Desktop Thermal Printers Service Manual

2443
2824
2844
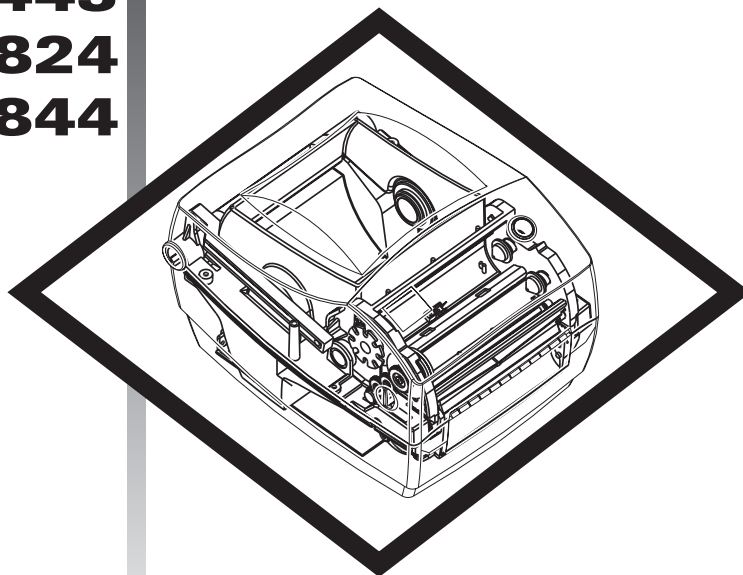
Zebra Technologies Corporation

FOREWARD

This manual provides spares replacement and service information for the LP 2443, LP 2824, TLP 2824, LP 2844, and TLP2844 series printers, manufactured by Zebra Technologies Corporation, Camarillo, California.

TECHNICAL SUPPORT

If for any reason you require product technical support, please contact the Distributor where you first purchased your equipment. If they cannot help you or at their direction, contact Zebra Repair Administration.

RETURN MATERIALS AUTHORIZATION

Before returning any equipment to Zebra for in warranty or out of warranty repair, contact Repair Administration for a Return Materials Authorization (RMA) number. Repack the equipment in the original packing material and mark the RMA number clearly on the outside. Ship the equipment, freight prepaid, to the address listed below:

Zebra RMA, USA
1001 Flynn Road
Camarillo, CA. 93012
Phone: +1 (805) 579-1800
repair@zebra.com

Label Printers:	**Card Printers:**
Zebra International, Europe	Zebra International, Europe
Zebra House, The Valley Centre	Zone Indutrielle, Rue d'Amsterdam
Gordon Road, High Wycombe	44370 Varades, France
Buckinghamshire HP13 6EQ, United Kingdom	Phone: +33 (0) 240 097 070
Phone: +44 (0) 1494 472872	FAX: +33 (0) 240 834 745
FAX: +44 (0) 1494 450103	

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TRADEMARKS

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OPERATOR CAUTIONS AND WARNINGS

These pages describe general safety and maintenance procedures that an operator must follow. They are referenced throughout the service manual. The manual may include other warnings and cautions not displayed here.

Warning - Shock Hazard

The printer should never be operated in a location where it can get wet. Personal injury could result.

Warning - Static Discharge

The discharge of electrostatic energy that accumulates on the surface of the human body or other surfaces can damage or destroy the print head or electronic components used in this device. TAKE ANTI-STATIC PRECAUTIONS before handling the print head or the electronic components under the print head assembly.

Caution - Printer Setup & Handling

1)When installing or modifying the printer setup or configuration, *ALWAYS TURN POWER OFF Before*:
   A) Connecting any cables.
   B) Performing any cleaning or maintenance operations.
   C) Moving the printer.

2) Damage to the printer interface connector, accessories or enclosure may result from placing the printer on it's front bezel or backside during unpacking or handling.

1) Always use high quality approved labels and tags. Approved supplies can be ordered from your dealer.

2) If poor quality, adhesive backed labels are used, that DO NOT lay flat on the backing liner, the exposed edges may stick to the label guides and rollers inside the printer, causing the label to peel off from the liner and jam the printer.

3) DO NOT use non-approved transfer ribbon. Permanent damage to the print head may result if a non-approved ribbon is used. Non-approved ribbons maybe wound incorrectly for the printer or contain chemicals that may damage the print head.

4) IMPORTANT - If a transfer ribbon is installed incorrectly by the operator, damage to the print head may result.

5) DO NOT use a ribbon when printing with direct thermal media.

Media Reload Tip

If you should run out of labels or ribbon while printing, DO NOT turn the power switch OFF (0) while reloading or data loss may occur. The printer will automatically resume printing when a new label or ribbon roll is loaded.

Print Quality Tip

Print density (darkness) is affected by the heat energy (density setting) applied and by the print speed. Changing both Print Speed and Density may be required to achieve the desired results.

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CABLE ROUTING 63

INTRODUCTION

If you are a field engineer or technician, this manual helps you with routine maintenance, troubleshooting and procedures for replacing parts for repair.

Follow the parts replacement procedures as closely as possible. If you are unsure of any procedure, please contact your service representative or call the products technical support group at Zebra Technologies Corporation, (805) 579-1800.

Zebra Technologies stocks all replacement parts for the printer. Be sure your facility stocks sufficient parts for the printer so that scheduled maintenance can take place in a timely manner.

Models

There are several models of the printer, each of which look similar but have different ribbon and media handling features.

LP models print using direct thermal media only. The top case is flat.

TLP models print using either direct thermal or thermal transfer media. The top case flares at the front to enclose the carriage and ribbon spool hubs.

There are models that can handle up to four-inch (102 mm) wide media and those that can handle up to two-inch (51 mm) wide media.

These printers also have optional media handling functions such as the dispensers to present a single label already peeled from the backing or cutters to present a single label snipped from the roll.
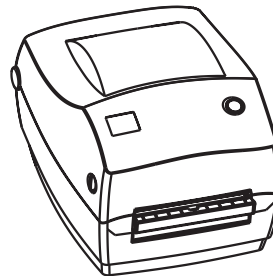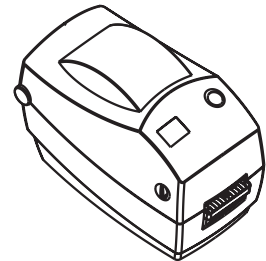
The power supply and firmware also are characteristics of the printer model and allow the printer to be used in various countries.

LP2844 and LP 2443   LP2824

TLP2844   TLP2824

Conventions

This manual uses the following notations to call attention to important information.

ICON / SYMBOL	MEANING
	WARNING - critical safety information.
	CAUTION - problem avoidance messages.
	STATIC SENSITIVE - follow procedures that protect against the discharge of electrostatic energy that accumulates on the surface of the human body or other objects as this discharge can damage or destroy the print head and other electronic components.
	HEAT - The print head becomes hot while printing. Protect against personal injury. DO NOT touch the print head. Use only the cleaning pen to perform maintenance.
	NOTE - important instructions and reminders.
	HINT - helpful information.

Unpacking the Printer

Printers are carton shipped and wrapped inside a protective electrostatic discharge (ESD) bag. Keep all packing materials in case you need to reship the printer later or store the printer for any length of time.

Preparing a Static-Safe Work Area

Prepare a static-safe work area before opening the printer for repair. The area must include a properly grounded conductive cushioned mat to hold the printer and a conductive wrist strap for the technician. ESD protective devices are available from most electronic supply stores or by contacting 3M corporation at (800) 328-1368

Environmental and Shock Protection

Extreme temperature and humidity fluctuations or mishandling can damage the printer and power supply.

Allow 30 minutes or more before opening the printer's plastic bag. This time allows the printer to stabilize temperature especially after storage in a cool, dry location and then placement in a warmer, more humid location. Warm, humid air condenses on the cool components of the printer and this condensation may damage the components.

Move the printer carefully. Mechanical damage can certainly result from falls or rough handling.

CLEANING AND MAINTENANCE

The printers are manufactured and tested under a strict quality management program. Zebra Technologies uses only high quality components and materials in its printers. Although only minimal routine maintenance is required, following these simple maintenance guidelines will ensure longer life with quality printing performance.

General Cleaning

Keep the outside your printer clean by periodically wiping it with a soft cloth dampened with water. Do not use abrasive cleaners as they will damage the surfaces.

Shock Hazard - See page iv. Always turn off the printer before cleaning.

Cleaning the Media Path

Keep the inside of your printer clean as needed, by using a brush, vacuum or air blower along the media path (except the print head).

If a label jams inside the printer, remove the label and any adhesive residue immediately. Adhesive may spread throughout the printer's media path if not completely removed. Many adhesive are permanent and have short "set" times.

If the platen, dispenser bar, or serrated tear bar require cleaning, use 70% isopropyl alcohol absorbed into a clean, lint-free cloth to wipe these surfaces. To turn the platen, use your finger to advance the platen gear. However, if the platen is designed for linerless media, do not use alcohol.

If the cutter requires cleaning, turn the printer off. Use tweezers to remove the media. Never use solutions or solvents to clean the blade. If necessary, turn the printer on and use the C programming command to cycle the cutter several times to perform a self cleaning operation. See the EPL2 programmer's manual.

Before Loading Media

You must remove the outside length of media (that is, one, full revolution of labels and any liner). When you remove this part of the media, you remove the oils, dust, and adhesives that contaminate it. Tape or adhesive holds the loose end and the outside length of media becomes contaminated when handled or stored.

⚠ You must avoid dragging adhesive or dirty media between the print head and platen. Such an occurrence damages the print head and is not covered under the warranty. Using clean media prevents damage and reduces wear on the print head and platen.

Labels
Remove all labels that are held by adhesives or tape.

Tag Stock
Detach both ends of the bottom tag.
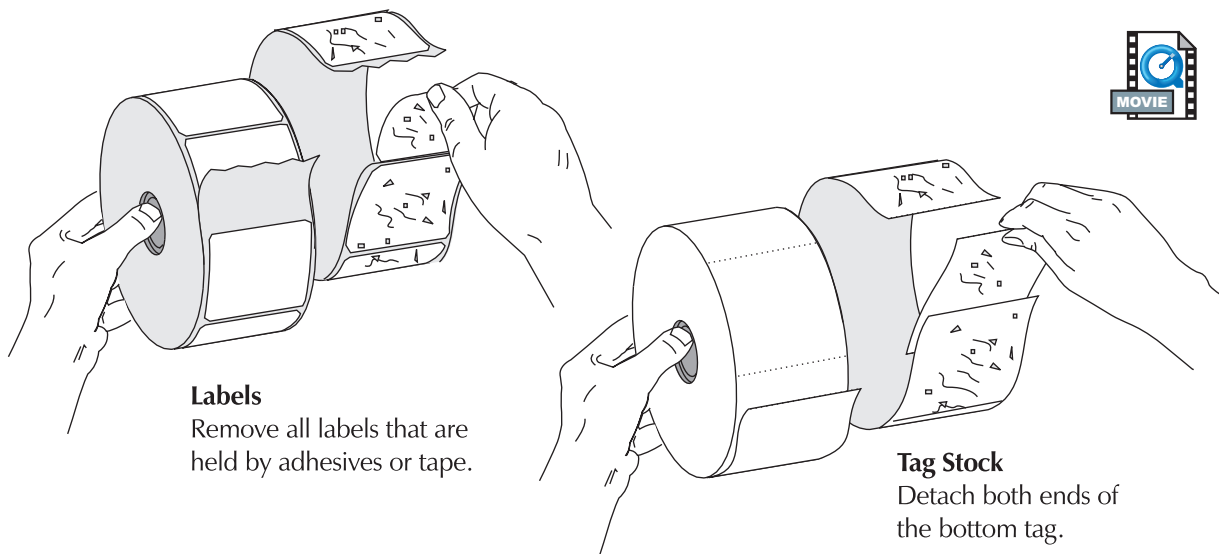
Cleaning the Print Head

When handled during installation, and over time, the print head may become contaminated resulting in poor print quality. After installing a new print head or after using a roll of media or ribbon, rub the cleaning pen across the dark area of the print head. Allow the print head to dry for one minute before loading labels.

> Avoid touching the print head whenever possible. To remove dirt or dust, always gently clean the print head with a cleaning pen or a cotton swab moistened with 70% isopropyl alcohol.

Lubrication

None of the serviceable parts require additional lubrication.

TROUBLESHOOTING GUIDE

| PROBLEMS	SOLUTIONS
Status indicator does not light when power switch is on (I)	1. Check power connections from the printer to the outlet.
Printer is in dump mode but nothing prints after sending file.	1. File does not contain a form feed code that will advance sheet. Press the Feed button to print data in the printer's buffer.
ASCII characters print in place of expected label art and bar codes.	1. Printer may be in dump mode. Press the Feed button to reset to normal operation. 2. Check serial port configuration using the **Y** command. See the EPL2 programmer's manual.
Printing is uniformly faded or poor quality.	1. Wipe the print head with the cleaning pen. 2. Adjust print speed/darkness in software or with programming. 3. Check the roll and verify that the media print surface is facing up. 4. Verify that the correct combination thermal transfer ribbon and media are in use.

PROBLEMS	SOLUTIONS
Printer appears to be working with the indicator light GREEN, but nothing is printed.	1. Check the connections between the printer and the cable as well as the cable and the computer. 2. Verify that the labels are the correct type. 3. Check the roll and verify that the print surface faces up for direct thermal printing. 4. Check that the transfer ribbon is correctly routed and has the ink side down. 5. Check print head wire bundle connections in carriage at main PCBA.
Printing stops and status indicator lights red	1. Perform the AutoSense adjustment. 2. Check that gap between labels is at least 1/16 inch (1.6mm) 3. Check for media jam. 4. Check that media is correctly routed. 5. Check printer memory configuration and correct data syntax. 6. Transmissive (gap) is dirty. Clean media path.
Status indicator remains red.	1. Check for out-of-media condition or missing labels in the middle of a roll. 2. Check for out-of-ribbon condition or damage or previous use of ribbon in middle of roll. 3. Check that the ribbon and label stock or correctly routed 4. If using direct thermal printing, check that programmed mode or printer driver is set for direct thermal printing. See the programmer's book for details. 5. Transmissive (gap) sensor may be dirty. Clean media path. 6. Check that the printer carriage is closed and latched.
Rubbing noise when pressing Feed button.	1. Media is not loaded and the platen is rubbing against the print head. Insert media (and load ribbon if necessary) between carriage and platen.
Cutter makes incomplete cuts or cuts in the wrong spot.	1. Form length is set wrong. Change length through printer driver or programming language. See the EPL2 programming manual.
Short length, perforated media are difficult to load when preparing for dispenser/peel mode.	1. Media length must be a minimum of 0.5 inch (12.7mm).

| PROBLEMS	SOLUTIONS
Printer firmware must be updated.	The printer firmware is updated by way of the parallel port. 1. Use the download utility to send firmware to the printer. 2. Optionally, you can download from the c:\ prompt by typing **copy/b** *filename* **lpt1:** from the directory holding the update file. The printer's light should start flashing green-orange, and then every few seconds will flash red a couple of seconds. Once the update is done, the light goes dark then comes on green.

Print Head Wear

The print head has a limited life and is considered a consumable item. The media rubs across the print elements and wears away the surface. Media material, operational settings, and environment all affect this process. Printing with worn elements may create illegible images. If the print quality remains poor after cleaning, you may need to replace the print head. Damage can be caused by improper cleaning (unapproved fluids or implements), electrostatic discharge (ESD), or touching the print head (contaminating it with bodily, oily acids). Examples of poor print:

Weak or Damaged Print Elements
(Full-On Print Pattern)
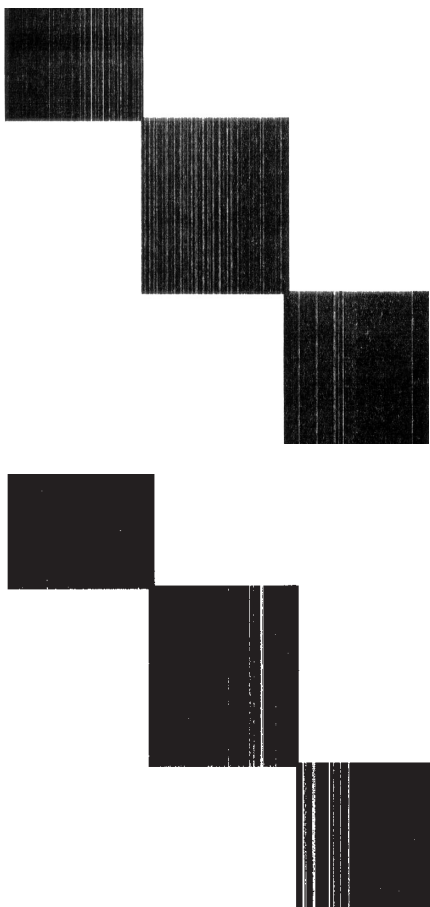
Weak or Damaged Print Elements or Print Logic
(Rotating Print Element Pattern)
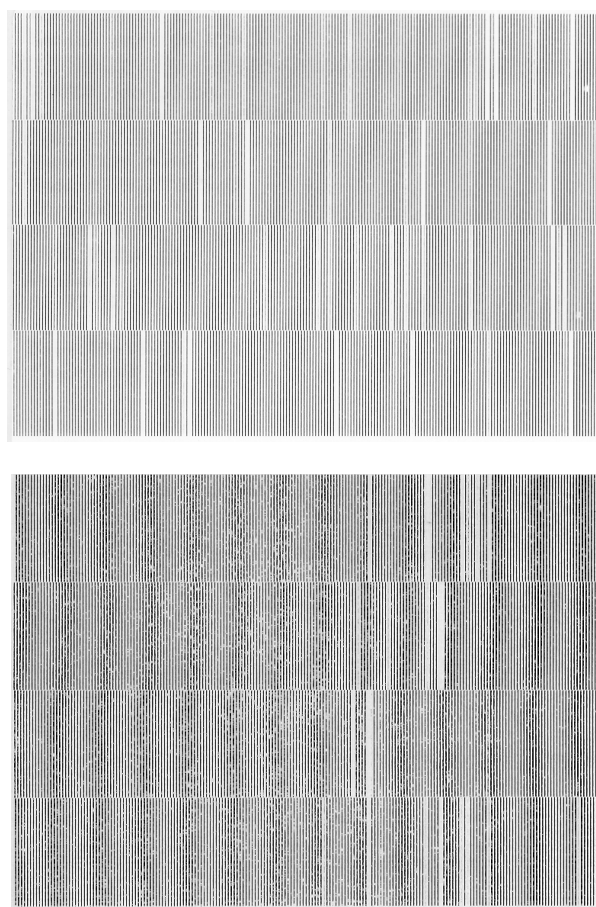
The print head on the left is brand new. The print head in the center has been run over a million inches and has been cleaned after each media roll (and/or ribbon). The print head on the right has been run less than a million inches without cleaning and wear is evident.
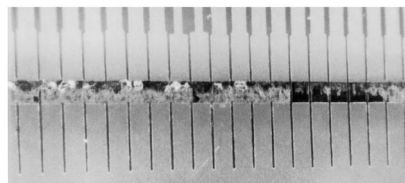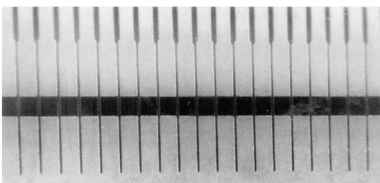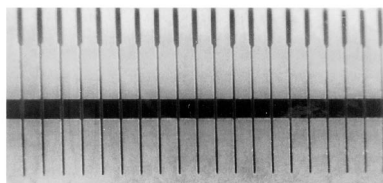
REQUIRED TOOLS

Make use of the following tools while performing replacement procedures:

- Phillips driver #0
- Phillips driver #1
- Phillips driver #2
- Slot-head screwdriver
- tweezers
- needle-nose pliers
- pliers for integrated chips

2844 and 2443 PARTS

The 2844 printers have a four-inch print width. Both the LP and TLP models can print on direct thermal media. The TLP model can also print using ribbons and thermal transfer media. This section includes procedures that are specific to the 2844 printers.

The 2443 printer is similar in most respects to the LP2844 printer. Both are direct-thermal printers.

REPAIR PATHS
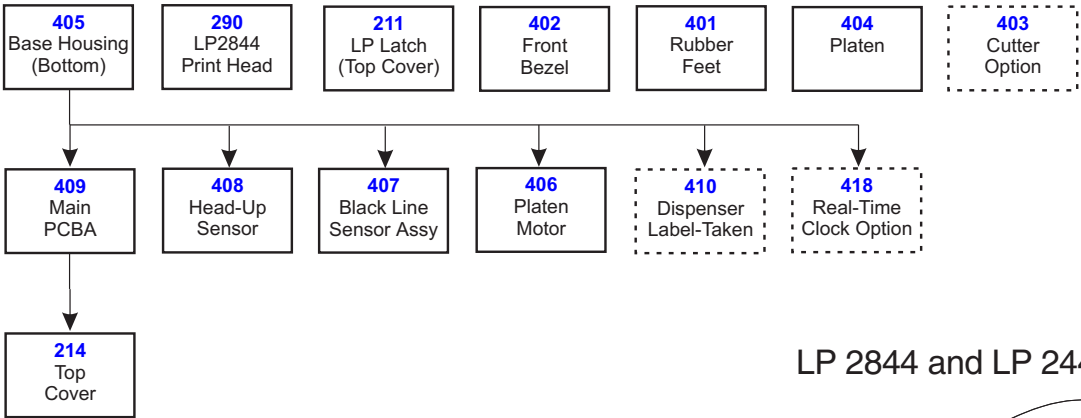
LP 2844 and LP 2443

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│   405    │  │   290    │  │   211    │  │   402    │  │   401    │  │   404    │    │   403   │
│Base Housing│ │ LP2844   │  │ LP Latch │  │  Front   │  │ Rubber   │  │  Platen  │    │ Cutter  │
│ (Bottom) │  │Print Head│  │(Top Cover)│ │  Bezel   │  │   Feet   │  │          │    │ Option  │
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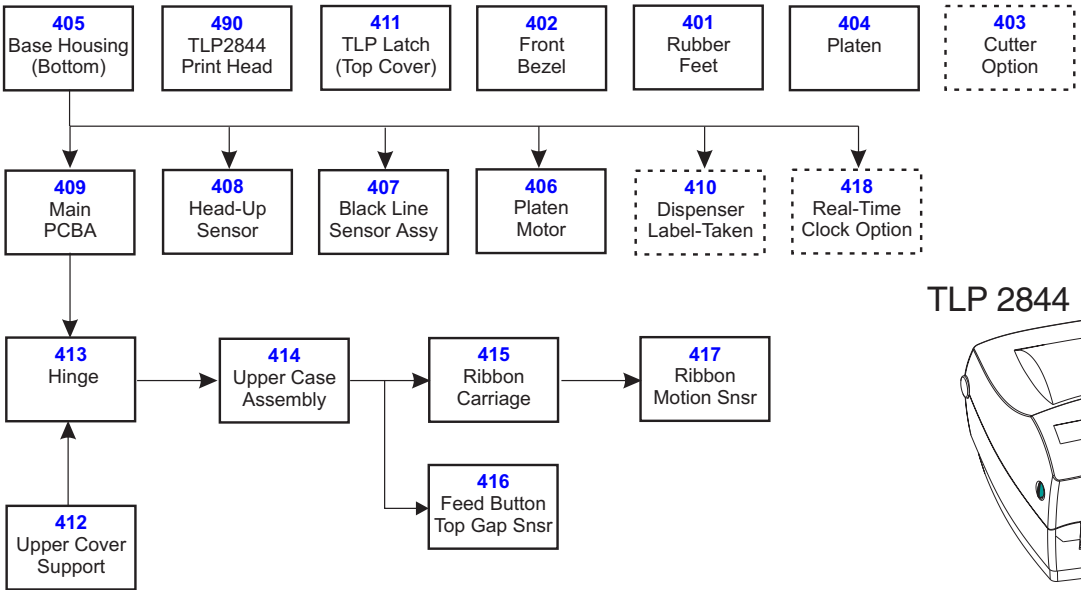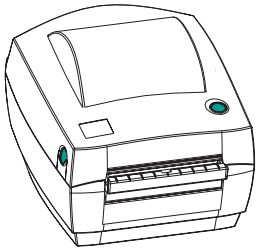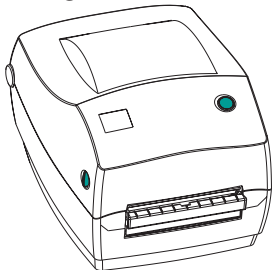
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│  Main    │  │ Head-Up  │  │Black Line│  │  Platen  │    │Dispenser│    │Real-Time│
│  PCBA    │  │ Sensor   │  │Sensor Assy│ │  Motor   │    │Label-Taken│  │Clock Option│
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┌──────────┐
│   214    │
│  Top     │
│  Cover   │
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TLP 2844

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│Base Housing│ │ TLP2844  │  │ TLP Latch│  │  Front   │  │ Rubber   │  │  Platen  │    │ Cutter  │
│ (Bottom) │  │Print Head│  │(Top Cover)│ │  Bezel   │  │   Feet   │  │          │    │ Option  │
└──────────┘  └──────────┘  └──────────┘  └──────────┘  └──────────┘  └──────────┘  └ ─ ─ ─ ─ ─ ┘
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│  Main    │  │ Head-Up  │  │Black Line│  │  Platen  │    │Dispenser│    │Real-Time│
│  PCBA    │  │ Sensor   │  │Sensor Assy│ │  Motor   │    │Label-Taken│  │Clock Option│
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│  Hinge   │      │Upper Case│      │  Ribbon  │      │  Ribbon  │
│          │      │ Assembly │      │ Carriage │      │Motion Snsr│
└──────────┘      └──────────┘      └──────────┘      └──────────┘
                                         │
                                         ▼
                                    ┌──────────┐
┌──────────┐                        │   416    │
│   412    │                        │Feed Button│
│Upper Cover│                       │Top Gap Snsr│
│ Support  │                        └──────────┘
└──────────┘
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Preparations

Protect against static discharge. Your work area must be static-safe and include a properly grounded conductive cushioned mat to hold the printer and a conductive wrist strap for yourself.

Open the printer by pulling the release latches forward, then lifting the top cover. Remove media.

Removal

1. Use a #1 Phillips driver to loosen the four screws ❶❷❸❹ that hold the latch frame Ⓐ to the top case Ⓑ.

2. Detach the springs on both sides from where they engage the latch frame Ⓒ Ⓓ.

3. Unsnap the latch shaft ❺ from its bearings in the frame.
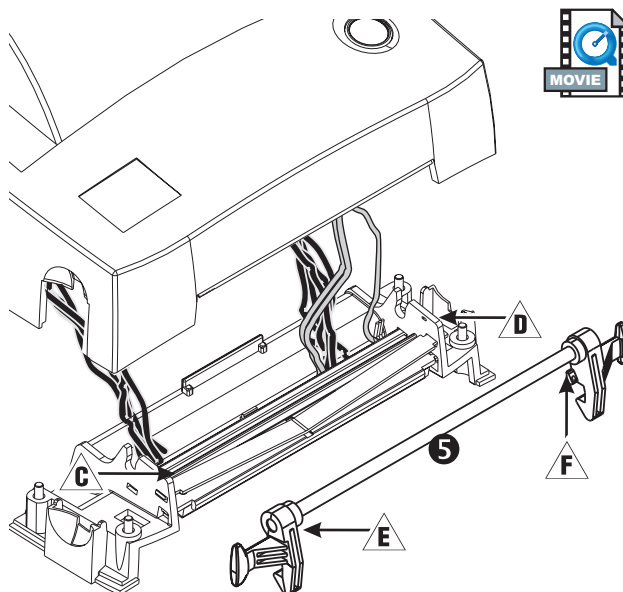
Assembly

1. Make sure the springs are engaged on the latch handles Ⓔ Ⓕ.

2. Align the latch assembly so that the hooks face the rear. Snap the latch shaft into its bearings on the frame.

3. Engage both springs into the top hole on the latch frame.

4. Align the latch frame up to the top case and ensure that the cables are not bent or pinched.

5. Replace the four screws that hold the latch frame to the top case and use a #1 Phillips driver to tighten them.

6. Clean the print head with the cleaning pen.
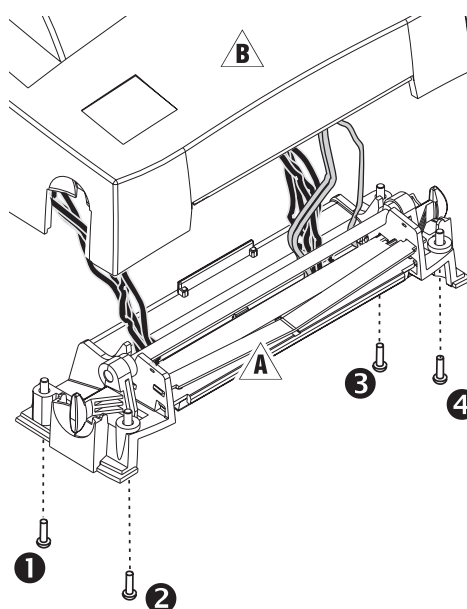
Assembling the Printer

Reload media. Plug in the power cord, turn on the printer and run the AutoSense routine to get a dump mode printout.

Preparation

Perform the removal steps of the *Bottom Case* (980358-405) and *Main PCBA* (980358-409) replacement procedures.

Removal

1. Unwrap the ribbon cables and wire bundles from the ferrite core.

2. Use a #1 Phillips to loosen the hinge F between top cover and bottom assembly.

3. Use a #1 Phillips to loosen the screws that hold the latch frame E to the cover.

4. Use a #1 Phillips to loosen the screws that hold the feed/LED PCBA D to the cover.

5. Detach the ribbon cable C from the feed/LED PCBA.

6. Pull the latch frame, feed/LED PCBA and print head cables out of the cover.
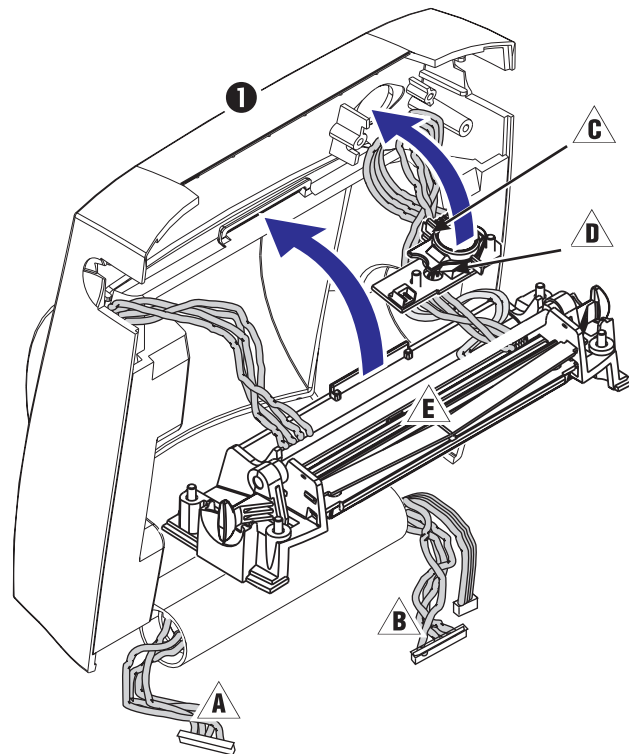
Assembly

1. Route the print head cables A B from the latch frame through the cover ❶. Refer to the diagram in the *Cable Routing* section.

2. Attach the ribbon cable C to the feed/LED PCBA.

3. Align the feed/LED PCBA D in the top cover and tighten the two screws to hold it.

3. Align the latch frame E in the cover and use a #1 Phillips to tighten the four screws to hold it.

4. Route the left print head wires through the hinge F and the right print head wires and PCBA ribbon cable through lower frame G.
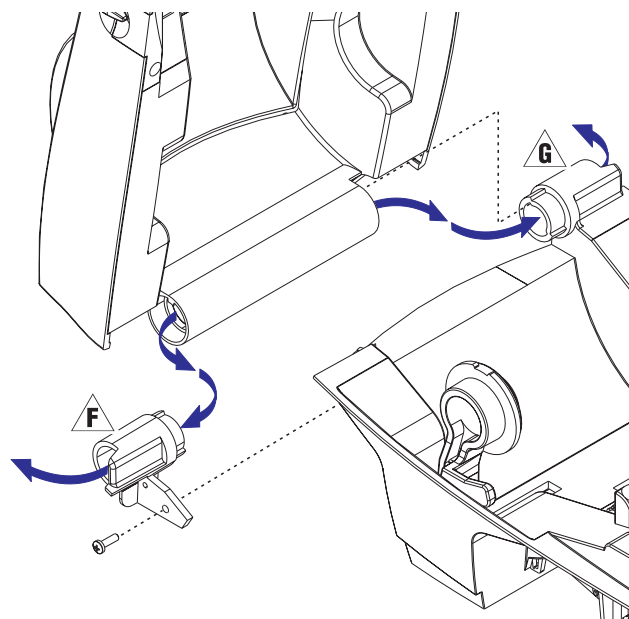
5. Align the hinge in place and use a #1 Phillips to tighten the single screw that holds it.

Assembling the Printer

Perform the assembly steps of the *Main PCBA* (980358-409) and *Bottom Case* (980358-405) replacement procedures.

Preparations

> ⚠ Protect against static discharge. Your work area must be static-safe and include a properly grounded conductive cushioned mat to hold the printer and a conductive wrist strap for yourself.

Open the printer by pulling the release latches forward, then lifting the top cover. Remove media.

Removal

1. Use a #1 Phillips driver to loosen the four screws ❶❷❸❹ that hold the latch frame ⚠G to the top case ⚠H.

2. Grasp the print head spring ❼ and pull it to the left; then, slide it free of the latch frame.

3. Gently pull the wire bundles ⚠C ⚠D from the print head ❽.

4. Use a #1 Phillips driver to loosen the two screws ❺❻ and release the print head from the latch frame ⚠G and bracket ⚠F.
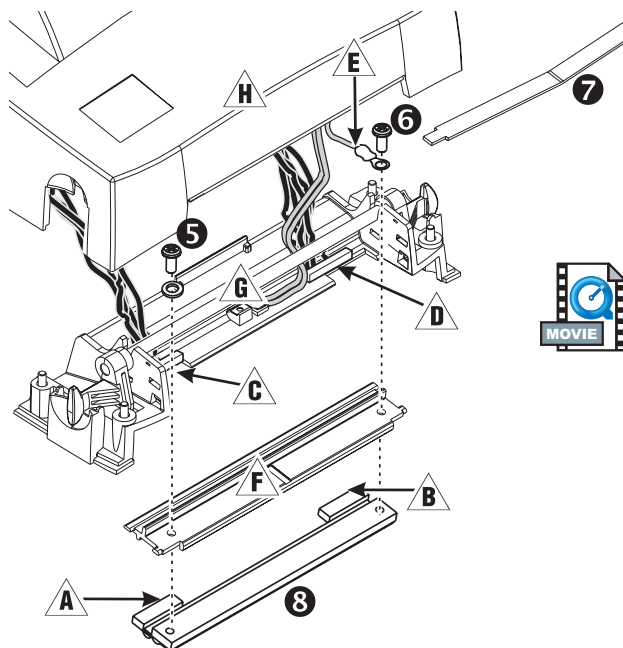
Assembly

1. Route the print head cables ⚠C ⚠D under latch shaft and plug into the receptacles ⚠A ⚠B on the print head ❽.

2. Hold the print head ❽ against the print head bracket ⚠F while replacing the screws ❺❻ and washers; attach the ground wire ⚠E using the right screw and washer. Use a #1 Phillips driver to tighten the screws.

3. Slip the left end of the print head spring ❼ into the left side of the latch bracket ⚠G; then slide the right end into the other side. The angle of the "v" fits into the indent on top of the print head bracket.

4. Align the latch bracket up to the top case ⚠H and ensure that the cables are not bent or pinched.
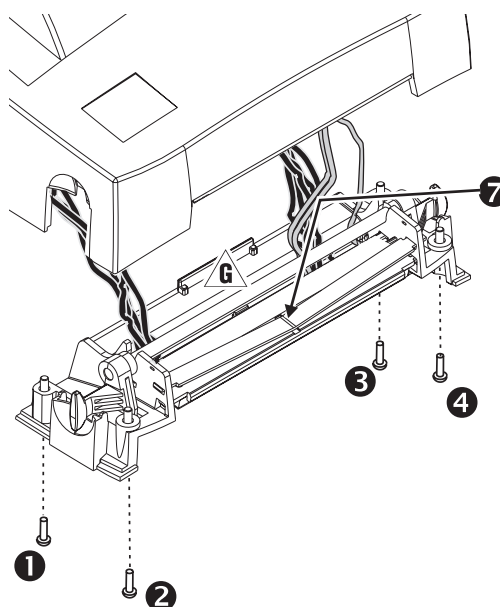
5. Replace the four screws that hold the latch bracket to the top case and use a #1 Phillips driver to tighten them.

6. Clean the print head with the cleaning pen.

Assembling the Printer

Reload media. Plug in the power cord, turn on the printer and run the AutoSense routine to get a dump mode printout.

To ship or store the printer, make sure all components are packed as shown.

❶ Foam set

❷ Master carton all-in-one

❸ Poly-bag

❹ Ship kit (varies per printer)

Extreme temperature and humidity
fluctuations or mishandling can damage the
printer and power supply.

When unpacking the printer, allow 30 minutes
or more before opening the plastic bag. This
time allows the printer to stabilize temperature
especially after storage in a cool, dry location
and then placement in a warmer, more humid
location. Warm, humid air condenses on the
cool components of the printer and this
condensation may damage the components.
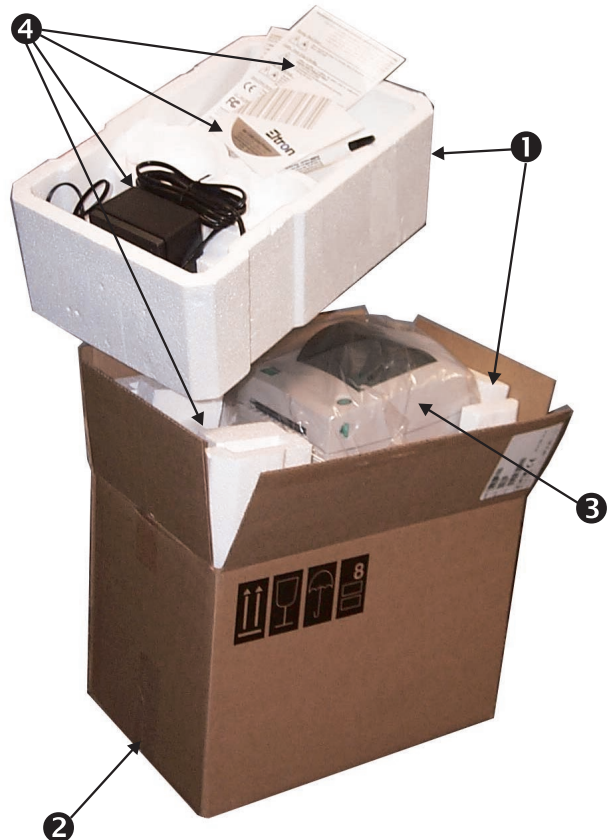
Move the printer carefully. While the printer has sturdy construction, mechanical damage
can certainly result from falls or rough handling.

Preparations

Tilt the printer to access the bottom.

Removal

Pry the foot ❶ off the base ⚠A using a levering tool if necessary.

Assembly

1. Peel the foot off of its backing.

2. Place the sticky adhesive (top of foot) into its receptacle ⚠B on the bottom case.

Preparations

Open the printer by pulling the release latches forward, then lifting the top cover.

Removal

Use a small slot-head screwdriver to pry either side free and then lift the bezel away from the printer.

Assembly

Align the tabs with the notches in the media exit and snap the bezel into place.

Preparations

Open the printer by pulling the release latches forward, then lifting the top cover.

Removal

1. Use a small slot-head screwdriver to pry either side free and then lift the bezel away from the printer.

2. Unplug the connector.

Assembly

1. Align the cutter so that the connector is to the rear.

2. Plug the connectors together.

3. Align the tabs with the notches in the media exit and snap the bezel into place.
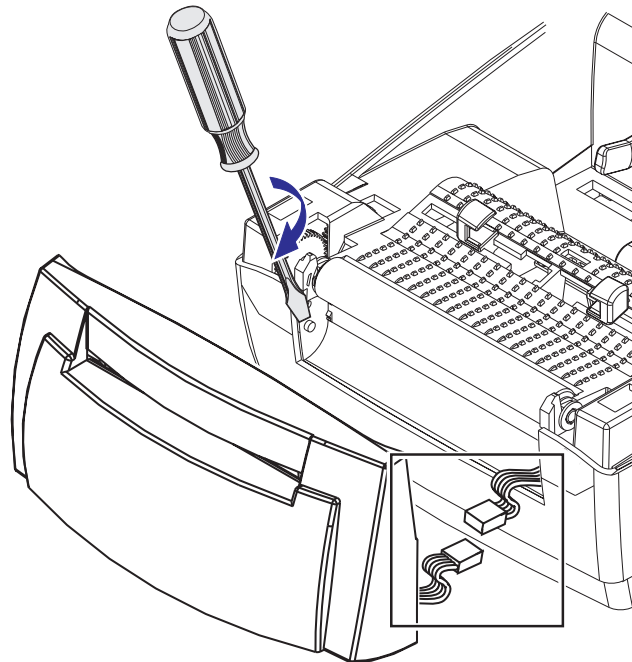
Preparations

Open the printer by pulling the release latches forward, then lifting the top cover.

Removal

1. Use the blade of a small slotted screw driver to pry the peg ⓐ free from its hole and rotate the bearing forward a quarter turn. Repeat on the other side ⓑ.

2. Pinch both tabs then lift the platen ❶ free of the printer.
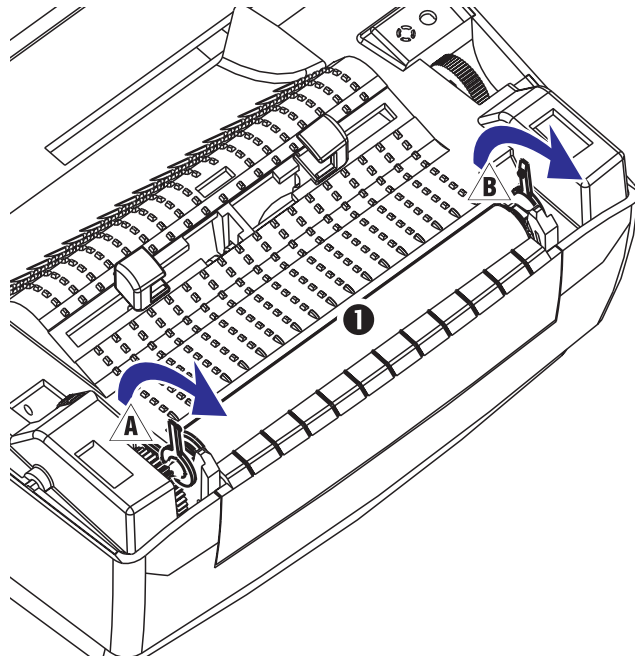
Assembly

1. Align the platen so that its gear ⓒ is to the left.

2. Pinch both tabs (pressing inward) and put each bearing into its slot.

3. Rotate each tab backward until the peg snaps into its hole.
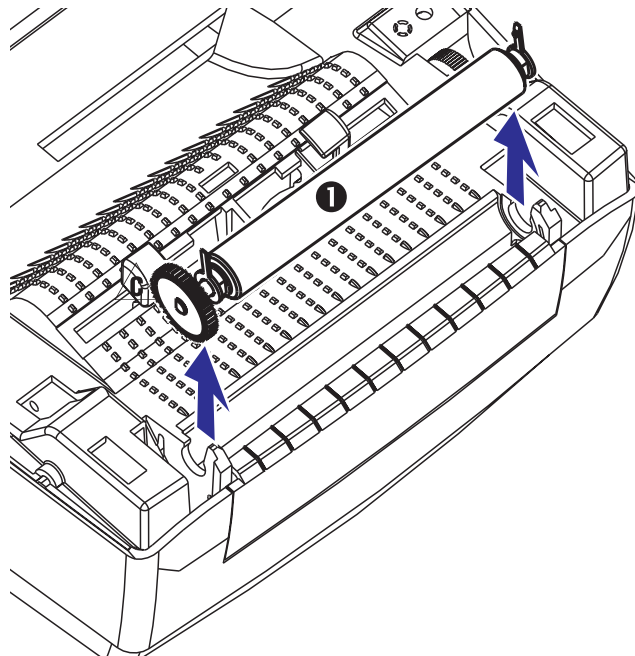
⚠ 2443 printers have only one tab (ⓐ) securing the platen with a bearing on the right.

Removal

1. Tilt the printer so you can see the bottom.

2. Use a #1 Phillips driver to remove the three screws that secure the bottom case to the bottom frame.

3. Pull the bottom case off of the bottom frame.

Assembly

1. Align the bottom case to the bottom frame.

2. Replace the three screws that hold the case to the frame; then, use a #1 Phillips driver to tighten them.
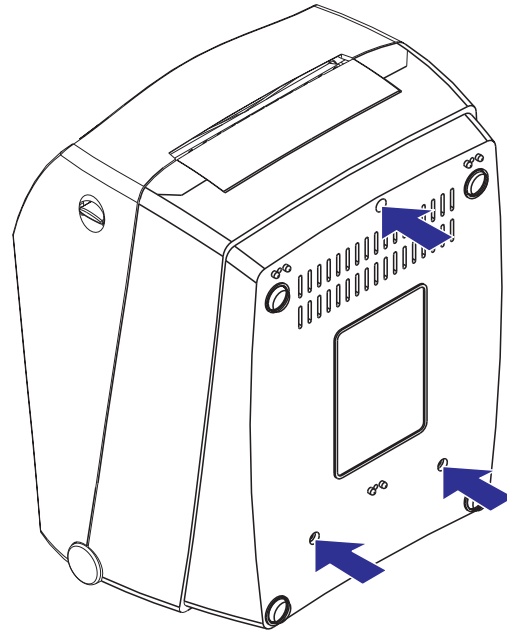
TLP Models - three screws

LP Models - four screws

Preparations

> ⚠️ Protect against static discharge. Your work area must be static-safe and include a properly grounded conductive cushioned mat to hold the printer and a conductive wrist strap for yourself.

Perform the removal steps of the *Bottom Case Replacement* procedure (980358-405).
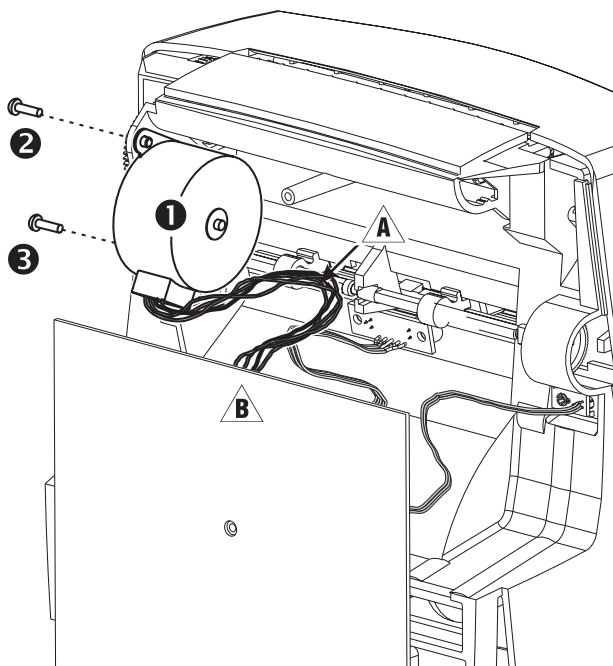
Removal

1. Unplug the wire bundle ⚠️ from the motor ❶ where it attaches to the main PCBA ⚠️ . Note its location.

2. Use a #2 Phillips to remove the screws ❷ ❸ that hold the motor to the left side frame of the media frame.

Assembly

1. Align the motor so that its gear is to the left; then, insert it through the left side frame of the media frame.

2. Replace the two screws that hold the motor to the side frame; then, use a #2 Phillips driver to tighten them.

3. Twist the wires at least three times; then, plug the wire bundle from the motor into its connector on the main PCBA.

Assembling the Printer

Perform the assembly steps of the *Bottom Case Replacement* procedure (980358-405). Check the installation. Turn on the printer and run the AutoSense routine to get a dump mode printout. This action tests the printer's media drive and printing capabilities.

Preparations

⚠	Protect against static discharge. Your work area must be static-safe and include a properly grounded conductive cushioned mat to hold the printer and a conductive wrist strap for yourself.

Perform the removal steps of the *Bottom Case Replacement* procedure (980358-405).

Removal

1. Unplug the ribbon cable ⚠A from the sensor ❶ where it attaches to the main PCBA ⚠B. Note its location.

2. Use a #1 Phillips to remove the screw ❷ that holds the sensor to the bottom of the media frame.

Assembly

1. Align the sensor in place it on the bottom of the media frame.

2. Use a #1 Phillips driver to replace and tighten the screw that holds the sensor to the frame.

3. Plug the ribbon cable from the sensor into its connector on the main PCBA.

Assembling the Printer

Perform the assembly steps of the *Bottom Case Replacement* procedure (980358-405). Check the installation. Turn on the printer and run the AutoSense routine to get a dump mode printout. This action tests the printer's media drive and printing capabilities.

TLP Models

LP Models

Preparations

> Protect against static discharge. Your work area must be static-safe and include a properly grounded conductive cushioned mat to hold the printer and a conductive wrist strap for yourself.
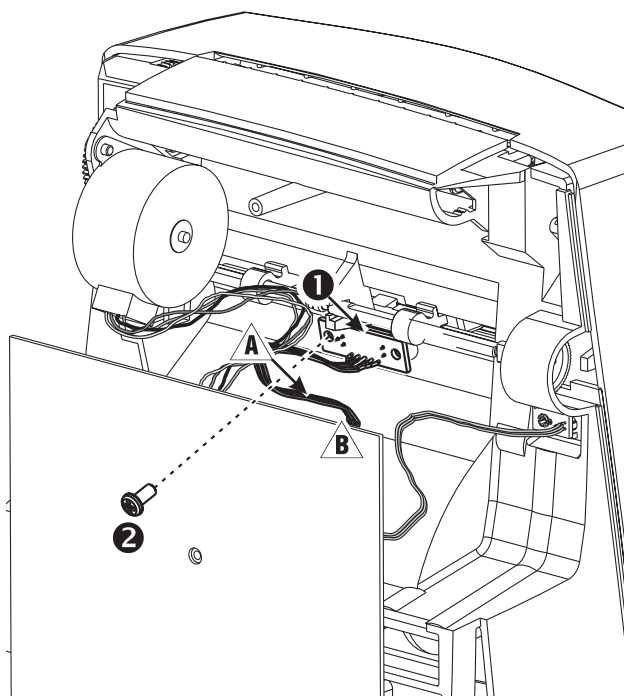
Perform the removal steps of the *Bottom Case Replacement* procedure (980358-405).

Removal

1. Unplug the ribbon cable ⚠️A from the sensor ❶ where it attaches to the main PCBA ⚠️B. Note its location.

2. Use a #1 Phillips to remove the screw ❷ that holds the sensor to the bottom of the media frame.

Assembly

1. Align the sensor so that its ribbon cable is to the left; then, place it one the bottom of the media frame.

2. Replace the screw that holds the sensor to the frame; then, use a #1 Phillips driver to tighten it.

3. Plug the ribbon cable from the sensor into its connector on the main PCBA.

Assembling the Printer

Perform the assembly steps of the *Bottom Case Replacement* procedure (980358-405). Check the installation. Turn on the printer and run the AutoSense routine to get a dump mode printout. This action tests the printer's media drive and printing capabilities.

Preparation

Protect against static discharge. Your work area must be static-safe and include a properly grounded conductive cushioned mat to hold the printer and a conductive wrist strap for yourself.

Check your work when connecting the print head cables—For 2844 models, the right bundle of wires plugs into the right connector (J17) and the left bundle plugs into the left connector (J19) on the main PCBA. For 2443 models, the right bundle plugs into J3 and the left bundle plugs into J2 on the main PCBA. *If connected wrong, permanent damage can result to the printer.*

Perform the removal steps of the *Bottom Case Replacement* procedure (980358-405).

Removal

1. Use a #1 Phillips driver to remove the screw ❶ that secures the board ❷ to the lower frame ⚠A⚠.

2. Unplug the wire bundles, ribbon cables and ground wire from their connectors on the board. Make note of their locations and routes.
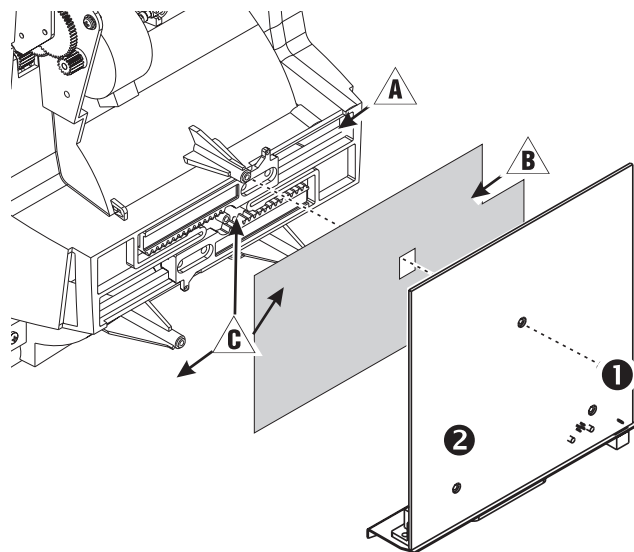
Assembly

1. Plug the wire bundles, ribbon cables and ground wire into their connectors on the board.

2. Align the protective separator ⚠B⚠ against the bottom frame.

3. Align the board onto the standoffs ⚠C⚠.

4. Replace the screw that hold the board to the front standoff and use a #1 Phillips driver to tighten it.

Assembling the Printer

Perform the assembly steps of the *Bottom Case Replacement* procedure (980358-405). Check the installation. Turn on the printer and run the AutoSense routine to get a dump mode printout. This action tests the printer's media drive and printing capabilities.

Preparations

Protect against static discharge. Your work area must be static-safe and include a properly grounded conductive cushioned mat to hold the printer and a conductive wrist strap for yourself.

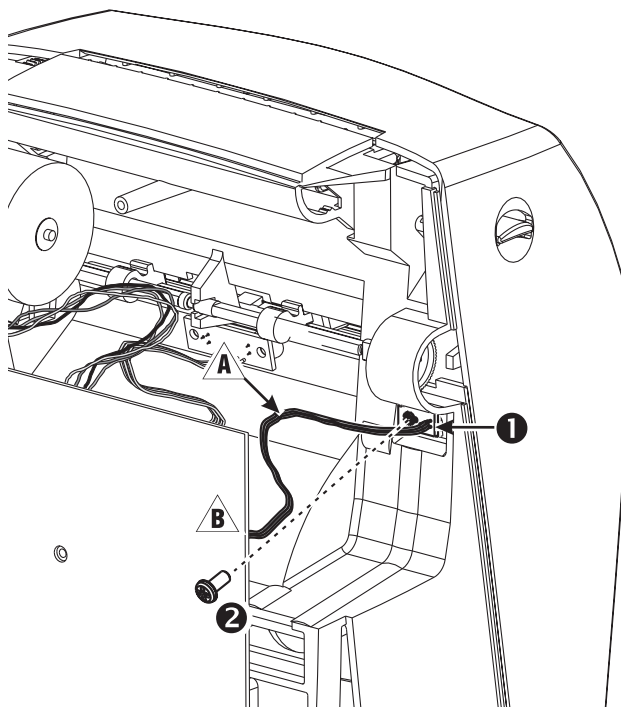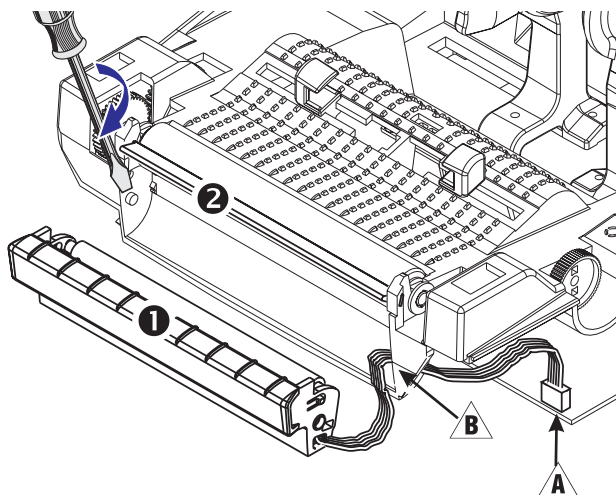Perform the removal steps of the *Bottom Case Replacement* procedure (980358-405).

Removal

1. Pry either side free and then lift the bezel ❶ away from the dispenser bar ❷ and bottom frame assembly.

2. Note the location of the connector ⚠A on the main control board; then unplug it.

3. Pull the wires and connector through the frame access ⚠B.

Replacing the Dispenser Switch PCB

Find the dispenser PCB ❸. Slip the ribbon cable out of the dispenser access ⚠C then snap the PCB out of/into the dispenser bezel.

Assembly

1. Align the bezel so that the connector is to the rear.

2. Thread the connector and wires through the access.

3. Plug the connector into its location on the main control board.

4. Align the tabs with the notches in the media exit and snap the bezel into place.
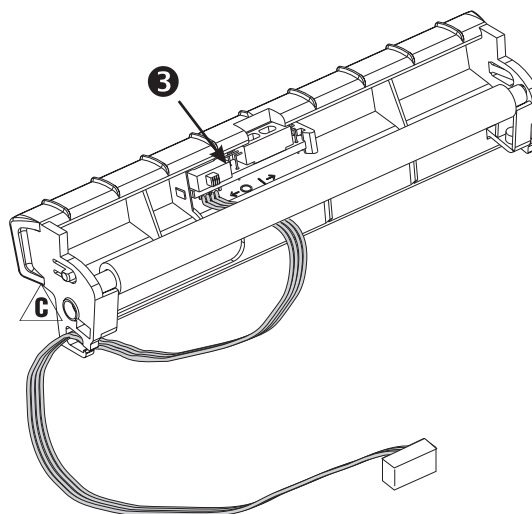
Assembling the Printer

Perform the assembly steps of the *Bottom Case Replacement* procedure (980358-405). Check the installation. Turn on the printer and run the AutoSense routine to get a dump mode printout. This action tests the printer's media drive and printing capabilities.

Preparations

Open the printer by pulling the release latches forward, then lifting the top cover.
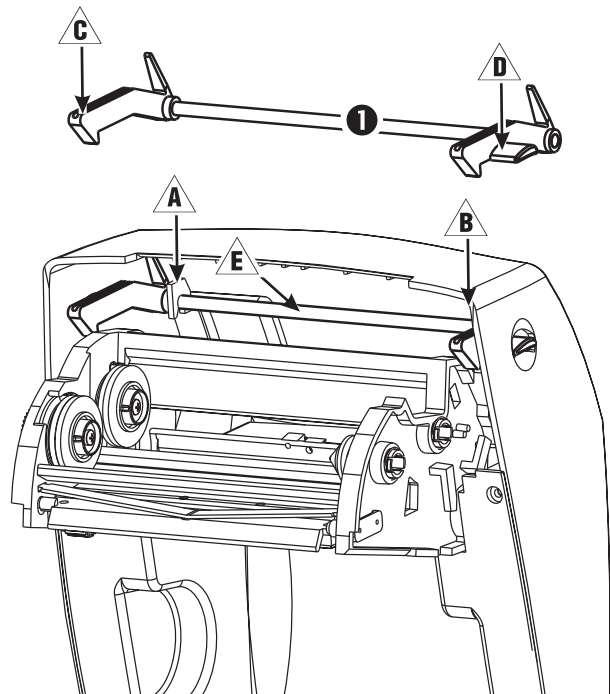
Removal

Unsnap the latch assembly ❶ from both bearings ⚠A⚠B in the top case.

Assembly

1. Squeeze the latch handles ⚠C⚠D inward and press into the top case.

2. Push the cross bar ⚠E into each bearing until it snaps into place.

Preparations

Open the printer by pulling the release latches forward, then lifting the top cover.

Removal

1. Use a #1 Phillips driver to remove the two screws ❷ ❸ holding the support ❶ to the top assembly △A.

2. Lift the support away from the bottom assembly △B.

Assembly

1. Align the support so that the square brace fits into the top assembly.

2. Insert the support into the bottom assembly.

3. Replace the two screws that hold the support the top assembly and use a #1 Phillips driver to tighten them.
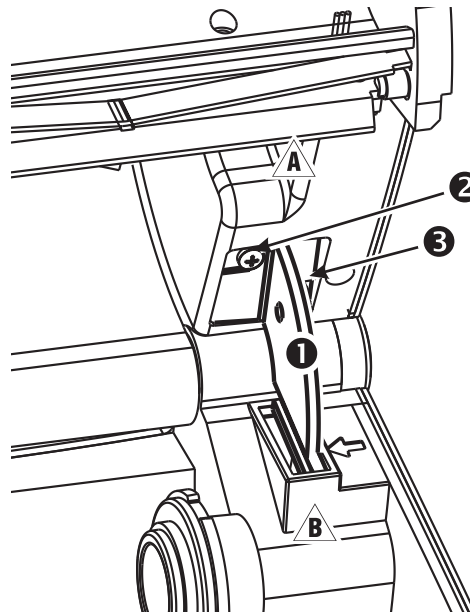
Preparation

Perform the removal steps of the *Bottom Case* (980358-405) and *Main PCBA* (980358-409) and *Cover Support* (980358-412) procedures.

Removal

1. Use a #1 Phillips driver to loosen and remove the screw ❶ that holds the hinge lock ❷ onto the bottom media frame ⒜.

2. Slide the hinge off of the frame.

3. Slide the top cover assembly ⒝ and bottom media frame apart.

Installation

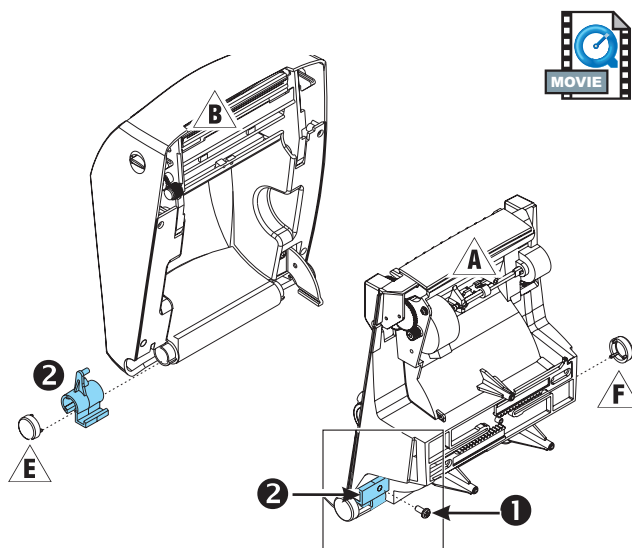1. Ensure the wires follow their correct routing. On the side opposite the hinge, make sure the cables go through the channel ⒢.

2. Slide the top cover assembly and bottom media frame together.

4. Align the hinge with the link tab ⒞ facing right and insert into the top cover assembly. *Note:* Make certain that the link tab engages with the link ⒟ inside the top case.

5. Fit the hinge onto the bottom media frame.

6. Replace the screw and use a #1 Phillips driver to tighten it.

7. Ensure the hinge caps ⒠⒡ are inserted properly.
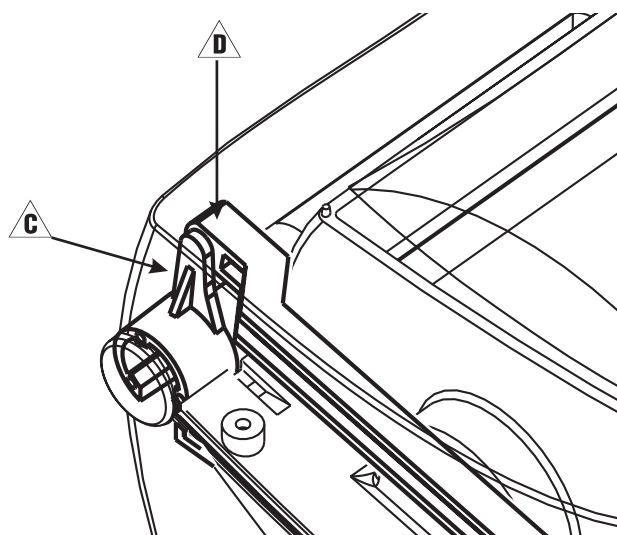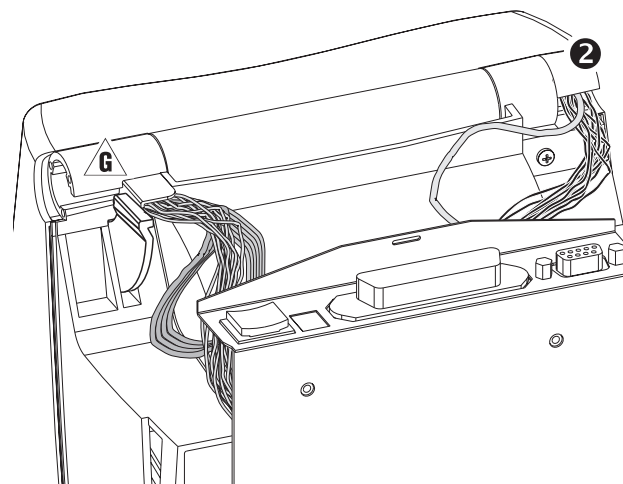
Assembling the Printer

Perform the assembly steps of the *Cover Support* (980358-412), *Main PCBA* (980358-409) and *Bottom Case* (980358-405) procedures.

Preparation

Perform the removal steps of these procedures: *Bottom Case Replacement* (980358-405), *Main PCBA Replacement* (980358-409), and *Hinge Replacement* (980358-413).

Removal

1. Loosen the four screws ❺ ❻ ❼ and ❽ that hold the upper frame ❶ to the top case ❷.

2. Lift the frame away from the window ❸ and top case. Notice that the feed/LED cable ⚠E leads to the button assembly attached to the top case.

Assembly

1. Align the window so that the holes at the rear engage on the pegs of the upper frame. Refer to the diagram in the *Cable Routing* section.

2. Check that the link ❹ is in place across the ribbon carriage and upper frame.

3. Lower the top case onto the window and frame.

4. While holding the frame, window and top case together, flip them over so that they rest on the window.

5. Replace the four screws that hold the frame to the top case and use a #1 Phillips driver to tighten them.

Assembling the Printer

Perform the assembly steps of these procedures: *Hinge Replacement* (980358-413), *Main PCBA Replacement* (980358-409), and *Bottom Case Replacement* (980358-405).

Preparation

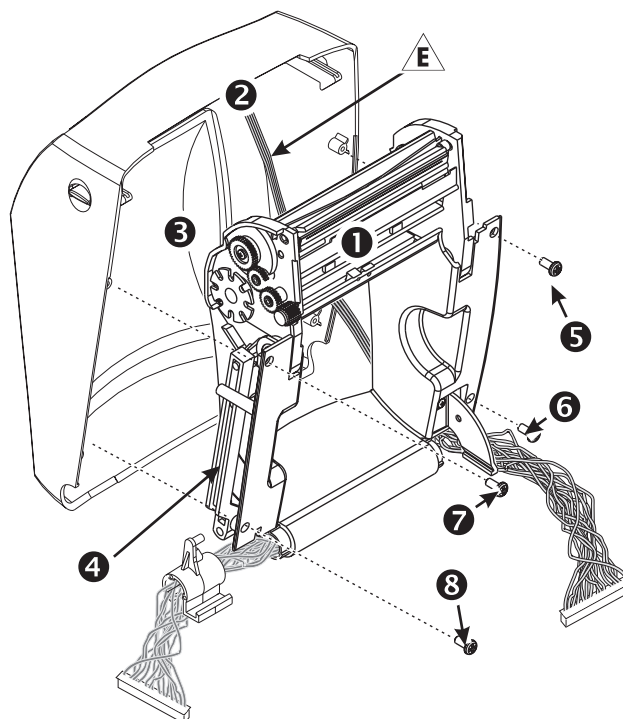Perform the removal steps of these procedures: *Bottom Case Replacement* (980358-405), *Main PCBA Replacement* (980358-409), *Hinge Replacement* (980358-413), and *Upper Case Replacement* (980358-414).

Removal

1. Gently flex the left bearing △ to release the left hinge ❶ of the carriage.

2. Gently flex the right bearing △ to release the right hinge ❷ of the carriage.

3. To free the carriage from the upper frame, cut the rear tie wrap to free the wire bundles and ribbon cables; then, pull them free of the case and rear hinge of the upper frame.
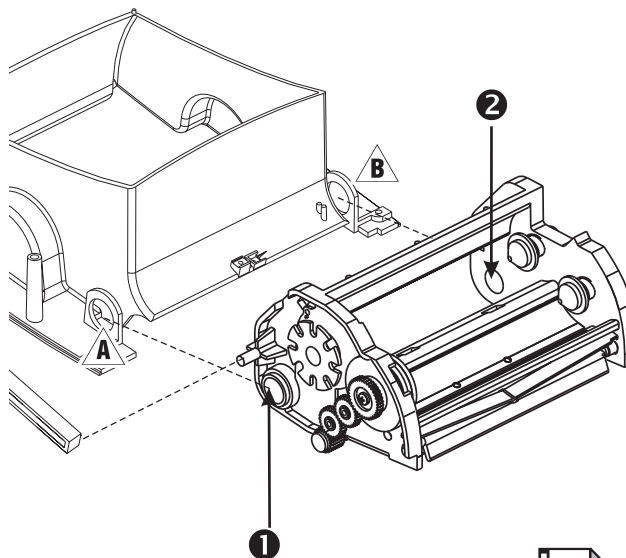
Assembly

1. Route the ribbon cables and wire bundles along the right side of the upper frame; then, secure them all with a tie wrap above the cover support location. Refer to the diagram in the *Cable Routing* section.

2. Snap both hinges into the bearings.

Assembling the Printer

Perform the assembly steps of these procedures: *Upper Case Replacement* (980358-414), *Hinge Replacement* (980358-413), *Main PCBA Replacement* (980358-409), and *Bottom Case Replacement* (980358-405).

Preparation

The feed button LED PCB and the top gap (receive) sensor are one assembly. To access
them, perform the removal steps of these procedures: *Bottom Case Replacement*
(980358-405), *Main PCBA Replacement* (980358-409), *Hinge Replacement* (980358-413),
Upper Case Replacement (980358-414), and *Ribbon Carriage Replacement* (980358-415).

Removal

1. In the top cover ⚠A, use a #1 Phillips driver
    to remove the two screws ⚠B ⚠C that hold
    the PCB ❶, and button ❷.

2. On the upper frame ⚠D, use a #0 Phillips
    driver to remove the screw ⚠E that holds
    the metal brace ⚠F and upper gap sensor ❹
    in place.

3. Lift the opaque button and clear lens away
    from the top cover.
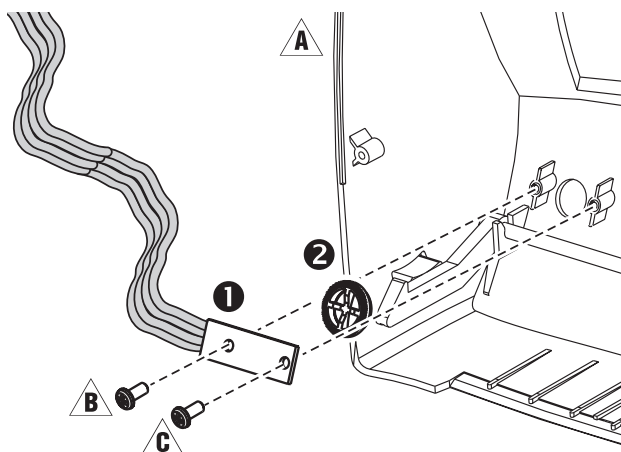
Assembly

1. With the top cover upside-down, insert the
    both button into place.

2. Align the feed button/LED PCBA so that
    the ribbon cable faces the closest sidewall.

3. Replace the two screws that hold the LED
    PCBA and use a #1 Phillips driver to
    tighten them.

4. Align the top gap sensor so that the ribbon
    cable goes to the right of the upper frame.

5. Align the metal brace that holds the upper
    gap sensor.

6. Replace the screw that holds the brace and
    sensor and use a #0 Phillips driver to tighten it.

7. Route the sensor's wires through their guides. Refer to the diagram in the *Cable Routing* section.

Assembling the Printer

Perform the assembly steps of these procedures: *Ribbon Carriage Replacement* (980358-415), *Upper Case Replacement* (980358-414), *Hinge Replacement* (980358-413), *Main PCBA Replacement* (980358-409), and *Bottom Case Replacement* (980358-405).

Preparation

Perform the removal steps of these procedures: *Bottom Case Replacement* (980358-405), *Main PCBA Replacement* (980358-409), *Hinge Replacement* (980358-413), *Upper Case Replacement* (980358-414), and *Ribbon Carriage Replacement* (980358-415).
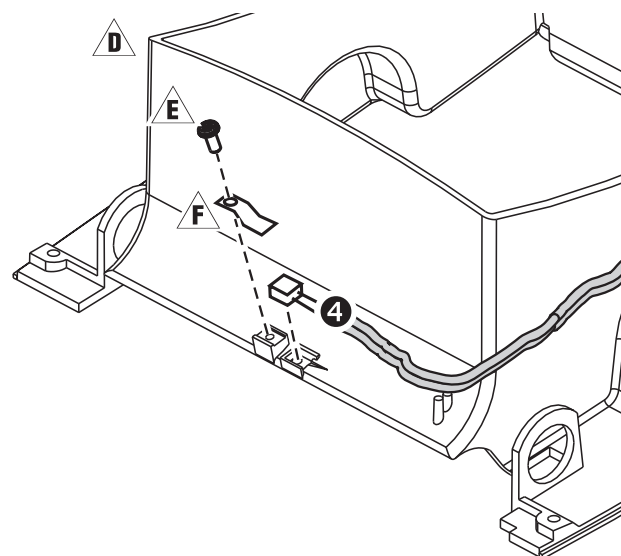
Removal

1. On the ribbon carriage, cut the tie wrap ⚠A
    that holds the wire bundles and ribbon
    cables to the right side frame.

2. Use a #1 Phillips driver to loosen the screw
    ⚠B that holds the sensor ❶ to the outside of
    the left side frame.

3. Pull the sensor away from the carriage and
    pull the wires through both side frames.

Assembly

1. Insert the connector through the outside of
    the left side frame.

2. Insert the connector through the inside of
    the right side frame.

3. Pull the wires through, and route them through their guides.

4. Align the sensor so that the wires go to the rear of the carriage.

5. Replace the screw that holds the sensor to the left side frame and use a #1 Phillips driver to
    tighten it.

6. Secure the wire bundles and ribbon cables against the carriage with a tie wrap inserted through
    the right side frame.

Assembling the Printer

Perform the assembly steps of these procedures: *Ribbon Carriage Replacement* (980358-415), *Upper Case Replacement* (980358-414), *Hinge Replacement* (980358-413), *Main PCBA Replacement* (980358-409), and *Bottom Case Replacement* (980358-405).
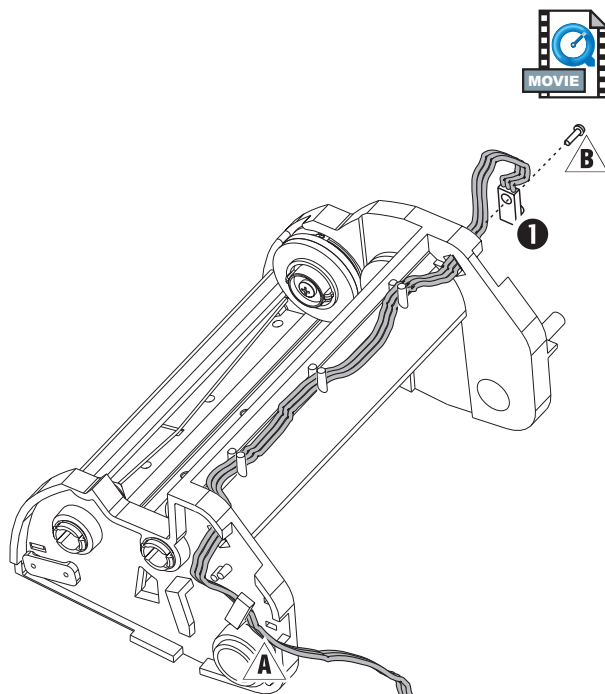
Preparations

> Protect against static discharge. Your work area must be static-safe and include a properly grounded conductive cushioned mat to hold the printer and a conductive wrist strap for yourself.

Perform the removal steps of the *Bottom Case* (980358-405) and *Main PCBA* (980358-409) replacement procedures.

Installation

The socket for the real-time clock option is designated as U15 on 2443 printers, U24 on both TLP and LP2844 printers.

1. Align the real time clock chip above its location on the main PCBA ❶. Make sure the notched end of the chip is oriented correctly to the outline on the board.

2. Lower the real time clock chip into place taking care not to bend any of the pins.
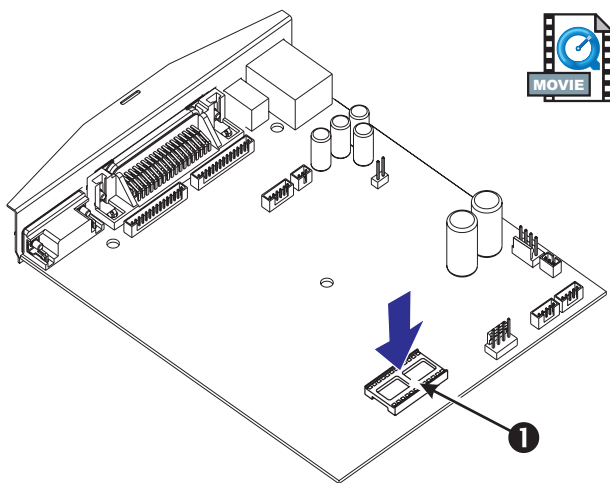
Assembling the Printer

Perform the assembly steps of the *Main PCBA* (980358-409) and *Bottom Case* (980358-405) replacement procedures.

Checking the Installation

Turn on the printer and run your printer's AutoSense routine to get a dump mode printout. This action tests the printer's media drive and printing capabilities.

You can also check the printout.

△A   Firmware version number

△B   Memory (available bytes)

△C   Real time clock option (when installed)

```
8" UKQ1775      V3.20         A
Serial port : 96,N,8,1
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Image buffer size:0507
Fmem:000.5K,060.9K avl        B
Gmem:024K,0045K avl
Emem:000K,0045K avl
I8,0,001  rN
S4 D10 R064,000   ZT UN
q1600 Q1209,026
Option:
17 21 25

Date: 07-19-99
Time: 12:44:00

now in DUMP                   C
```

Preparations

> Protect against static discharge. Your work area must be static-safe and include a properly grounded conductive cushioned mat to hold the printer and a conductive wrist strap for yourself.

Open the printer by pulling the release latches forward, then lifting the top cover. Remove any ribbon from the carriage.

Removal

1. Grasp the print head spring ❹ and pull it to the left; then, slide it free of the carriage.

2. Use the spring to pry the print head clip ❸ off the right side of the carriage.

3. Pull the print head and bracket ❶ forward.

4. Use a #2 Phillips driver to remove the screw ❷ that holds the ground wire.

5. Unplug both bundles C D of print head wires from the left and right connectors.
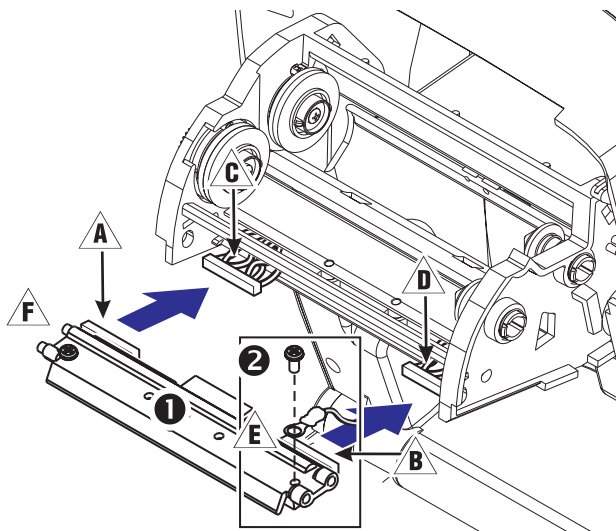
Assembly

1. Align the print head and bracket ❶ to plug the left A and right B connectors into the black C and white D wire bundles.

2. Attach the ground wire E and secure it with the screw ❷. Use a #2 Phillips driver to tighten it.

3. Insert the bracket pegs F into the left side of the carriage.

4. Align the right side of the bracket and insert the print head clip ❸ through the right side of the ribbon carriage into the bracket.
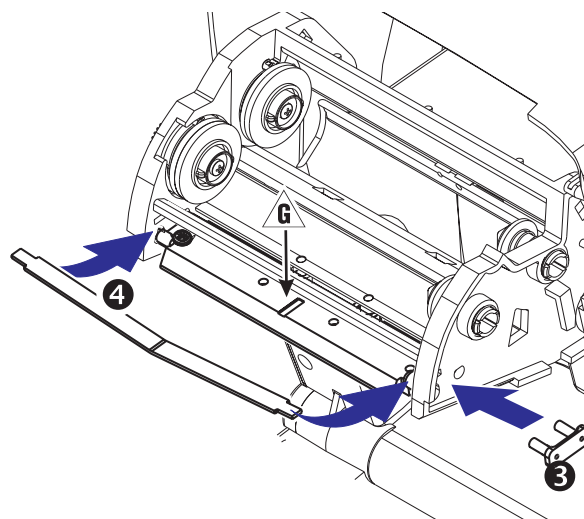
5. Slip the left end of the print head spring ❹ into the left side of the ribbon carriage; then slide the right end into the other side. The angle of the "v" fits into the indent on top of the print head bracket ⚠**G**.

6. Clean the print head with the cleaning pen.

Assembling the Printer

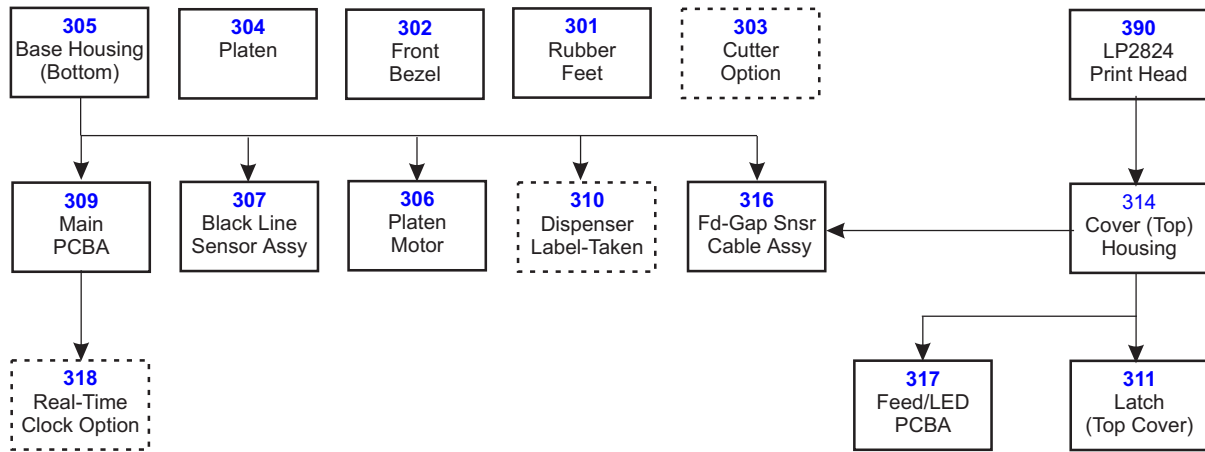Reload media and ribbon. Plug in the power cord, turn on the printer and run the AutoSense routine to get a dump mode printout.
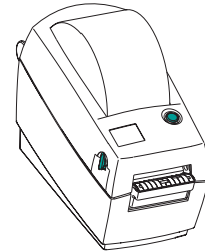
2824 PARTS

The 2824 printers have a two-inch print width. Both the LP and TLP models can print on direct thermal media. The TLP model can also print using ribbons and thermal transfer media. This section includes procedures that are specific to the 2824 printers.

REPAIR PATHS

```
┌──────────────┐  ┌──────────────┐  ┌──────────────┐  ┌──────────────┐  ┌ ─ ─ ─ ─ ─ ─ ─┐        ┌──────────────┐
│     305      │  │     304      │  │     302      │  │     301      │  │     303      │        │     390      │
│ Base Housing │  │   Platen     │  │   Front      │  │   Rubber     │  │   Cutter     │        │   LP2824     │
│  (Bottom)    │  │              │  │   Bezel      │  │    Feet      │  │   Option     │        │  Print Head  │
└──────────────┘  └──────────────┘  └──────────────┘  └──────────────┘  └ ─ ─ ─ ─ ─ ─ ─┘        └──────────────┘
       │                 │                 │                 │                 │                        │
       ▼                 ▼                 ▼                 ▼                 ▼                        ▼
┌──────────────┐  ┌──────────────┐  ┌──────────────┐  ┌ ─ ─ ─ ─ ─ ─ ─┐  ┌──────────────┐        ┌──────────────┐
│     309      │  │     307      │  │     306      │  │     310       │  │     316      │        │     314      │
│    Main      │  │  Black Line  │  │   Platen     │  │  Dispenser    │  │ Fd-Gap Snsr  │ ◄───── │ Cover (Top)  │
│    PCBA      │  │ Sensor Assy  │  │   Motor      │  │ Label-Taken   │  │ Cable Assy   │        │  Housing     │
└──────────────┘  └──────────────┘  └──────────────┘  └ ─ ─ ─ ─ ─ ─ ─┘  └──────────────┘        └──────────────┘
       │                                                                                                 │
       ▼                                                                                     ┌───────────┴──────────┐
┌ ─ ─ ─ ─ ─ ─ ─┐                                                                             ▼                      ▼
│     318      │                                                                     ┌──────────────┐      ┌──────────────┐
│  Real-Time   │                                                                     │     317      │      │     311      │
│ Clock Option │                                                                     │  Feed/LED    │      │   Latch      │
└ ─ ─ ─ ─ ─ ─ ─┘                                                                     │    PCBA      │      │ (Top Cover)  │
                                                                                     └──────────────┘      └──────────────┘
```
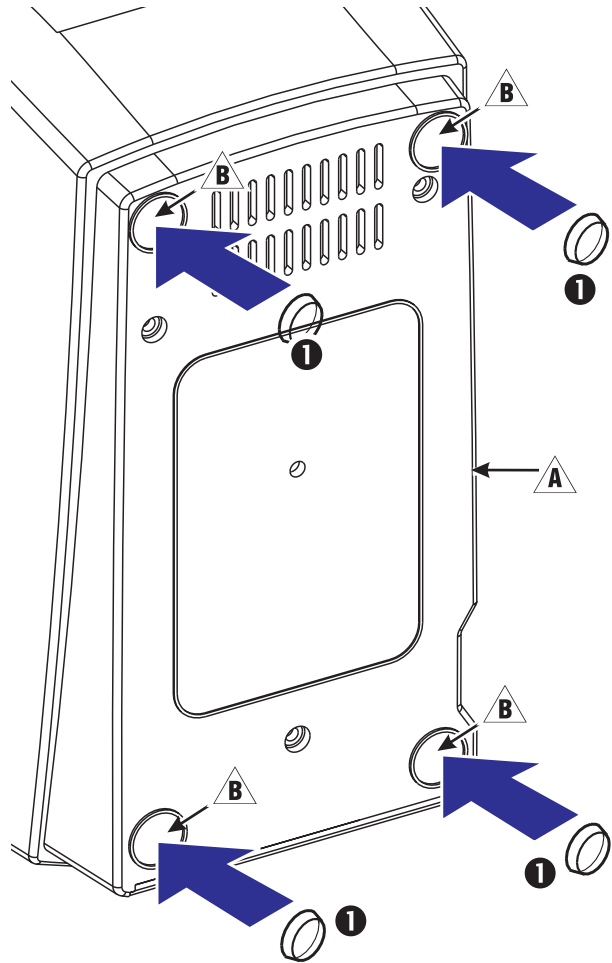
LP 2824

Preparations

Tilt the printer to access the bottom.

Removal

Pry the foot ❶ off the base ⚠ using a levering tool if necessary.

Assembly

1. Peel the foot off of its backing.

2. Place the sticky adhesive (top of foot) into its receptacle ⚠ on the bottom case.

Preparations

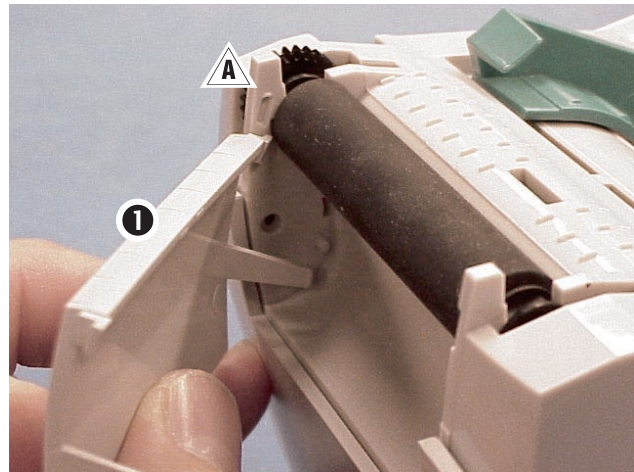Open the printer by pulling the release latches forward, then lifting the top cover.

Removal

Use a small slot-head screwdriver to pry either side free and then lift the bezel ❶ away from the printer ⚠.

Assembly

Align the tabs with the notches in the media exit and snap the bezel into place.

Preparations

Open the printer by pulling the release latches forward, then lifting the top cover.

Removal

1. Pry either side free and then lift the bezel away from the printer.

2. Unplug the connector.

Assembly

1. Align the cutter so that the connector is to the rear.

2. Plug the connectors together.

3. Align the tabs with the notches in the media exit and snap the bezel into place.
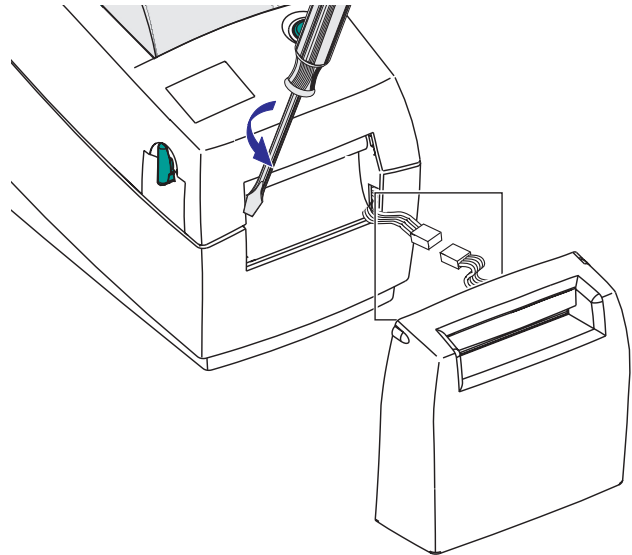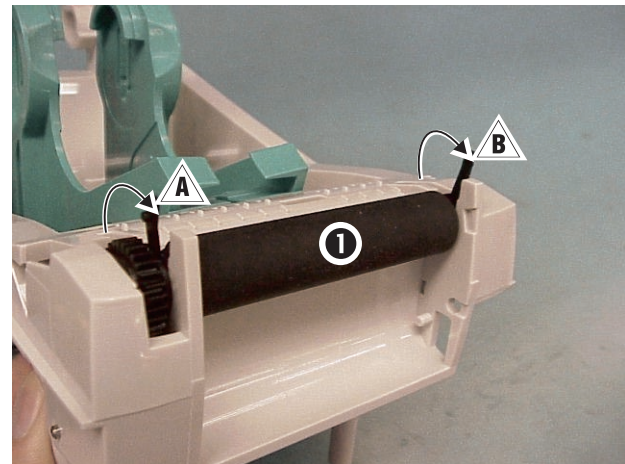
Preparations

Open the printer by pulling the release latches forward, then lifting the top cover.

Removal

1. Use the blade of a small slotted screw driver to pry the pegs A B free from their holes and rotate the bearing forward a quarter turn.

2. Lift the platen ❶ free of the printer.

Assembly

1. Align the platen so that its gear C is to the left.

2. Put each bearing into its slot.

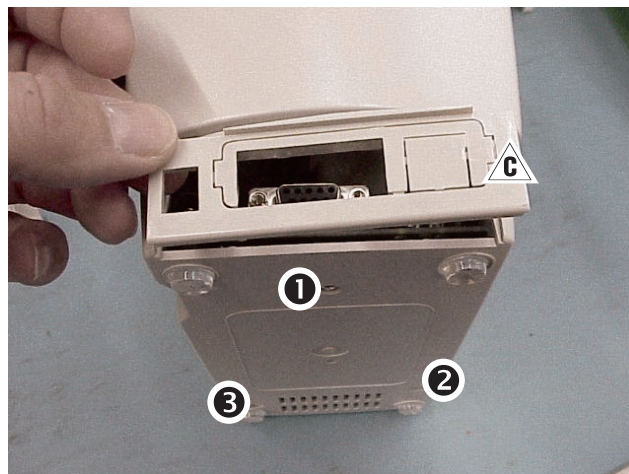3. Rotate the tabs backward until their pegs snap into their holes.
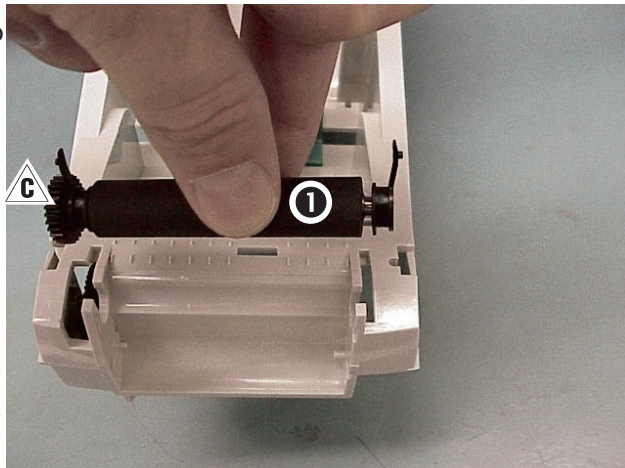
Preparations

> Protect against static discharge. Your work area must be static-safe and include a properly grounded conductive cushioned mat to hold the printer and a conductive wrist strap for yourself.

Removal

1. Carefully used a small slotted driver to pry the interface cover off of the bottom case

2. Tilt the printer so you can see the bottom.

3. Use a #1 Phillips driver to remove the three screws ❶❷❸ that secure the bottom case to the bottom frame.

4. Pull the bottom case off of the bottom frame. Take care when moving the interface connector past the rear access.
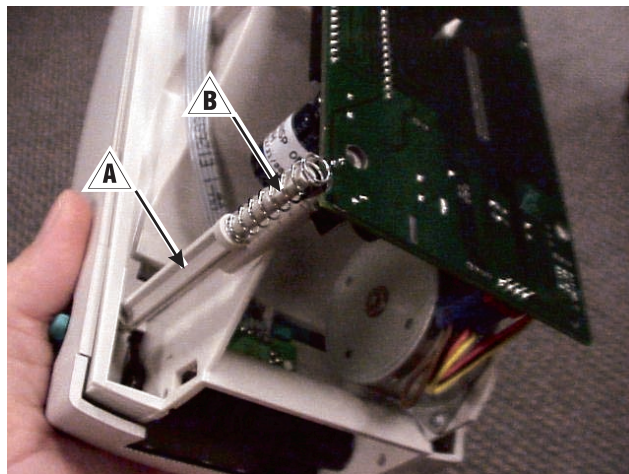
Assembly

1. Hold the printer upside down.

2. Place the head-up sensor plunger into its notched hole on the lower frame.

3. Place the spring ⓑ onto the plunger ⓐ.

4. Tilt the printer so that the plunger and spring lean into place on the main PCBA. The flag on the plunger must fit into the head-up sensor on the main PCBA.

5. Align the bottom case to the lower frame. Carefully insert the interface connectors through the rear access. Carefully insert the plunger into the notched hole inside the bottom case.

6. Hold the printer onto the bottom case. Check the action of the head-up sensor plunger.

7. Replace the three screws that hold the case to the frame; then, use a #1 Phillips driver to tighten them.

8. Snap the interface cover ⓒ over the interface connectors.

Preparations

> ⚠ Protect against static discharge. Your work area must be static-safe and include a properly grounded conductive cushioned mat to hold the printer and a conductive wrist strap for yourself.

Perform the removal steps of the *Bottom Case Replacement* procedure (980358-305).

Removal

1. Unplug the wire bundle ⚠ from the motor ❶ where it attaches to the main PCBA ⚠ . Note its location.

2. Use a #2 Phillips to remove the screws ❷ ❸ that hold the motor to the left side frame of the lower frame.
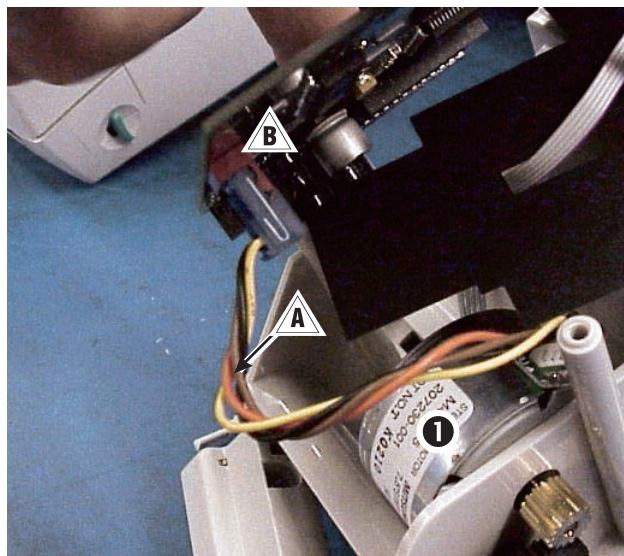
Assembly

1. Align the motor so that its gear is to the left; then, insert it through the left side of the lower frame.

2. Replace the two screws that hold the motor to the side frame; then, use a #2 Phillips driver to tighten them.

3. Twist the wires at least three times; then, plug the wire bundle from the motor into its connector on the main PCBA.

Assembling the Printer

Perform the assembly steps of the *Bottom Case Replacement* procedure (980358-305). Check the installation. Turn on the printer and run the AutoSense routine to get a dump mode printout. This action test the printer's media drive and printing capabilities.
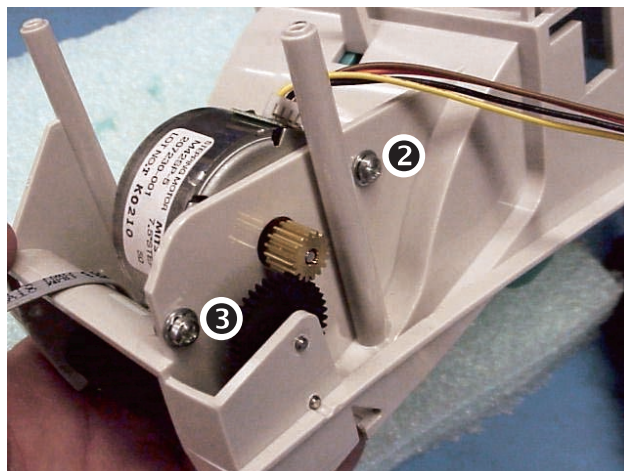
Preparations

	Protect against static discharge. Your work area must be static-safe and include a properly grounded conductive cushioned mat to hold the printer and a conductive wrist strap for yourself.

Perform the removal steps of the *Bottom Case Replacement* procedure (980358-305).

Removal

1. If necessary, move the main PCBA aside.

2. Unplug the ribbon cable ⚠ from the sensor ❶ where it attaches to the main PCBA. Note its location.

3. Carefully loosen the ribbon cable retainer on the right side of the lower frame.

4. Use a #1 Phillips to remove the screw ❷ that holds the sensor to the bottom of the lower frame.
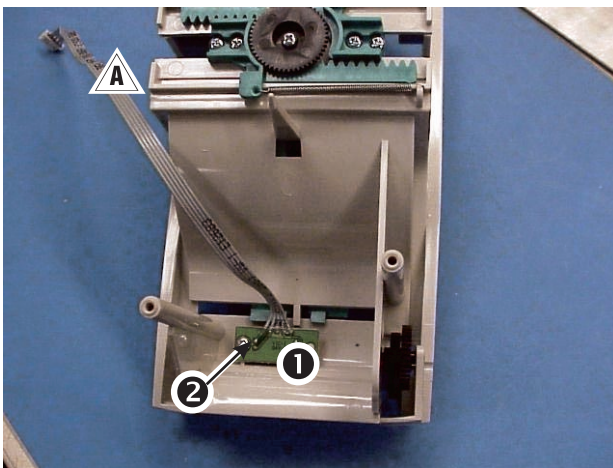
Assembly

1. Align the sensor so that its ribbon cable is to the rear; then, place it on the bottom of the lower frame.

2. Replace the screw that holds the sensor to the frame; then, use a #1 Phillips driver to tighten it.

3. Align the ribbon cable into the cable retainer on carefully close the retainer.

4. Plug the ribbon cable from the sensor into its connector on the main PCBA.

Assembling the Printer

Perform the assembly steps of the *Bottom Case Replacement* procedure (980358-305). Check the installation. Turn on the printer and run the AutoSense routine to get a dump mode printout. This action test the printer's media drive and printing capabilities.

Preparations

> Protect against static discharge. Your work area must be static-safe and include a properly grounded conductive cushioned mat to hold the printer and a conductive wrist strap for yourself.

> **Check your work when connecting the print head cables—**The right bundle of wires plugs into the front connector (J8) and the left bundle plugs into the rear connector (J9) on the main PCBA. *If connected wrong, permanent damage can result to the printer.*

Perform the removal steps of the *Bottom Case Replacement* (980358-305) procedure.

Removal

1. Loosen the main PCBA ❶ from its post ⚠A and standoffs ⚠B on the lower frame.

2. Note the locations of the cable connectors then carefully unplug the ribbon cables and wire bundles from their locations.

Assembly

1. Plug the wire bundles, ribbon cables and ground wire into their connectors on the board.

2. Align the protective separator ⚠C ("fish paper") against the bottom frame.

3. Align the board onto its post ⚠A and standoffs ⚠B.

Assembling the Printer

Perform the assembly steps of the *Bottom Case Replacement* (980358-305) procedure.

Reload media. Plug in the power cord, turn on the printer, load media, and run the AutoSense routine to get a dump mode printout.

Preparations

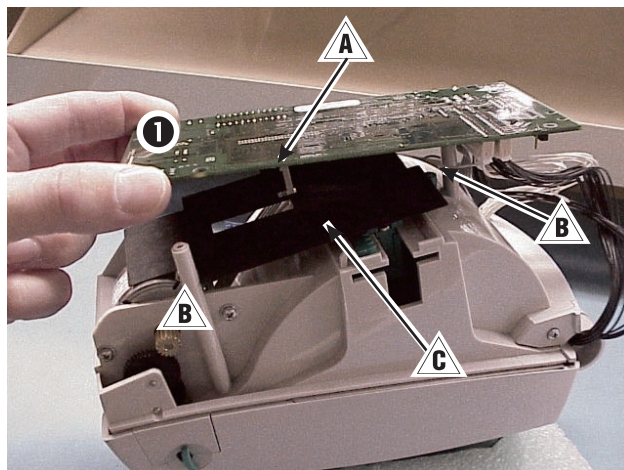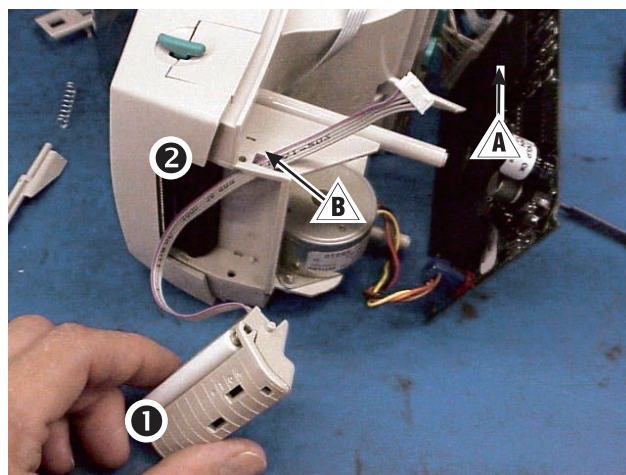|	Protect against static discharge. Your work area must be static-safe and include a properly grounded conductive cushioned mat to hold the printer and a conductive wrist strap for yourself.

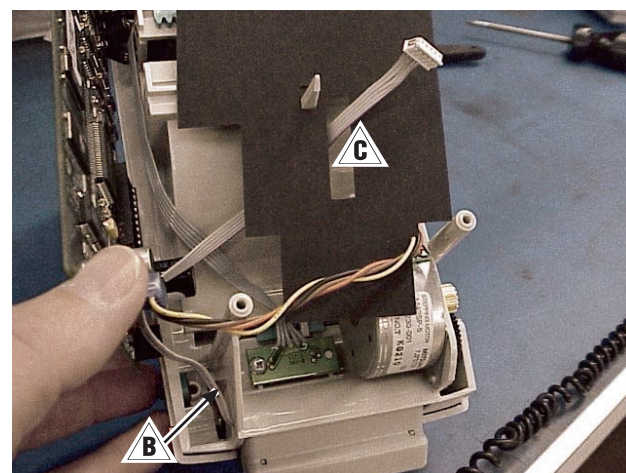Perform the removal steps of the *Bottom Case Replacement* procedure (980358-305).

Removal

1. Pry either side free and then lift the bezel ❶ away from the dispenser bar ❷ and bottom frame assembly.

2. Note the location of the connector Ⓐ on the main control board; then unplug it.

3. Pull the wires and connector through the frame access Ⓑ.

Assembly

1. Align the bezel so that the connector is to the rear.

2. Thread the connector and wires through the access in the bottom case Ⓑ and the protective separator ("fish paper") Ⓒ.

3. Plug the connector into its location on the main control board.

4. Align the tabs with the notches in the media exit and snap the bezel into place.

Assembling the Printer

Perform the assembly steps of the *Bottom Case Replacement* procedure (980358-305). Check the installation. Turn on the printer and run the AutoSense routine to get a dump mode printout. This action test the printer's media drive and printing capabilities.

Preparations

Perform the removal steps of the *Upper Case Replacement* procedure (980358-314).

Open the printer by pulling the release latches forward, then lifting the top frame.

Removal

Lift both sides of the latch to ❶ unsnap it from the upper frame.

Assembly

1. Align the latch spring ❷ so that is extends to the rear of the latch.

2. Align the latch so that the spring faces the rear of the printer.

3. Lower the latch into its notches ⚠A ⚠B while the spring provides tension against the upper frame's front cross brace.

Assembling the Printer

Perform the assembly steps of the *Upper Case Replacement* procedure (980358-314).

Reload media. Plug in the power cord, turn on the printer, load media, and run the AutoSense routine to get a dump mode printout.

Preparations

> ⚠ Protect against static discharge. Your work area must be static-safe and include a properly grounded conductive cushioned mat to hold the printer and a conductive wrist strap for yourself.

Open the printer by pulling the release latches forward, then lifting the top cover. Remove media.
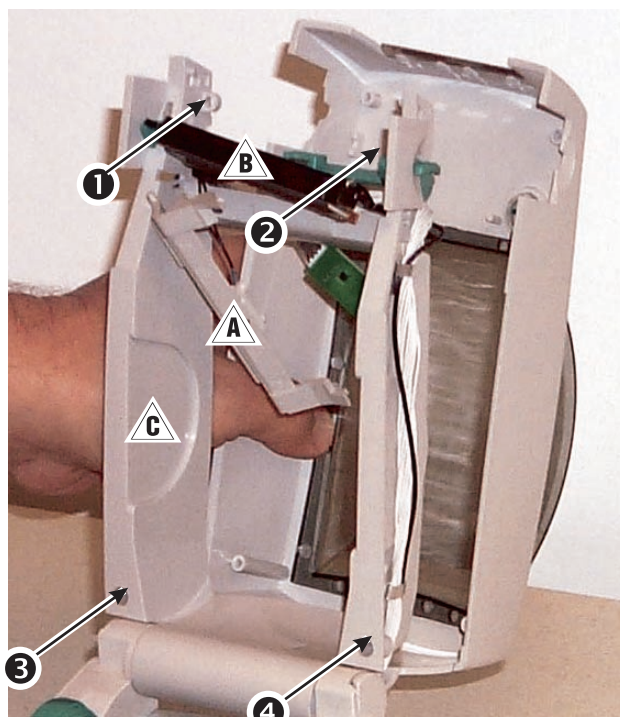
Removal
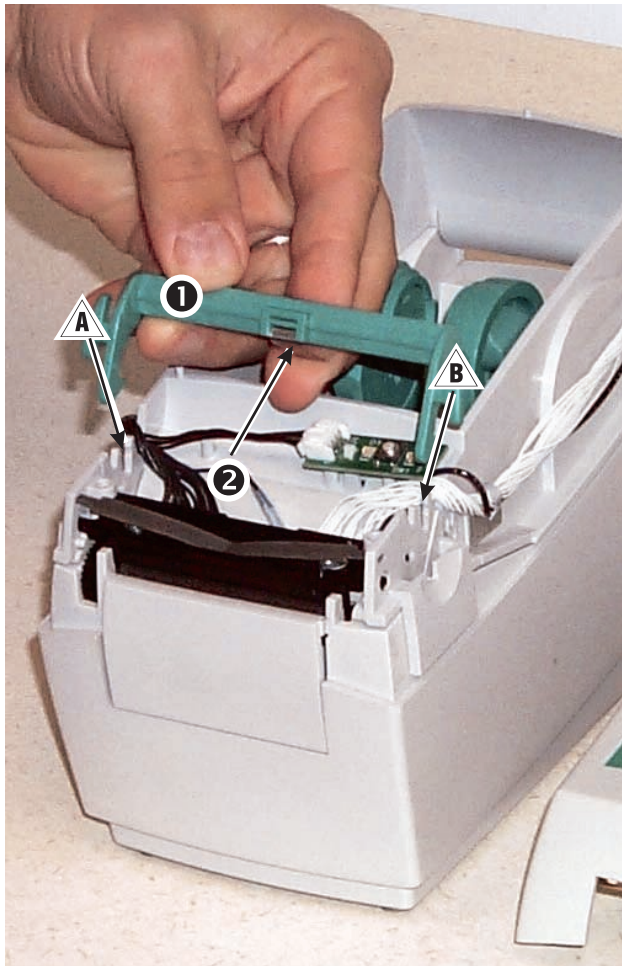
1. Unsnap the bracket ⒜ .

2. Free the print head ⒝ .

3. Slide the print head spring to one side to release the opposite end.

4. Use a #1 Phillips driver to remove the screws ❶❷❸❹ that hold the case to the upper frame ⒞.

5. Lift the top case and window away.

Assembly

1. Align the window so that the holes fit onto the pegs on the upper frame.

2. Align the case to hold the window in place.

4. Replace the four screws and use a #1 Phillips driver to tighten them.

5. Align the print head to plug the left and right connectors into the wire bundles.

6. Slide the print head into one side and jog it into the other side.

7. Align the pivots of the bracket onto the posts; then, snap the bracket into place.

8. Clean the print head with the cleaning pen.

Assembling the Printer

Reload media. Plug in the power cord, turn on the printer, load media, and run the AutoSense routine to get a dump mode printout.

Preparations

⚠ Protect against static discharge. Your work area must be static-safe and include a properly grounded conductive cushioned mat to hold the printer and a conductive wrist strap for yourself.

Perform the removal steps of the *Upper Case Replacement* (980358-314) and *Bottom Case Replacement* (980358-305A) procedures.

Removal

1. Detach the cable connector ❶ from where it plugs into the feed/LED PCBA.

2. Detach the bracket ❷ from the upper case.

3. Carefully open the cable retainers Ⓐ Ⓑ on the left side of the upper frame.

4. Detach the main PCBA connector and slip it through the left hinge Ⓒ of the frame assemblies.

5. Remove the cables and bracket from the upper frame.
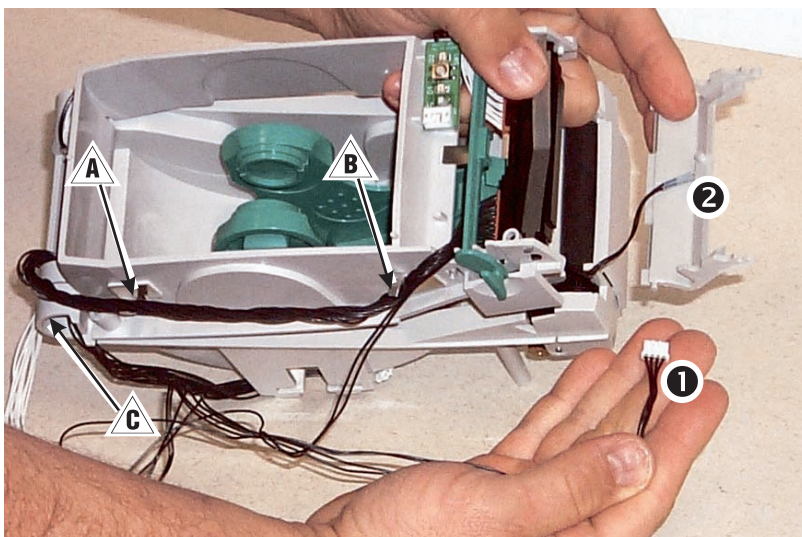
Assembly

1. Slip the connector for the main PCBA through the upper frame and align the bracket into place.

2. Route the wires through the cable retainers on the left side of the upper frame.

3. Slip the connector through the left hinge of the frame assembly.

4. Plug the wire bundle into its receptacle on the main PCBA.

5. Plug the cable connector into its receptacle on the feed/LED PCBA.

Assembling the Printer

Perform the assembly steps of the *Bottom Case Replacement* (980358-305) and *Upper Case Replacement* (980358-314) procedure. Reload media. Plug in the power cord, turn on the printer, load media, and run the AutoSense routine to get a dump mode printout.

Preparations

Perform the removal steps of the *Upper Case Replacement* procedure (980358-314).

Removal

1. Lift the feed/LED PCBA ❶ to unsnap it from the upper frame.

2. Detach the cable connector ⚠ from where it plugs into the feed/LED PCBA.

Assembly

1. Plug the cable connector into the feed/LED PCBA.

2. Lower the feed/LED PCBA onto its tab on the upper frame.

Assembling the Printer

Perform the assembly steps of the *Upper Case Replacement* procedure (980358-314).

Reload media. Plug in the power cord, turn on the printer, load media, and run the AutoSense routine to get a dump mode printout.
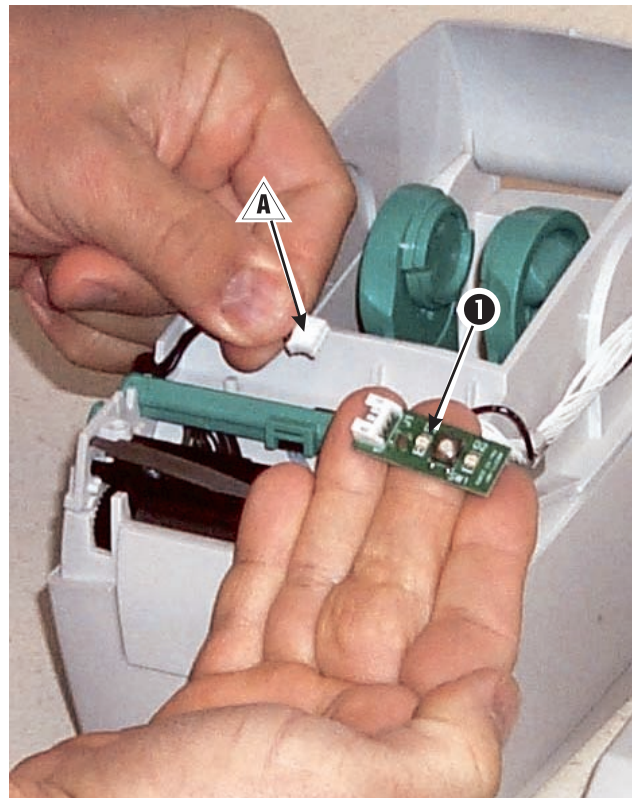
Preparations

> Protect against static discharge. Your work area must be static-safe and include a properly grounded conductive cushioned mat to hold the printer and a conductive wrist strap for yourself.

Perform the removal steps of the *Bottom Case Replacement* (980358-305) and *Main PCBA Replacement* (980358-309) procedures.

Installation

1. Align the real time clock chip above its location U22 on the main PCBA ❶. Make sure the notched end of the chip is towards the notched end of the outline printed on the board.

2. Lower the real time clock chip into place taking care not to bend any of the pins.

Assembling the Printer

Perform the assembly steps of the *Main PCBA Replacement* (980358-309) and *Bottom Case Replacement* (980358-305) procedures.

Checking the Installation

Turn on the printer and run your printer's AutoSense routine to get a dump mode printout. This action tests the printer's media drive and printing capabilities.
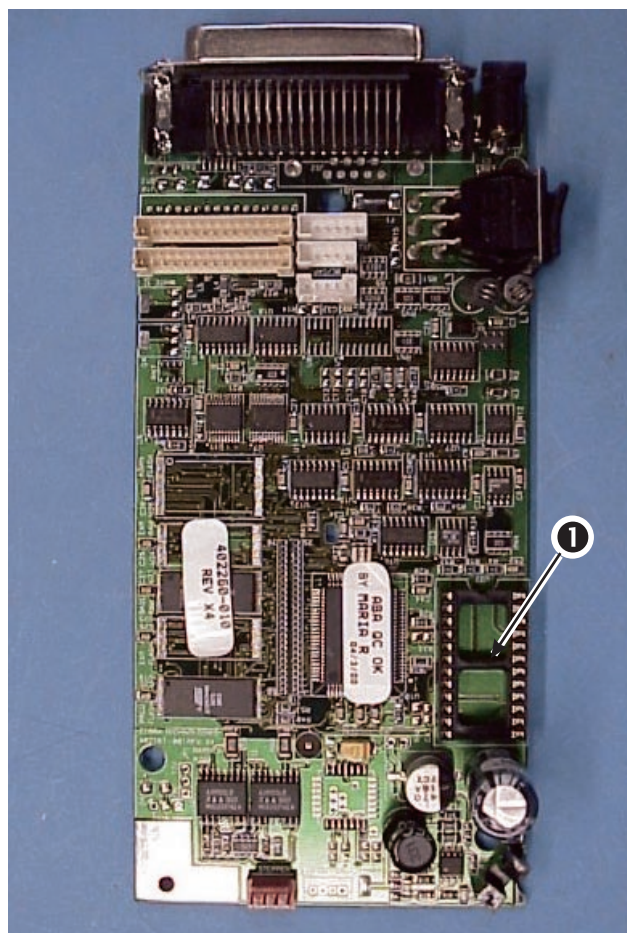
You can also check the printout.

⚠A   Firmware version number
⚠B   Memory (available bytes)
⚠C   Real time clock option (when installed)


```
8" UKQ1775      V3.20                ⚠A
Serial port : 96,N,8,1
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Image buffer size:050K
Fmem:000.5K,060.9K avl              ⚠B
Gmem:024K,0045K avl
Emem:000K,0045K avl
I8,0,001  rN
S4 D10 R064,000   ZT UN
q1600 Q1209,026
Option:
17 21 25

Date: 07-19-99
Time: 12:44:00

now in DUMP                         ⚠C
```

Preparations

⚠	Protect against static discharge. Your work area must be static-safe and include a properly grounded conductive cushioned mat to hold the printer and a conductive wrist strap for yourself.

Open the printer by pulling the release latches forward, then lifting the top cover. Remove media.

Removal

1. Unsnap the bracket ❷ from the lid.

2. Slide the print head ❶ to one side until it is free of the lid.

3. Use a #1 Phillips driver to loosen the screw that holds the ground wire to the bracket; pull the wire away from the bracket.

4. Unplug both bundles of print head wires from the left and right connectors.

The head spring remains in the lid. The spring slides to one side to release the other end.
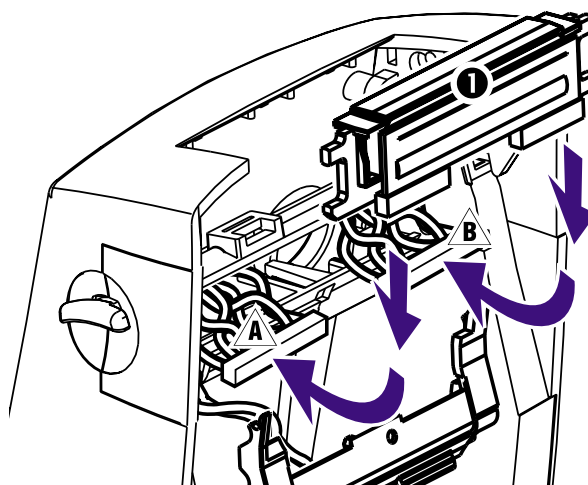
Assembly

1. Align the print head ❶ to plug the left and right connectors into the wire bundles ⒜ ⒝ .

2. Slip the ground wire under the right screw and use a #1 Phillips driver tighten to it.

3. Slide the print head into one side and jog it into the other side.

4. Align the pivots ⒞ ⒟ of the bracket ❷ onto the posts ⒠ ⒡ ; then, snap the bracket into place.

5. Clean the print head with the cleaning pen.
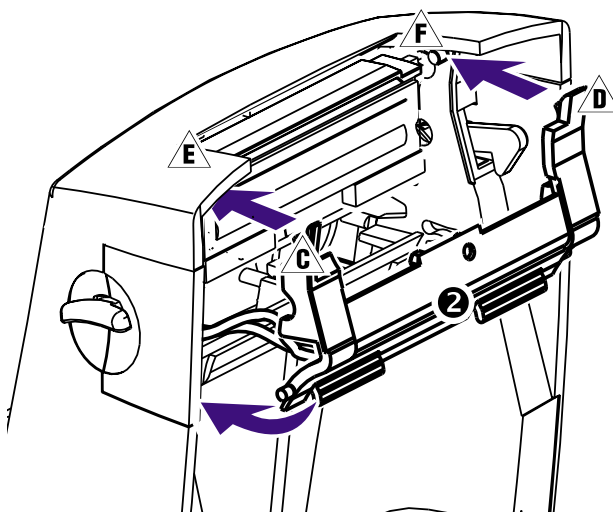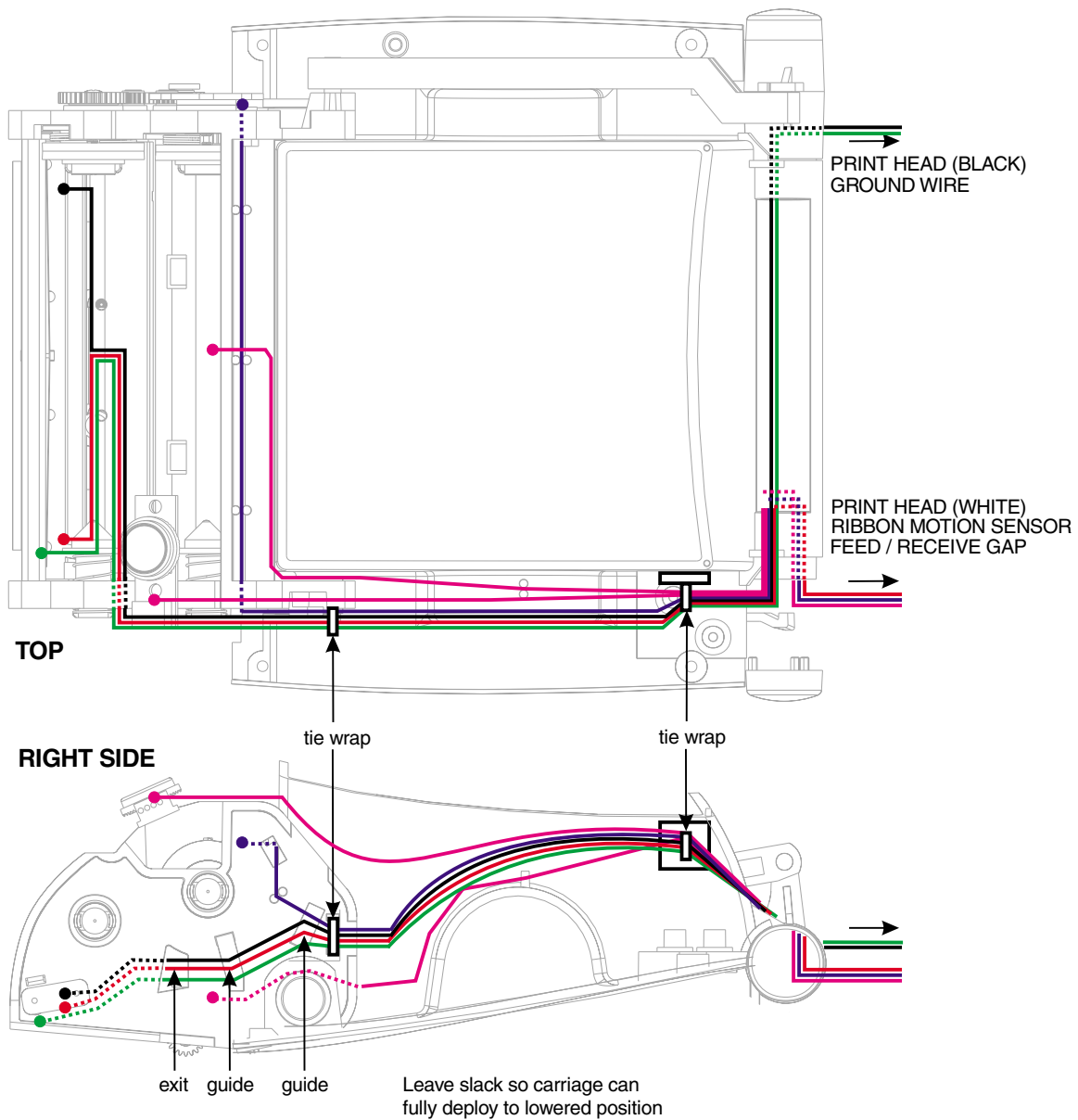
Assembling the Printer

Reload media. Plug in the power cord, turn on the printer, load media, and run the AutoSense routine to get a dump mode printout.
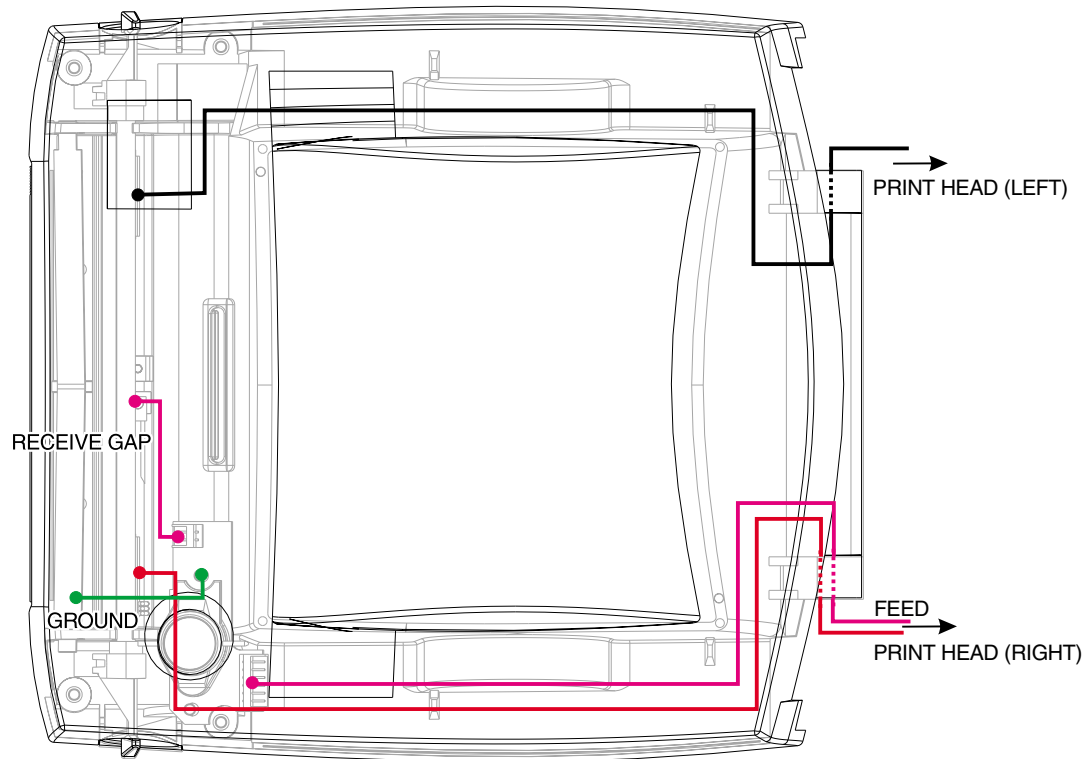
CABLE ROUTING

The following simplified charts show routing for the printer's electronic components.

SIMPLIFIED WIRING DIAGRAM - TLP 2844
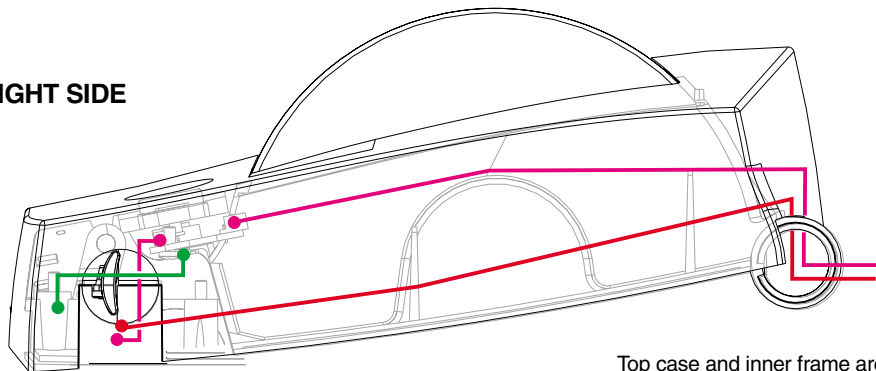## Carriage & Upper Frame

PRINT HEAD (BLACK)
GROUND WIRE

PRINT HEAD (WHITE)
RIBBON MOTION SENSOR
FEED / RECEIVE GAP

TOP

tie wrap

tie wrap

RIGHT SIDE

exit   guide   guide

Leave slack so carriage can
fully deploy to lowered position

SIMPLIFIED WIRING DIAGRAM - LP 2844
Carriage & Upper Frame

PRINT HEAD (LEFT)

RECEIVE GAP

GROUND

FEED

PRINT HEAD (RIGHT)

TOP

RIGHT SIDE

Top case and inner frame are
welded together.

SIMPLIFIED WIRING DIAGRAM - LP 2824
Upper Frame

tie wrap   tie wrap

PRINT HEAD (BLACK)
FEED / RECEIVE GAP

tie wrap

TOP

PRINT HEAD (WHITE)
GROUND WIRE

tie wrap   tie wrap

RIGHT SIDE

tie wrap

guide

Zebra Technologies Corporation