SERVICE MANUAL

Monochrome Laser Printer

EPSON EPL-N2050 Optional Units

SEPG99010

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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

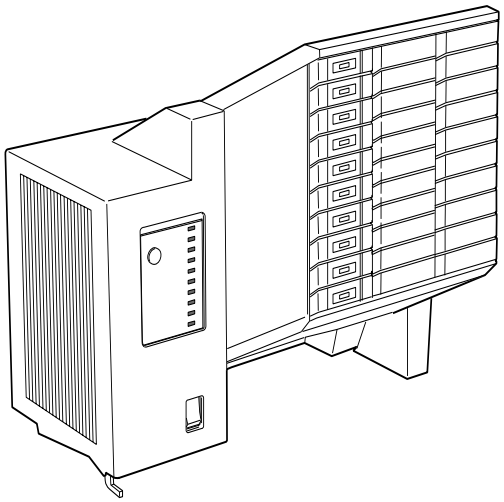
Chapter 1 Multibin Unit

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.*

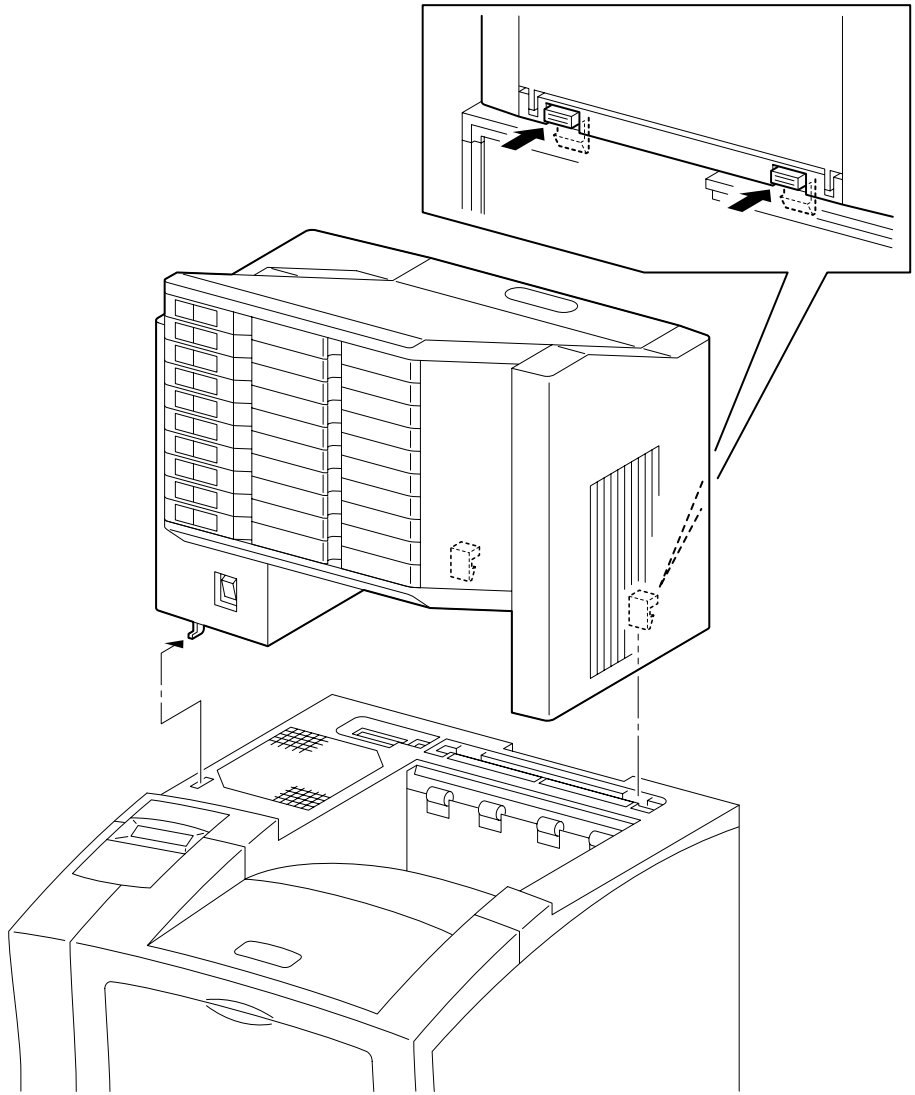


Figure 1-1. Multibin Unit

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

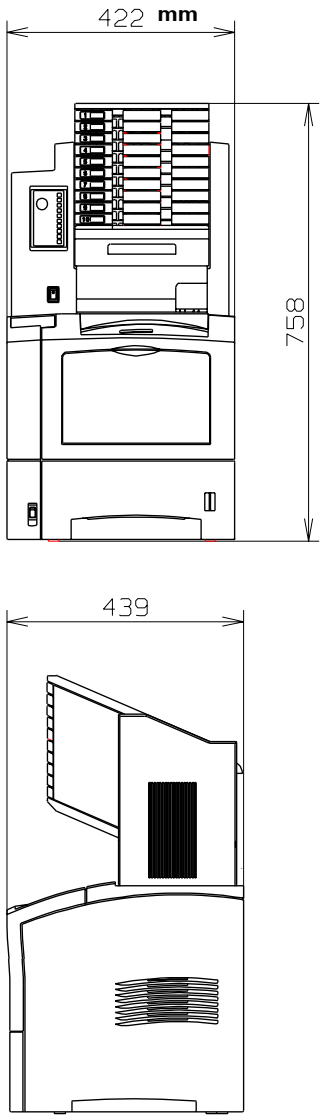


Figure 1-2. External Dimension

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.

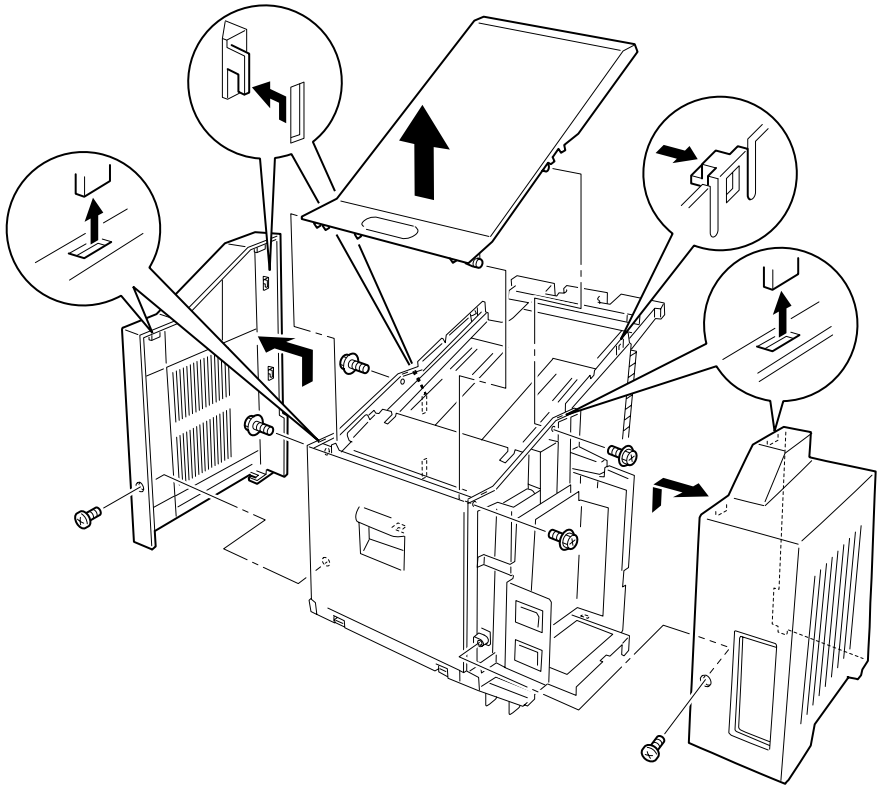


Figure 1-3. Cover Left, Cover Right, Cover Top

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)

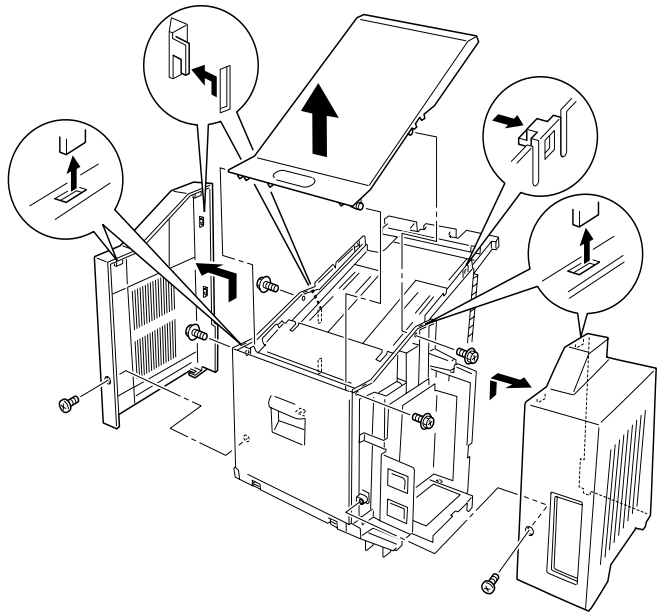


Figure 1-4. Cover Left, Cover Top, Cover Right

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)

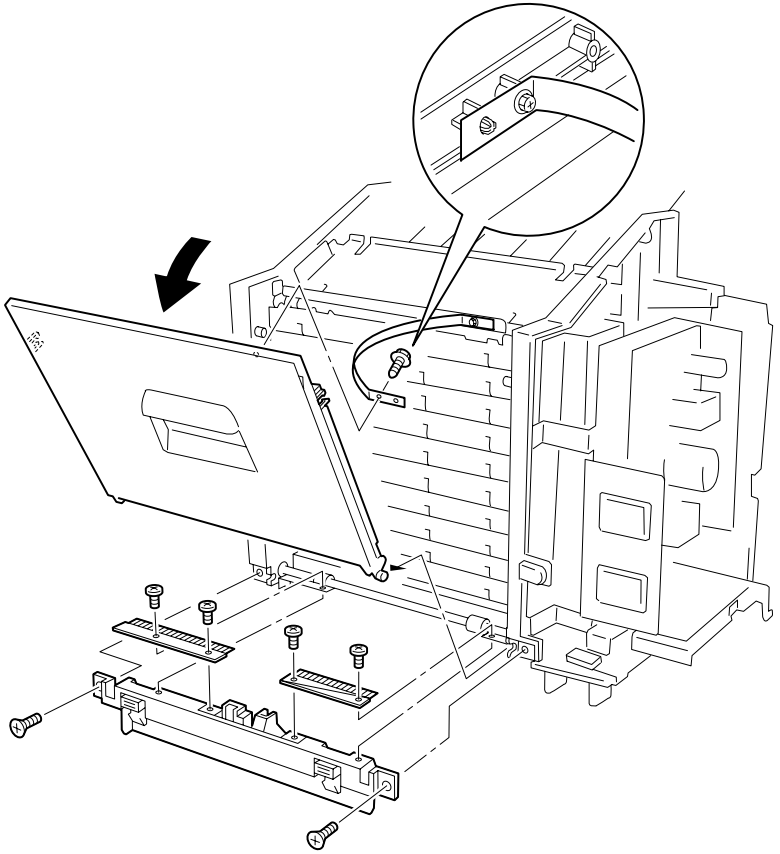


Figure 1-5. Chute Rear and Chute Assy Lower

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)

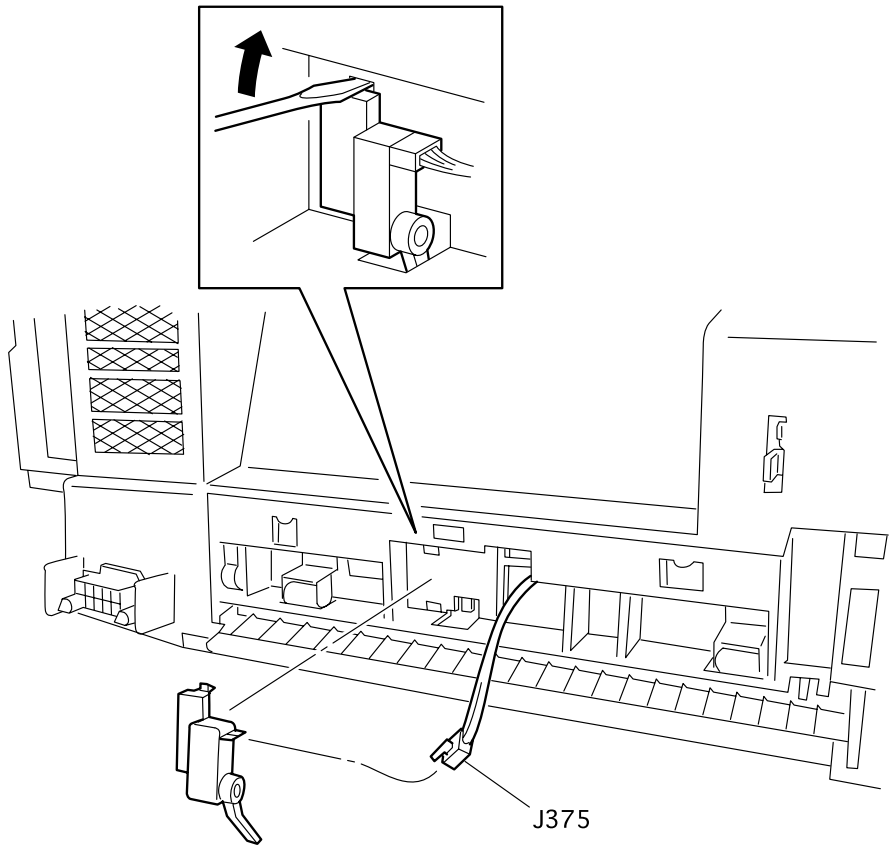


Figure 1-6. Sensor Pass INT

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)

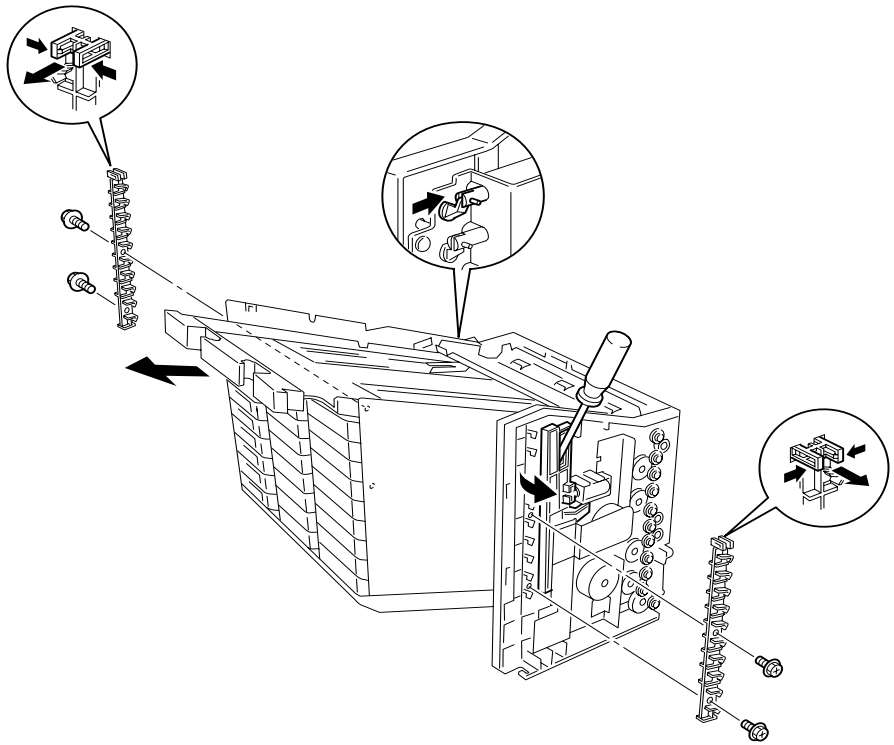


Figure 1-7. Tray Assy Multibin Unit 2 (with 36-38): Tray1-9 and Tray Assy Multibin Unit 1 (with 37, 38, 42): Tray10

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)

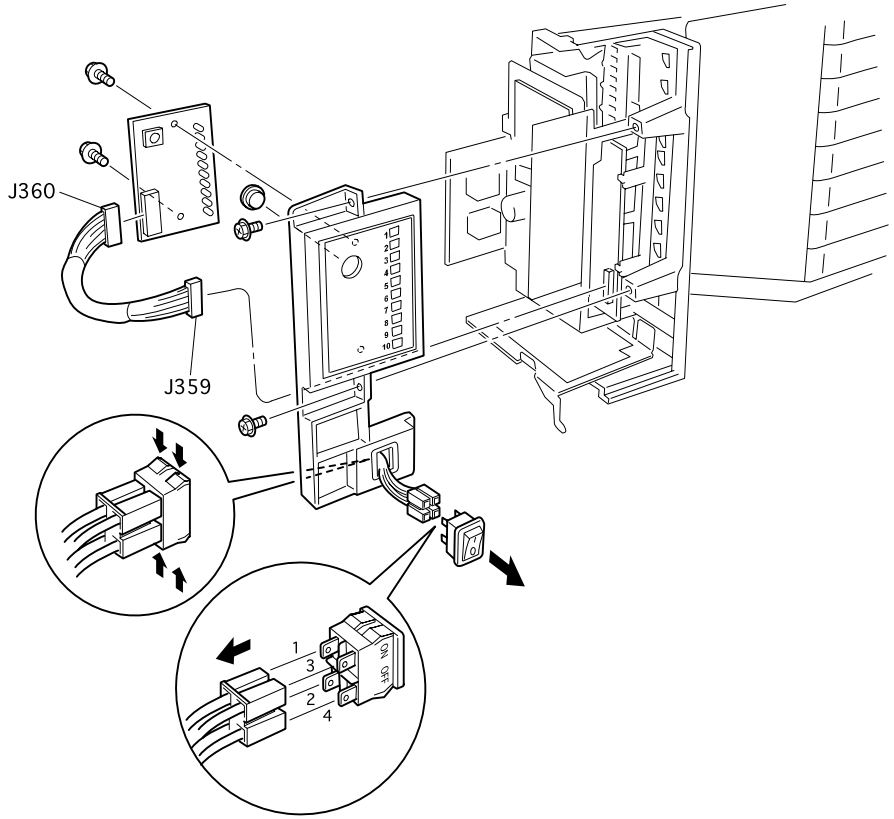


Figure 1-8. Panel Assy, PWBA LED, and Switch Main

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)

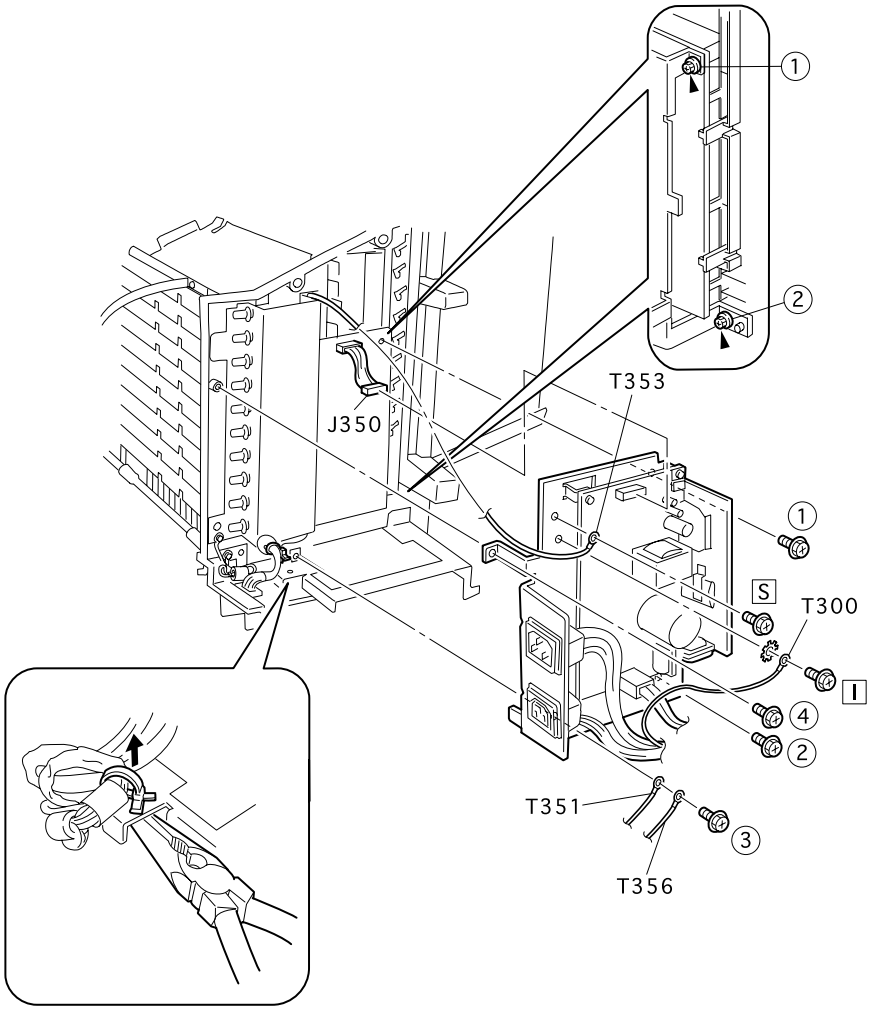


Figure 1-9. Frame Assy LVPS

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)

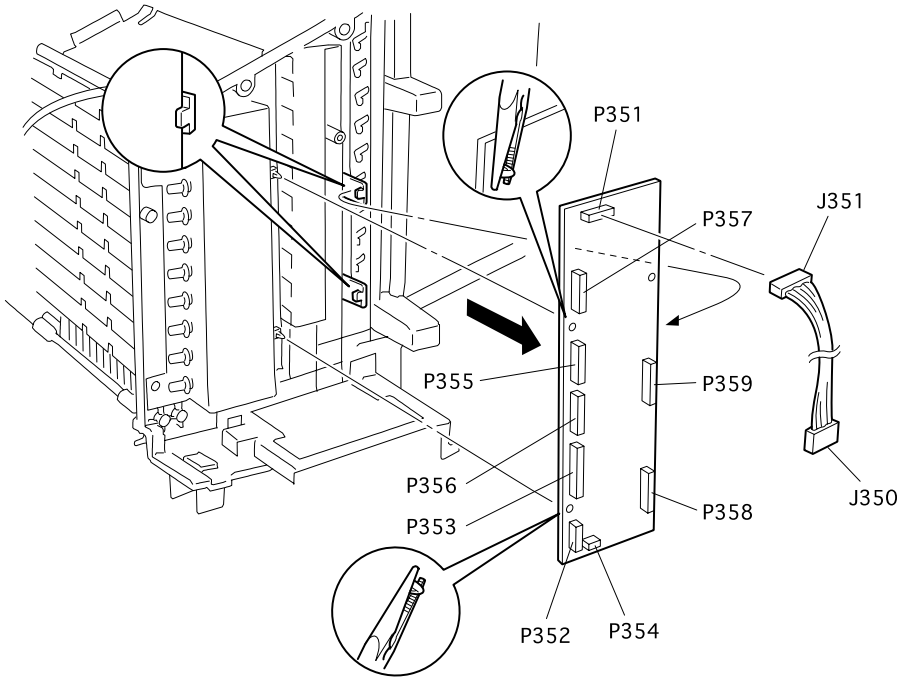


Figure 1-10. PWBA Main

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)

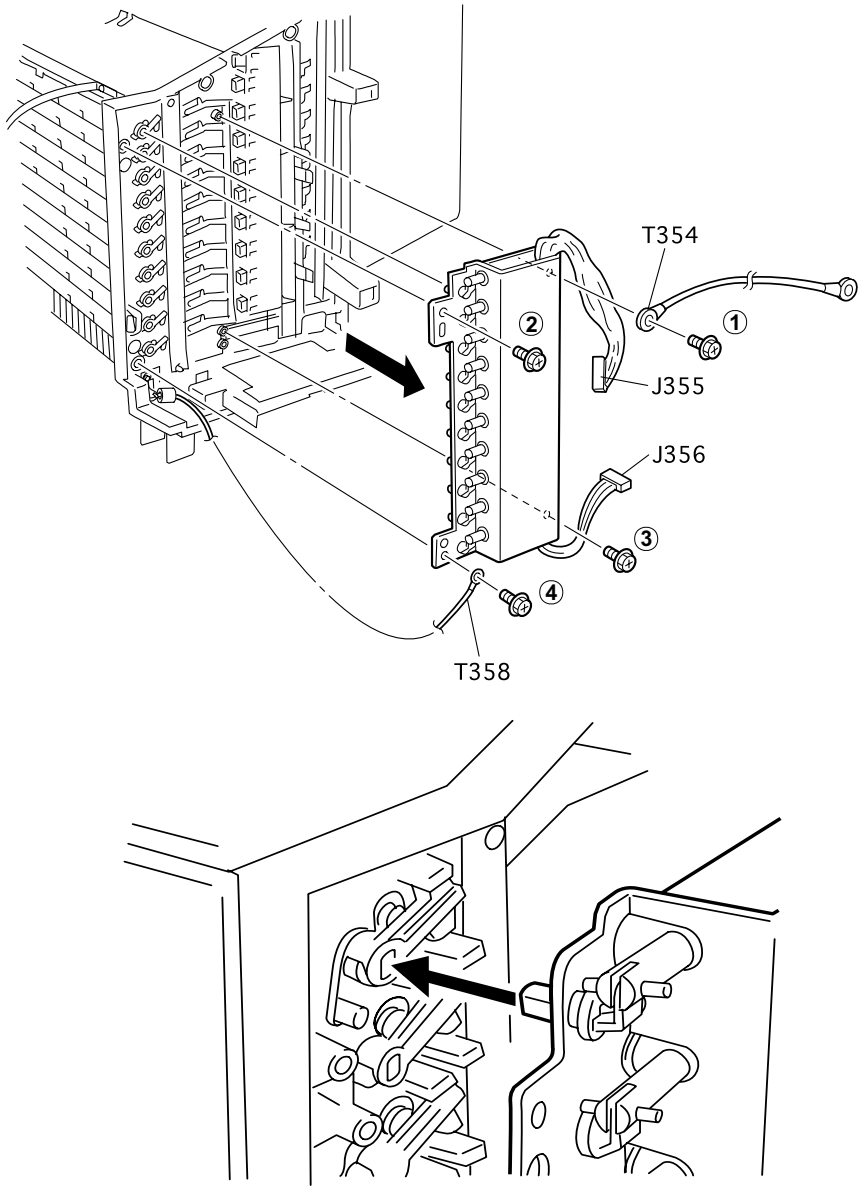


Figure 1-11. Solenoid Assy Link (with 23-25)

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)

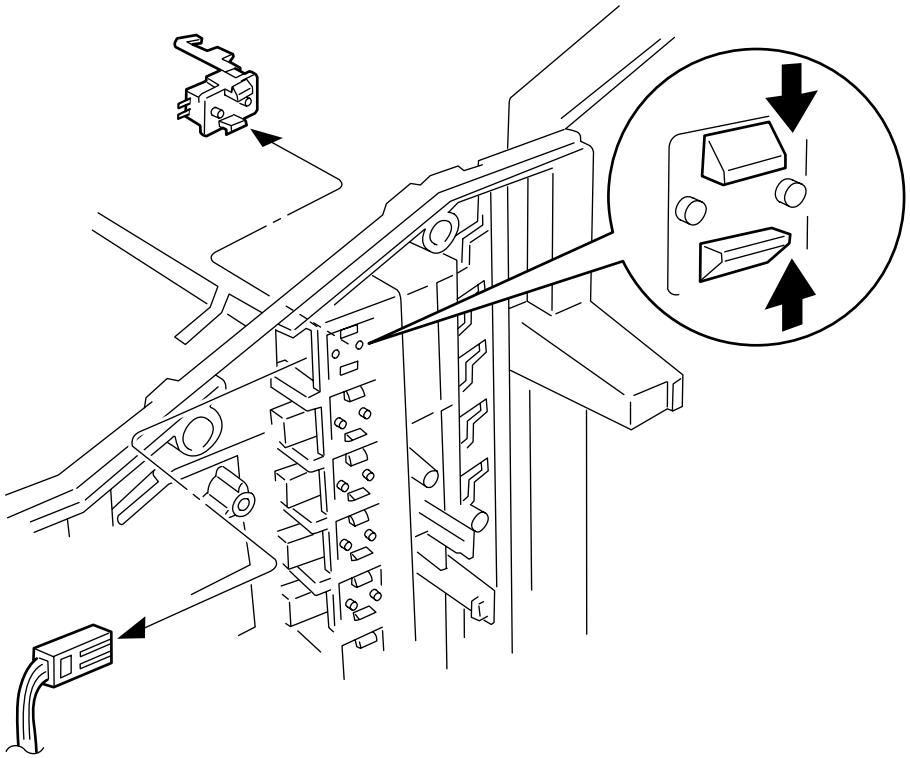


Figure 1-12. Sensor Stack Full

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)

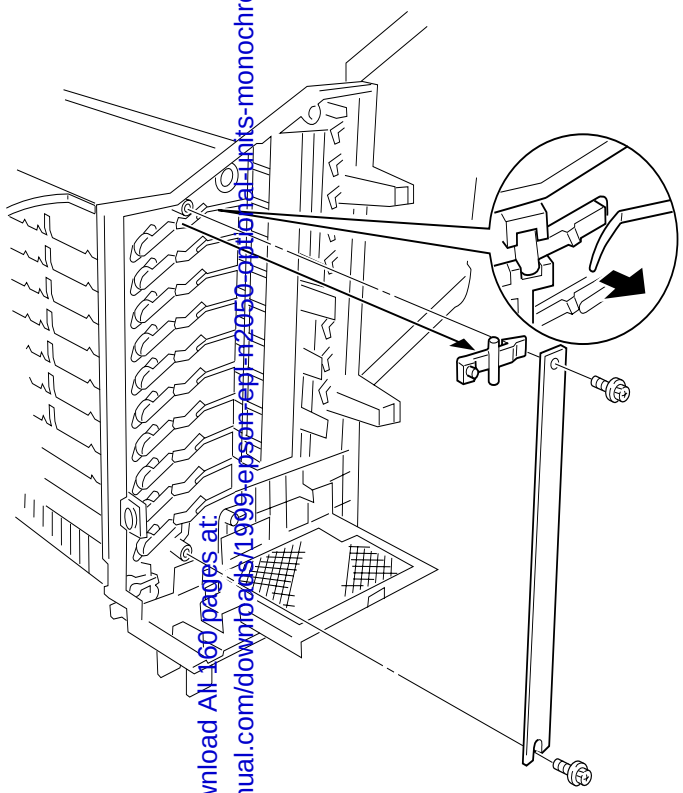


Figure 1-13. Stopper Key Lock L