUP in exact position.
2. Secure the Cover DUP to the Duplex Unit with three hooks. (See “Cover DUP” on page 68)
3. Mount the Duplex Unit. (See “Installation” on page 51)

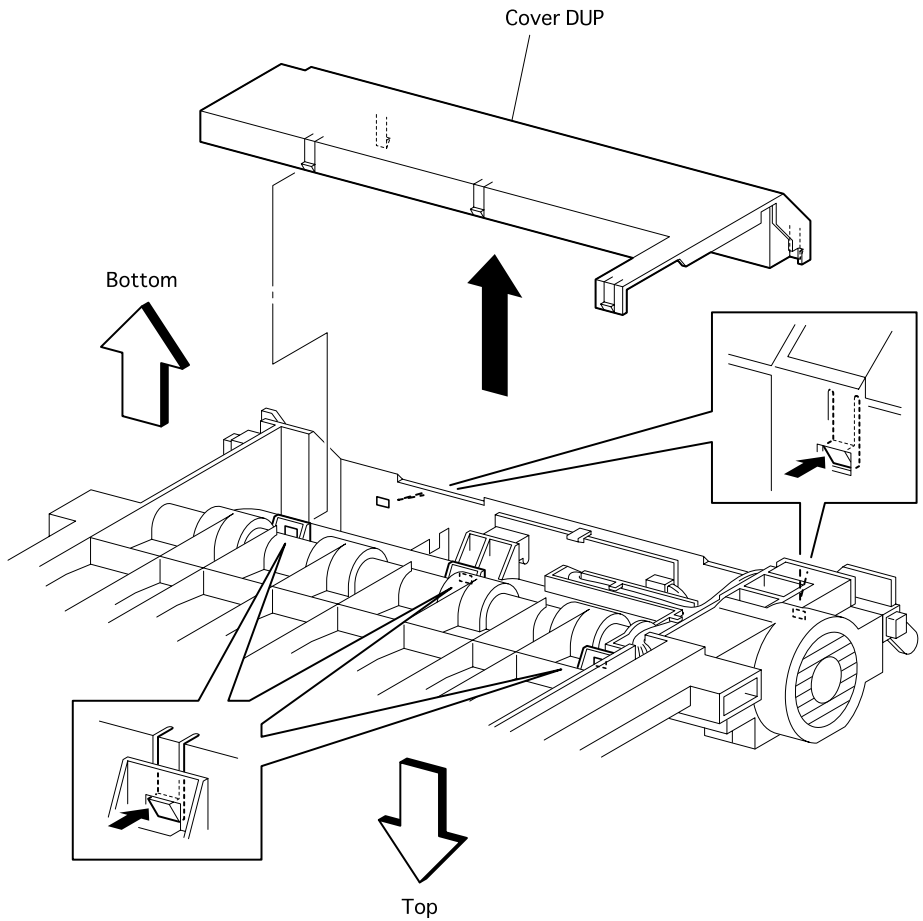


Figure 2-22. Cover DUP Removal

2.3.14 Sensor Assy DUP

2.3.14.1 Removal

1. Remove the Duplex Unit. (See “Removal” on page 51)
2. Remove the Cover DUP. (See “Cover DUP” on page 68)
3. Unplug the connector (P/J37) of the Sensor Assy DUP from the PWBA DUP.
4. Disengage four hooks that secure the Sensor Assy DUP to the Duplex Unit.
5. Remove the Sensor Assy DUP from the Duplex Unit.

2.3.14.2 Assembly

1. Align the Sensor Assy DUP with its mount position to the Duplex Unit.
2. Secure the Sensor Assy DUP to the Duplex Unit with four hooks.
3. Plug the connector (P/J37) of the Sensor Assy DUP to the PWBA DUP
4. Mount the Cover DUP. (See “Cover DUP” on page 68)
5. Mount the Duplex Unit. (See “Installation” on page 51)

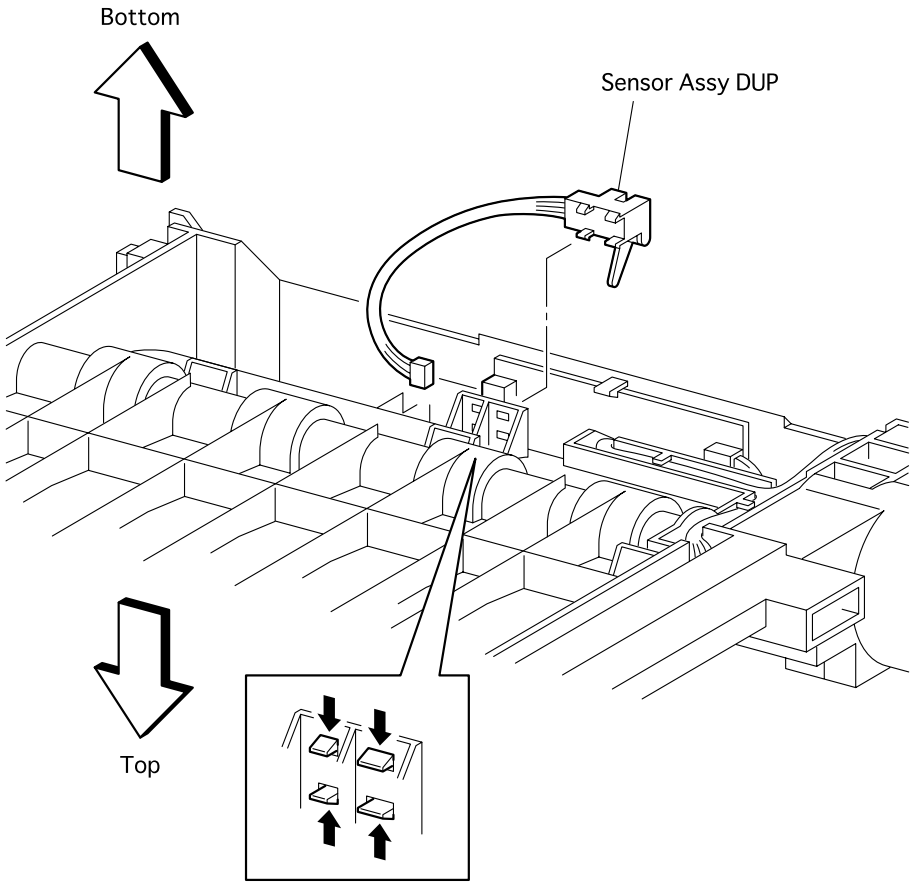


Figure 2-23. Sensor Assy DUP Removal

2.4 Parts List and Exploded Diagram

2.4.1 Duplex I

Table 2-1. Parts List for Duplex I

No. in Figure	Unit / Parts Name
1	DUPLEX UNIT (with 2~6)
2	CHUTE ASSY TURN DUP
3	CHUTE ASSY CONNECTOR DUP
4	CHUTE ASSY UPPER DUP
5	COVER DRIVE DUP
6	CHUTE ASSY LOWER DUP

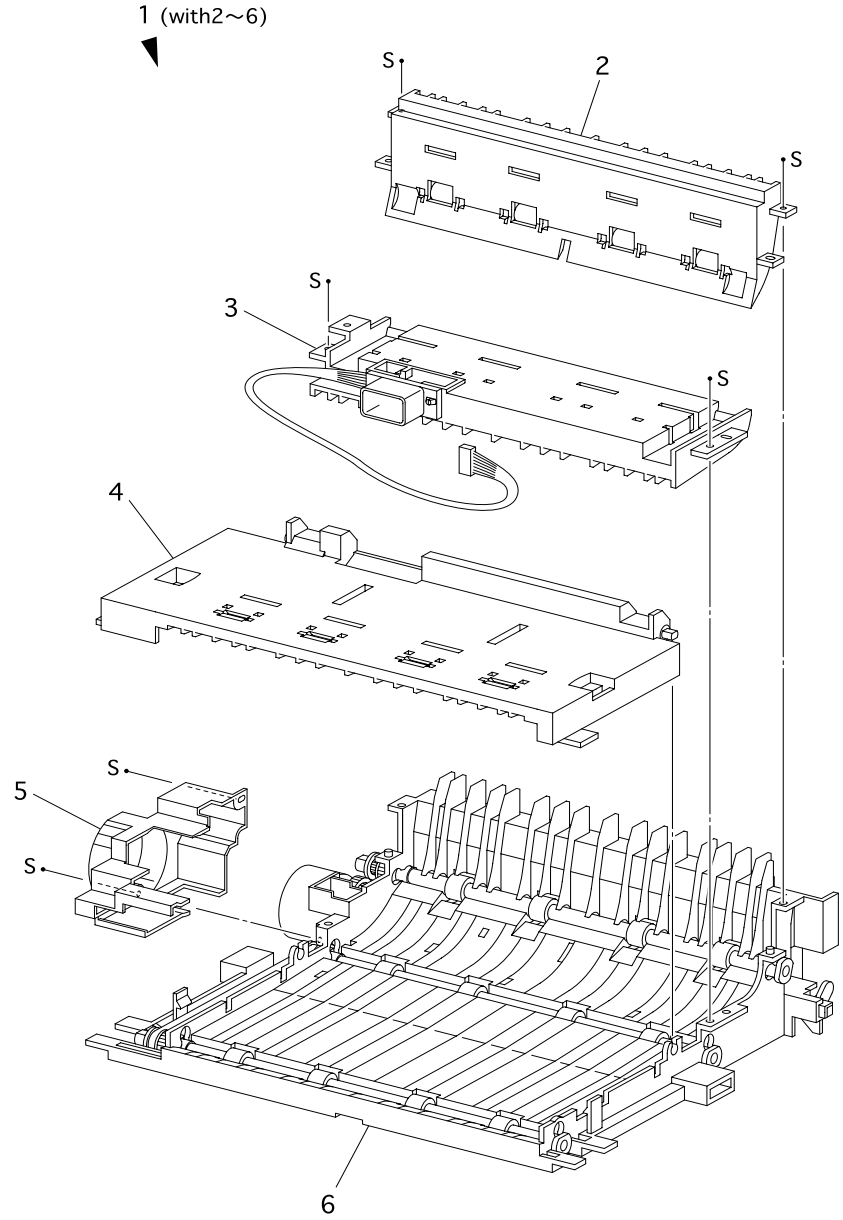


Figure 2-24. Exploded Diagram for Duplex I

2.4.2 Duplex II

Table 2-2. Parts List for Duplex II

No. in Figure	Unit / Parts Name
1	CHUTE ASSY LOWER DUP (with 2~19)
2	ROLL ASSY DUP
3	STOPPER BELT DUP
4	GEAR DUP 17 / PULLEY
5	BEARING DUP
6	GEAR DUP 18
7	GEAR DUP 17/39
8	MOTOR ASSY DUP
9	BELT SYNCRONOUS
10	CHUTE LOWER DUP
11	LATCH DUP
12	SPRING LATCH DUP
13	HARNESS ASSY DUP SNR
14	SENSOR PHOTO IN-H (L)
15	---
16	PWBA DUP
17	COVER DUP
18	SENSOR ASSY DUP
19	LABEL HANDLE DUP
99	KIT LATCH DUP (with 11 and 12)

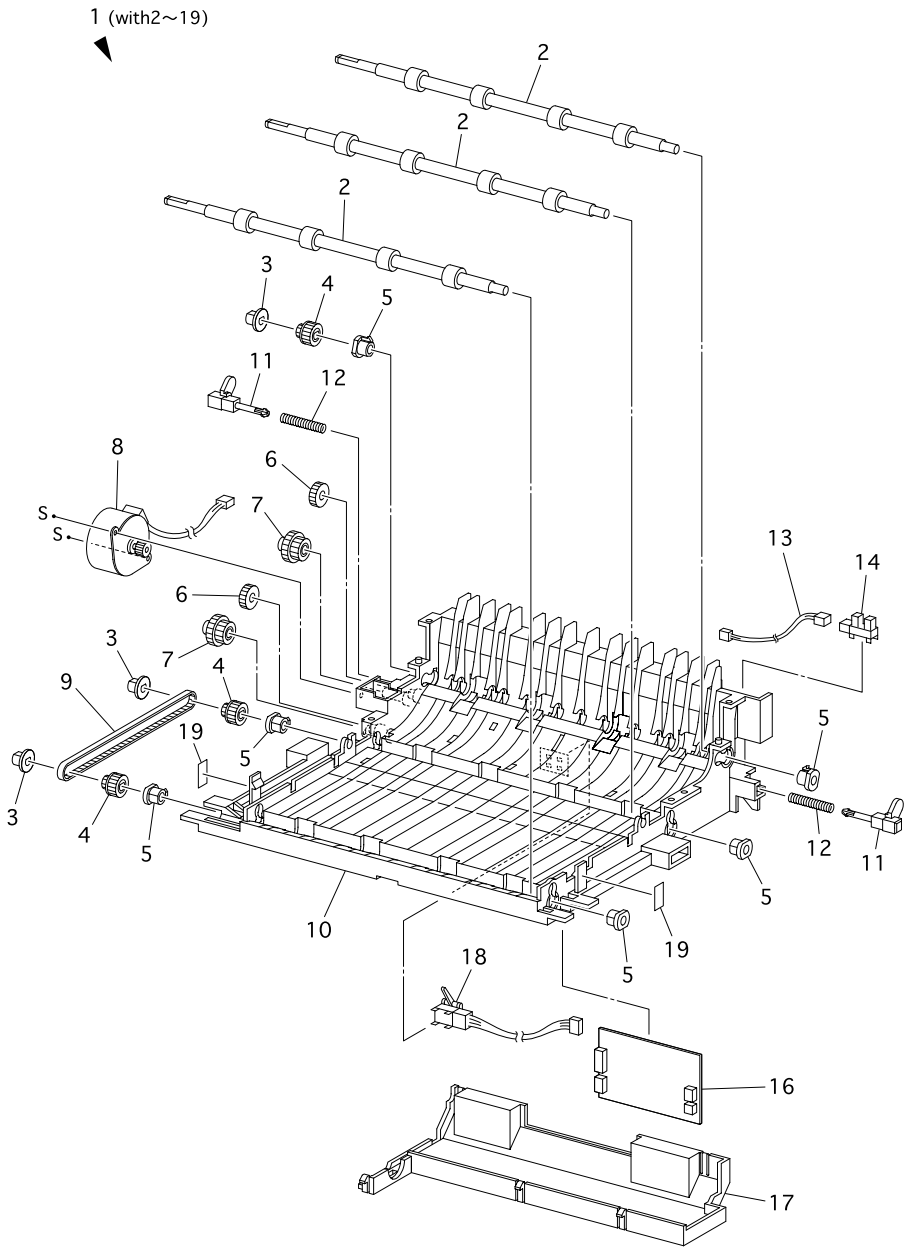
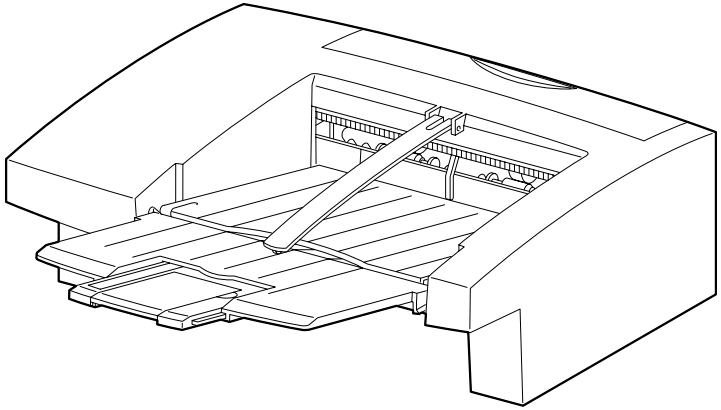


Figure 2-25. Exploded Diagram for Duplex II



CHAPTER

3

SHIFTER

3.1 Installation and Removal of the Shifter

3.1.1 Installing the Shifter

NOTE: *Remove the Cover Option by referring to the EPL-N2050 Service Manual / Chapter 4 when the Cover Option has been mounted on the Cover Top of the printer.*

1. Align the *Shifter* with its mount position to the printer.
2. Engage the left hook of *Shifter* with the top left hole in the *Cover Assy Top* on the printer.
3. Engage two hooks on the back of *Shifter* with two notches on the top rear side of *Cover Assy Top* on the printer.
4. Close the *Cover Rear*.

3.1.2 Shifter Removal

1. Open the *Cover Rear*.
2. Pushing two hooks on the back of *Shifter*, disengage hooks of *Shifter* from the *Cover Assy Top* on the printer.
3. Shifting the *Shifter* toward the rear, disengage the hook of *Shifter* from the hole on the top left side of *Cover Assy Top* on the printer.
4. Remove the *Shifter* from the printer.

NOTE: *Mount the Cover Option on the Cover Assy Top, if the Shifter is removed from the printer for a long time. For a mounting method, refer to the EPL-N2050 Service Manual / Chapter 4.*

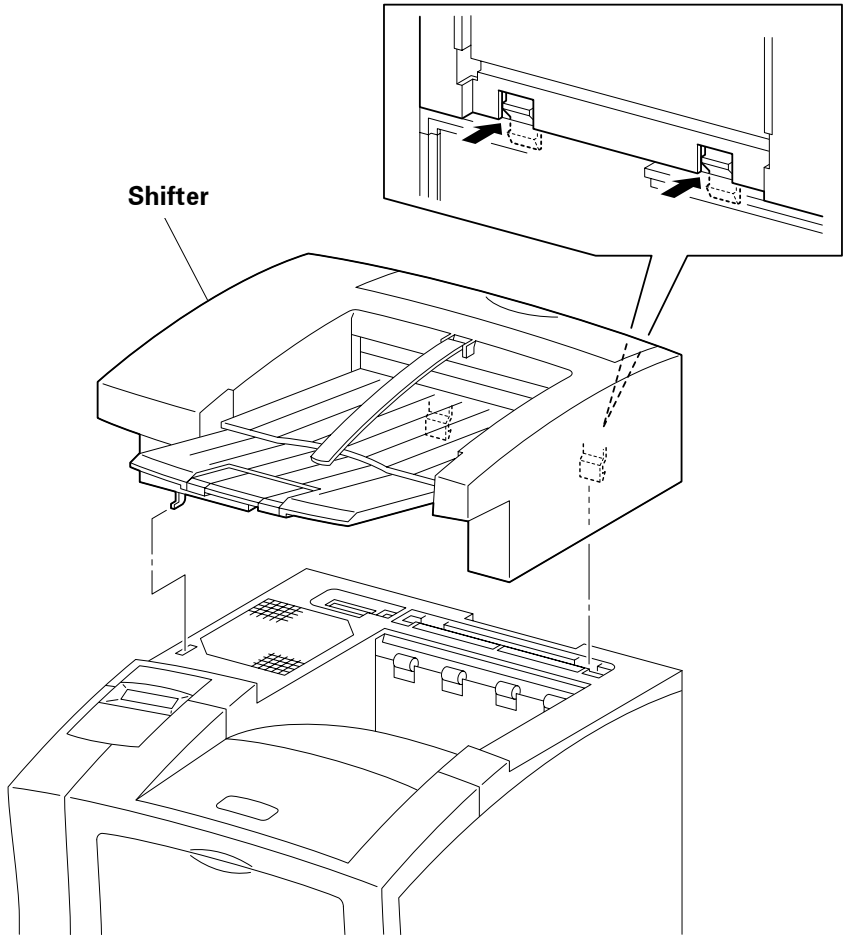


Figure 3-1. Shifter

3.2 Introduction

This section contains the disassembly and disassembly procedures for major parts within the Shifter.

3.2.1 Preparation

1. Switch OFF the main power.
2. Disconnect the AC power cord from the wall outlet, then start work.
3. Remove the *Cassette Assy*.
4. In performing work for the *FUSER ASSY* periphery, wait until the *FUSER ASSY* and its periphery have become cool enough.
5. Disconnect all interface cables from the rear panel of printer.
6. In performing work, to eliminate static electricity in your body, wear wristbands, etc. to take grounding properly.

3.2.2 Precaution

CAUTION

- **Many kinds of screws are used, and do not confuse where they are used. Using wrong screws could cause the tapped holes to be broken, or troubles to occur.**
- **In performing work with parts that are managed as spare parts but its procedure is not given, make sure how the parts have been mounted before starting work.**
- **Optional parts, as a rule, should be removed, but they may be left in the printer, on condition that they do not obstruct your work.**

3.2.3 Notations in the Text

1. The printer orientation expressed in the procedure is defined as follows

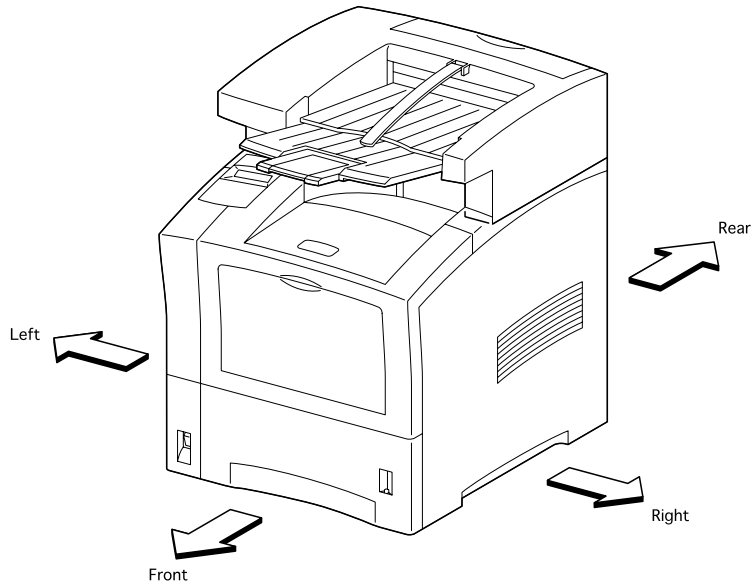


Figure 3-2. Definition of Printer Orientation

2. The screws in the illustration imply that they should be loosened and removed using a cross-tip screwdriver, unless otherwise specified.
3. A black arrow in the illustration implies that the part should be moved in the arrow direction, and when numbers are assigned to black arrows, the parts should be moved in the order of given numbers.

3.2.4 Tray Exit Assy

3.2.4.1 Removal

1. Open the *Tray Exit Assy* from the *Shifter* .
2. Deflecting the right side of *Tray Exit Assy*, draw the right shaft of *Tray Exit Assy* from the right hole in the *Cover OCT*.
3. Draw the left shaft of *Tray Exit Assy* from the left hole in the *Cover OCT*, and remove the *Tray Exit Assy*.

3.2.4.2 Assembly

NOTE: *Take care not to pinch your fingers when mounting the Tray Exit Assy.*

NOTE: *The left and right hooks of Tray Exit Assy must be positioned above the left and bosses of Cover OCT.*

1. Insert the left shaft of *Tray Exit Assy* into the left hole in the *Cover OCT*.
2. Deflecting the right side of *Tray Exit Assy*, insert the right shaft of *Tray Exit Assy* into the right hole in the *Cover OCT*.
3. Close the *Tray Exit Assy* from the *Shifter*.

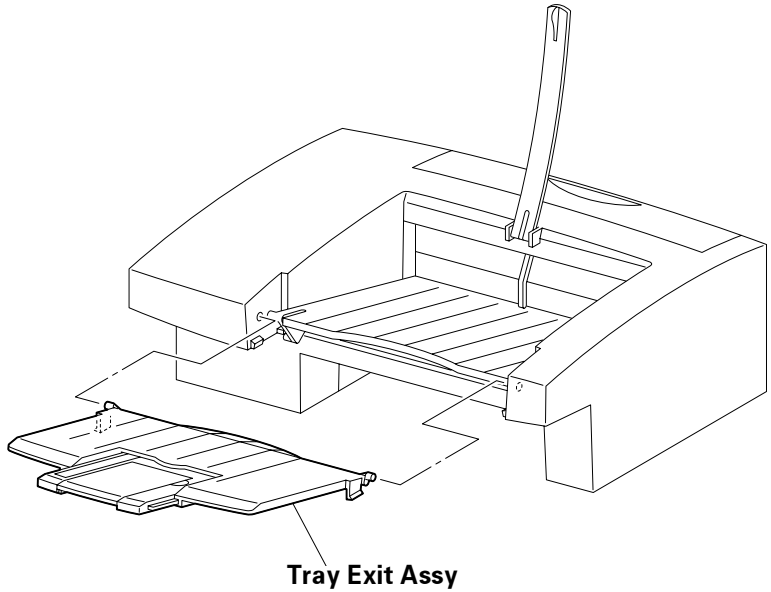


Figure 3-3. Tray Exit Assy Removal

3.2.5 Spring Tray

3.2.5.1 Removal

1. Remove the *Tray Exit Assy*. (See "Tray Exit Assy" on page 75.)
2. Remove the *Tray Exit*. (See "Tray Exit" on page 77.)
3. Turning the *Spring Tray* to the left, disengage and remove the right *Spring Tray* from the hook of the *Shifter*.
4. Turning the *Spring Tray* to the left, disengage and remove the left *Spring Tray* from the hook of the *Shifter*.

3.2.5.2 Assembly

1. Turning the *Spring Tray* to the right, secure the right *Spring Tray* to the hook of the *Shifter*.
2. Turning the *Spring Tray* to the right, secure the left *Spring Tray* to the hook of the *Shifter*.
3. Mount the *Tray Exit*.
4. Mount the *Tray Exit Assy*.

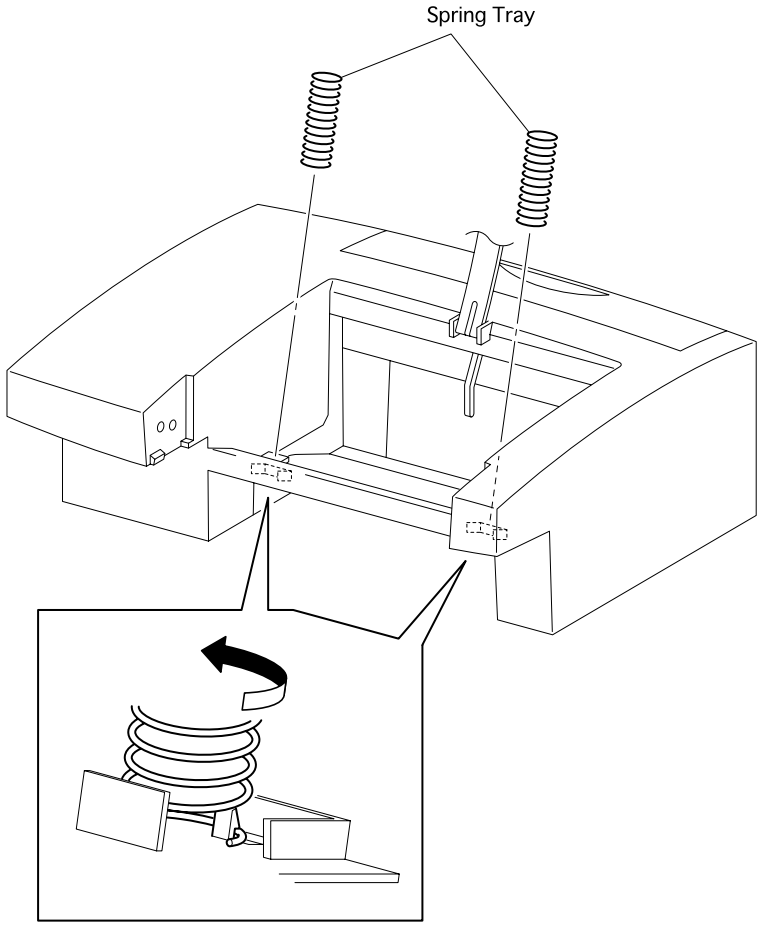


Figure 3-4. Spring Tray Removal

3.2.6 Tray Exit

3.2.6.1 Removal

1. Remove the *Tray Exit Assy*. (See "Tray Exit Assy" on page 75.)

NOTE: *In the following steps, do not damage the Actuator Full Stack.*

2. Deflecting the right bracket of *Tray Exit*, draw the right shaft of *Tray Exit* from the right hole in the *Cover OCT*.
3. Deflating the left bracket of *Tray Exit*, draw the left shaft of *Tray Exit* from the left hole in the *Cover OCT*, and remove the *Tray Exit.*

3.2.6.2 Assembly

NOTE: *In the following steps, do not damage the Actuator Full Stack.*

1. Align the *Tray Exit* with its mount position to the *Shifter*.
2. Insert the top of *Spring Tray* into two holes on the back of *Tray Exit*.
3. Insert the left shaft of *Tray Exit* into the left hole in the *Cover OCT*.
4. Insert the right shaft of *Tray Exit* into the right hole in the *Cover OCT*.
5. Mount the *Tray Exit Assy*.

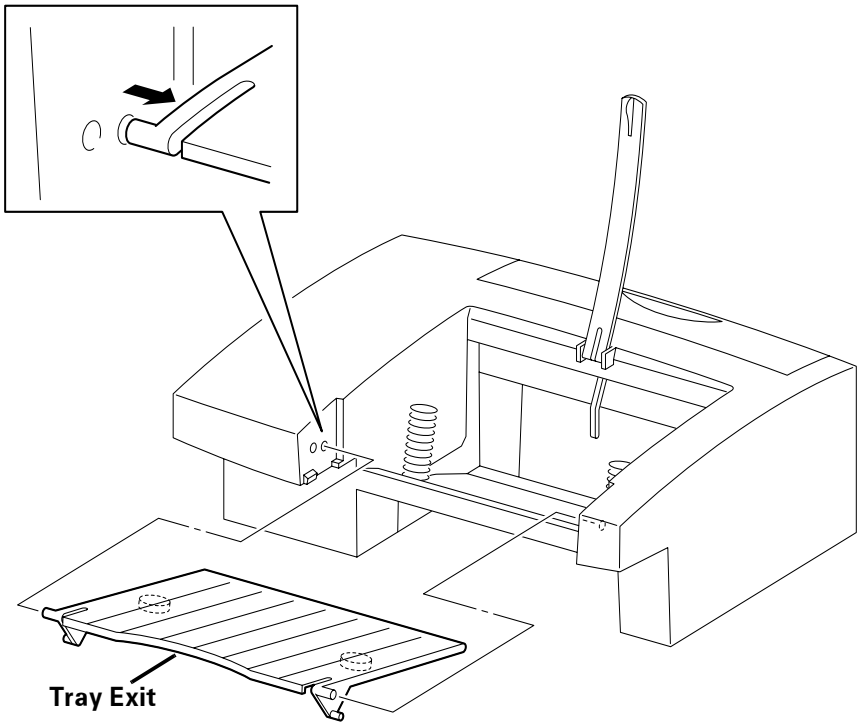


Figure 3-5. Tray Exit Removal

3.2.7 Link Weight

3.2.7.1 Removal

1. Deflecting the left and right brackets of *Link Weight*, draw the shaft from the bearing bore of the *Cover OCT*, and remove the *Link Weight* from the *Shifter*.

3.2.7.2 Assembly

1. Deflecting the left and right brackets of *Link Weight*, insert the shaft into the bearing bore of the *Cover OCT*, and mount the *Link Weight* on the *Shifter*.

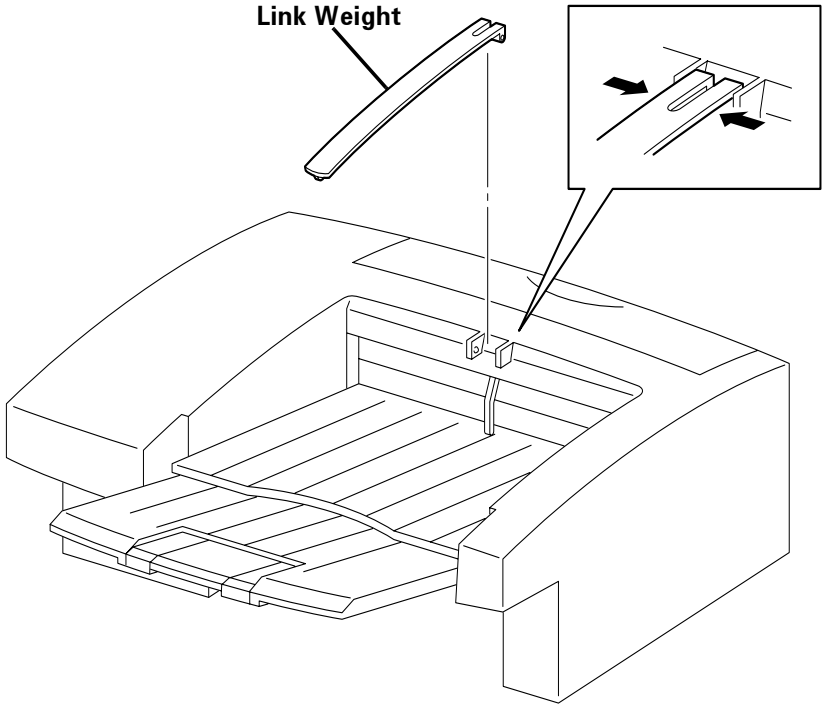


Figure 3-6. Link Weight Removal

3.2.8 Cover Rear

3.2.8.1 Removal

1. Open the *Cover Rear* from the *Shifter*.
2. Deflecting the right bracket of *Cover Rear* with a small screwdriver, draw the shaft from the right hole in the *Cover OCT*.
3. Draw the left chaff of *Cover Rear* from the left hole in the *Cover OCT*, and remove the *Cover Rear*.

3.2.8.2 Assembly

1. Insert the left shaft of *Cover Rear* into the left hole in the *Cover OCT*.
2. Deflecting the right bracket of *Cover Rear* with a small screwdriver, engage the boss with the right hole in the *Cover OCT*.
3. Close the *Cover Rear* from the *Shifter*.

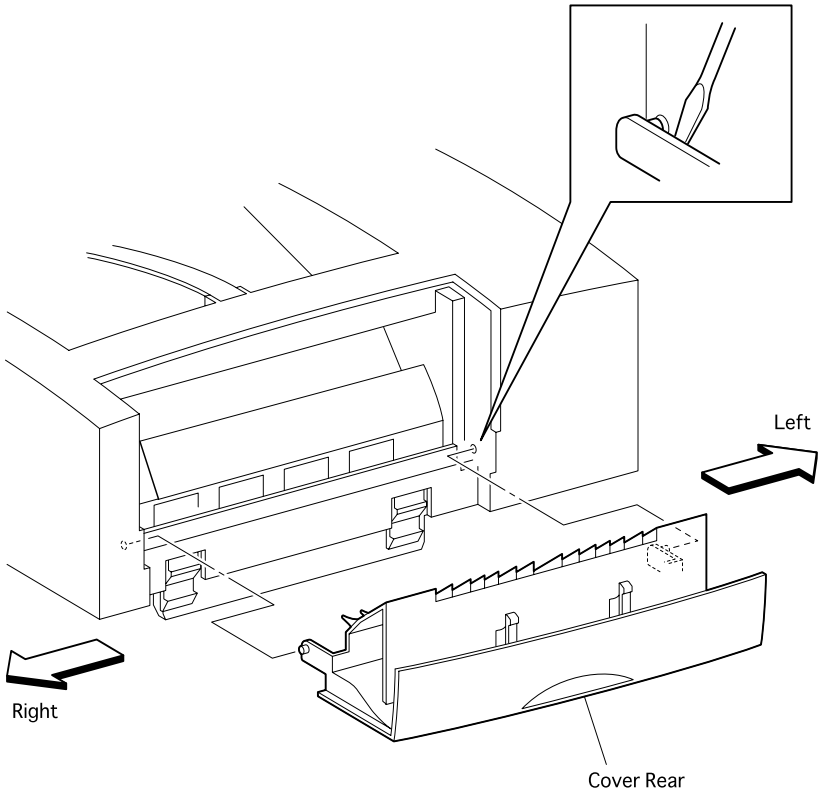


Figure 3-7. Cover Rear Removal

3.2.9 Chute Exit Inner Assy

3.2.9.1 Removal

1. Remove the *Link Weight*. (See “Link Weight” on page 78.)
2. Remove the *Tray Exit Assy*. (See “Tray Exit Assy” on page 75.)
3. Remove the *Tray Exit*. (See “Tray Exit” on page 77.)
4. Remove the *Spring Tray*. (See “Spring Tray” on page 76.)
5. Open the *Cover Rear*.
6. Remove the *Cover Lower*. (See “Cover Lower” on page 81.)
7. Remove the five screws securing the *Chute Exit Inner Assy* to the *Shifter*.
8. Remove the *Chute Exit Inner Assy* from the *Shifter*.

3.2.9.2 Assembly

1. Align the *Chute Exit Inner Assy* with its mount position on the *Shifter*.
2. Secure the *Chute Exit Inner Assy* to the *Shifter* with five screws.
3. Mount the *Cover Lower*.
4. Close the *Cover Rear*.
5. Mount the *Spring Tray*.
6. Mount the *Tray Exit*.
7. Mount the *Tray Exit Assy*.
8. Mount the *Link Weight*.

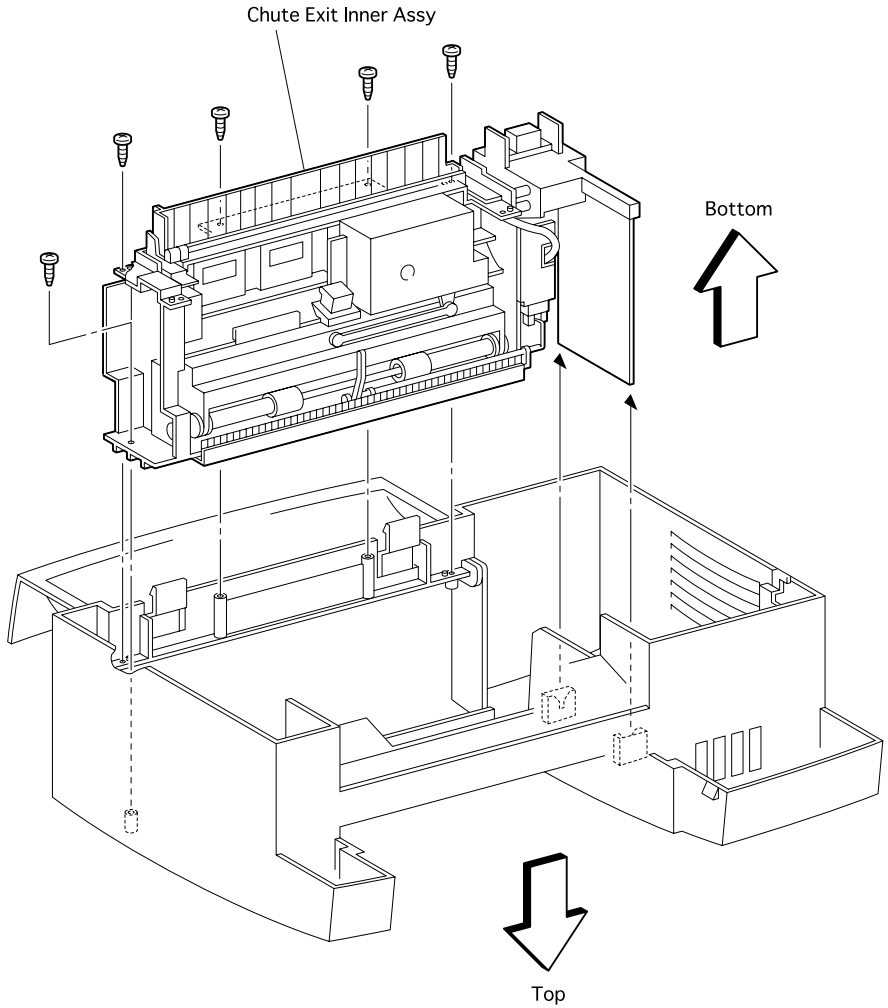


Figure 3-8. Chute Exit Inner Assy Removal

3.2.10 Cover Lower

3.2.10.1 Removal

NOTE: *In the following steps, do not damage the Actuator Full Stack.*

1. Remove the *Link Weight*. (See "Link Weight" on page 78.)
2. Remove the *Tray Exit Assy*. (See "Tray Exit Assy" on page 75.)
3. Remove the *Tray Exit*. (See "Tray Exit" on page 77.)
4. Remove the *Spring Tray*. (See "Spring Tray" on page 76.)
5. Open the *Cover Rear*.
6. Remove the six screws securing the *Cover Lower* to the *Chute Exit Inner Assy*.
7. Remove the *Cover Lower* from the *Chute Exit Inner Assy*.

3.2.10.2 Assembly

NOTE: *In the following steps, do not damage the Actuator Full Stack.*

1. Align the *Cover Lower* with its mount position on the *Chute Exit Inner Assy*.
2. Secure the *Cover Lower* to the *Chute Exit Inner Assy* with six screws.
3. Close the *Cover Rear*.
4. Mount the *Spring Tray*.
5. Mount the *Tray Exit*.
6. Mount the *Tray Exit Assy*.
7. Mount the *Link Weight*.

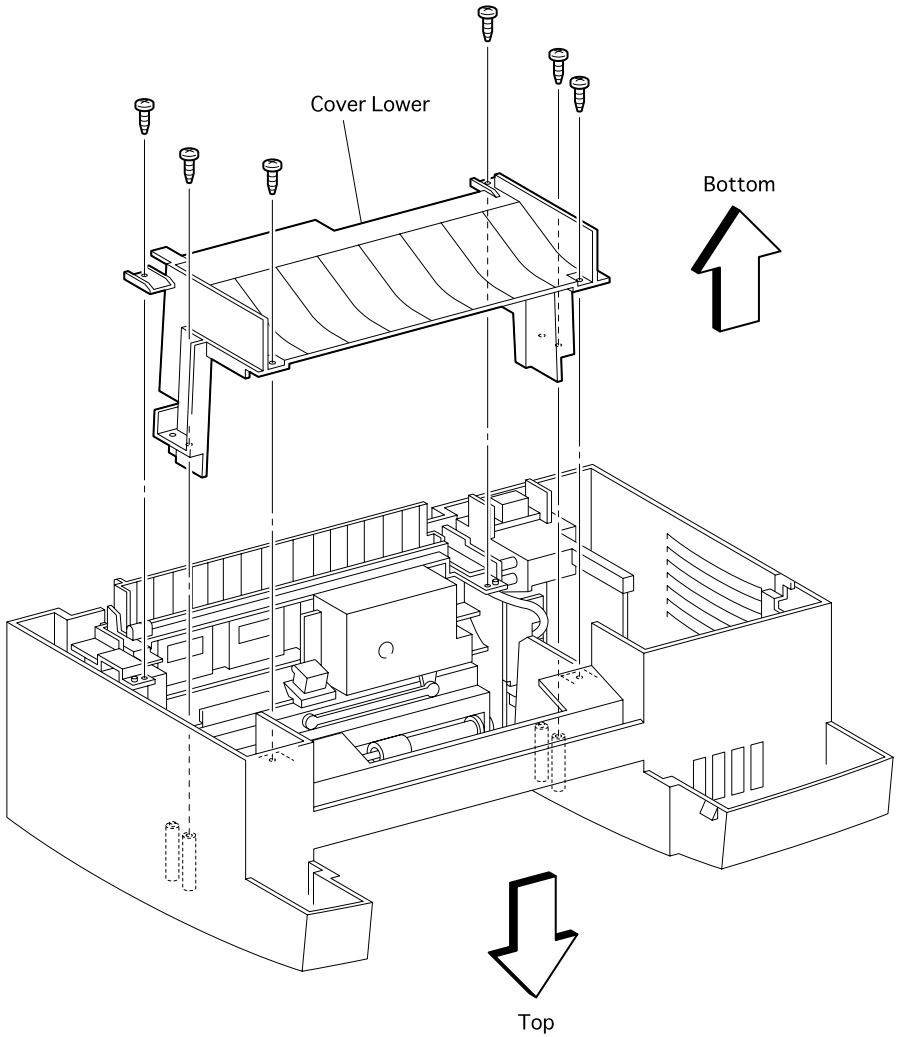


Figure 3-9. Cover Lower Removal

3.2.11 PWBA OCT

3.2.11.1 Removal

1. Remove the *Link Weight*. (See "Link Weight" on page 78.)
2. Remove the *Tray Exit Assy*. (See "Tray Exit Assy" on page 75.)
3. Remove the *Tray Exit*. (See "Tray Exit" on page 77.)
4. Remove the *Spring Tray*. (See "Spring Tray" on page 76.)
5. Open the *Cover Rear*.
6. Remove the *Cover Lower*. (See "Cover Lower" on page 81.)
7. Remove the *Chute Exit Inner Assy*. (See "Chute Exit Inner Assy" on page 80.)
8. Remove the one screw securing the *PWBA OCT* to the *Chute Exit Inner Assy*.

NOTE: *In the following steps, do not detach Chute Exit Inner Assy and PWBA OCT far away because they are connected with the harness.*

9. Detach the *PWBA OCT* a little from the *Chute Exit Inner Assy*.
10. Unplug the connector (P/J223) from the *PWBA OCT*.
11. Unplug the connector (P/J210) from the *PWBA OCT.*
12. Unplug the connector (P/J224) from the *PWBA OCT.*
13. Unplug the connector (P/J209) from the *PWBA OCT.*

3.2.11.2 Assembly

1. Plug the connector (P/J209) to the *PWBA OCT.*
2. Plug the connector (P/J224) to the *PWBA OCT.*
3. Plug the connector (P/J210) to the *PWBA OCT.*
4. Plug the connector (P/J223) to the *PWBA OCT.*
5. Align the *PWBA OCT* with its mount position on the *Chute Exit Inner Assy*.
6. Secure the *PWBA OCT* to the *Chute Exit Inner Assy* with one screw.
7. Mount the *Chute Exit Inner Assy*.
8. Mount the *Cover Lower*.
9. Close the *Cover Rear*.
10. Mount the *Spring Tray*.
11. Mount the *Tray Exit*.
12. Mount the *Tray Exit Assy*.
13. Mount the *Link Weight*.

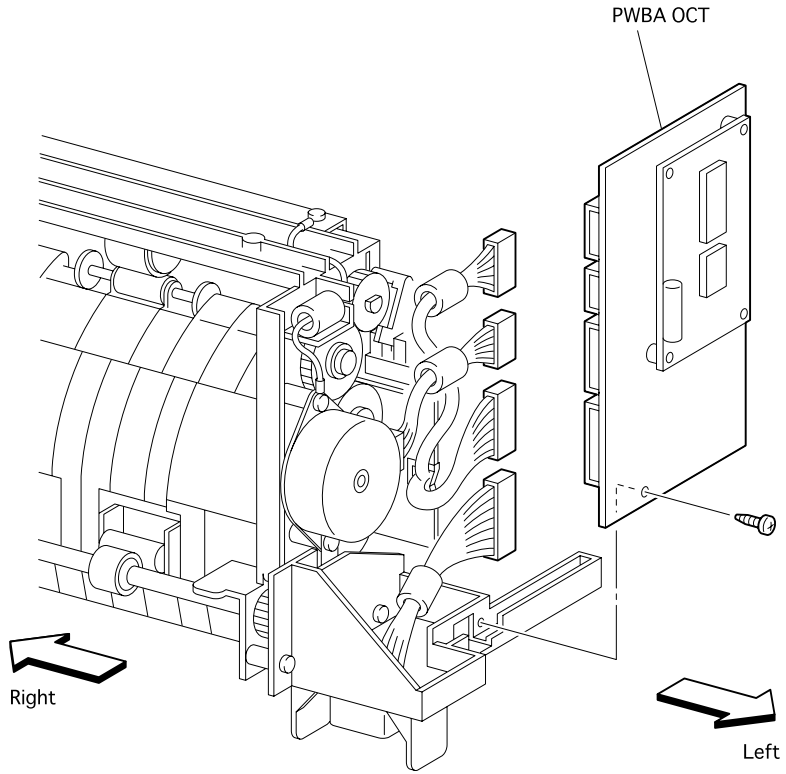


Figure 3-10. PWBA OCT Removal

3.2.12 Motor Drive Assy

3.2.12.1 Removal

1. Remove the *Link Weight*. (See "Link Weight" on page 78.)
2. Remove the *Tray Exit Assy*. (See "Tray Exit Assy" on page 75.)
3. Remove the *Tray Exit*. (See "Tray Exit" on page 77.)
4. Remove the *Spring Tray*. (See "Spring Tray" on page 76.)
5. Open the *Cover Rear*.
6. Remove the *Cover Lower*. (See "Cover Lower" on page 81.)
7. Remove the *Chute Exit Inner Assy*. (See "Chute Exit Inner Assy" on page 80.)
8. Remove the two screws securing the *Motor Drive Assy to the Chute Exit Inner Assy*.

NOTE: *In the following steps, do not detach Chute Exit Inner Assy and Motor Drive Assy far away they are connected with the harness.*

9. Detach the *Motor Drive Assy* a little from the *Chute Exit Inner Assy*.
10. Unplug the connector (P/J210) of the *Motor Drive Assy*.

3.2.12.2 Assembly

NOTE: *The Motor Drive Assy must be mounted with its connector facing the front.*

1. Plug the connector (P/J210) of the *Motor Drive Assy*.
2. Positioning the lower hole in *Motor Drive* between *Plate Earth* and *HSG Gear*, mount the *Motor Drive Assy* on the *Chute Exit Inner Assy*.
3. Secure the lower hole in the *Motor Drive Assy* to the *Chute Exit Inner Assy* with one screw.
4. Secure the upper hole in *Motor Drive Assy* together with *Wire Assy OCT* to the *Chute Exit Inner Assy* with one screw.
5. Mount the *Chute Exit Inner Assy*.
6. Mount the *Cover Lower*.
7. Close the *Cover Rear*.
8. Mount the *Spring Tray*.
9. Mount the *Tray Exit*.
10. Mount the *Tray Exit Assy*.
11. Mount the *Link Weight*.

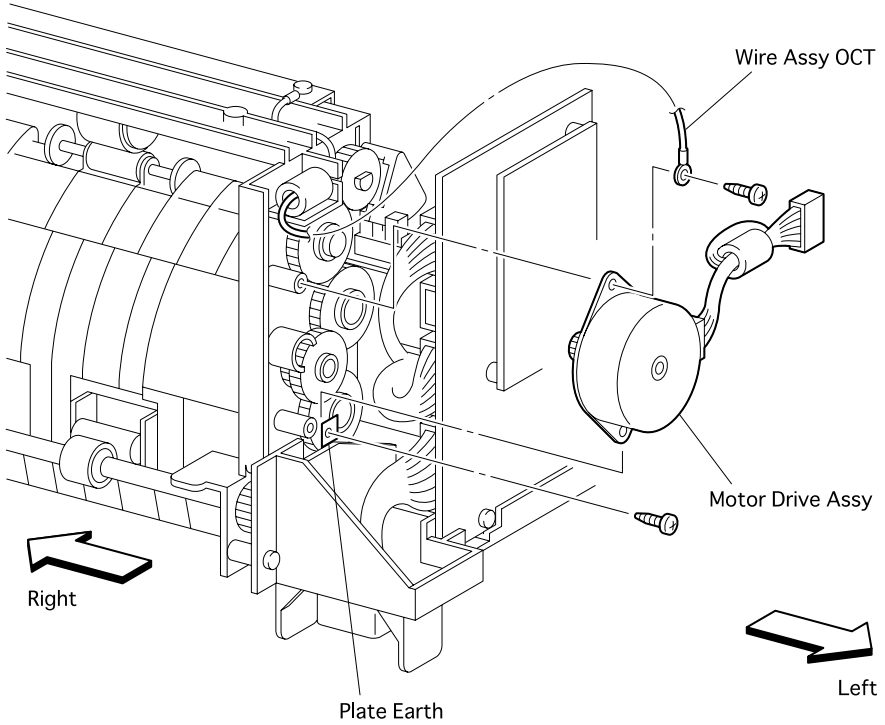


Figure 3-11. Motor Drive Assy Removal

3.2.13 Eliminator

3.2.13.1 Removal

1. Remove the *Link Weight*. (See "Link Weight" on page 78.)
2. Remove the *Tray Exit Assy*. (See "Tray Exit Assy" on page 75.)
3. Remove the *Tray Exit*. (See "Tray Exit" on page 77.)
4. Remove the *Spring Tray*. (See "Spring Tray" on page 76.)
5. Open the *Cover Rear*.
6. Remove the *Cover Lower*. (See "Cover Lower" on page 81.)
7. Remove the *Chute Exit Inner Assy*. (See "Chute Exit Inner Assy" on page 80.)
8. Remove the three screws securing the *Eliminator* from the *Chute Exit Inner Assy*.
9. Remove the *Eliminator* from the *Chute Exit Inner Assy.*

3.2.13.2 Assembly

1. Align the *Eliminator* with its mount position on the *Chute Exit Inner Assy*.
2. Secure the left hole in *Eliminator* together with *Wire Assy OCT* to the *Chute Exit Inner Assy* with one screw.
3. Secure the *Eliminator* to the *Chute Exit Inner Assy* with two screws.
4. Mount the *Chute Exit Inner Assy*.
5. Mount the *Cover Lower*.
6. Close the *Cover Rear*.
7. Mount the *Spring Tray*.
8. Mount the *Tray Exit*.
9. Mount the *Tray Exit Assy*.
10. Mount the *Link Weight*.

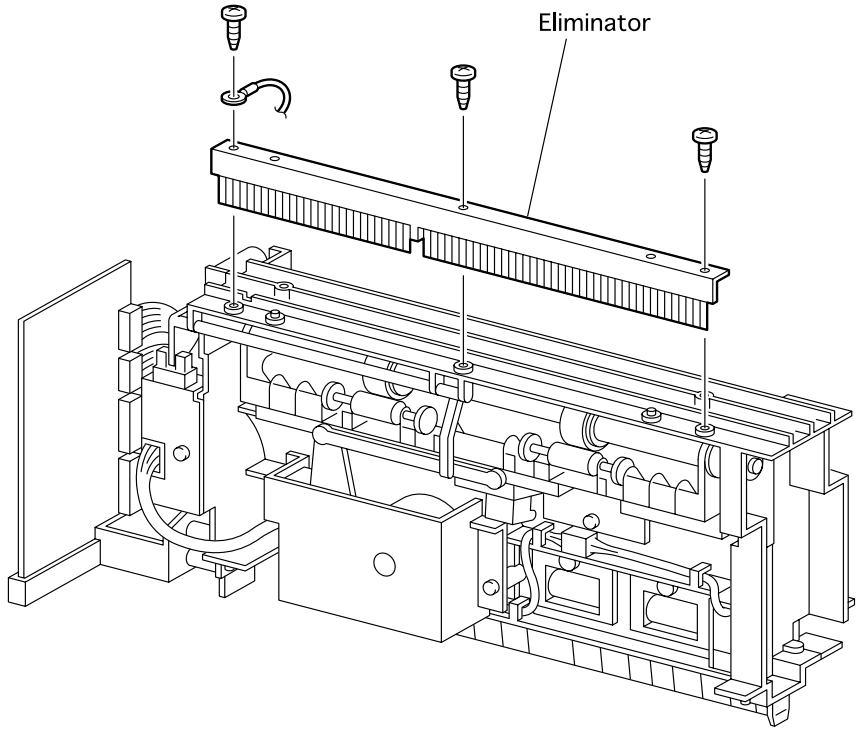


Figure 3-12. Eliminator Removal

3.2.14 Solenoid Direction

3.2.14.1 Removal

1. Remove the *Link Weight*. (See "Link Weight" on page 78.)
2. Remove the *Tray Exit Assy*. (See "Tray Exit Assy" on page 75.)
3. Remove the *Tray Exit*. (See "Tray Exit" on page 77.)
4. Remove the *Spring Tray*. (See "Spring Tray" on page 76.)
5. Open the *Cover Rear*.
6. Remove the *Cover Lower*. (See "Cover Lower" on page 81.)
7. Remove the *Chute Exit Inner Assy*. (See "Cover Lower" on page 81.)
8. Unplug the connector (P/J228) from the *Solenoid Direction*.

NOTE: *Take care not to drop the Solenoid Direction when remove the screw.*

9. Remove the two screws securing the *Solenoid Direction* to the *Chute Exit Inner Assy*.
10. Unhook the harness of *Solenoid Direction* from the *Chute Exit Inner Assy*, and remove the *Solenoid Direction*.

3.2.14.2 Assembly

1. Aligning the spool of *Solenoid Direction* with the notch in *Lever Solenoid*, mount the *Solenoid Direction* on the *Chute Exit Inner Assy*.
2. Hook the harness of *Solenoid Direction* to the *Chute Exit Inner Assy*.
3. Secure the *Solenoid Direction* to the *Chute Exit Inner Assy* with two screws.
4. Plug the connector (P/J228) of the *Solenoid Direction*.
5. Mount the *Chute Exit Inner Assy*.
6. Mount the *Cover Lower*.
7. Close the *Cover Rear*.
8. Mount the *Spring Tray*.
9. Mount the *Tray Exit*.
10. Mount the *Tray Exit Assy*.
11. Mount the *Link Weight*.

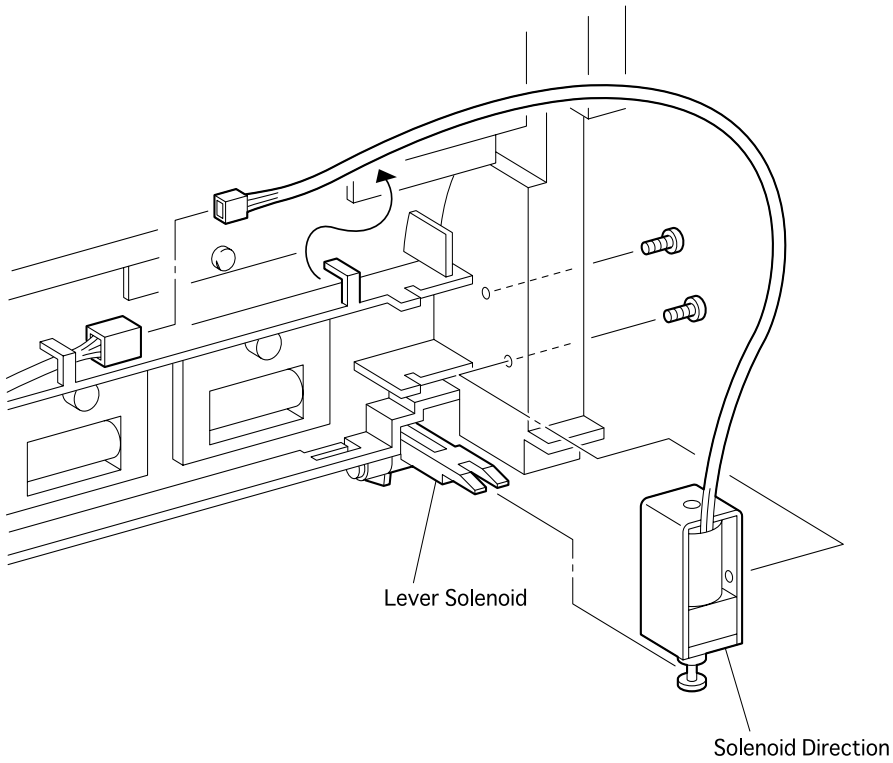


Figure 3-13. Solenoid Direction Removal

3.2.15 Sensor Assy Exit OCT

3.2.15.1 Removal

1. Remove the *Link Weight*. (See "Link Weight" on page 78.)
2. Remove the *Tray Exit Assy*. (See "Tray Exit Assy" on page 75.)
3. Remove the *Tray Exit*. (See "Tray Exit" on page 77.)
4. Remove the *Spring Tray*. (See "Spring Tray" on page 76.)
5. Open the *Cover Rear*.
6. Remove the *Cover Lower*. (See "Cover Lower" on page 81.)
7. Remove the *Chute Exit Inner Assy*. (See "Chute Exit Inner Assy" on page 80.)
8. Disengage four hooks that secure the *Sensor Assy Exit OCT* to the *Chute Exit Inner Assy*.
9. Unplug the connector (P/J227) from the *Sensor Assy Exit OCT*.

3.2.15.2 Assembly

1. Plug the connector (P/J227) of the *Sensor Assy Exit OCT*.
2. Align the position exactly, secure the *Sensor Assy Exit OCT* to the *Chute Exit Inner Assy* with four hooks.
3. Mount the *Chute Exit Inner Assy*.
4. Mount the *Cover Lower*.
5. Close the *Cover Rear*.
6. Mount the *Spring Tray*.
7. Mount the *Tray Exit*.
8. Mount the *Tray Exit Assy*.
9. Mount the *Link Weight*.

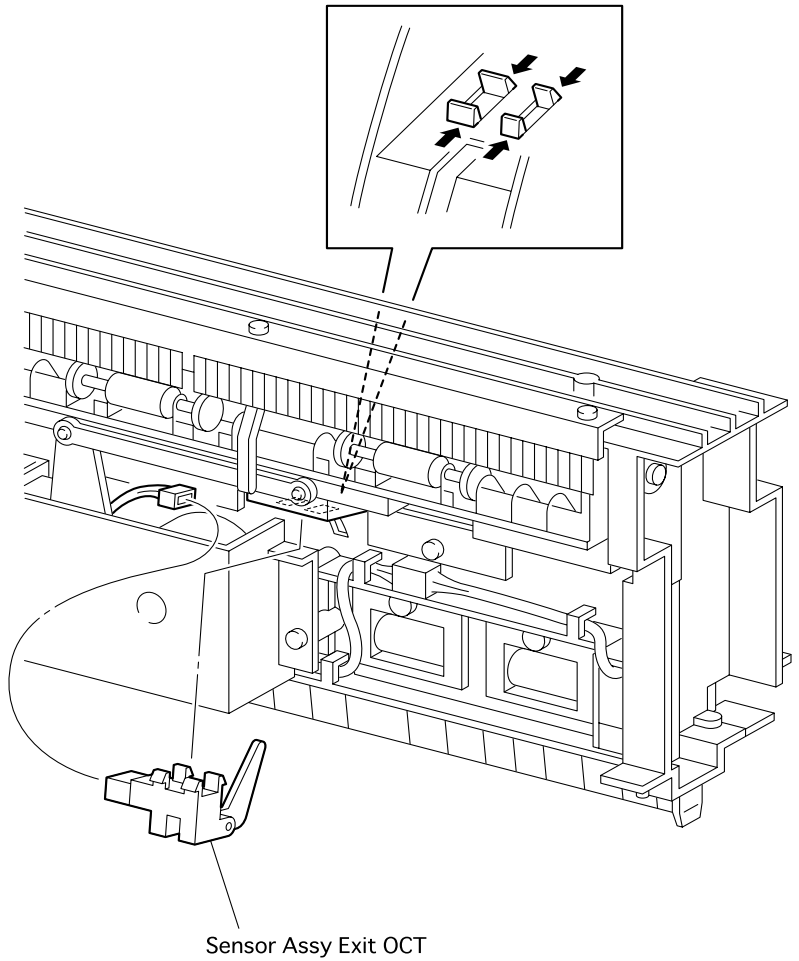


Figure 3-14. Sensor Assy Exit OCT Removal

3.2.16 Actuator Full Stack

3.2.16.1 Removal

1. Remove the *Link Weight*. (See "Link Weight" on page 78.)
2. Remove the *Tray Exit Assy*. (See "Tray Exit Assy" on page 75.)
3. Remove the *Tray Exit*. (See "Tray Exit" on page 77.)
4. Remove the *Spring Tray*. (See "Spring Tray" on page 76.)
5. Open the *Cover Rear*.
6. Remove the *Cover Lower*. (See "Cover Lower" on page 81.)
7. Remove the *Chute Exit Inner Assy*. (See "Chute Exit Inner Assy" on page 80.)

NOTE: *In the following steps, do not damage the Actuator Full Stack.*

8. Disengage the left shaft of *Actuator full Stack* from the left bearing of *Chute Exit Inner Assy*.
9. Disengage the right shaft of *Actuator full Stack* from the right bearing of *Chute Exit Inner Assy*, and remove the *Actuator full Stack*.

3.2.16.2 Assembly

NOTE: *In the following steps, do not damage the Actuator Full Stack.*

1. Engage the right shaft of *Actuator full Stack* with the right bearing of *Chute Exit Inner Assy*.
2. Engage the left shaft of *Actuator full Stack* with the left bearing of *Chute Exit Inner Assy*.
3. Mount the *Chute Exit Inner Assy*.
4. Mount the *Cover Lower*.
5. Close the *Cover Rear*.
6. Mount the *Spring Tray*.
7. Mount the *Tray Exit*.
8. Mount the *Tray Exit Assy*.
9. Mount the *Link Weight*.

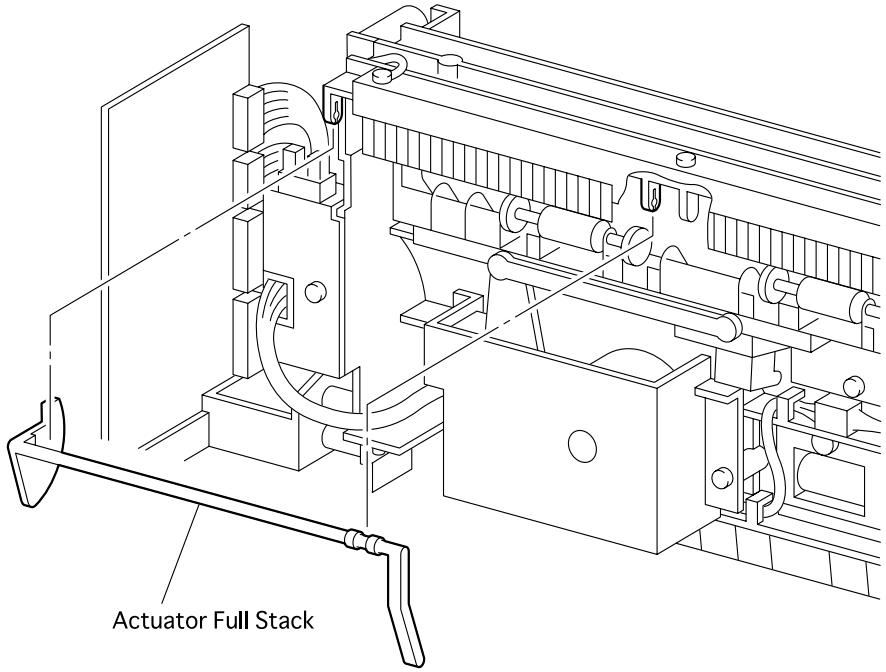


Figure 3-15. Actuator Full Stack Removal

3.2.17 Sensor Full Stack

3.2.17.1 Removal

1. Remove the *Link Weight*. (See "Link Weight" on page 78.)
2. Remove the *Tray Exit Assy*. (See "Tray Exit Assy" on page 75.)
3. Remove the *Tray Exit*. (See "Tray Exit" on page 77.)
4. Remove the *Spring Tray*. (See "Spring Tray" on page 76.)
5. Open the *Cover Rear*.
6. Remove the *Cover Lower*. (See "Cover Lower" on page 81.)
7. Remove the *Chute Exit Inner Assy*. (See "Chute Exit Inner Assy" on page 80.)
8. Remove the *PWBA OCT*. (See "PWBA OCT" on page 82.)
9. Unplug the connector (P/J225) from the *Sensor Full Stack*.
10. Disengage four hooks that secure the *Sensor Full Stack* to the *Chute Exit Inner Assy*.
11. Remove the *Sensor Full Stack* from the *Chute Exit Inner Assy*.

3.2.17.2 Assembly

1. Align the position exactly, secure the *Sensor Full Stack* to the *Chute Exit Inner Assy* with four hooks.
2. Plug the connector (P/J225) to the *Sensor Full Stack*.
3. Mount the *PWBA OCT*.
4. Mount the *Chute Exit Inner Assy*.
5. Mount the *Cover Lower*.
6. Close the *Cover Rear*.
7. Mount the *Spring Tray*.
8. Mount the *Tray Exit*.
9. Mount the *Tray Exit Assy*.
10. Mount the *Link Weight*.

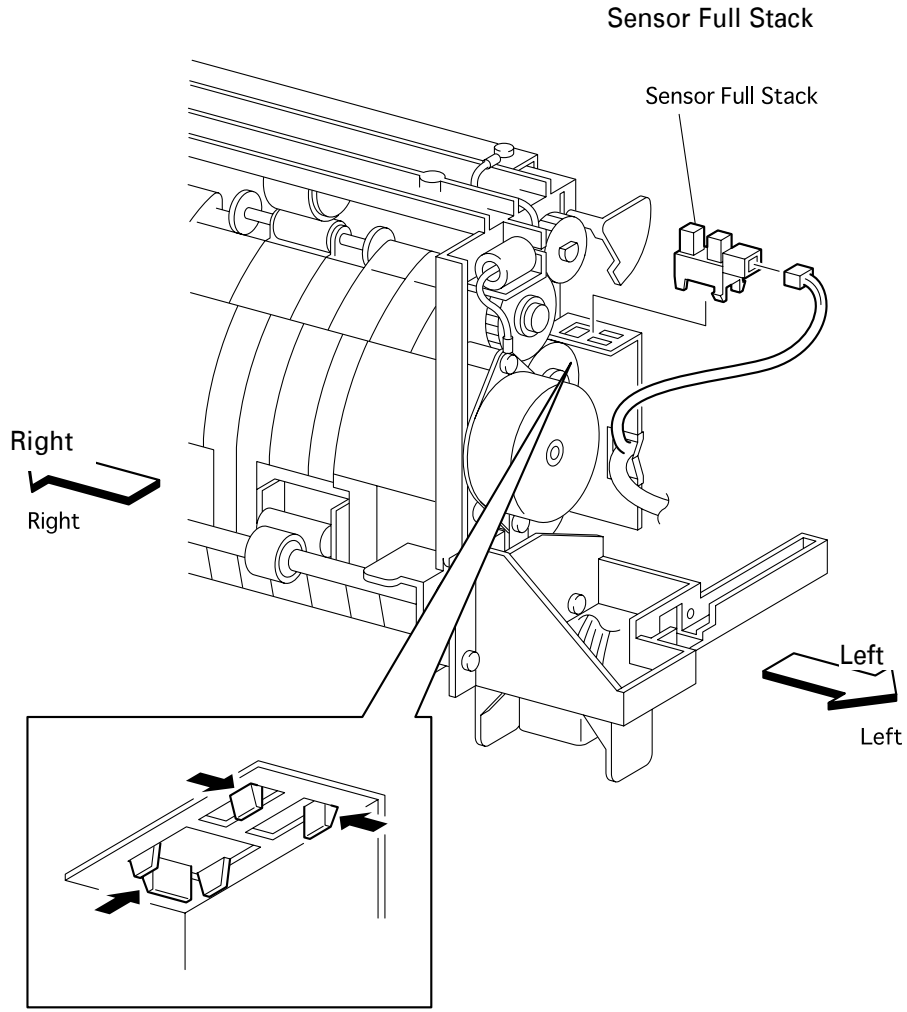


Figure 3-16. Sensor Full Stack Removal

3.2.18 Roll Assy Offset

3.2.18.1 Removal

1. Remove the *Link Weight*. (See "Link Weight" on page 78.)
2. Remove the *Tray Exit Assy*. (See "Tray Exit Assy" on page 75.)
3. Remove the *Tray Exit*. (See "Tray Exit" on page 77.)
4. Remove the *Spring Tray*.(See "Spring Tray" on page 76.)
5. Open the *Cover Rear*.
6. Remove the *Cover Lower*. (See "Cover Lower" on page 81.)
7. Remove the *Chute Exit Inner Assy*. (See "Chute Exit Inner Assy" on page 80.)
8. Remove the *PWBA OCT*. (See "PWBA OCT" on page 82.)
9. Remove the *Offset Assy*. (See "Offset Assy" on page 94.)
10. Remove the *Eliminator*. (See "Eliminator" on page 84.)
11. Remove the *Actuator Full Stack*. (See "Actuator Full Stack" on page 87.)
12. Unhook the *Gear Exit OCT* from the left shaft of *Shaft Exit*, and remove the *Gear Exit OCT* from the *Chute Exit Inner Assy*.
13. Remove the *Bearing Exit* from the left shaft of *Shaft Exit* of the *Chute Exit Inner Assy*.
14. Disengage the hole in *Lever Offset* from the hook of *Roll Assy Offset.*
15. Remove the *Shaft Exit* securing the *Roll Assy Offset* together with *Bearing Exit* and E-ring from the right hole in the *Chute Exit Inner Assy*.
16. Remove the *Roll Assy Offset* from the *Chute Exit Inner Assy*.

3.2.18.2 Assembly

1. Insert two bosses at the bottom of *Roll Assy Offset* into a gap between *Holder PWBA OCT* and *HSG Gear*, and mount the *Roll Assy Offset* on the *Chute Exit Inner Assy*.
2. From the right hole in the *Chute Exit Inner Assy*, insert the *Shaft Exit* into the hole in the *Roll Assy Offset* to secure the *Roll Assy Offset* to the *Chute Exit Inner Assy*.
3. Secure the left shaft of *Shaft Exit* to the *Chute Exit Inner Assy* with the *Bearing Exit*.
4. Hook the *Gear Exit OCT* to the left shaft of *Shaft Exit* to mount the *Gear Exit OCT* on the *Chute Exit Inner Assy*.
5. Mount the *Actuator Full Stack*.
6. Mount the *Eliminator*.
7. Mount the *Offset Assy*.
8. Mount the *PWBA OCT*.
9. Mount the *Chute Exit Inner Assy*.
10. Mount the *Cover Lower*.
11. Close the *Cover Rear*.
12. Mount the *Spring Tray*.
13. Mount the *Tray Exit* Ç.
14. Mount the *Tray Exit Assy*.
15. Mount the *Link Weight*.

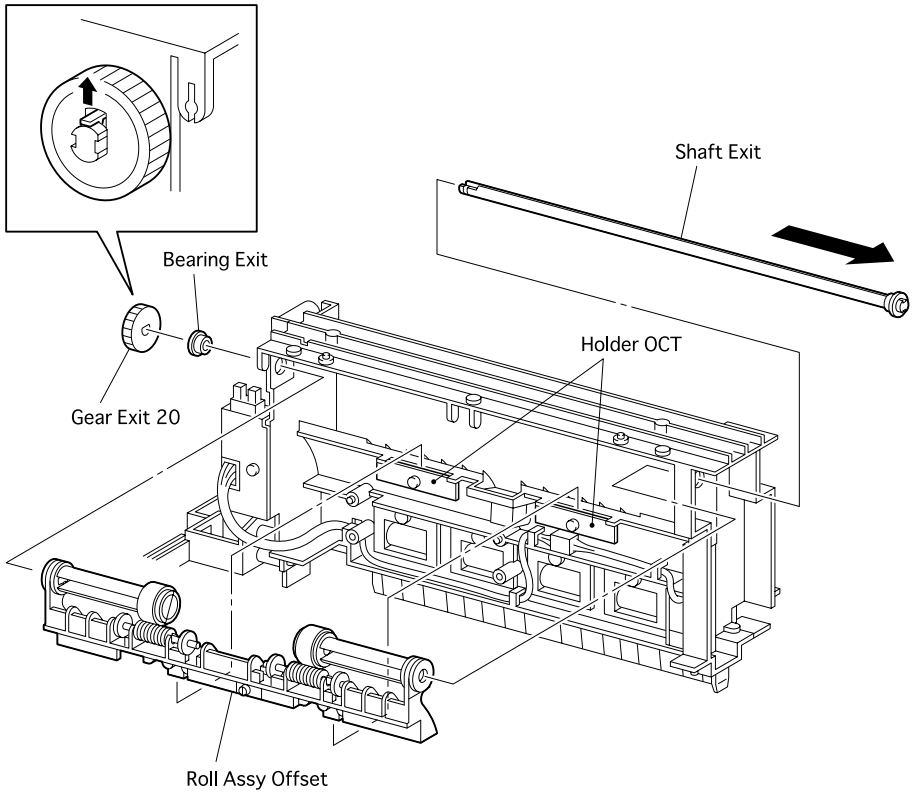


Figure 3-17. Roll Assy Offset Removal

3.2.19 Roll Assy MID OCT

3.2.19.1 Removal

1. Remove the *Link Weight*. (See "Link Weight" on page 78.)
2. Remove the *Tray Exit Assy*. (See "Tray Exit Assy" on page 75.)
3. Remove the *Tray Exit*. (See "Tray Exit" on page 77.)
4. Remove the *Spring Tray*. (See "Spring Tray" on page 76.)
5. Open the *Cover Rear*.
6. Remove the *Cover Lower*. (See "Cover Lower" on page 81.)
7. Remove the *Chute Exit Inner Assy*. (See "Chute Exit Inner Assy" on page 80.)
8. Remove the *PWBA OCT*. (See "PWBA OCT" on page 82.)
9. Remove the one screw securing the *Plate Earth* to the *Chute Exit Inner Assy*.
10. Remove the three screws securing the *Holder PWBA* to the *Chute Exit Inner Assy*.
11. Remove the *Holder* together with *Harness Assy OCT* and *Plate Earth* from the *Chute Exit Inner Assy*.
12. Unhook the *Gear Exit* from the left shaft of *Roll Assy MID OCT*, and remove the *Gear Exit* from the *Chute Exit Inner Assy*.
13. Disengage the right E-ring that secures the *Roll Assy MID OCT* to the *Chute Exit Inner Assy*.
14. Remove the *Bearing Exit* that secures the left and right shafts of *Roll Assy MID OCT* to the *Chute Exit Inner Assy*.
15. Shifting the *Roll Assy MID OCT* to the left from the *Chute Exit Inner Assy*, draw the right shaft from the right hole in the *Chute Exit Inner Assy.*
16. Draw the *Roll Assy MID OCT* from the *Chute Exit Inner Assy*.

3.2.19.2 Assembly

1. Insert the left shaft *Roll Assy MID OCT* into the left hole in the *Chute Exit Inner Assy*.
2. Insert the right shaft of *Roll Assy MID OCT* into the right hole in the *Chute Exit Inner Assy*.
3. Secure the left and right shafts of *Roll Assy MID OCT* to the *Chute Exit Inner Assy* with the *Bearing Exit*.
4. Secure the right shaft of *Roll Assy MID OCT* to the *Chute Exit Inner Assy* with an E-ring.
5. Hook the *Gear Exit* to the left shaft of *Roll Assy MID OCT* to mount the *Gear Exit* on the *Chute Exit Inner Assy*.
6. Aligning the position exactly, mount the *Holder PWBA* together with *Harness Assy OCT* and *Plate Earth Chute Exit Inner Assy*.
7. Secure the *Holder PWBA* to the *Chute Exit Inner Assy* with three screws.
8. Secure the *Plate Earth* to the *Chute Exit Inner Assy* with one screw.
9. Mount the *PWBA OCT*.
10. Mount the *Chute Exit Inner Assy*.
11. Mount the *Cover Lower*.
12. Close the *Cover Rear*.
13. Mount the *Spring Tray*.
14. Mount the *Tray Exit*.
15. Mount the *Tray Exit Assy*.
16. Mount the *Link Weight*.

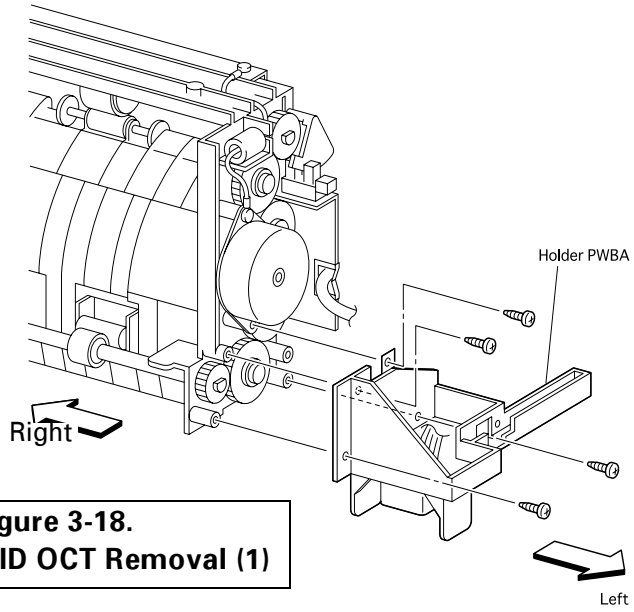


Figure 3-18.
Roll Assy MID OCT Removal (1)

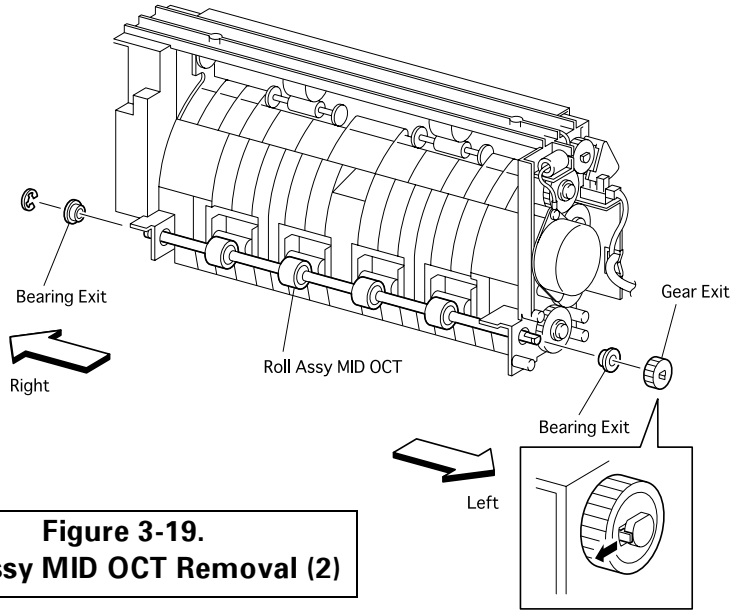


Figure 3-19.
Roll Assy MID OCT Removal (2)

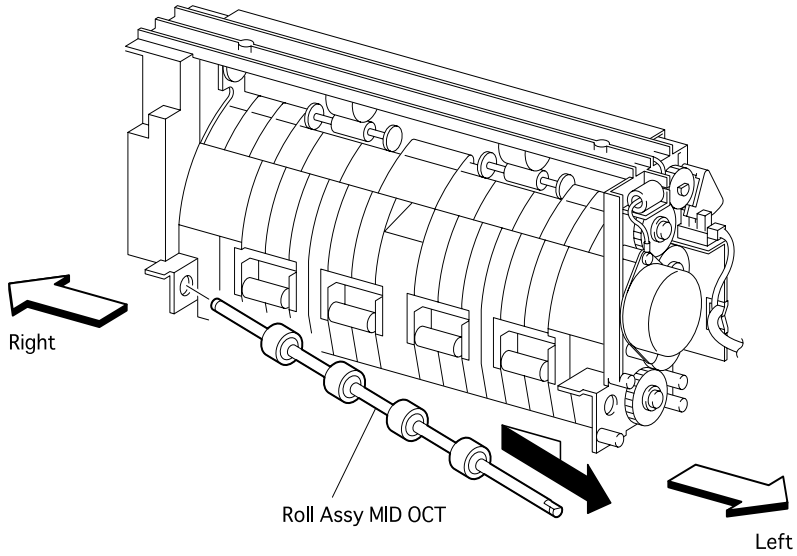


Figure 3-20.
Roll Assy MID OCT Removal (3)

3.2.20 Chute Exit Inner

3.2.20.1 Removal

1. Remove the four screws securing the *Chute Exit Inner* to *Chute Exit Inner Assy*.
2. Remove the *Chute Exit Inner* from *Chute Exit Inner Assy*.

3.2.20.2 Assembly

1. Align the *Chute Exit Inner* with its mount position on the *Chute Exit Inner Assy*.
2. Secure the *Chute Exit Inner* to the *Chute Exit Inner Assy* with four screws.

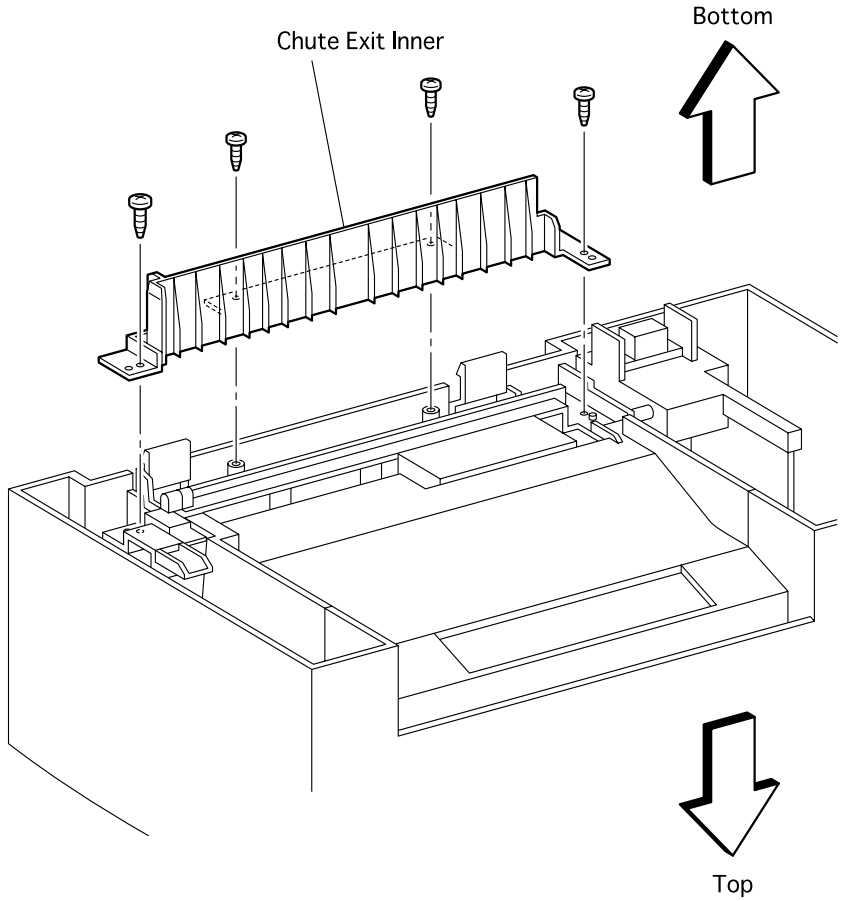


Figure 3-21. Chute Exit Inner Removal

3.2.21 Offset Assy

3.2.21.1 Removal

1. Remove the *Link Weight*. (See "Link Weight" on page 78.)
2. Remove the *Tray Exit Assy*. (See "Tray Exit Assy" on page 75.)
3. Remove the *Tray Exit*. (See "Tray Exit" on page 77.)
4. Remove the *Spring Tray*. (See "Spring Tray" on page 76.)
5. Open the *Cover Rear*.
6. Remove the *Cover Lower*. (See "Cover Lower" on page 81.)
7. Remove the *Chute Exit Inner Assy*. (See "Chute Exit Inner Assy" on page 80.)
8. Unhook the *Lever Offset* of *Offset Assy* from the *Chute Exit Inner Assy*.
9. Remove the two screws securing the *Offset Assy* to the *Chute Exit Inner Assy*.

NOTE: *In the following steps, do not detach Chute Exit Inner Assy and Offset Assy far away they are connected with the harness.*

10. Detach the Offset Assy a little from the Chute Exit Inner Assy.
11. Unplug the connector (P/J226) from the *Sensor OCT Home*.
12. Unplug the connector (P/J210) of the *Motor Offset Assy*.
13. Unclamp the harness of *Motor Offset Assy* at two places from the *Chute Exit Inner Assy*.
14. Remove the *Offset Assy* from the *Chute Exit Inner Assy*.
15.

3.2.21.2 Assembly

1. Plug the connector (P/J210) of the *Motor Offset Assy*.
2. Plug the connector (P/J226) from the *Sensor OCT Home*.
3. Clamp the harness of *Motor Offset Assy* at two places to the *Chute Exit Inner Assy*.
4. Align the *Offset Assy* with its mount position to the *Chute Exit Inner Assy*.
5. Secure the *Offset Assy* to the *Chute Exit Inner Assy* with two screws.
6. Engaging the hole in the *Lever Offset* of *Offset Assy* with the hook of *Chute Exit Inner Assy*, secure the *Lever Offset* with the hook.
7. Mount the *Chute Exit Inner Assy*.
8. Mount the *Cover Lower*.
9. Close the *Cover Rear*.
10. Mount the *Spring Tray*.
11. Mount the *Tray Exit*.
12. Mount the *Tray Exit Assy*.
13. Mount the *Link Weight*.

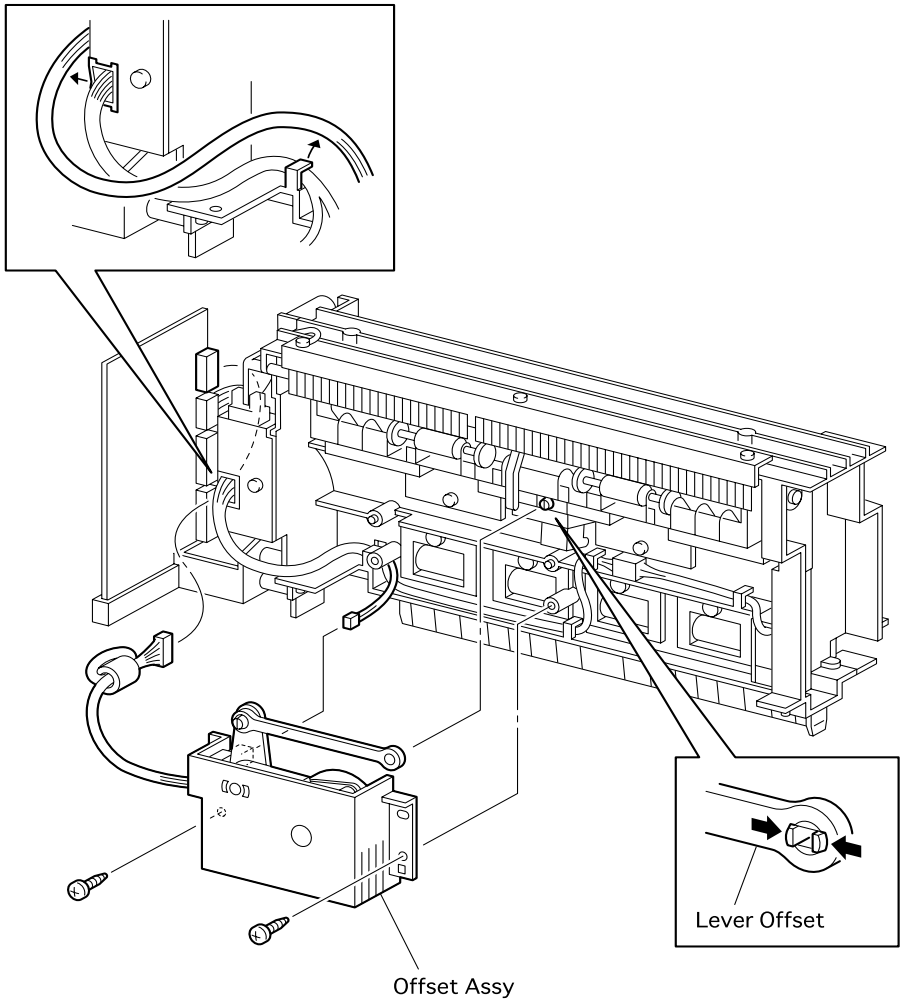


Figure 3-22. Offset Assy Removal

3.2.22 Motor Offset Assy

3.2.22.1 Removal

1. Remove the *Link Weight*. (See "Link Weight" on page 78.)
2. Remove the *Tray Exit Assy*. (See "Tray Exit Assy" on page 75.)
3. Remove the *Tray Exit*. (See "Tray Exit" on page 77.)
4. Remove the *Spring Tray*. (See "Spring Tray" on page 76.)
5. Open the *Cover Rear*.
6. Remove the *Cover Lower*. (See "Cover Lower" on page 81.)
7. Remove the *Chute Exit Inner Assy*. (See "Chute Exit Inner Assy" on page 80.)
8. Remove the *Offset Assy*. (See "Offset Assy" on page 94.)
9. Remove the two screws securing the *Motor Offset Assy* to the *Offset Assy*.
10. Remove the *Motor Offset Assy* from the *Offset Assy*.

3.2.22.2 Assembly

1. Align the *Motor Offset Assy* with its mount position to the *Offset Assy*.
2. Secure the *Motor Offset Assy* to the *Offset Assy* with two screws.
3. Mount the *Offset Assy*.
4. Mount the *Chute Exit Inner Assy*.
5. Mount the *Cover Lower*.
6. Close the *Cover Rear*.
7. Mount the *Spring Tray*.
8. Mount the *Tray Exit*.
9. Mount the *Tray Exit Assy*.
10. Mount the *Link Weight*.

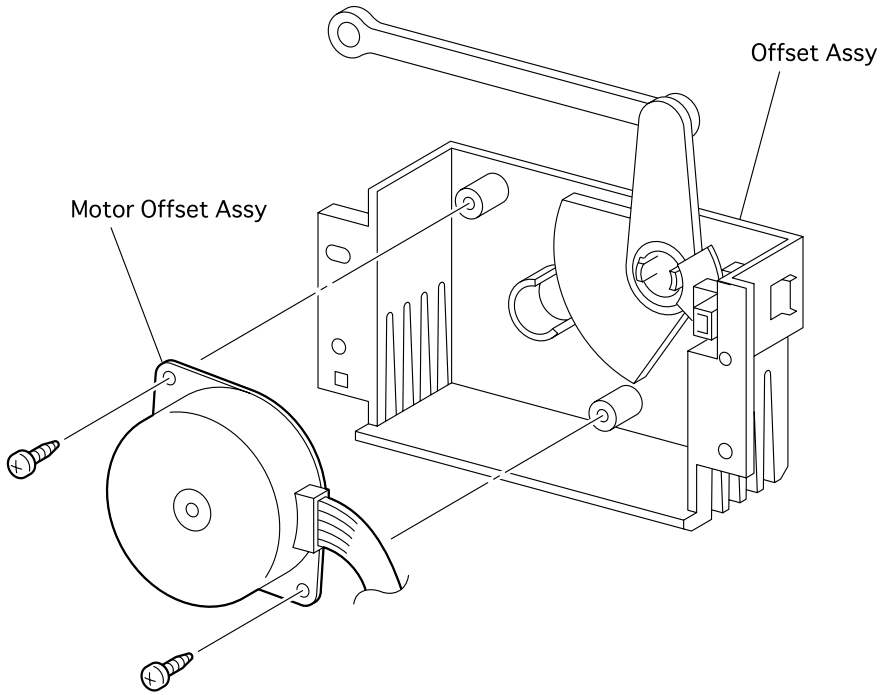


Figure 3-23. Motor Offset Assy Removal

3.2.23 Sensor OCT Home

3.2.23.1 Removal

1. Remove the *Link Weight*. (See "Link Weight" on page 78.)
2. Remove the *Tray Exit Assy*. (See "Tray Exit Assy" on page 75.)
3. Remove the *Tray Exit*. (See "Tray Exit" on page 77.)
4. Remove the *Spring Tray*. (See "Spring Tray" on page 76.)
5. Open the *Cover Rear*.
6. Remove the *Cover Lower*. (See "Cover Lower" on page 81.)
7. Remove the *Chute Exit Inner Assy*. (See "Chute Exit Inner Assy" on page 80.)
8. Remove the *Offset Assy*. (See "Offset Assy" on page 94.)
9. Disengage the five hooks that secure the *Sensor OCT Home* to the *Offset Assy*.
10. Remove the *Sensor OCT Home* from the *Offset Assy*.

3.2.23.2 Assembly

1. Align the *Sensor OCT Home* with its mount position to the *Offset Assy*.
2. Secure the five hooks the *Sensor OCT Home* to the *Offset Assy*.
3. Mount the *Offset Assy*.
4. Mount the *Chute Exit Inner Assy*.
5. Mount the *Cover Lower*.
6. Close the *Cover Rear*.
7. Mount the *Spring Tray*.
8. Mount the *Tray Exit*.
9. Mount the *Tray Exit Assy*.
10. Mount the *Link Weight*.

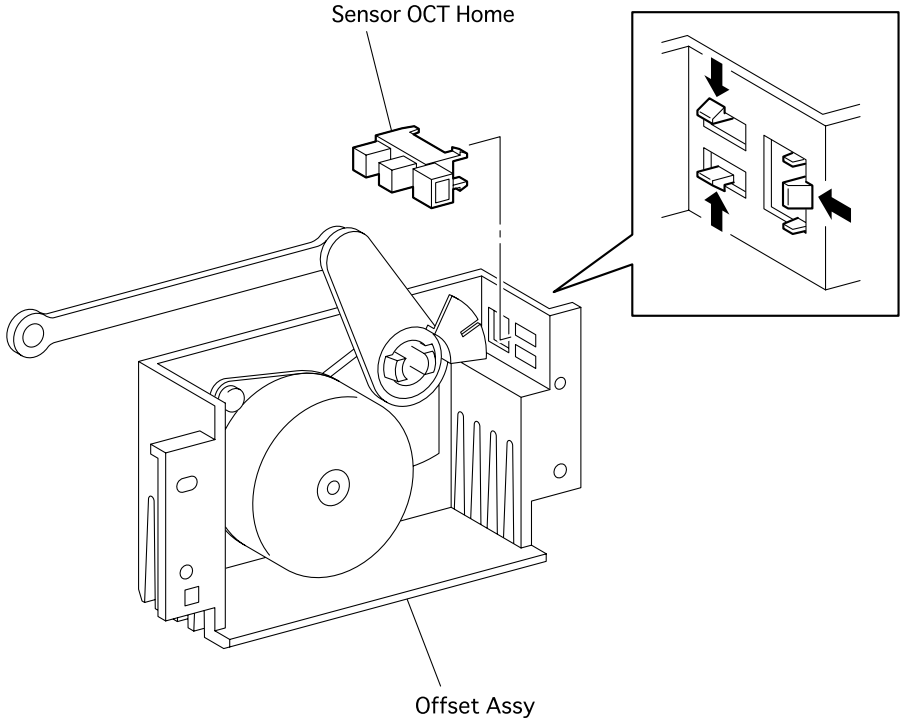


Figure 3-24. Sensor OCT Home Removal

3.3 Parts List and Exploded Diagram

3.3.1 Shifter I

Table 3-1. Parts List for Shifter I

No. in Figure	Unit / Parts Name
1	Shifter ASSY (with 2~17)
2	TRAY EXIT ASSY
3	SPRING TRAY
4	TRAY EXIT
5	---
6	LINK WEIGHT
7	COVER REAR
8	---
9	---
10	---
11	COVER OCT
12	CHUTE EXIT INNER ASSY
13	HOOK COVER
14	COVER LOWER
15	HINGE COVER
16	SPRING COVER L
17	SPRING COVER R

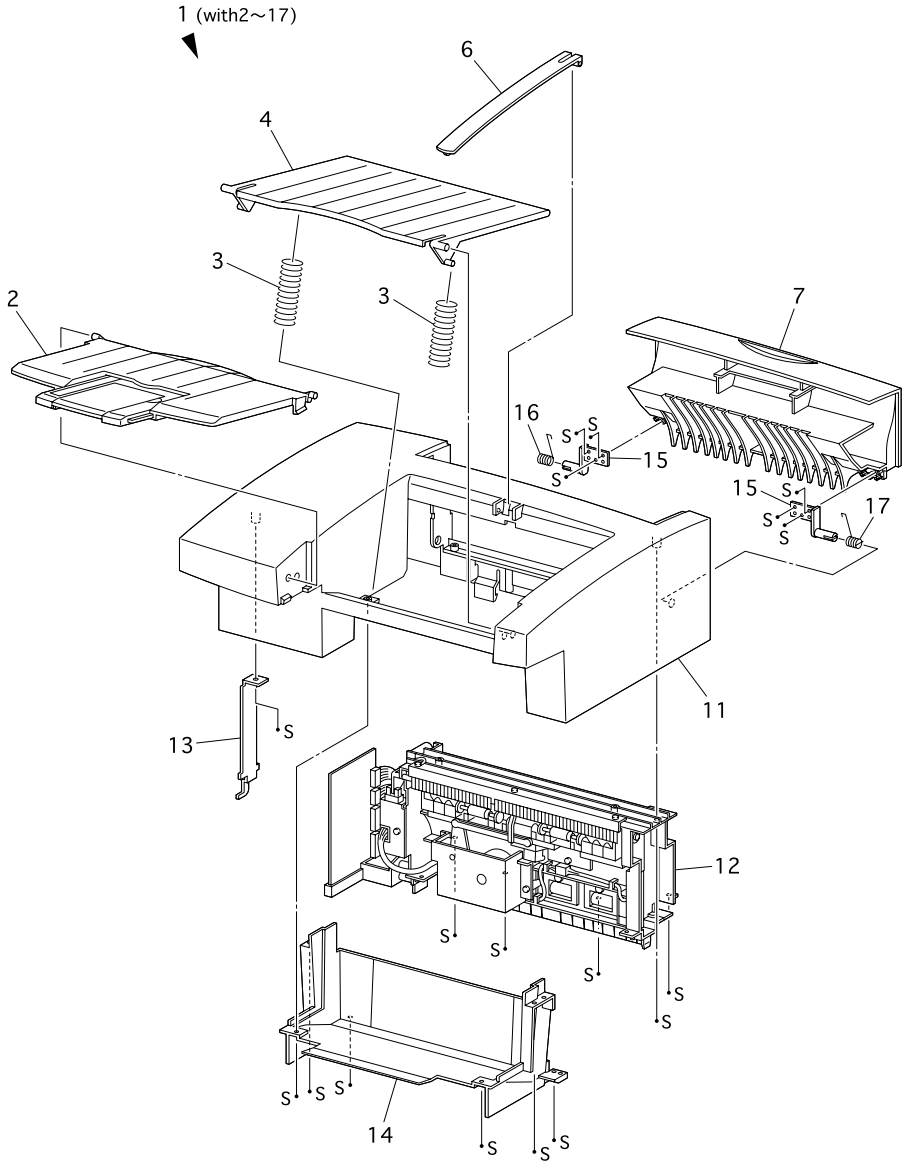


Figure 3-25. Exploded Diagram for Shifter I

3.3.2 Shifter II

Table 3-2. Parts List for Shifter II

No. in Figure	Unit / Parts Name
1	CHUTE EXIT INNER SS (with 2~45)
2	HARNESS ASSY OCT UNIT (J21-P202)
3	HOLDER PWBA
4	PWBA OCT
5	PLATE EARTH
6	MOTOR DRIVE ASSY
7	GEAR EXIT 20
8	BEARING EXIT
9	GEAR 27
10	GEAR 26
11	GEAR 47W
12	GEAR EXIT
13	ELIMINATOR
14	HSG GEAR
15	SOLENOID DIRECTION
16	LEVER SORENOID
17	PIN SOLENOID
18	SENSOR ASSY EXIT OCT
19	ACTUATOR FULL STACK
20	SENSOR FULL STACK
21	HARNESS ASSY OCT SNR (J224-225, J226, J227, J228)
22	ROLL ASSY OFFSET (with 23~26,45)
23	ROLL ASSY EXIT
24	ROLL PINCH EXIT
25	BEARING OFFSET
26	GUIDE OCT
27	HOLDER OCT
28	SHAFT EXIT
29	ROLL ASSY MID OCT
30	ROLL PINCH OCT
31	SPRING PINCH MID
32	CHUTE EXIT INNER
33	---
34	OFFSET ASSY (with 35~39)
35	MOTOR OFFSET ASSY
36	HSG OFFSET
37	SENSOR OCT HOME
38	LEVER OFFSET
39	GEAR CORE
40	FERRITE CORE
41	WIRE ASSY OCT
42	---
43	BRACKET SENSOR
44	EDGE SADDLE
45	SPRING PINCH EXIT

Table 3-2. Parts List for Shifter II

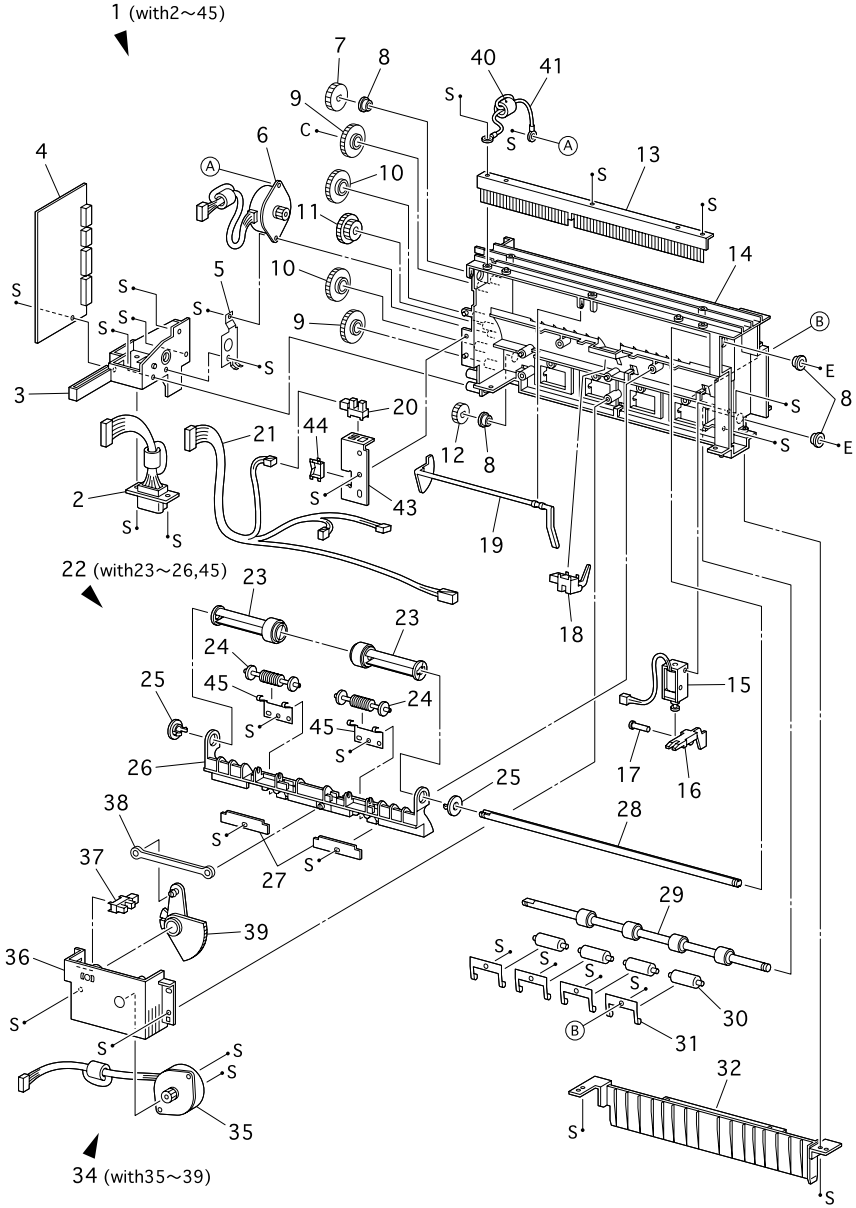
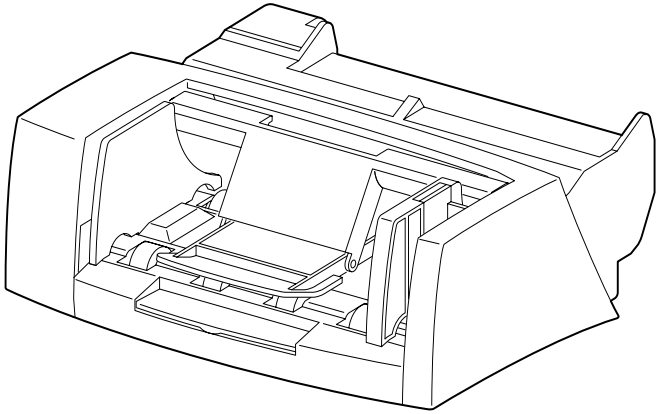


Figure 3-26. Exploded Diagram for Shifter II



CHAPTER

4

ENVELOPE FEEDER

4.1 Installation and Removal of Envelope Feeder

4.1.1 Installation

1. Make sure the printer is off.
2. Open the MP Tray.
3. Remove the ENV Gear Cover by referring to the Base Engine Manual, when the ENV Gear Cover has been mounted on the Cover Front of the printer.
4. Mount the Envelope Feeder Unit to the printer by inserting the plug into printer's receptacle properly.

4.1.2 Removal

1. Draw the Envelope Feeder Unit from the printer.

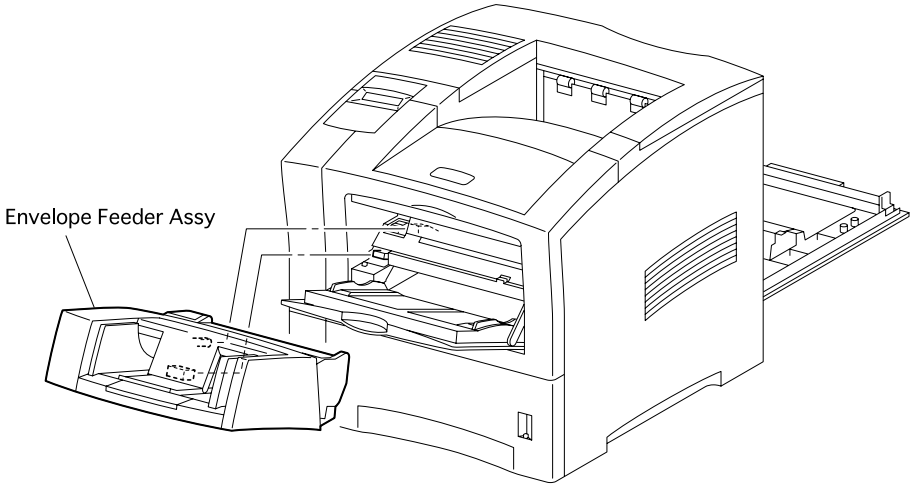


Figure 4-1. Envelope Feeder Unit Removal

4.2 Introduction

This section contains the disassembly and assembly procedure for main parts of the Envelope Feeder.

4.2.1 Preparation

Before you begin any disassembly and assembly procedure;

2. Switch OFF the main power.
3. Disconnect the AC power cord from the wall outlet, then start work.
4. Remove the EP cartridge and store it at a dark and safety place free from direct sunlight.
5. In performing work for the FUSER ASSY periphery, wait until the FUSER ASSY and its periphery have become cool enough.
6. Disconnect all interface cables from the rear panel of printer.
7. In performing work, to eliminate static electricity in your body, wear wristbands, etc. to take grounding properly.

4.2.2 Precautions

CAUTION !

- **Many kinds of screws are used, and do not confuse where they are used. Using wrong screws could cause the tapped holes to be broken, or troubles to occur.**
- **In performing work with parts that are managed as spare parts but its procedure is not given, make sure how the parts have been mounted before starting work.**
- **Optional parts, as a rule, should be removed, but they may be left in the printer, on condition that they do not obstruct your work.**

4.2.3 Notations in Text

The printer orientation expressed in the procedure is defined as follows.

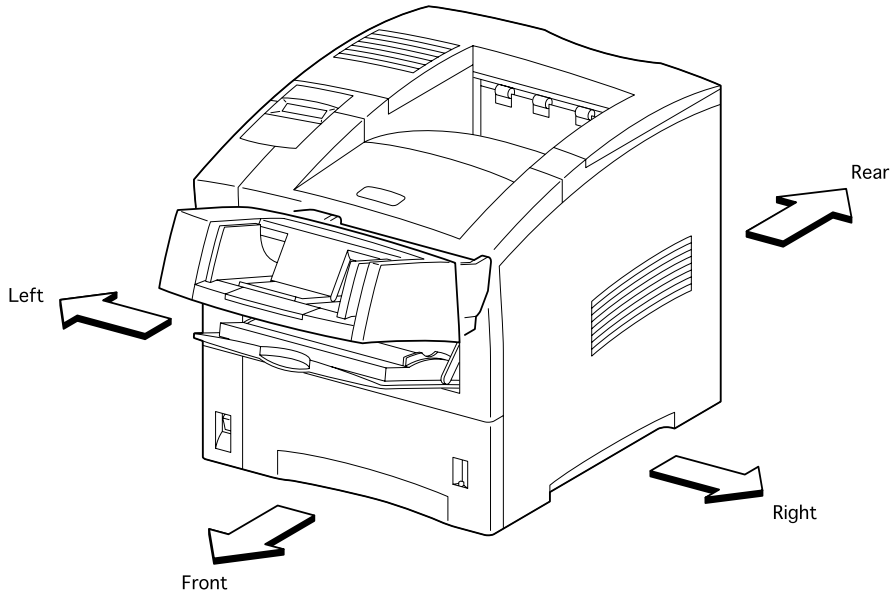


Figure 4-2. Definition of Printer Orientation

- ☐ The screws in the illustration imply that they should be loosened and removed using a cross-tip screw-driver, unless otherwise specified.
- ☐ A black arrow in the illustration implies that the part should be moved in the arrow direction, and when numbers are assigned to black arrows, the parts should be moved in the order of given numbers.

4.3 Disassembly and Assembly

4.3.1 Chute Top

4.3.1.1 Removal

1. Remove the Envelope Feeder Unit. (See “Removal” on page 102)
2. Remove the Cover Bottom. (See “Cover Bottom” on page 107)
3. Remove the two screws securing the Chute Top to the Envelope Feeder Unit.
4. Open the Chute Top from the Envelope Feeder Unit.
5. Unplug the connector from the PWBA ENV.
6. Shifting the Chute Top to the left, disengage it from the hole and shaft of the Envelope Feeder Unit.
7. Remove the Chute Top from Envelope Feeder Unit.
8. Remove the Sensor Assy Exit ENV.
9. Remove the Kit Roll Assy Retard.
10. Remove the Roll Pinch and Shaft Pinch.

4.3.1.2 Assembly

11. Mount the Roll Pinch and Shaft Pinch. (See “Roll Pinch and Shaft Pinch” on page 105)
12. Mount the Kit Roll Assy Retard. (See “Kit Roll Assy Retard” on page 110)
13. Remove the Sensor Assy Exit ENV. (See “Sensor Assy Exit ENV” on page 109)
14. Insert the shaft and hole of Chute Top into the hole and shaft of the Envelope Feeder Unit. (See “Chute Top” on page 104)
15. Plug the connector (P/J412) to the PWBA ENV. (See “PWBA ENV” on page 126)
16. Close the Chute Top from Envelope Feeder Unit.
17. Secure the Chute Top to the Envelope Feeder Unit with two screws.
18. Mount the Cover Bottom. (See “Cover Bottom” on page 107)
19. Mount the Envelope Feeder Unit. (See “Installation” on page 102)

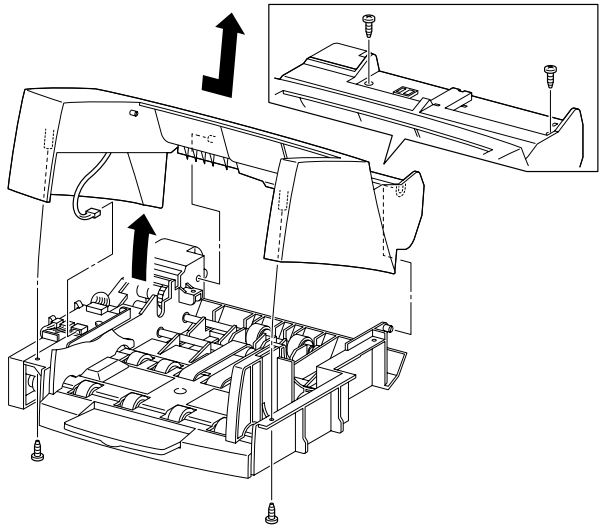


Figure 4-3. Chute Top Removal

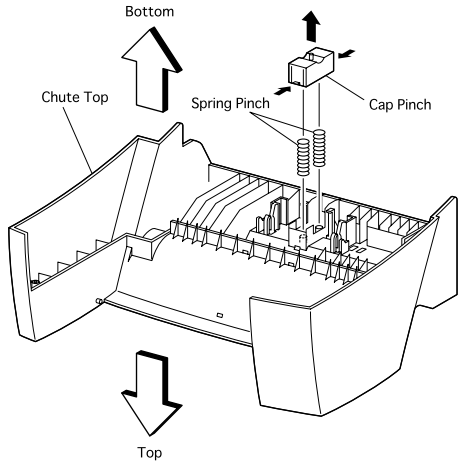


Figure 4-4. Chute Top Removal

4.3.2 Roll Pinch and Shaft Pinch

4.3.2.1 Removal

1. Remove the Envelope Feeder Unit. (See “Removal” on page 102)
2. Remove the Cover Bottom. (See “Cover Bottom” on page 107)
3. Remove the Chute Top. (See “Chute Top” on page 104)
4. Remove the Kit Roll Assy Retard. (See “Kit Roll Assy Retard” on page 110)
5. Disengage the Shaft Pinch together with the Bearing Feeders from the bearing of Chute Top, and remove the Shaft Pinch together with the Roll Pinches and the Bearing Feeders.
6. Remove the Bearing Feeders and Roll Pinches from the Shaft Pinch.

4.3.2.2 Assembly

1. Mount the Roll Pinches and the Bearing Feeder on the Shaft Pinch. (See “Roll Pinch and Shaft Pinch” on page 105)
2. Aligning the Shaft Pinch exactly on the position, mount the Shaft Pinch together with Bearing Feeder on the Chute Top, and secure the Shaft Pinch Exit together with Bearing Feeder to the bearing of Chute Top.
3. Mount the Kit Roll Assy Retard. (See “Kit Roll Assy Retard” on page 110)
4. Mount the Chute Top. (See “Chute Top” on page 104)
5. Mount the Cover Bottom. (See “Cover Bottom” on page 107)
6. Mount the Envelope Feeder Unit. (See “Installation” on page 102)

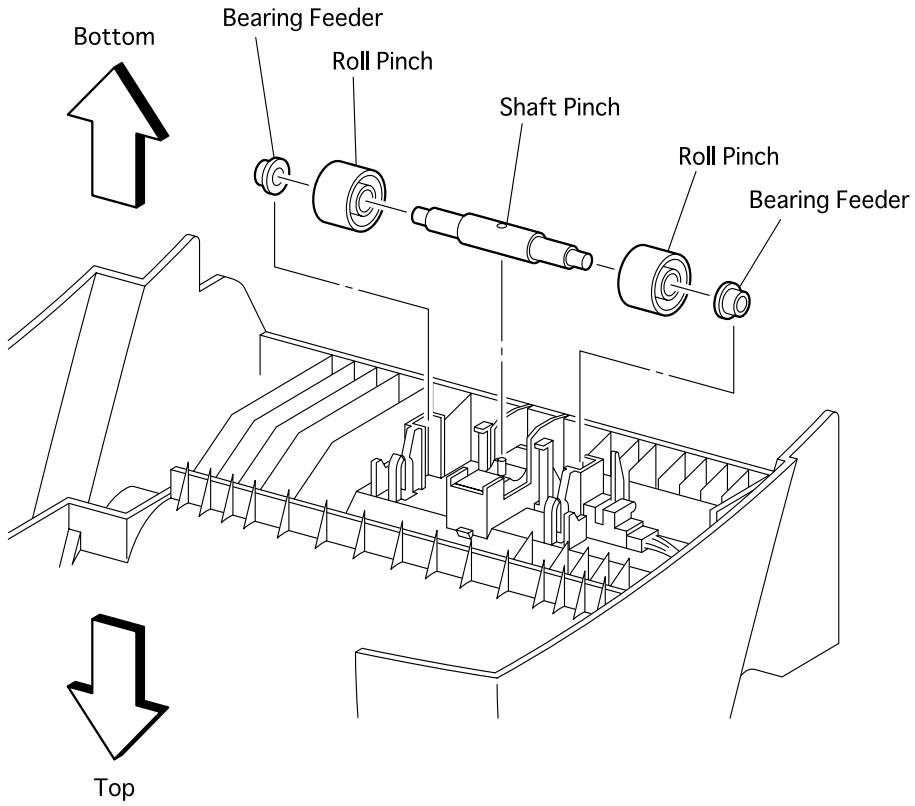


Figure 4-5. Roll Pinch and Shaft Pinch Removal

4.3.3 Arm Weight

4.3.3.1 Removal

1. Remove the Envelope Feeder Unit. (See “Removal” on page 102)
2. Deflecting the Arm Weight, disengage the right bearing of Arm Weight from the right shaft of Envelope Feeder Unit.
3. Raising the right side of Arm Weight, remove the Arm Weight together with Holder Weight from the Envelope Feeder Unit.
4. Deflecting the right bearing of Arm Weight, disengage from the right shaft of Cover Weight.
5. Pulling the right side of Cover Weight a little toward the front and shifting to the right, disengage from the left bearing of Arm Weight, then remove the Holder Weight.

4.3.3.2 Assembly

1. Insert the left shaft of Cover Weight into the left bearing of Arm Weight.
2. Deflecting the right bearing of Arm Weight, insert the right shaft of Cover Weight.
3. Insert the left shaft of Envelope Feeder Unit into the left bearing of Arm Weight.
4. Deflecting the Arm Weight, insert the right shaft of Envelope Feeder Unit into the right bearing.
5. Mount the Envelope Feeder Unit. (See “Installation” on page 102)

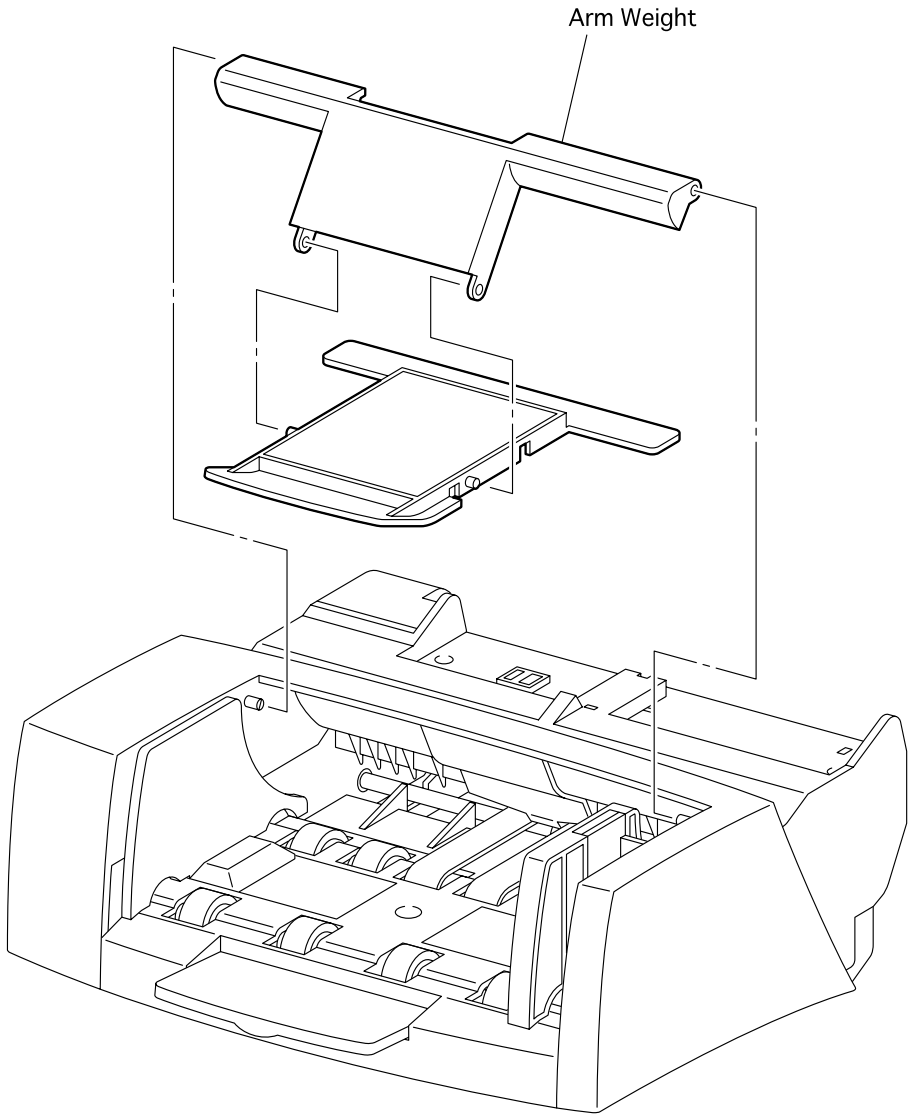


Figure 4-6. Arm Weight Removal

4.3.4 Cover Bottom

4.3.4.1 Removal

1. Remove the Envelope Feeder Unit. (See “Removal” on page 102)
2. Remove the two screws securing the Cover Bottom to the Envelope Feeder Unit.
3. Remove the cover from Envelope Feeder Unit.
4. Remove the Connector ENV together with Harness Assy Main from the Cover Bottom.

4.3.4.2 Assembly

1. Aligning the position exactly, mount the Connector ENV together with Harness Assy Main on the Cover Bottom.
2. Engaging two hooks with two holes in the Envelope Feeder Unit, mount the Cover Bottom.
3. Secure the Cover bottom to the Envelope Feeder Unit with two screws.
4. Mount the Envelope Feeder Unit. (See “Installation” on page 102)

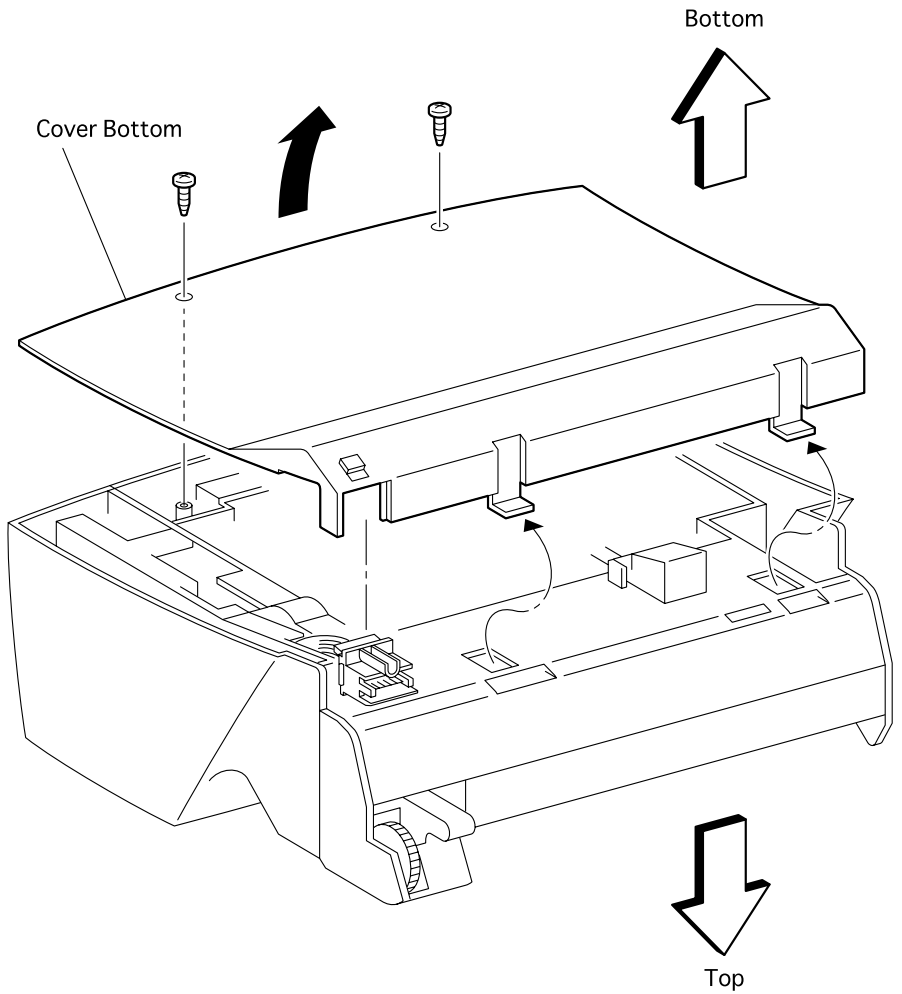


Figure 4-7. Cover Bottom Removal

4.3.5 Tray Extension

4.3.5.1 Removal

1. Remove the Envelope Feeder Unit. (See “Removal” on page 102)
2. Remove the Cover Bottom. (See “Cover Bottom” on page 107)
3. Draw the Tray Extension from the Envelope Feeder Unit in diagonal upward direction.

4.3.5.2 Assembly

1. Aligning the position exactly, insert the Tray Extension into the Envelope Feeder Unit.
2. Mount the Cover Bottom. (See “Cover Bottom” on page 107)
3. Mount the Envelope Feeder Unit. (See “Installation” on page 102)

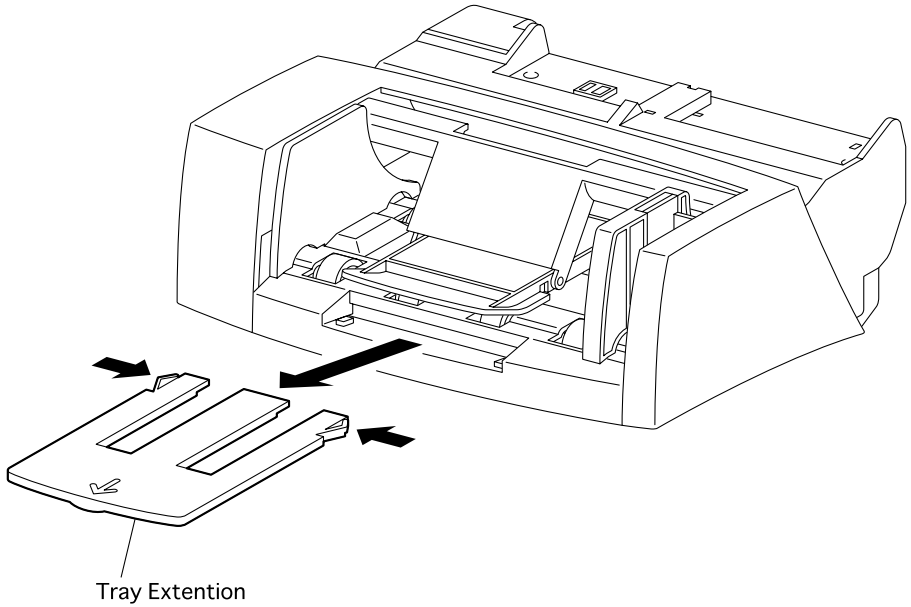


Figure 4-8. Tray Extension Removal

4.3.6 Sensor Assy Exit ENV

4.3.6.1 Removal

1. Remove the Envelope Feeder Unit. (See “Removal” on page 102)
2. Remove the Cover Bottom. (See “Cover Bottom” on page 107)
3. Remove the Chute Top. (See “Chute Top” on page 104)
4. Disengage two hooks that secure the Sensor Assy Exit ENV to the Chute Top, and remove the Sensor Assy Exit ENV.
5. Unplug the connector (P/J417) from the Sensor Assy Exit ENV.

4.3.6.2 Assembly

1. Plug the connector (P/J417) in the Sensor Assy Exit ENV.
2. Mount the Sensor Assy Exit ENV on the Chute Top, and secure it with two hooks. (See “Sensor Assy Exit ENV” on page 109)
3. Mount the Chute Top. (See “Chute Top” on page 104)
4. Mount the Cover Bottom. (See “Cover Bottom” on page 107)
5. Mount the Envelope Feeder Unit. (See “Installation” on page 102)

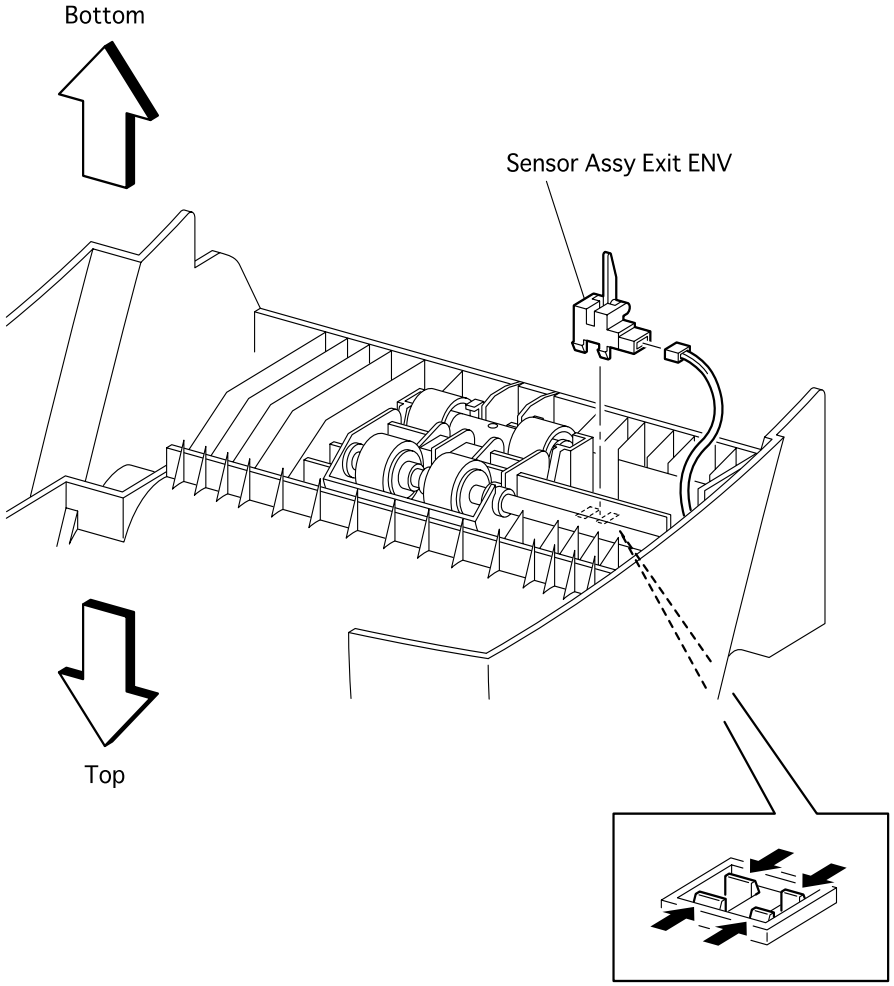


Figure 4-9. Sensor Assy Exit ENV Removal

4.3.7 Kit Roll Assy Retard

4.3.7.1 Removal

1. Remove the Envelope Feeder Unit. (See “Removal” on page 102)
2. Remove the Cover Bottom. (See “Cover Bottom” on page 107)
3. Remove the Chute Top. (See “Chute Top” on page 104)

NOTE: *In the following steps, take care not to drop, then lose the Spring Retard.*

4. Disengage the shaft of Kit Roll Assy Retard from the bearing of Chute Top, and remove the Kit Roll Assy Retard.

4.3.7.2 Assembly

NOTE: *In the following steps, take care not to drop, then lose the Spring Retard.*

1. Mount the Kit Roll Assy Retard on the Chute Top, and secure the shaft of Kit Roll Assy Retard to the bearing of Chute Top. (See “Kit Roll Assy Retard” on page 110)
2. Mount the Chute Top.(See “Chute Top” on page 104)
3. Mount the Cover Bottom. (See “Cover Bottom” on page 107)
4. Mount the Envelope Feeder Unit. (See “Installation” on page 102)

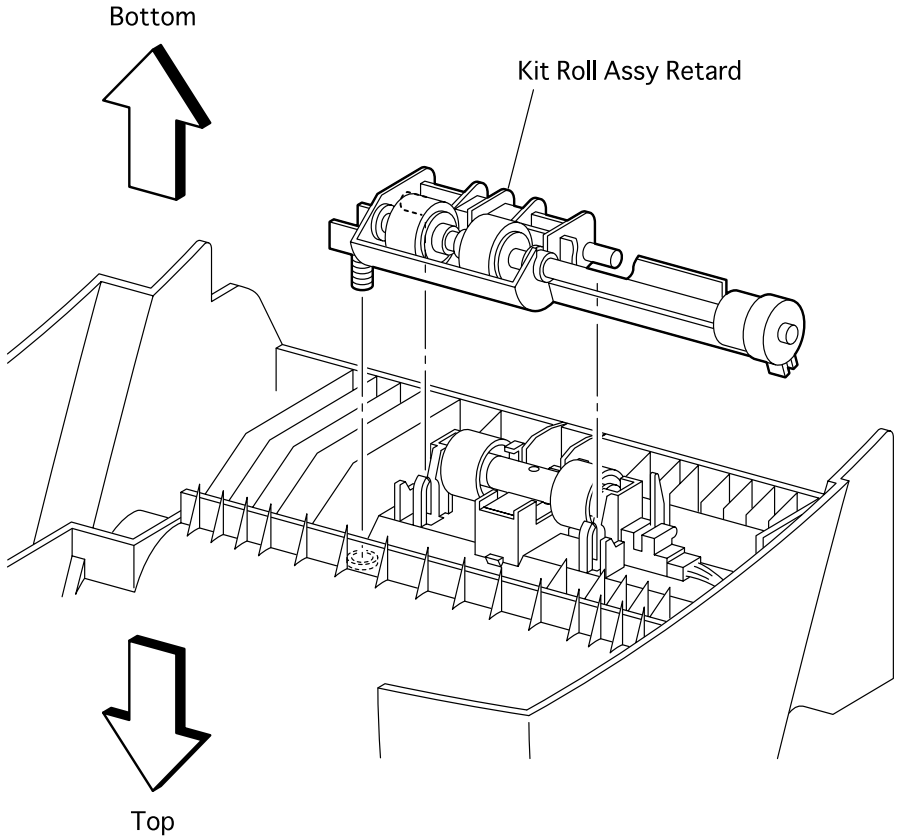


Figure 4-10. Kit Roll Assy Retard Removal

4.3.8 Cover Gear

4.3.8.1 Removal

1. Remove the Envelope Feeder Unit. (See “Removal” on page 102)
2. Remove the Cover Bottom. (See “Cover Bottom” on page 107)
3. Remove the Chute Top. (See “Chute Top” on page 104)
4. Remove the PWBA ENV. (See “PWBA ENV” on page 126)

NOTE: *In the following steps, the gear, clutch, etc. will easily drop when the cover is removed. Take care not to lose them.*

5. Remove two screws securing the Cover Gear to the Envelope Feeder Unit.
6. Detach the Cover Gear together with the harness from the Envelope Feeder Unit.
7. Unhook the following harnesses from the Cover Gear.
   *Harness Assy Clutch connected to the Clutch ELECT 29.
   *Harness Assy N/P connected to the Sensor Photo: No Paper.
8. Draw the following harnesses from the hole in the Cover Gear.
   *Harness Assy Main connected to the Connector ENV.
   *Harness Assy Clutch connected to the Clutch ELEC 29.
   *Harness Assy N/P connected to the Sensor Photo: No Paper.

4.3.8.2 Assembly

1. Let the following harnesses through the hole of Cover Gear.
   *Harness Assy Main connected to the Connector ENV.
   *Harness Assy Clutch connected to the Clutch ELECT 29.
   *Harness Assy N/P connected to the Sensor Photo: No Paper.
2. Hook the following harnesses to the Cover Gear.
   *Harness Assy Clutch connected to the Clutch ELEC 29
   *Harness Assy N/P connected to the Sensor Photo: No Paper
3. Align the Cover Gear with its mount position to the Envelope Feeder Unit. (See “Cover Gear” on page 111)
4. Secure the Cover Gear to the Envelope Feeder Unit with two screws.
5. Mount the PWBA ENV. (See “PWBA ENV” on page 126)
6. Mount the Chute Top.(See “Chute Top” on page 104)
7. Mount the Cover Bottom. (See “Cover Bottom” on page 107)
8. Mount the Envelope Feeder Unit. (See “Installation” on page 102)

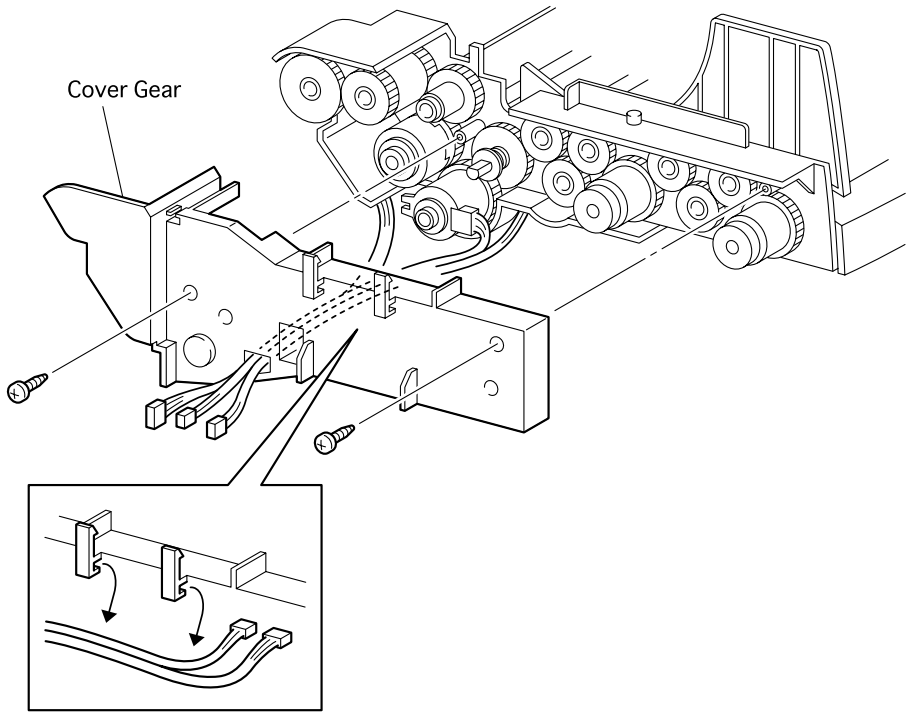


Figure 4-11. Cover Gear Removal

4.3.9 Clutch ELEC 29

4.3.9.1 Removal

1. Remove the Envelope Feeder Unit. (See “Removal” on page 102)
2. Remove the Cover Bottom. (See “Cover Bottom” on page 107)
3. Remove the Chute Top. (See “Chute Top” on page 104)
4. Remove the PWBA ENV. (See “PWBA ENV” on page 126)
5. Remove the Cover Gear. (See “Cover Gear” on page 111)
6. Draw the Clutch Assy Torque 25 securing on the shaft of Roll Assy Trans.
7. Draw the Bearing Clutch ELEC securing on the shaft Clutch ELEC17 of the Envelope Feeder Unit.
8. Draw the Clutch ELEC 29 together with Harness Assy Clutch securing on the shaft of Shaft Clutch ELEC 17 of the Envelope Feeder Unit.
9. Unplug the connector (P/J416) from the Clutch ELEC 29.

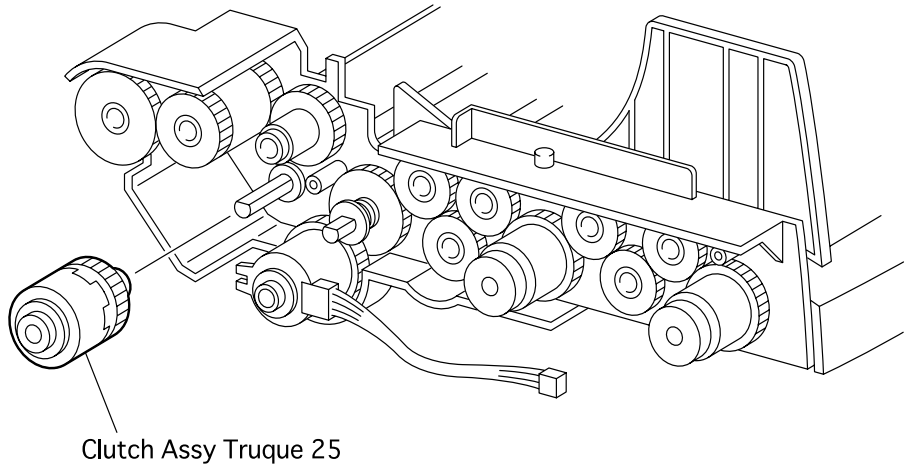


Figure 4-12. Clutch ELEC 29 Removal

4.3.9.2 Assembly

1. Plug the connector (P/J416) to the Clutch ELEC 29.
2. Mount the Clutch ELEC 29 on the shaft of Shaft Clutch ELEC 17 of the Envelope Feeder Unit.
3. Mount the Bearing Clutch ELEC on the shaft of Shaft Clutch ELEC 17 of the Envelope Feeder Unit.
4. Mount the Clutch Assy Torque 25 on the shaft of Roll Assy Trans.
5. Mount the Cover Gear. (See “Cover Gear” on page 111)
6. Mount the PWBA ENV. (See “PWBA ENV” on page 126)
7. Mount the Chute Top.(See “Chute Top” on page 104)
8. Mount the Cover Bottom. (See “Cover Bottom” on page 107)
9. Mount the Envelope Feeder Unit. (See “Installation” on page 102)

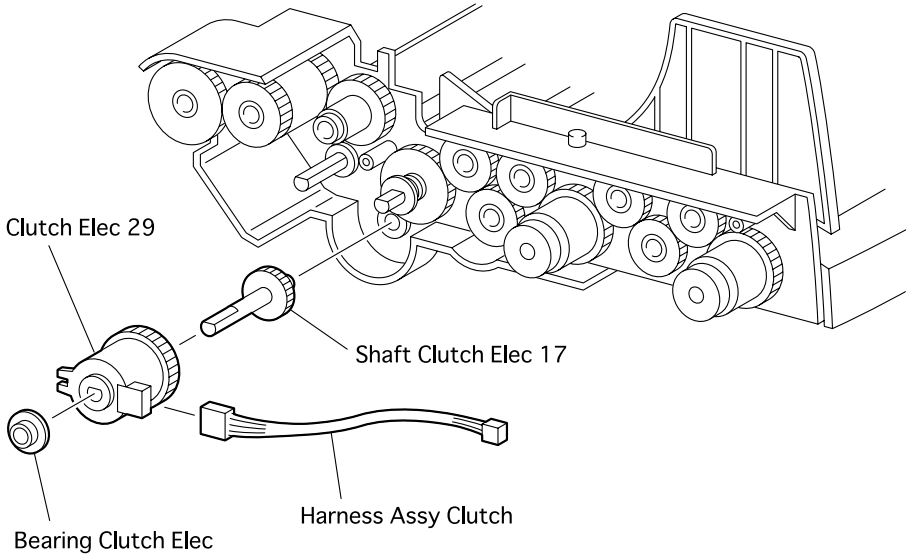


Figure 4-13. Clutch ELEC 29 Removal

4.3.10 Roll Assy Trans

4.3.10.1 Removal

1. Remove the Envelope Feeder Unit. (See “Removal” on page 102)
2. Remove the Cover Bottom. (See “Cover Bottom” on page 107)
3. Remove the Chute Top. (See “Chute Top” on page 104)
4. Remove the PWBA ENV. (See “PWBA ENV” on page 126)
5. Remove the Cover Gear. (See “Cover Gear” on page 111)
6. Draw the Clutch Assy Torque 25 securing on the shaft of Roll Assy Trans.
7. Remove the Bearing Feeder that secures the left shaft of Roll Assy Trans to the left bearing of Envelope Feeder Unit.
8. Shifting the right shaft of Roll Assy Trans together with bearing Feeder to the left, release it from the right bearing of Envelope feeder Unit.
9. Raising the right shaft of Roll Assy Trans, draw the Roll Assy Trans together with Bearing Feeder from the Envelope Feeder Unit.
10. Remove the bearing Feeder from the right shaft of Roll Assy Trans.
11. Remove an E-ring from the right shaft of Roll Assy Trans.

4.3.10.2 Assembly

1. Mount the E-ring to the right shaft of Roll Assy Trans.
2. Mount the Bearing Feeder to the right shaft of Roll Assy Trans.
3. Insert the left shaft of Roll Assy Trans into the left bearing of Envelope Feeder Unit.
4. Insert the right shaft of Roll Assy Trans together with Bearing Feeder into the right bearing of Envelope Feeder Unit to secure.
5. Insert the Bearing Feeder into the left bearing of Envelope Feeder Unit to secure the left shaft of Roll Assy feed 2.
6. Mount the Clutch Assy Torque 25 on the shaft of Roll Assy Trans.
7. Mount the Cover Gear. (See “Cover Gear” on page 111)
8. Mount the PWBA ENV. (See “PWBA ENV” on page 126)
9. Mount the Chute Top. (See “Chute Top” on page 104)
10. Mount the Cover Bottom. (See “Cover Bottom” on page 107)
11. Mount the Envelope Feeder Unit. (See “Installation” on page 102)

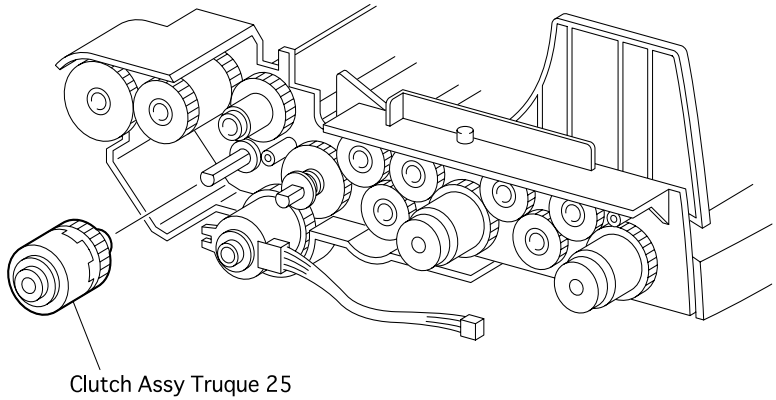


Figure 4-14. Roll Assy Trans Removal

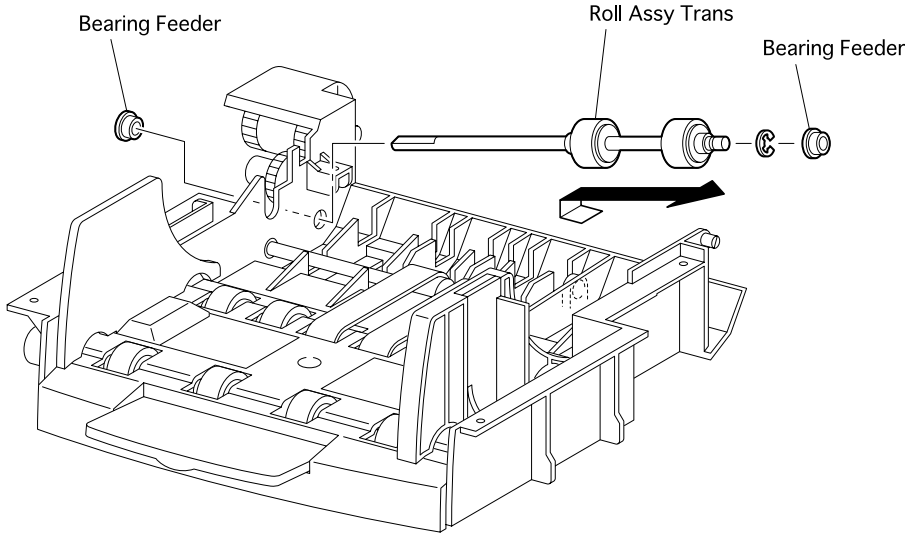


Figure 4-15. Roll Assy Trans Removal

4.3.11 Roll Assy Bottom

4.3.11.1 Removal

1. Remove the Envelope Feeder Unit. (See “Removal” on page 102)
2. Remove the Cover Bottom. (See “Cover Bottom” on page 107)
3. Remove the Chute Top. (See “Chute Top” on page 104)
4. Remove the PWBA ENV. (See “PWBA ENV” on page 126)
5. Remove the Cover Gear. (See “Cover Gear” on page 111)
6. Draw the Clutch Assy Torque 25 securing on the shaft of Roll Assy Trans.
7. Remove the Clutch ELEC 29.
8. Draw the Clutch Assy One Way 26 securing on the shaft of Roll Assy Bottom.
9. Remove the Bearing Feeder that secures the left shaft of Roll Assy Bottom to the left bearing of Envelope Feeder Unit.
10. Shifting the right shaft of Roll Assy Bottom together with bearing Feeder to the left, release it from the right bearing of Envelope feeder Unit.
11. Raising the right shaft of Roll Assy Bottom, draw the Roll Assy Bottom together with Bearing Feeder from the Envelope Feeder Unit.
12. Remove the bearing Feeder from the right shaft of Roll Assy Bottom.
13. Remove an E-ring from the right shaft of Roll Assy Bottom.

4.3.11.2 Assembly

1. Mount the E-ring to the right shaft of Roll Assy Bottom.
2. Mount the Bearing Feeder to the right shaft of Roll Assy Bottom.
3. Let the left shaft of Roll Assy Bottom through the belt Feed of Envelope Feeder Unit at two places.
4. Insert the left shaft of Roll Assy Bottom into the left bearing of Envelope Feeder Unit.
5. Insert the right shaft of Roll Assy Bottom together with Bearing Feeder into the right bearing of Envelope Feeder Unit to secure.
6. Insert the Bearing Feeder into the left bearing of Envelope Feeder Unit to secure the left shaft of Roll Assy feed 2.
7. Align the position of Belt Feed at two places with the roller of Roll Assy Bottom.
8. Mount the Clutch Assy One Way 26 on the shaft of Roll Assy Bottom.
9. Mount the Clutch ELEC 29.
10. Mount the Clutch Assy Torque 25 on the shaft of Roll Assy Trans.
11. Mount the Cover Gear. (See “Cover Gear” on page 111)
12. Mount the PWBA ENV. (See “PWBA ENV” on page 126)
13. Mount the Chute Top. (See “Chute Top” on page 104)
14. Mount the Cover Bottom. (See “Cover Bottom” on page 107)
15. Mount the Envelope Feeder Unit. (See “Installation” on page 102)

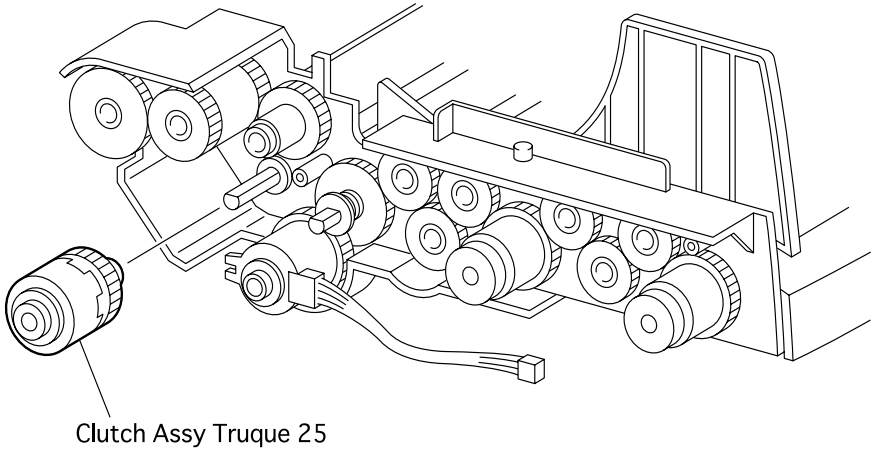


Figure 4-16. Roll Assy Bottom Removal

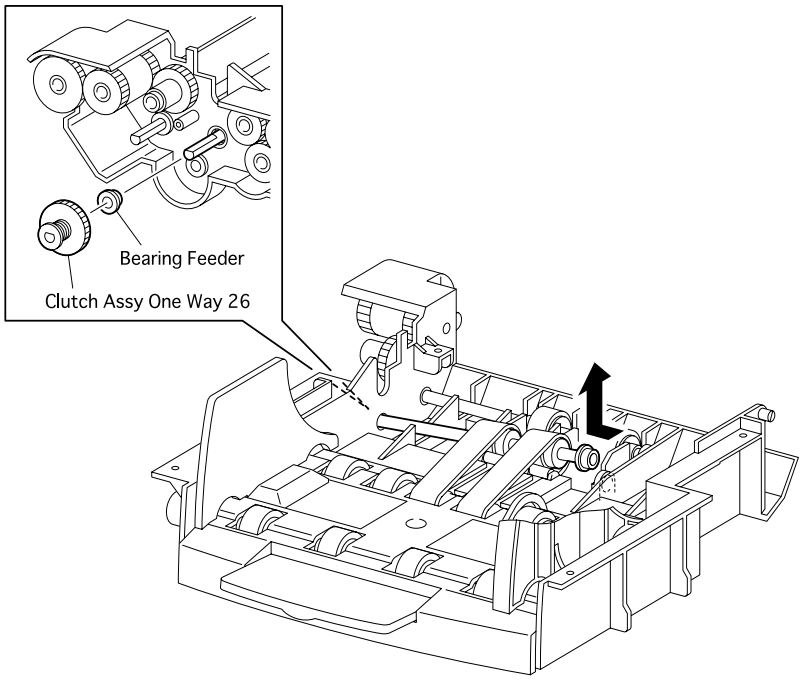


Figure 4-17. Roll Assy Bottom Removal

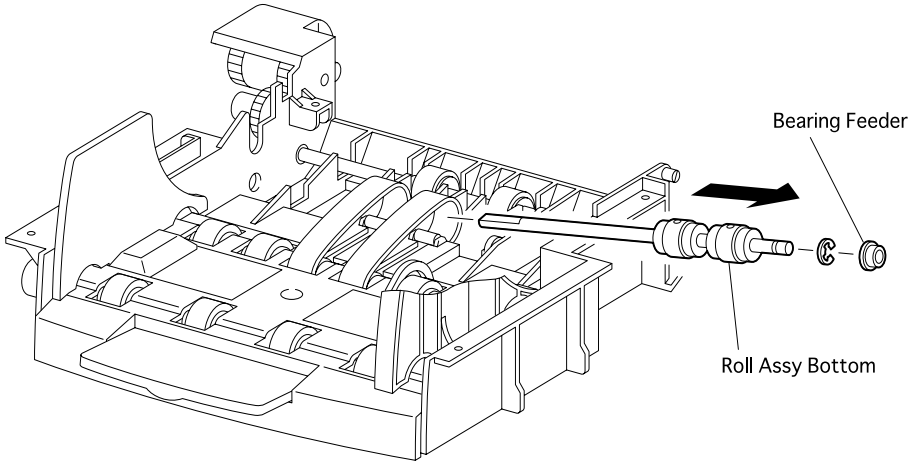


Figure 4-18. Roll Assy Bottom Removal

4.3.12 Roll Pinch ENV

4.3.12.1 Removal

1. Remove the Envelope Feeder Unit. (See “Removal” on page 102)
2. Remove the Cover Bottom. (See “Cover Bottom” on page 107)
3. Remove the Chute Top. (See “Chute Top” on page 104)
4. Pulling upward the left Belt Feed of Envelope Feeder Unit, disengage the shaft of left Roll Pinch ENV, and remove the shaft from the bearing of Envelope Feeder Unit.
5. Pulling upward the right Belt Feed of Envelope Feeder Unit, disengage the shaft of right Roll Pinch ENV, and remove the shaft from the bearing of Envelope Feeder Unit.

4.3.12.2 Assembly

1. Pulling upward the right Belt Feed of Envelope Feeder Unit, insert the shaft of Roll Pinch ENV into the right bearing of Envelope Feeder Unit.
2. Pulling upward the left Belt Feed of Envelope Feeder Unit, insert the shaft of Roll Pinch ENV into the left bearing of Envelope Feeder Unit.
3. Mount the Chute Top. (See “Chute Top” on page 104)
4. Mount the Cover Bottom. (See “Cover Bottom” on page 107)
5. Mount the Envelope Feeder Unit. (See “Installation” on page 102)

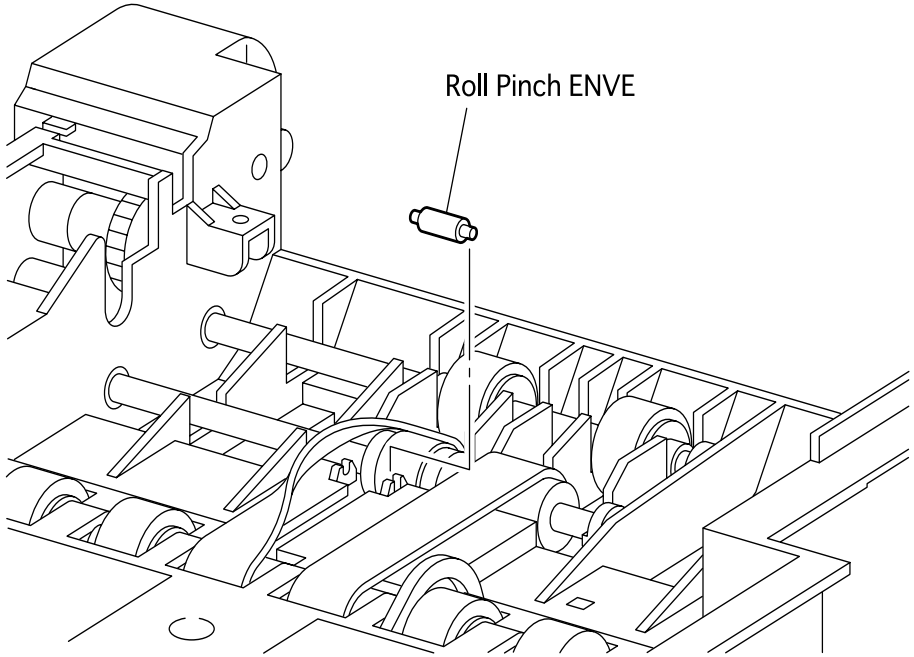


Figure 4-19. Roll Pinch ENV Removal

4.3.13 Belt Feed

4.3.13.1 Removal

1. Remove the Envelope Feeder Unit. (See “Removal” on page 102)
2. Remove the Cover Bottom. (See “Cover Bottom” on page 107)
3. Remove the Chute Top. (See “Chute Top” on page 104)
4. Remove the PWBA ENV. (See “PWBA ENV” on page 126)
5. Remove the Cover Gear. (See “Cover Gear” on page 111)
6. Remove the Clutch ELEC 29.
7. Remove the Roll Assy Bottom.
8. Remove the Roll Assy Feed 1.
9. Letting the right Belt Feed through the right slit of Envelope Feeder Unit, remove the Belt Feed.
10. Letting the left Belt Feed through the left slit of Envelope Feeder Unit, remove the Belt Feed.

4.3.13.2 Assembly

1. Letting the Belt Feed through the left slit of Envelope Feeder Unit, mount the Belt Feed.
2. Letting the Belt Feed through the right slit of Envelope Feeder Unit, mount the Belt Feed.
3. Mount the Roll Assy Feed 1. (See “Roll Assy Feed 1” on page 120)
4. Mount the Roll Assy Bottom. (See “Roll Assy Bottom” on page 114)
5. Mount the Clutch ELEC 29.
6. Mount the Cover Gear. (See “Cover Gear” on page 111)
7. Mount the PWBA ENV. (See “PWBA ENV” on page 126)
8. Mount the Chute Top. (See “Chute Top” on page 104)
9. Mount the Cover Bottom. (See “Cover Bottom” on page 107)
10. Mount the Envelope Feeder Unit. (See “Installation” on page 102)

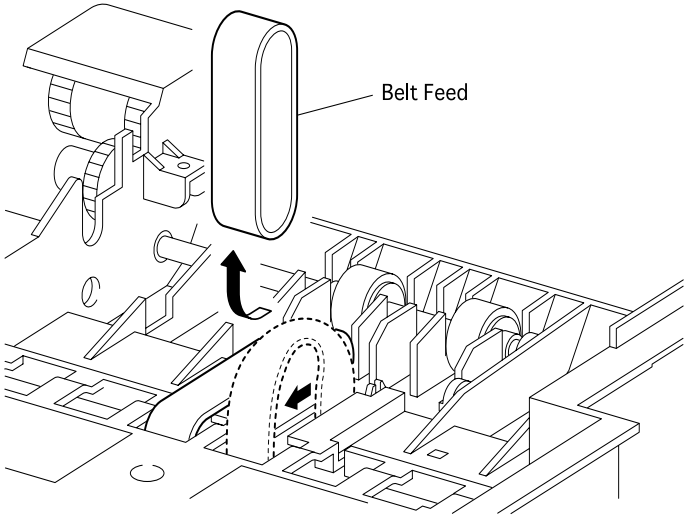


Figure 4-20. Belt Feed Removal

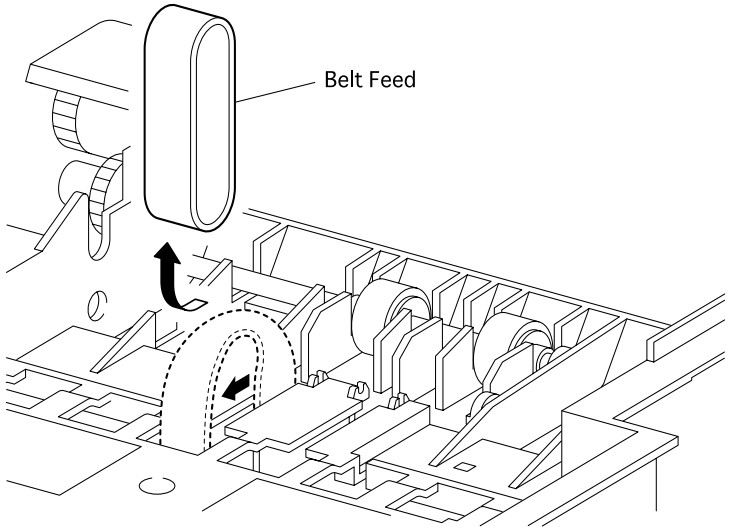


Figure 4-21. Belt Feed Removal

4.3.14 Actuator N/P Envelope

4.3.14.1 Removal

1. Remove the Envelope Feeder Unit. (See “Removal” on page 102)
2. Remove the Cover Bottom. (See “Cover Bottom” on page 107)
3. Release the shaft of Actuator N/P Envelope from the bearing of Envelope Feeder Unit, and remove the Actuator N/P Envelope.

4.3.14.2 Assembly

1. Aligning the position exactly, mount the Actuator N/P Envelope on the Envelope Feeder Unit, and secure the shaft of Actuator N/P Envelope to the bearing of Envelope Feeder Unit.
2. Mount the Cover Bottom. (See “Cover Bottom” on page 107)
3. Mount the Envelope Feeder Unit. (See “Installation” on page 102)

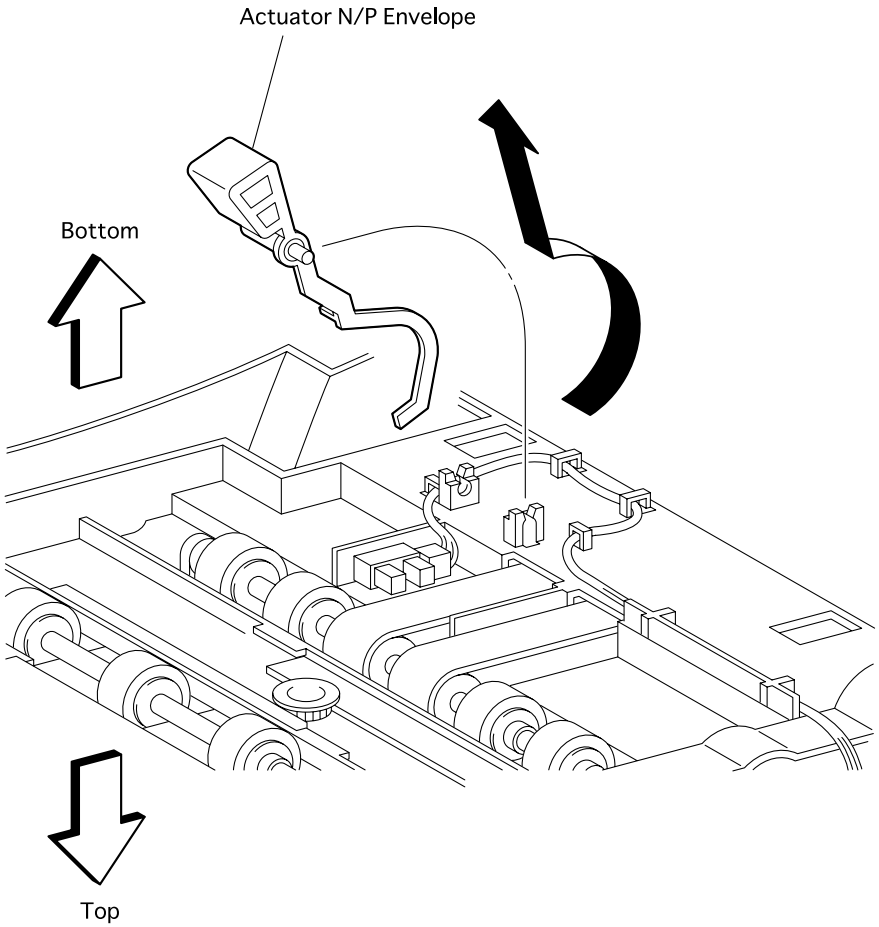


Figure 4-22. Actuator N/P Envelope Removal

4.3.15 Sensor Photo: No Paper

4.3.15.1 Removal

1. Remove the Envelope Feeder Unit. (See “Removal” on page 102)
2. Remove the Cover Bottom. (See “Cover Bottom” on page 107)
3. Remove the Actuator N/P Envelope AB.
4. Disengage two hooks that secure the Sensor Photo: No Paper to the Envelope Feeder Unit and remove the Sensor Photo: No Paper.
5. Unplug the connector (P/J415) from the Sensor Photo: No Paper.

4.3.15.2 Assembly

1. Plug the connector (P/J415) to the Sensor Photo: No Paper.
2. Aligning the position exactly, mount the Sensor Photo: No Paper on the Envelope Feeder Unit and secure with two hooks.
3. Mount the Actuator N/P Envelope. (See “Actuator N/P Envelope” on page 118)
4. Mount the Cover Bottom. (See “Cover Bottom” on page 107)
5. Mount the Envelope Feeder Unit. (See “Installation” on page 102)

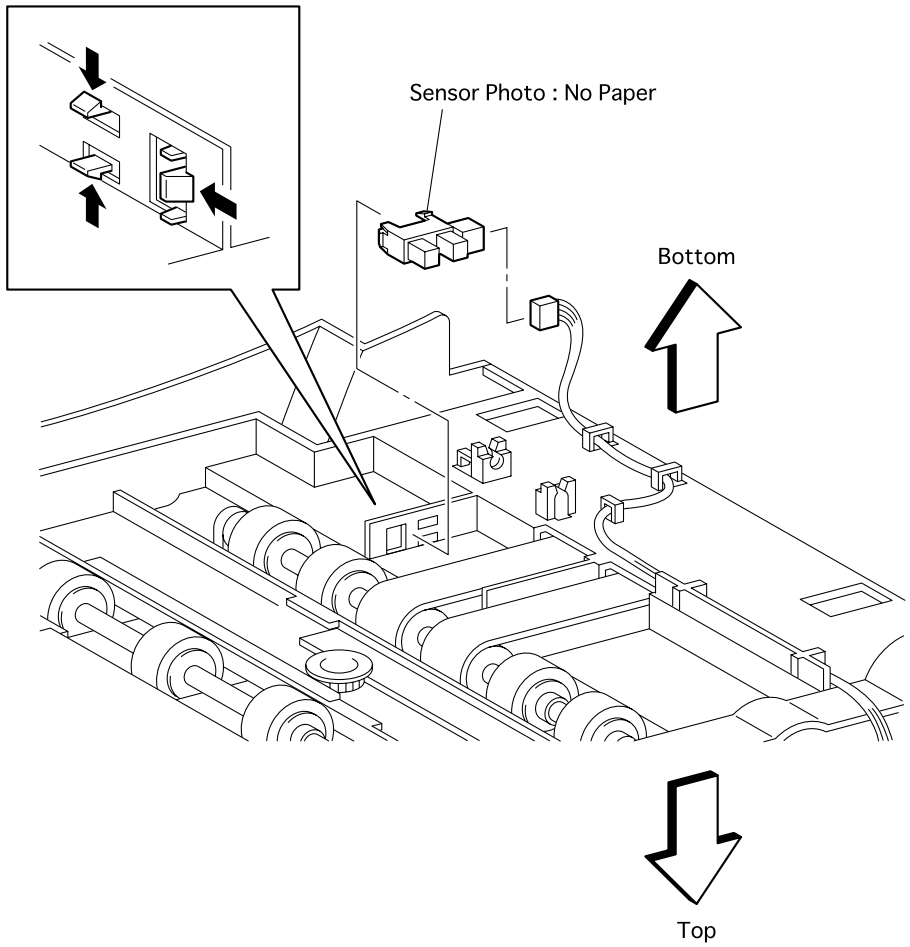


Figure 4-23. Sensor Photo: No Paper Removal

4.3.16 Roll Assy Feed 1

4.3.16.1 Removal

1. Remove the Envelope Feeder Unit. (See “Removal” on page 102)
2. Remove the Cover Bottom. (See “Cover Bottom” on page 107)
3. Remove the Chute Top. (See “Chute Top” on page 104)
4. Remove the Actuator N/P Envelope. (See “Actuator N/P Envelope” on page 118)
5. Remove the PWBA ENV. (See “PWBA ENV” on page 126)
6. Remove the Cover Gear. (See “Cover Gear” on page 111)
7. Remove the Clutch ELEC 29.
8. Remove the Roll Assy Bottom.
9. Draw the Clutch Assy One Way Torque 26A securing on the shaft of Roll Assy Feed 1.
10. Remove the Bearing Feeder that secures the left shaft of Roll Assy Feeder 1 to the left bearing of Envelope Feeder Unit.
11. Shifting the right shaft of Roll Assy Feeder 1 together with bearing Feeder to the left, release it from the right bearing of Envelope feeder Unit.
12. Raising the right shaft of Roll Assy Feeder 1, draw the Roll Assy Feeder 1 together with Bearing Feeder from the Envelope Feeder Unit.
13. Remove the Bearing Feeder from the right shaft of Roll Assy Feeder 1.

4.3.16.2 Assembly

1. Mount the Bearing Feeder to the right shaft of Roll Assy Feeder 1.
2. Let the left shaft of Roll Assy Feeder 1 through the Belt Feed of Envelope Feeder Unit at two places.
3. Insert the left shaft of Roll Assy Feeder 1 into the left bearing of Envelope Feeder Unit.
4. Insert the right shaft of Roll Assy Feeder 1 together with Bearing Feeder into the right bearing of Envelope Feeder Unit to secure.
5. Insert the Bearing Feeder into the left bearing of Envelope Feeder Unit to secure the left shaft of Roll Assy Feed 1.
6. Align the position of Belt Feed at two places with the roll of Roll Assy Feeder 1.
7. Mount the Roll Assy Bottom. (See “Roll Assy Bottom” on page 114)
8. Mount the Clutch ELEC 29. (See “Clutch ELEC 29” on page 112)
9. Mount the Cover Gear. (See “Cover Gear” on page 111)
10. Mount the PWBA ENV. (See “PWBA ENV” on page 126)
11. Mount the Actuator N/P Envelope).
12. Mount the Chute Top. (See “Chute Top” on page 104)
13. Mount the Cover Bottom. (See “Cover Bottom” on page 107)
14. Mount the Envelope Feeder Unit. (See “Installation” on page 102)

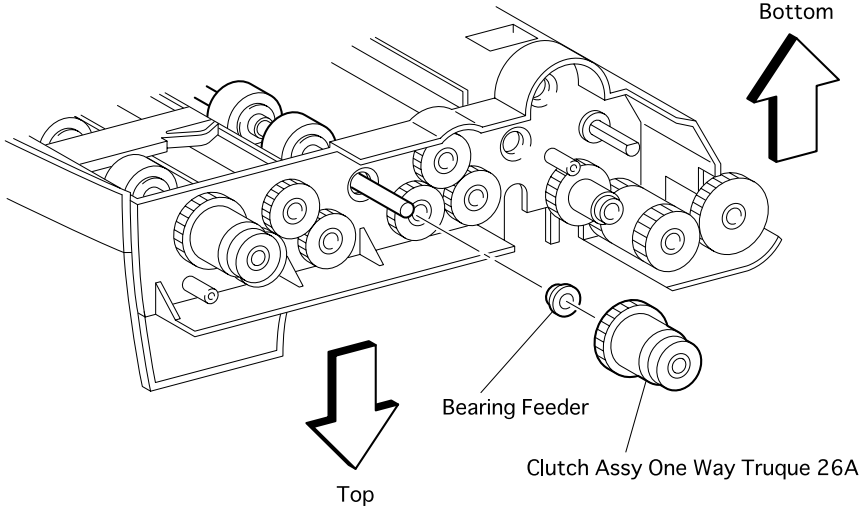


Figure 4-24. Roll Assy Feed1 Removal

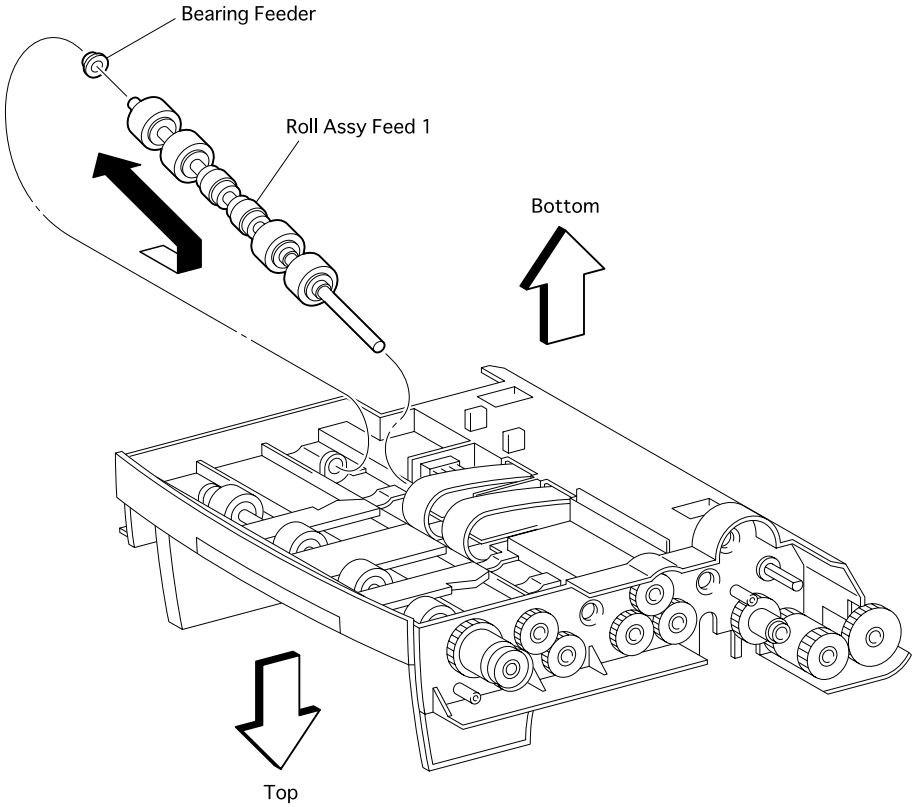


Figure 4-25. Roll Assy Feed1 Removal

4.3.17 Roll Assy Feed 2

4.3.17.1 Removal

1. Remove the Envelope Feeder. (See “Removal” on page 102)
2. Remove the Cover Bottom. (See “Cover Bottom” on page 107)
3. Remove the Chute Top. (See “Chute Top” on page 104)
4. Remove the PWBA ENV. (See “PWBA ENV” on page 126)
5. Remove the Cover Gear. (See “Cover Gear” on page 111)
6. Draw the Clutch Assy One Way Torque 26B securing on the shalt of Roll Assy Feed 2.
7. Remove the Bearing Feeder that secures the left shaft of Roll Assy Feeder 2 to the left bearing of Envelope Feeder Unit.
8. Shifting the right shaft of Roll Assy Feeder 2 together with bearing Feeder to the left, release it from the right bearing of Envelope Feeder Unit.
9. Raising the right shaft of Roll Assy Feeder 2, remove the Roll Assy Feeder 2 together with Bearing Feeder from the Envelope Feeder Unit.
10. Remove the Bearing Feeder from the right shaft of Roll Assy Feeder 2.

4.3.17.2 Assembly

1. Mount the Bearing Feeder to the right shaft of Roll Assy Feeder 2.
2. Insert the left shaft of Roll Assy Feeder 2 into the left bearing of Envelope Feeder Unit.
3. Insert the right shaft of Roll Assy Feeder 2 together with Bearing Feeder into the right bearing of Envelope Feeder Unit to secure.
4. Insert the Bearing Feeder into the left bearing of Envelope Feeder Unit to secure the left shaft of Roll Assy Feed 2.
5. Mount the Clutch Assy One Way Torque 26B to the shaft of Roll Assy Feed 2.
6. Mount the Cover Gear. (See “Cover Gear” on page 111)
7. Mount the PWBA ENV. (See “PWBA ENV” on page 126)
8. Mount the Chute Top. (See “Chute Top” on page 104)
9. Mount the Cover Bottom. (See “Cover Bottom” on page 107)
10. Mount the Envelope Feeder Unit. (See “Installation” on page 102)

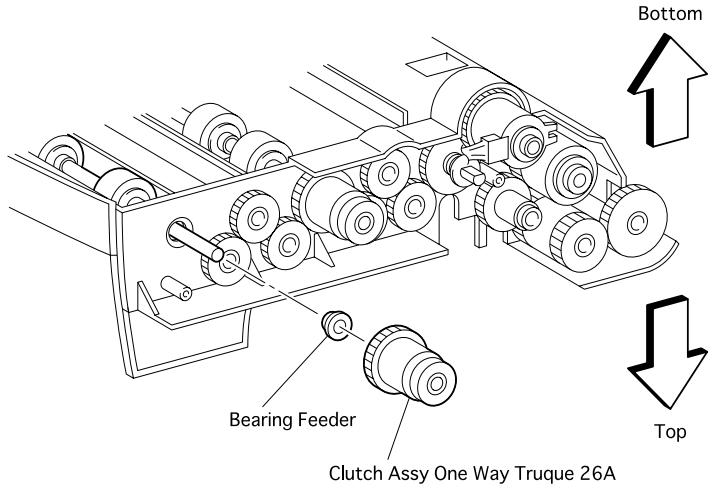


Figure 4-26. Roll Assy Feed2 Removal

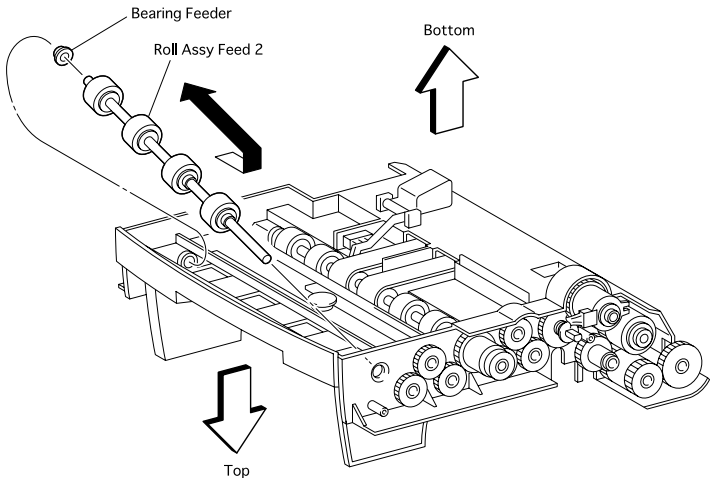


Figure 4-27. Roll Assy Feed2 Removal

4.3.18 Roll Feeder: Roll Feed 1

4.3.18.1 Removal

1. Remove the Envelope Feeder Unit. (See “Removal” on page 102)
2. Remove the Cover Bottom. (See “Cover Bottom” on page 107)
3. Remove the Chute Top. (See “Chute Top” on page 104)
4. Remove the Actuator N/P Envelope. (See “Actuator N/P Envelope” on page 118)
5. Remove the PWBA ENV. (See “PWBA ENV” on page 126)
6. Remove the Cover Gear. (See “Cover Gear” on page 111)
7. Remove the Clutch ELEC 29.
8. Remove the Roll Assy Bottom.
9. Remove the Roll Assy Feed 1).
10. Remove the left Roll Feeder from Roll Assy Feeder 1.
11. Remove the right Roll Feeder from Roll Assy Feeder 1.
12. From the Roll Assy Feed 1, remove the second Roll Feeder from the left side.
13. From the Roll Assy Feed 1, remove the second Roll Feeder from the right side.

4.3.18.2 Assembly

1. Mount the Roll Feeder on the second roller from the right side of Roll Assy Feed 1.
2. Mount the Roll Feeder on the second roller from the left side of Roll Assy Feed 1.
3. Mount the Roll Feeder on the right roller of Roll Assy Feed 1.
4. Mount the Roll Feeder on the left roller of Roll Assy Feed 1.
5. Mount the Roll Assy Feed 1. (See “Roll Assy Feed 1” on page 120)
6. Mount the Roll Assy Bottom. (See “Roll Assy Bottom” on page 114)
7. Mount the Clutch ELEC 29. (See “Clutch ELEC 29” on page 112)
8. Mount the Cover Gear. (See “Cover Gear” on page 111)
9. Mount the PWBA ENV. (See “PWBA ENV” on page 126)
10. Mount the Actuator N/P Envelope. (See “Actuator N/P Envelope” on page 118)
11. Mount the Chute Top. (See “Chute Top” on page 104)
12. Mount the Cover Bottom. (See “Cover Bottom” on page 107)
13. Mount the Envelope Feeder Unit. (See “Installation” on page 102)

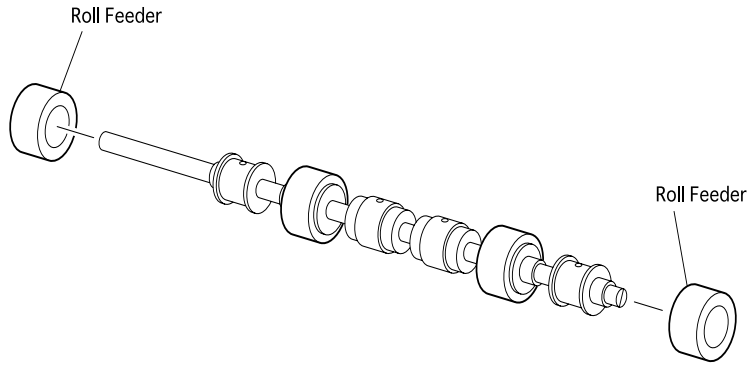


Figure 4-28. Roll Feeder: Roll Feed1 Removal

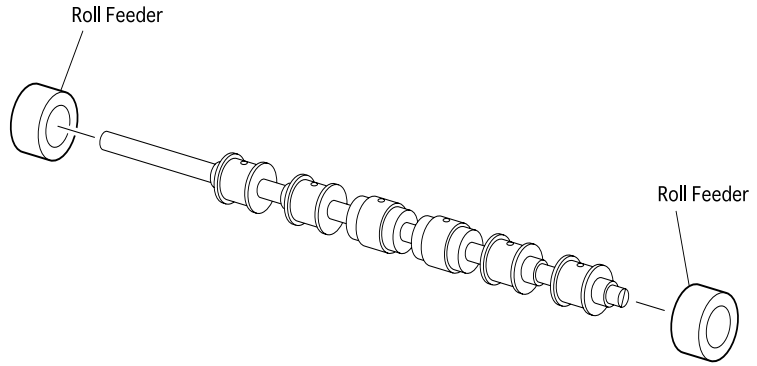


Figure 4-29. Roll Feeder: Roll Feed1 Removal

4.3.19 Roll Feeder: Roll Feed 2

4.3.19.1 Removal

1. Remove the Envelope Feeder Unit. (See “Removal” on page 102)
2. Remove the Cover Bottom. (See “Cover Bottom” on page 107)
3. Remove the Chute Top. (See “Chute Top” on page 104)
4. Remove the PWBA ENV. (See “PWBA ENV” on page 126)
5. Remove the Cover Gear. (See “Cover Gear” on page 111)
6. Remove the Roll Assy Feed 2. (See “Roll Assy Feed 2” on page 122)
7. Remove the left Roll Feeder from Roll Assy Feeder 2.
8. Remove the right Roll Feeder from Roll Assy Feeder 2.
9. From the Roll Assy Feed 2, remove the second Roll Feeder from the left side.
10. From the Roll Assy Feed 2, remove the second Roll Feeder from the right side.

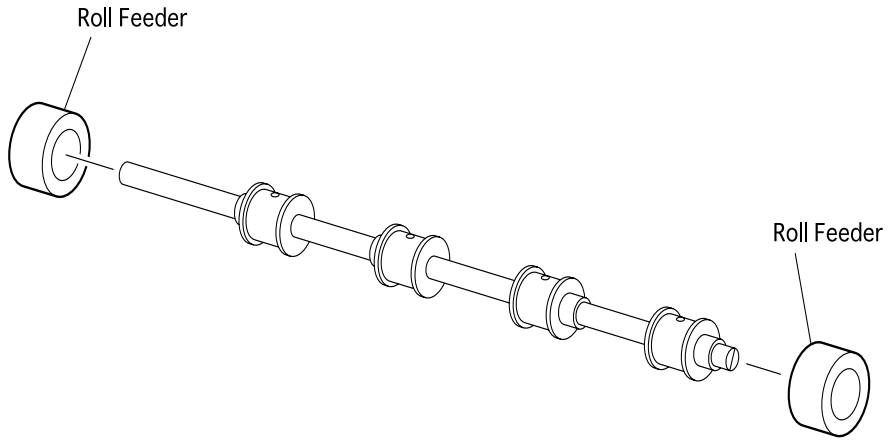


Figure 4-30. Roll Feeder: Roll Feed2 Removal

4.3.19.2 Assembly

1. Mount the Roll Feeder on the second roller from the right side of Roll Assy Feed 2.
2. Mount the Roll Feeder on the second roller from the left side of Roll Assy Feed 2.
3. Mount the Roll Feeder on the right roller of Roll Assy Feed 2.
4. Mount the Roll Feeder on the left roller of Roll Assy Feed 2.
5. Mount the Cover Gear. (See “Cover Gear” on page 111)
6. Mount the PWBA ENV. (See “PWBA ENV” on page 126)
7. Mount the Chute Top. (See “Chute Top” on page 104)
8. Mount the Cover Bottom. (See “Cover Bottom” on page 107)
9. Mount the Envelope Feeder Unit. (See “Installation” on page 102)

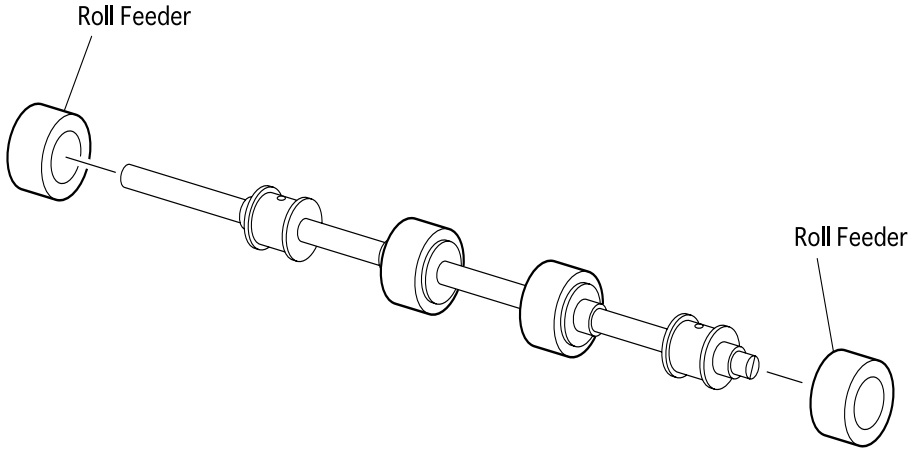


Figure 4-31. Roll Feeder: Roll Feed2 Removal

4.3.20 Connector ENV

4.3.20.1 Removal

1. Remove the Envelope Feeder Unit. (See “Removal” on page 102)
2. Remove the Cover Bottom. (See “Cover Bottom” on page 107)
3. Unplug the Connector ENV from the connector (P/J418) of Harness Assy Main.

4.3.20.2 Assembly

1. Plug the Connector ENV to the connector (P/J418) of Harness Assy Main.
2. Mount the Cover Bottom. (See “Cover Bottom” on page 107)
3. Mount the Envelope Feeder Unit. (See “Installation” on page 102)

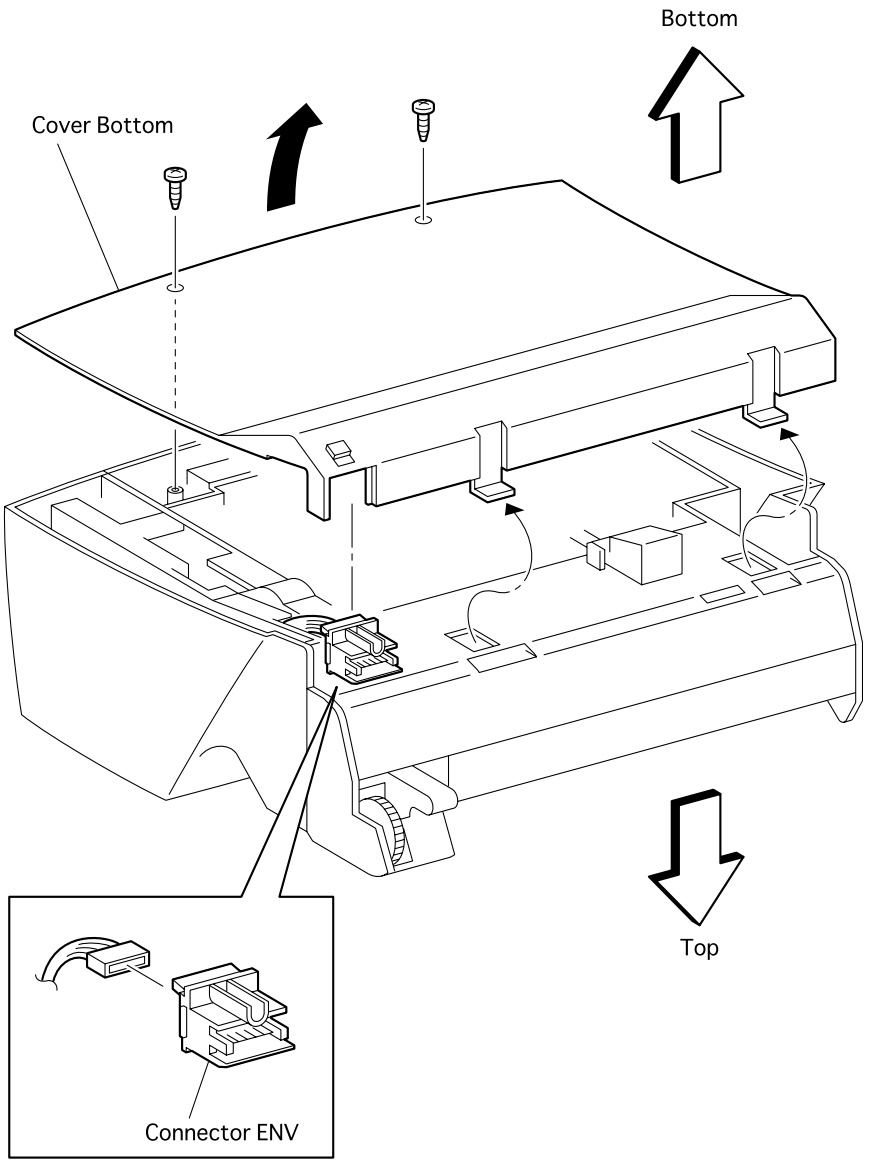


Figure 4-32. Connector ENV Removal

4.3.21 PWBA ENV

4.3.21.1 Removal

1. Remove the Envelope Feeder Unit. (See “Removal” on page 102)
2. Remove the Cover Bottom. (See “Cover Bottom” on page 107)
3. Remove the Chute Top. (See “Chute Top” on page 104)
4. Unplug the connector (P/J411) from the PWBA ENV.
5. Unplug the connector (P/J413) from the PWBA ENV.
6. Unplug the connector (P/J414) from the PWBA ENV.
7. Remove the one screw securing the PWBA ENV to the Envelope Feeder Unit.
8. Remove the PWBA ENV from Envelope Feeder Unit. (See “PWBA ENV” on page 126)

4.3.21.2 Assembly

1. Align the PWBA ENV with its mount position to the Envelope Feeder Unit.
2. Secure the PWBA ENV to the Envelope Feeder Unit with one screw. (See “PWBA ENV” on page 126)
3. Plug the connector (P/J414) to the PWBA ENV.
4. Plug the connector (P/J413) to the PWBA ENV.
5. Plug the connector (P/J411) to the PWBA ENV.
6. Mount the Chute Top. (See “Chute Top” on page 104)
7. Mount the Cover Bottom. (See “Cover Bottom” on page 107)
8. Mount the Envelope Feeder Unit. (See “Installation” on page 102)

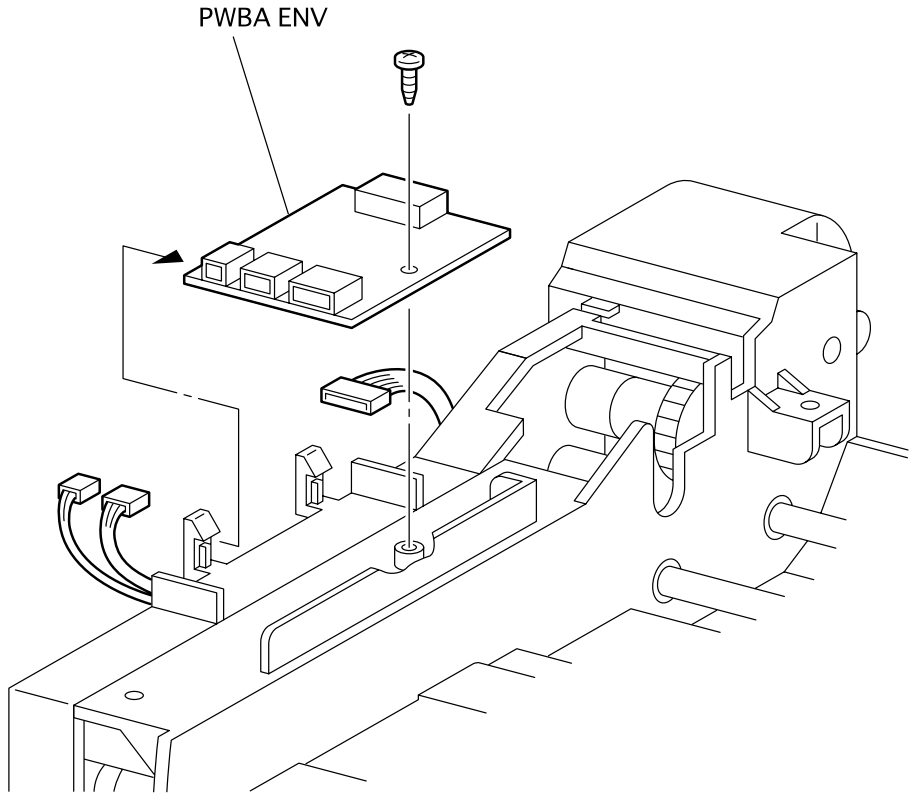


Figure 4-33. PWBA ENV Removal

4.4 Parts List and Exploded Diagram

4.4.1 Envelope Feeder I

Table 4-1. Parts List for Envelope Feeder I

No. in Figure	Unit / Parts Name
1	ENVELOPE FEEDER UNIT (with 2~30)
2	CHUTE TOP
3	SPRING RETARD
4	HOLDER RETARD
5	CLUTCH ASSY TRUQUE 29
6	ROLL ASSY RETARD (with 7)
7	ROLL RETARD
8	BEARING FEEDER
9	---
10	---
11	ARM WEIGHT
12	HOLDER WEIGHT
13	GUIDE SIDE ENV L
14	GUIDE SIDE ENV R
15	---
16	ENVELOPE FEEDER SUB ASSY
17	GEAR PINION
18	---
19	COVER BOTTOM
20	TRAY EXTENTION
21	---
22	HARNESS ASSY SENSOR

Table 4-1. Parts List for Envelope Feeder I

No. in Figure	Unit / Parts Name
23	SENSOR ASSY EXIT ENV
24	COVER WEIGHT
25	---
26	PLATE CHUTE
27	SPRING PINCH
28	CAP PINCH
29	SHAFT PINCH
30	ROLL PINCH
31	KIT ARM WEIGHT (with 11, 12, 24)
32	KIT ROLL ASSY RETARD

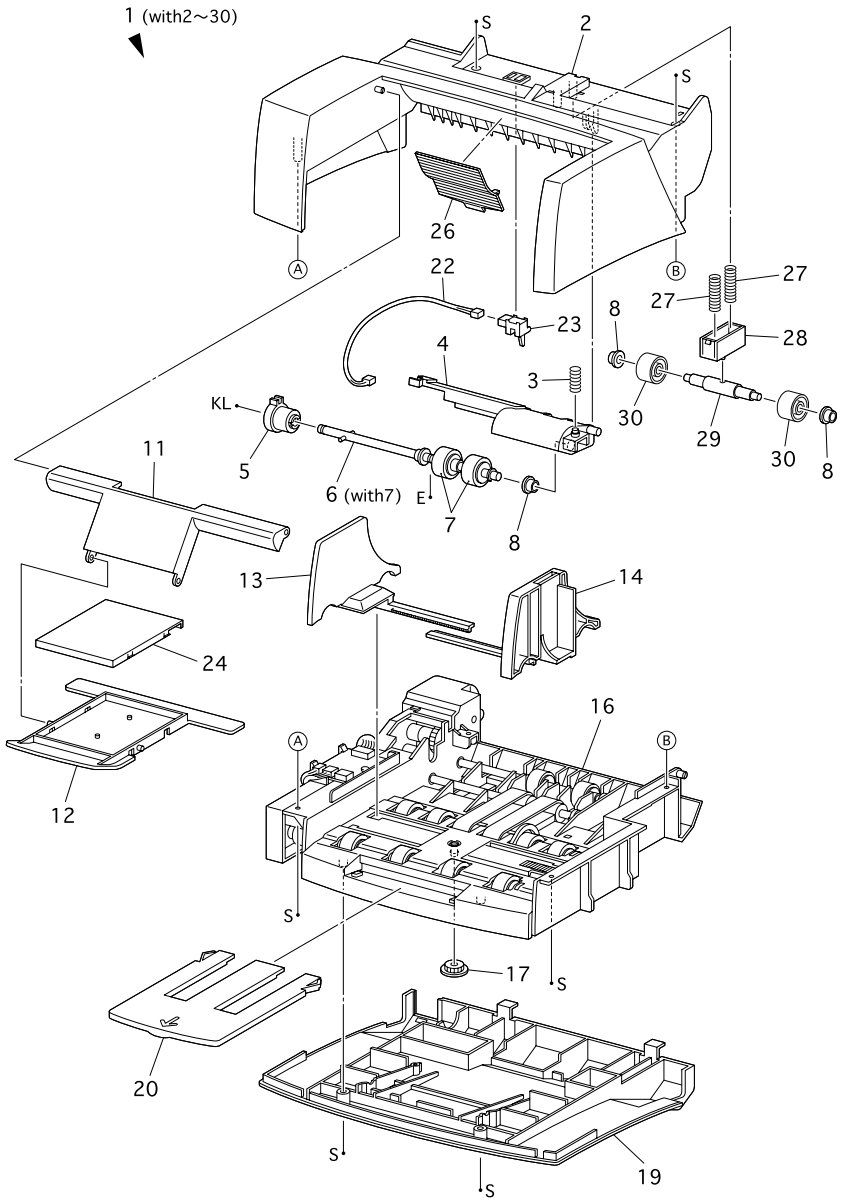


Figure 4-34. Exploded Diagram for Envelope Feeder I

4.4.2 Envelope Feeder II

Table 4-2. Parts List for Envelope Feeder II

No. in Figure	Unit / Parts Name
1	ENVELOPE FEEDER SUB ASSY (with 2~34)
2	COVER GEAR
3	GEAR 29
4	GEAR DRIVE 21
5	GEAR 23
6	CLUTCH ASSY TRUQUE 25
7	BEARING FEEDER
8	GEAR IDLER 21
9	CLUTCH ASSY ONE WAY 26
10	BEARING CLUTCH ELEC
11	CLUTCH ELEC 29
12	SHAFT CLUTCH ELEC 17
13	CLUTCH ASSY ONE WAY TRUQUE 26A
14	---
15	ROLL ASSY TRANS (with 16)
16	ROLL TRANS
17	ROLL ASSY BOTTOM
18	ROLL PINCH ENVE
19	BELT FEED
20	CHASSIS MAIN
21	ACTUATOR N/P ENVELOPE
22	SENSOR PHOTO: NO PAPER
23	ROLL ASSY FEED 1 (with 26)
24	---

Table 4-2. Parts List for Envelope Feeder II

No. in Figure	Unit / Parts Name
25	ROLL ASSY FEED 2 (with 26)
26	ROLL FEEDER
27	---
28	---
29	---
30	CONNECTOR ENV
31	HARNESS ASSY MAIN
32	HARNESS ASSY CLUTCH

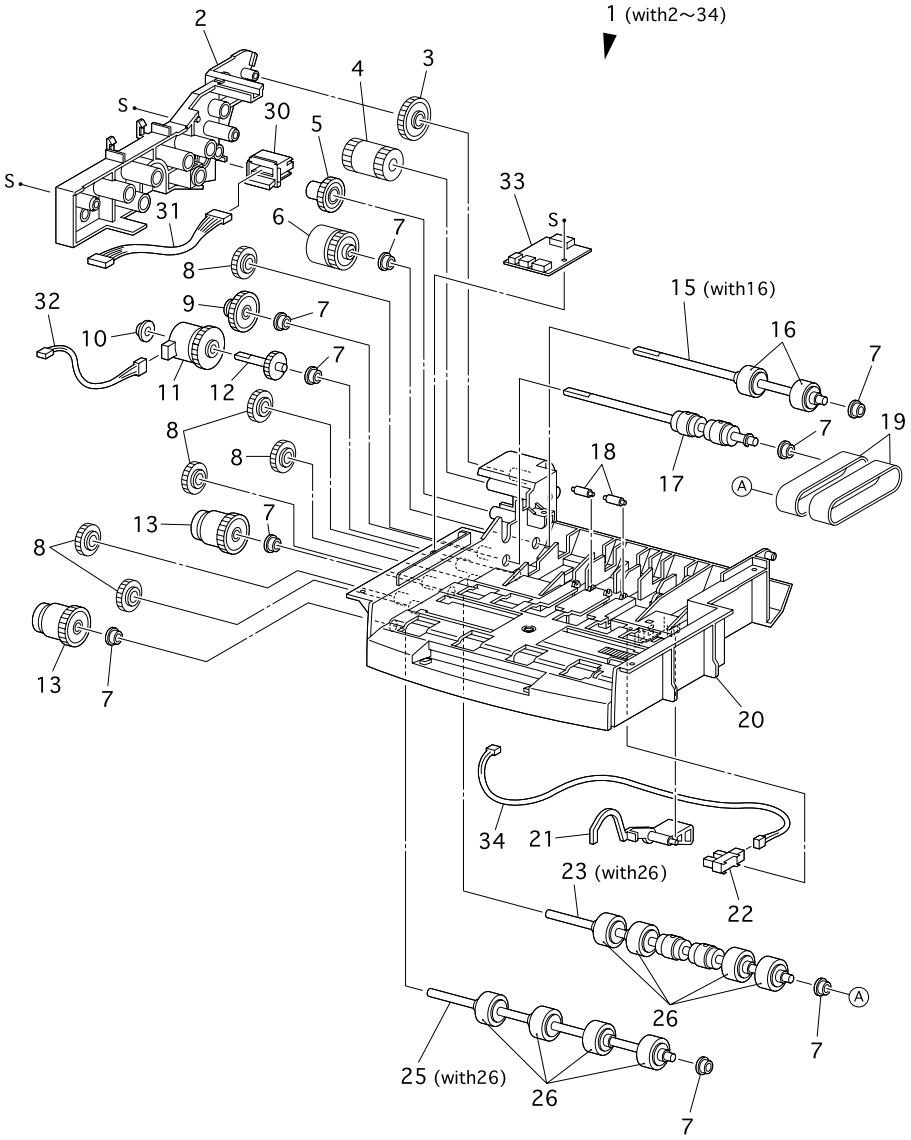
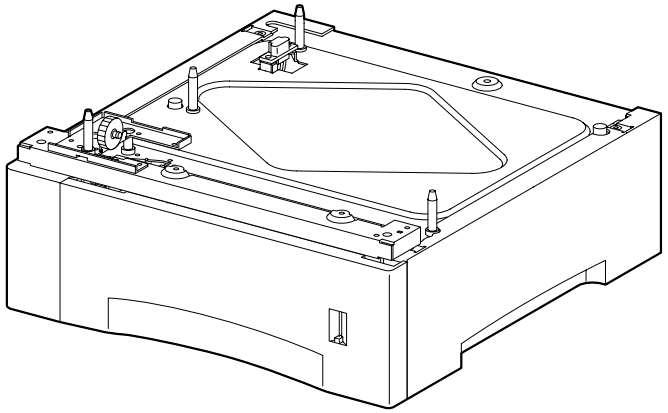


Figure 4-35. Exploded Diagram for Envelope Feeder II



CHAPTER

5

LARGE CAPACITY PAPER UNIT

5.1 Installation and Removal of the Large Capacity Paper Unit

5.1.1 Installing the Large Capacity Paper Unit

1. Align the printer with its mount position to the Large Capacity Paper Unit.
2. Secure the Large Capacity Paper Unit to the printer with three screws.

5.1.2 Large Capacity Paper Unit Removal

1. Remove the three screws securing the Large Capacity Paper Unit to the printer.
2. Raising the printer, remove the Large Capacity Paper Unit from the printer.

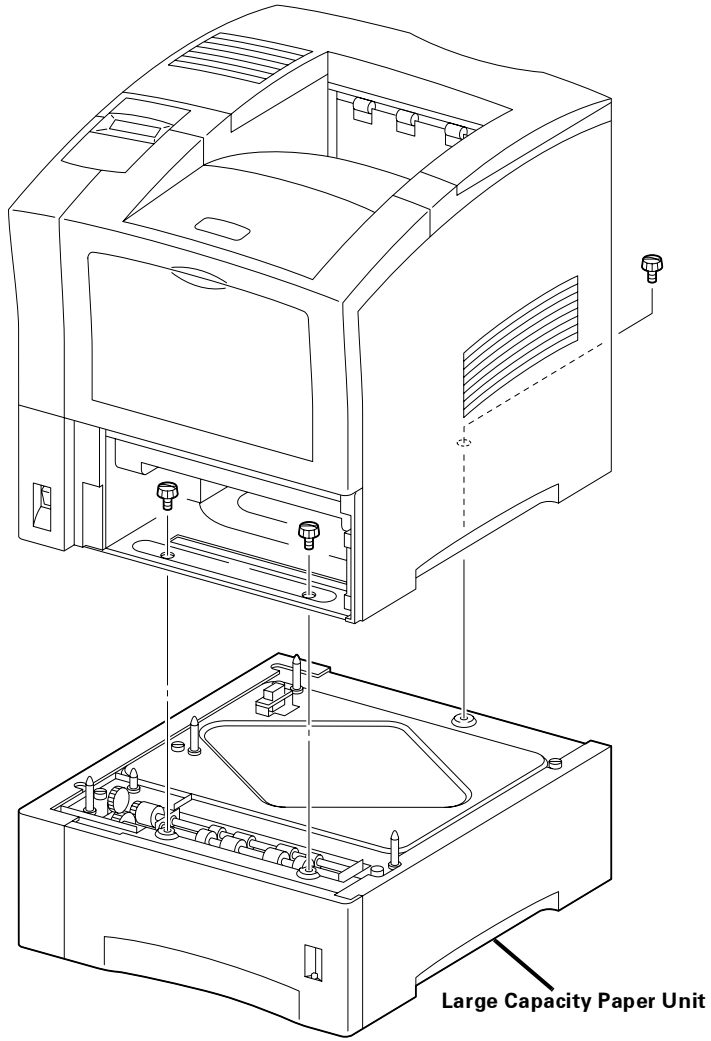


Figure 5-1. Large Capacity Paper Unit

5.2 Introduction

This section contains the disassembly and disassembly procedures for major parts within the Large Capacity Paper Unit (LCP Unit).

5.2.1 Preparation

1. Switch OFF the main power.
2. Disconnect the AC power cord from the wall outlet, then start work.
3. Remove the *Cassette Assy*.
4. In performing work for the *FUSER ASSY* periphery, wait until the *FUSER ASSY* and its periphery have become cool enough.
5. Disconnect all interface cables from the rear panel of printer.
6. In performing work, to eliminate static electricity in your body, wear wristbands, etc. to take grounding properly.

5.2.2 Precaution

CAUTION

- **Many kinds of screws are used, and do not confuse where they are used. Using wrong screws could cause the tapped holes to be broken, or troubles to occur.**
- **In performing work with parts that are managed as spare parts but its procedure is not given, make sure how the parts have been mounted before starting work.**
- **Optional parts, as a rule, should be removed, but they may be left in the printer, on condition that they do not obstruct your work.**

5.2.3 Notations in the Text

1. The printer orientation expressed in the procedure is defined as follows

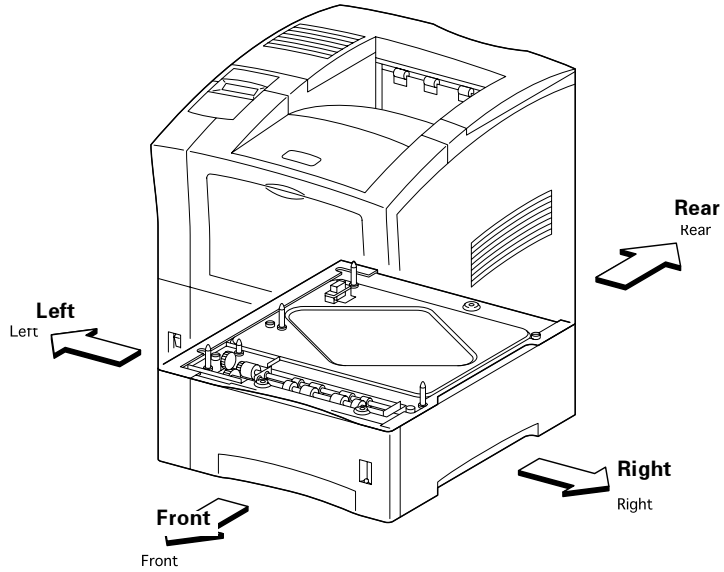


Figure 5-2. Definition of Printer Orientation

2. The screws in the illustration imply that they should be loosened and removed using a cross-tip screwdriver, unless otherwise specified.
3. A black arrow in the illustration implies that the part should be moved in the arrow direction, and when numbers are assigned to black arrows, the parts should be moved in the order of given numbers.

5.3 Disassembly and Assembly

5.3.1 Bracket Assy OPT Gear

5.3.1.1 Removal

1. Remove the eight screws securing the *Bracket Assy OPT Gear* to the Large Capacity Paper Unit.
2. Remove the *Bracket Assy OPT Gear* from the Large Capacity Paper Unit.

5.3.1.2 Assembly

1. Align the *Bracket Assy OPT Gear* with its mount position to the Large Capacity Paper Unit.
2. Secure the *Bracket Assy OPT Gear* to the Large Capacity Paper Unit with eight screws.

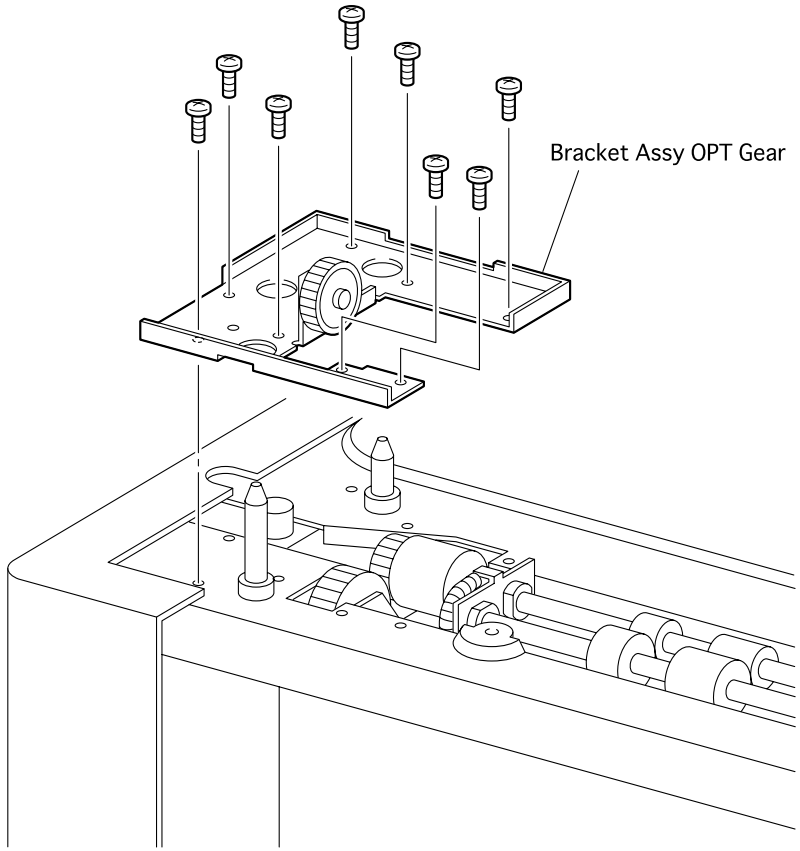


Figure 5-3. Bracket Assy OPT Gear

5.3.2 Plate Top F

5.3.2.1 Removal

1. Remove the *Bracket Assy OPT Gear*. (See "Bracket Assy OPT Gear" on page 134.)
2. Remove the *Housing Side R*. (See "Housing Side R" on page 140.)
3. Remove the *Housing Side L*. (See "Housing Side L" on page 142.)
4. Remove the one screw securing the *Plate Top F* to the Large Capacity Paper Unit.
5. Remove the *Plate Top F* from the Large Capacity Paper Unit.

5.3.2.2 Assembly

1. Align the *Plate Top F* with its mount position to the Large Capacity Paper Unit.
2. Secure the *Plate Top F* to the Large Capacity Paper Unit with one screw.
3. Mount the *Housing Side L*. (See "Housing Side L" on page 142.)
4. Mount the *Housing Side R*. (See "Housing Side R" on page 140.)
5. Mount the *Bracket Assy OPT Gear*. (See "Bracket Assy OPT Gear" on page 134.)

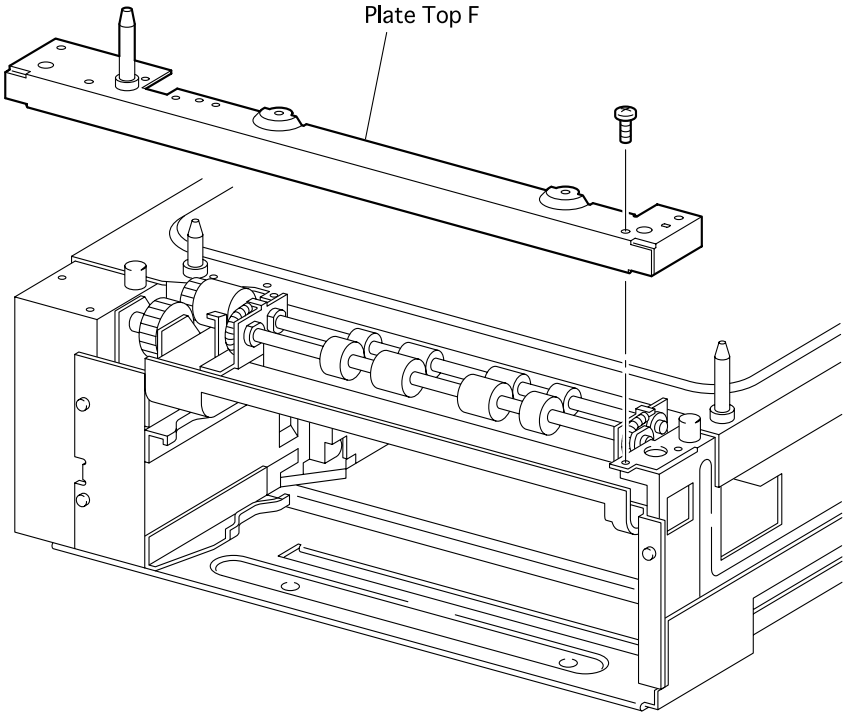


Figure 5-4. Plate Top F

5.3.3 Harness Assy Size Option

5.3.3.1 Removal

1. Remove the *Housing Side L.* (See "Housing Side L" on page 142.)
2. Remove the two screws securing the *Harness Assy Size Option* to the Large Capacity Paper Unit.
3. Insert the *Harness Assy Size Option* into the hole in the Large Capacity Paper Unit.
4. Using a small screwdriver, push one boss that secures the *Housing Assy Size Sensor* to the Large Capacity Paper Unit to disengage the boss from the hole.
5. Draw toward the rear the *Housing Assy Size Sensor* together with *Harness Assy Size Option* from the Large Capacity Paper Unit.
6. Remove the *Size Sensor Housing*. (See "Size Sensor Housing (with 8-12)" on page 143.)
7. Unplug the connector (P/J52) of the *Harness Assy Size Option* from the *PWBA Size Option*.
8. Remove the *Housing Assy Size Sensor* from the *Housing Assy Size Sensor*.

5.3.3.2 Assembly

1. Insert the harness of *Housing Assy Size Sensor* into a hole in the *Housing Assy Size Sensor*.
2. Plug the connector (P/J52) of the *Harness Assy Size Option* to the *PWBA Size Option*.
3. Mount the *Size Sensor Housing*.
4. Align four hooks of *Housing Assy Size Sensor* together with *Harness Assy Size Option* with four holes in the Large Capacity Paper Unit.
5. Pushing the rear of *Housing Assy Size Sensor*, slide it toward the front, and engage four hooks of *Housing Assy Size Sensor* with four holes in the Large Capacity Paper Unit.
6. Insert the *Harness Assy Size Option* into a hole in the Large Capacity Paper Unit.
7. Align the *Harness Assy Size Option* with its mount position to the Large Capacity Paper Unit.
8. Secure the *Harness Assy Size Option* to the Large Capacity Paper Unit with two screws.
9. Mount the *Housing Side L*.

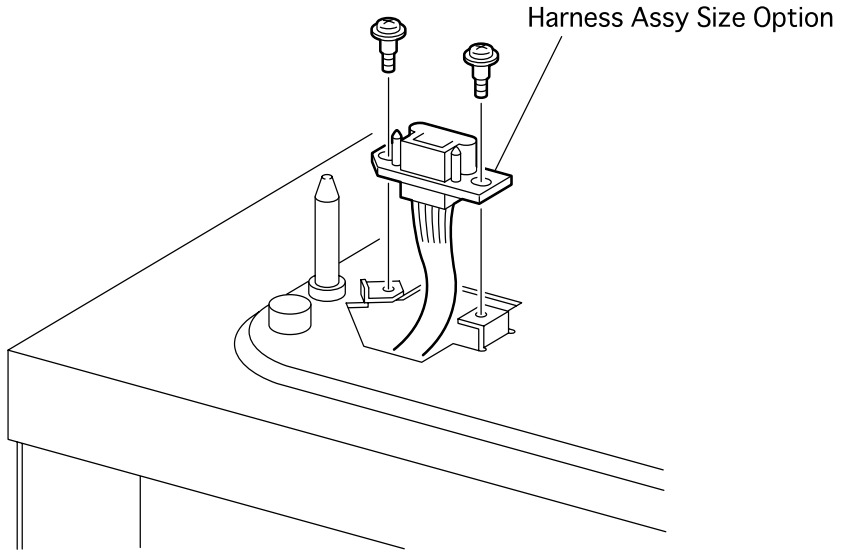


Figure 5-5. Harness Assy Size Option (1)

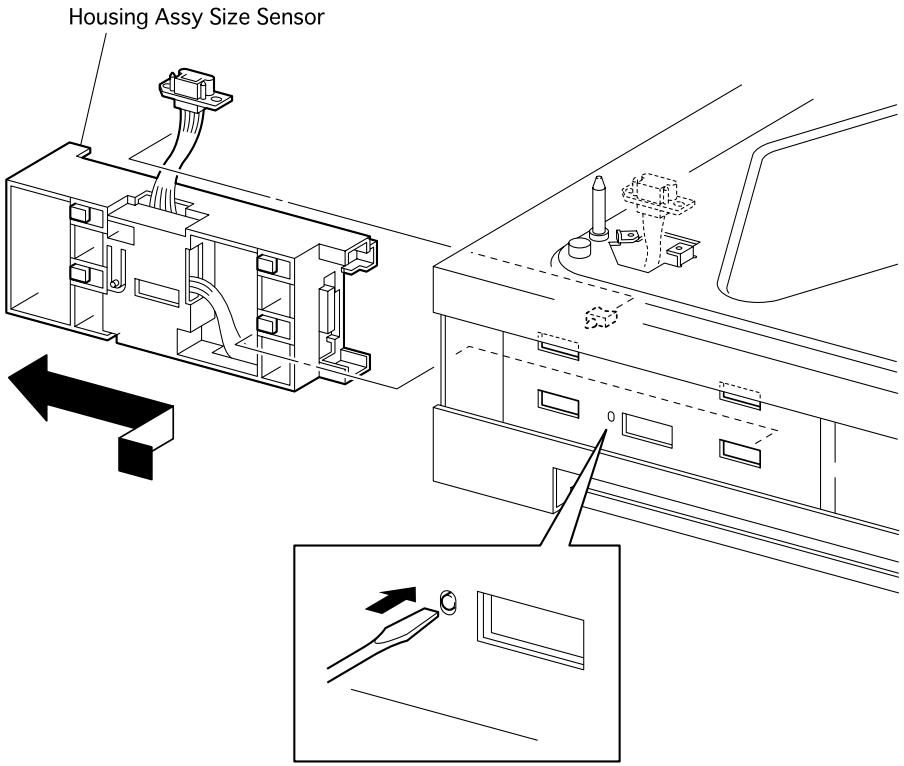


Figure 5-6. Harness Assy Size Option (2)

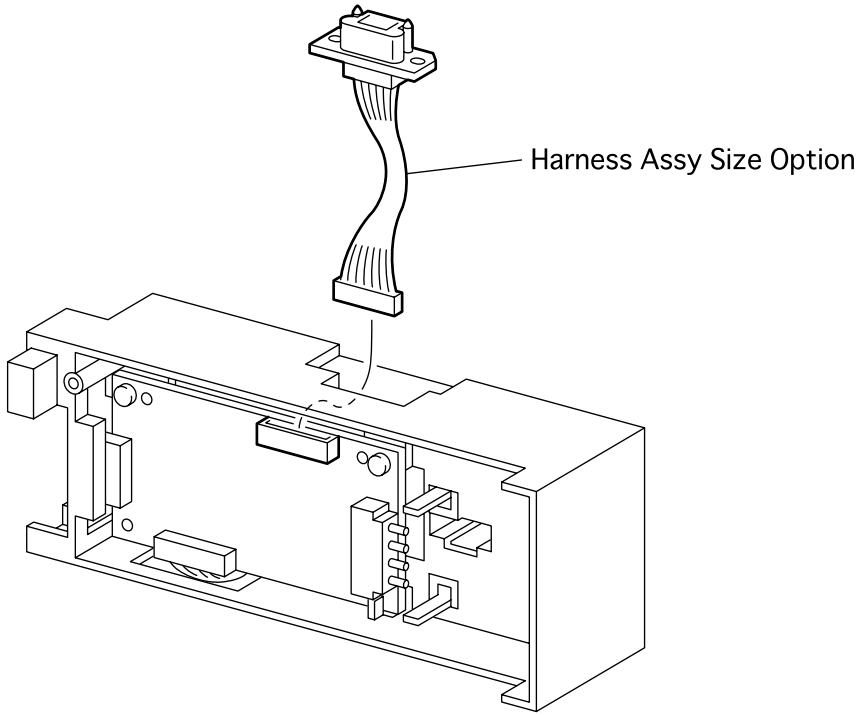


Figure 5-7. Harness Assy Size Option (3)

5.3.4 PWBA Size Option

5.3.4.1 Removal

1. Remove the *Housing Side L*. (See "Housing Side L" on page 142.)
2. Remove the *Harness Assy Size Option*. (See "Harness Assy Size Option" on page 136.)
3. Remove the *Housing Assy Size Sensor*. (See "Housing Assy Size Sensor (with 5-13)" on page 144.)
4. Remove the *Size Sensor Housing*. (See "Size Sensor Housing (with 8-12)" on page 143.)
5. Unplug the connector (P/J53) from the *PWBA Size Option*.
6. Remove the two screws securing the *PWBA Size Option* to the *Housing Assy Size Sensor*.
7. Remove the *PWBA Size Option* from the *Housing Assy Size Sensor*.

5.3.4.2 Assembly

1. Align the *PWBA Size Option* with its mount position to the *Housing Assy Size Sensor*.
2. Secure the *PWBA Size Option* to the *Housing Assy Size Sensor* with two screws.
3. Plug the connector (P/J53) to the *PWBA Size Option*.
4. Mount the *Size Sensor Housing*.
5. Mount the *Housing Assy Size Sensor*.
6. Mount the *Harness Assy Size Option*.
7. Mount the *Housing Side L*.

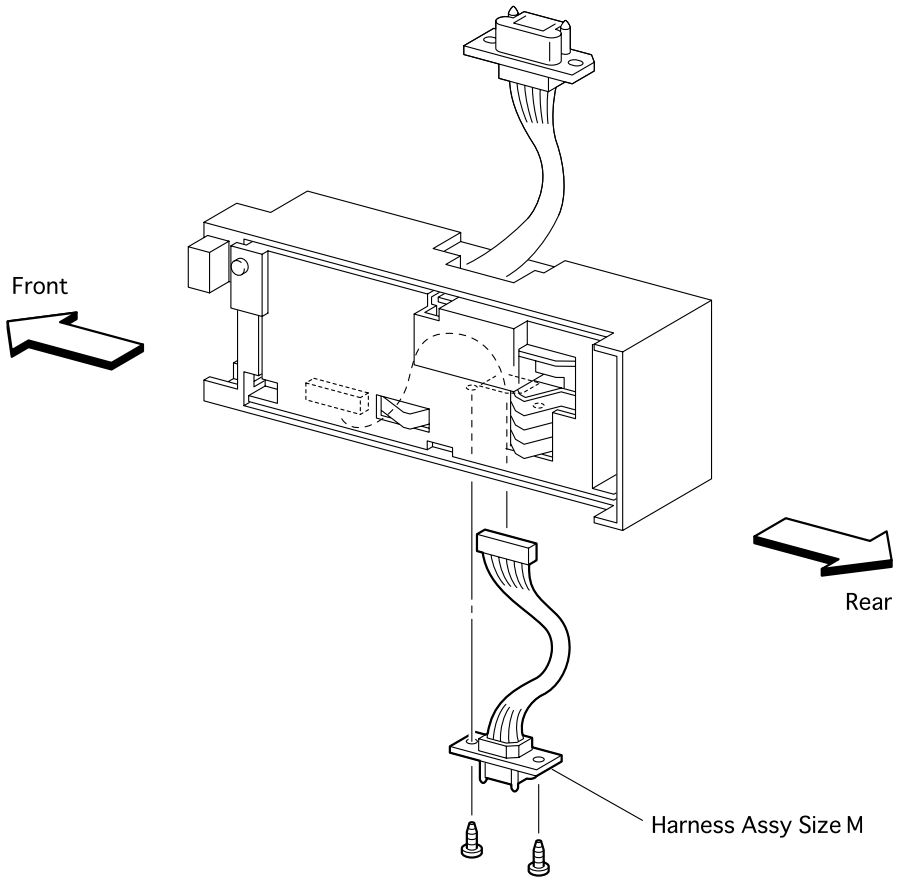


Figure 5-8. PWBA Size Option

5.3.5 Harness Assy Size M

5.3.5.1 Removal

1. Remove the *Housing Side L*. (See “Housing Side L” on page 142.)
2. Remove the *Harness Assy Size Option*. (See “Harness Assy Size Option” on page 136.)
3. Remove the *Housing Assy Size Sensor*. (See “Housing Assy Size Sensor (with 5-13)” on page 144.)
4. Remove the *Size Sensor Housing*. (See “Size Sensor Housing (with 8-12)” on page 143.)
5. Unplug the connector (P/J53) from the *PWBA Size Option*.
6. Remove the two screws securing the *Harness Assy Size M* to the *Housing Assy Size Sensor*.
7. Remove the *Harness Assy Size M* from the *Housing Assy Size Sensor*.

5.3.5.2 Assembly

1. Align the *Harness Assy Size M* with its mount position to the *Housing Assy Size Sensor*.
2. Secure the *Harness Assy Size M* to the *Housing Assy Size Sensor* with two screws.
3. Plug the connector (P/J53) to the *PWBA Size Option*.
4. Mount the *Size Sensor Housing*.
5. Mount the *Housing Assy Size Sensor*.
6. Mount the *Harness Assy Size Option*.
7. Mount the *Housing Side L*.

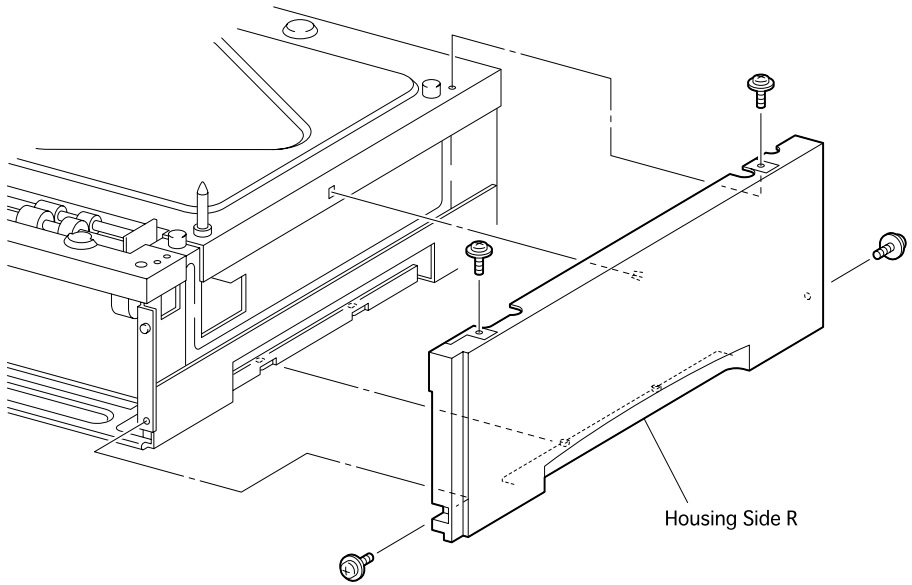


Figure 5-9. Harness Assy Size M

5.3.6 Housing Side R

5.3.6.1 Removal

1. Remove the four screws securing the *Housing Side R* to the Large Capacity Paper Unit.
2. Raising the right side of Large Capacity Paper Unit a little, remove the *Housing Side R*.

5.3.6.2 Assembly

1. Raising a little the right side of Large Capacity Paper Unit, mount the *Housing Side R* in exact position.
2. Secure the *Housing Side R* to the Large Capacity Paper Unit with four screws.

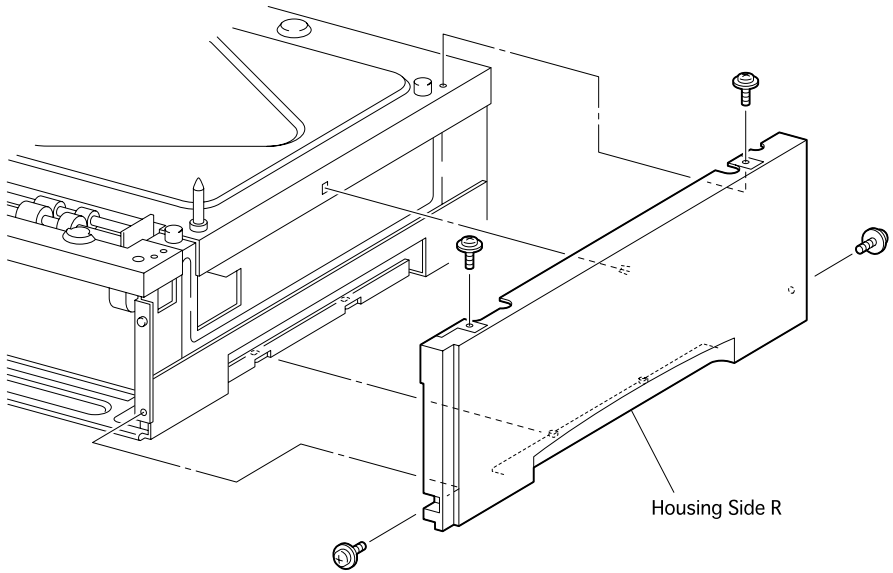


Figure 5-10. Housing Side R

5.3.7 Feeder

5.3.7.1 Removal

1. Remove the *Bracket Assy OPT Gear.* (See "Bracket Assy OPT Gear" on page 134.)
2. Remove the *Housing Side R*. (See "Housing Side R" on page 140.)
3. Remove the *Housing Side L*. (See "Housing Side L" on page 142.)
4. Remove the *Plate Top F.* (See "Plate Top F" on page 135.)
5. Remove the seven screws securing the *Feeder* to the Large Capacity Paper Unit.
6. Draw the *Feeder* from the Large Capacity Paper Unit toward the front.

5.3.7.2 Assembly

1. Align the *Feeder* with its mount position to the Large Capacity Paper Unit.
2. Secure the *Feeder* with seven screws to the Large Capacity Paper Unit.
3. Mount the *Plate Top F*.
4. Mount the *Housing Side L*.
5. Mount the *Housing Side R*.
6. Mount the *Bracket Assy OPT Gear*.

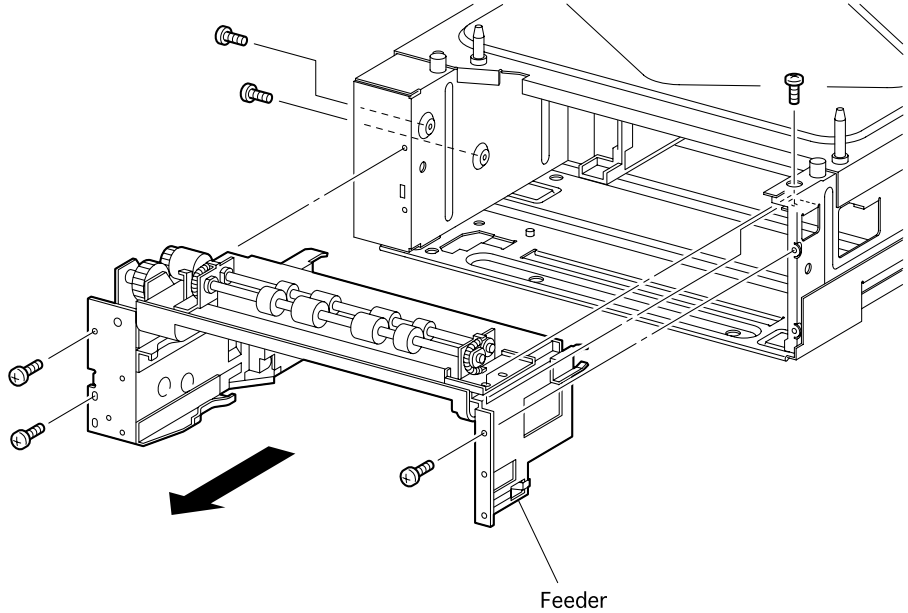


Figure 5-11. Feeder

5.3.8 Housing Side L

5.3.8.1 Removal

1. Remove the four screws securing the *Housing Side L* to the Large Capacity Paper Unit.
2. Raising the left side of Large Capacity Paper Unit a little, remove the *Housing Side L*.

5.3.8.2 Assembly

1. Raising a little the left side of Large Capacity Paper Unit, mount the *Housing Side L* in exact position.
2. Secure the *Housing Side L* to the Large Capacity Paper Unit with four screws.

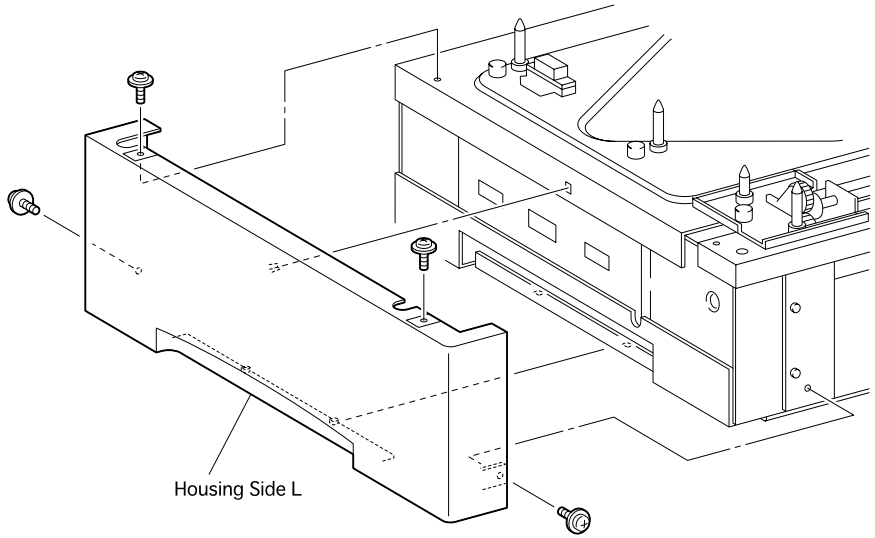


Figure 5-12. Housing Side L

5.3.9 Size Sensor Housing (with 8-12)

5.3.9.1 Removal

1. Remove the *Housing Side L*. (See “Housing Side L” on page 142.)
2. Remove the *Harness Assy Size Option*. (See “Harness Assy Size Option” on page 136.)
3. Remove the *Housing Assy Size Sensor*. (See “Housing Assy Size Sensor (with 5-13)” on page 144.)
4. Remove the *Size Sensor Housing*.
5. Remove the four screws securing the *Size Sensor Housing* to the *Housing Assy Size Sensor*.
6. Disengage two hooks of *Size Sensor Housing* from the *Housing Assy Size Sensor*.
7. Remove the *Size Sensor Housing* from the *Housing Assy Size Sensor*.

5.3.9.2 Assembly

1. Disengage the back of *Cam SW* on *Size Sensor Housing* from a square hole, and while holding the back of *Cam SW*, mount the *Size Sensor Housing* on the *Housing Assy Size Sensor*.
2. Secure the *Size Sensor Housing* to the *Housing Assy Size Sensor* with two hooks.
3. Secure the *Size Sensor Housing* to the *Housing Assy Size Sensor* with four screws.
4. Mount the *Size Sensor Housing*.
5. Mount the *Housing Assy Size Sensor*.
6. Mount the *Harness Assy Size Option*.
7. Mount the *Housing Side L*.

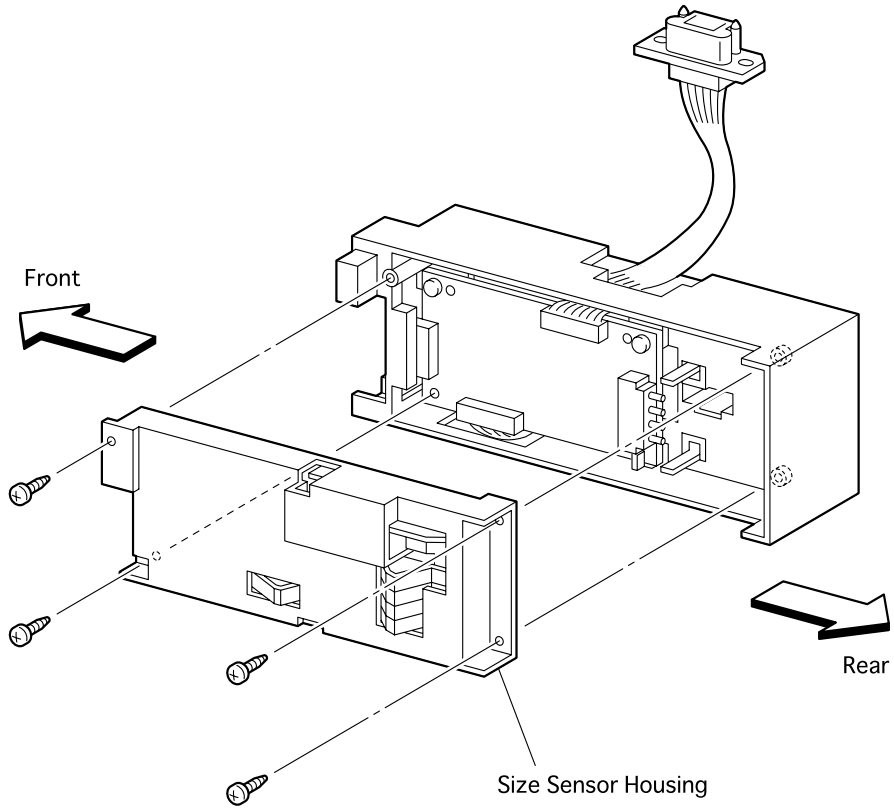


Figure 5-13. Size Sensor Housing

5.3.10 Housing Assy Size Sensor (with 5-13)

5.3.10.1 Removal

1. Remove the *Housing Side L*. (See "Housing Side L" on page 142.)
2. Remove the two screws securing the *Harness Assy Size Option* to the Large Capacity Paper Unit.
3. Insert the *Harness Assy Size Option* into the hole in the Large Capacity Paper Unit.
4. Using a small screwdriver, push one boss that secures the *Housing Assy Size Sensor* to the Large Capacity Paper Unit to disengage the boss from the hole.
5. Draw toward the rear the *Housing Assy Size Sensor* together with *Harness Assy Size Option* from the Large Capacity Paper Unit.
6. Remove the *Size Sensor Housing*. (See "Size Sensor Housing (with 8-12)" on page 143.)
7. Unplug the connector (P/J52) of the *Harness Assy Size Option*.
8. Remove the *Housing Assy Size Sensor* from the *Housing Assy Size Sensor*.
9. Remove the *Size Sensor Housing* from the *Housing Assy Size Sensor*. (See "Size Sensor Housing (with 8-12)" on page 143.)

5.3.10.2 Assembly

1. Mount the *Size Sensor Housing*.
2. Insert the harness of *Housing Assy Size Sensor* into a hole in the *Housing Assy Size Sensor*.
3. Plug the connector (P/J52) of the *Harness Assy Size Option* to the *PWBA Size Option*.
4. Mount the *Size Sensor Housing*.
5. Align four hooks of *Housing Assy Size Sensor* together with *Harness Assy Size Option* with four holes in the Large Capacity Paper Unit.
6. Pushing the rear of *Housing Assy Size Sensor*, slide it toward the front, and engage four hooks of *Housing Assy Size Sensor* with four holes in the Large Capacity Paper Unit.
7. Insert the *Harness Assy Size Option* into a hole in the Large Capacity Paper Unit.
8. Align the *Harness Assy Size Option* with its mount position to the Large Capacity Paper Unit.
9. Secure the *Harness Assy Size Option* to the Large Capacity Paper Unit with two screws.
10. Mount the *Housing Side L*.

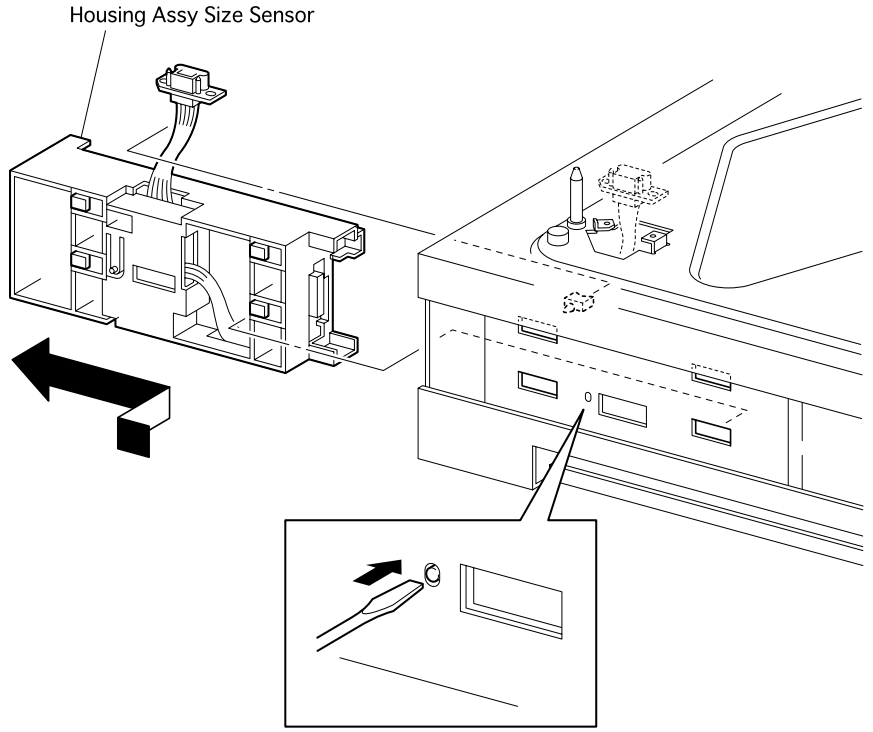


Figure 5-14. Housing Assy Size Sensor

5.3.11 Roll Assy Turn

5.3.11.1 Removal

1. Remove the *Bracket Assy OPT Gear.* (See "Bracket Assy OPT Gear" on page 134.)
2. Remove the *Housing Side R*. (See "Housing Side R" on page 140.)
3. Remove the *Housing Side L*. (See "Housing Side L" on page 142.)
4. Remove the *Plate Top F.* (See "Plate Top F" on page 135.)
5. Remove the Feeder. (See "Feeder" on page 141.)
6. Unplug the connector (P/J641) on the *Clutch Assy Turn* from the *Feeder*.
7. Remove the four screws securing the *Roll Assy Turn* to the *Feeder*.
8. Remove the *Roll Assy Turn* together with *Spring Extension* and Spring Chute from the *Feeder*.
9. Remove the *Spring Chute.* (See "Spring Chute" on page 147.)
10. Unhook the left *Spring Extension* from two notches of *Roll Assy Turn*, and remove the *Spring Extension*.
11. Unhook the right *Spring Extension* from two notches of *Roll Assy Turn*, and remove the *Spring Extension*.

5.3.11.2 Assembly

1. Hook the *Spring Extension* to two notches on the right side of *Roll Assy Turn* to secure the *Spring Extension* to the *Roll Assy Turn*.
2. Hook the *Spring Extension* to two notches on the left side of *Roll Assy Turn* to secure the *Spring Extension* to the *Roll Assy Turn*.
3. Mount the *Spring Chute*.
4. Align the *Roll Assy Turn*, together with the *Spring Extension* and *Spring Chute*, to the *Feeder*.
5. Secure the Roll Assy Turn to the *Feeder* with four screws.
6. Plug the connector (P/J641) to the *Clutch Assy Turn* from the *Feeder*.
7. Mount the *Feeder*.
8. Mount the *Plate Top F*.
9. Mount the *Housing Side L*.
10. Mount the *Housing Side R*.
11. Mount the *Bracket Assy OPT Gear*.

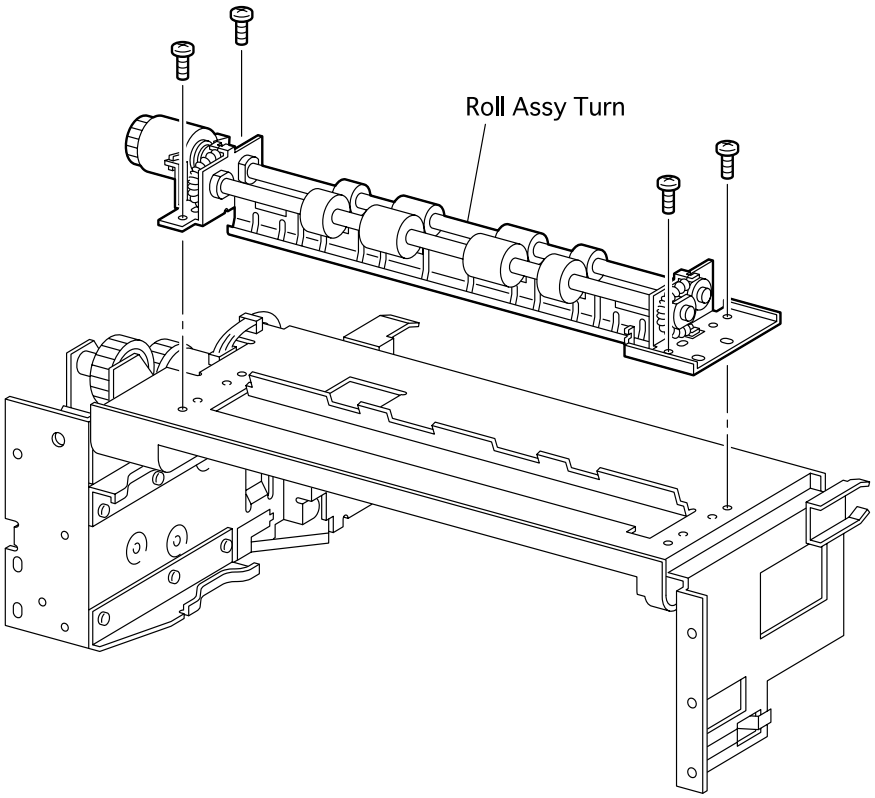


Figure 5-15. Roll Assy Turn (1)

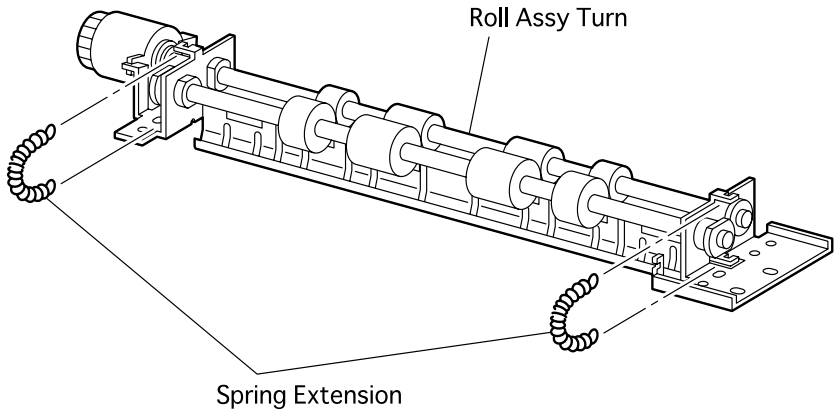


Figure 5-16. Roll Assy Turn (2)

5.3.12 Spring Chute

5.3.12.1 Removal

1. Remove the *Bracket Assy OPT Gear.* (See "Bracket Assy OPT Gear" on page 134.)
2. Remove the *Housing Side R*. (See "Housing Side R" on page 140.)
3. Remove the *Housing Side L*. (See "Housing Side L" on page 142.)
4. Remove the *Plate Top F.* (See "Plate Top F" on page 135.)
5. Remove the *Feeder.* (See "Feeder" on page 141.)
6. Unplug the connector (P/J641) from the *Clutch Assy Turn* from the *Feeder*.
7. Remove the four screws securing the *Roll Assy Turn* to the *Feeder*.
8. Remove the *Roll Assy Turn* together with *Spring Extension* and *Spring Chute* from the *Feeder*.
9. Unhook the *Spring Chute* securing to the *Roll Assy Turn* at two places, and remove the *Spring Chute*.

5.3.12.2 Assembly

1. Hook the *Spring Chute* to the boss of the right *Chute* of the *Roll Assy Turn*.
2. Hook the *Spring Chute* to the notch of the right bracket of the *Roll Assy Turn*.
3. Aligning the position exactly, mount the *Roll Assy Turn* together with *Spring Extension* and *Spring Chute* to the *Feeder*.
4. Secure the *Roll Assy Turn* to the *Feeder* with four screws.
5. Plug the connector (P/J641) to the *Clutch Assy Turn* from the *Feeder*.
6. Mount the *Feeder*.
7. Mount the *Plate Top F*.
8. Mount the *Housing Side L*.
9. Mount the *Housing Side R*.7.
10. Mount the *Bracket Assy OPT Gear*.

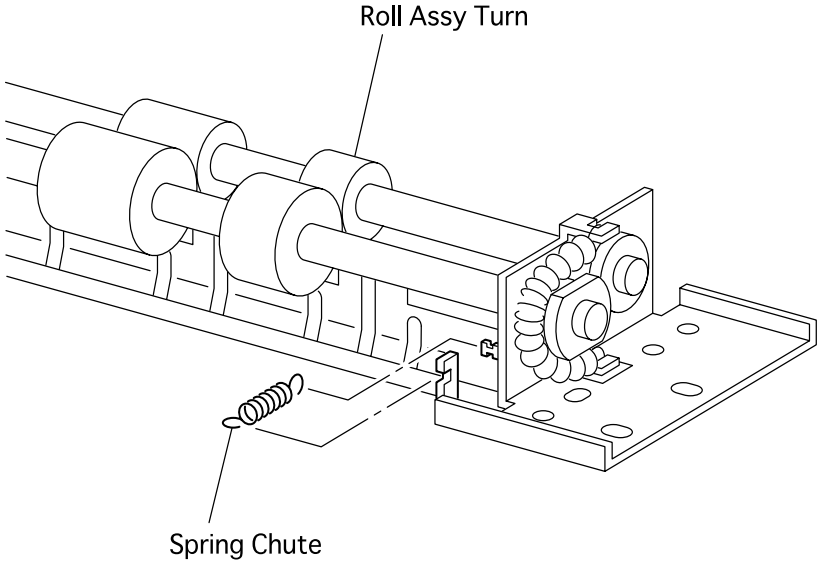


Figure 5-17. Spring Chute

5.3.13 Actuator N/P

5.3.13.1 Removal

1. Remove the *Bracket Assy OPT Gear*. (See "Bracket Assy OPT Gear" on page 134.)
2. Remove the *Housing Side R*. (See "Housing Side R" on page 140.)
3. Remove the *Housing Side L*. (See "Housing Side L" on page 142.)
4. Remove the *Plate Top F*. (See "Plate Top F" on page 135.)
5. Remove the *Feeder*. (See "Feeder" on page 141.)
6. Unhook the left and right shafts of *Actuator N/P* from the left and right *Support Actuators*, and remove the *Actuator N/P* from the *Feeder*.

5.3.13.2 Assembly

1. Aligning the position exactly, mount the *Actuator N/P* on the left and right *Support Actuators* of *Feeder*.
2. Insert the left and right shafts of *Actuator N/P* into the *Support Actuator*.
3. Mount the *Feeder*.
4. Mount the *Plate Top F*.
5. Mount the *Housing Side L*.
6. Mount the *Housing Side R*.
7. Mount the *Bracket Assy OPT Gear*.

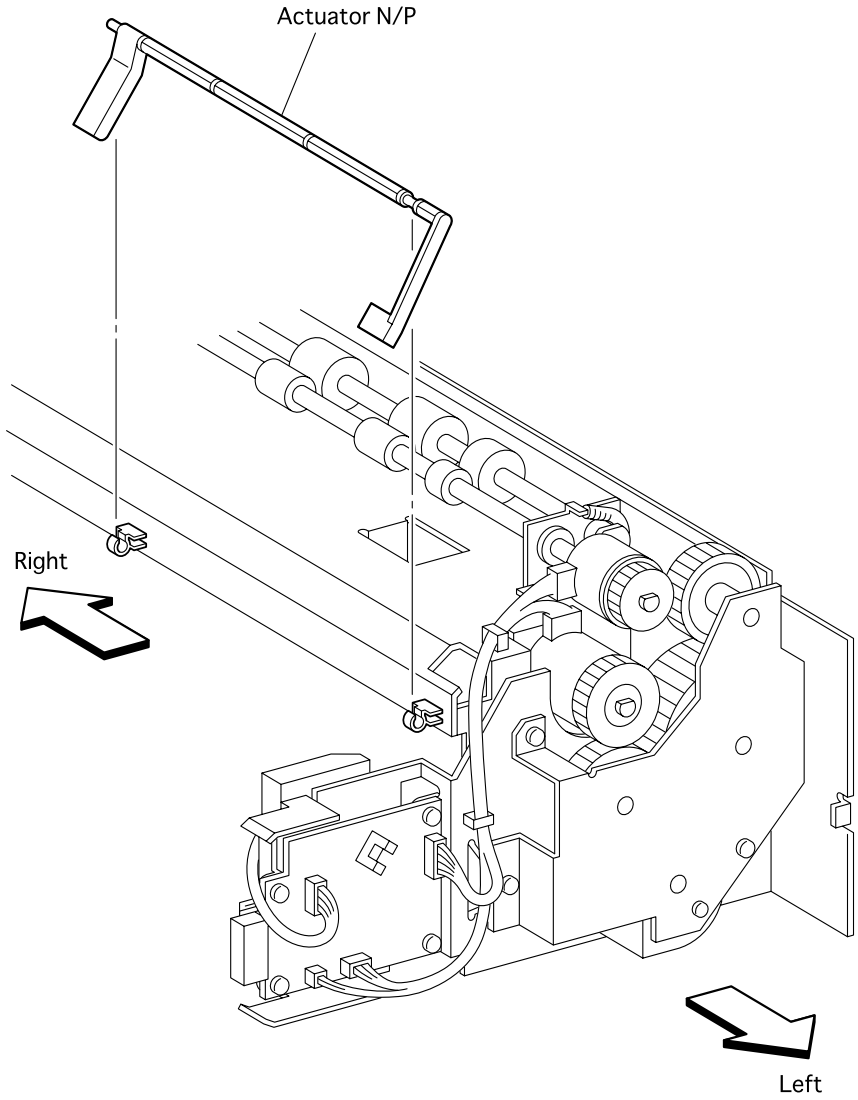


Figure 5-18. Actuator N/P

5.3.14 Sensor Photo: Face Control, Low Paper

5.3.14.1 Removal

1. Remove the *Bracket Assy OPT Gear*. (See "Bracket Assy OPT Gear" on page 134.)
2. Remove the *Housing Side R*. (See "Housing Side R" on page 140.)
3. Remove the *Housing Side L*. (See "Housing Side L" on page 142.)
4. Remove the *Plate Top F*. (See "Plate Top F" on page 135.)
5. Remove the *Feeder*. (See "Feeder" on page 141.)
6. Unplug the connector (P/J662) on the left *Sensor Photo: Face Control* from the *Feeder*.
7. Disengage five hooks of left *Sensor Photo: Face Control* from the *Feeder*, and remove the *Sensor Photo: Face Control*.
8. Unplug the connector (P/J661) on the right *Sensor Photo: Lower Paper* from the *Feede*r.
9. Disengage five hooks of right *Sensor Photo: Lower Paper* from the *Feeder*, and remove the *Sensor Photo: Lower Paper*.

5.3.14.2 Assembly

1. Secure the *Sensor Photo: Lower Paper* to the mounting hole on the right side of *Feeder* with five hooks.
2. Plug the connector (P/J661) to the right *Sensor Photo: Lower Pape*r from the *Feeder*.
3. Secure the *Sensor Photo: Face Control* to the mounting hole on the left side of *Feeder* with five hooks.
4. Plug the connector (P/J662) to the left *Sensor Photo: Face Control* from the *Feeder*.
5. Mount the *Feeder*.
6. Mount the *Plate Top F*.
7. Mount the *Housing Side L*.
8. Mount the *Housing Side R*.
9. Mount the *Bracket Assy OPT Gear*.

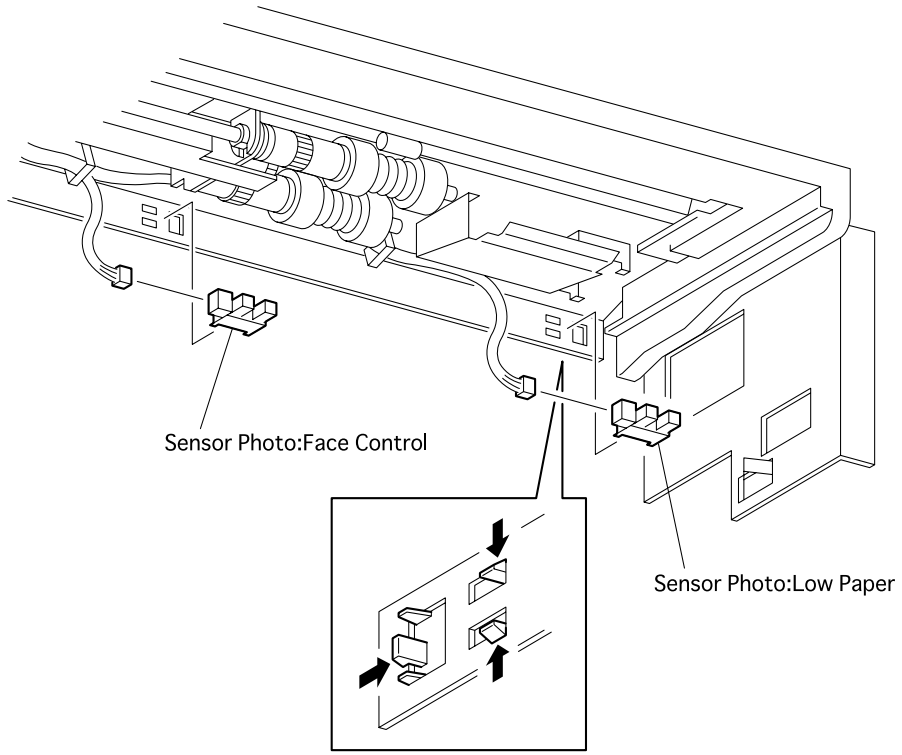


Figure 5-19. Sensor Photo

5.3.15 Feeder Assy

5.3.15.1 Removal

1. Remove the *Bracket Assy OPT Gear.* (See "Bracket Assy OPT Gear" on page 134.)
2. Remove the *Housing Side R*. (See "Housing Side R" on page 140.)
3. Remove the *Housing Side L*. (See "Housing Side L" on page 142.)
4. Remove the *Plate Top F.* (See "Plate Top F" on page 135.)
5. Remove the *Feeder.* (See "Feeder" on page 141.)
6. Remove the *Clutch Assy Feed.* (See "Clutch Assy Feed" on page 154.)
7. Remove the *Sensor Photo: Face Control*. (See "Sensor Photo: Face Control, Low Paper" on page 149.)
8. Disengage the E-ring that secures the left shaft of *Feeder Assy* to the *Feeder*.

NOTE: *In the following steps, place thick paper under the Feeder to protect the Roll of Roll Assy Turn from damage.*

NOTE: *In the following steps, take care not to drop and lose the Spring Nudger.*

9. Reverse the *Feeder so that the top surface faces down.*
10. Draw the *Bearing* securing the left shaft of *Feeder Assy* to the *Feeder*.
11. Open the *Chute Assy Front* from the *Feeder*.
12. Sliding the *Feeder Assy* to the right, draw the shaft of *Feeder Assy* from the left bearing bore of the *Feeder*, and remove the *Feeder Assy* from the *Feeder*.
13. Remove the *Spring Nudger* from the boss of *Feeder*.

5.3.15.2 Assembly

NOTE: *In the following steps, take care not to drop and lose the Spring Nudger.*

1. Align the position exactly, mount the *Spring Nudger* on the boss of *Feeder*.
2. Open the *Chute Assy Front* from the *Feeder*.

NOTE: *In the following steps, align the Feeder Assy position so that the leading end of Spring Nudger enters the boss of Feeder Assy.*

3. Insert the lead edge of left shaft of *Feeder Assy* into the left bearing bore of *Feeder*, and slide the *Feeder Assy* to the left.
4. Secure the left shaft of *Feeder Assy* to the *Feeder* with the *Bearing*.
5. Restore the reversed *Feeder* so that the top surface faces up.
6. Secure the left shaft of *Feeder Assy* to the *Feeder* with the E-ring.
7. Mount the *Sensor Photo: Face Control*.
8. Mount the *Clutch Assy Feed*.
9. Mount the *Feeder*.
10. Mount the *Plate Top F*.
11. Mount the *Housing Side L*.
12. Mount the *Housing Side R*.
13. Mount the *Bracket Assy OPT Gear*.

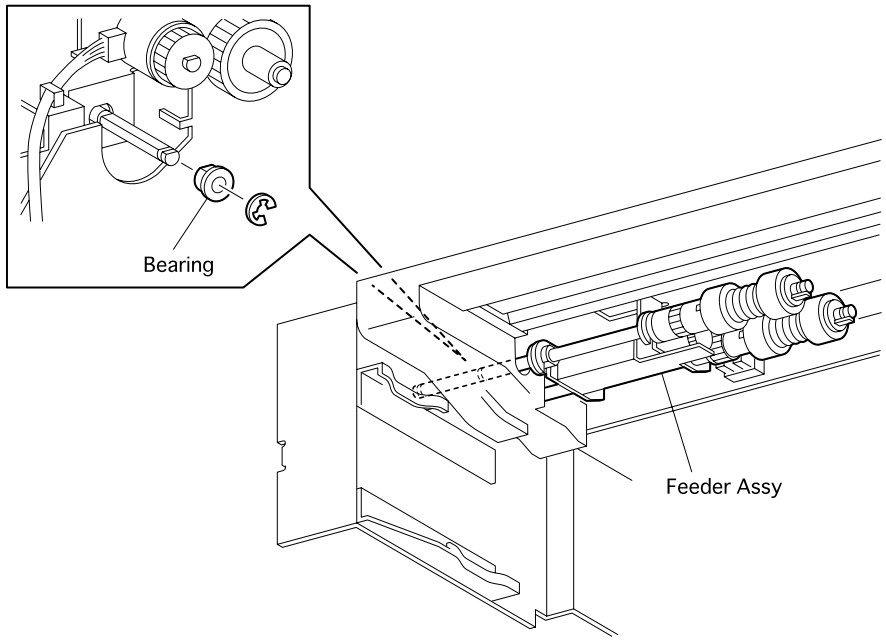


Figure 5-20. Feed Assy (1)

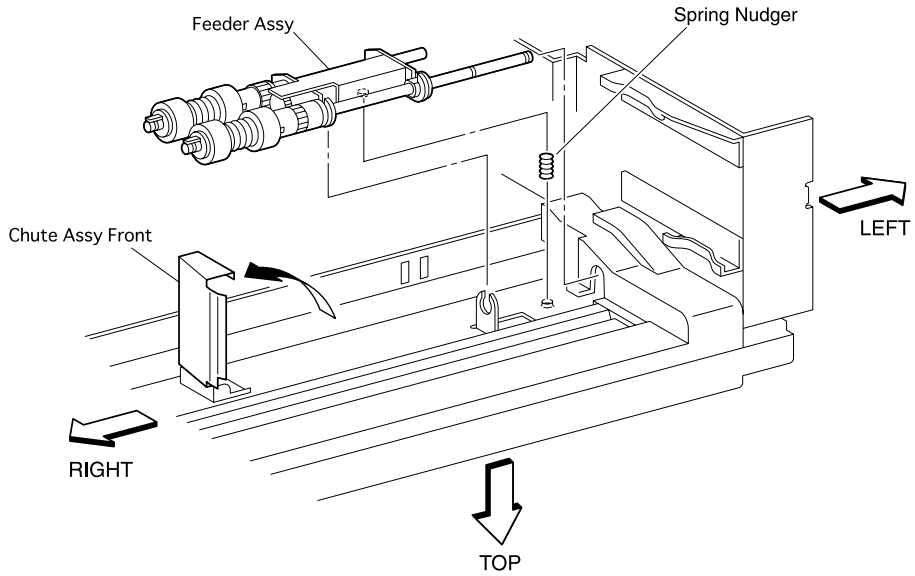


Figure 5-21. Feed Assy (2)

5.3.16 Roll Assy

5.3.16.1 Removal

1. Draw the *Cassette Assy* from the Large Capacity Paper Unit.
2. Open the *Chute Assy Front* from the *Feeder* of the Large Capacity Paper Unit.
3. Unhook the *Roll Assy* secured to the front shaft of *Feeder Assy* in the *Feeder*.
4. Draw the *Roll Assy* from the front shaft of *Feeder Assy*.
5. Unhook the *Roll Assy* secured to the rear shaft of *Feeder Assy* from the *Feeder*.
6. Draw the *Roll Assy* from the rear shaft of *Feeder Assy*.

5.3.16.2 Assembly

1. Open the *Chute Assy Front* from the *Feeder* in the Large Capacity Paper Unit.
2. Insert the *Roll Assy* into the rear shaft of *Feeder Assy* from the *Feeder*.
3. Hook the *Roll Assy* to the groove in the rear shaft of *Feeder Assy* to secure.
4. From the *Feeder*, insert the *Roll Assy* into the front shaft of *Feeder Assy*.
5. Hook the *Roll Assy* to the groove in the front shaft of *Feeder Assy* to secure.
6. Mount the *Cassette Assy* to the Large Capacity Paper Unit.

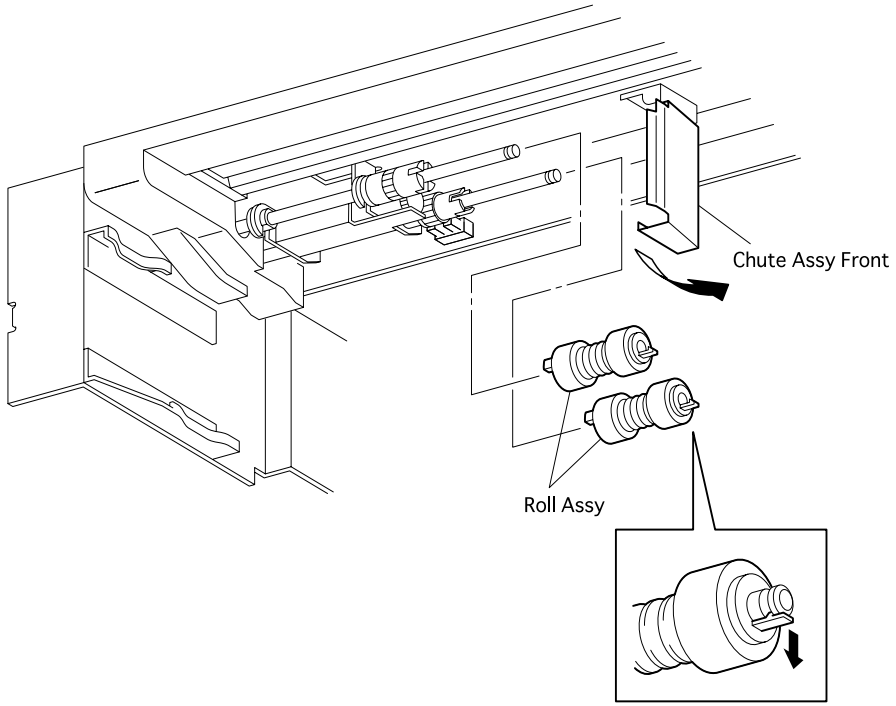


Figure 5-22. Roll Assy

5.3.17 PWBA Feeder

5.3.17.1 Removal

1. Remove the *Bracket Assy OPT Gear*. (See "Bracket Assy OPT Gear" on page 134.)
2. Remove the *Housing Side R*. (See "Housing Side R" on page 140.)
3. Remove the *Housing Side L*. (See "Housing Side L" on page 142.)
4. Remove the *Plate Top F*. (See "Plate Top F" on page 135.)
5. Remove the *Feeder*. (See "Feeder" on page 141.)
6. Unplug the connector (P/J64) on the *PWBA Feeder* from the *Feeder*.
7. Unplug the connector (P/J65) on the *PWBA Feeder* from the *Feeder*.
8. Unplug the connector (P/J66) on the *PWBA Feeder* from the *Feeder*.
9. Unplug the connector (P/J67) on the *PWBA Feeder* from the *Feeder*.
10. Remove the four screws securing the *PWBA Feeder* to the *Feeder*.
11. Remove the *PWBA Feeder* from the *Feeder*.

5.3.17.2 Assembly

1. Align the *PWBA Feeder* with its mount position to the *Feeder*.
2. Secure the *PWBA Feeder* to the *Feeder* with four screws.
3. Plug the connector (P/J67) to the *PWBA Feeder*.
4. Plug the connector (P/J66) to the *PWBA Feeder*.
5. Plug the connector (P/J65) to the *PWBA Feeder*.
6. Plug the connector (P/J64) to the *PWBA Feeder*.
7. Mount the *Feeder*.
8. Mount the *Plate Top F*.
9. Mount the *Housing Side L*.
10. Mount the *Housing Side R*.
11. Mount the *Bracket Assy OPT Gear*.

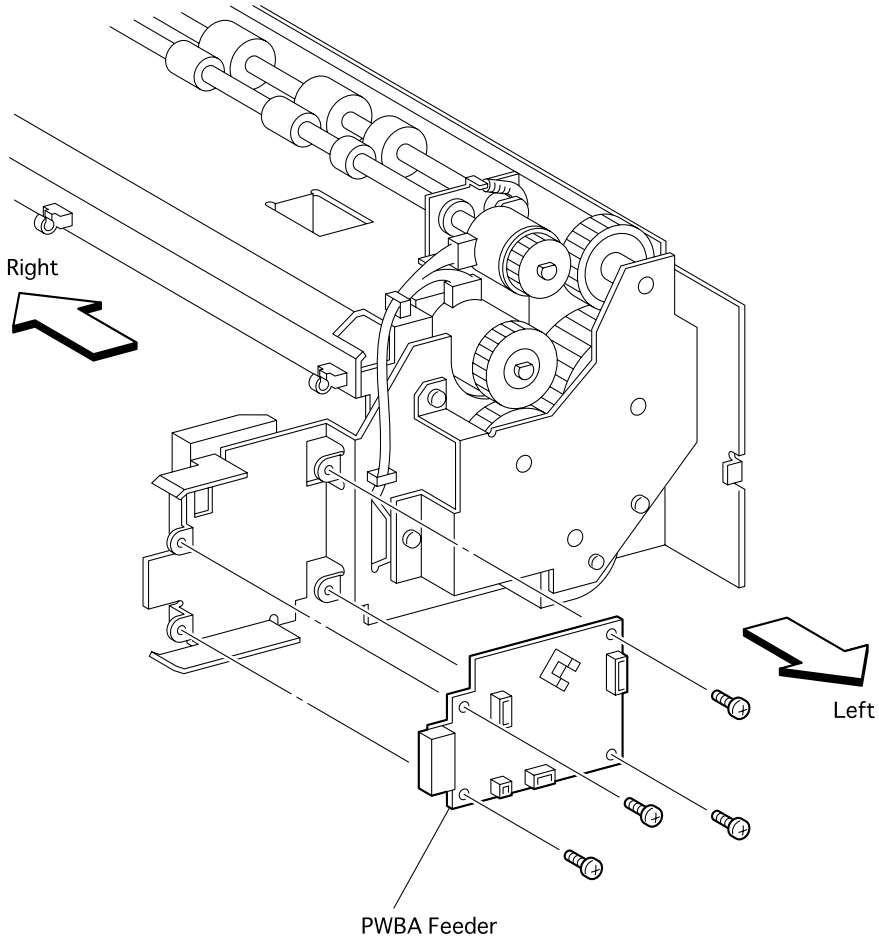


Figure 5-23. PWBA Feeder

5.3.18 Clutch Assy Feed

5.3.18.1 Removal

1. Remove the *Bracket Assy OPT Gear.* (See "Bracket Assy OPT Gear" on page 134.)
2. Remove the *Housing Side R*. (See "Housing Side R" on page 140.)
3. Remove the *Housing Side L*. (See "Housing Side L" on page 142.)
4. Remove the *Plate Top F.* (See "Plate Top F" on page 135.)
5. Remove the *Feeder*. (See "Feeder" on page 141.)
6. Remove the four screws securing the *Bracket* from the *Feeder*.
7. Remove the *Bracket* from the *Feeder*.
8. Draw the *Gear 3* from the shaft of *Feeder*.
9. Draw the *Gear 2* from the shaft of *Feeder*.
10. Unplug the connector (P/J65) on the *PWBA Feeder* from the *Feeder*.
11. Disengage the E-ring that secures the *Clutch Assy Feed* to the *Feeder*.
12. Draw the *Clutch Assy Feed* from the shaft of *Feeder Assy* in the *Feeder*.

5.3.18.2 Assembly

1. Aligning the position exactly, insert the *Clutch Assy Feed* into the shaft of *Feeder Assy* in the Feeder.
2. Secure the *Clutch Assy Feed* to the shaft of *Feeder Assy* in the *Feeder* with the E-ring.
3. Plug the connector (P/J65) to the *PWBA Feeder*.
4. Aligning the position exactly, insert the *Gear 2* into the shaft of *Feeder*.
5. Aligning the position exactly, insert the *Gear 3* into the shaft of *Feeder*.
6. Align the *Bracket* with its mount position to the *Feeder*.
7. Secure the *Bracket* from the *Feeder* with four screws.
8. Mount the *Feeder*.
9. Mount the *Plate Top F*.
10. Mount the *Housing Side L*.
11. Mount the *Housing Side R.*
12. Mount the *Bracket Assy OPT Gear*.

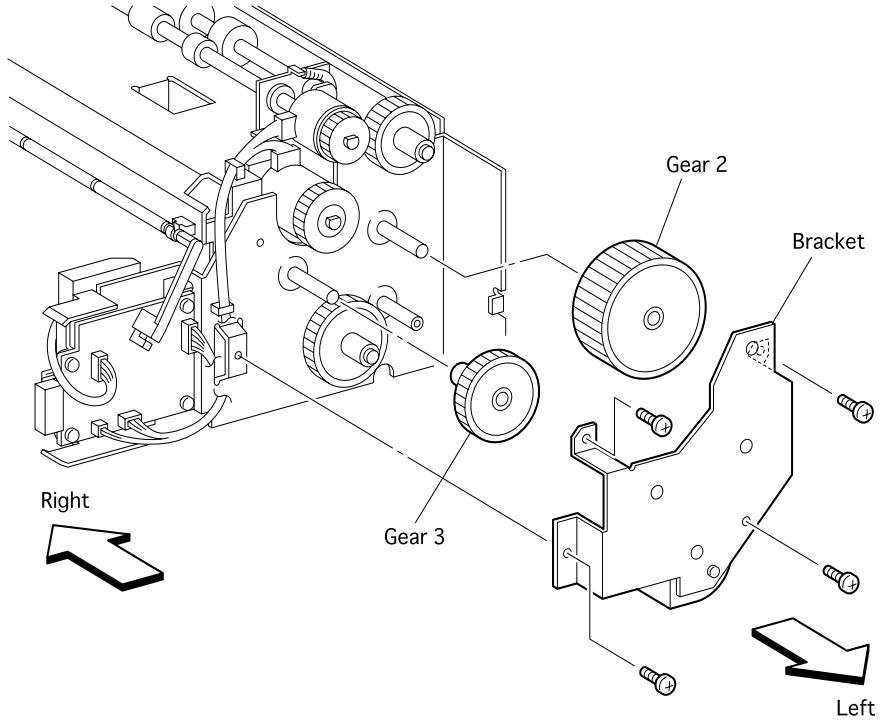


Figure 5-24. Clutch Assy Feed (1)

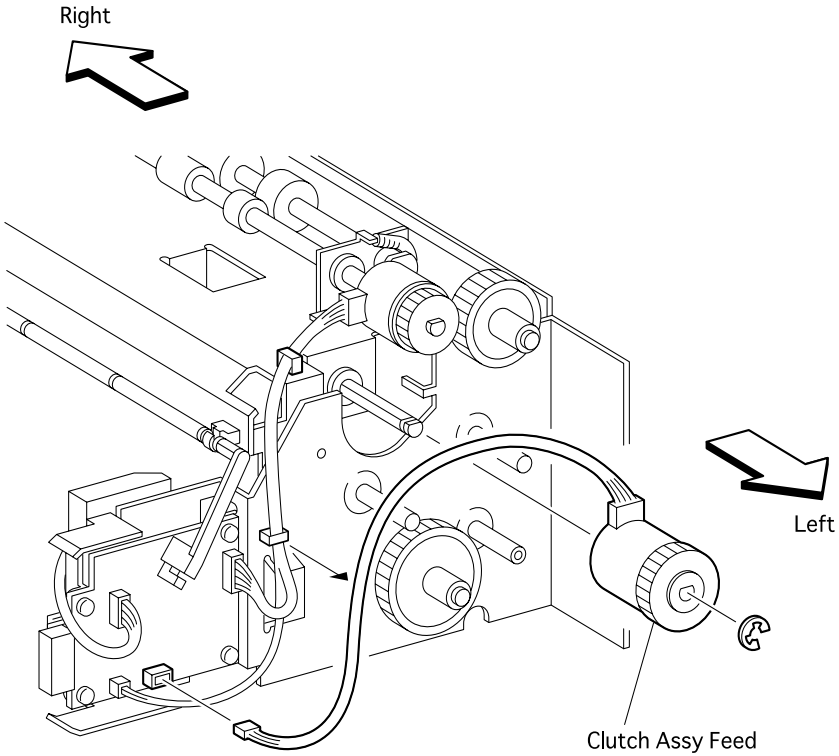


Figure 5-25. Clutch Assy Feed (2)

5.3.19 Socket

5.3.19.1 Removal

1. Draw the *Cassette Assy* from the Large Capacity Paper Unit.
2. Remove the two screws securing the *Socket* to the *Feeder* in the Large Capacity Paper Unit.

NOTE: *In the following steps, do not detach Feeder and Socket far away because they are connected with the harness.*

3. Detach the *Socket* a little from the *Feeder*.
4. Unplug the connector (P/J71) from the *Socket*.

5.3.19.2 Assembly

1. Plug the connector (P/J71) to the *Socket*.

NOTE: *In the following steps, do not allow the harness to get caught between Feeder and Socket.*

2. Aligning the position exactly, insert the boss of *Socket* into a hole in the Large Capacity Paper Unit.
3. Secure the *Socket* to the *Feeder* with two screws.
4. Mount the *Cassette Assy* to the Large Capacity Paper Unit.

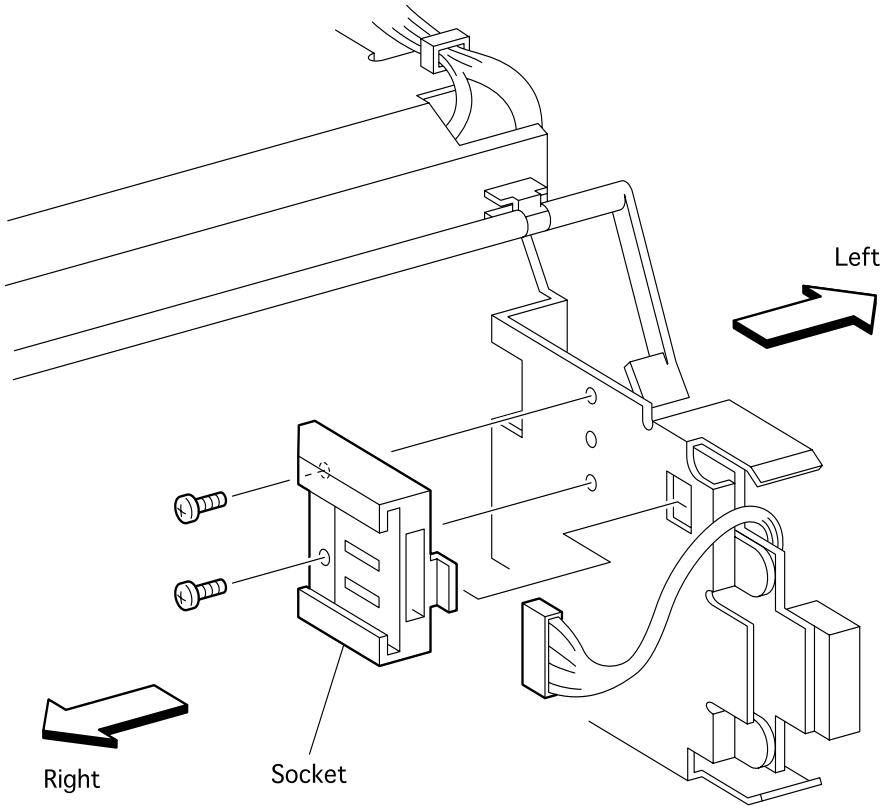


Figure 5-26. Socket

5.4 Parts List and Exploded Diagram

5.4.1 Large Capacity Paper Unit I

Table 5-1. Parts List for Large Capacity Paper Unit I

No. in Figure	Unit / Parts Name
1	LARGE CAPACITY PAPER UNIT (with 2 - 22)
2	BRACKET ASSY OPT GEAR
3	GEAR OPT I
4	PLATE TOP F
5	HARNESS ASSY SIZE OPTION (J52 - J521)
6	HOUSING SIZE SENSOR
7	PWBA SIZE OPTION
8	SPRING CAM
9	LEVER CAM
10	SHAFT CAM
11	CAM SW
12	COVER SIZE SENSOR
13	HARNESS ASSY SIZE M (J51-J511)
14	CLAMP
15	FRAME ASSY MAIN
16	HOUSING SIDE R
17	FEEDER ASSY
18	CASSETTE ASSY
19	HOUSING SIDE L
20	SCREW

Table 5-1. Parts List for Large Capacity Paper Unit I

No. in Figure	Unit / Parts Name
21	SPRING EARTH OPT FDR
22	BLOCK OPT CST
99	KIT SIZE ACTUATOR (with 8~12)

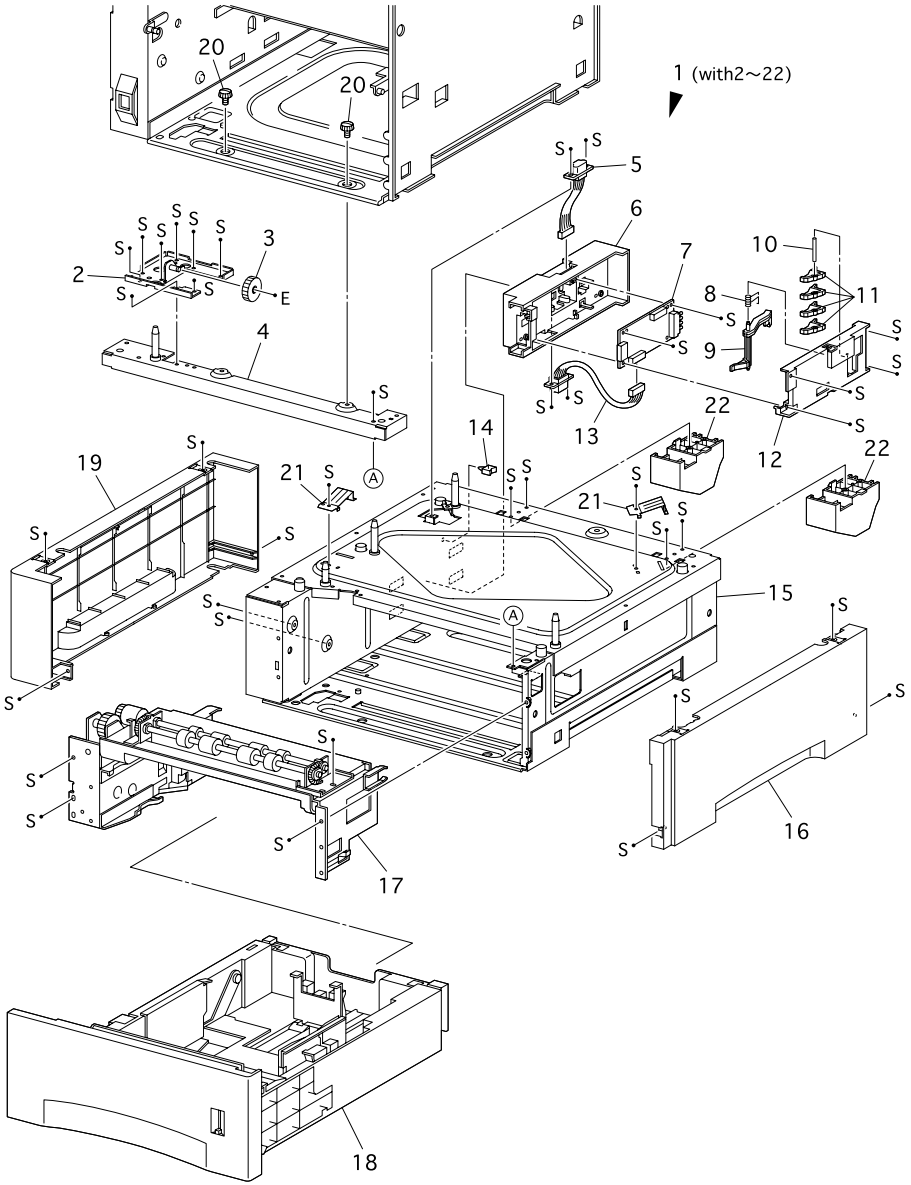


Figure 5-27. Exploded Diagram for Large Capacity Paper Unit I

5.4.2 Large Capacity Paper Unit II

Table 5-2. Parts List for Large Capacity Paper Unit II

No. in Figure	Unit / Parts Name
1	FEEDER ASSY (with 2~40)
2	ROLL ASSY TURN (with 3)
3	CLUTCH ASSY TURN
4	SPRING EXTENSION
5	SPRING CHUTE
6	ACTUATER N/P
7	SUPPORT ACTUATER
8	FRAME ASSY FEEDER
9	CLAMP
10	SPRING LATCH L
11	ACTUATER LOW PAPER
12	SUPPORT ACTUATER L/P
13	SENSOR PHOTO: FACE CONTROL, LOW PAPER
14	HARNESS ASSY N/SNSR
15	CHUTE ASSY FRONT
16	CHUTE TURN
17	ROLL 7
18	COVER FEEDER
19	FEEDER ASSY (with 20~29)
20	SHAFT FEED
21	BEARING
22	SUPPORT ASSY NUDGER
23	CHUTE NUDGER
24	CLUTCH GEAR

Table 5-2. Parts List for Large Capacity Paper Unit II

No. in Figure	Unit / Parts Name
25	CLUTCH ASSY O/W
26	ROLL ASSY
27	GEAR 25T
28	GEAR 31T
29	SPRING NUDGER
30	GEAR 4
31	GEAR 2
32	COVER GEAR
33	BRACKET
34	GEAR 3
35	GEAR OPT
36	PWBA FEEDER
37	CLUTCH ASSY FEED
38	BEARING
39	HARNESS ASSY N/MOT
40	SOCKET

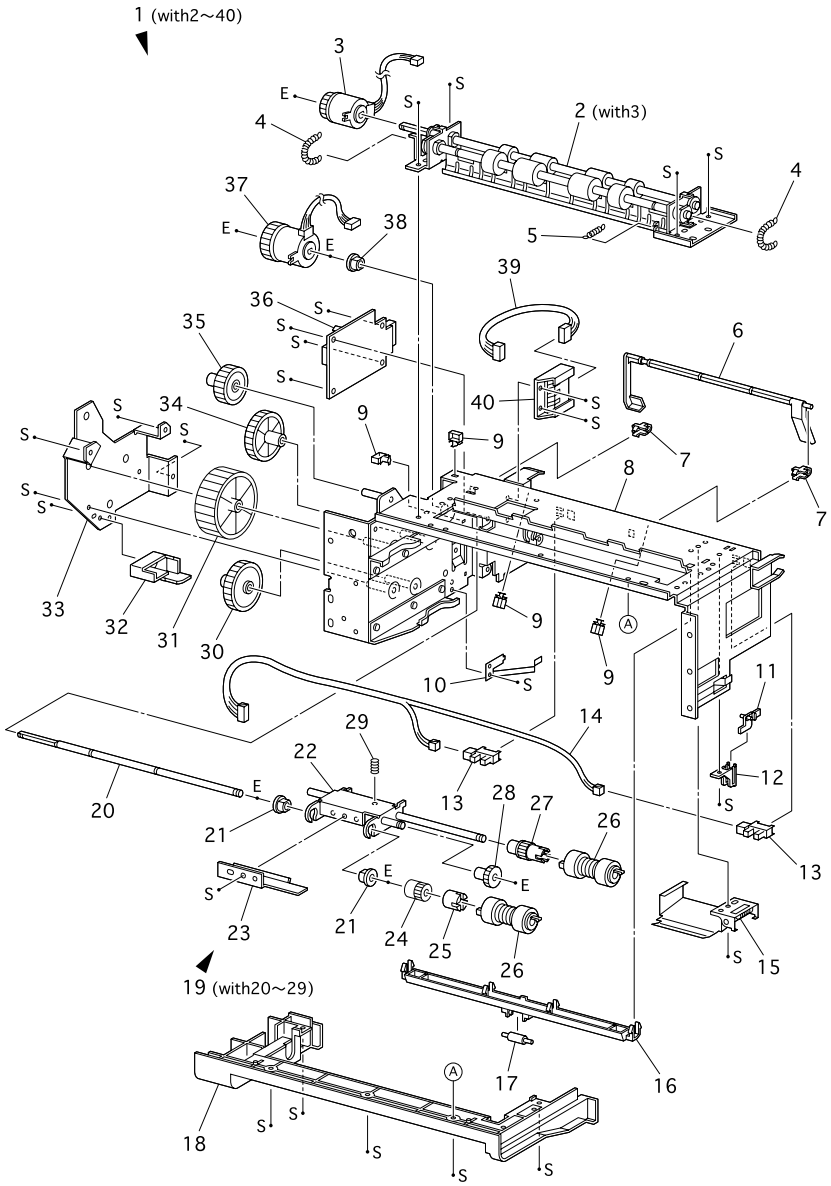


Figure 5-28. Exploded Diagram for Large Capacity Paper Unit II