
Removal and Installation

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Introduction

This chapter is a step by step guide to the removal and installation of the key components in the printer. You may find it useful to tick off the steps as they are performed. Use the illustration at the end of each procedure to identify the parts referred to in the text.

The procedures appear in order of removal. So the whole machine can be stripped down by starting at the beginning of this chapter and working through the subsequent procedures.

Before using this chapter to remove and install a new component, always make sure that you have performed the relevant service test from Chapter 4. If the test passes you will not need to replace the component.

Safety Precautions

(Safety symbols ♦ Immediately after the table of contents.)

Review WARNING and CAUTION symbols and instructions before you service the plotters. Follow these warnings and cautions for your protection and to avoid damaging the plotter.

WARNING **Serious shock hazard leading to death or injury may result if you do not take the following precautions:**

Ensure that the ac power outlet (mains) has a protective earth (ground) terminal.

Switch the plotter off, and disconnect it from the power source prior to performing any maintenance.

Prevent water or other liquids from running onto electrical components or circuits, or through openings in the module.

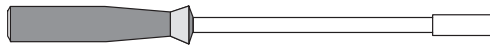
Electrostatic Discharge (ESD) Precautions

To prevent damage to the plotter circuits from high-voltage electrostatic discharge (ESD):

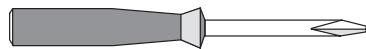
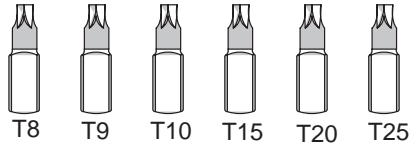
1. Do not wear clothing that is subject to static build-up.
2. Do not handle integrated circuits (ICs) in carpeted areas.
3. Do not remove an IC or a printed circuit assembly (PCA) from its conductive foam pad or conductive packaging until you are ready to install it.
4. Ground (earth) your body while disassembling and working on the plotter.
5. After removing a cover from the plotter, attach an earthing (ground) lead between the PCA common and earth ground. Touch all tools to earth ground to remove static charges before using them on the plotter.
6. After removing any PCA from the plotter, place it on a conductive foam pad or into its conductive packaging to prevent ESD damage to any ICs on the PCA.

Required Tools

The following tools are required to remove and install the printer.



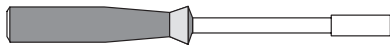
Long Torx screwdriver with the indicated attachments.



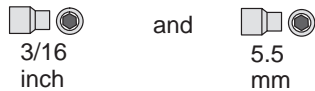
Pozidrive PZ1 screwdriver.



Small flat-blade screwdriver.



Nut driver with the indicated attachments.



Electronics Module

Refer to figure 1A ♦ page 8-9

Removal

1. This step is **ONLY** to be performed if the electronics module is being **REPLACED** by a new electronics module. Otherwise go straight to step 2.
 1. Enter Service Mode.
 2. Enter Service Calibrations and go to C09 Maintenance. Record the value of the preventative maintenance number (ie the number of swaths) ♦ page 5-16.

WARNING

Switch off the printer and remove the power cord.

3. Locate the four T-10 screws (item 1) that secure the SIMM cover (item 2) to the Electronics Module. Remove three screws only and loosen the fourth. Slide the cover to the side.

Note the position of the SIMMs. From left to right:

- The Firmware SIMM (Flash SIMM) is held in the 1st slot (Item 3).
 - The Postscript Code SIMM is held in the 2nd slot (Item 4).
 - The DRAM SIMM(s) are held in the 3rd and 4th slot (item 5).
4. Remove the SIMMs by holding the outer non-metallic edge and gently pulling towards you. Store these parts in a safe place.
 5. With a flat end screwdriver, unscrew the 2 screws (item6) holding the MIO card (also known as the Jetdirect card)(item7). Lift the MIO card out and store in a safe place.
 6. Remove the following:
 1. *Hard Disk Drive* ♦ page 8-12.
 2. Remove the left and right hand back covers (items 8 and 9) by releasing them from holding clips.
 3. Carefully disconnect all the cables from the electronics module.
 4. Remove the five (HP DesignJets 2500CP/2000CP) or eight (HP DesignJets 3500CP/3000CP) T-20 screws (item 10) which secure the top cover to the electronics module.
 5. Remove two T-20 screws (item 11) which can be found at both ends of the electronics module at the bottom.
 6. Loosen the two remaining T-20 screws (item 12).

7. Carefully remove the whole electronics module (item 13) by sliding it up and to the right.

Installation

Note: Working from the rear of the printer.

1. Ensuring there are no cables trapped between the printer and the electronics module, install the electronics module onto the two remaining loosened screws (item 12). Make sure you install first the right hand side and then the left hand side.
2. Install the bottom left and then the bottom right T-20 screws located inside the electronics module (item 11).
3. Tighten the top left and top right screws inside the electronics module.
4. Install the five (HP DesignJets 2500CP/2000CP) or eight (HP DesignJets 3500CP/3000CP) T-20 screws (item 10) into the rear of the top cover, securing the electronics module. Be careful not to damage the sheet metal MIO gasket which surrounds the centronics port.
5. This step is **ONLY** to be performed if the electronics module is being **REPLACED** by a new electronics module. Otherwise go straight to step 6.
 2. Install the following:
 1. *Hard Disk Drive* ▶ page 8-12.
 1. Install the MIO card (item 7). Lower the card into the metal receptacle in the electronics module. Tighten the retaining screws (item 6).
 2. Install the Firmware SIMM (Flash SIMM). This SIMM plugs into the 1st slot on the left (item 3). Be careful not to bend the contacts in the plug when installing.
 3. Install the Postscript Code SIMM. This SIMM plugs into the 2nd slot on the left (item 4). Be careful not to bend the contacts in the plug when installing.
 4. Install the DRAM SIMM(s). These SIMMs plug into the 3rd and 4th slot from the left (item 5). Be careful not to bend the contacts in the plug when installing.
 5. Slide the SIMM cover (item 2) over the hole. Install the three T-10 screws (items 1) into the SIMM cover securing it to the electronics module. Tighten the 4th screw.
6. Carefully connect the following cables to the electronics module:
 1. *Front panel cable in J9*
 2. *Stand-by switch cable in J2*

3. *X-encoder cable in **J1***
 4. *Service station cable in **J11***
 5. *Refill station cable in **J4***
 6. *Media sensor cable in **J6***
 7. *Pinch wheel sensor cable in **J8***
 8. *X-motor cable in **J7***
 9. *Trailing cable in **J3, J5 and J10***
7. Install the left and right hand back covers (items 7 and 8).
 8. Connect the power cord and turn the printer on in service mode.
 9. If a new electronics module is being installed, perform the following service calibrations:
 1. **C01 Carriage** ▶ **page 5-6**
 2. **C02 Refill** ▶ **page 5-8**
 3. **C03 Line Sensor** ▶ **page 5-9**
 4. **C10 Font Type Set** ▶ **page 5-19**
 5. **C05 Printheads Alignment** ▶ **page 5-12**
 6. **C06 Printheads Check** ▶ **page 5-13**
 7. **C07 Color Calibration** *Only for HP DesignJet 2500CP/3500CP printer* ▶ **page 5-15**
 8. **C08 Service Accuracy** ▶ **page 5-16**
 9. **C09 Maintenance** ▶ **page 5-18** (Adjust Counter)
 10. **C10 Font Type Set** ▶ **page 5-19** (Only for Asian Fonts)
 10. Perform the D01 Electronics service test ▶ **page 4-6**.

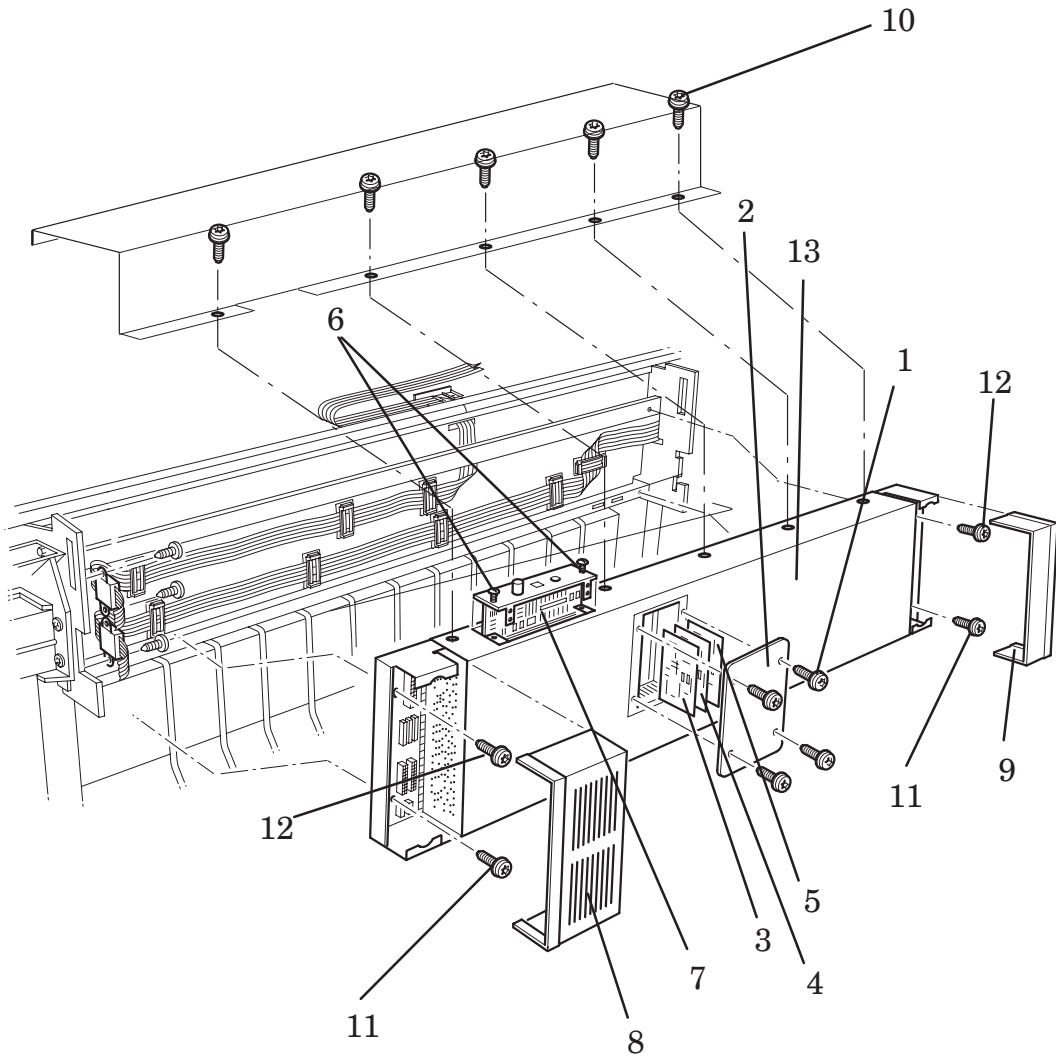


Figure 1A: Electronics Module

Additional Rear Cover (Only applicable to HP DesignJets 3500CP and 3000CP)

Refer to figure 1B ▶ page 8-11

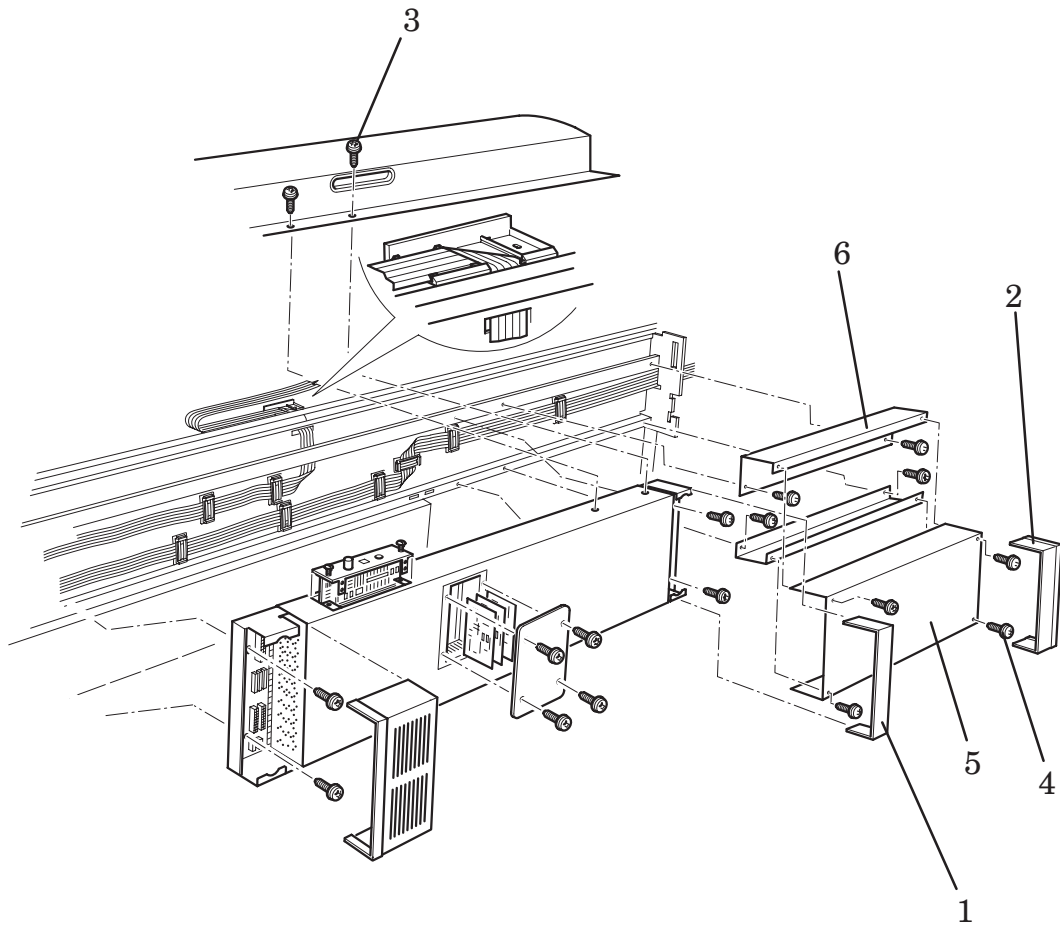
Removal

1. Remove the central and right hand back covers (items 1 and 2) by releasing them from holding clips.
2. Remove the eight T-20 screws (item 3) which secure the top cover to the electronics module.
3. Remove the four T-20 screws (item 4) which secure the additional rear cover (item 5) to the cover support structure (item 6).
4. Remove the additional rear cover (item 5) from the cover support structure (item 6).

Installation

Note: Working from the rear of the printer.

1. Install the additional rear cover (item 5) onto the cover support structure (item 6).
2. Install the four T-20 screws (item 4) which secure the additional rear cover (item 5) to the cover support structure (item 6).
3. Install the eight T-20 screws (item 3) which secure the top cover to the electronics module.
4. Install the central and right hand back covers (items 1 and 2).



**Figure 1B: Additional Rear Cover
(Only Applicable to HP DesignJets 3500CP/3000CP)**

Hard Disk Drive, Power Switch Cable

***THE HARD DISK DRIVE IS ONLY APPLICABLE FOR THE
HP DESIGNJET 2500CP/3500CP PRINTER.***

Refer to figure 2 ♦ page 8-14

Removal

WARNING

Switch off the printer and remove the power cord.

1. Remove the following:
 1. *Window and Top Cover ♦ page 8-15.*
2. Remove the electronics cover (item 2) by removing eight screws (item 1) securing it to the electronics module.
3. Remove the black polystyrene hard disk holder (item 3) with the hard disk drive (item 4) inside.
4. Disconnect the data cable (item 5) from the hard disk drive
5. Disconnect the data cable from position **J22 Hard Disk Drive** from the main PCA (item 6).
6. Disconnect the hard disk power cable (item 7) from the hard disk driver.
7. Disconnect the hard disk power cable from position **J15 HDD PWR** from the main PCA (item 8).
8. Lift up the black plastic guard (item 9) on the power PCA and disconnect the power switch cable (item 10) from position **J2** on the power PCA.
9. Remove the power switch cable by pinching together the retaining clips on the rocker switch (item 11), then pulling the switch and the cable through the hole in the electronics module.

Installation

1. Pull the power switch cable through the hole in the electronics module, then push the rocker switch (item 11) into the hole securing it with retaining clips.
2. Connect the power switch cable (item 10) to position **J2** on the power PCA.
3. Connect the hard disk power cable (item 8) to position **J15 HDD PWR** on the main PCA.
4. Connect the hard disk power cable (item 7) to the hard disk driver.
5. Connect the data cable (item 6) to position **J22 Hard Disk Drive** on the main PCA
6. Connect the data cable (item 5) to the hard disk drive.
7. Install the black polystyrene hard disk holder (item 3) with the hard disk drive (item 4) inside into the correct position in the electronics module.
8. Install eight screws (item 1) into the electronics cover (item 2) securing it to the electronics module. Be careful not to damage the sheet metal MIO gasket which surrounds the centronics port.
9. Connect the power cord and turn the printer on in service mode.
- 10. Perform the C10 Font Type Set calibration ▶ page 5-19 (Only for Asian Fonts).**
11. Perform the D01 Electronics service test ▶ page 4-6.

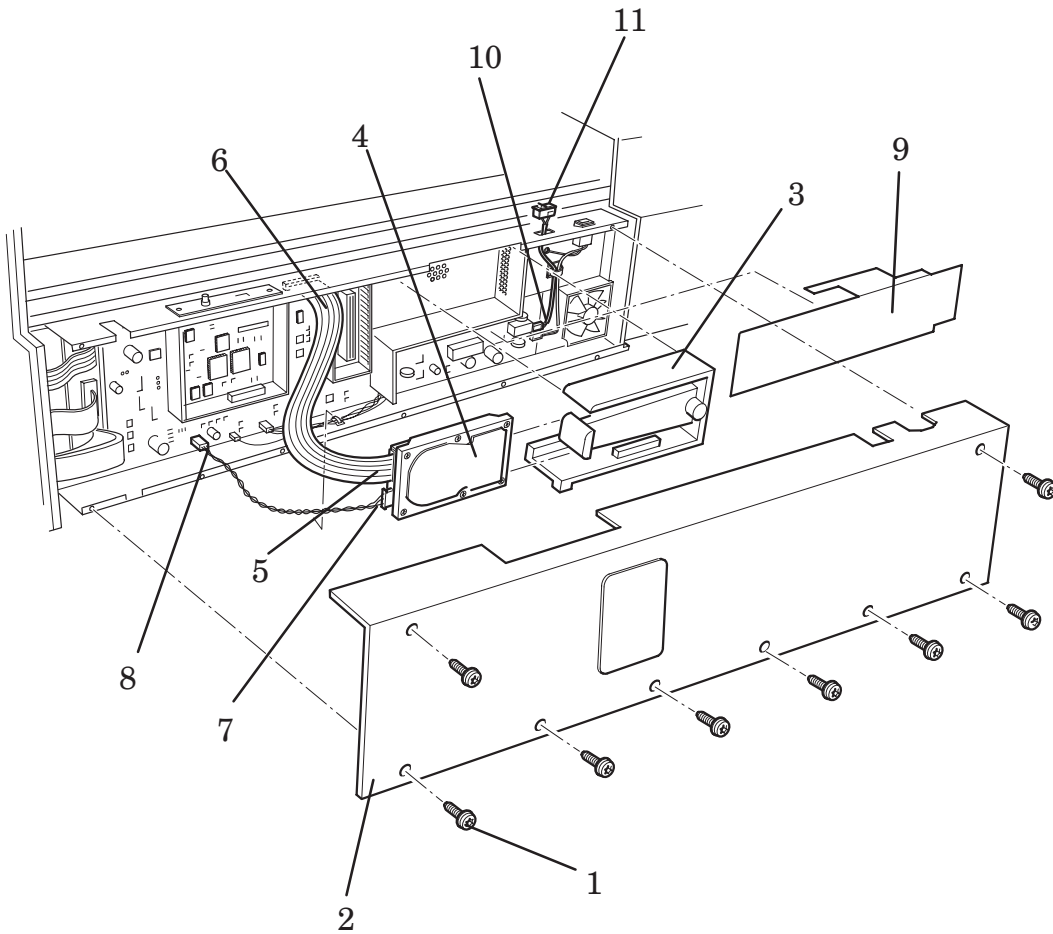


Figure 2: Hard Disk Drive

Window and Top Cover

Refer to figures 3 and 4 ▶ page 8-16 and 8-17

Removal

WARNING

Switch off the printer and remove the power cord.

1. Remove two T-15 screws (item 1 on figures 3 & 4) securing the top cover to the left and right hand covers.
2. **Loosen** the screws (item 2 on figure 3) on the left hand cover.
3. Pulling the left hand cover aside remove the window (item 3 on figure 4).
4. Remove the rear left and right hand back covers.
5. Remove five T-20 screws from the rear of the top cover.
6. Remove the top cover (item 4 on figure 3).

Installation

1. Install the top cover (item 4 on figure 3) making sure that the two small wire clamps on the centronics port are positioned vertically.
2. Install the five T-20 screws into the rear of the top cover.
3. Install the rear left and right hand back covers.
4. Carefully push the left hand cover aside and install the window (item 3 on figure 4).
5. Tighten the screws on the left hand cover (item 2 on figure 3).
6. Using two T-15 screws, secure the rear cover to the left and right hand covers (item 1 on figures 3 & 4).
7. Connect the power cord and turn the printer on in service mode.
8. Perform D08 Sensors Service Test ▶ page 4-18

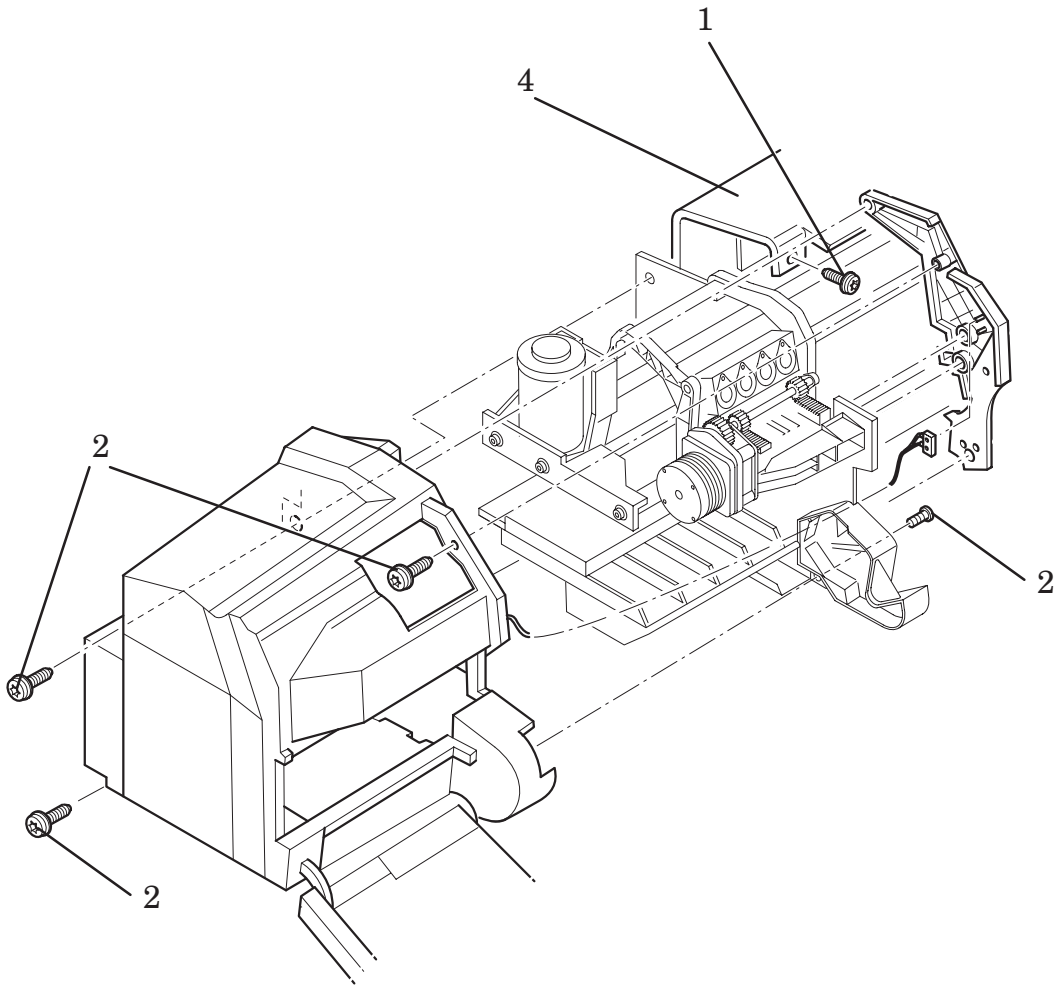


Figure 3: Top Cover

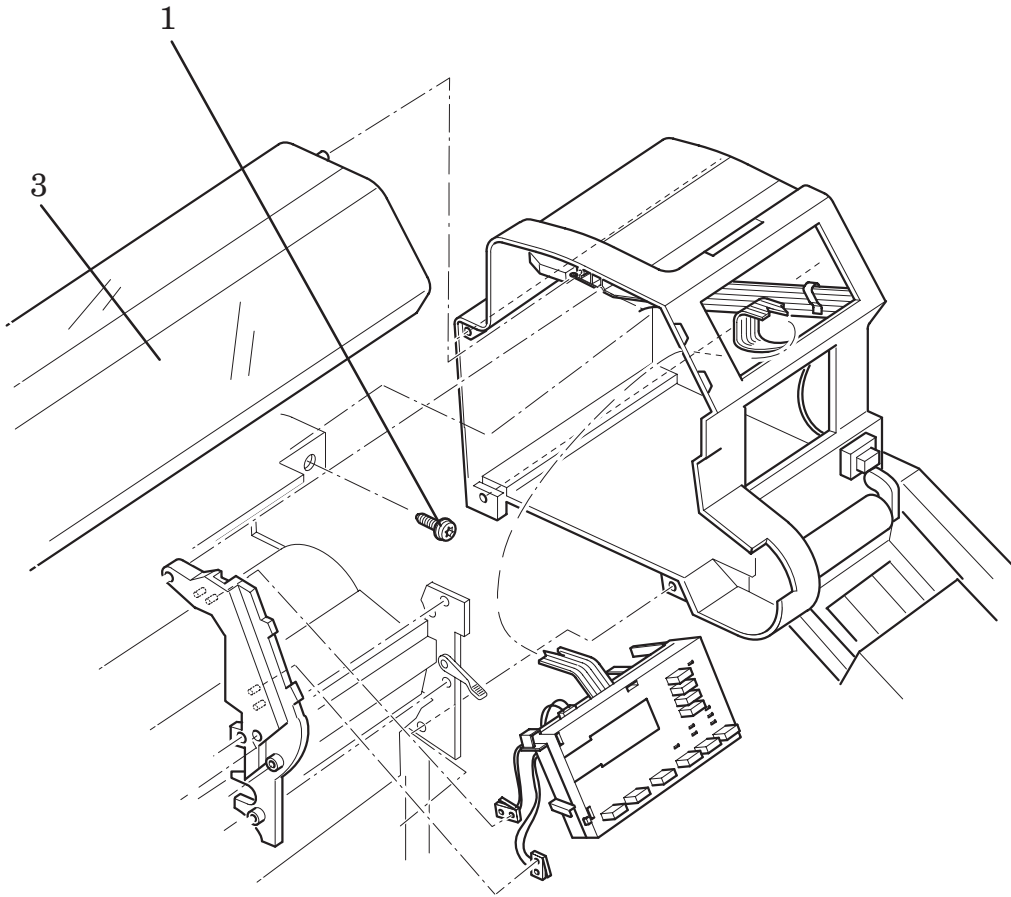


Figure 4: Window

Left Hand Cover and Left Hand Trim Assembly

Refer to figure 5 ▶ page 8-20

Removal

1. Remove the ink delivery system (Refer to the User Guide).

WARNING

Switch off the printer and remove the power cord.

2. Remove the following:
 1. *Window and Top Cover* ▶ page 8-15.
3. Open the door on the left hand cover (item 1).
4. Remove the left hand trim assembly (item 2) by removing four T-15 screws (item 3) and one T-20 screw (item 4) and disconnecting the cover sensor (item 5).

Be careful not to drop the cover once the securing fasteners have been removed. Support the cover throughout the next step.

5. Remove the three T-15 screws (item 6) securing the cover to the left hand side chassis.
6. Making sure the left hand door is open, remove the left hand cover (item 7).

Note: To remove the Cover Sensor, disconnect it from position J6 DOOR SW on the Refill Interconnect PCA.

Installation

1. Open the door on the left hand cover (item 1).
2. Ensuring the cover sensor cable (item 5) is not trapped, install the left hand cover (item 7) into the correct position on the chassis.
3. Install three T-15 screws (item 6), securing the left hand cover to the left hand side chassis.
4. Install the cover sensor (item 5) onto the left hand trim assembly (item 2) by pushing it onto the retaining clips.
5. Install the left hand trim assembly in position, making sure the cover sensor cable is not trapped
6. Install four T-15 screws (item 3) and one T-20 screw (item 4) securing the left hand trim assembly.
7. Close the door of the left hand cover.
8. Install the following:
 1. *Window and Top Cover* ▶ page 8-15.
9. Install the ink delivery system (Refer to the User Guide).
10. Connect the power cord and turn the printer on in service mode.
11. Perform D08 Sensors Service Test ▶ page 4-18

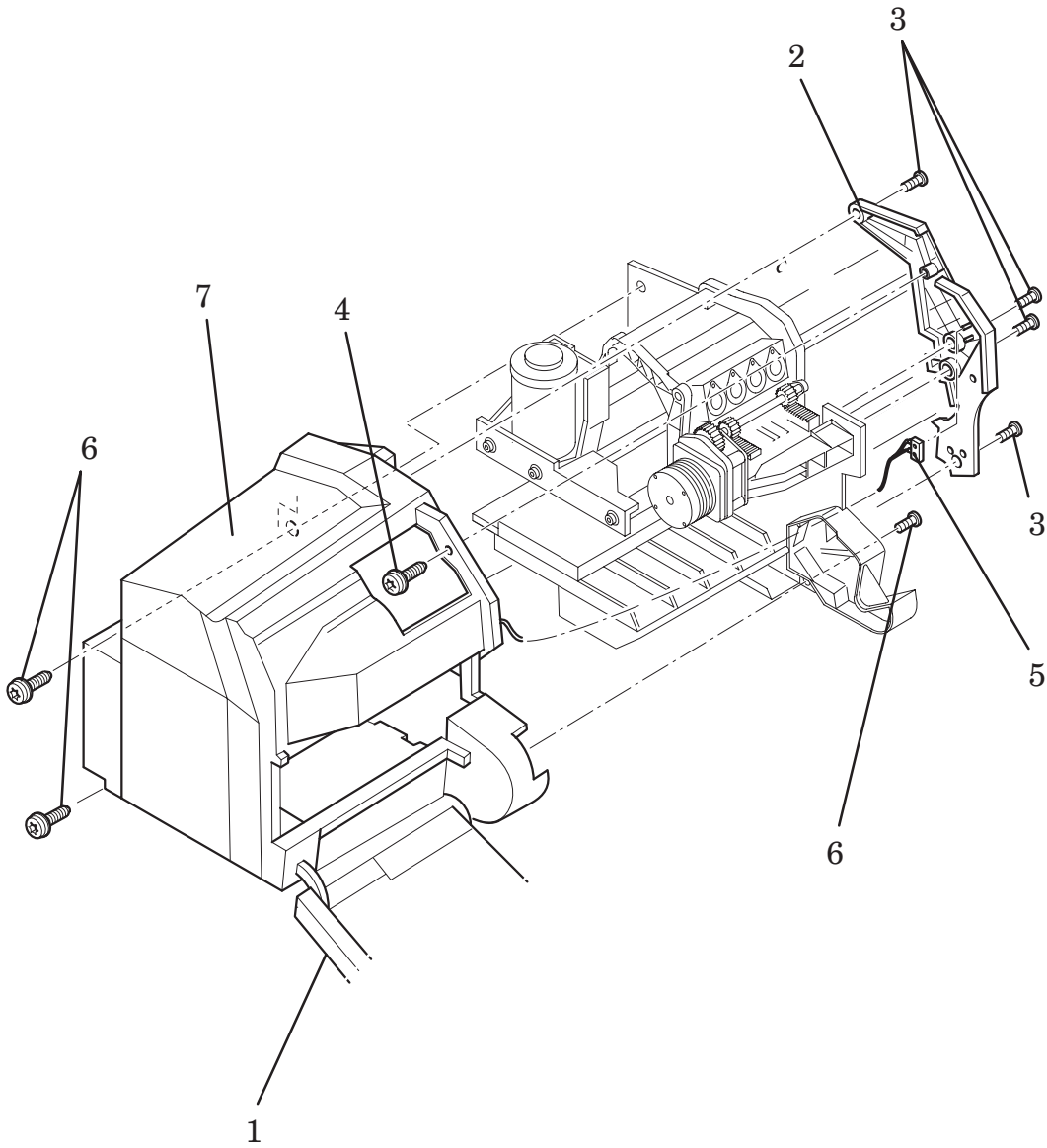


Figure 5: Left Hand Cover

Right Hand Cover and Right Hand Trim Assembly

Refer to figure 6 ▶ page 8-23

Removal

1. Remove the ink delivery system (Refer to the User Guide).

WARNING

Switch off the printer and remove the power cable.

2. Remove the left hand back cover.
3. Disconnect the front panel cable from position **J1 FRONT PANEL** on the electronics module.
4. Disconnect the stand-by button cable from position **J2 ON/STBY** on the electronics module.
5. Remove the following:
 1. *Window and Top Cover* ▶ page 8-15.
6. Open the door on the right hand cover (item 1).

Note: Position the pinch-arm lever at half way to enable you to perform the next step (item 2).

7. Remove the right hand trim assembly (item 3) by removing five T-15 screws (item 4) and disconnecting two cover sensors (item 5) located on the inside.

Be careful not to drop the cover (item 7) once the securing fasteners have been removed. Support the cover throughout the next step.

The right hand cover and window sensors can be removed by disconnecting them from the front panel assembly.

8. Remove the three T-15 screws (item 6) securing the right hand cover to the right hand side chassis.
9. Remove the right hand cover (item 7), carefully passing the front panel cable and the stand-by button cable through the hole in the right hand side chassis.

Installation

Note 1: *Ensure the front panel cable and the stand-by button cables are secured by the cable clamps on the inside of the cover.*

Note 2: *At the rear of the right hand side chassis is a hole for the cables to go through. If the cables are not through this hole the cover cannot be installed.*

1. Ensuring the cover sensor cable is not trapped (item 5), install the right hand cover (item 7) into the correct position on the right hand side chassis.
2. Install three T-15 screws (item 6), securing the right hand cover to the right hand side chassis.
3. Open the door on the right hand cover (item 1).
4. Install the two cover sensors (item 5) onto the right hand trim assembly (item 3) by pushing it onto the retaining clips. Use a **small** amount of glue to glue the sensor onto the right hand trim.

Note: *Position the pinch-arm lever (item 2) at half way to enable you to perform the next step.*

5. Install the right hand trim assembly in position and secure with five T-15 screws (items 4).
6. Connect the front panel cable to the electronics module in position **J9 FRONT PANEL**.
7. Connect the stand-by button cable to the electronics module in position **J2 ON/STBY**.
8. Install the following:
 1. *Window and Top Cover* ▶ page 8-15.
9. Install the ink delivery system (Refer to the User Guide).
10. Connect the power cord and turn the printer on in service mode.
11. Perform D08 Sensors Service Test ▶ page 4-18

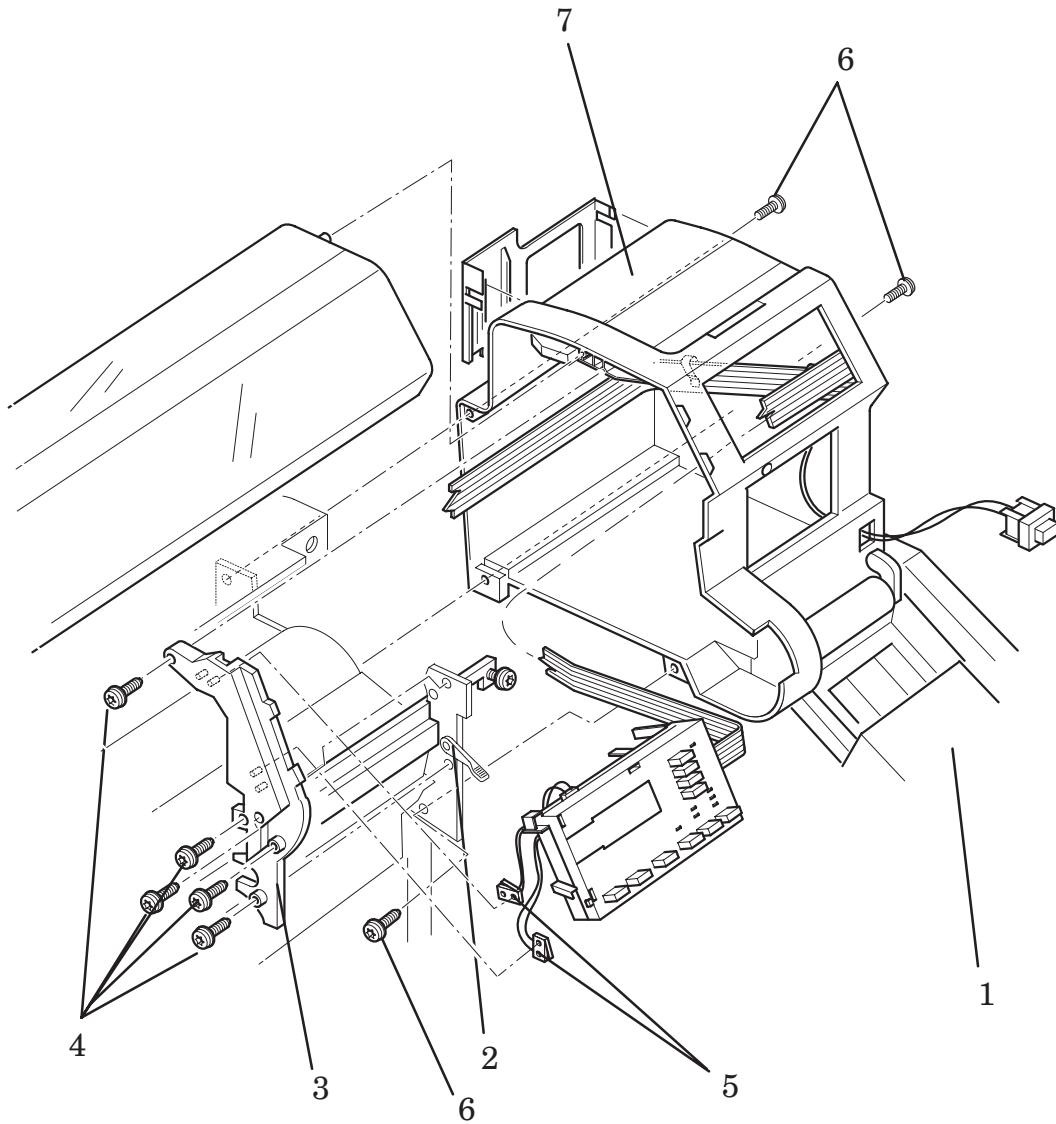



Figure 6: Right Hand Cover



Front Panel and Stand-by Button

Refer to figure 7  page 8-25




Removal

WARNING

Switch off the printer and remove the power cord.

1. Remove the following:
 1. *Window and Top Cover*  *page 8-15.*
 2. *Right Hand Cover*  *page 8-21.*
2. Remove the stand-by button cable and the front panel cable from the wire clamps (item 1) on the inside of the right hand cover.
3. Remove the front panel (item 2) from inside the right hand cover (item 3) by releasing it from the retaining clips.
4. Open the door (item 4) on the right hand cover.
5. Remove the stand-by button (item 5) by releasing it from the securing clips located inside the right hand cover.
6. Remove the stand-by button through the front of the right hand cover.

Installation

1. Open the door (item 4) on the right hand cover. Feed the cable for the stand-by button (item 5) through a hole in the front of the right hand cover (item 3).
2. Secure the button in the cover by pushing it onto retaining clips.
3. Push the front panel (item 2) into the securing clips inside the right hand cover.
4. Route the stand-by button cable and the front panel cable through cable clamps (item 1) on the inside of the right hand cover.
5. Install the following:
 1. *Right Hand Cover*  *page 8-21.*
 2. *Window and Top Cover*  *page 8-15.*
6. Connect the power cord and turn the printer on in service mode.
7. Perform D07 Front Panel Service Test  *page 4-17*

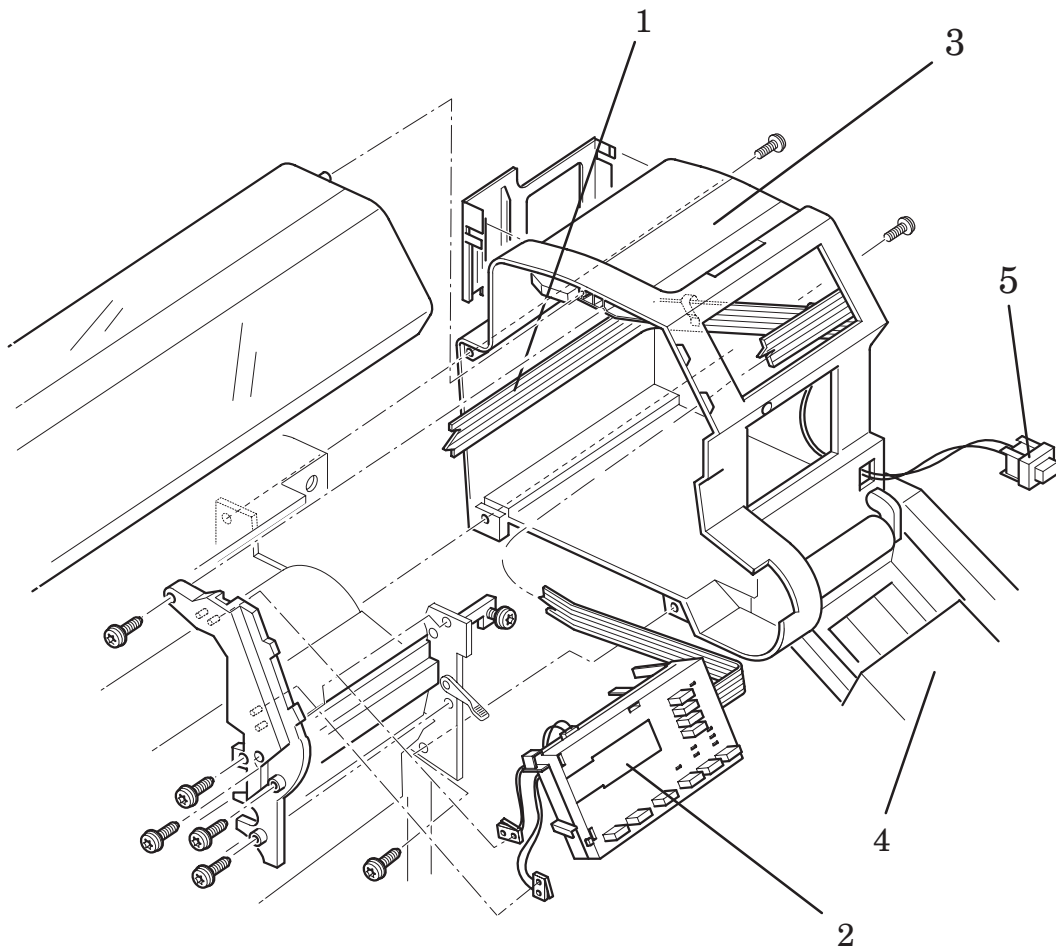


Figure 7: Front Panel and Stand-by Button

Service Station Assembly and Service Station Flag

Refer to figure 8 ♦ page 8-28

Removal of the Service Station Assembly

1. Remove the ink delivery system (Refer to the User Guide).

WARNING

Switch off the printer and remove the power cord.

2. Remove the following
 1. Window and Top Cover ♦ page 8-15.
 2. Right Hand Cover ♦ page 8-21.
3. Manually slide the carriage assembly to the middle of the printer.
4. Carefully disconnect the black service station interconnect cable (item 1) from the service station interconnect PCA, this is located under the service station assembly.

Note for HP DesignJets 3500CP/3000CP: Make sure you disconnect the Media Button Cable (Item 10) from the Service Station Interconnect PCA.

5. To remove a T20 screw (item 3) it may be necessary to move the head cleaner holders to the rear. This can be done by turning the service station motor gear (item 2), the screw can then be reached by a screw driver.
6. Loosen the remaining three T-20 screws (item 4) securing the service station to the printer. These screws are long and can be fully loosened.
7. Remove the service station assembly (item 5) by lifting up and pulling towards you.

Removal of the Service Station Flag.

1. Release the spring (item 6) from the service station flag (item 7).
2. Position the flag horizontal and push down and to the right

Note: To remove the primer assembly from the service station assembly, refer to the primer removal procedure ♦ page 8-29.

Installation of the Service Station Assembly

1. Release any cable clamps that may be wrapped around the service station to protect it while in transportation.

Note: On the service station assembly there are two locating pins, these will help you to align the service station assembly to the right hand side chassis.

Note: Be careful not to damage the service station flag while performing the following procedure.

2. Install the service station assembly onto the three loosened T-20 screws (item 4). Tighten the screws.
3. Install the T-20 screw (item 3) securing the service station.

Note: Make sure the tubes (item 8) are not bent or twisted.

4. Install the black service station interconnect cable (item 1) to the service station interconnect PCA, this is located under the service station assembly.

Note for HP DesignJets 3500CP/3000CP: Make sure you reconnect the Media Button Cable (Item 10) to the Service Station Interconnect PCA.

5. Install the following:
 1. *Right Hand Cover* ▶ page 8-21.
 2. *Window and Top Cover* ▶ page 8-15.
6. Install the power cable and turn the printer on in service mode.
7. Enter service test and perform D05 service station test ▶ page 4-15
8. Install the ink delivery system (Refer to the User Guide).

Installation of the Service Station Flag

1. Position the flag (item 7) horizontally, then push up into a retaining clip on the service station assembly. The correct clip on the flag is shown as (item 9).
2. Install the spring (item 6) from the service station flag to the service station assembly.

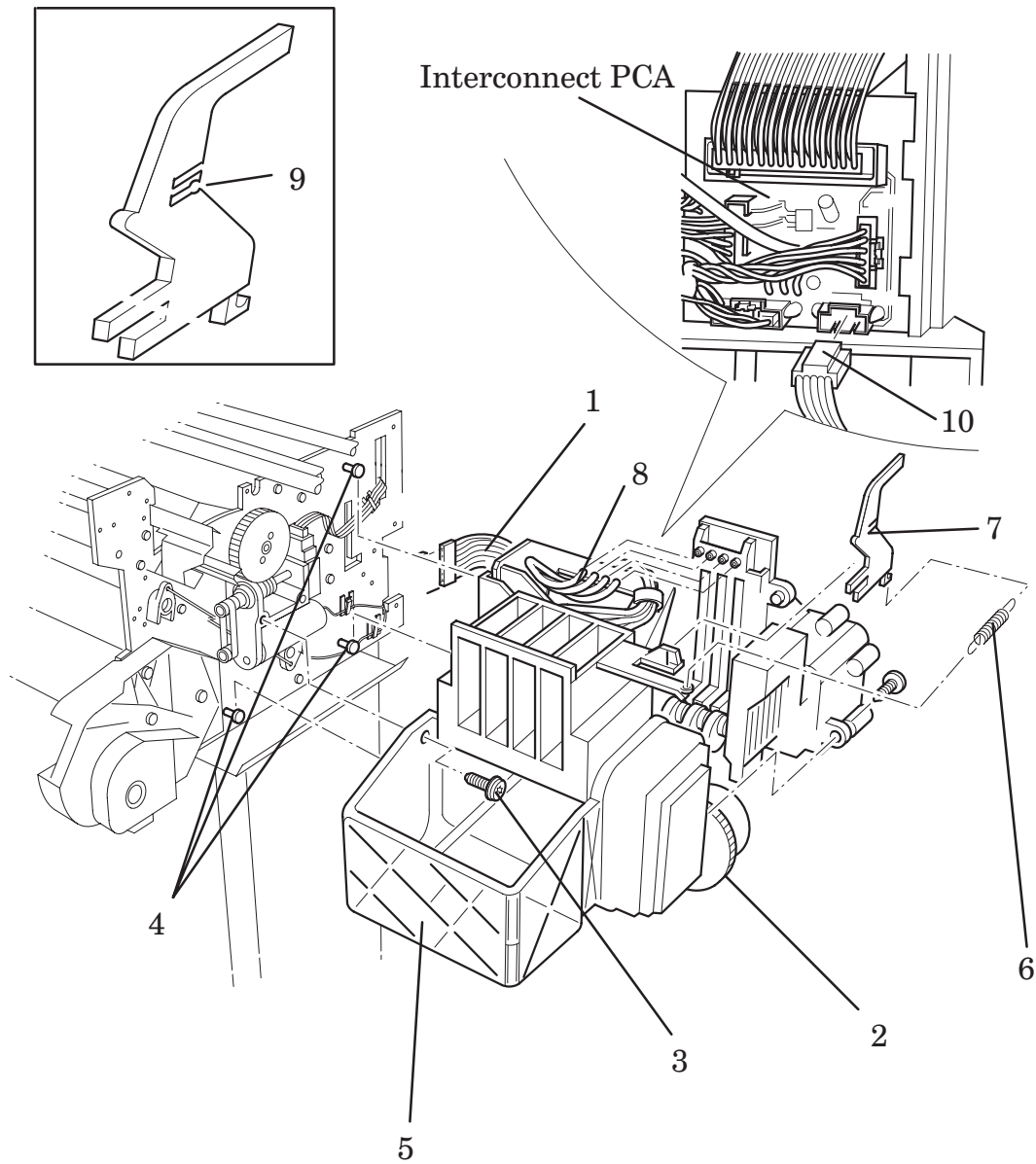


Figure 8: Service Station Assembly

Primer Assembly (Only Applicable to HP DesignJets 2500CP/2000CP)

NOTE FOR HP DESIGNJETS 3500CP/3000CP: IF THE PRIMER ASSEMBLY FAILS, YOU MUST REPLACE THE COMPLETE SERVICE STATION.

Refer to figure 9 ♦ page 8-31

Removal

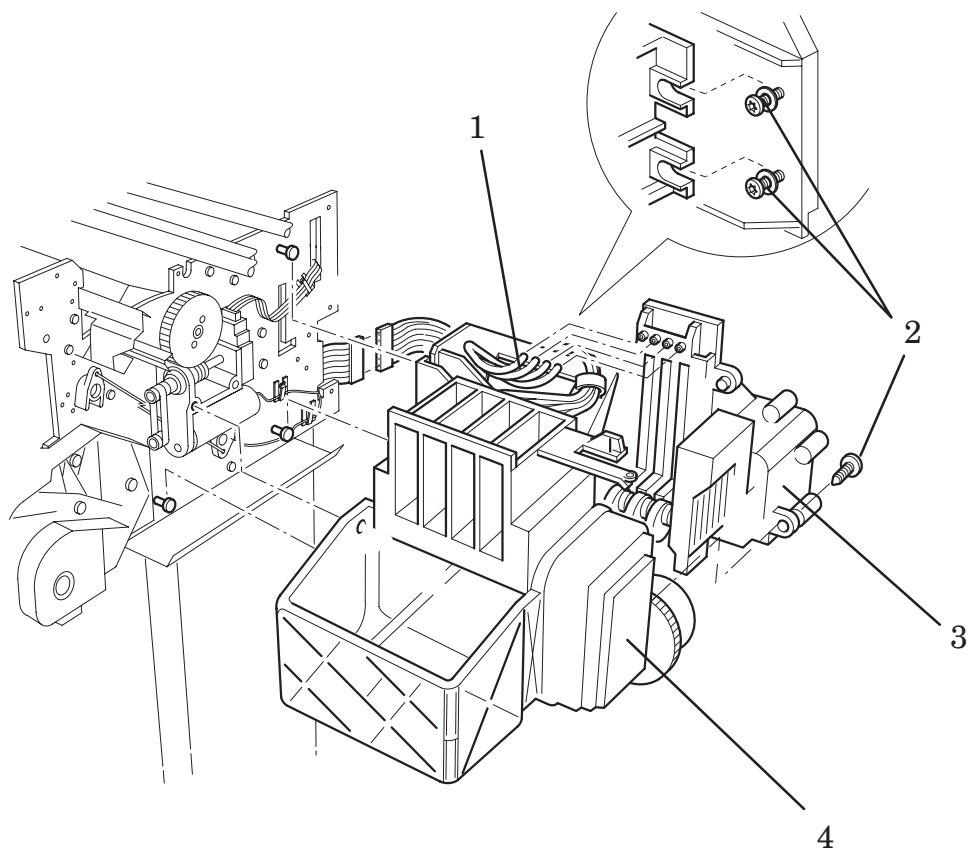
WARNING

Switch off the printer and remove the power cord.

1. Remove the following:
 1. *Window and Top Cover* ♦ page 8-15.
 2. *Right Hand Cover* ♦ page 8-21.
2. Manually slide the carriage assembly to the middle of the printer.
3. Disconnect the 4 tubes (item 1) from the primer assembly (item 3).
4. Release the cables from the cable clamp located underneath the service station assembly.
5. Remove the service station interconnect PCA from underneath the service station assembly by releasing it from a retaining clip and sliding it out.
6. Disconnect the primer stepper cable from position **J8 PRIMER STEPPER** on the service station interconnect PCA.
7. Disconnect the primer sensor cable from the position **J4 PRIMER SENSOR** on the service station interconnect PCA.
8. Remove the three T-15 screws (item 2) securing the Primer Assembly (item 3) to the service station assembly (item 4).
9. Remove the primer assembly.

Installation

1. Install the primer assembly (item 3) into the correct position in the service station assembly (item 4), making sure no cables are trapped between the two assemblies.
2. Install three T-15 screws (item 2) securing the primer to the service station assembly.
3. Connect the primer sensor cable to the position **J4** on the service station interconnect PCA.
4. Connect the primer stepper cable to the position **J8** to the service station interconnect PCA.
5. Route the cables through the cable clamps on the underside of the service station assembly.
6. Holding the retaining clip up, slide the service station interconnect PCA into place underneath the service station assembly.
7. Connect the 4 tubes (item 1) to the primer assembly, making sure that the tubes are correctly connected to the corresponding colour on the head cleaner.
8. Install the following:
 1. *Right Hand Cover* ▶ page 8-21.
 2. *Window and Top Cover* ▶ page 8-15.
9. Install the power cable.



**Figure 9: Primer Assembly
(Only Applicable to HP DesignJets 2500CP/2000CP)**

Encoder Strip

Refer to figures 10 and 11 ▶ pages 8-34 and 8-35

Removal

WARNING

Switch off the printer and remove the power cord.

1. Remove the following:
 1. *Window and Top Cover* ▶ page 8-15.
 2. *Right Hand Cover* ▶ page 8-21.
 3. *Left Hand Cover* ▶ page 8-18.

WARNING

Care should be taken while performing the following procedure, the encoder strip has sharp edges and could cause injury.

Caution: To prevent damage to the encoder strip, hold it at the ends only.

Caution: Lay the encoder strip down on a flat surface when not installed in the printer.

2. Remove the encoder strip roof over the carriage by squeezing it slightly.
3. Cut the cable tie which secures the magnetic core (item 1) to the encoder grounding (item 12).
4. Remove two T-15 screws (item 2) securing the grounding bridge (item 3) to the Y-axis motor assembly (item 4).

Note: Working from the rear of the printer.

5. Remove the T-15 screw (item 5) securing the left side of the encoder strip (item 7).
6. Release the encoder strip from the retaining pin (item 6) on the Y-axis tensioner holder (item 8). It may help to pull the encoder spring (item 9) towards the middle of the printer to release some tension.
7. Remove the encoder spring (item 9) from the Y-axis motor assembly by releasing it from a retaining pin (item 10).
8. Remove the two nuts and two washers (items 11) securing the encoder spring to the encoder grounding (item 12).

Installation

WARNING

Care should be taken while performing the following procedure, the encoder strip (item 6) has sharp edges and could cause injury.

Caution: To prevent damage to the encoder strip, hold it at the ends only.

Caution: When installing the encoder strip ensure that the transparent side is underneath.

1. Install the two nuts and two washers (items 11) securing the encoder grounding (item 12) to the encoder spring (item 9).

Note: Working from the rear of the printer.

2. Install the encoder spring (item 9) into the Y-axis motor assembly (item 4) by sliding it onto a retaining pin (item 10).
3. Route the encoder strip (item 7) through the encoder sensor in the carriage assembly. Install the encoder strip roof.
4. Install the left side of the encoder strip onto the retaining pin (item 6) on the Y-axis tensioner holder (item 8), then secure with a T-15 screw (item 5).
5. Install two T-15 screws (item 2) through the grounding bridge (item 3).
6. Secure the magnetic core (item 1) to the encoder grounding with a cable tie.
7. Manually slide the carriage assembly along the printer. Check the encoder strip does not touch the encoder sensor in the carriage assembly.
8. Install the following:
 1. *Left Hand Cover* ▶ page 8-18.
 2. *Right Hand Cover* ▶ page 8-21.
 3. *Top Cover and Window* ▶ page 8-15.
9. Install the power cable and turn the printer on in service mode.
10. Perform the D03 carriage axis (Y-axis) service test ▶ page 4-11.

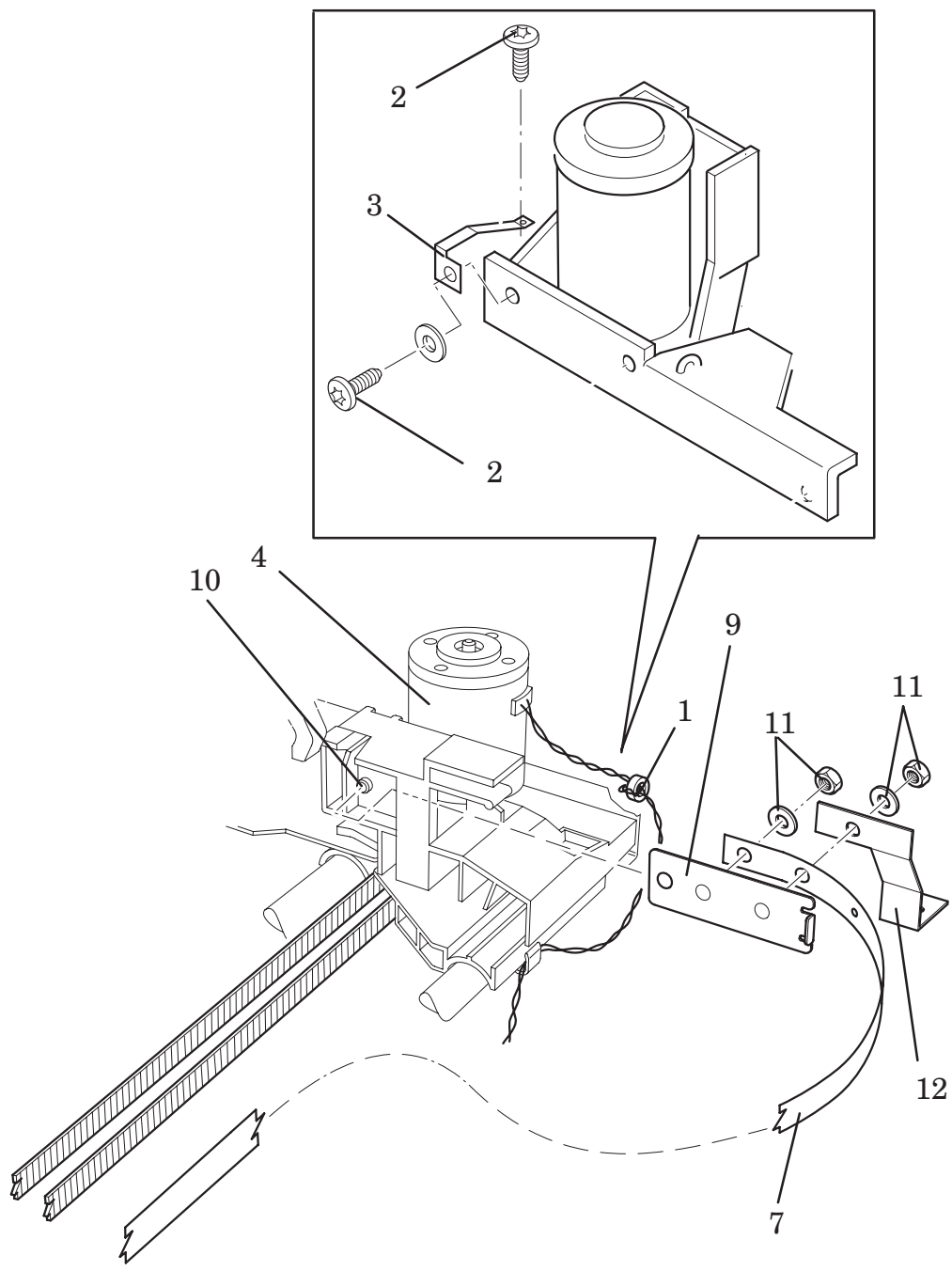


Figure 10: Encoder Strip

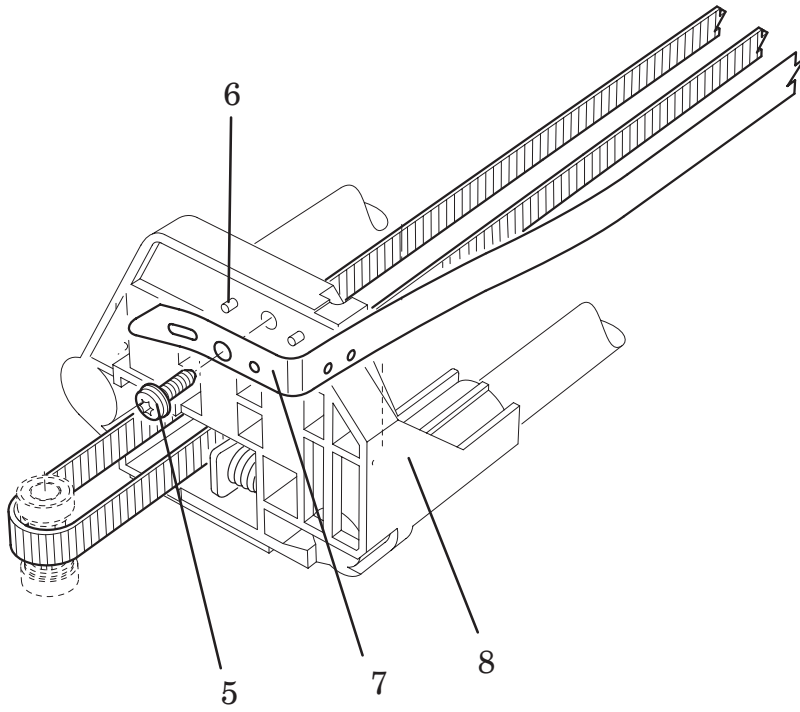


Figure 11: Encoder Strip

Trailing Cable

Refer to figure 12 ▶ page 8-38

Removal

WARNING

Switch off the printer and remove the power cord.

1. Remove the following:
 1. *Electronics Module* ▶ page 8-6.
 2. *Window and Top Cover* ▶ page 8-15
 3. *Right Hand Cover* ▶ page 8-21
2. Manually slide the carriage assembly to the center of the printer.
3. Carefully disconnect the trailing cable (item 1) from connectors on the carriage PCA.
4. Remove the trailing cable from the trailing cable carriage clamp (item 2).
5. Remove the trailing cable from the trailing cable holder (item 3).
6. Pull the trailing cable through a hole in the Y-axis assembly (item 4).
7. Pull the trailing cable through a hole in the electronics support frame (item 5).
8. Remove the trailing cable from the 3 cable clamps at the rear of the printer (item 6).
9. Disconnect the trailing cable from the following positions in the electronics module:
 1. **J3 MISC**
 2. **J5 DATA**
 3. **J10 SUPPLY**
10. Remove the trailing cable by pulling it through the ferrite (item 7) at the rear of the printer.

Installation

1. Connect the trailing cable into the three connectors on the carriage PCA.
2. Install the trailing cable (item 1) onto the trailing cable carriage clamp (item 2). Align the printed red line on the trailing cable as shown.
3. Install the trailing cable into the trailing cable holder (item 3).
4. Pull the trailing cable through a hole in the rear of the Y-axis assembly (item 4).
5. Pull the trailing cable through a hole in the electronics support frame (item 5).
6. Install the cable through three cable clamps, on the rear of the printer (item 6).
7. Feed the cable through the ferrite at the rear of the printer (item 7).
8. Install the following:
 1. *Electronics Module* ▶ page 8-6.
 2. *Right Hand Cover* ▶ page 8-21
 3. *Window and Top Cover* ▶ page 8-15
9. Connect the trailing cable to the following positions in the electronics module:
 1. **J3 MISC**
 2. **J5 DATA**
 3. **J10 SUPPLY**
10. Move the carriage to the left and right to ensure the trailing cable does not interfere with the movement of the carriage.
11. Connect the power cord and turn the printer on in service mode.
12. Perform the D01 Electronics service test ▶ page 4-6.

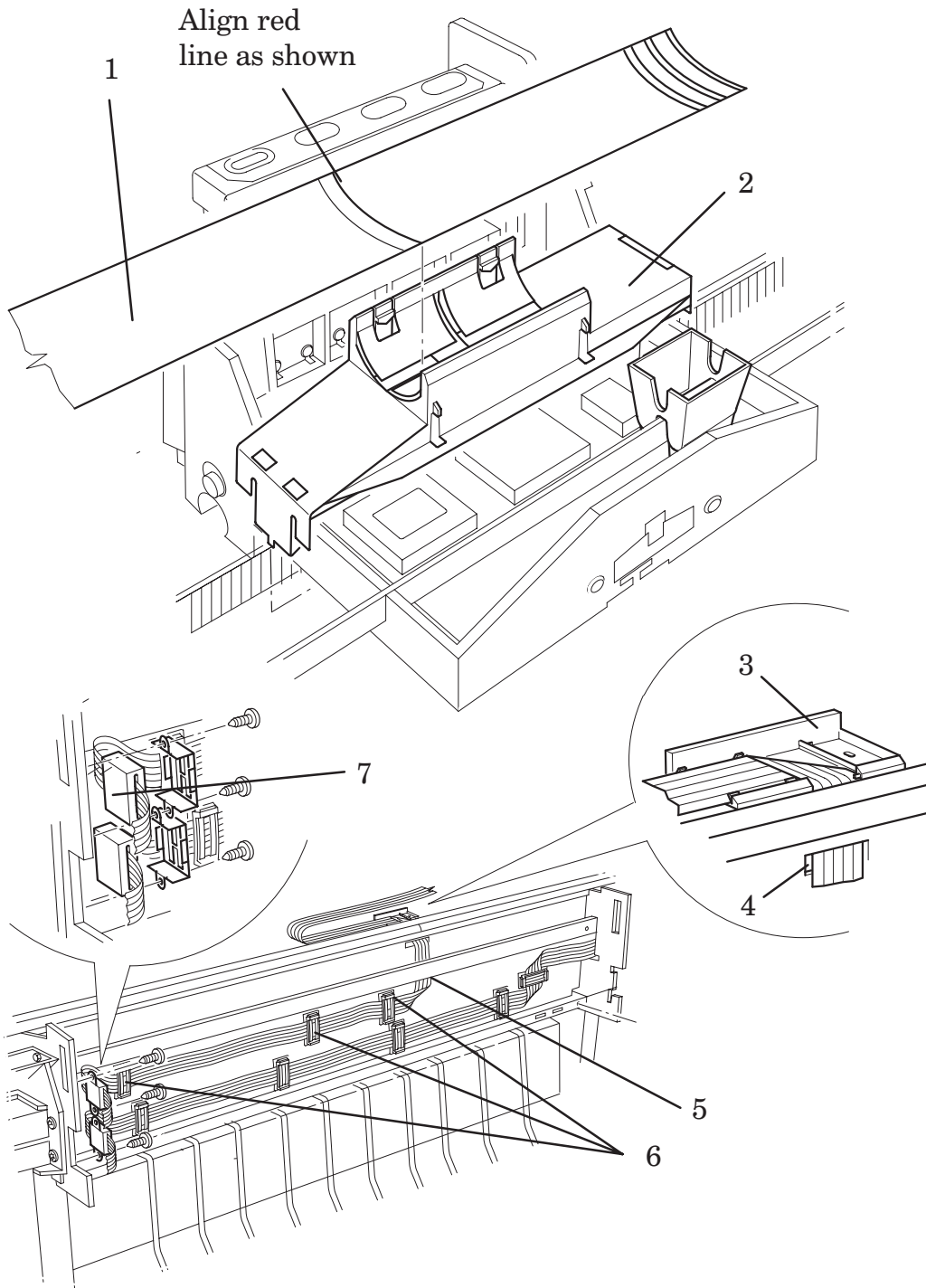


Figure 12: Trailing Cable

Y-Axis Belt

Refer to figure 13 ▶ page 8-41

Removal

WARNING

Switch off the printer and remove the power cord.

1. Remove the following:
 1. *Window and Top Cover* ▶ page 8-15.
 2. *Right Hand Cover* ▶ page 8-21.
 3. *Left Hand Cover* ▶ page 8-18.

WARNING

The spring (item 1) in the next step is under high tension and could spring out of the Y-axis tensioner holder (item 2).

Caution: Cup your hand over the Y-axis tensioner holder in the next step to avoid losing the spring.

2. To release the tension on the Y-axis belt (item 3), manually squeeze the spring (item 1) using the tensioner wedge clip (item 4) until you hear it click into place. If the tensioner wedge clip will not click into place, carefully remove the spring and the tensioner wedge clip with a screw driver.
3. Remove the Y-axis belt from the Y-axis motor pulley (item 5).
4. Remove the Y-axis belt pulley (item 6) located in the Y-axis tensioner holder.
5. The rest of the procedure is **ONLY** to be performed if the Y-axis belt is being **REPLACED** by a new Y-axis belt.
6. Remove the carriage assembly ▶ page 8-42
7. Remove the Y-axis belt by releasing it from the carriage assembly.

Installation

1. Install the Y-axis belt (item 3) onto the carriage assembly making sure the belt is in between the two slider rods (see figure 14, item 5).
2. Install the carriage assembly ▶ page 8-42
Note: Make sure the Y-axis belt is not twisted.
3. Install the Y-axis belt (item 3) around the Y-axis belt pulley (item 6).
4. Install the Y-axis belt pulley with the belt into the Y-axis tensioner holder (item 2).
5. Install the belt around the Y-axis motor pulley (item 5).

WARNING

The spring is under high tension and could spring out of the Y-axis tensioner holder.

Caution: Cup your hand over the Y-axis tensioner holder in the next step to avoid losing the spring.

6. If you have removed the tensioner wedge clip (item 4) and the spring (item 1), install it now. To tension the belt, use a small flat-blade screw driver to release the wedge tensioner clip from its position in the Y-axis tensioner holder.
7. Install the following:
 1. *Left Hand Cover* ▶ page 8-18.
 2. *Right Hand Cover* ▶ page 8-21.
 3. *Window and Top Cover* ▶ page 8-15.
8. Install the power cable.

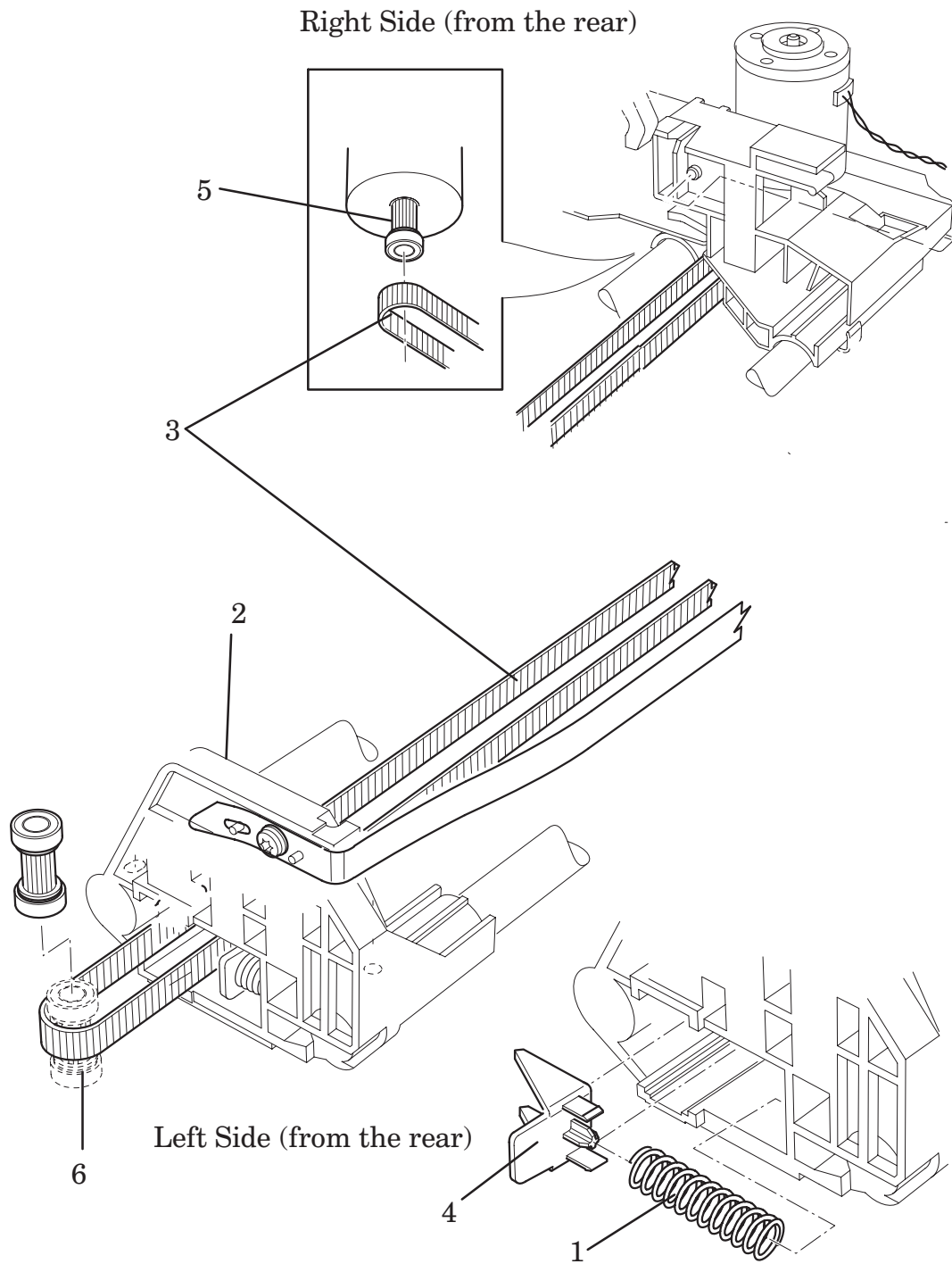


Figure 13: Y-Axis Belt

Carriage Assembly

Refer to figure 14 ▶ page 8-44

Removal

WARNING

Switch off the printer and remove the power cord.

1. Remove the following:
 1. *Left Hand Cover* ▶ page 8-18.
 2. *Window and Top Cover* ▶ page 8-15.
 3. *Right Hand Cover* ▶ page 8-21.
 4. *Service Station Flag* ▶ page 8-26
 5. *Encoder Strip* ▶ page 8-32.
 6. *Y-Axis Belt* ▶ page 8-39.
2. Carefully disconnect the trailing cable from the carriage assembly.
3. Remove the trailing cable carriage clamp (item 1) from the carriage by releasing it from the retaining clips.
4. Remove the Y-axis tensioner holder by removing two T-20 screws from the slider rods.

Caution: The rear bushing (item 2) on the carriage assembly is tensioned with a spring (item 3). When removing the carriage assembly, hold the rear bushing on the carriage assembly.

5. Remove the carriage assembly (item 4) by sliding it off the slider rods.
6. Remove the Y-axis belt (item 5) from underneath the carriage assembly.

Installation

1. Lubricate the slider rod with a small amount of oil.
2. Install Y-axis belt (item 5) onto the carriage assembly.
Caution: The rear bushing (item 2) on the carriage assembly is tensioned with a spring (item 3). When installing the carriage assembly, hold the rear bushing on the carriage assembly.
3. Making sure the Y-axis belt (item 5) is between the sliding rods, slide the carriage assembly onto the slider rods.
4. Install the trailing cable carriage clamp (item 1) in the correct position on the carriage assembly.
5. Carefully connect the trailing cable to connectors on the carriage PCA.
6. Install two T-20 screws securing the Y-axis tensioner holder to the slider rods.
7. Install the following:
 1. *Y-Axis Belt* ▶ page 8-39.
 2. *Encoder Strip* ▶ page 8-32.
 3. *Service Station Flag* ▶ page 8-26
 4. *Right Hand Cover* ▶ page 8-21.
 5. *Window and Top Cover* ▶ page 8-15.
 6. *Left Hand Cover* ▶ page 8-18.
8. Install the power cable and turn the printer on in service mode.
9. Perform the following calibrations.
 1. **C01 Carriage** ▶ page 5-6
 2. **C02 Refill** ▶ page 5-8
 3. **C03 Line Sensor** ▶ page 5-9
 4. **C05 Printheads Alignment** ▶ page 5-12
 5. **C06 Printheads Check** ▶ page 5-13
 6. **C07 Color Calibration** (*Only for HP DesignJet 2500CP/3500CP printers*) ▶ page 5-15
 7. **C08 Service Accuracy** ▶ page 5-16

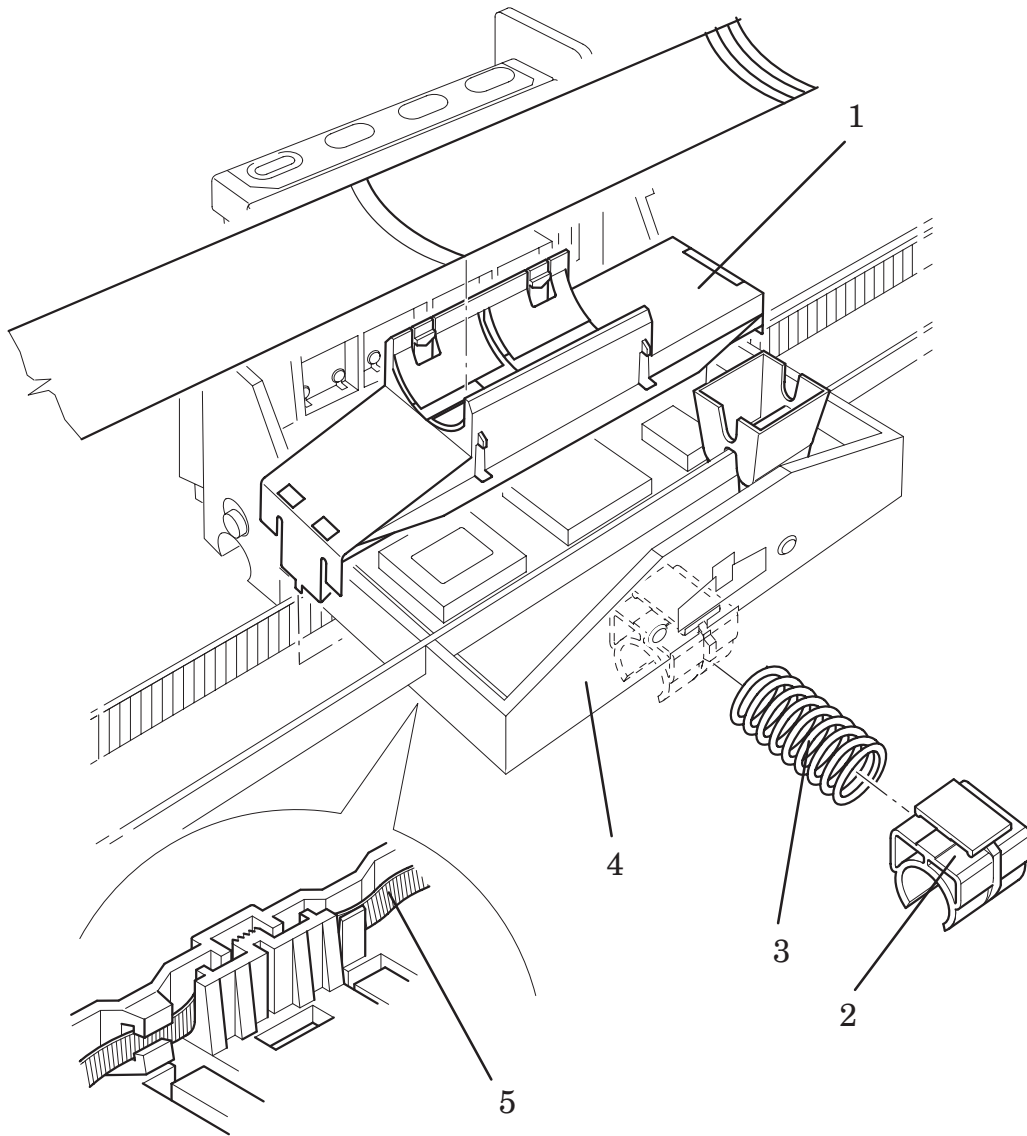


Figure 14: Carriage Assembly

Y-Axis Motor Assembly

Refer to figure 16 ▶ page 8-47

Removal

WARNING

Switch off the printer and remove the power cord.

1. Remove the following:
 1. *Window and Top Cover* ▶ page 8-15.
 2. *Right Hand Cover* ▶ page 8-21.
 3. *Left Hand Cover* ▶ page 8-18.
 4. *Encoder Strip* ▶ page 8-32.
 5. *Y-Axis belt* ▶ page 8-39
2. Remove the cables from the cable clamps (item 1) on the Y-axis bracket (item 2).
3. Remove two T-15 screws and washers installed into the Y-axis bracket (item 3).
4. Remove the one remaining T-20 screw (item 4) which secures the Y-axis Motor assembly (item 6) to the front slider rod (the other screw was removed when you removed the encoder strip).
5. Disconnect the Y-axis motor cable (item 5) from the position **J2 Y MOTOR** on the refill interconnect PCA (item 7).
6. Remove the Y-axis motor assembly from the slider rods.

Installation

1. Install the T-20 screw (item 4) securing the Y-axis motor assembly (item 6) to the front slider rod.
2. Connect the Y-axis motor cable (item 5) to the position **J2 Y MOTOR** on the refill interconnect PCA (item 7), then install the cable into a retaining clip on the side of the Y-axis motor assembly.
3. Install the two T-15 screws (item 3) into the Y-axis bracket (item 2) securing it to the printer.
4. Install the following:
 1. *Y-Axis belt* ▶ *page 8-39*
 2. *Encoder Strip* ▶ *page 8-32.*
 3. *Left Hand Cover* ▶ *page 8-18.*
 4. *Right Hand Cover* ▶ *page 8-21.*
 5. *Window and Top Cover* ▶ *page 8-15.*
5. Install the power cable and turn the printer on in service mode.
6. Perform D03 Carriage Axis (Y-axis) Service Test ▶ *page 4-11*

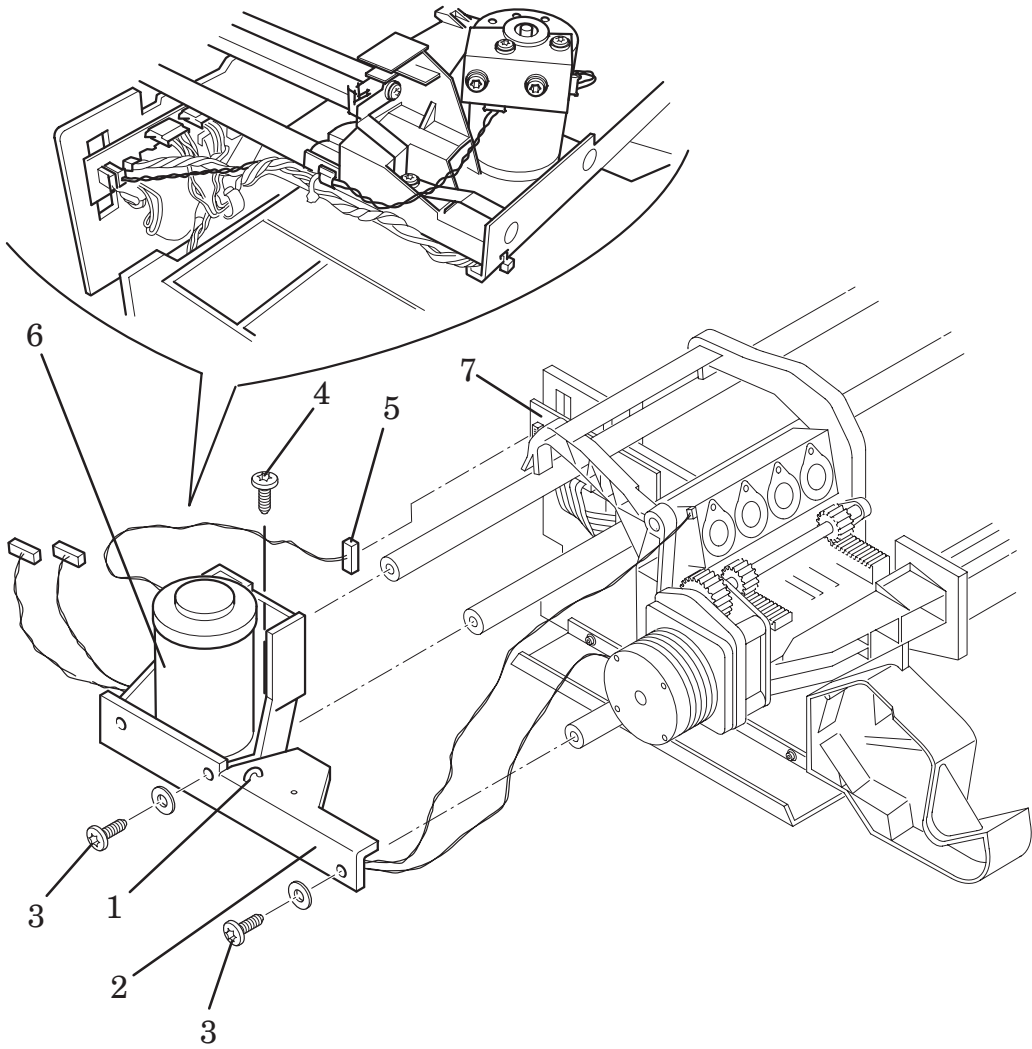


Figure 16: Y-Axis Motor Assembly

Cutter Assembly (Only Applicable to HP DesignJets 2500CP and 2000CP)

Refer to figure 17A ▶ page 8-49

Removal

WARNING

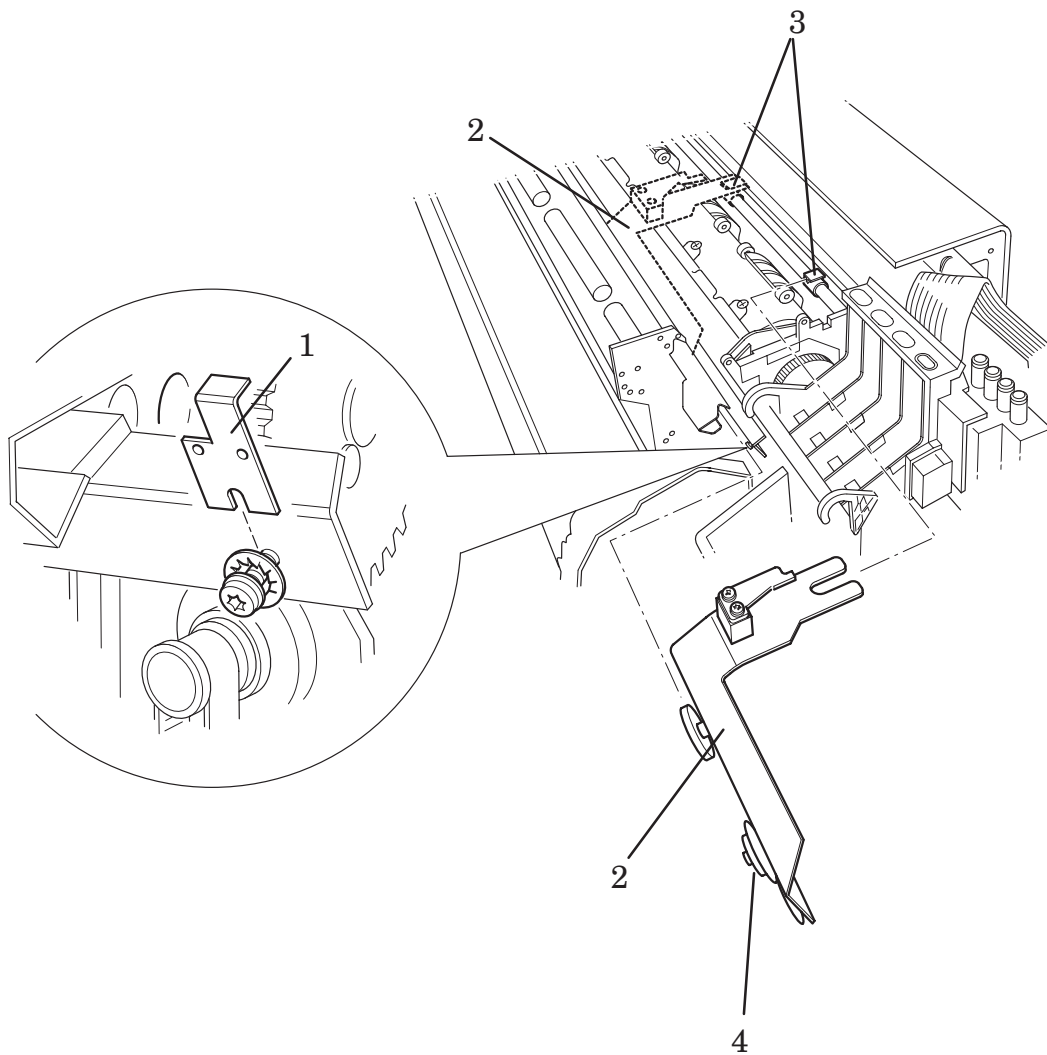
Switch off the printer and remove the power cord.

1. Remove the following:
 1. *Right Hand Cover* ▶ page 8-21.
2. Remove the window.
3. Move the Carriage Assembly to the right.
4. Remove the stopper (item 1) located on the right end of the overdrive assembly.
5. Remove the cutter assembly (item 2) from the slider rod by sliding it to the left and pulling it off the rear bushing (item 3).

Installation

Note: Make sure you install the front wheel of the media cutter under the lip of the starguard assembly.

1. Install the cutter assembly (item 2) onto the rear bushing (item 3) and slide to the left. To obtain the correct position so that the cutter assembly moves easily into position, you may have to move the cutter wheel (item 4) (which is sprung loaded).
2. Install the stopper (item 1) located on the right end of the overdrive assembly onto the overdrive assembly.
3. Install the following:
 2. *Right Hand Cover* ▶ page 8-21.
4. Install the window.
5. Install the power cable and turn the printer on in service mode.
6. Perform D10 Cutter Service Test ▶ page 4-22



**Figure 17A: Cutter Assembly
(Only Applicable to HP DesignJets 2500CP and 2000CP)**

Cutter Assembly (Only Applicable to HP DesignJets 3500CP and 3000CP)

Refer to figure 17B ▶ page 8-51

Removal

WARNING

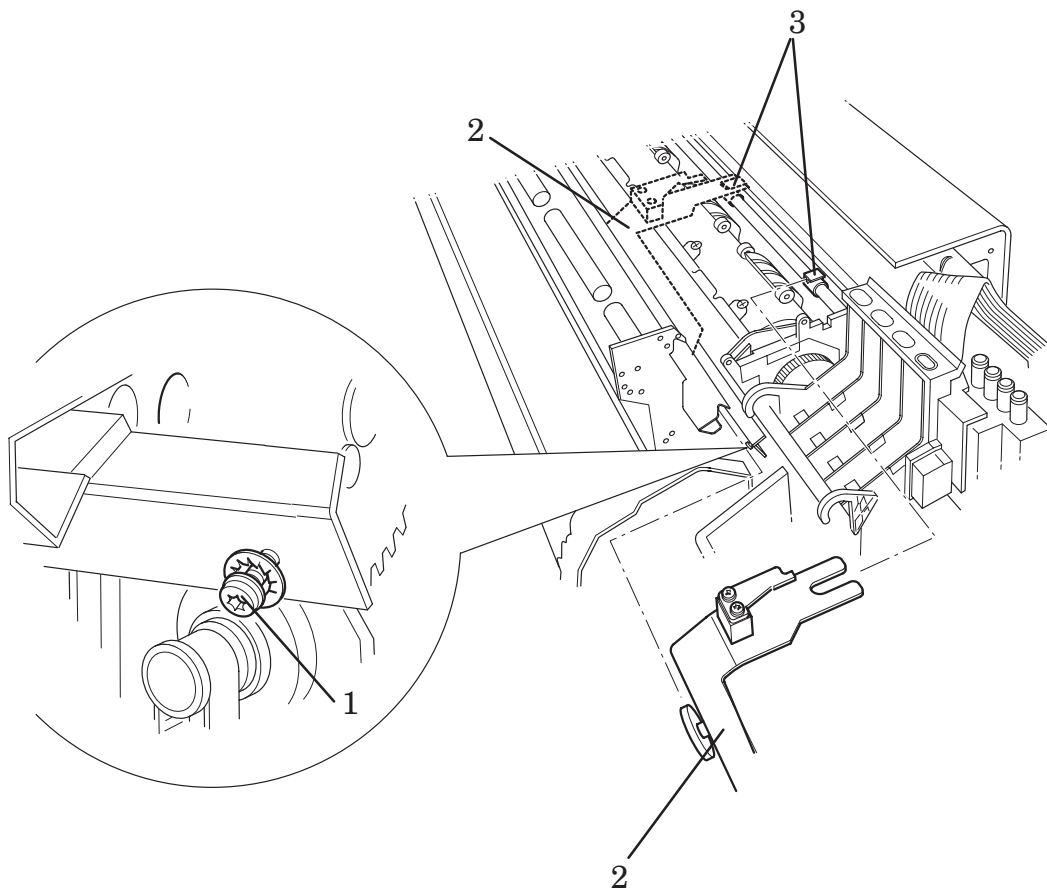
Switch off the printer and remove the power cord.

1. Remove the following:
 1. *Right Hand Cover* ▶ page 8-21.
2. Move the Carriage Assembly to the right.
3. Loosen the screw (item 1) located on the right end of the Starguard.
4. Remove the cutter assembly (item 2) from the slider rod by sliding it to the right and pulling it off the rear bushing (item 3).

Installation

Note: Make sure that when you install the Cutter Assembly that both black wheels of the cutter assembly enter the starguard assembly.

1. Install the cutter assembly (item 2) onto the rear bushing (item 3) and slide to the left. To obtain the correct position so that the cutter assembly moves easily into position, you may have to move the cutter wheel (which is sprung loaded).
2. Tighten the screw (item 1) located on the right end of the Starguard assembly onto the overdrive assembly.
3. Install the following:
 2. *Right Hand Cover* ▶ page 8-21.
4. Install the power cable and turn the printer on in service mode.
5. Perform D10 Cutter Service Test ▶ page 4-22



**Figure 17B: Cutter Assembly
(Only Applicable to HP DesignJets 3500CP and 3000CP)**

Elevator Assembly

Refer to figure 18 ▶ page 8-54

Removal

WARNING

Switch off the printer and remove the power cord.

1. Remove the ink delivery system (Refer to the User Guide).
 2. Remove the following:
 1. *Window and Top Cover* ▶ page 8-15.
 2. *Left Hand Cover* ▶ page 8-18.
- Note: To gain access to the screws securing the elevator assembly to the left hand side chassis, it may be necessary to manually raise the elevator assembly. This can be done by turning the motor gear under the elevator assembly.***
3. Remove the T-20 screw (item 1) located at the bottom rear of the elevator assembly.
 4. Loosen the three T-20 screws (item 2) securing the elevator assembly to the left hand side chassis.
 5. Remove the top half of the elevator assembly (item 3) by releasing it from two retaining clips at the back, then lifting up and to the left.
 6. Disconnect the platform sensor cable from position **J5 PLATEF SENSOR** on the refill interconnect PCA and release from the cable clamp.
 7. Disconnect the elevator stepper motor cable from position **J9 ELEV STEPPER** on the refill interconnect PCA and release from the cable clamp.
 8. Remove the elevator assembly by sliding it up and pulling it towards you.

Installation

Note: *At the same time as performing step one, install loose cables into the cable clamp, which is located on the left hand side chassis.*

1. Install the elevator assembly onto the three loosened T-20 screws (item 2). Tighten the three screws.
2. Install the T-20 screw (item 1) into the bottom rear of the elevator assembly.
3. Connect the platform sensor cable in position **J5 PLATEF SENSOR** on the refill interconnect PCA.
4. Connect the elevator stepper motor cable in position **J9 ELEV STEPPER** on the refill interconnect PCA.
5. Install the top half of the elevator assembly by securing it to two retaining clips at the back and push down and to the right.
6. Install the following:
 1. *Left Hand Cover* ▶ *page 8-18.*
 2. *Window and Top Cover* ▶ *page 8-15.*
7. Install the ink delivery system (Refer to the User Guide).
8. Install the power cable and turn the printer on in service mode.
9. Perform D06 Refill Service Test ▶ *page 4-16*

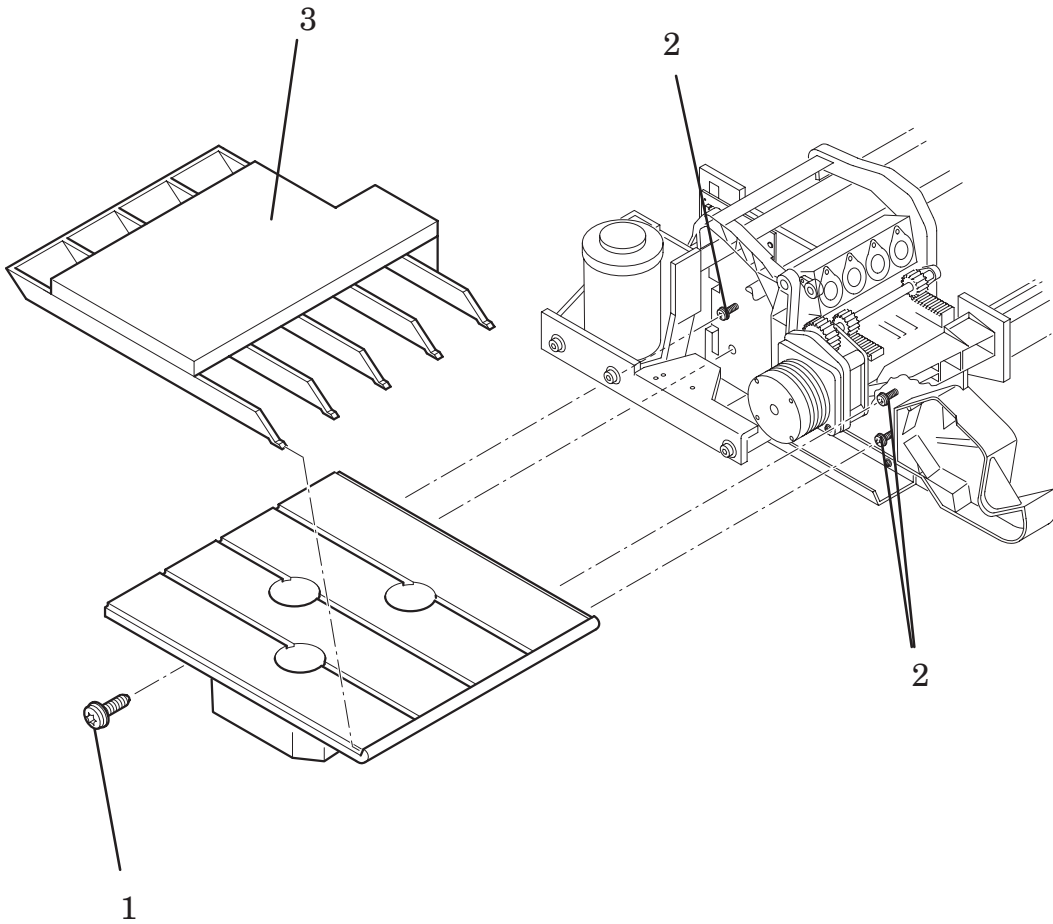


Figure 18: Elevator Assembly

Refill Assembly

Refer to figure 19 ▶ page 8-57

Removal

WARNING

Switch off the printer and remove the power cord.

1. Remove the following:
 1. *Window and Top Cover* page ▶ 8-15.
 2. *Left Hand Cover* ▶ page 8-18.
2. Disconnect the following cables from the refill interconnect PCA (item 1):
 1. *Valve sensor cable in position J4 VALVE SENSOR*
 2. *Door Sensor cable in position J6 DOOR SW*
 3. *Refill Sensor Cable in position J3 REFILL SENSOR*
3. Remove the cables from two cable clamps (item 2) on the left hand side chassis.
4. Carefully disconnect from the refill stepper motor the refill stepper motor cable (item 3).
5. Remove the cable clamp securing the cables to the Y-axis bracket.
6. Loosen fully the three T-20 screws (item 4) from the refill assembly.
7. Remove the T-20 screw (item 5) at the end of the metal rod securing it to the Y-axis bracket (item 6).
8. Remove the refill assembly (item 7).

Installation

1. Install the refill assembly (item 7) in the correct position between the Y-axis bracket (item 6) and the left hand side chassis.
2. Install the refill assembly onto the three T-15 screws (item 4) and secure the refill assembly to the left hand side chassis.
3. Install the T-15 screw (item 5) securing the refill assembly to the Y-axis bracket.
4. Connect the following cables to the refill interconnect PCA (item 1):
 1. *Valve sensor cable in position **J4 VALVE SENSOR***
 2. *Door Sensor cable in position **J6 DOOR SW***
 3. *Refill Sensor cable in position **J3 REFILL SENSOR***
5. Install the door sensor cable and the refill sensor cable into two cable clamps (item 2) on the left hand side chassis.
6. Connect the stepper motor cable (item 3) to the stepper motor.
7. Use a cable clamp to clamp the valve sensor cable and the refill stepper motor cable to the Y-axis bracket (item 6).
8. Install the following:
 1. *Window and Top Cover page **8-15**.*
9. Connect the power cord and turn the printer on in service mode
- 10. Perform C02 Refill Service Calibration page **5-8** .**
11. Perform D06 Refill Service Test 4-16
12. Install the following:
 1. *Left Hand Cover **8-18**.*

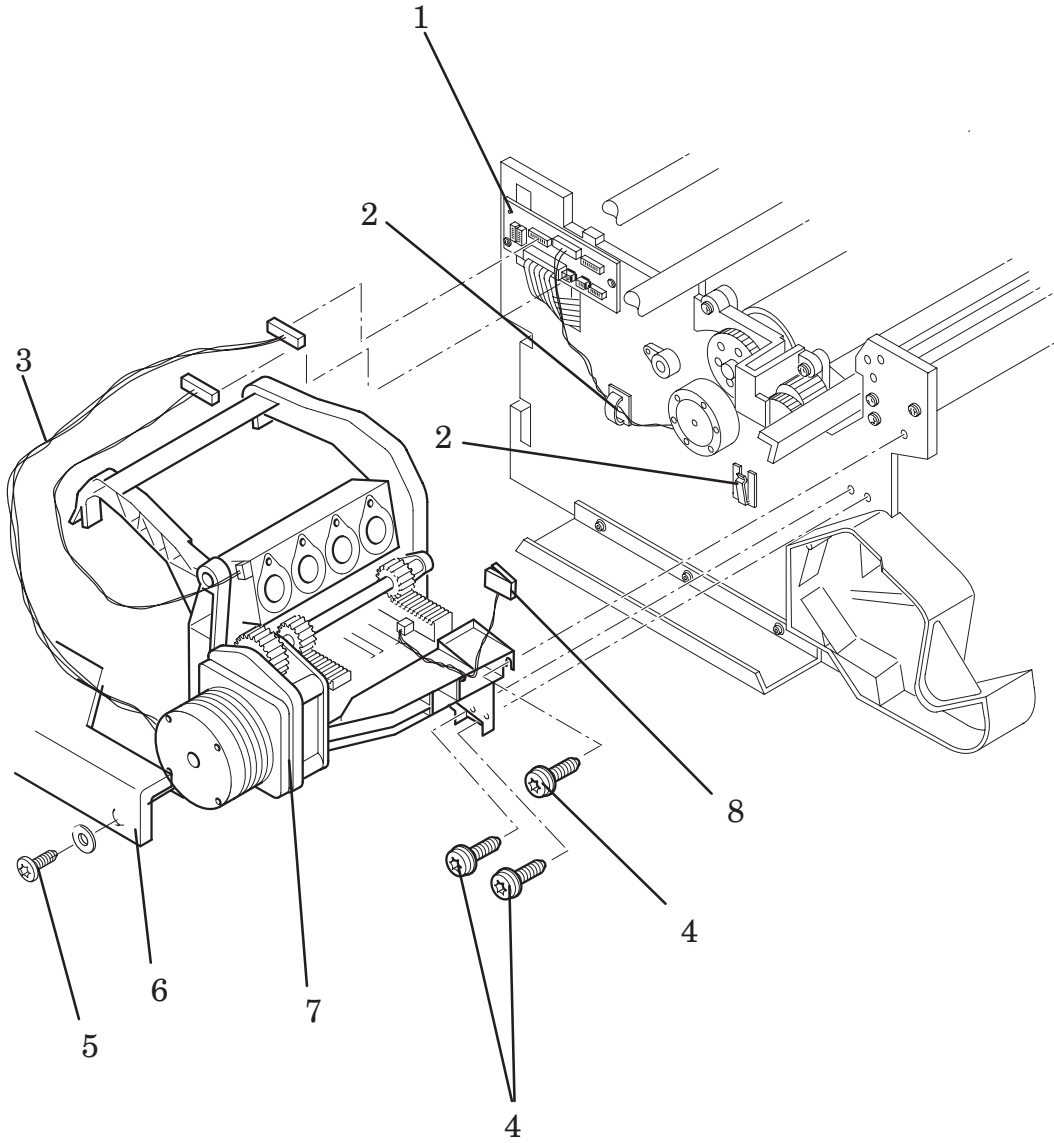


Figure 19: Refill Assembly

Bail Assembly and Star Wheel Assemblies

Refer to figure 20 ▶ page 8-59

Removal

1. Open the window.
2. Manually move the carriage assembly to the left side of the printer.
3. Lifting up the bail assembly (item 1), push both the plastic arms at the end of the bail assembly together. This will release it from holes in the left and right hand side chassis.
4. Remove the right side of the bail arm first and then the left.

*Note: If the mark encoder which is glued to the drive roller obstructs the removal of the bail assembly, press **Form Feed and Cut** this will move the drive roller around.*

5. Remove the star wheel assemblies (item 2) by pushing together the retaining clips and pulling them off

Installation

1. Install the star wheel assemblies (item 2) by pushing the retaining clips into the bail assembly (item 1).
2. Install the bail assembly by installing the left side first, then install the bail assembly into holes in the left and right hand side chassis.
3. Close the window.
4. Perform D11 Bail Service Test ▶ page 4-23

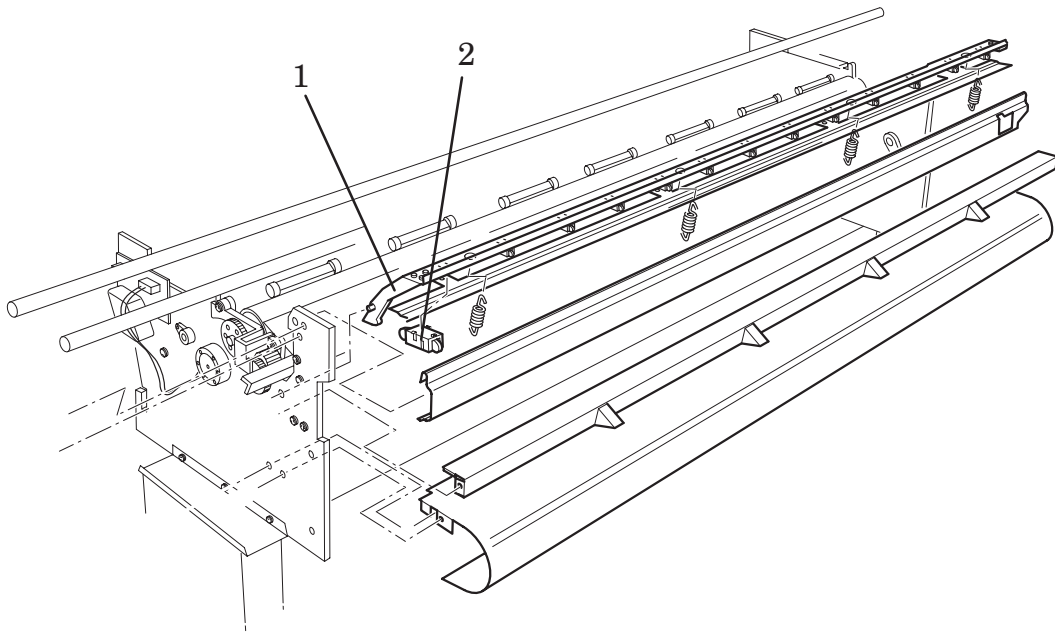


Figure 20: Bail Assembly

Starguard Assembly

Refer to figure 21 ▶ page 8-61

WARNING

Switch off the printer and remove the power cord.

Removal

1. Remove the following:
 1. *Window and Top Cover* ▶ page 8-15.
 2. *Left Hand Cover* ▶ page 8-18.
 3. *Right Hand Cover* ▶ page 8-21.
 4. *Refill Assembly* ▶ page 8-55
2. Remove the two T-20 screws (item 1) securing the starguard assembly (item 2) to the right hand side chassis.
3. Remove the two T-20 screw securing the starguard assembly to the left hand side chassis.
4. Slide out the starguard assembly.

Installation

1. Install the starguard assembly into the correct position in the printer.
2. Install the two T-20 screws (item 1) securing the starguard assembly (item 2) to the right hand side chassis.
3. Install two T-20 screw securing the starguard assembly to the left hand side chassis.
4. Install the following:
 1. *Refill Assembly* ▶ page 8-55
 2. *Right Hand Cover* ▶ page 8-21.
 3. *Left Hand Cover* ▶ page 8-18.
 4. *Window and Top Cover* ▶ page 8-15.
5. Connect the power cord.

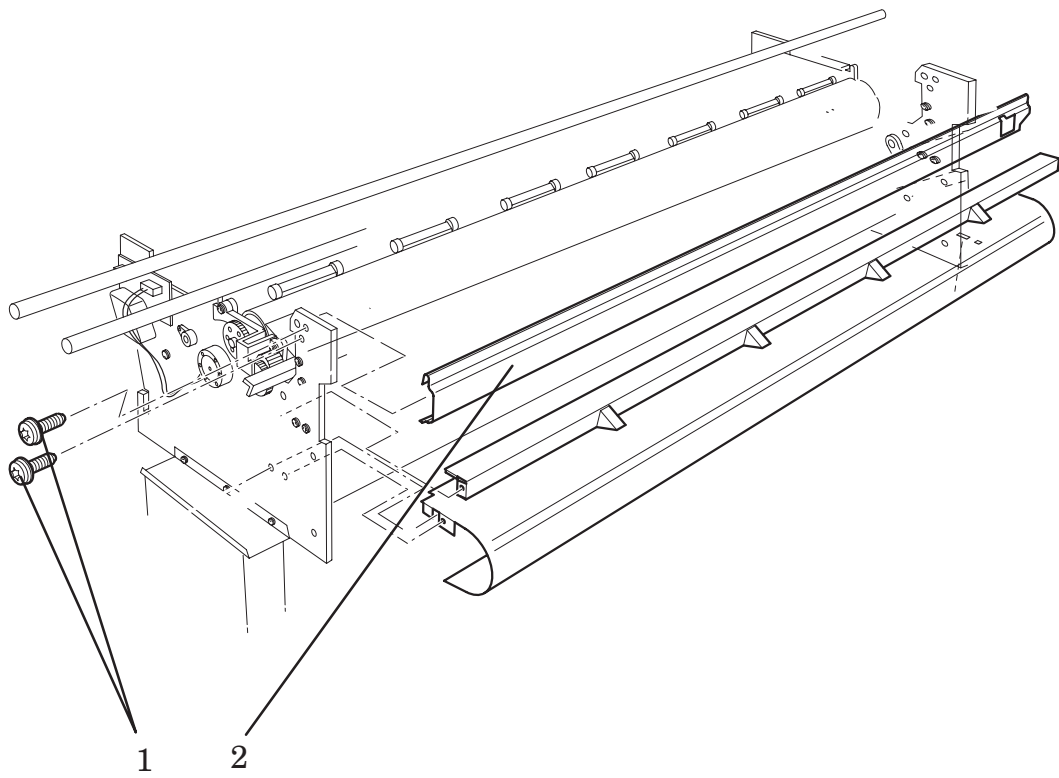


Figure 21: Starguard Assembly

Bail Stepper Motor

Refer to figure 22 ▶ page 8-63

Removal

WARNING

Switch off the printer and remove the power cord.

1. Remove the following:
 1. *Left Hand Cover* ▶ page 8-18.
 2. *Bail Arm Assembly* ▶ page 8-58
2. Remove the top half of the elevator assembly by releasing it from two retaining clips at the back and lifting up and to the left.
3. Disconnect the bail stepper motor cable (item 1) from position **J7 STEPPER MOTOR** on the refill interconnect PCA (item 2).
4. Release the bail stepper motor cable from the cable clamp (item 3) on the left hand side chassis.
5. Remove the bail stepper motor (item 5) by removing two T-10 screws (item 4).

Installation

1. Install the bail stepper motor (item 5) in the correct position on the left hand side chassis.
2. Install two T-10 screws (item 4) into the left hand side chassis securing the bail stepper motor.
3. Connect the bail stepper motor cable (item 1) to the refill interconnect PCA (item 2) in position **J7 STEPPER MOTOR**.
4. Install the bail stepper motor cables into a cable clamp (item 3) on the left hand side chassis.
5. Install the top half of the elevator assembly by securing it to two retaining clips at the back and push down and to the right.
6. Install the following:
 1. *Left Hand Cover* ▶ page 8-18.
 2. *Bail Arm Assembly* ▶ page 8-58
7. Connect the power cord and turn the printer on in service mode.
8. Perform D11 Bail Service Test ▶ page 4-23

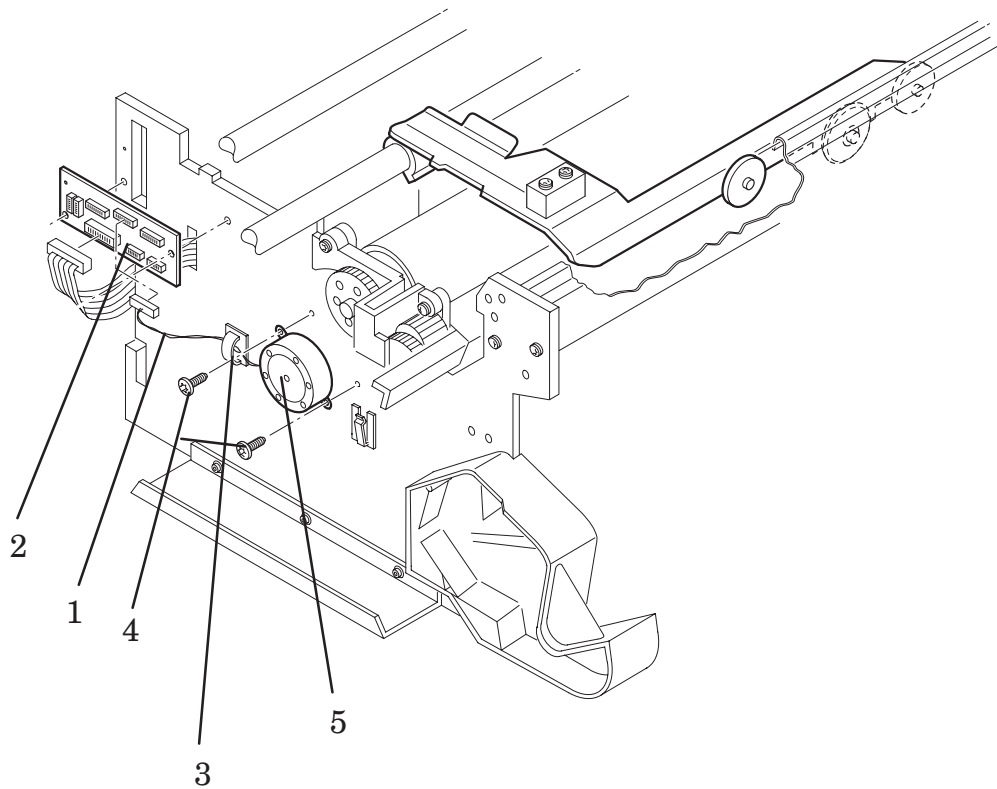


Figure 22: Bail Stepper Motor

Refill Interconnect PCA

Refer to figure 23 ▶ page 8-65

Removal

WARNING

Switch off the printer and remove the power cord.

1. Remove the following:
 1. *Left Hand Cover assembly* ▶ page 8-18.
2. Remove the top half of the elevator assembly by releasing it from two retaining clips at the back and lifting up and to the left.
3. Carefully disconnect all cables (item 4) from the refill interconnect PCA.
4. Remove the refill interconnect PCA (item 1) by removing two T-20 screws (item 2) installed through two support rings (item 3) and into the left hand side chassis.

Installation

1. Install two T-20 screws (item 2) through the refill interconnect PCA and the two supporting rings (item 3) into the left hand side chassis.
2. Connect all cables (item 4) to the refill interconnect PCA.
3. Install the top half of the elevator assembly by securing it to two retaining clips at the back and push down and to the right.
4. Install the following:
 1. *Left Hand Cover assembly* ▶ page 8-18.
5. Connect the power cord.
6. Perform the following service tests:
 1. D11 Bail ▶ page 4-6.
 2. D08 Sensors ▶ page 4-18.
 3. D03 Carriage Axis (Y-axis) ▶ page 4-11 .
 4. D06 Refill ▶ page 4-16.

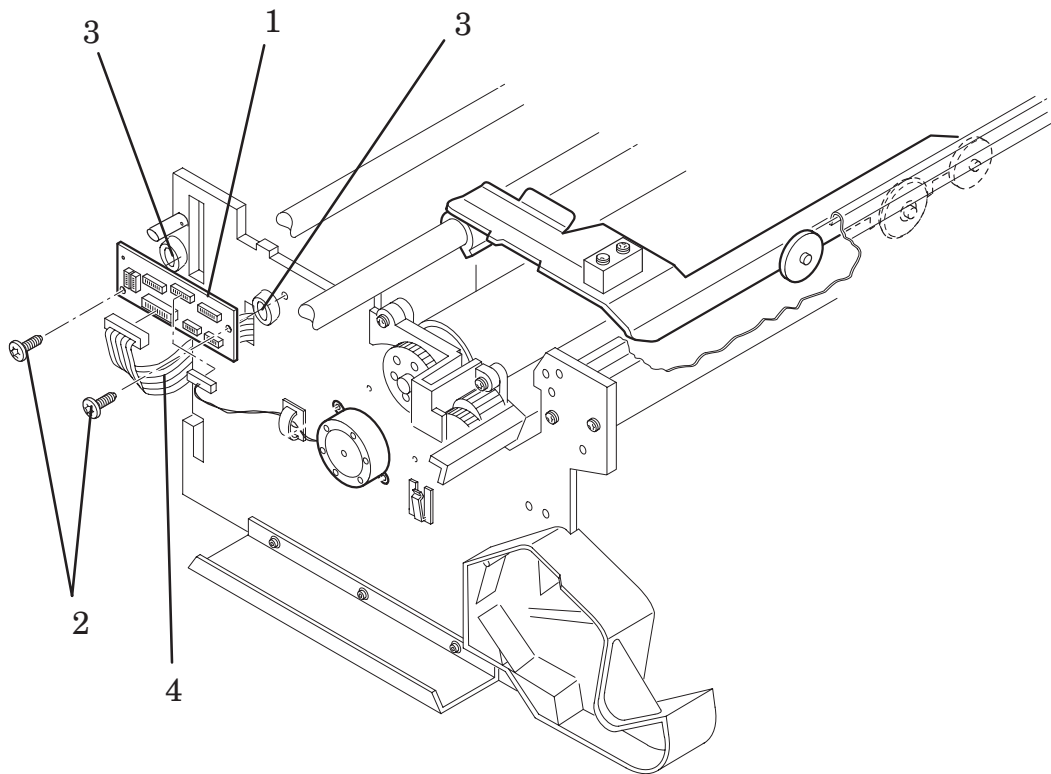


Figure 23: Refill Interconnect PCA

X-Axis Assembly

Refer to figure 24 ▶ page 8-68

Removal

WARNING

Switch off the printer and remove the power cord.

1. Remove the following:
 1. *Right Hand Cover* ▶ page 8-21.
 2. *Window and Top Cover* ▶ page 8-15.
 3. *Service Station Assembly* ▶ page 8-26.
 4. *Left Hand Back Cover*.
2. Disconnect the X-axis encoder cable (item 1) from the X-axis assembly
3. Disconnect the X-axis motor cable from position **J7 X MOTOR** from the electronics module.
4. Remove the X-axis motor cable from the cable clamp (item 2).
5. Remove the helical gear (item 4) by removing two T-10 screws (item 3).
6. Remove the three T-20 screws (item 5) securing the X-axis assembly (item 6) to the right hand side chassis.
7. Remove the X-axis assembly.

Installation

1. Install the X-axis assembly (item 6) in the correct position on the right hand side chassis,
2. While pushing down the X-axis assembly against the right hand side chassis, install three T-20 screws (item 5) securing the X-axis assembly to the right hand side chassis.
3. Install the helical gear (item 4) in the correct position on the drive roller by aligning the holes on the helical gear to the holes on the drive roller shaft (item 7).
4. Install the two T-10 screws (item 3) through the helical gear and into the drive roller shaft.
5. Connect the X-axis encoder cable (item 1) to the X-axis assembly (item 6).
6. Connect the X-axis motor cable to position **J7 X MOTOR** on the electronics module.
7. Install the X-axis motor cable in the cable clamp (item 2).
8. Install the following:
 1. *Service Station Assembly* ▶ page 8-26.
 2. *Right Hand Cover* ▶ page 8-21.
 3. *Window and Top Cover* ▶ page 8-15.
 4. *Left Hand Back Cover*.
9. Connect the power cord and turn the printer on in service mode.
10. Perform D04 Media Axis (X-axis) Service Test ▶ page 4-13.
11. Perform the following calibration:
 1. **C08 Service Accuracy** ▶ page 5-16

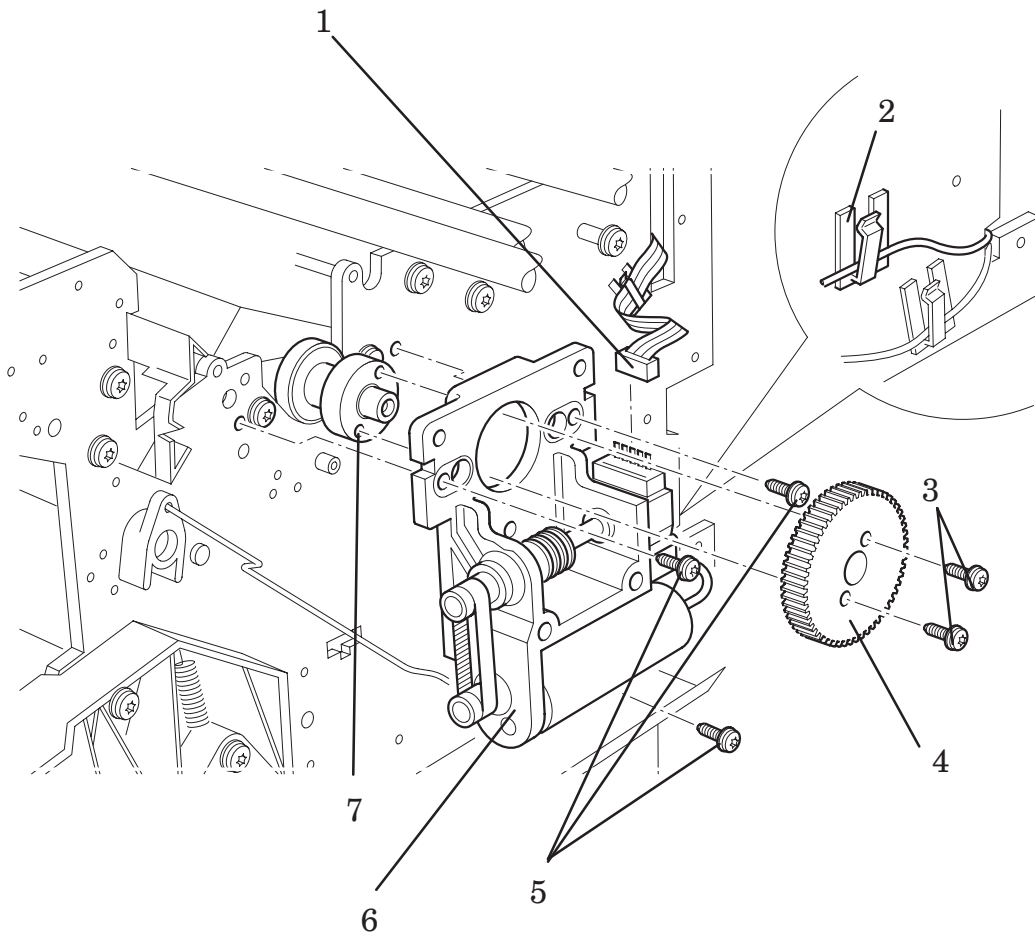


Figure 24: X-Axis Assembly

Overdrive Assembly and Drive Roller (Only Applicable to HP DesignJets 2500CP and 2000CP)

Refer to figure 25A ▶ page 8-71

WARNING

Switch off the printer and remove the power cord.

1. Remove the following:
 1. *Window and Top Cover* ▶ page 8-15.
 2. *Left Hand Cover* ▶ page 8-18.
 3. *Right Hand Cover* ▶ page 8-21.
 4. *Bail Arm Assembly* ▶ page 8-58
 5. *Cutter Assembly* ▶ page 8-48
2. Manually slide the carriage assembly to the right side of the printer.
3. Remove the top half of the elevator assembly by releasing it from two retaining clips at the back, then lifting up and to the left.
4. Remove the two T-15 screws (item 1) securing the roller support bracket (item 2) to the left hand side chassis.
5. Remove the roller support bracket.
6. Remove the clutch (item 4) and washers (item 5) on the left end of the overdrive shaft by removing the retaining clip (item 3).
7. Remove the two T-10 screws (item 8) securing the overdrive assembly (item 9) to the left and right hand side chassis.
8. Remove overdrive assembly by lifting it out on the right, then sliding to the right.

To remove the Drive Roller only

9. Remove the following:
 1. *X-Axis Motor Assembly* ▶ page 8-45.
 2. *Service Station Assembly* ▶ page 8-26.
10. Remove the shoulder screw (item 6) securing the cluster gear (item 7) to the left hand side chassis.
11. Move the pinch-arm lever to the up position.
12. Remove the drive roller (item 10) by holding the ends and lifting out.

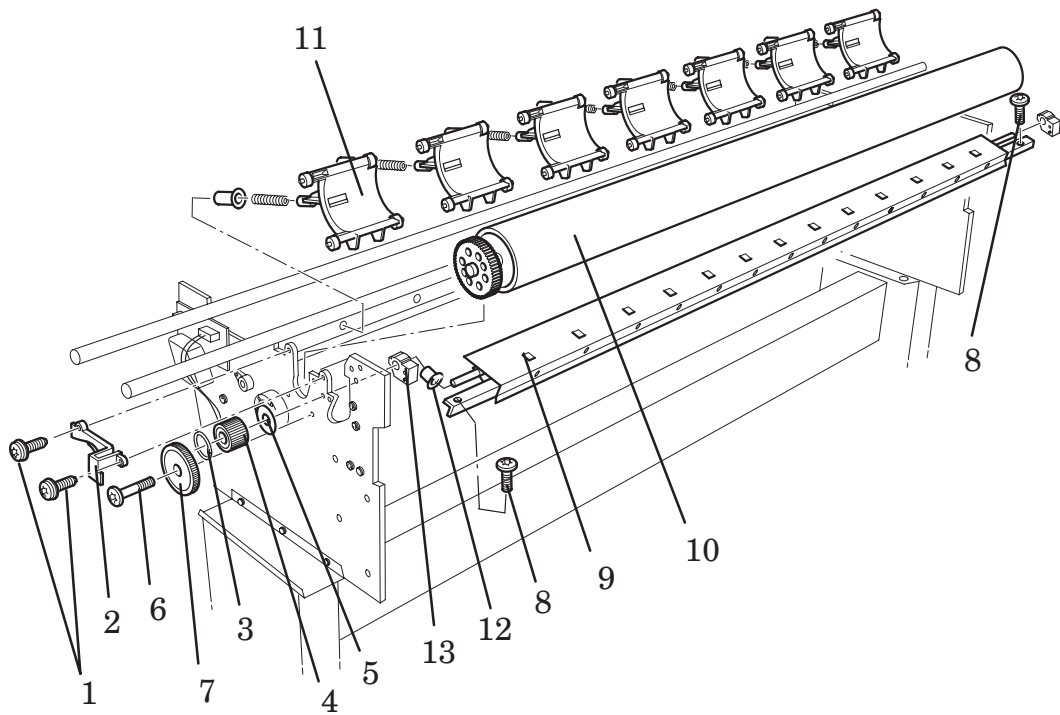
Installation of the drive roller

Note: Make sure all the pincharm assemblies (item 11) are in the correct position before performing the next step.

1. Install the drive roller (item 10). Make sure the bearings at either end of the drive roller are installed into the correct position in the left and right hand side chassis.
2. Install the shoulder screw (item 6) securing the cluster gear (item 7) to the chassis.
3. Install the following:
 1. *Service Station Assembly* ▶ page 8-26.
 2. *X-Axis Motor Assembly* ▶ page 8-45.

Installation of the overdrive assembly

4. Install the overdrive assembly (item 9) by holding both ends and sliding the left end first through a sleeve bearing (item 12) into the mount block (item 13).
5. Install two T-10 screws (item 8) securing the overdrive assembly to the left and right hand side chassis.
6. Install the clutch (item 4) and two washers (item 5) on the left end of the overdrive shaft, then secure with the retaining clip (item 3).
7. While pressing down on the roller support bracket, install two T-15 screws (item 1) securing the roller support bracket to the chassis.
8. Install the top half of the elevator assembly by securing it to two retaining clips at the back and push down and to the right.
9. Install the following:
 1. *Cutter Assembly* ▶ page 8-48
 2. *Bail Arm Assembly* ▶ page 8-58
 3. *Right Hand Cover* ▶ page 8-21.
 4. *Left Hand Cover* ▶ page 8-18.
 5. *Window and Top Cover* ▶ page 8-15.
10. Connect the power cord and turn the printer on in service mode.
11. Perform following calibrations:
 1. **C08 Service Accuracy Calibration** ▶ page 5-16.
12. Perform following service tests:
 1. *D11 Bail Service Test* ▶ page 5-11
 2. *D05 Service Station Service Test* ▶ page 4-15



**Figure 25A: Overdrive Assembly
(Only Applicable to HP DesignJets 2500CP and 2000CP)**

Overdrive Assembly and Drive Roller (Only Applicable to HP DesignJets 3500CP and 3000CP)

Refer to figure 25B ▶ page 8-75

WARNING

Switch off the printer and remove the power cord.

1. Remove the following:
 1. Window and Top Cover ▶ page 8-15.
 2. Left Hand Cover ▶ page 8-18.
 3. Right Hand Cover ▶ page 8-21.
 4. Bail Arm Assembly ▶ page 8-58.
 5. Cutter Assembly ▶ page 8-50.
2. Manually slide the carriage assembly to the right side of the printer.
3. Remove the top half of the elevator assembly by releasing it from two retaining clips at the back, then lifting up and to the left.
4. Remove the two T-15 screws (item 1) securing the roller support bracket (item 2) to the left hand side chassis.
5. Remove the roller support bracket (item 2).
6. Remove the clutch (item 4) and washers (item 5) on the left end of the overdrive shaft by removing the retaining clip (item 3).
7. Remove the four T-10 screws (item 8) (two on each side) securing the overdrive assembly (item 9) to the left and right hand side chassis.
8. Remove the two screws (item 10) (one on each side) securing the overdrive assembly (item 9) to the left and right hand side chassis.

Make sure you disconnect the Media Button Cable from the Service Station Interconnect PCA (See Figure 25C ▶ page 8-76).

9. Remove the overdrive assembly (item 9) by lifting it out on the right, then sliding to the right.

To remove the Drive Roller only

1. Remove the following:
 1. X-Axis Motor Assembly ▶ page 8-45.
 2. Service Station Assembly ▶ page 8-26.

2. Remove the shoulder screw (item 6) securing the cluster gear (item 7) to the left hand side chassis.
3. Move the pinch-arm lever to the up position.
4. Remove the drive roller (item 11) by holding the ends and lifting out.

Installation of the drive roller

Note: Make sure all the pincharm assemblies (item 12) are in the correct position before performing the next step.

1. Install the drive roller (item 11). Make sure the bearings at either end of the drive roller are installed into the correct position in the left and right hand side chassis.
2. Install the shoulder screw (item 6) securing the cluster gear (item 7) to the chassis.
3. Install the following:
 1. *Service Station Assembly* ▶ page 8-26.
 2. *X-Axis Motor Assembly* ▶ page 8-45.

Installation of the overdrive assembly

Take care when installing the Overdrive Assembly and make sure that the Media Button Cable is positioned as shown on figure 25B.

If it is not correctly positioned, it will get trapped between the Overdrive Assembly and the chassis and will become damaged.

Also make sure that the Media Button is routed correctly as shown on Figure 25C ▶ page 8-76.

1. Install the overdrive assembly (item 9) by holding both ends and sliding the left end first into the chassis and push it firmly down. Then push the right hand side down firmly until it reaches the pin stops.
2. Install two screws (item 10), one on each side, securing the overdrive assembly to the left and right hand side chassis.

Note: Make sure that you install the first screw (item 10) on the right hand side first before installing the second screw (item 10) on the left hand side.

3. Install the four T-10 screws (item 8) (two on each side) securing the overdrive assembly (item 9) to the left and right hand side chassis.
4. Install the clutch (item 4) and two washers (item 5) on the left end of the overdrive shaft, then secure with the retaining clip (item 3).
5. While pressing down on the roller support bracket, install two T-15 screws (item 1) securing the roller support bracket to the chassis.
6. Connect the Media Button Cable to the Service Station Interconnect PCA (See Figure 25C ▶ page 8-76).

7. Install the top half of the elevator assembly by securing it to two retaining clips at the back and push down and to the right.

8. Install the following:

1. *Cutter Assembly* ▶ page 8-50
2. *Bail Arm Assembly* ▶ page 8-58

IF YOU ARE INSTALLING A NEW OVERDRIVE ASSEMBLY, YOU MUST INSTALL THE OVERDRIVE SHIMS IN ORDER TO PREVENT THE CUTTER ASSEMBLY FROM CRASHING INTO THE BAIL ASSEMBLY.

9. You must install the Overdrive Shims on the Overdrive Assembly as follows (Refer to Figures 25D and 25E on page ▶ 8-77):

1. *Peel the paper from the back of the first Overdrive Shim (Item 1) and install it on the Linear Blade (Item 2) of the Overdrive Assembly on the left-hand side of the Printer (Refer to Figure 25D).*

Make sure that when you install the Overdrive Shim (item 1) that there is a gap of approximately 3mm between the Overdrive Shim (Item 1) and the Cutter Assembly Shim (Item 3) as shown on Figure 25D.

2. *Peel the paper from the back of the second Overdrive Shim (Item 1) and install it on the Linear Blade (Item 2) of the Overdrive Assembly on the right-hand side of the Printer (Refer to Figure 25E).*

Make sure that when you install the Overdrive Shim (item 1) that there is a gap of approximately 3mm between the Overdrive Shim (Item 1) and the Cutter Assembly Shim (Item 3) as shown on Figure 25E.

10. Install the following:

1. *Right Hand Cover* ▶ page 8-21.
2. *Left Hand Cover* ▶ page 8-18.
3. *Window and Top Cover* ▶ page 8-15.

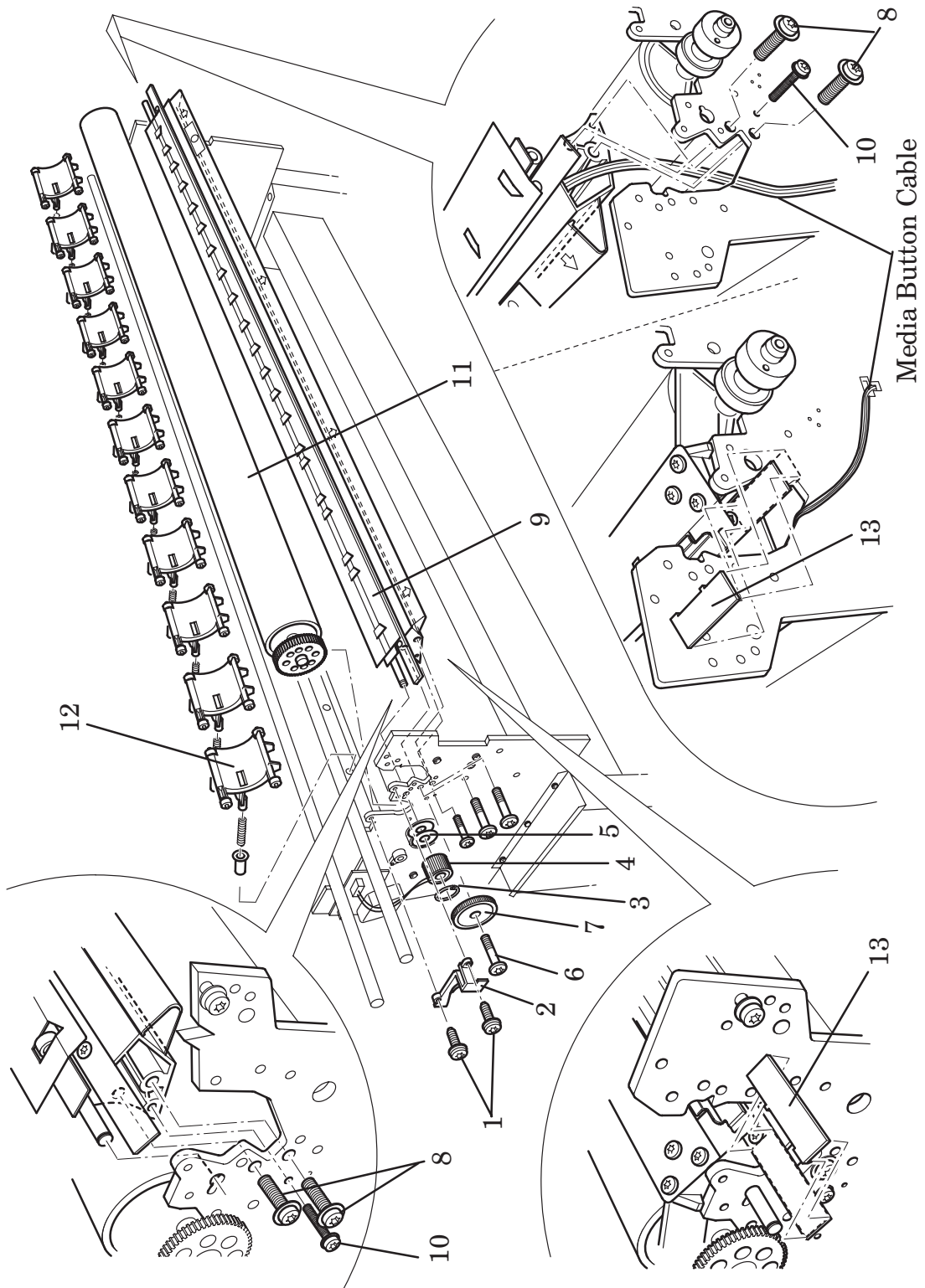
11. Connect the power cord and turn the printer on in service mode.

12. Perform following calibrations:

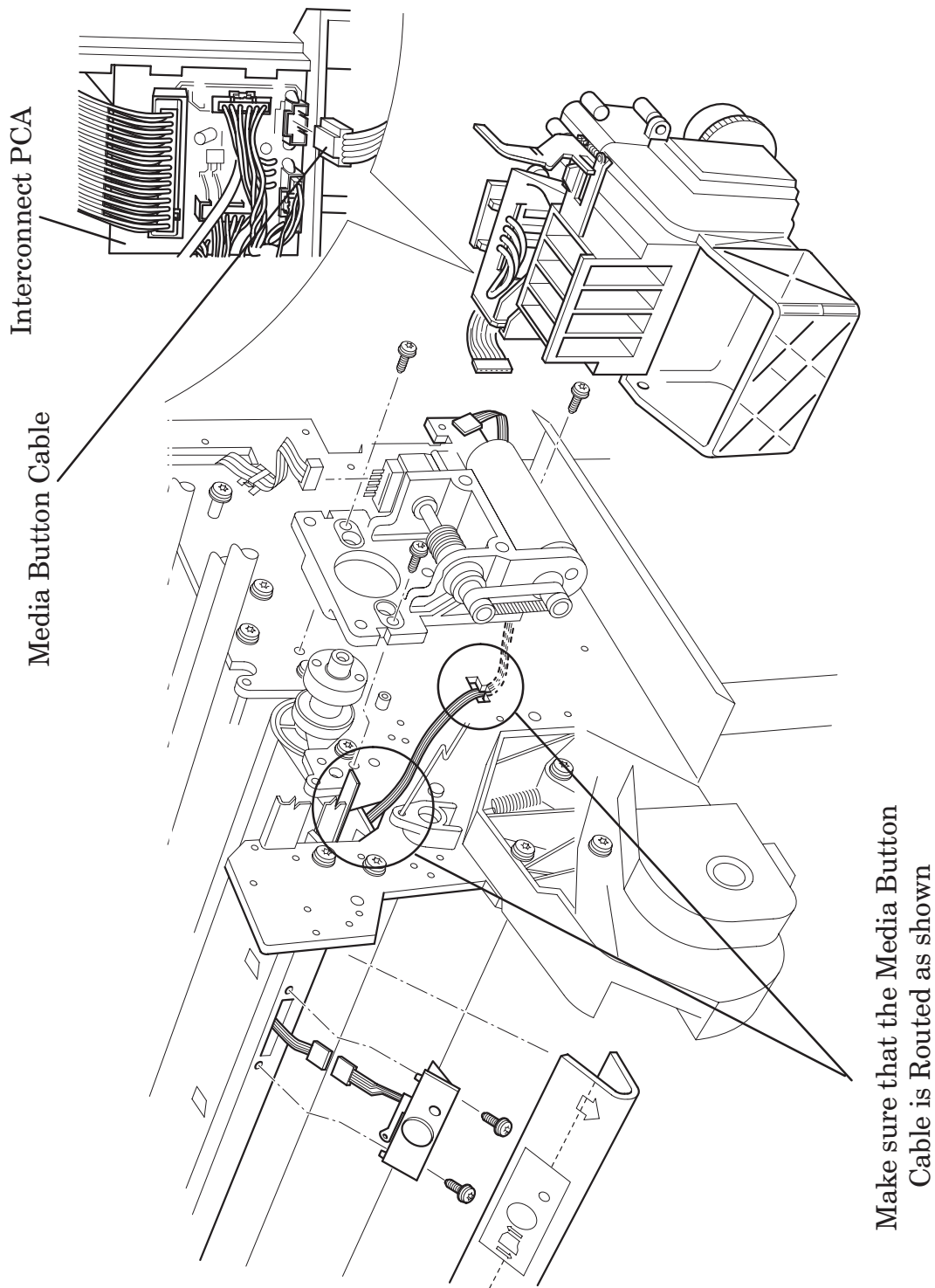
1. **C08 Service Accuracy Calibration** ▶ page 5-16.

13. Perform following service tests:

1. *D11 Bail Service Test* ▶ page 5-11
2. *D05 Service Station Service Test* ▶ page 4-15

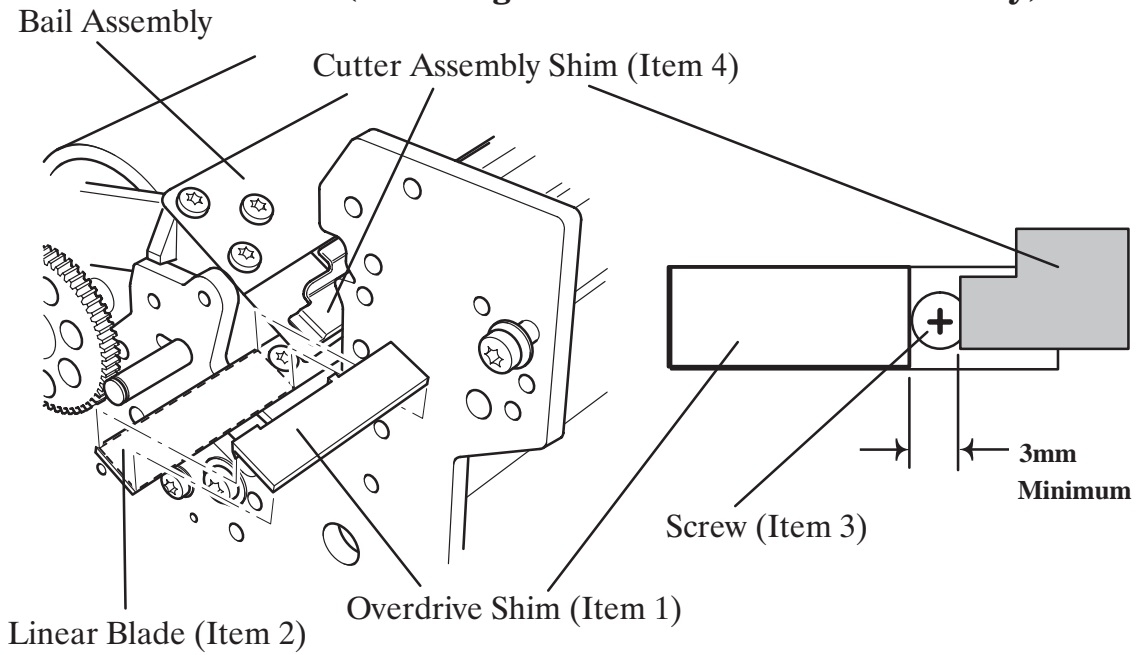


**Figure 25B: Overdrive Assembly
(Only Applicable to HP DesignJets 3500CP and 3000CP)**

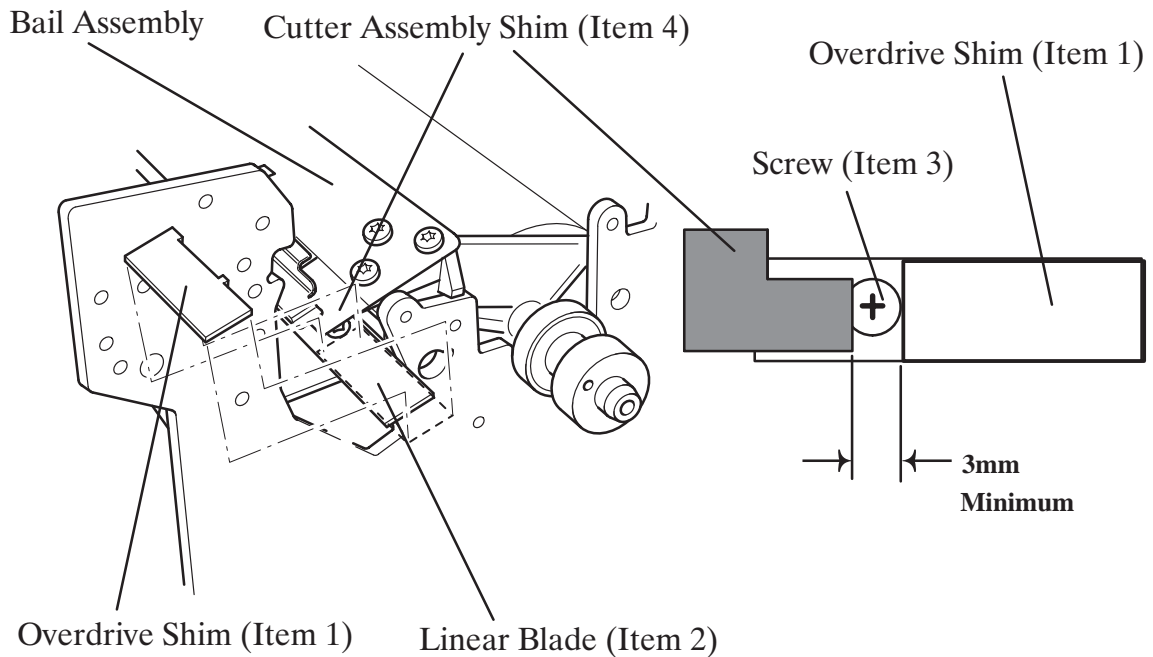


**Figure 25C: Media Button Cable Routing
(Only Applicable to HP DesignJets 3500CP and 3000CP)**

Media Button (HP DesignJets 3500CP and 3000CP Only)



**Figure 25D: Overdrive Shims
(Only Applicable to HP DesignJets 3500CP and 3000CP)**



**Figure 25E: Overdrive Shims
(Only Applicable to HP DesignJets 3500CP and 3000CP)**

Entry Platen

Refer to figure 26 ▶ page 8-80

Removal

WARNING

Switch off the printer and remove the power cord.

1. Remove the following:
 1. *Window and Top Cover* ▶ page 8-15.
 2. *Left Hand Cover* ▶ page 8-18.
 3. *Right Hand Cover* ▶ page 8-21.
2. Carefully disconnect the media sensor cable from the electronics module in position **J6 MEDIA**.
3. Carefully pull the media sensor assembly (item 1) off the retaining pin located underneath the entry platen (item 2). Make sure that when you pull the media sensor off the pin you do not lose the two actuators inside the assembly.
4. Remove the media sensor cable from a cable clamp at the rear of the printer.
5. Open the roll cover.
6. Remove the spindle by pulling it towards you.

WARNING

Care should be taken while performing the following procedure, the entry platen has sharp edges and could cause injury.

7. Remove the top half of the elevator assembly by releasing it from two retaining clips at the back and lifting up and to the left.
8. Move the pincharm lever to the down position.
9. Remove the two T-15 screws securing the entry platen to the right hand side chassis.

Caution: Be careful not to drop the entry platen once the securing fasteners have been removed. Support the entry platen throughout the next step.
10. Remove the entry platen by removing two T-15 screws (item 3), which secure the entry platen to the left side of the chassis.

Installation

1. Carefully push the media sensor assembly (item 1) onto the retaining pin located underneath the entry platen.

WARNING

Care should be taken while performing the following procedure, the entry platen has sharp edges and could cause injury.

Note: On the inside of the left and right hand side chassis, there are locating pins (item 4). The correct locating pin for the entry platen is located just below the starguard assembly.

2. Install the entry platen (item 2) onto the entry platen locating pins (item 4).
Caution: Be careful not to drop the entry platen. Support the entry platen throughout the next step.
3. Install two T-15 screws (item 5) into the right hand side chassis securing the entry platen.
4. Install two T-15 screws (item 3) securing the entry platen to the left hand side of chassis.
5. Install the top half of the elevator assembly by securing it with two retaining clips at the back and push down and to the right.
6. Connect the media sensor cable to the electronics module in position **J6 MEDIA**.
7. Install the media sensor cable in the cable clamp at the rear of the printer.
8. Install the following:
 1. *Right Hand Cover* ▶ page 8-21.
 2. *Left Hand Cover* ▶ page 8-18.
 3. *Window and Top Cover* ▶ page 8-15.
9. Connect the power cord and turn the printer on in service mode.
10. Perform D08 Sensor Service Test ▶ page 4-28

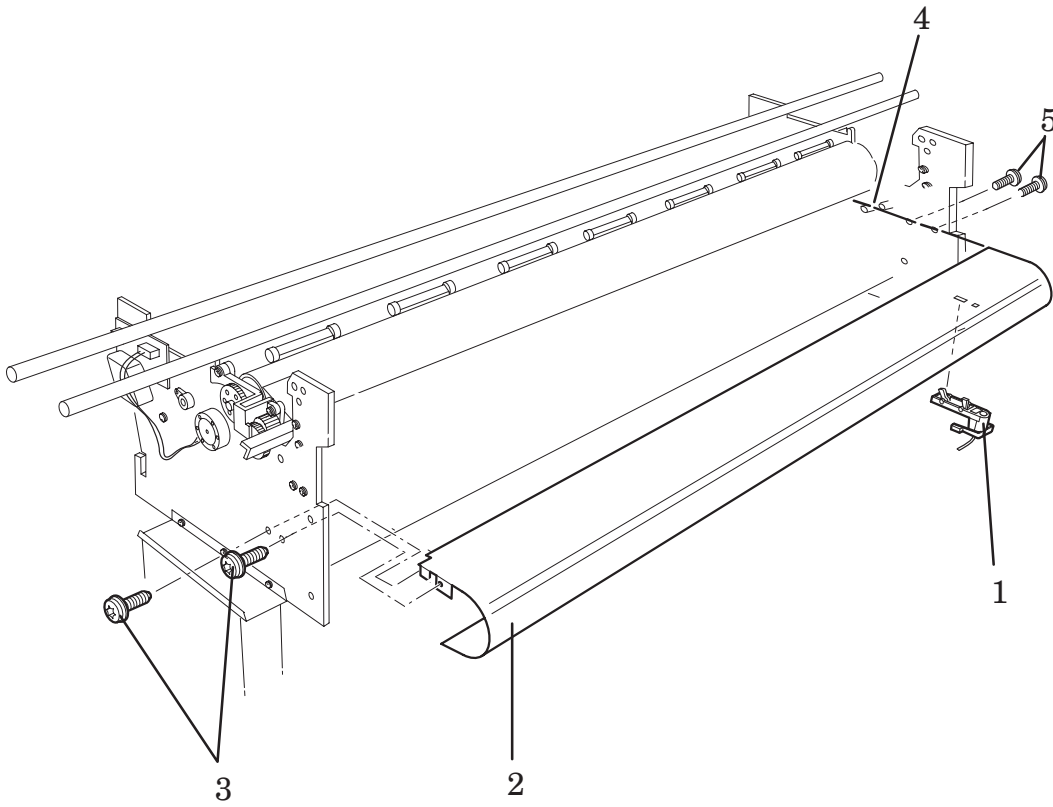


Figure 26: Entry Platen

Roll Cover and Roll Feed Assemblies

Refer to figure 27 ▶ page 8-83

Removal

WARNING

Switch off the printer and remove the power cord.

1. Remove the following:
 1. *Window and Top Cover* ▶ page 8-15.
 2. *Left Hand Cover* ▶ page 8-18.
 3. *Right Hand Cover* ▶ page 8-21.
 4. *Service Station Assembly* ▶ page 8-26.
2. Remove the spindle assembly (item 1) by pulling it towards you on the right side.

WARNING

The two springs on the roll cover are under high tension.

3. Remove the two T-10 screws (item 2) securing the two springs (item 3) onto the roll cover (item 4)
4. Loosen the two nuts (item 5) on the adjustment bracket on the left side to remove the cover.
5. Remove the three T-20 screws (item 6) securing the left hand roll feed assembly to the left hand side chassis.
6. Remove the three T-20 screws (item 7) securing the right hand roll feed assembly to the right hand side chassis.

Installation

1. Install the three T-20 screws (item 6) securing the left hand roll feed assembly to the left hand side chassis.
2. Install the three T-20 screws (item 7) securing the right hand roll feed assembly to the right hand side chassis.
3. Install the roll cover (item 4) into the correct position in the roll feed assemblies.
4. Move the adjustment bracket as far left as it can go to secure the roll cover to the left hand chassis, then tighten the nuts (item 5) on the adjustment bracket.
5. Install the two roll cover springs (item 3) onto the roll cover with two T-10 screws (item 2).
6. Install the spindle assembly (item 1) by pushing it into the retaining clips in the roll feed assembly.
7. Install the following:
 1. *Service Station Assembly* ▶ page 8-26.
 2. *Right Hand Cover* ▶ page 8-21.
 3. *Left Hand Cover* ▶ page 8-18.
 4. *Window and Top Cover* ▶ page 8-15.
8. Connect the power cord.

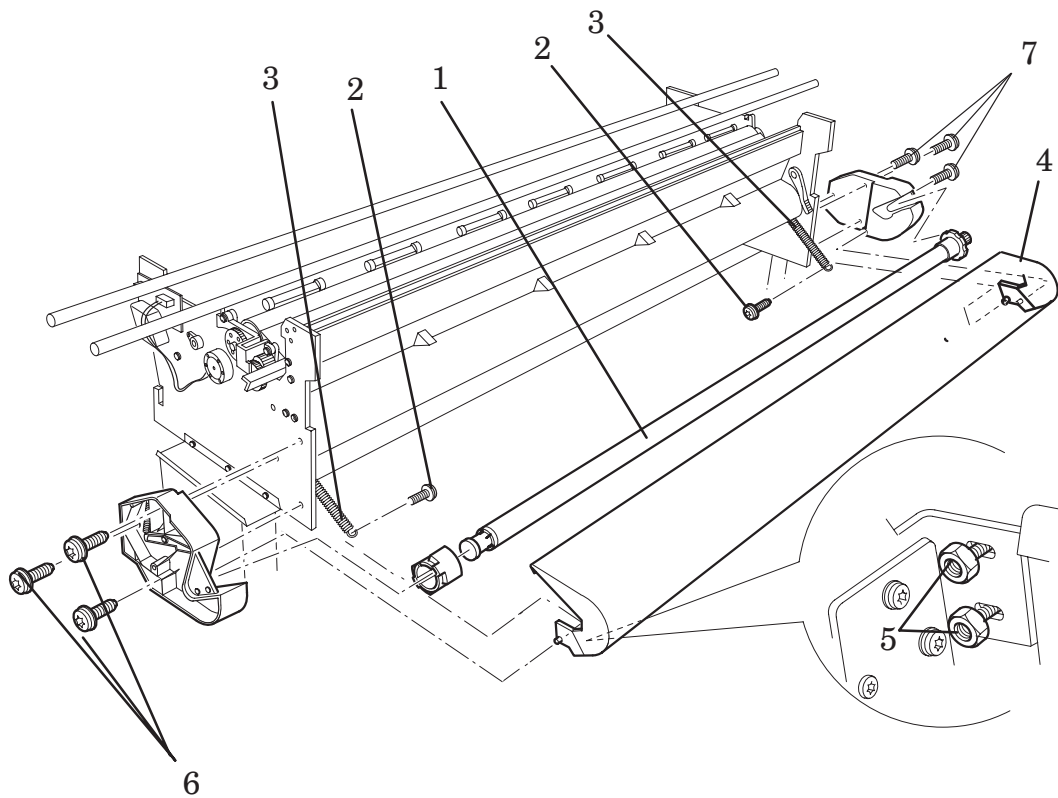


Figure 27: Roll Cover Assemblies

Pincharm Assemblies, Pincharm Shaft and Pincharm Sensor

Refer to figure 28 ▶ page 8-86

Removal of the pincharm sensor

WARNING

Switch off the printer and remove the power cord.

1. Remove the following:
 1. *Right Hand Cover* ▶ page 8-21.
 2. *Service Station Assembly* ▶ page 8-26
2. Remove the two T-10 screws (item 1) securing the pincharm sensor to the right hand side chassis.
3. Remove the pincharm sensor cable from the cable clamp (item 2) secured to the left hand side chassis.
4. Disconnect the pincharm sensor cable from the electronics module in position **J8 PINCH**.

Removal of the pincharm assemblies and the pincharm shaft.

1. Remove the following:
 1. *Window and Top Cover* ▶ page 8-15.
 2. *Left Hand Cover* ▶ page 8-18.
 3. *Right Hand Cover* ▶ page 8-21.
 4. *Service Station Assembly* ▶ page 8-26.
 5. *Overdrive assembly and Drive roller* ▶ page 8-69.
2. To remove the pincharm shaft (item 6), **loosen** the T-9 screw (item 3) at the right end of the pincharm shaft. Be careful not to loosen the screw too much as you may loose the nut (item 5)
3. Remove the top half of the elevator assembly by releasing it from two retaining clips at the back and lifting up and to the left.
4. Pull out the cam journal (item 4) from the hole in the right hand side chassis
5. Remove the pincharm shaft from the left side of the printer by pulling it out.
6. To remove any of the pincharm assemblies (item 7) pull out from the chassis.

Installation of the pincharm sensor.

1. Install the pincharm sensor into the correct position and secure with two T-10 screws (item 1).
2. Install the pincharm sensor cable into the cable clamp (item 2) secured to the left hand side chassis.
3. Connect the pincharm sensor cable to the electronics module in position **J8 PINCH**.
4. Install the following:
 1. *Right Hand Cover* ▶ page 8-21.
 2. *Service Station Assembly* ▶ page 8-26
5. Connect the power cord and turn the printer on in service mode.
6. Perform D08 Sensor Service Test ▶ page 4-28

Installation of the pincharm assemblies and the pincharm shaft.

1. Install the pincharm shaft (item 6) into the left hand side chassis and at the same time install the pincharm spring (item 8) and pincharm assemblies (item 7) into the plastic bushing (item 9) in the chassis.
2. Install the cam journal (item 4) onto the pincharm shaft on the right hand side chassis.
3. Making sure that you do not over tighten the screw, secure the cam journal on the end of the pincharm shaft with the T-9 screw (item 3).
4. Install the top half of the elevator assembly by securing it to two retaining clips at the back and push down and to the right.
5. Install the following:
 1. *Overdrive Assembly and Drive Roller* ▶ page 8-69.
 2. *Service Station Assembly* ▶ page 8-26.
 3. *Left Hand Cover* ▶ page 8-18.
 4. *Right Hand Cover* ▶ page 8-21.
 5. *Window and Top Cover* ▶ page 8-15.
6. Connect the power cord and turn the printer on in service mode.
7. Perform D08 Sensor Service Test ▶ page 4-28

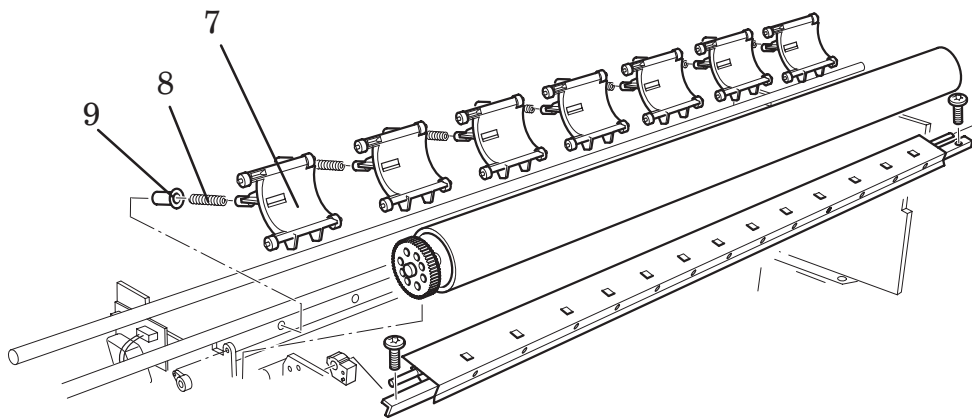
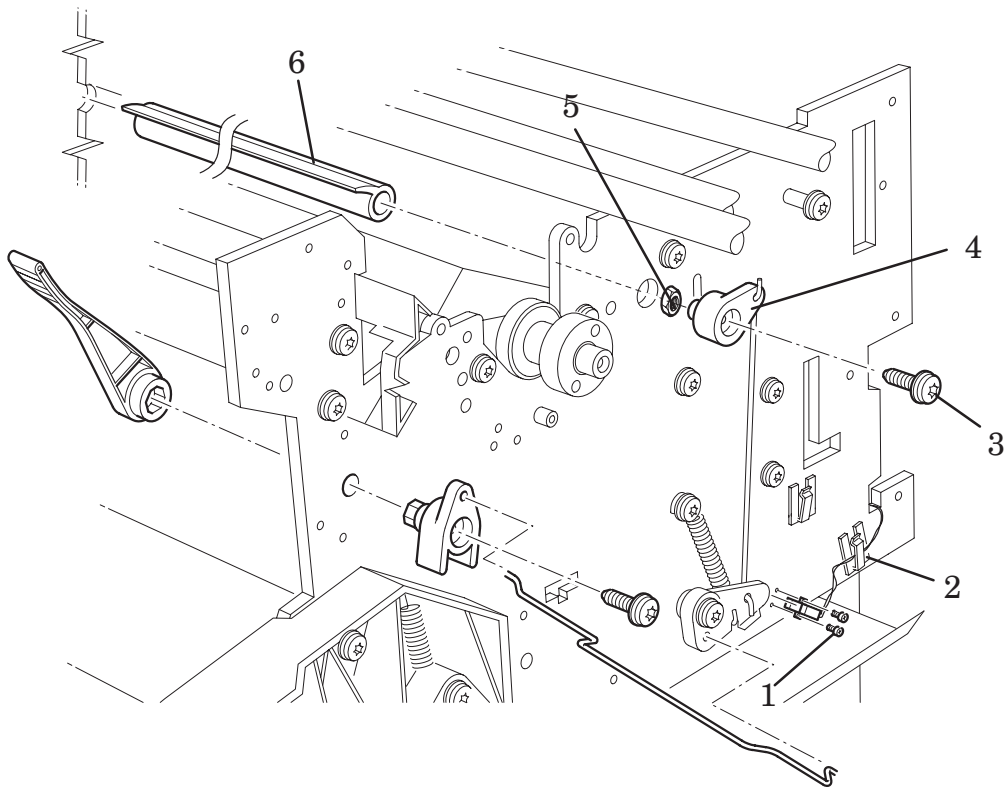


Figure 28: Pincharm Assemblies

Interconnect Cables

Refer to figure 29 ▶ page 8-89

WARNING

Switch off the printer and remove the power cord.

Removal of the refill interconnect cable.

1. To remove the following:
 1. *Electronics Module* ▶ page 8-6.
 2. *Left Hand Cover* ▶ page 8-18.
 3. *Right Hand Cover* ▶ page 8-21.
2. Remove the top half of the elevator assembly by releasing it from two retaining clips at the back and lifting up and to the left.
3. Carefully disconnect the refill interconnect cable from position **J1** on the refill interconnect PCA.

Note: Working from the rear of the printer.

4. Remove the refill interconnect cable from the cable clamp on the right hand side chassis.
5. Pull the refill interconnect cable through the hole (item 1) in the right hand side chassis.
6. Remove the refill interconnect cable from five cable clamps (item 2) located at the back of the printer.
7. Remove the two T-20 screws (item 3) securing the ferrite clamp (item 4) to the left hand side chassis.
8. Remove the refill interconnect cable and the ferrite (item 5) from the ferrite clamp.

Removal of the service station interconnect cable.

1. Remove the following:

Note: Working from the rear of the printer.

 1. *Right Hand Cover* ▶ page 8-21.
2. Remove the left hand back cover by releasing it from the holding clips.
3. Carefully disconnect the service station interconnect cable from the electronics module from position **J11 SRVCE STN**.
4. Carefully disconnect the service station interconnect cable from the service station interconnect PCA located underneath the service station assembly.

Installation of the service station interconnect cable

1. Connect the service station interconnect cable to the service station interconnect PCA located underneath the service station assembly.
2. Connect the service station interconnect cable to the electronics module in position **J11 SRVCE STN**.
3. Install the left hand back cover.
4. Install the following:
 1. *Right Hand Cover* ▶ page 8-21.
5. Install the power cable and turn the printer on in service mode.
6. Perform the D01 Electronics service test ▶ page 4-6

Installation of the refill interconnect cable

1. Install the ferrite on the refill interconnect cable into the ferrite clamp (item 4).
2. Install the ferrite in the correct position on the left hand side chassis with two T-20 screws (item 3).
3. Install the refill interconnect cable through five cable clamps (item 2) located at the back of the printer.
4. Pull the refill interconnect cable through the hole (item 1) in the right hand side chassis.
5. Install the refill interconnect cable through the cable clamp on the right hand side chassis.
6. Connect the refill interconnect cable to position **J1 REFILL STATION** on the refill interconnect PCA.
7. Install the top half of the elevator assembly by securing it with two retaining clips at the back and push down and to the right.
8. Install the following:
 1. *Electronics Module* ▶ page 8-6.
 2. *Left Hand Cover* ▶ page 8-18.
 3. *Right Hand Cover* ▶ page 8-21.
9. Install the power cable and turn the printer on in service mode.
10. Perform the Electronics service test ▶ page 4-6.

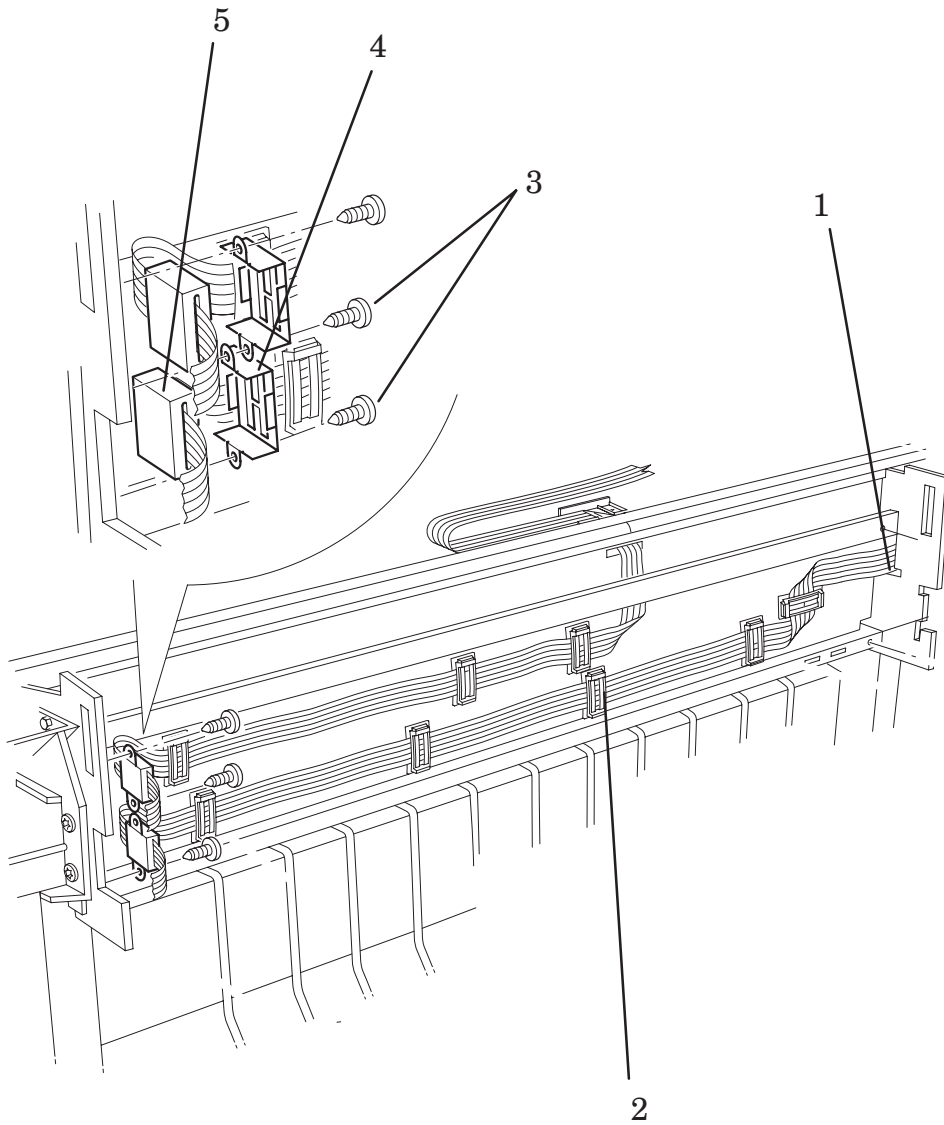


Figure 29: Interconnect Cables

Media Button (Only Applicable to HP DesignJets 3500CP and 3000CP)

Refer to figure 30 ▶ page 8-91

Removal

WARNING

Switch off the printer and remove the power cord.

1. Remove the Media Guide (item 1) from the Overdrive Assembly by unclipping it from underneath.
2. Remove the two screws (item 2) securing the Media Button (item 3) to the Overdrive Assembly.
3. Carefully pull out the Media Button (item 3) and disconnect it from the Media Button Cable (item 4).

Installation

1. Connect the Media Button (item 3) to the Media Button Cable (item 4).
2. Install the two screws (item 2) that secure the Media Button (item 3) to the Overdrive Assembly.
3. Install the Media Guide (item 1) by clipping it onto the Overdrive Assembly.

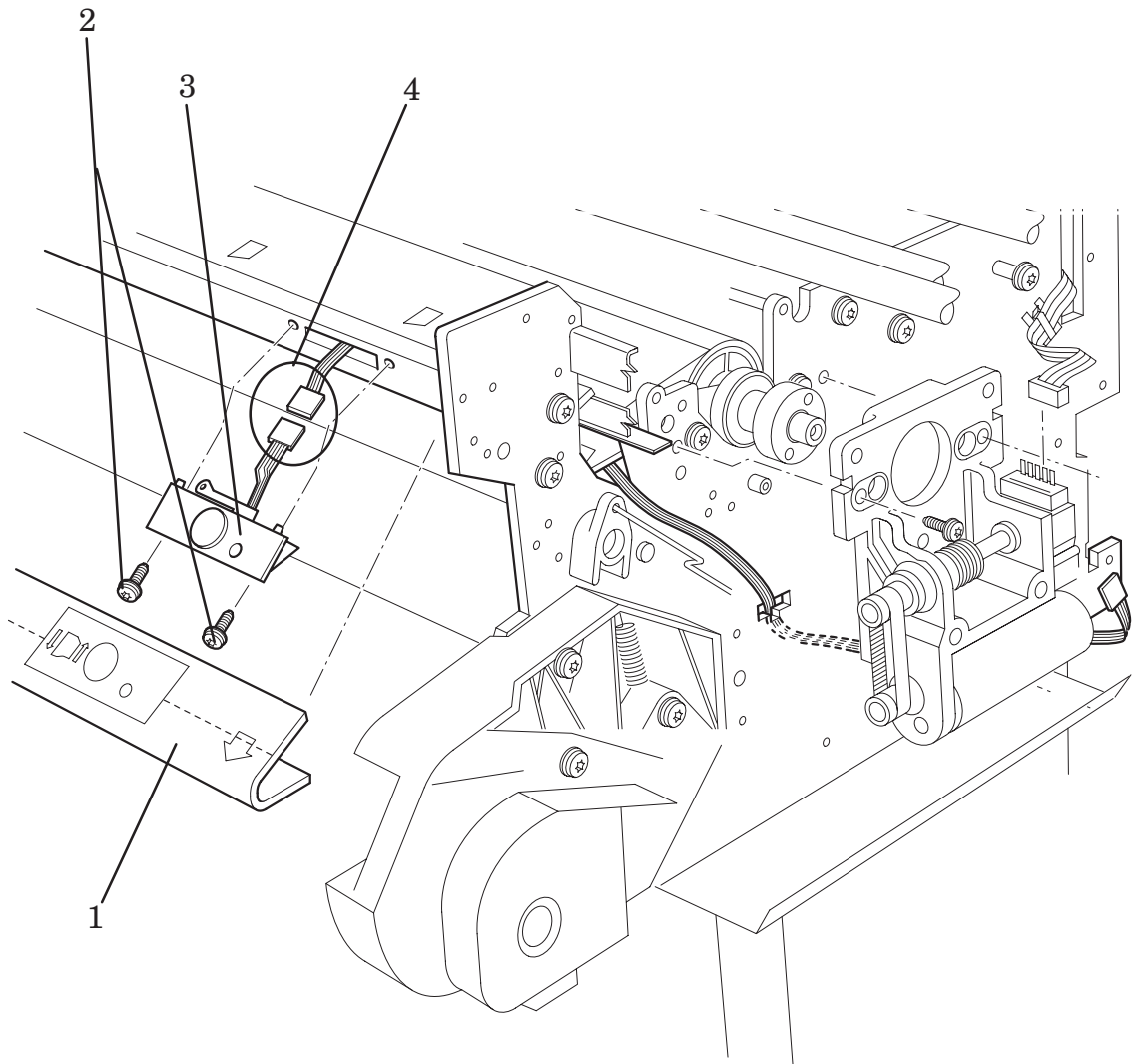


Figure 30: Media Button
(Only Applicable to HP DesignJets 3500CP and 3000CP)

