Service Manual

Lexmark 2030 Color Jetprinter™

4091-001

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LEXMARK™

4091-001

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Contents

Preface

This manual is divided into the following chapters:

1. **General Information** contains a general description of the printer and the maintenance approach used to repair it. Special tools and test equipment are listed in this chapter, as well as general environmental and safety instructions.
2. **Diagnostic Information** contains symptom table, and service checks used to isolate failing field replaceable units (FRUs).
3. **Diagnostic Aids** contains tests and checks used to locate or repeat symptoms of printer problems.
4. **Repair Information** provides instructions for making printer adjustments and removing and installing FRUs.
5. **Connector Locations** uses illustrations to identify the connector locations and test points on the printer.
6. **Preventive Maintenance** contains the lubrication specifications and recommendations to prevent problems.
7. **Parts Catalog** contains illustrations and part numbers for individual FRUs.

Safety Information

- The maintenance information for this product has been prepared for use by a professional service person and is not intended to be used by others.
- There may be an increased risk of electric shock and personal injury during disassembly and servicing of this product. Professional service personnel should understand this and take necessary precautions.
- The safety features of some parts may not always be obvious. Therefore, replacement parts must have the identical or equivalent characteristics as the original parts.

Sicherheitshinweise

- Die Wartungsinformationen für dieses Produkt wurden zur Verwendung durch einen Wartungsfachmann entwickelt und sollten nicht von anderen benützt werden.
- Zusätzliches Risiko eines elektrischen Schlags und körperlicher Verletzung existiert während des Auseinandernehmens und der Wartung des Geräts. Fachpersonal sollte im vollen Verständnis der Lage entsprechende Vorsichtsmaßnahmen ergreifen.
- Ersatzteile müssen gleiche oder gleichwertige Merkmale wie die Originalteile aufweisen, da Sicherheitsvorkehrungen nicht immer offensichtlich sind.

Consignes de Sécurité

- Les consignes d'entretien et de réparation de ce produit s'adressent uniquement à un personnel de maintenance qualifié.
- Le démontage et l'entretien de ce produit pouvant présenter certains risques électriques, le personnel d'entretien qualifié devra prendre toutes les précautions nécessaires.
- Les normes de sécurité de certaines pièces n'étant pas toujours explicites, les pièces de rechange doivent être identiques ou conformes aux caractéristiques des pièces d'origine.

Norme di sicurezza

- Le informazioni riguardanti la manutenzione di questo prodotto sono indirizzate soltanto al personale dell'assistenza autorizzato.
- Durante lo smontaggio e il manutenzionamento di questo prodotto, è possibile il rischio accresciuto di scosse elettriche e danni personali. Il personale di assistenza autorizzato, consapevole di ciò, deve adottare le precauzioni necessarie.
- È possibile che le funzioni di sicurezza di alcuni elementi non siano così ovvie, quindi, i pezzi di ricambio devono avere caratteristiche identiche o equivalenti a quelle dei pezzi originali.

Pautas de Seguridad

- La información sobre el mantenimiento de este producto fue escrita para el personal de mantenimiento cualificado y no para cualquier otro usuario.
- Existen mayores riesgos de descargas eléctricas y daños personales durante el desmontaje y la reparación de la máquina. El personal cualificado comprende esto y toma las precauciones necesarias.
- Los dispositivos de seguridad de algunas partes quizá no siempre puedan ser reconocidas a simple vista. Por lo tanto, las partes de reemplazo deben poseer características idénticas o equivalentes a las partes originales.

Sikkerhedsoplysninger

- Oplysningerne om vedligeholdelse af dette produkt er forberedt med henblik på professionelt servicepersonale, og bør derfor ikke benyttes af andre.
- Risikoen for elektrisk stød øges under demontering og service af dette produkt, hvorfor der bør tages de nødvendige forholdsregler.
- Sikkerhedsforanstaltningerne er ikke altid lige åpenbare for alle reservedele. Der bør derfor kun anvendes originale reservedele eller reservedele med samme egenskaber som de oprindelige.

Informações de Segurança

- As informações de segurança relativas a este produto destinam-se a profissionais destes serviços e não devem ser utilizadas por outras pessoas.
- Risco de choques eléctricos e ferimentos graves durante a desmontagem e manutenção deste produto. Os profissionais destes serviços devem estar avisados deste facto e tomar os cuidados necessários.
- Os dispositivos de segurança de algumas peças poderão não ser sempre suficientemente evidentes. Assim, as peças sobressalentes devem possuir características idênticas ou equivalentes às peças originais.

Chinese Safety Information

安全资讯

- 本产品的维护资讯仅供专业服务人员使用，而非针对一般使用者。
- 本产品在拆卸、维修的时候，遭受电击或人员受伤的危险性会增高，专业服务人员对这点必须有所了解，并采取必要的预防措施。
- 有些零件的安全功能可能不明显。因此，所替换零件的性能一定要与原有的零件一致。

Korean Safety Information

안전 사항

- 본 제품에 관한 유지 보수 설명서는 전문 서비스 기술자 용으로 작성된 것이므로 비 전문가는 사용할 수 없습니다.
- 본제품을 해체하거나 정비할 경우 전기적인 충격을 받거나 상처를 입을 위험이 커집니다. 전문 서비스 기술자는 이 사실을 숙지하고 필요한 예방 조치를 취하도록 하십시오.
- 일부 부품의 안전성은 항상 보장되지 않습니다. 따라서, 교체 부품은 원래 부품과 같거나 동등한 특성을 가진 제품을 사용하여야합니다.

1. General Information

The Lexmark™ 2030 Color Jetprinter™ is a personal, near laser-quality inkjet printer. The printer contains two print cartridges (color and black), which are customer replaceable supply items. A single printhead provides three colors and composite black printing. The printer also supports a black print cartridge and provides 600 X 300 dpi edge definition for professional quality text image and graphics printing.

The Lexmark 2030 Color Jetprinter is a host (PC) based printer containing no buttons, lights or error indicators. All printer errors are sent to the host (PC). The printer also contains no NVRAM on the system board. Page count and printhead ink levels are stored in the PC.

Power Consumption

- Less than 3.5 Watts - power off and power to the printer
- 7.5 Watts - Idle Mode (power on - not printing)
- 12 Watts - Printing (average)
- 25 Watts - Printing (peak)

Maintenance Approach

The diagnostic information in this manual leads you to the correct field replaceable unit (FRU) or part. Use the symptom index, service checks, and diagnostic aids to determine the symptom and repair the failure. Begin with “Symptom Tables” on page 2-1.

After you complete the repair, perform tests as needed to verify the repair.

Note: Files copied from DOS, will NOT print on this printer.

Abbreviations

ESD	Electrostatic Discharge
FRU	Field Replaceable Unit
HVPS	High Voltage Power Supply
LVPS	Low Voltage Power Supply
OEM	Original Equipment Manufacturer
V ac	Volts alternating current
V dc	Volts direct current
ZIF	Zero Insertion Force

Unique Tools Required for Service

Parallel Wrap Plug P/N 1319128

2. Diagnostic Information

Start

Use the symptom tables, service checks, and diagnostic aids in chapter 3, to determine the printer failure.

Symptom Tables

Locate the symptom in the following tables and take the appropriate action.

Carrier Transport Problems

Symptom	Action
• No carrier movement • Slow carrier movement • Carrier stops • Carrier slams side frame	Go to the “Carrier Transport Service Check” on page 2-3.

Maintenance Station Problems

Symptom	Action
Maintenance station: • Fails to cap the printheads • Fails to clean the printheads	Go to the “Maintenance Station Service Check” on page 2-5.

Paper Feed Problems

Symptom	Action
• Fails to pick paper • Picks more than one sheet of paper • Picks paper but fails to feed • Paper jams • Paper fails to exit • Noisy paper feed	Go to the “Paper Feed Service Check” on page 2-6.
Envelopes fail to feed	Go to the “Envelope Feed Service Check” on page 2-4.
Paper skews	Go to the “Paper Path Service Check” on page 2-8.

Power Problems

Symptom	Action
No power in machine, motors do not operate	Go to the “Power Service Check” on page 2-9.

Print Quality Problems

Symptom	Action
• Voids in characters • Light print • Prints off the page • Fuzzy print • Carrier moves but no print • Printhead drys prematurely • Colors print incorrectly • Vertical alignment off	Go to the “” on page 2-10.
• Ink smearing • Vertical streaks on paper • Print lines crowded	Go to the “Paper Feed Service Check” on page 2-6.

Service Checks

Carrier Transport Service Check

	FRU	Action
1	System Board	Unplug the printer and disconnect CN6 from the system board. Plug in the printer and check for a pulse of (approximately) 10 V dc between CN6-1and ground, on the system board. If the voltage is not present, check for motor pins shorted to the motor housing. If you find a pin shorted to the housing, replace the motor. If the failure remains, replace the system board.
2	Carrier Transport Motor	Check the motor for binds, or loose motor pulley. A noisy or chattering motor or a motor that fails to turn can be caused by: • An open or short in the motor. • An open or short in the motor driver on the system board. • A bind in the carrier transport mechanism. With the carrier transport motor cable disconnected from the system board, check for zero to ten (0 - 10) ohms between the following pins on the motor: CN6-1 and CN6-2 CN6-3 and CN6-4 If the readings are incorrect, replace the motor.
3	Carrier Guide Rod	Clean the carrier rod. **Note**: Lubricate the rod and the carrier rod bearing surfaces with grease P/N 1329301.
4	Carrier Transport Belt Idler Pulley Parts Carrier Frame	Check for worn, loose or broken parts. Check for obstructions blocking carrier movement. Carrier to carrier frame engagement should be lubricated with grease P/N 1329301.
6	Home Position Sensor	Unplug the printer and disconnect CN5 from the system board. Plug in the printer and check for 5 V dc between CN5-3 and ground, at the system board. If the voltage is present, replace the home position sensor. If the voltage is not present, replace the system board.

	FRU	Action
7	Maintenance Station	A problem with the maintenance station can cause carrier movement problems at the right margin. Go to the “Maintenance Station Service Check” on page 2-5.

Envelope Feed Service Check

	FRU	Action
1	Envelope Guide	Be sure the envelope guide has been turned to the envelope load position. Be sure the envelope guide is against the envelopes. Perform the “Paper Feed Service Check” on page 2-6.

Maintenance Station Service Check

The maintenance station has two functions:

1. Cleans the printhead nozzles during the print operation.
2. Seals the printhead when it is not being used to prevent the nozzles from drying.

	FRU	Action
1	Maintenance Station Assembly	As the carrier moves to the right over the maintenance station, a slot on the bottom of the carrier engages a tab on the sled of the maintenance station causing the cap to rise and seal the printhead. Carrier movement to the left uncaps the printhead. The wiper cleans the printhead nozzles as the carrier leaves the maintenance station. The wiper cleans the printhead only when the carrier is moving to the left. There should be no wiping action of the printhead nozzles when the carrier is moving to the right. After the cleaning operation is complete, a tab on the maintenance station engages a tab on the carrier, causing the wiper to lower. Check the maintenance station for worn or broken parts.
2	Wiper	Worn wipers cause degraded print quality just after a maintenance cleaning. Check for loose or worn wipers.
3	Cap	Worn caps cause the printhead nozzles to dry and clog. Check for loose or worn caps.

Paper Feed Service Check

If your machine does not have paper jam problems, continue with the service check. If your machine does have a paper jam problem, examine it for the following before you begin the service check:

- Check the entire paper path for obstructions.
- Be sure there is not too much paper in the sheet feeder.
- Be sure the correct type of paper is being used.
- Check for static in the paper.

	FRU	Action
1	System Board	Unplug the printer and disconnect CN7 from the system board. Plug the printer in and check for a pulse of 24 V dc between CN7-1 and ground and CN7-2 and ground on the system board. If the voltage is not present, check for motor pins shorted to the motor housing. If you find a shorted pin, replace the motor. If you still have a failure after replacing the motor, replace the system board.

	FRU	Action
2	Paper Feed Motor	A noisy or chattering motor or a motor that fails to turn, can be caused by: • An open or short in the motor • An open or short in the motor driver on the system board • A bind in the paper feed mechanism With the paper feed motor cable disconnected from the system board, check for 60 ohms (±15 ohms) between the following pins on the motor: Pin 1 to Pin 5 Pin 1 to Pin 6 130 ohms (±20 ohms) between pins 5 and 6. If the readings are incorrect, replace the motor. Although the paper feeds in a forward direction only, the paper feed motor turns in two directions. If the paper feed motor turns in one direction only, replace the system board. Binds in the paper feed motor or gear train can cause intermittent false paper jam errors. Remove the paper feed motor and check the shaft for binds. Also check for loose or worn motor gear.
3	Drive Train Assembly	Check for binds in the gear train and paper feed mechanism by removing the paper feed motor and rotating the large gear by hand. If you notice a bind, replace the drive train assembly. Check the feed clutch inside the large feed gear. Remove the sheet feeder. Turn the clutch gear and check that it rotates freely in one direction and locks when turned in the opposite direction.
4	Auto Sheet Feeder	Check the pick rollers for wear.
5	Mid Frame Asm	Check the following for wear: • Friction wheels • Exit roller • Star rollers
6	End-of-Forms Flag and Spring	Check for binds or damage. If binds are found, replace the small feed roll bracket assembly.

Paper Path Service Check

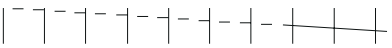
Examine the machine for the following before you begin this service check:

- Check the entire paper path for obstructions.
- Be sure the correct type of paper is being used.
- Be sure the printer is installed on a flat surface.

	FRU	Action
1	Large and Small Feed Rollers	Check for wear and binds.
2	Small Feed Roller Springs	Check for damage.
3	Auto Sheet Feeder	Check the pick rollers for wear.
4	Mid Frame Asm	Check the following for wear: • Friction wheels • Exit roller • Star rollers
5	End-of-Forms Flag	Check for binds or damage.

Power Service Check

	FRU	Action
1	External Power Supply	Disconnect the power supply from the DC/DC converter. Plug the external power supply into an outlet. Check for + 24 V dc. If you do not have correct voltage, replace the external power supply.
2	DC/DC Converter	Disconnect CN8 from the system board and check the following voltages on the DC/DC Converter cable: • CN8-2 to GND = +24 V dc • CN8-4 to GND = + 5 V dc If you do not have correct voltage, replace the DC/DC Converter. Be sure to unplug the machine before you reconnect the DC/DC Converter to the system board.
3	Printhead Cable Carrier Home Sensor Parallel Cable Paper feed motor Carrier transport motor	Unplug the printer. Disconnect one of the printhead cables and plug in the printer. Look for a symptom change. Check the failing part for shorts and replace as necessary. Repeat this procedure for the carrier home sensor, parallel cable, carrier transport motor and paper feed motor.
4	System Board	If the symptom has not changed, replace the system board.

	FRU / Function	Action
1	Print Cartridge	Be sure the machine contains good print cartridges.
2	Color Print Cartridge Cross Contamination	Cross contamination of color inks results in incorrect colors printed, as when green prints for yellow, (when yellow and blue are mixed in the print cartridge). This problem resolves quickly as the print cartridge is used. If cross contamination occurs, check the following: • The maintenance station wiper for damage. • The printhead nozzle plate was resealed with tape.
3	Printhead Carrier Assembly	Reseat the printhead cables in the system board and check the following parts for wear or damage: • Print Cartridge Latch • Latch Spring • Carrier
4	System Board Printhead Cable Rubber Backer	• Run the “Test Page” on page 3-1. Look for a break in the diagonal line of the test pattern. A broken line indicates one or more print nozzles are not working. Run the test again to verify the failure. If there are even breaks in the diagonal line similar to the pattern shown below, ensure the printhead cables are connected properly. If the symptom remains, replace the system board.  If there is a single break or random breaks in the diagonal line, check the following: • Check the gold-plated contacts, on the end of the cable that connect to the carrier, for dirt and wear. Use only a clean dry cloth to clean the contacts. Also check the cable for damage. You may need to remove the cable from the carrier to inspect it. • A worn rubber backer results in poor contact between the printhead cable and the print cartridge. Check the rubber backer for wear.

	FRU / Function	Action
5	Maintenance Station	Intermittent nozzle failures can be caused by worn parts in the maintenance station. Perform the “Maintenance Station Service Check” on page 2-5, then return to this check.
6	Paper Feed	Ink smudging and smearing can be caused by paper problems or problems in the paper feed area. Check the following: • Correct type of paper is being used. Also check the paper for curl or wrinkles. • Feed rollers for wear, dirt, or looseness. • Gears for wear or binds. • Paper path for obstructions.
7	Carrier Transport	Blurred print and voids can be caused by problems in the carrier transport area. Check the following: • Carrier transport belt for wear. • Carrier guide rod for wear or dirt. If dirty, clean and lubricate. • Carrier to carrier frame engagement should be lubricated with grease P/N 1329301. • Idler pulley parts for wear, damage, or looseness.
8	Alignment	Uneven vertical lines can be adjusted by performing the bidirectional alignment. The user is directed, through the Printer Control program, to perform the bidirectional printing alignment, when replacing a print cartridge.

3. Diagnostic Aids

Test Page

This test prints the test page.

To run a complete test page of black and color patterns, be sure the print cartridges are in good condition.

To enter the test:

Move the carrier to the far left, before turning the printer on

The test page prints the following lines:

Line 1 - Code level and date.

Line 2 - Manufacturer name.

Line 3 - Model name.

Line 4 - Motor type.

The next line is the black print cartridge nozzle pattern. The next three lines are the purge pattern where all nozzles are printing. This action cleans (purges) the nozzles. Another nozzle test pattern follows.

These test patterns are used to verify all print cartridge nozzles are working. There should be no breaks in the diagonal line. A break in the diagonal line indicates one or more nozzles are not working.

4. Repair Information

This chapter explains how to make adjustments to the printer and how to remove defective parts.

Note: Read the following before handling electronic parts.

Handling ESD-Sensitive Parts

Many electronic products use parts that are known to be sensitive to electrostatic discharge (ESD). To prevent damage to ESD-sensitive parts, follow the instructions below in addition to all the usual precautions, such as turning off power before removing logic boards:

- Keep the ESD-sensitive part in its original shipping container (a special “ESD bag”) until you are ready to install the part into the machine.
- Make the least-possible movements with your body to prevent an increase of static electricity from clothing fibers, carpets, and furniture.
- Put the ESD wrist strap on your wrist. Connect the wrist band to the system ground point. This discharges any static electricity in your body to the machine.
- Hold the ESD-sensitive part by its edge connector shroud (cover); do not touch its pins. If you are removing a pluggable module, use the correct tool.
- Do not place the ESD-sensitive part on the machine cover or on a metal table; if you need to put down the ESD-sensitive part for any reason, first put it into its special bag.
- Machine covers and metal tables are electrical grounds. They increase the risk of damage because they make a discharge path from your body through the ESD-sensitive part. (Large metal objects can be discharge paths without being grounded.)
- Prevent ESD-sensitive parts from being accidentally touched by other personnel. Install machine covers when you are not working on the machine, and do not put unprotected ESD-sensitive parts on a table.
- If possible, keep all ESD-sensitive parts in a grounded metal cabinet (case).
- Be extra careful in working with ESD-sensitive parts when cold weather heating is used because low humidity increases static electricity.

Adjustments

The user is directed, in the Printer Control program, to perform the bidirectional alignment adjustments after replacing a print cartridge.

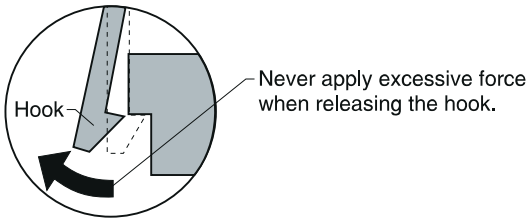
Removal Procedures

The following procedures are arranged according to the name of the printer part discussed.

CAUTION: Unplug the power cord before removing any parts.

Releasing Plastic Latches

Many of the parts are held in place with plastic latches. The latches break easily; release them carefully. To remove such parts, press the hook end of the latch away from the part to which it is latched.



Access Cover Removal

1. Open the access cover.
2. Push the mounting tabs toward the center of the machine.
3. Remove the access cover.

Base Assembly Removal

1. Remove the front cover.
2. Remove the rear cover.
3. Remove the sheet feeder.
4. Disconnect the DC/DC converter connector at the system board.
5. Remove the two screws that secure the carrier frame to the base assembly.
6. Remove the screw that secures the DC/DC Converter frame to the carrier frame.
7. Press down on the left side clip and slide the DC/DC converter out of the base.
8. Unlatch the carrier frame from the base assembly and lift it off the base.
9. Slide the machine off the base assembly.

Carrier Belt Removal

1. Remove the front cover.
2. Remove the retainer spring from the left side of the carrier rod.
3. Remove the screw from the right side of the carrier rod.
4. Slide the carrier rod to the left, out of the machine.
5. Remove the carrier belt from the rear of the carrier.
6. Remove the carrier belt from the carrier transport motor pulley.
7. Remove the carrier belt.

Carrier Frame Assembly Removal

The carrier rail mounted by two screws on the carrier frame is included with the carrier frame (11B5584). The carrier rail, which is not available as a FRU, is mounted in the elongated slots at the factory. During adjustment, the rail is pushed to the rear as far as it will go, before the mounting screws are tightened.

1. Remove the front cover.
2. Remove the rear cover.
3. Remove the sheet feeder.
4. Disconnect the DC/DC converter connector at the system board.
5. Remove the two screws that secure the carrier frame to the base assembly.
6. Remove the screw that secures the DC/DC converter frame to the carrier frame.
7. Press down on the left side clip and slide the DC/DC converter out of the base.
8. Unlatch the carrier frame from the base assembly and lift it off the base.
9. Slide the carrier frame assembly off the base assembly.
10. To replace the carrier frame, remove all associated parts from the old carrier frame and install them on the new carrier frame.

Carrier Home Sensor Removal

1. Remove the front cover.
2. Remove the rear cover.
3. Disconnect the sensor cable from the system board.
4. Remove the screw that secures the sensor to the carrier frame.
5. Remove the sensor.

Carrier Transport Motor Removal

1. Remove the front cover.
2. Remove the rear cover.
3. Disconnect the carrier transport motor connector from the system board.
4. Remove the belt from the carrier transport motor pulley.
5. Remove the two screws securing the carrier transport motor to the carrier frame and remove the motor. Note the routing of the motor cable.
6. See the **Note** in the “” on page 2-10.

DC/DC Converter Removal

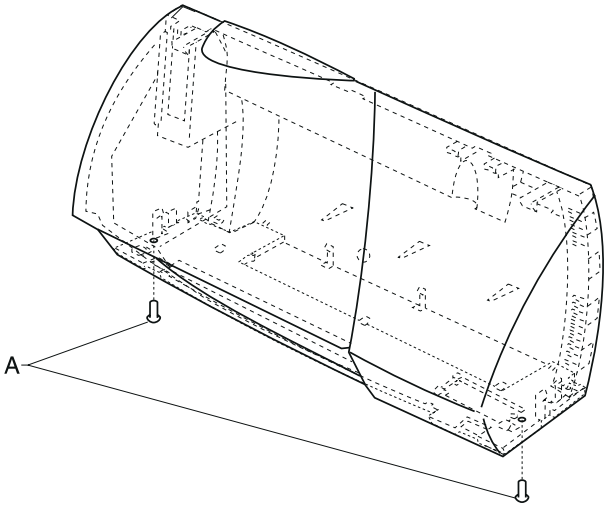
1. Remove the front cover.
2. Remove the rear cover.
3. Disconnect the DC/DC converter connector from the system board.
4. Remove the screw that secures the DC/DC converter to the carrier frame on the right side.
5. Push down on the latch at the left rear of the DC/DC converter and slide it off the base.

Drive Train Assembly Removal

1. Remove the front cover.
2. Remove the rear cover.
3. Remove the sheet feeder.
4. Unplug the paper feed motor assembly. Note the routing of the motor cable.
5. Remove the two screws securing the drive train to the carrier frame.
6. Push the drive train to the left and remove it from the carrier frame.

Front Cover Removal

1. Turn the printer over to expose the base. Remove the two cover mounting screws [A] from the front cover. When reassembling, do not overtighten these screws as they will break. Replacement screws can be found in parts packet 11B5600.



2. Slide the cover upward and off the machine.

To reassemble:

1. Align the tabs on the front cover over the front edge of the base assembly.
2. Rotate the front cover over the top edge of the rear cover and press in on both sides opposite the cover latches, until they latch.

Gutter Pad Removal

1. Remove the front cover.
2. Remove the rear cover.
3. Remove the sheet feeder.
4. Remove the base assembly.
5. Remove the gutter pad from the base assembly.

Large Feed Roll Removal

1. Remove the front cover.
2. Remove the rear cover.
3. Remove the sheet feeder.
4. Remove the base assembly.
5. Remove the system board.
6. Remove the printhead carrier assembly.
7. Remove the small feed roll assemblies.
8. Remove the small feed roll bracket assembly.
9. Remove the mid frame assembly.
10. Remove the maintenance station assembly.
11. Turn and remove the retainer at the right end of the large feed roller.
12. Remove the large feed roller from the carrier frame.

Maintenance Station Assembly Removal

1. Remove the front cover.
2. Remove the rear cover.
3. Remove the base assembly.
4. Depress the clip on the left and right side of the carrier frame that secures the maintenance station assembly and slide the assembly out of the machine.

Maintenance Wiper and Cap Removal

1. Remove the front cover.
2. Push the carrier to the left away from the maintenance station.
3. Gently pull the cap and wiper off their mountings.

Mid Frame Assembly Removal

1. Remove the front cover.
2. Remove the rear cover.
3. Remove the sheet feeder.
4. Remove the system board.
5. Remove the small feed roll assemblies.
6. Remove the small feed roll bracket assembly.
7. Remove the printhead carrier assembly.
8. Lift up the rear of the mid frame assembly and remove it from the carrier frame.

Paper Feed Motor Removal

1. Remove the front cover.
2. Remove the rear cover.
3. Disconnect the paper feed motor from the system board.
4. Remove the two screws mounting the paper feed motor to the drive train assembly and remove the motor.
5. See the **Note** in the “” on page 2-10.

Printhead Carrier Assembly Removal

1. Remove the front cover.
2. Remove the rear cover.
3. Remove the sheet feeder.
4. Unlock the four printhead cable connectors and disconnect the printhead cable from the system board.
5. Unlatch the cable retainer from the carrier frame.
6. Remove the retainer spring from the left end of the carrier guide rod.
7. Remove the screw from the right end of the carrier guide rod.
8. Slide the carrier guide rod out the left side of the machine.
9. Remove the belt from the back of the carrier.
10. Lift the carrier out of the machine.

Rear Cover Removal

1. Remove the screws from the bottom assembly.
2. Remove the front cover.
3. Pry upward on the two rear cover latches.
4. Work the tabs of the rear cover free from the base assembly.
5. To reassemble, place the cover over the tabs in the base assembly and press toward the front of the machine until the cover latches. Be sure the parallel connector snaps do not get trapped behind the cover.

Sheet Feeder Removal

1. Remove the front cover.
2. Remove the rear cover.
3. Remove the two sheet feeder mounting screws from the rear of the carrier frame.
4. Unlatch the right sheet feeder latch from the front of the carrier frame.

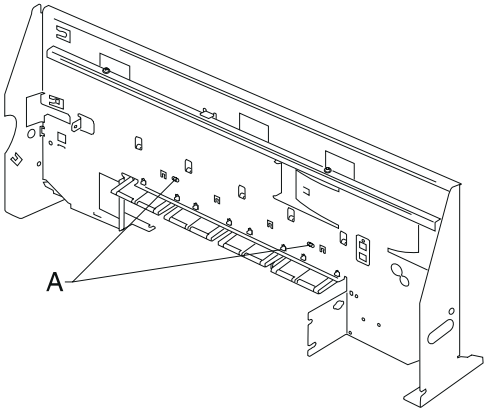
   Note: For reassembly. The cables are routed through tab slots in the sheet feeder.
5. Remove the sheet feeder.

Small Feed Roll Assembly Removal

1. Remove the front cover.
2. Remove the rear cover.
3. Remove the sheet feeder.
4. Remove the system board.
5. Remove the four small feed roller springs from the carrier frame.
6. Push down on each of the small feed roll assemblies to remove them from the small feed roll bracket.

Small Feed Roll Bracket Assembly Removal

1. Remove the front cover.
2. Remove the rear cover.
3. Remove the sheet feeder.
4. Remove the system board.
5. Remove the four small feed roller springs from the carrier frame.
6. Push down on each of the small feed roll assemblies to remove them from the small feed roll bracket.
7. Push the two locking tabs [A] to the rear to release the small feed roll assembly from the carrier frame.

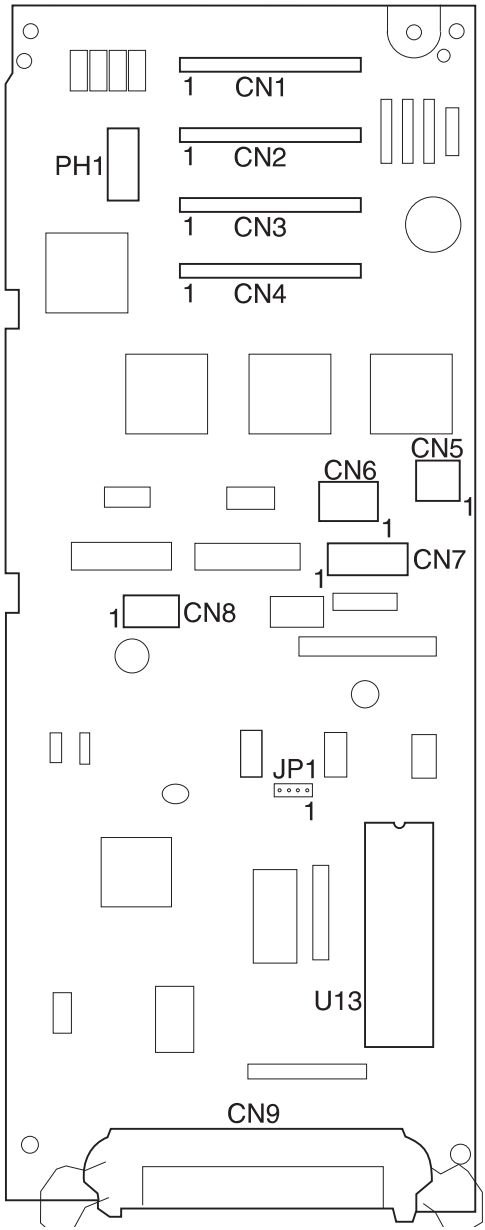


System Board Removal

1. Remove the front cover.
2. Remove the rear cover.
3. Unlock the four printhead cable connectors and disconnect the printhead cables from the system board.
4. Disconnect the other cables from the system board.
5. Remove the three screws securing the system board to the carrier frame and remove the system board. Note the routing of all the cables.
6. Remove the system board being careful not to damage the End-of-Form flag.
7. See the **Note** in the “” on page 2-10.

5. Connector Locations

System Board Connectors



Connector	Connector Names
CN1	Printhead Cable 1
CN2	Printhead Cable 2
CN3	Printhead Cable 3
CN4	Printhead Cable 4
CN5	Home Position Sensor
CN6	Carrier Transport Motor
CN7	Paper Feed Motor
CN8	DC/DC Converter
CN9	Parallel Port
PH1	EOF Sensor
U13	Code Module
JP1	Jumper

6. Preventive Maintenance

This chapter contains the lubrication specifications. Follow these recommendations to prevent problems and maintain optimum performance.

Lubrication Specifications

Lubricate only when parts are replaced or as needed, not on a scheduled basis. Use grease P/N 1329301 to lubricate the following:

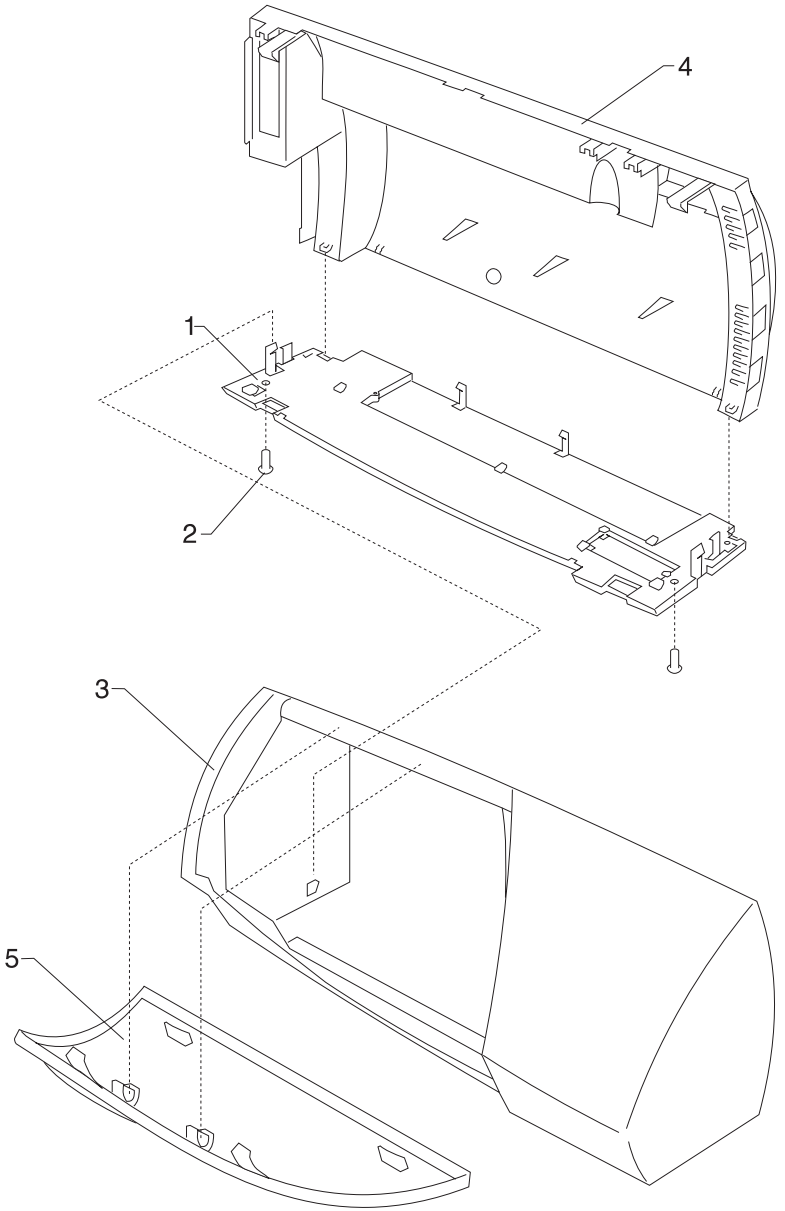
- All gear mounting studs.
- The left and right ends of the large feed roller at the side frames.
- The carrier to carrier frame engagement.
- The carrier guide rod, and carrier guide rod bearings.

7. Parts Catalog

How to Use This Parts Catalog

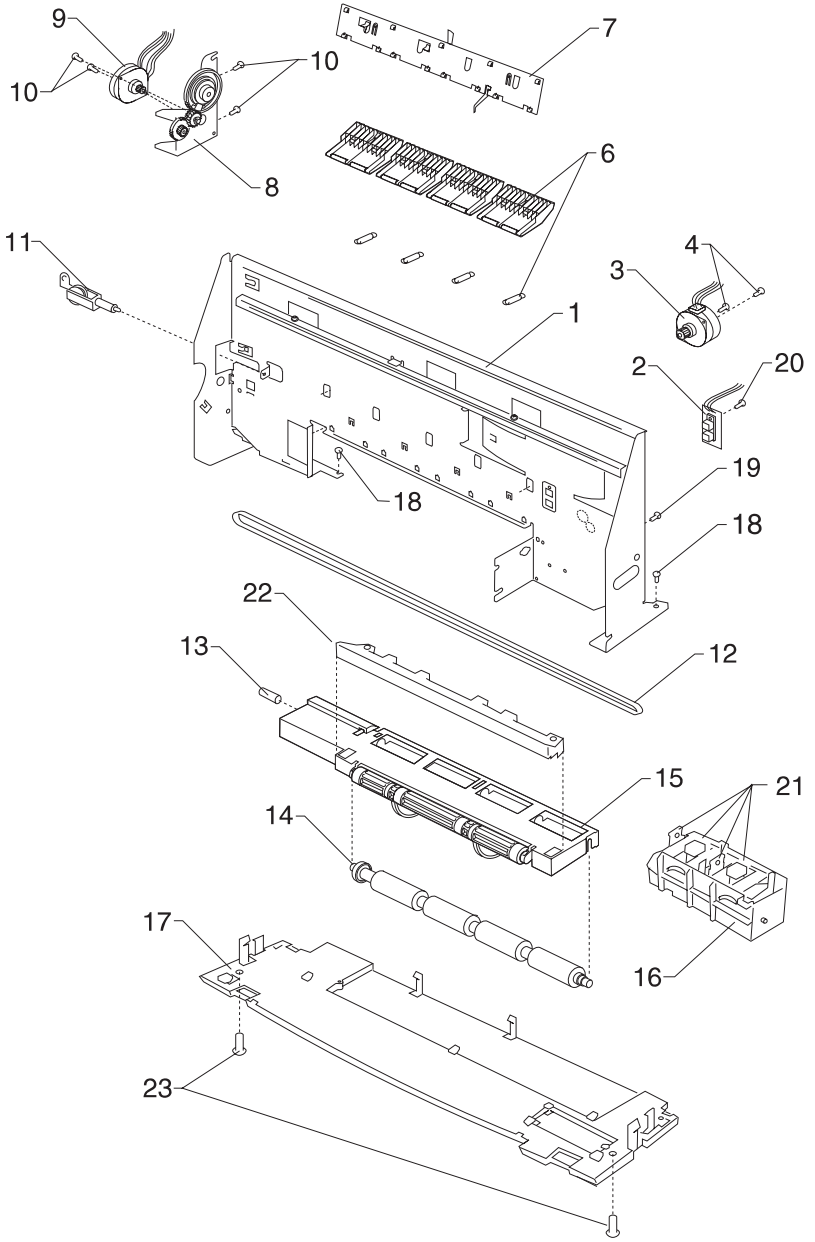
- SIMILAR ASSEMBLIES: If two assemblies contain a majority of identical parts, they are broken down on the same list. Common parts are shown by one index number. Parts peculiar to one or the other of the assemblies are listed separately and identified by description.
- NS: (Not Shown) in the Asm-Index column indicates that the part is procurable but is not pictured in the illustration.
- PP: in the parts descriptions column indicates the part is available in the listed parts packet.

Assembly 1: Covers



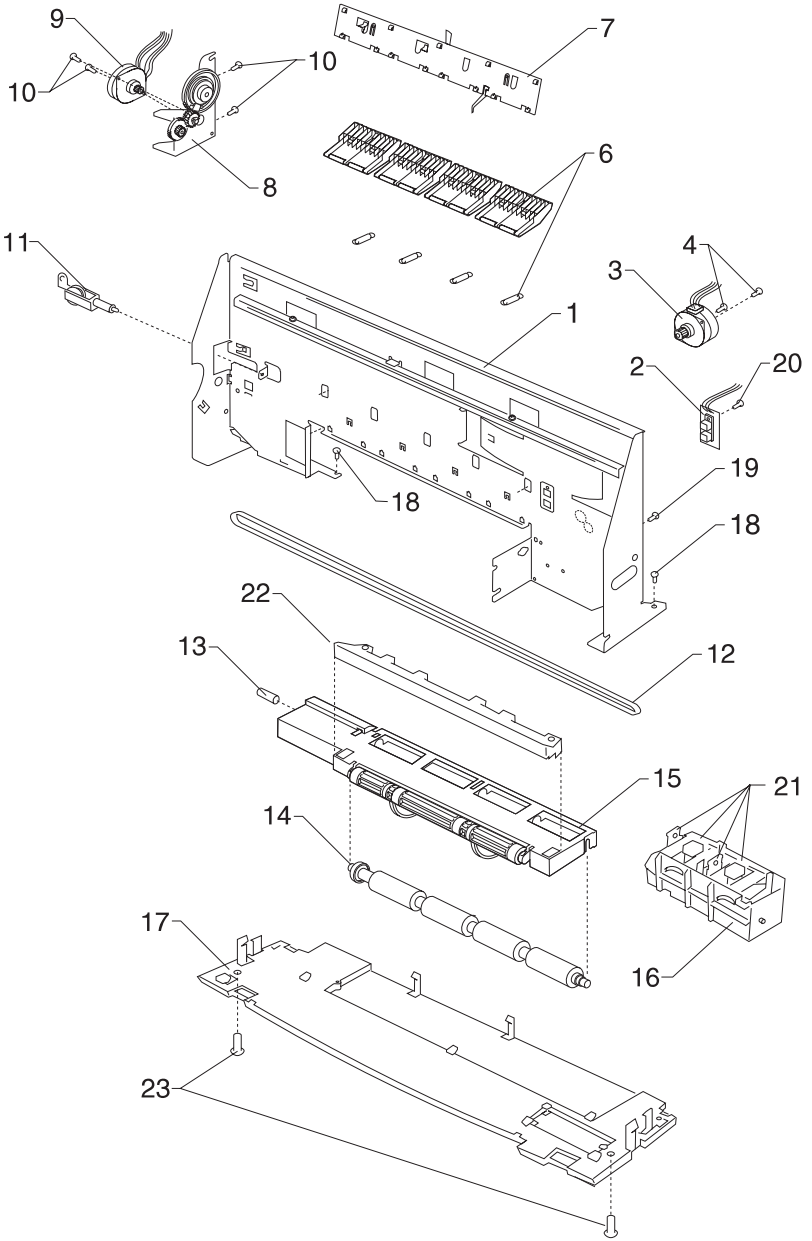
Asm-Index	Part Number	Units	Description
1 -1	11B5580	1	Base Assembly
2	11B5600	2	Front Cover Mounting Screws (PP)
3	11B5581	1	Cover, Front Assembly
4	11B5582	1	Cover, Rear Assembly
5	11B5583	1	Cover, Access Assembly
N/S	7347859	1	Replaceable Package B/M - Includes: (Carton, Cushion Set, Sealing Tape)

Assembly 2: Paper Feed / Carrier Transport / Maintenance



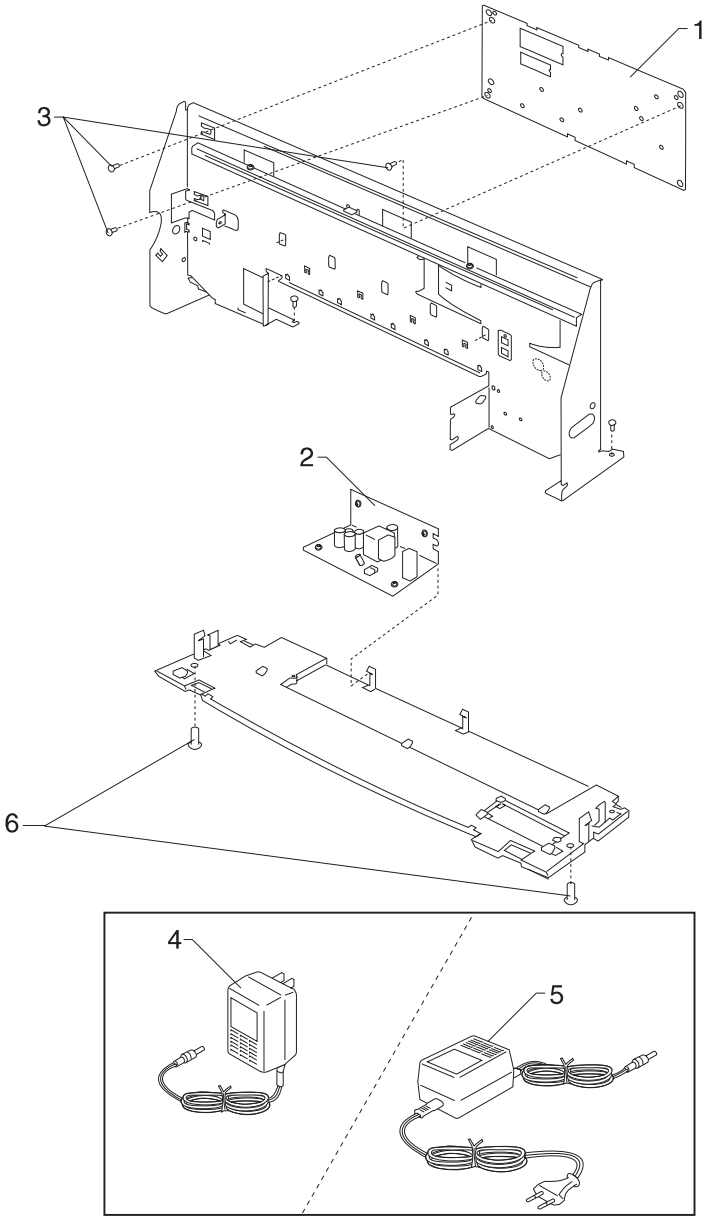
Asm-Index	Part Number	Units	Description
2 -1	11B5584	1	Frame, Carrier with cable guide system board stand off.
2	11B5586	1	Sensor, Carrier Home
3	11B5598	1	Motor, Carrier Transport Assembly
4	11B5600	2	Screw, (PP)
6	11B5601	1	Feed Roll Assembly, Small
7	11B5589	1	Mounting Bracket, Small Feed Roll Assembly
8	11B5590	1	Drive Train Assembly
9	11A5444	1	Motor, Paper Feed Assembly
10	11B5600	5	Screws, Paper Feed Motor Mounting (PP)
11	11B5588	1	Arm, Tensioner
12	11B5597	1	Belt, Carrier
13	11B5600	1	Spring, Large Feed Roll Dampening (PP)
14	11A5440	1	Feed Roll Assembly, Large
15	11B5587	1	Frame, Mid Assembly
16	11B5599	1	Maintenance Assembly
17	11B5580	1	Base Assembly

Assembly 2: Paper Feed / Carrier Transport / Maintenance



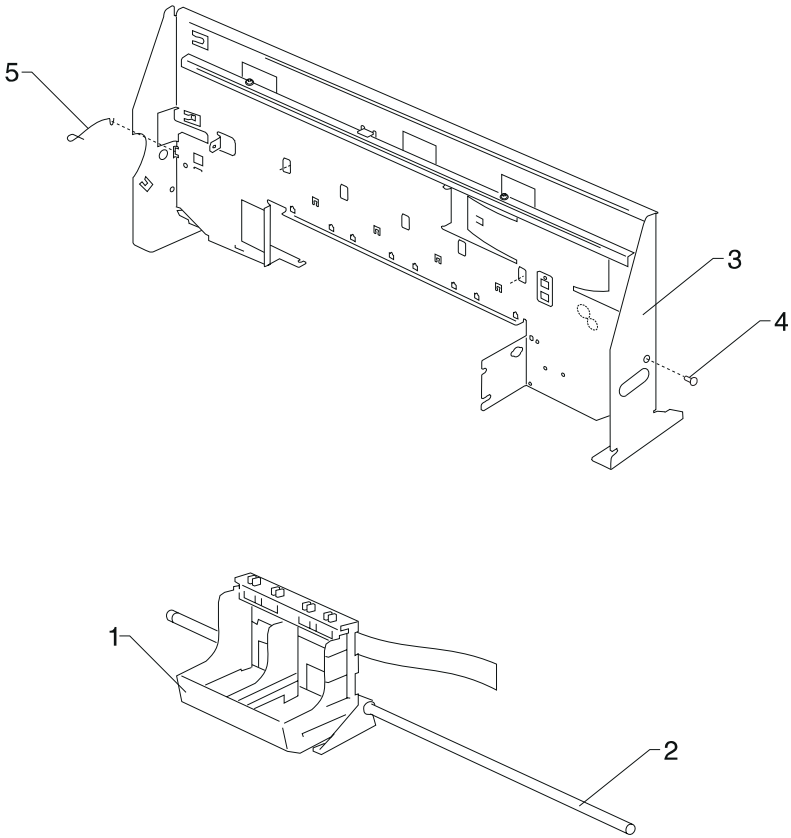
Asm-Index	Part Number	Units	Description
2- 18	11B5600	2	Screw, (PP)
19	11B5600	1	Screw, (PP)
20	11B5600	1	Screw, (PP)
21	1367389	1	Cap and Wiper B/M (One of each)
22	11B5595	1	Star Roller Asm
23	11B5600	2	Screw (PP)
NS	11B5600	2	Bearings, Large Feed Roll
NS	11B5600	2	Screws, Star Roller Assembly Mounting

Assembly 3: Electronics



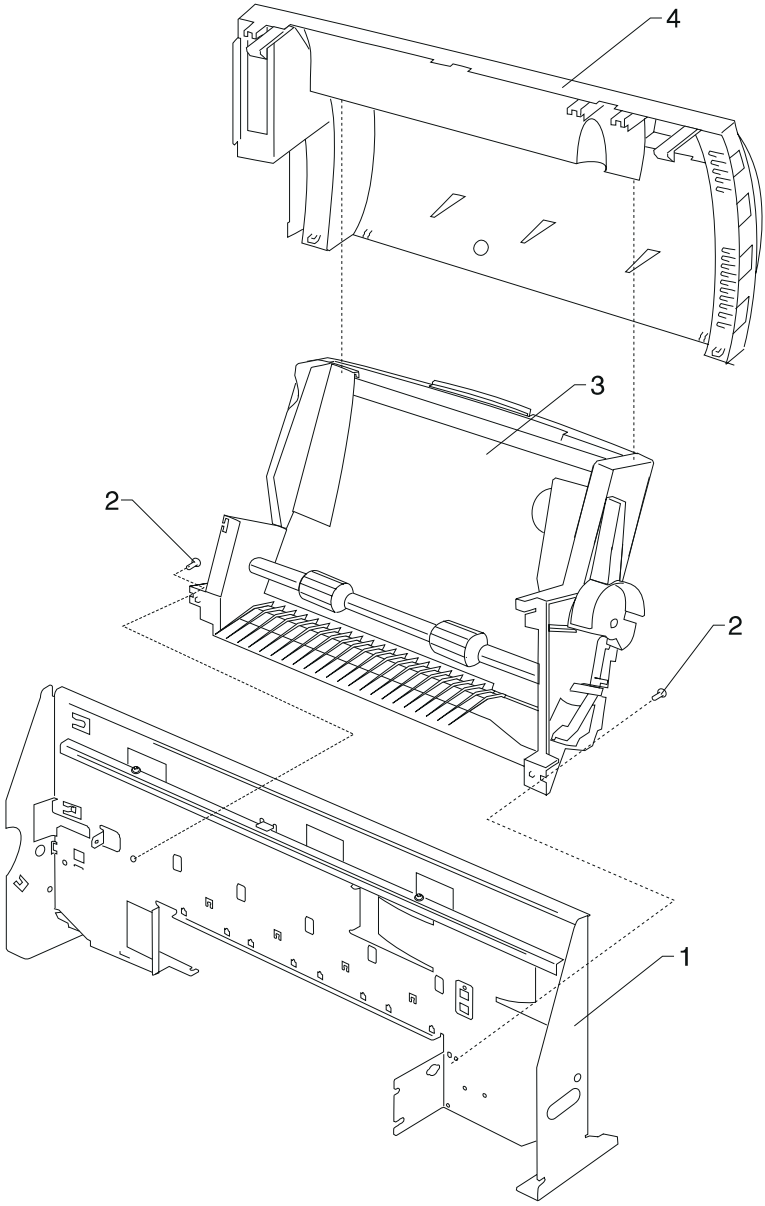
Asm-Index	Part Number	Units	Description
3 -1	11B5591	1	System Board with ROM
2	11B5594	1	DC/DC Converter
3	11B5600	3	Screws, System Board (PP)
4	11B5592	1	External Power Supply Asm. (LV)
5	11B5593	1	External Power Supply Asm. (HV)
6	11B5600	2	Screws, Base Asm (PP)
NS	11B5602	1	Cable, Parallel Port
NS	11B6073	1	Power Cable (United Kingdom)
NS	11B6074	1	Power Cable (Europe)
NS	11B6075	1	Power Cable (Israel)
NS	11B6076	1	Power Cable (Australia / New Zealand)
NS	11B6077	1	Power Cable (South Africa)
NS	11B6078	1	Power Cable (Peru)

Assembly 4: Carrier



Asm-Index	Part Number	Units	Description
4 -1	11B5596	1	Carrier Assembly
2	11B5585	1	Rod, Carrier Guide
3	11B5584	1	Frame, Carrier
4	11B5600	1	Screw, Carrier Guide Rod (PP)
5	11B5600	1	Spring, Carrier Guide Rod (PP)

Assembly 5: Sheet Feeder



Asm-Index	Part Number	Units	Description
5 -1	11B5584	1	Frame, Carrier
2	11B5600	2	Screws, Sheet Feeder Mounting (PP)
3	11A5451	1	Sheet Feeder Asm
4	11B5582	1	Cover, Rear Asm

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