



HP DesignJet T1700 Printer Series

HP Designjet T1708 Printer Series

HP DesignJet Z9+ PostScript Printer series

HP DesignJet Z6 PostScript Printer series

Service manual

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For HP-authorized personnel only

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Readership

The primary readers of this service manual are HP service engineers, although secondary readership may include resellers.

Using this Manual

This Service Manual contains information necessary to test, calibrate, maintain and service the following:

	Version
HP DesignJet T1700 44-in Printer	One-roll printer
HP DesignJet T1700dr 44-in Printer	Dual-roll printer
HP Designjet T1708 44-in Printer	One-roll printer
HP Designjet T1708dr 44-in Printer	Dual-roll printer
HP DesignJet Z6 24-in PostScript Printer	One-roll printer
HP DesignJet Z6 44-in PostScript Printer	One-roll printer
HP DesignJet Z6dr 44-in PostScript Printer with V-Trimmer	Dual-roll printer with V-Trimmer
HP DesignJet Z9+ 24-in PostScript Printer	One-roll printer
HP DesignJet Z9+ 44-in PostScript Printer	One-roll printer
HP DesignJet Z9+dr 44-in PostScript Printer with V-Trimmer	Dual-roll printer with V-Trimmer

Printer name (Part number)	RTL	PostScript/PDF
HP DesignJet T1700 44-in Printer (W6B55A)	W6B55A	
HP DesignJet T1700dr 44-in Printer (W6B56A)	W6B56A	
HP DesignJet T1700 44-in PostScript Printer (1VD87A)		1VD87A
HP DesignJet T1700dr 44-in PostScript Printer (1VD88A)		1VD88A
HP DesignJet T1708 44-in Printer (1VD83A)		1VD83A
HP DesignJet T1708dr 44-in Printer (1VD85A)		1VD85A
HP DesignJet T1708 44-in PostScript Printer (1VD84A)		1VD84A
HP DesignJet T1708dr 44-in PostScript Printer (1VD86A)		1VD86A
HP DesignJet Z6 24-in PostScript Printer (T8W15A)		T8W15A
HP DesignJet Z6 44-in PostScript Printer (T8W16A)		T8W16A
HP DesignJet Z6dr 44-in PostScript Printer with V-Trimmer (T8W18A)		T8W18A
HP DesignJet Z9+ 24-in PostScript Printer (W3Z71A)		W3Z71A

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Printer name (Part number)	RTL	PostScript/PDF
HP DesignJet Z9+ 44-in PostScript Printer (W3Z72A)		W3Z72A
HP DesignJet Z9+dr 44-in PostScript Printer with V-Trimmer (X9D24A)		X9D24A

For information about using these printers, refer to the corresponding User and Quick Reference Guides.

Readership

The procedures described in this Service Manual are to be performed by HP Certified service personnel only.

Part Numbers

Part Numbers for printer service parts are located in Chapter 7 [Parts and Diagrams on page 223](#).

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1 Printer fundamentals

- [Product specifications](#)
- [Theory of operation](#)

Product specifications

Table 1-1 Printer physical specifications

	HP DesignJet T1700 & T1708	HP DesignJet T1700dr and T1708dr	HP DesignJet Z6 24 in	HP DesignJet Z6 44 in	HP DesignJet Z6dr 44 in
			HP DesignJet Z9* 24 in	HP DesignJet Z9* 44 in	HP DesignJet Z9* dr 44 in
Weight	88.9 kg (196 lb)	89.4 kg (197.1 lb)	66 kg (145.5 lb)	86 kg (189.6 lb)	96 kg (211.6 lb)
Width		1802 mm (70.9 in)	1293 mm (50.9 in)		1802 mm (70.9 in)
Depth		695 mm (27.4 in)	695 mm (27.4 in)		695 mm (27.4 in)
Height		997 mm (39.3 in)	997 mm (39.3 in)		997 mm (39.3 in)

The depth is measured without the upper spindle; wall spacers up; ink cover opened; roll covers and basket closed.

Table 1-2 HP ink supplies

Printheads	Universal printheads, which can be inserted into any of the available slots. Once initialized in a particular slot, they cannot be moved to another.
Ink cartridges	Cartridges containing 130 ml of ink: matte black, photo black, light gray, cyan, magenta, yellow Cartridges containing 300 ml of ink: matte black, photo black, light gray, cyan, magenta, yellow NOTE: Notice that for T1708 printers there is only one type of 300 ml ink cartridges available: matte black.

Table 1-3 Paper sizes (T1700 & T1708)

	Minimum	Maximum
Roll width	279 mm (11 in)	1118 mm (44 in)
Roll length		91 m (300 feet)
Roll diameter		135 mm (5.3 in)
Roll weight		11.9 kg (26.3 lb)
Sheet width	210 mm (8.26 in)	1118 mm (44 in)
Sheet length	279 mm (11 in)	1676 mm (66 in)
Paper thickness		0.5 mm (19.68 mil)
Paper weight	60 g/m ²	328 g/m ²

Table 1-4 Paper sizes (Z6 and Z9*)

	Minimum	Maximum
Roll width	279 mm (11 in)	610 mm (24 in) (24-in printer) 1118 mm (44 in) (44-in printer)
Roll length		91 m (300 feet)
Roll diameter		135 mm (5.3 in)
Roll weight		11.9 kg (26.3 lb)
Sheet width	210 mm (8.26 in)	610 mm (24 in) (24-in printer) 1118 mm (44 in) (44-in printer)
Sheet length	279 mm (11 in)	1676 mm (66 in)
Paper thickness		0.8 mm (31.5 mil)
Paper weight	60 g/m ²	500 g/m ²

Table 1-5 Printing resolutions (T1700 & T1708)

Print quality	Maximum detail	Glossy paper		Coated, bond, film, technical, self-adhesive material, banner, backlit.	
		Rendering resolution (ppi)	Printing resolution (dpi)	Rendering resolution (ppi)	Printing resolution (dpi)
Best	On	600 × 600	2400 × 1200	600 × 600	1200 × 1200 or 600 × 1200
	Off	600 × 600	1200 × 1200		
Normal	On/Off	600 × 600	600 × 1200	600 × 600	1200 × 1200 or 600 × 1200
Fast	On/Off	–	–	600 × 600	600 × 1200
Economode	On/Off	–	–	600 × 600	600 × 1200

Table 1-6 Printing resolutions (Z6 and Z9*)

Print quality	Maximum detail	Self-adhesive material, banner, backlit, glossy paper		Coated, bond, film, technical	
		Rendering resolution (ppi)	Printing resolution (dpi)	Rendering resolution (ppi)	Printing resolution (dpi)
Best	On	1200 × 1200	2400 × 1200	600 × 600	1200 × 1200
	Off	600 × 600	1200 × 1200		
Normal	On/Off	600 × 600	1200 × 1200	600 × 600	1200 × 1200
Fast	On/Off	–	–	600 × 600	1200 × 1200
Economode	On/Off	–	–	300 × 300	600 × 1200

Table 1-7 Margins (T1700 & T1708)

Top, right and left margins	3 mm (0.1 in)
Bottom margin (trailing edge)	3 mm (0.1 in) (roll) 17 mm (0.67 in) (sheet)

Table 1-8 Margins (Z6 and Z9*)

Top, right and left margins	5 mm (0.2 in)
Bottom margin (trailing edge)	5 mm (0.2 in) (roll) 17 mm (0.67 in) (sheet)


 **NOTE:** Designjet T1708, Z6 and Z9+ support borderless printing. Borderless printing is available on photo, polypropylene, and backlit roll media.

Table 1-9 Mechanical accuracy

±0.1% of the specified vector length or ±0.2 mm (whichever is greater) at 23° C (73° F), 50-60% relative humidity, on E/A0 printing material in Best or Normal mode with HP Matte Film roll feed.

Table 1-10 Graphic languages supported

HP DesignJet	Languages
T1700, T1700dr	HP-PCL3GUI, HP-GL/2, CALS G4, TIFF, JPEG
T1708, T1708dr	PostScript printers also support Adobe PDF 1.7 ext. 3 (Monza embedded) and Adobe PostScript 3
T1708, T1708dr	HP-PCL3GUI, HP-GL/2, CALS G4, TIFF, JPEG PostScript printers also support Adobe PDF 1.7 ext. 3 (Monza embedded) and Adobe PostScript 3
Z6, Z6dr, Z9*, Z9* dr	Adobe PostScript 3, Adobe PDF 1.7, TIFF, JPEG, CALS G4, HPGL/2, HP-RTL

Table 1-11 Memory specifications

Virtual memory	128 GB
Hard disk	500 GB

Table 1-12 Printer power specifications

Input voltage	100–240 V AC ±10%, auto-ranging
Frequency	50–60 Hz
Maximum current	2 A
Power	100 W

Table 1-13 Printer environmental specifications

Operating temperature	5 to 40°C (41 to 104°F)
Recommended operating temperature	15 to 35°C (59 to 95°F), depending on paper type
Storage temperature	-25 to 55°C (-13 to 131°F)
Recommended operating humidity	20 to 80% RH, depending on paper type
Storage humidity	0 to 95% RH

Ecological specifications

This product complies with the WEEE Directive 2012/19/EU and RoHS Directive 2011/65/EU. To determine the ENERGY STAR and EPEAT registration status of your product model, see <http://www.hp.com/go/ecolabels>.

Table 1-14 Printer acoustic specifications (declared according to ISO 9296)

Idle sound pressure	32 dB (A)
Idle sound power	≤ 5.0 B(A)
Operating sound pressure	45 dB (A)
Operating sound power	≤ 6.1 B(A)

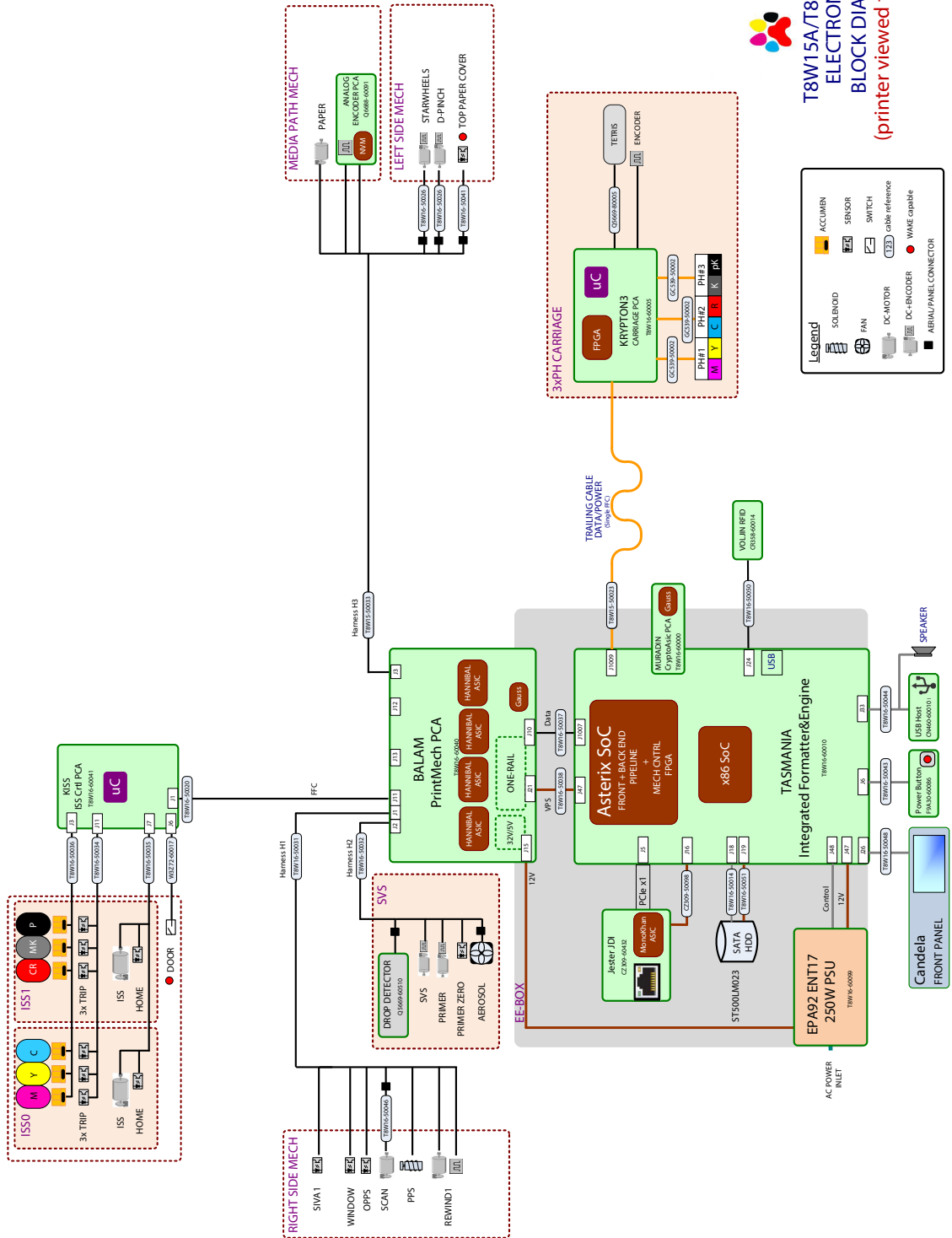
Theory of operation

Schematics

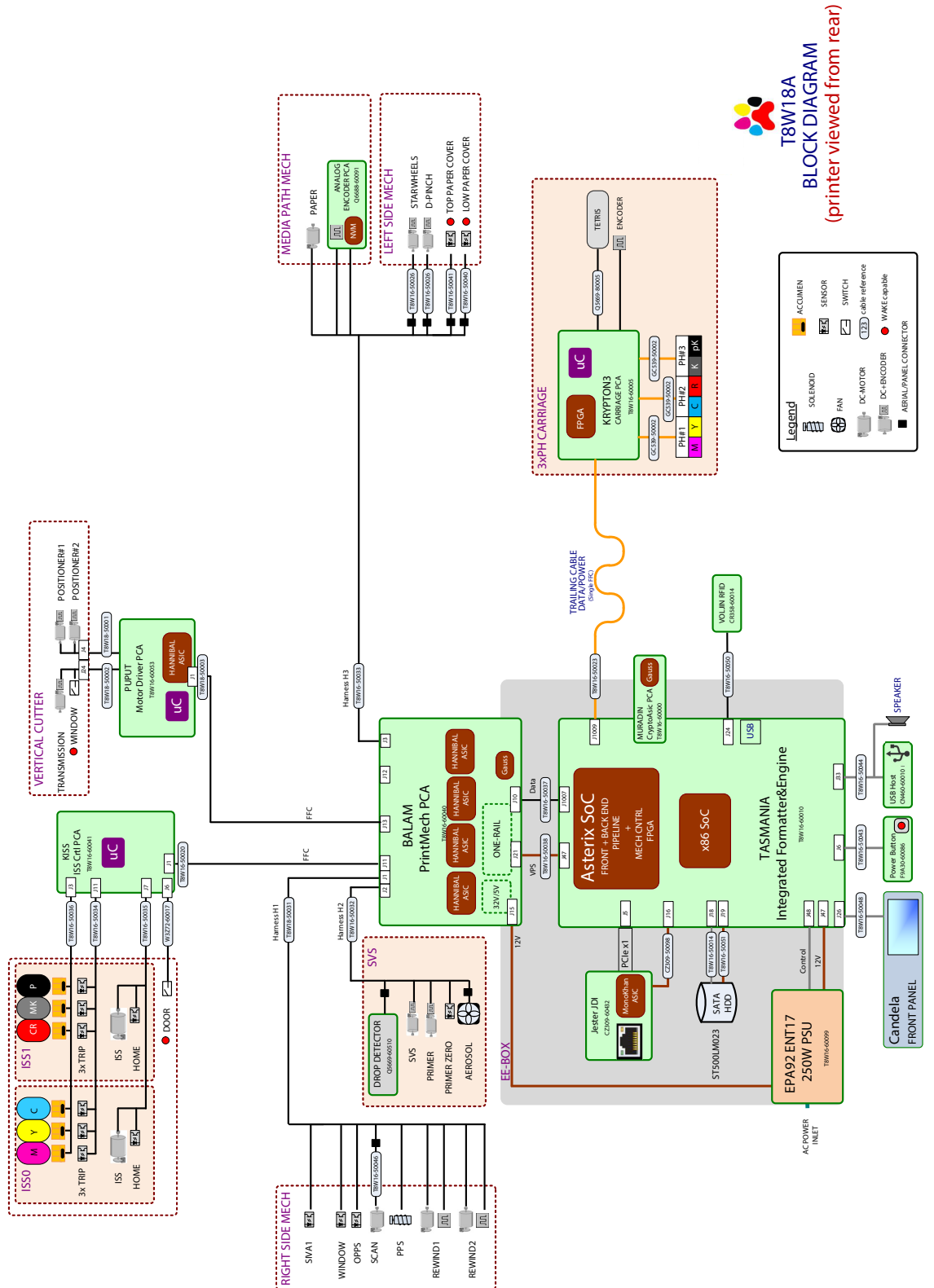
Electronics are based on 3 main components:

- **E-box:** contains the power supply and all the PCAs (driving the printer), plus the Ethernet port.
- **Carriage PCA:** drives the printhead.
- **Front panel:** user interface and USB port.

The following diagrams describe the connections between components and electronic boards and the data line type for T1700, T1708, Z6, and Z9+ series.



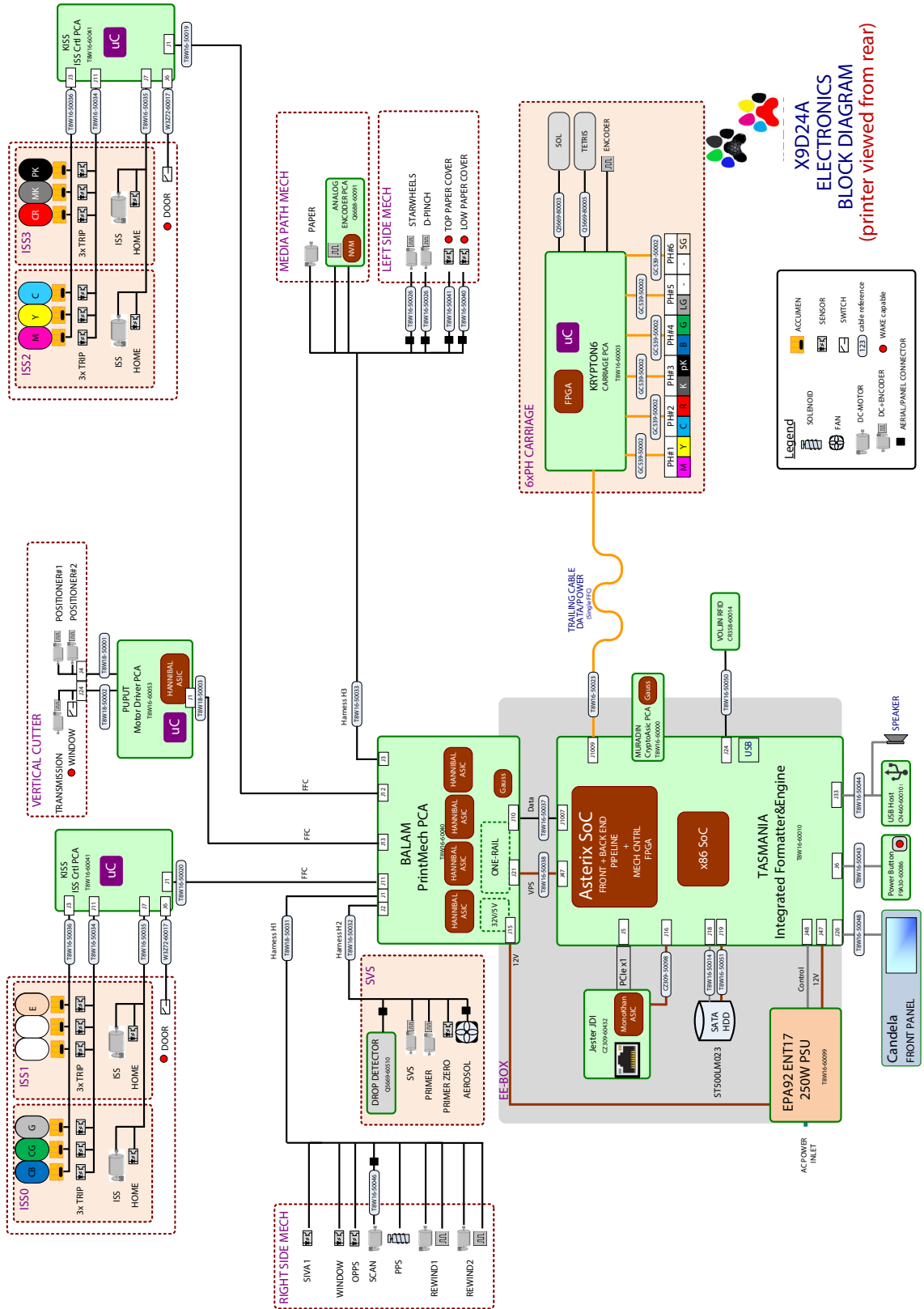
T8W15A/T8W16A
ELECTRONICS
BLOCK DIAGRAM
(printer viewed from rear)



T8W18A
BLOCK DIAGRAM
 (printer viewed from rear)

Legend

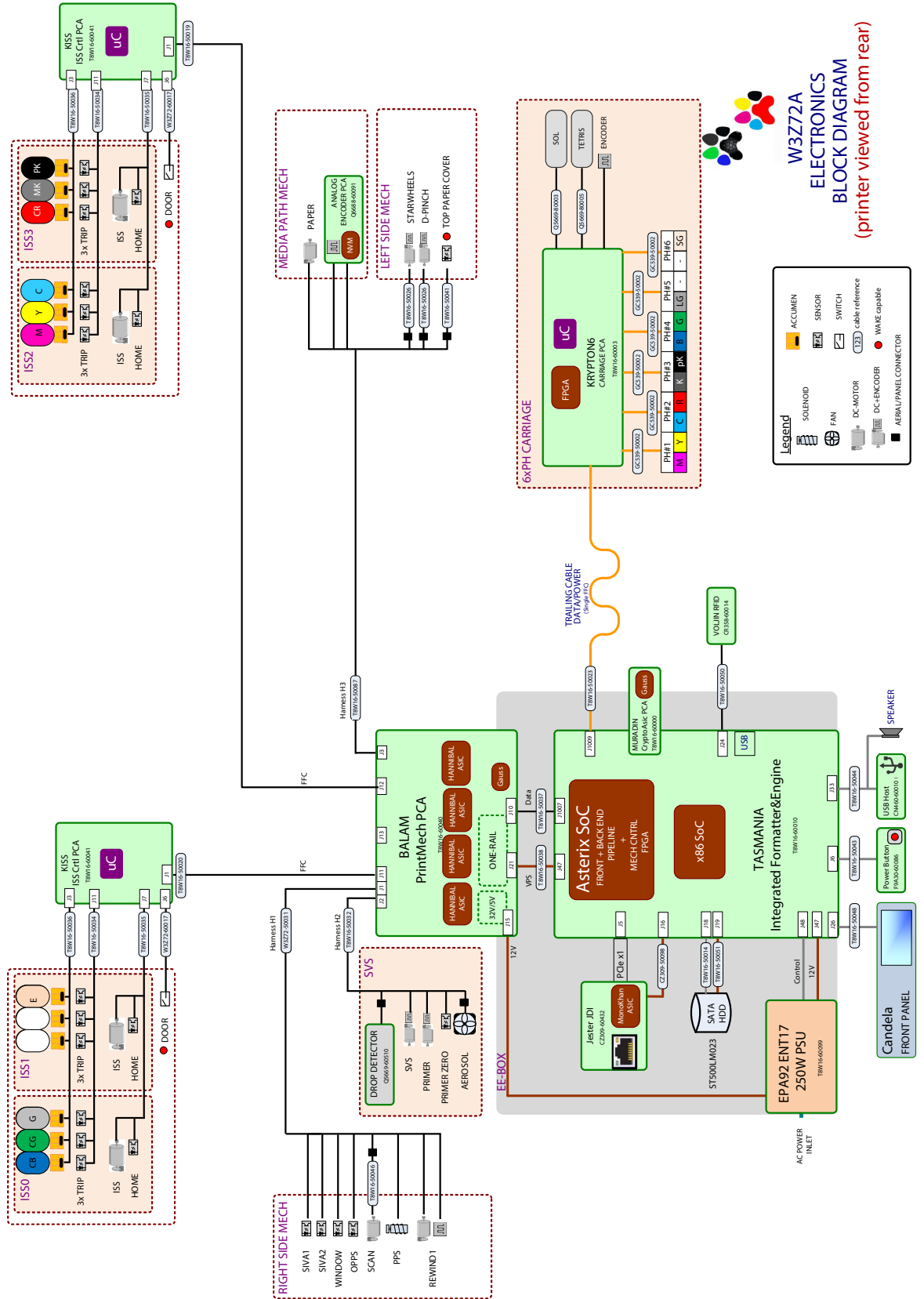
- ACCUMEN
- SOLENOID
- SENSOR
- SWITCH
- FAN
- DC-MOTOR
- DC-ENCODER
- WAKE-capable
- AERIAL/PANEL CONNECTOR

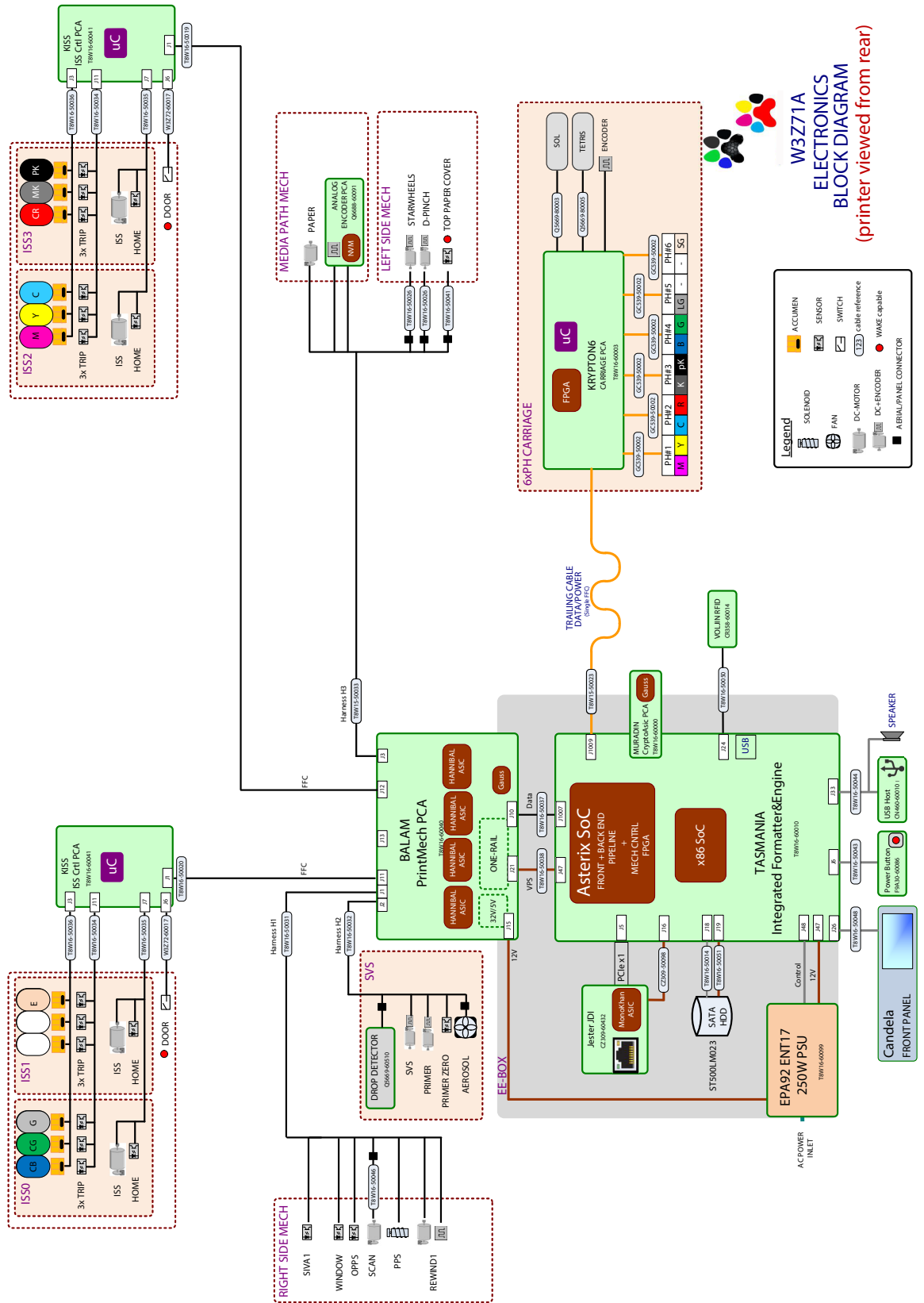


X9D24A
ELECTRONICS
BLOCK DIAGRAM
(printer viewed from rear)

Legend

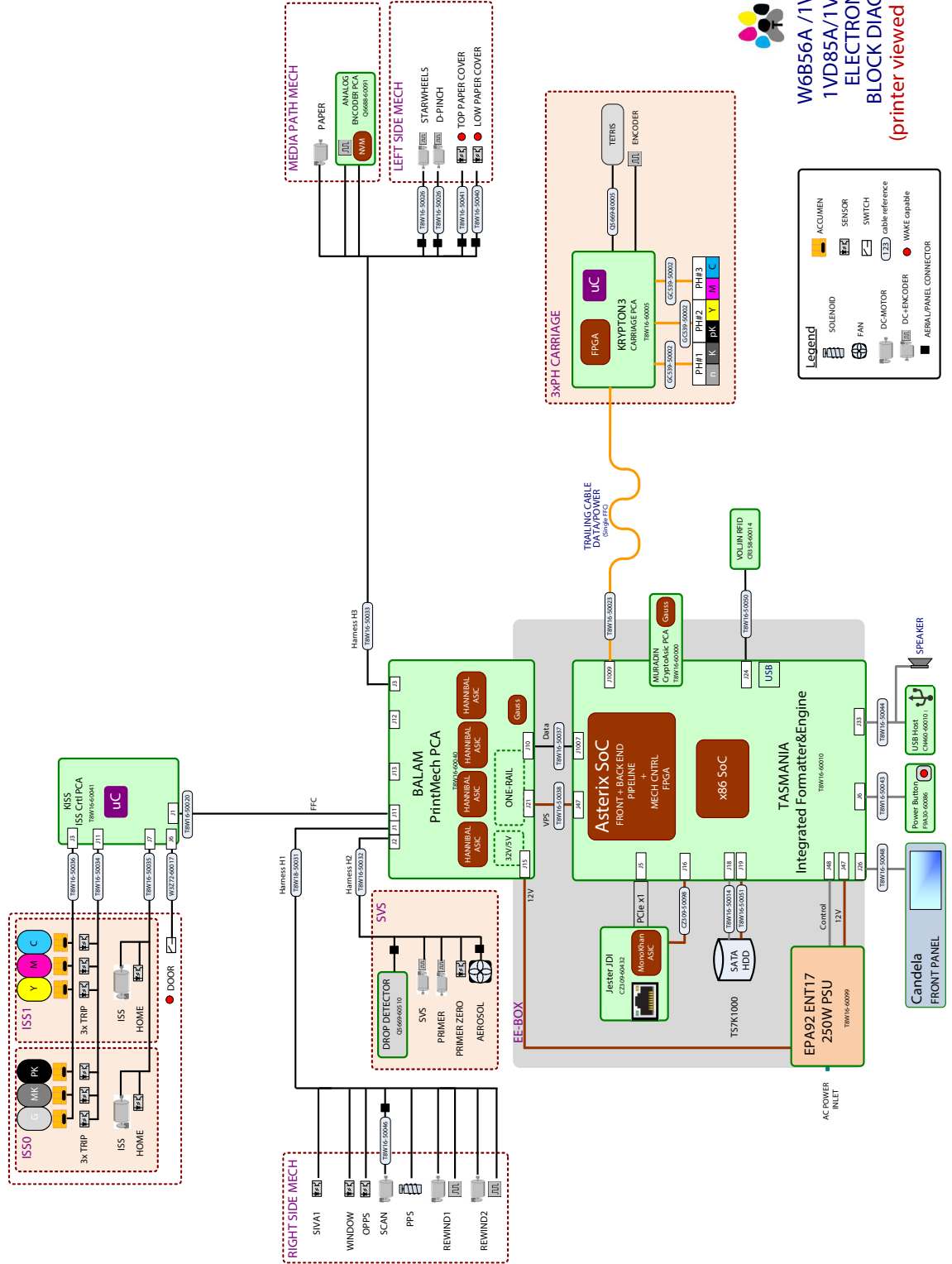
- ACCUMEN
- SOLENOID
- FAN
- DC-MOTOR
- DC-ENCODER
- WAKE capable
- SENSOR
- SWITCH
- cable reference
- MOTOR
- AERIAL/PANEL CONNECTOR





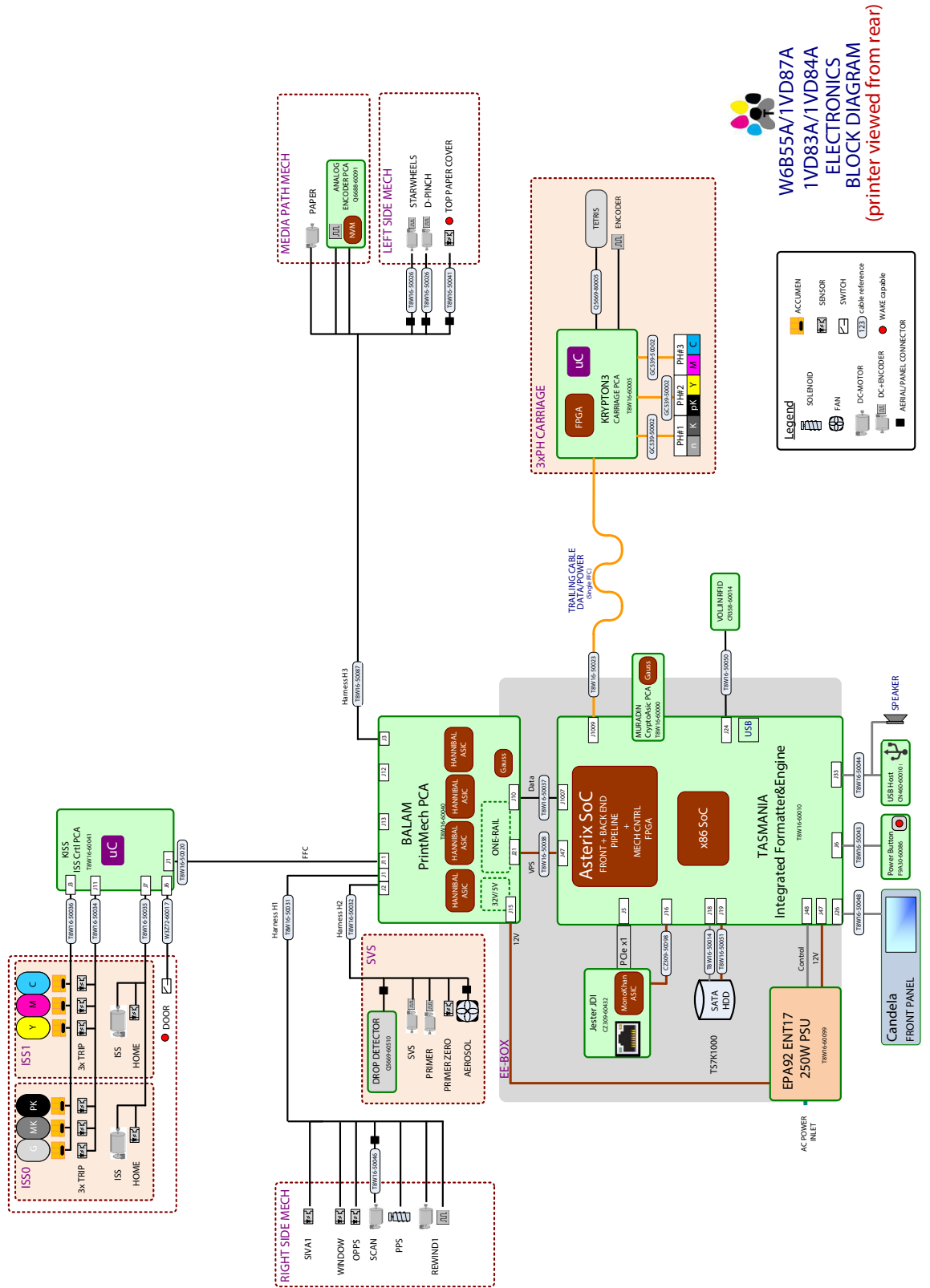


W6B56A / 1VD88A/
1VD85A/1VD86A
ELECTRONICS
BLOCK DIAGRAM
(printer viewed from rear)



Legend

- ACQUIRY
- SOLENOID
- FAN
- DC MOTOR
- ASB/L/PANEL CONNECTOR
- SENSOR
- SWITCH
- DC-ENCODER
- WAKE capable



W6B55A/1VD87A
1VD83A/1VD84A
ELECTRONICS
BLOCK DIAGRAM
(printer viewed from rear)

Legend

- ACCLIMEN
- SOLENOID
- FAN
- DC MOTOR
- DC-ENCODER
- AERIAL/PANEL CONNECTOR
- SENSOR
- SWITCH
- cable reference
- WAME capable

Printer initialization

There are 3 main blocks to be initialized before the printer can be operated:

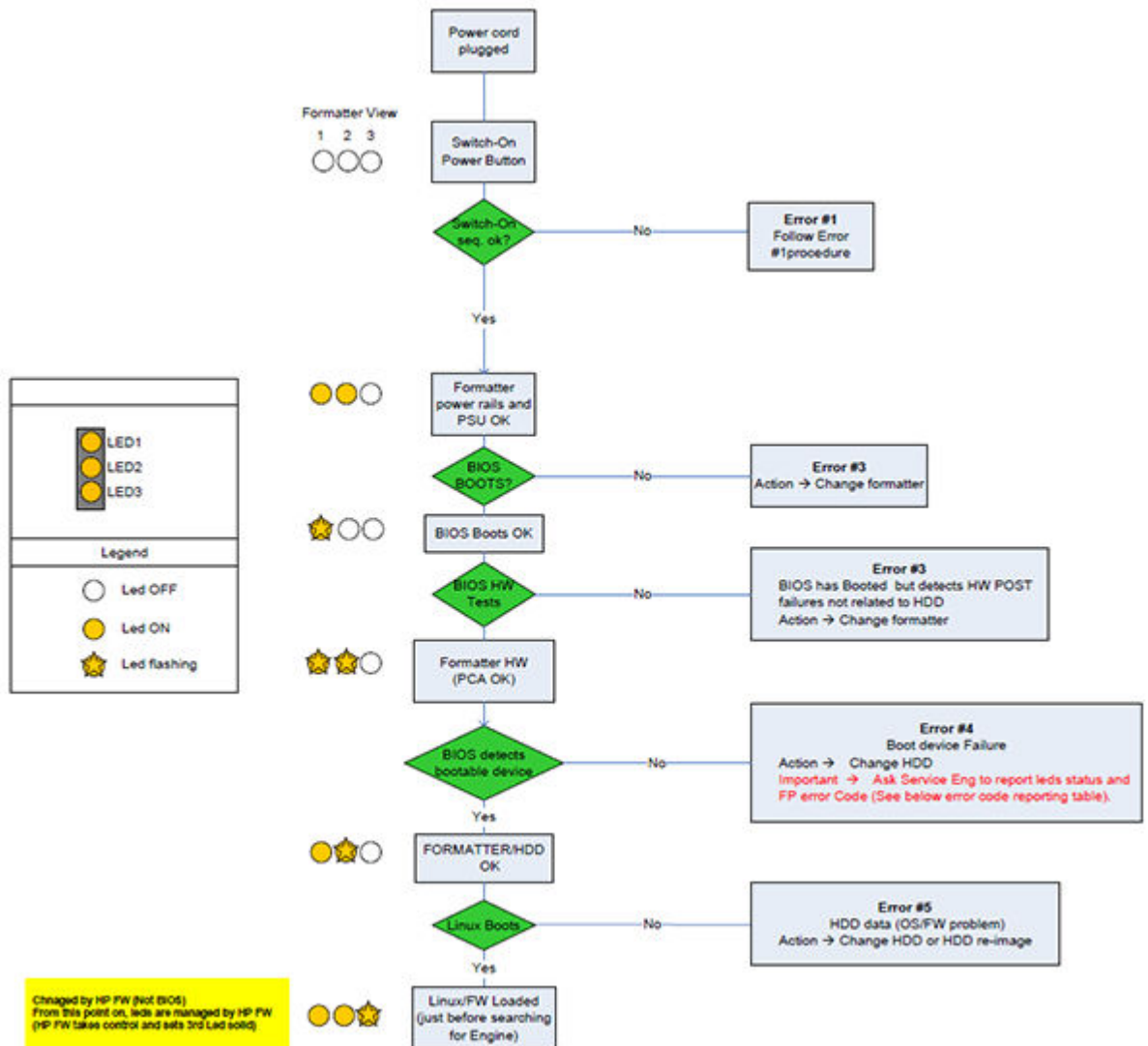


Electronic components initialization

1. The front panel shows a white background and a blue HP logo.



- The LED 1 in the Formatter is **on**, indicating that the Formatter has been initialized.



OS & firmware initialization

- The OS is loaded into RAM. The Front Panel blinks for a second.



- The home button lights up to allow stopping the boot sequence, and entering to the diagnostics menu, see [Entering the Diagnostic menu \(service bootmode\) on page 183](#).

Mechanical components initialization

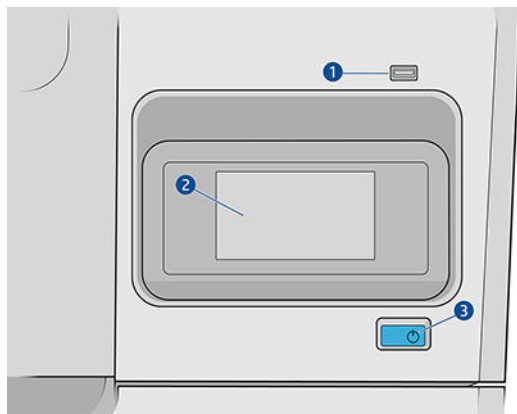
1. The Front Panel shows a black background with a blue circle in the middle. The **Initializing** message appears. A progress bar shows the percentage of subsystems that have been initialized.
2. The printer moves the Carriage from side to side to validate its position within the Scan-axis. The printer initializes the Service station, moving the caps from bumper to bumper.
3. The Pinches move down into position.
4. The Carriage and Service station move to the home position.
5. The printer checks the status of the supplies and the printhead, and then initializes the Ink supply stations.
6. Servicing routines are launched. The routines refresh the printhead depending on the time that the printer has been off. The Front Panel shows **Preparing Print System**.
7. The Paper path subsystems are initialized by exercising the ramps and rewinder, checking if there is media present over the Media sensor.
8. At the end of the process, the home screen appears in the Front Panel.

2 Troubleshooting

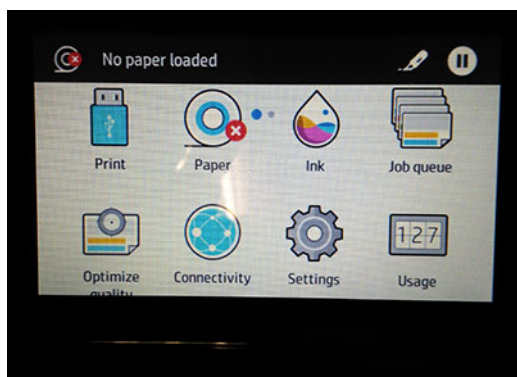
- [Using the Touch Control Panel](#)
- [Service Key Combinations](#)
- [Paper-handling troubleshooting](#)
- [Ink-supplies troubleshooting](#)
- [Print Quality](#)
- [The Service Image Quality Diagnostic Print](#)
- [Reading the Diagnostic Print Results](#)
- [Troubleshooting print-quality issues](#)
- [Connectivity problems](#)
- [Special firmware upgrades](#)

Using the Touch Control Panel

The Touch Control Panel is located on the front right of the printer. It gives you complete control of your printer: from here you can print, view information about the printer, change printer settings, perform calibrations and tests, and so on. The Touch Control Panel also displays alerts (warning and error messages) when needed.






1. A Hi-Speed USB host port, intended for connecting a USB flash drive, which can provide files to be printed.
2. The Touch Control Panel itself: a touch-sensitive screen with a graphical user interface.
3. The **Power** key, with which you can turn the printer on or off. The key is illuminated when the printer is on. It flashes when the printer is in transition between on and off.



The Touch Control Panel has a large central area to display dynamic information and icons. On the left and right sides you can see up to six fixed icons at different times. Normally they are not all displayed at the same time.

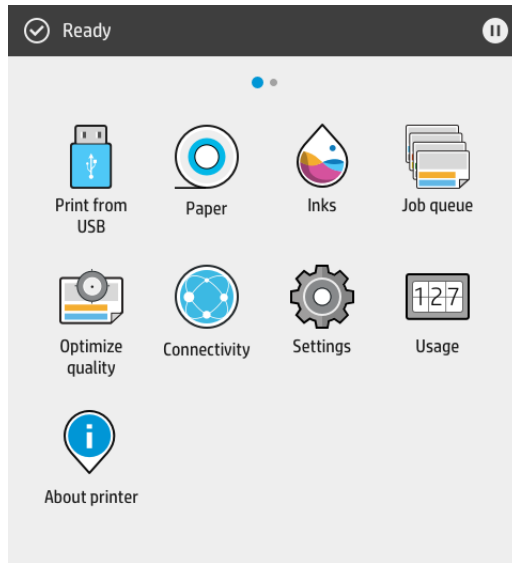
Left fixed icons

- Tap  to return to the home screen.
- Tap  to view help about the current screen.
- Tap  to go back to the previous screen.

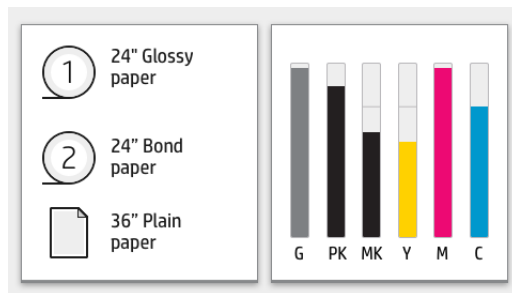
Home screens

There are two top-level screens that you can move between by sliding your finger across the screen:

- The all-app screen displays a list of all apps available in your printer, and the status of each of them.



- The widget screen enables you to monitor at a glance supplies such as ink and paper.



Service Key Combinations

Table 2-1 Service Key Combinations

Label	Description
Diagnostic mode	<ol style="list-style-type: none"> 1. With the printer turned off, press the Power Key 2. When the magic frame LEDs become active, first tap Home and then select by touching one of the following sequences: <ul style="list-style-type: none"> – Help – Home – Back: hp-service-1: For call center remote support. – Help – Back – Home: hp-service-2: For the Onsite Engineer. <p>The LEDs in the frame will blink a response to confirm the selected sequence.</p>
Service menu (Service Engineers only)	<p>With the printer powered on, access the setting service menu – service menu.</p> <p>Password is 2703</p>

Paper-handling troubleshooting

Roll paper

The Touch Control Panel of the printer indicates that paper is misaligned or incorrectly positioned

- The roll may be loaded the wrong way. The paper should load over the roll toward you.
- Check that the paper is correctly loaded onto the spindle.
- The paper may be loaded at an angle. The right-hand edge must be aligned with the blue line on the Print Platen.
- Check that the Right Roll Support is properly attached and screwed to the printer.
- The Rewinder, located on the Right Roll Support, should maintain proper back tension. If the Right Roll Support is misaligned or not properly attached to the printer, the Rewinder will not function properly.
- To further diagnose problems with the Rewinder, see [0060 Media input on page 194](#).
- If the customer is experiencing problems with paper jams, check that the Overdrive is not obstructed by paper or that the Turn Drive Roller Service Utility is being used. See [Turn drive roller on page 221](#).
- While attempting to load roll media, if the Touch Control Panel prompts you to remove paper, although no paper is loaded, calibrate the sheet sensor, refer to [Calibrate sheet sensor on page 218](#)

- Sheet paper**
- The sheet must be loaded with the right-hand edge against the white line on the upper roll cover.
 - The paper may be crumpled or warped or may have irregular edges.
 - If the printer incorrectly detects the presence of a sheet of paper, perform the Calibrate Sheet Sensor, refer to [Calibrate sheet sensor on page 218](#).
 - If hand-cut paper is used, the edges may not form a right-angle or they may be rough. If possible, hand-cut paper should not be used. Only purchased sheet paper should be used in the printer.
 - If you have problems with paper jams, check that the Overdrive is not obstructed by bits of paper or using the Turn Drive Roller Service Utility. See [Turn drive roller on page 221](#).
 - When attempting to load sheet paper from Front Panel, if the printer displays a media skew message repeatedly, and sheet cannot be loaded, calibrate sheet sensor. refer to [Calibrate sheet sensor on page 218](#)
- Vertical trimmer**
- If the printer is reporting missing modules:
 - Launch a replacement from **Output Options > Vertical Trimmer > Replace** and make sure they are correctly attached to the ring-bar. It is recommended to leave modules near the center position so the printer can find them.
 - Make sure there are no pieces of paper in the output platen that can interfere with modules' movement, this will also avoid JAMS.
 - If the margins are not accurate:
 - Make sure your plot does not have lateral blanks or white spaces that can cause margins to be greater than expected.
 - Adjust the manual offset by going to **Output Options > Vertical Trimmer > Adjust manually**.
 - If the manual adjustment doesn't solve the problem, launch the automatic calibration by going to **Output Options > Vertical Trimmer > Adjust automatic**. Use glossy paper to improve the result of this calibration. You might need to remove calibration waste from output platen later.


Ink-supplies troubleshooting


- [About the ink cartridges](#)
- [Check the ink cartridges status](#)
- [Remove an ink cartridge](#)
- [Insert an ink cartridge](#)
- [Maintaining the ink cartridges](#)
- [Use of refilled or altered cartridges](#)
- [About the printheads](#)
- [Check the printhead status](#)
- [Remove a printhead](#)
- [Insert a printhead](#)
- [Troubleshooting ink cartridge and printhead issues](#)


About the ink cartridges

Ink cartridges store the ink and are connected to the printheads, which distribute the ink on the paper.


 **CAUTION:** Observe precautions when handling ink cartridges because they are ESD-sensitive devices. Avoid touching pins, leads and circuitry.

 **NOTE:** This printer is not designed to use continuous ink systems. To resume printing, remove any continuous ink system and install genuine HP (or compatible) ink cartridges.

 **NOTE:** This printer is designed for ink cartridges to be used until they are empty. Refilling cartridges prior to depletion might cause your printer to fail. If this happens, insert a new cartridge (either genuine HP or compatible) to continue printing.

 **NOTE:** Dynamic security enabled printer. Only intended to be used with cartridges using an HP original chip. Cartridges using a non-HP chip may not work, and those that work today may not work in the future. More at: <http://www.hp.com/go/learnaboutesupplies>.

Check the ink cartridges status

To view the ink levels of your ink cartridges, tap  on the front panel, then tap the cartridge on which you want information. There is a **Replace ink cartridges** option on the ink information page in case you want to do so (see also [Remove an ink cartridge on page 25](#)).

To get more information on your ink cartridges, you can tap the color of the cartridge on which you want information.

You can also get this information from the HP DesignJet Utility.

For an explanation of the ink cartridge status messages, see [Ink cartridge status messages on page 34](#).

HP DesignJet Utility procedures

- In the HP DesignJet Utility for Windows, go to the **Overview** tab, each cartridge's status is under **Supplies Status ► Cartridges**.
- In the HP DesignJet Utility for Mac OS X, select **Printer Status** in the Information group.

Remove an ink cartridge

There are two occasions when you need to remove an ink cartridge.



- The ink cartridge is very low and you want to replace it with a full cartridge for unattended printing (you can use up the remaining ink in the first cartridge at a more convenient time).
- The ink cartridge is empty or faulty, and you must replace it to continue printing.

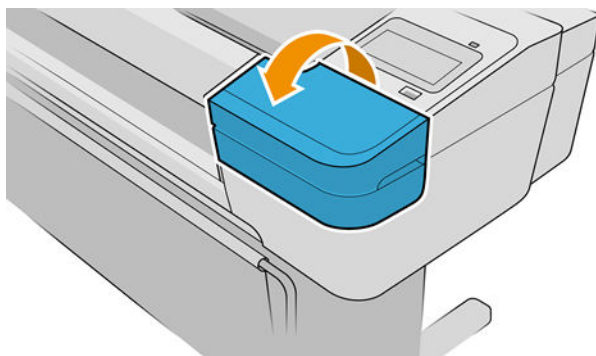
CAUTION: Do not try to remove an ink cartridge while printing.

CAUTION: Remove an ink cartridge only if you are ready to insert another one.

CAUTION: Make sure the printer wheels are locked (the brake lever is pressed down) to prevent the printer from moving.

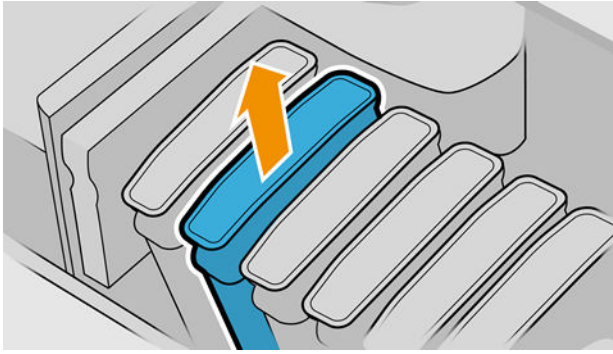
NOTE: When a cartridge runs out of ink, the current job is not automatically canceled: unless you cancel it manually, it will resume printing when the empty cartridge has been replaced. If there is a delay in replacing the cartridge, you may see some banding on the print.


1. From the front panel, tap , then , then **Replace ink cartridges**.
2. Open the ink cartridge cover on the right-hand side of the printer.




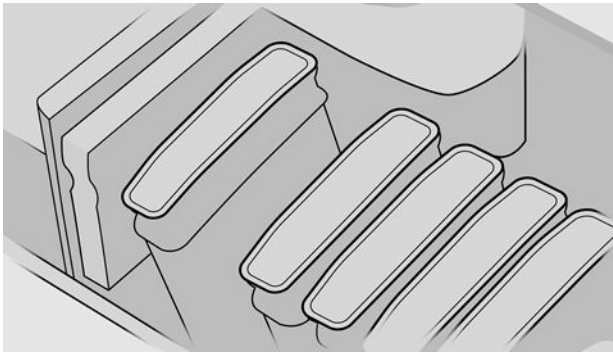
3. Grip the cartridge you wish to remove.

4. Pull the cartridge straight up.



 **NOTE:** Avoid touching the end of the cartridge that is inserted into the printer, as there may be ink on the connection.

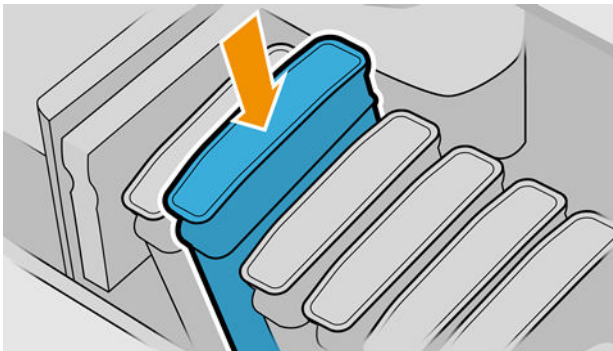
 **NOTE:** Avoid storing partially used ink cartridges.



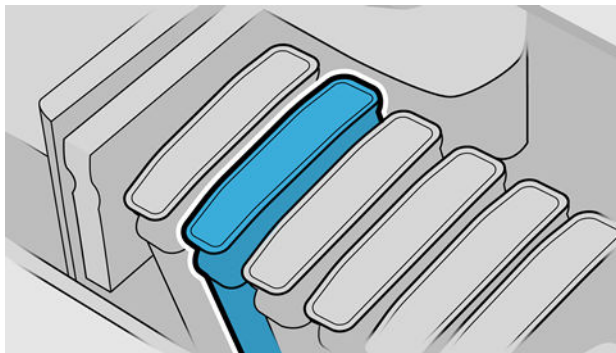
5. The front-panel display identifies the missing ink cartridge.

Insert an ink cartridge

1. Before removing the cartridge from its wrapping, shake it vigorously.
2. Unwrap the new ink cartridge, find the label identifying the ink color. Check that the letter or letters (for example, M for magenta) marking the empty slot, matches the letter or letters on the cartridge label.
3. Insert the ink cartridge into its slot.

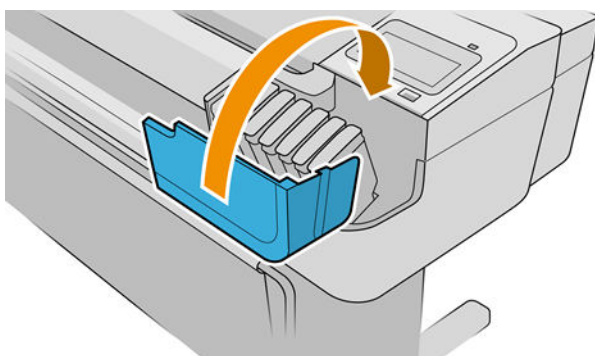


4. Push the cartridge into the slot until it snaps into position.



If you have difficulty, see [Cannot insert an ink cartridge on page 34](#).

5. When all cartridges have been inserted, close the cover.



6. The front-panel display confirms that all cartridges have been correctly inserted.

Maintaining the ink cartridges

During the normal lifetime of a cartridge, no specific maintenance is required. However, in order to maintain the best print quality, replace a cartridge when it reaches its expiration date. The printer's front panel notifies you when any cartridge reaches its expiration date.

See also [Check the ink cartridges status on page 24](#).

You can also check a cartridge's expiration date at any time, see below.

Check printer status

You can check the current status of the printer in various ways:

- If you access the Embedded Web Server, you'll see information about the general status of the printer. The home page shows several widgets with the status of the paper and ink supplies.
- At the front panel, you can see information about paper, ink levels, ink cartridges, and printheads by tapping the corresponding icon.



If there are any current alerts, the upper row of the home screen shows the top-priority alert. Tap the alert message to see a list of all current alerts, with an icon indicating the severity of each alert. You can tap an individual alert to get help in solving the problem.

Use of refilled or altered cartridges


HP recommends that you replace the empty cartridge with a new HP cartridge. See [Remove an ink cartridge on page 25](#) and [Insert an ink cartridge on page 26](#).

The use of refilled or altered ink cartridges has several serious disadvantages:

- There is some risk of damaging the printer. In this case the printer warranty will not be valid for any printer repairs that are related to the cartridge, nor for any problems due to ink contamination.
- You will invalidate the warranty of all printheads of the same color used in the printer subsequently.
- Print quality may be impaired.
- The printer will be unable to estimate the ink level in the cartridge, and will not report it.

To force the printer to accept a cartridge, you can tap   on the front panel.


1. Install the cartridge in the printer (see [Insert an ink cartridge on page 26](#)).
2. The front panel notifies you that the cartridge is altered, and the cartridge removal process will start. If you believe that you purchased a non-Original HP cartridge, HP recommends that you abort the process. To check the authenticity of your cartridges, see <http://www.hp.com/go/anticounterfeit>.
3. If you proceed, the front panel displays a series of warning messages.

 **NOTE:** The printer detects cartridges that are non-Original HP. The printer is only intended to be used with cartridges using an HP original chip. Cartridges using a non-HP chip may not work, and those that work today may not work in the future. More at: <http://www.hp.com/go/learnaboutsupplies>.

When the process is finished, the front panel will give the usual ink cartridge display but the cartridge will not report the ink level.


About the printheads

The printheads are connected to the ink cartridges and jet ink onto the paper.

 **CAUTION:** Observe precautions when handling printheads because they are ESD-sensitive devices. Avoid touching pins, leads and circuitry.

Check the printhead status

The printer automatically checks and services the printheads after each print. Follow the steps below to get more information on your printheads.

1. From the front panel, tap , then the printhead on which you want information.
2. The front panel displays:
 - Colors
 - Product name
 - Product number
 - Serial number

- Status
- Volume of ink it has used
- Warranty status

A full list of Front-panel error messages is supplied in the User's Guide.

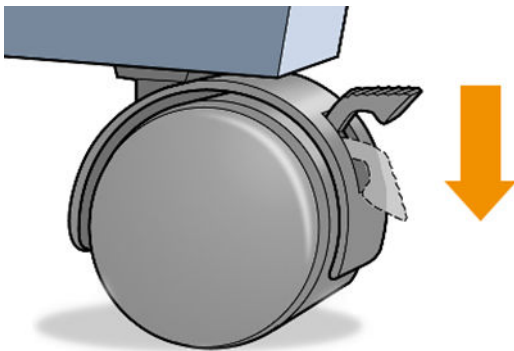
You can also get most of this information from the HP DesignJet Utility. In the HP DesignJet Utility for Windows, go to the **Overview** tab, where each cartridge's status is under **Supplies Status**.

For an explanation of the printhead status messages, see [Printhead status messages on page 40](#).



If the warranty status is **See warranty note**, this indicates that non-HP ink is being used. See the *Legal Information* document provided with your printer for details of the warranty implications.

Remove a printhead

CAUTION: Make sure the printer wheels are locked (the brake lever is pressed down) to prevent the printer from moving.

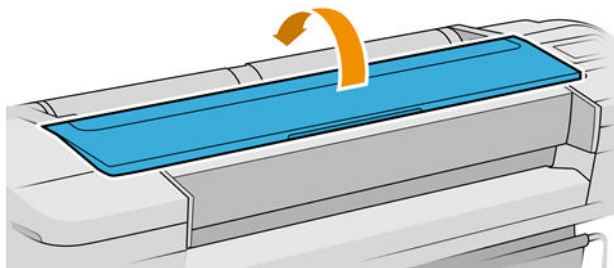


CAUTION: Printhead replacement must be performed with the printer powered on.

1. From the front panel, tap , then **Printheads**, then , then **Replace**.
2. The printer moves the carriage into the correct position.

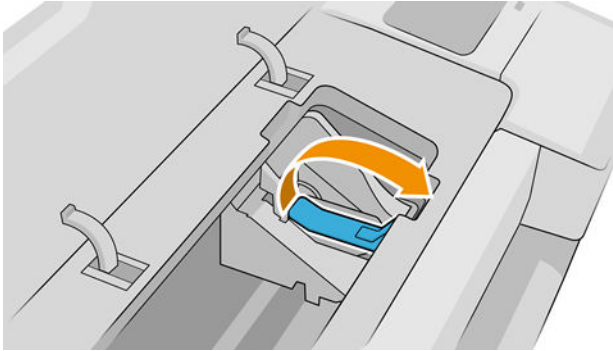
CAUTION: If the carriage is left in the removal position for more than three minutes without inserting or removing any printheads, it tries to move back to its normal position in the right-hand end.

3. When the carriage has stopped moving, the front-panel display asks you to open the window.

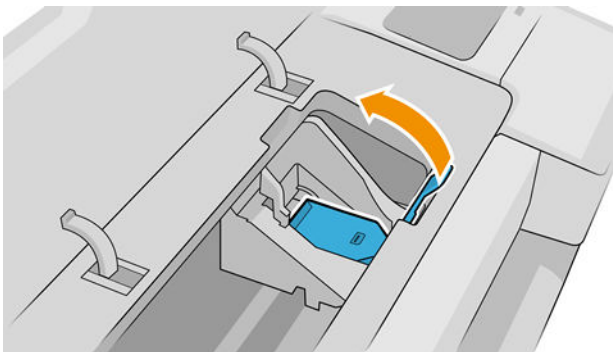


4. Locate the carriage on the right side of the printer.

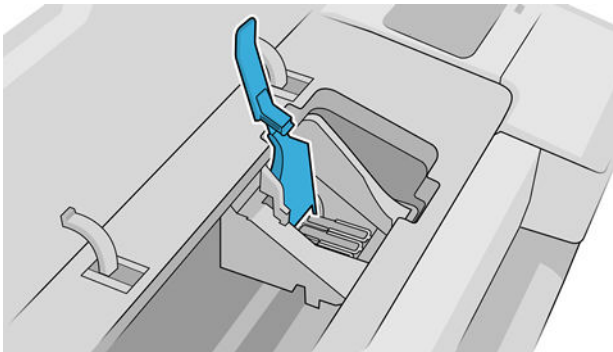
5. Pull the handle up and toward you to release the wire loop.



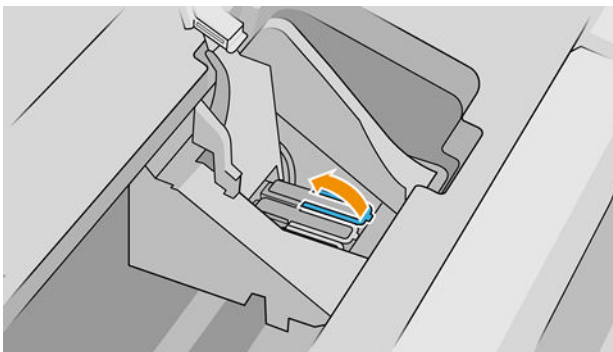
6. Push the handle back to raise the lid.



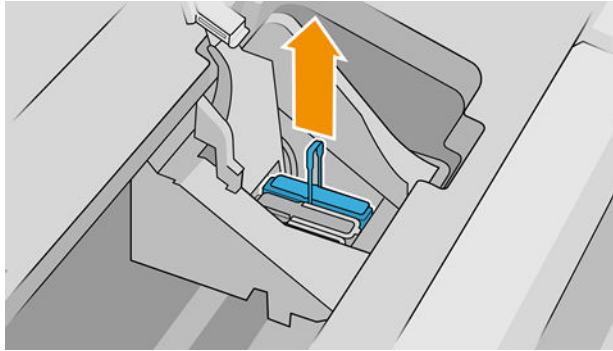
7. This gives you access to the printheads.



8. To remove a printhead, lift up the blue handle.

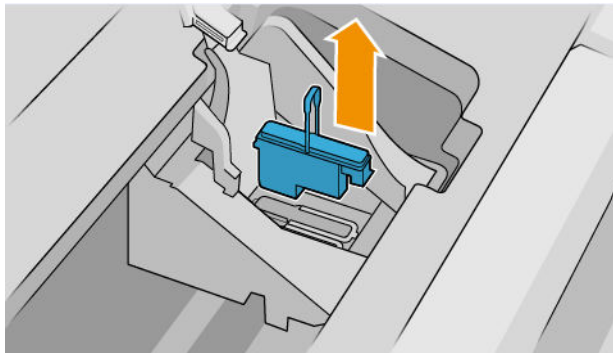


- Using the blue handle, use steady force to disengage the printhead.



- Pull the blue handle upward until the printhead is released from the carriage.

⚠ CAUTION: Do not pull abruptly because this can damage the printhead.

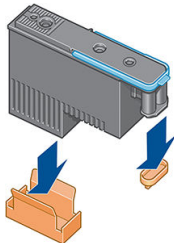


- The front-panel display identifies the missing printhead.

Insert a printhead

📝 NOTE: You cannot insert a new printhead successfully if either of the connected ink cartridges is empty, or nearly empty. In this case, you should replace the ink cartridge before inserting the new printhead. The minimum amount of ink required to perform a printhead replacement is 22 ml of ink per cartridge.

- Remove the orange protective caps by pulling them down.

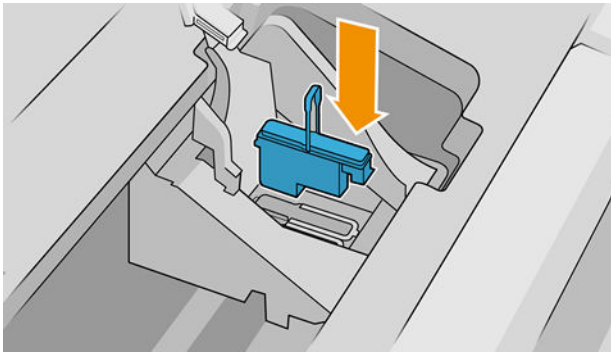


2. The printhead is designed to be inserted into any of the available slots. Once the printhead is inserted into a specific slot, it will be set up to work only with that combination of colors. For this reason, it is important to mark the printhead with the specific colored label that comes with it, matching the colored label of the carriage slot into which the printhead is to be inserted.

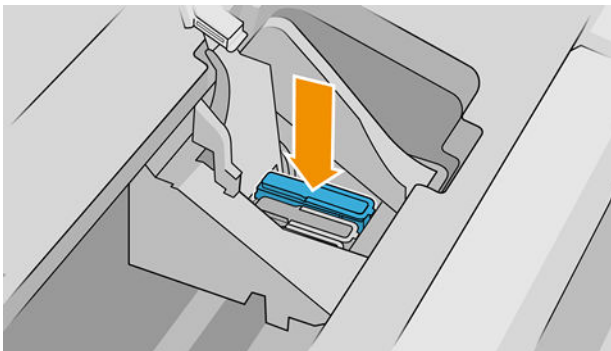


3. Insert the new printhead into its correct slot in the carriage.

CAUTION: Insert the printhead slowly and vertically, straight down. It may be damaged if you insert it too fast, or at an angle, or if you rotate it as you insert it.

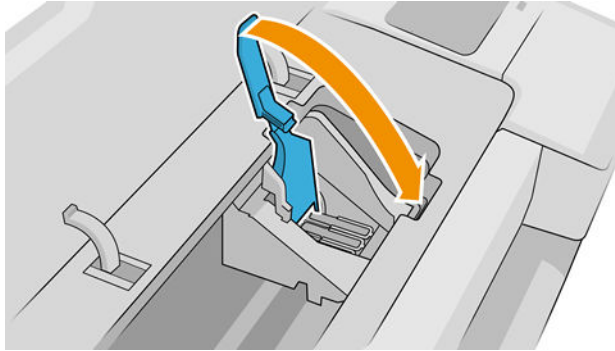


4. Push down as indicated by the arrow shown below.

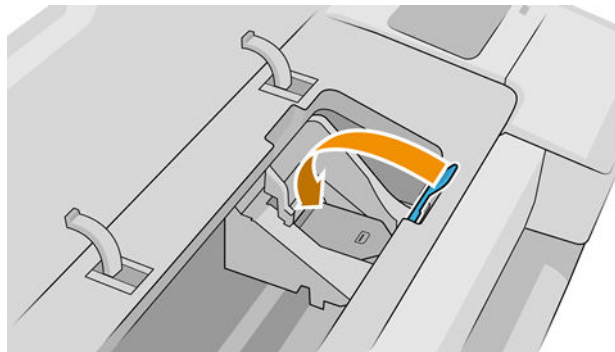


CAUTION: When installing the new printhead there may be some resistance, so you need to press it down firmly but smoothly. You should hear a beep and see confirmation on the front-panel display that the printhead has been inserted. If you have difficulty, see [Cannot insert a printhead on page 35](#).

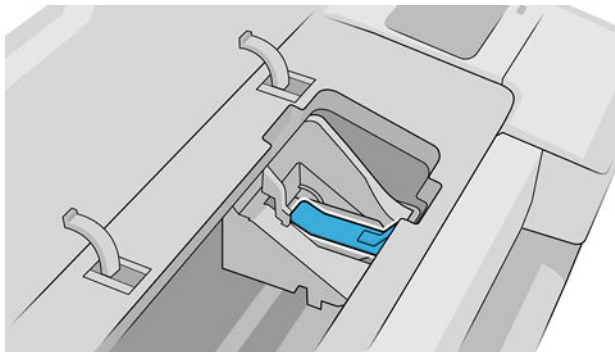
5. Insert all other printheads that need to be installed, and close the carriage lid.




6. Ensure that the end of the blue handle catches the wire loop on the near side of the carriage.



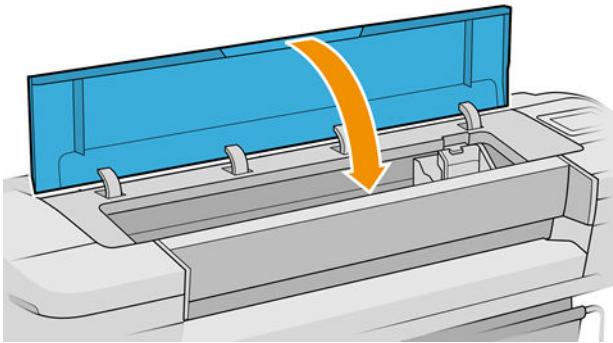
7. Lower the handle to rest on the carriage cover.



When all the printheads have been inserted correctly and are accepted by the printer, the printer beeps.

 **NOTE:** If the printer does not beep when you insert the printhead and the **Replace** message appears on the front-panel display, the printhead may need to be reinserted.

8. Close the window.



9. The front-panel display confirms that all printheads are correctly inserted. The printer starts checking and preparing the printheads. The default routine process, when all printheads are changed, takes 20 minutes. If the printer finds problems in preparing the printheads, it takes longer, up to 45 minutes. For a single printhead insertion, the times vary between 2 and 40 minutes. After all the printheads are checked and prepared, the printhead realignment procedure runs automatically if paper is loaded, see [Align the printheads on page 38](#).
10. You are recommended to perform a color calibration after inserting a new printhead.

Troubleshooting ink cartridge and printhead issues

Cannot insert an ink cartridge

1. Check that you have the correct type of cartridge (model number).
2. Check that the colored label on the cartridge is the same color as the label on the slot.
3. Check that the cartridge is correctly oriented, with the letter or letters marking the cartridge label right-side up and readable.

⚠ CAUTION: Never clean inside the ink cartridge slots.

Ink cartridge status messages

These are the possible ink cartridge status messages:

- **OK:** The cartridge is working normally, with no known problems.
- **Missing:** There is no cartridge present, or it is not correctly connected to the printer.
- **Low:** The ink level is low.
- **Very low:** The ink level is very low.
- **Empty:** The cartridge is empty.
- **Reseat:** You are recommended to remove the cartridge and then reinsert it.
- **Replace:** You are recommended to replace the cartridge with a new cartridge.
- **Expired:** It is past the cartridge's expiration date.
- **Non-HP:** The cartridge contains ink not made by HP.

- **Wrong:** The cartridge family or model is wrong, or it has been inserted wrongly.
- **Altered:** The cartridge has been altered (refilled).

Cannot insert a printhead

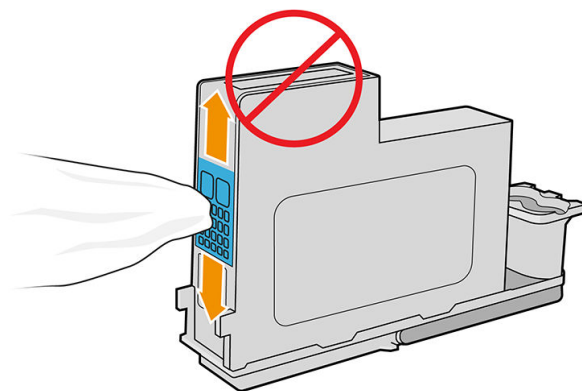
1. Check that you have the correct type of printhead (model number).
2. Check that you have removed the two orange protective caps from the printhead.
3. Check that the printhead is correctly oriented (compare with the others).
4. Check that you have correctly closed and latched the printhead cover, see [Insert a printhead on page 31](#).

Front panel recommends reseating or replacing a printhead

1. From the front panel, turn the power off then on.
2. Check the front-panel display message, if it shows the ready message, the printer is ready to print. If the problem remains continue with the next step.
3. Remove the printhead, see [Remove a printhead on page 29](#).
4. Clean the electrical connections on the backside of the printhead with a lint free cloth. You can carefully use a mild rubbing alcohol if moisture is needed to remove residue. Do not use water.

⚠ CAUTION: This is a delicate process and may damage the printhead. Do not touch the nozzles on the bottom side of the printhead, especially not with any alcohol.


CAUTION: Do not leave the printhead outside the printer for a long time. If this is absolutely necessary, cover the printhead with the original orange caps, then store it in a horizontal position.



5. Reinsert the printhead, see [Insert a printhead on page 31](#).
6. Check the front-panel display message. If the problem remains, try a new printhead.

Clean the printheads

As long as the printer is kept turned on, automatic cleaning is performed periodically. This ensures there is fresh ink in the nozzles and prevents nozzle clogs, which ensures color accuracy. If you have not already done so, see [Image Diagnostics Print on page 66](#) before proceeding.

To clean the printheads, go to the front panel and tap  and then **Clean printheads**. If you have gone through the Image Quality Diagnostic print process, you know which colors are failing. Select the pair of printheads which

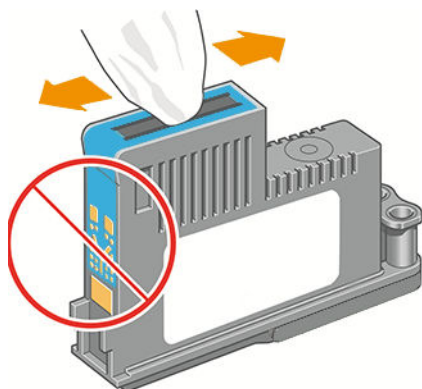
contain the failing colors. If you are not sure which colors to clean, you can also select to clean all printheads. Cleaning all printheads takes about nine minutes. Cleaning a single pair of printheads takes about six minutes.

 **NOTE:** Cleaning all printheads uses more ink than cleaning a single pair.

If you have cleaned the printheads using the **Clean printheads** procedure from the front panel but are still experiencing image quality problems, you can try cleaning the printhead nozzles manually using the following procedure:

 **CAUTION:** This is a delicate process and might damage the printhead. Do not touch the electrical connections on the backside of the printhead.


1. Remove the printhead. See [Remove a printhead on page 29](#).
2. Use a lint-free cloth to clean the bottom of the printhead until the residue is removed.

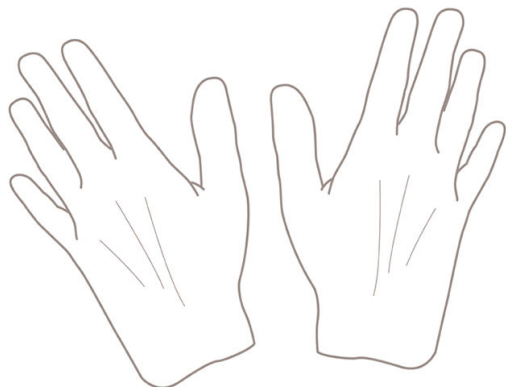


Clean the printhead drop detector

The printhead drop detector is a sensor that detects which nozzles on the printheads are not printing in order to substitute them for good printing nozzles. If particles, such as fibers, hair or paper pieces, block the sensor print-quality is affected.

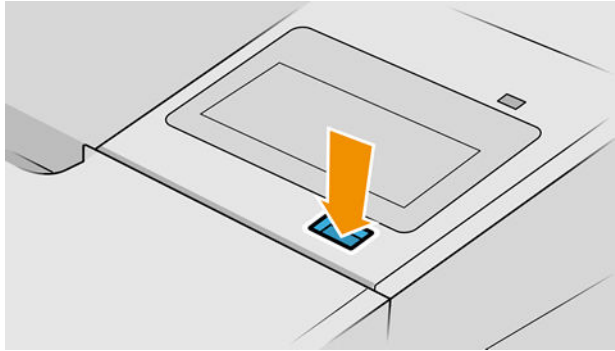
When the front panel displays a warning message that the clean process is needed, you are recommended to clean the printhead drop detector. If you do not clean the printhead drop detector immediately, the printer continues working normally, however, the front panel display continues to show the warning.

 **CAUTION:** Wear gloves to avoid getting ink on your hands.

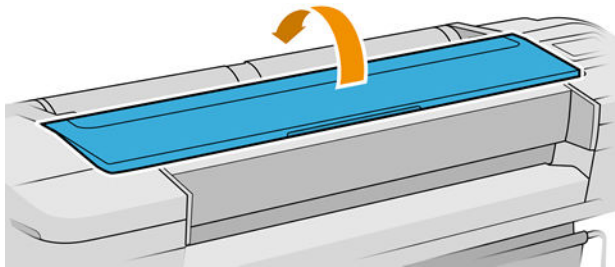


1. Turn off the printer at the front panel.

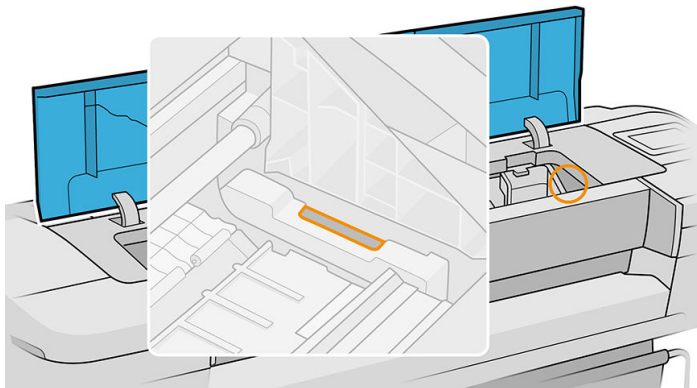
2. To avoid an electric shock, turn off the printer and unplug it.



3. Open the window.

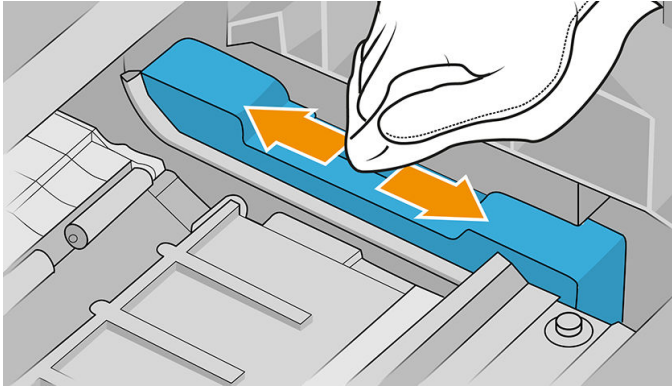


4. Find the printhead drop detector beside the stored printhead carriage.

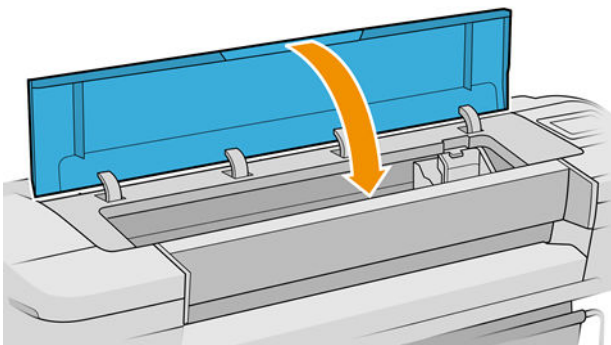


5. Remove any debris blocking the printhead drop detector.

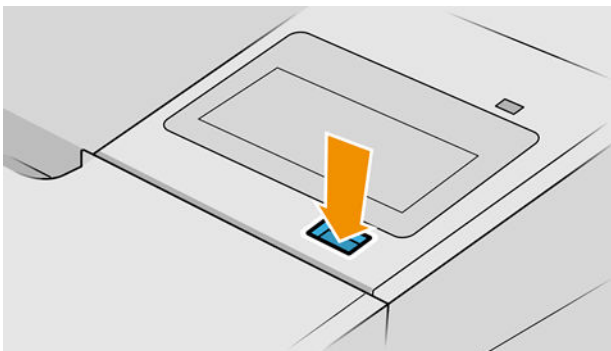
6. With a dry, lint-free cloth, wipe the surface of the drop detector to remove any non-visible debris.



7. Close the window.



8. Plug in and turn on the printer.






9. Power the printer on at the front panel.

Align the printheads

Precise alignment between printheads is essential for accurate colors, smooth color transitions and sharp edges in graphical elements. Your printer has an automatic printhead alignment process which runs whenever a printhead has been accessed or replaced.

In cases where the paper has jammed or you are experiencing problems with color accuracy (see the Color management section of the User Guide); you may need to align the printheads.

 **NOTE:** If the paper has jammed, it is recommended that you reinsert the printheads and initiate the realignment procedure by tapping , then **Printhead alignment**. If you have a dual roll printer, select the roll to be used.

 **CAUTION:** Do not use transparent or semi-transparent paper to align the printheads.

Reinsert printheads procedure

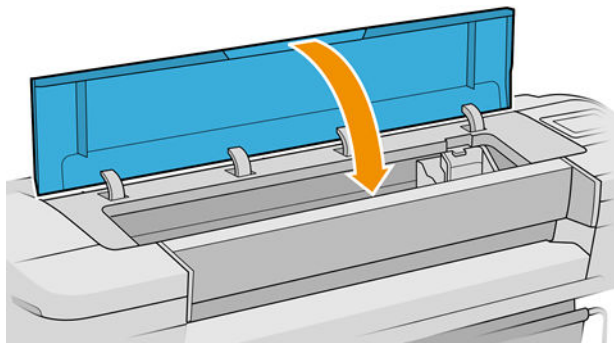
1. If the realignment process is running and the wrong paper is loaded, cancel the job from the front panel.

 **CAUTION:** Do not print if the realignment process has been canceled. You can restart the alignment by tapping , then **Printhead alignment**.


2. Load the paper you wish to use. You can use a roll that is at least 610 mm (24 in) wide or a cut sheet that is A2 landscape or larger.

 **CAUTION:** Do not use transparent or semi-transparent paper to align the printheads.

3. Remove and re-insert all the printheads, see [Remove a printhead on page 29](#) and [Insert a printhead on page 31](#). This starts the printhead alignment procedure.
4. Ensure the window is closed, as a strong light source near the printer during printhead realignment can negatively affect the alignment.



5. The process takes about six minutes. Wait until the front-panel display shows the process complete before using the printer.

 **NOTE:** The printer prints a calibration image. Do not worry about the image. The front-panel display shows any errors in the process.

 **NOTE:** The printhead alignment achieves a better result when using glossy media.

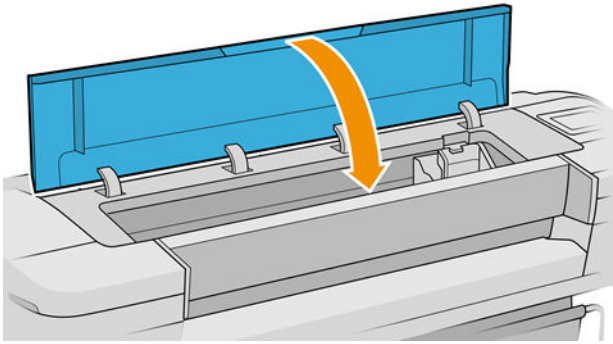
Image-quality maintenance menu procedure

1. Load the paper you wish to use. You can use a roll or cut sheet, however, it must be A3 landscape or larger (420 by 297 mm).

 **CAUTION:** Do not use transparent or semi-transparent paper to align the printheads.

2. From the front panel, tap , then **Printhead alignment**. The printer checks to see if it has enough paper to run the realignment.

3. If the loaded paper is satisfactory, the printer runs the realignment and prints a realignment pattern. Ensure the window is closed, as a strong light source near the printer during printhead realignment can negatively affect the alignment.



4. The process takes about five minutes. Wait until the front-panel display shows the process complete before using the printer.

Scanning errors during alignment

If the alignment process fails, a Scanning problems message appears on the front panel. This means that the alignment has not completed successfully. Therefore the printer is not aligned and the alignment should be repeated before printing with good image quality. The problem may be due to:

- The paper used was not valid, repeat the alignment with valid paper
- Printhead health problems, clean printheads, see [Clean the printheads on page 35](#)
- The alignment was done with the window open, repeat the alignment with the window closed

If the problem persists after using valid paper, cleaning the printheads and keeping the window closed, there may be a failure in the scanning system needing repair; or the printheads, although clean, may not work and need to be replaced.

Printhead status messages


These are the possible printhead status messages:

- **OK:** the printhead is working normally, with no known problems
- **Missing:** there is no printhead present, or it is not correctly installed in the printer.
- **Test printhead separately:** you are recommended to test the printheads individually to find the failing printhead. Remove all the printheads and insert them alone one by one, closing the latch and the carriage cover after every insertion. The front-panel display indicates the failing one showing the reseal or replace message.
- **Reseat:** you are recommended to remove the printhead and then reinsert it. If that fails, clean the electrical connections, see [Front panel recommends reseating or replacing a printhead on page 35](#). If that fails, replace the printhead with a new printhead, see [Remove a printhead on page 29](#) and [Insert a printhead on page 31](#).
- **Replace:** the printhead is failing. Replace the printhead with a working printhead, see [Remove a printhead on page 29](#) and [Insert a printhead on page 31](#).




- **Replacement incomplete:** a printhead replacement process has not completed successfully, re-launch the replacement process and let it finish completely (it is not needed to change the printheads).
- **Remove:** the printhead is not a suitable type for use in printing.

Print Quality

Print Quality Troubleshooting Actions

 **NOTE:** Phone support: For some Print Quality problems, a Call Agent can try and troubleshoot the Printer by requesting the Customer to perform certain actions. Using this process, most problems can be resolved without the need of an on-site visit.

When faced with a Print Quality problem, perform the following actions in order to resolve the problem:

1. Printer Configuration:
 - a. Check that the paper type loaded corresponds to the paper type selected in the front panel and in the software. You can verify the paper type selected through the Front Panel. Tap . Tap the paper icon.
 - b. Make sure that the correct Print Quality settings are used for different types of print content.
 - c. Dry time should be set to **“Optimal”**
2. Perform Printhead recovery. Tap  and then **Clean printheads**.
3. Media:
 - a. Select the correct media type through the front panel when loading it
 - b. Make sure that HP or HP-approved media is being used.
4. Perform the Printhead Alignment. Tap , then **Printhead alignment**, using the same paper type with which you were experiencing unacceptable image quality, if feasible (some paper types are not suitable for Printhead Alignment).
5. Check if the latest version of the firmware is installed. If not, install the latest firmware revision.

The Service Image Quality Diagnostic Print

What is the Service Image Quality Diagnostic Print?

The Printer contains an internal Image Quality Test which helps you to diagnose the possible source of any image quality defects. The Service IQ Diagnostic Print is available in the following options:

1. Image Quality Service Best Plot. This plot helps you to diagnose in more detail the possible source of any image quality defects. It is accessible
 - a. Diagnostic Part 1: Printhead Reliability Test. The purpose of this test is to identify which Printhead is faulty.
 - b. Diagnostic Part 2: Printhead Alignment Test. This test is designed to check any color-to-color and bi-directional misalignment the printer may have.
 - c. Diagnostic Part 3: Printheads and Paper Advance test. This test is designed to check whether the Printheads and the Media Advance Mechanism are working correctly.
2. Image Quality Service Normal Plot. This plot is the same as the Image Quality Service Best Plot but uses the Normal Print Mode.
3. Advanced Diagnostic Plots. These tests provide more information of the IQ defects that we could find in the Image Quality Service plot.

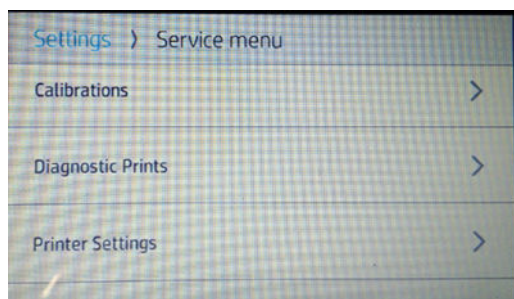
Considerations for Printing the Diagnostic Print

1. The IQ Diagnostic Print prints in A3 and B sizes so you must have media loaded (roll or sheet) that is this size or larger.
2. Use the same type of media that the customer was using when they found the image quality issue.
3. If the customer is using non-HP media and after the Image Quality Test you still have the same image quality problems, change to genuine HP media and repeat the Image Quality Test.
4. If you do not see any problems with the Image Quality Test, the problem may not be with the printer itself. The problem may be with the RIP, the driver, or the customer file itself.

If you do see problems with the Image Quality Test, continue with the Advanced Diagnostic procedures which will help you diagnose the problem.

Printing the Diagnostic Prints

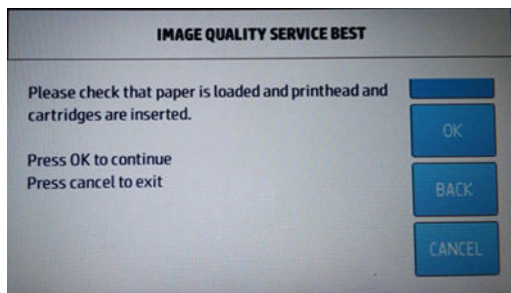
1. In the Service menu (2703), scroll to **Diagnostic Prints**.



2. Select the Diagnostic print that you need: **Image Quality Service Best**, **Image Quality Service Normal**, **Nozzle Health**, **Force Drop Detection**, **Printhead Alignment Check**, **Media Advance Check**.



3. Make sure media is loaded and that the Ink System is correctly installed. Tap **OK** to print the Image quality service plot or tap **Back/Cancel** to exit without printing the Diagnostic Print.

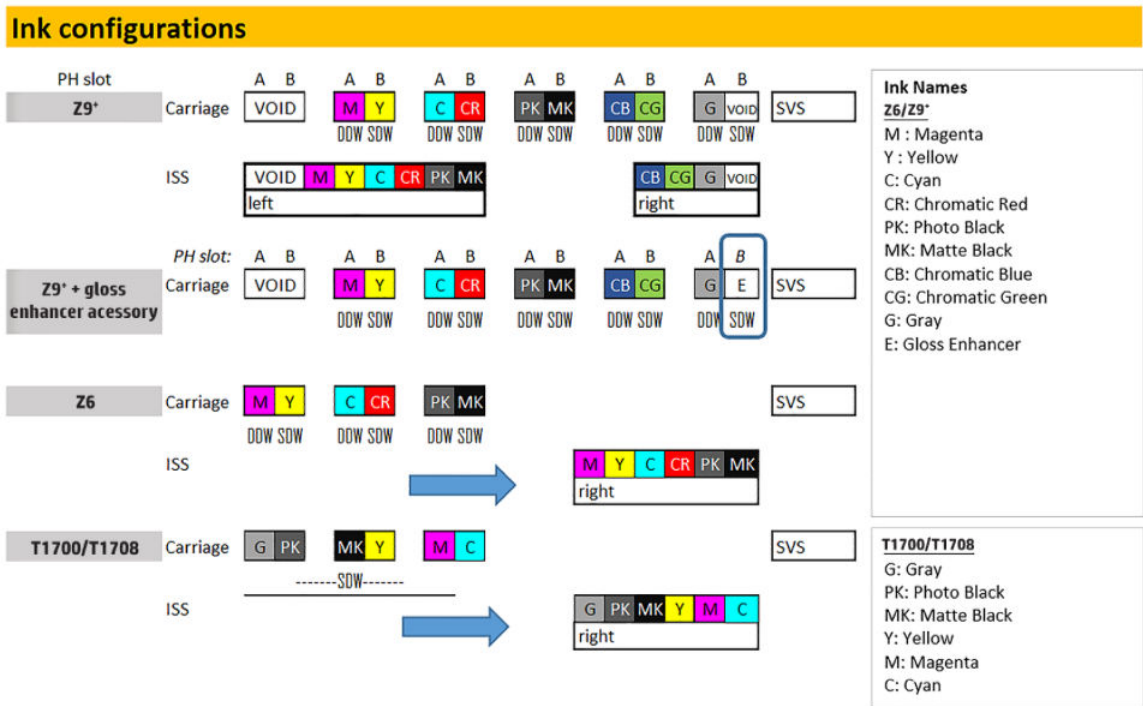


Reading the Diagnostic Print Results

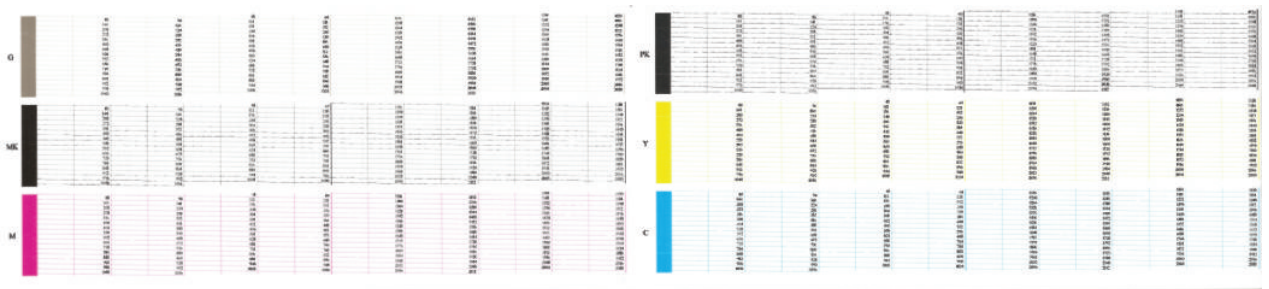
Diagnostic Part 1: Printhead Reliability

The Nozzle Print Test is designed to check if the Printhead nozzles print correctly.

Notice that the exact configuration of the plot depends on every particular SKU. The following diagram depicts the color configuration in the printhead set. Consider that the SDW stands for 'Single Drop Weight' (when all nozzles for that color have the same drop size) and DDW for 'Dual Drop Weight' (when half of the nozzles for that color are High drop size and the other half are Low drop size). In T1700 & T1708 all colors are SDW. However, in Z6 and Z9*, each printhead has one color in SDW and the other in DDW. The nozzles (bottom of the plot) are printed in a one-pass full swath mode. The diagnostics test prints out every single nozzle of each Printhead without applying an error hiding or alignment algorithm.



For each Printhead, you can see both the adjacent and the consecutive nozzles.

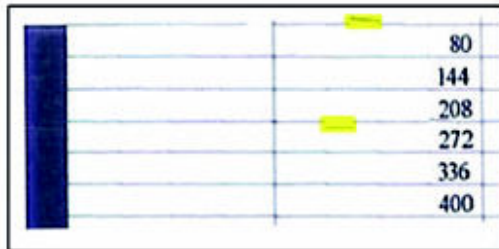


If any nozzles are not printing correctly they will be shown on the right of each Printhead Nozzle test. There is a series of numbered stepped diagonal lines. If one or more of the nozzles are clogged, malfunctioning or mispositioned, you will see that the stepped lines are broken or misdirected in one or more places.

Below, the stepped lines highlighted in yellow are broken. When the line is completely broken, this means the nozzle is out.



Below, the stepped lines highlighted in yellow are misdirected. When the line is misdirected, this means the nozzle is malfunctioning or out of position.




On the left of each Printhead Nozzle test, there is a series of horizontal straight lines. If one or more nozzles are misdirected there will be unequal spaces between the corresponding lines.

Corrective Action

If the printer has nozzle defects, you can still get perfect print quality results. The printer can automatically compensate for nozzle defects, so there is no need to replace the Printhead.

The method of improving Nozzle Defects is to:

1. Recover the Printheads, using the Front Panel. Tap  and then **Clean printheads**.
2. Reprint the Printhead Nozzles Test Plot to verify that the defective nozzles have been corrected.
3. If the problem continues, replace the defective Printhead.

Diagnostic Part 2: Printheads & Paper Advance

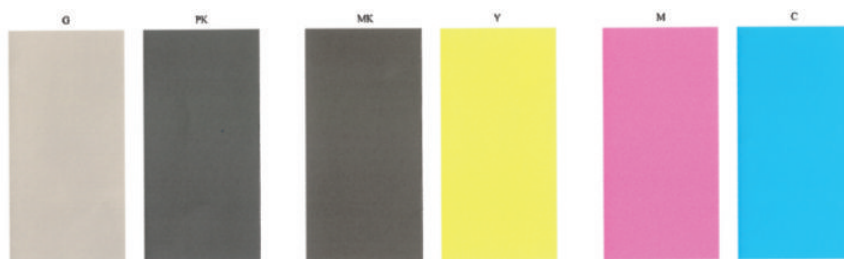
This test is designed to check whether the Printheads and the Paper Advance Mechanism are working correctly. This part of the Image Quality Test should **NOT** be used to check for color consistency or accuracy.

Banding

If the Printer is experiencing a banding problem, you will see repetitive horizontal bands within the printed image.


- Darker horizontal bands or lines repeated along the vertical band (from top to bottom at the same distance).
- Whiter horizontal bands or lines along the vertical band (from top to bottom at the same distance).

The plot is printed in Best or Normal mode (according to the menu option selected) with Error Hiding ON.



Troubleshooting Banding Problems

If banding **does NOT** occur in **ALL** the colors, then it is more than likely a Printhead problem. In this case, try the following:



1. Check that the appropriate print quality settings are being used (refer to the User's Guide for more information).
2. Recover the printheads using the option through the Front Panel. Tap  and then **Clean printheads**. Reprint the Diagnostic Print or the print file and if the problem persists, replace the faulty Printhead.

If banding **does** occur in ALL the colors, then it is more than likely a Paper Advance problem:

- If the bands are light, it means that the paper has advanced too much.
- If the bands are dark, it means that the paper hasn't advanced enough.
- In high quality modes, graininess in ALL colors can indicate problems either with alignment or Paper Advance.

Corrective Action

In order to solve problems that result in banding, try the following:

1. Check that the appropriate print quality settings are being used (refer to the User's Guide for more information).
2. Check that the loaded media is the same type as selected in the printer. You can verify the media type selected through the Front Panel. Tap , then the Paper icon.
3. If the customer is using low quality paper, try recommending better quality paper (preferably HP paper). Printer performance can only be guaranteed by using recommended papers.
4. Perform the Paper Advance Calibration using the same type of paper that will be used for the final print. Tap , then select **Paper Advance Calibration ► Calibrate Paper Advance**.

If there is white point banding in only one color band and the problem cannot be fixed using the Printhead recoveries, in some cases using the force a drop detection option can fix this issue. See [Force Drop Detection on page 53](#).

No Printing Defects Found in the Diagnostic Print


If all the test patterns from the Diagnostic Print are correct and you still experience Image Quality problems, you can use the following procedures to resolve the problem.

- [Reading the Diagnostic Print Results on page 45](#)
- [Printhead Alignment Check on page 50](#)



- [Nozzle Health on page 52](#)
- [Force Drop Detection on page 53](#)

Media Advance Check

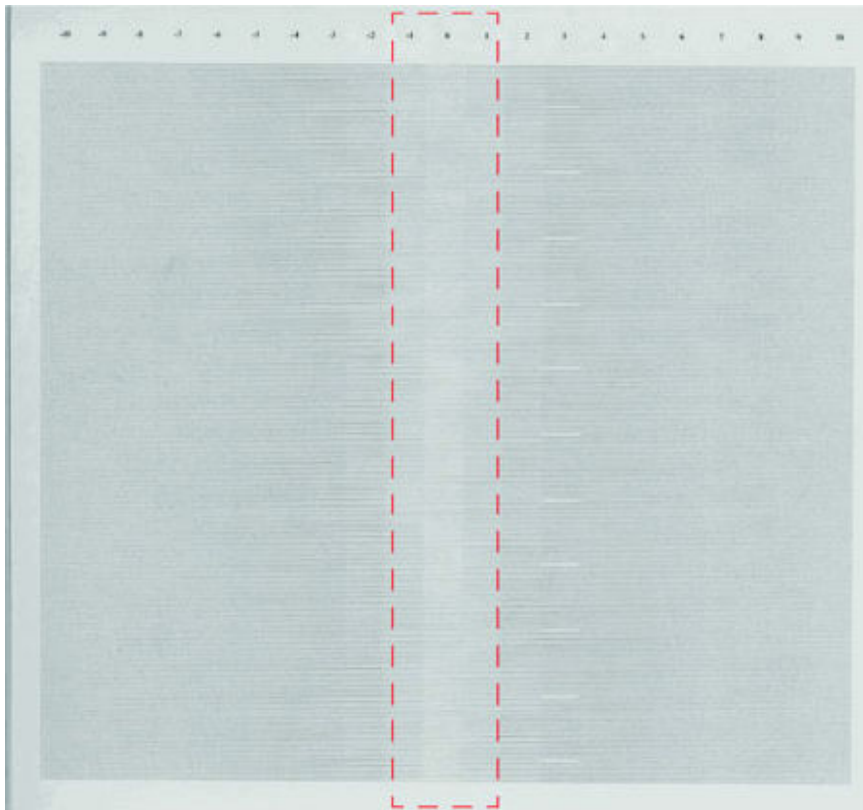
This plot helps you to visually check any alignment problems of the printer. You use it to precisely measure the media advance error with a one dot row accuracy, and to verify the stability of the media advance.

The whitest vertical line should be positioned in the 0 offset column with minor variations between +2 and -2 columns. If the offset is not positioned on the 0 column or between +2 and -2 columns and the whitest vertical line varies greatly, the printer requires Paper Advance Calibration. Tap , then select **Paper Advance Calibration**

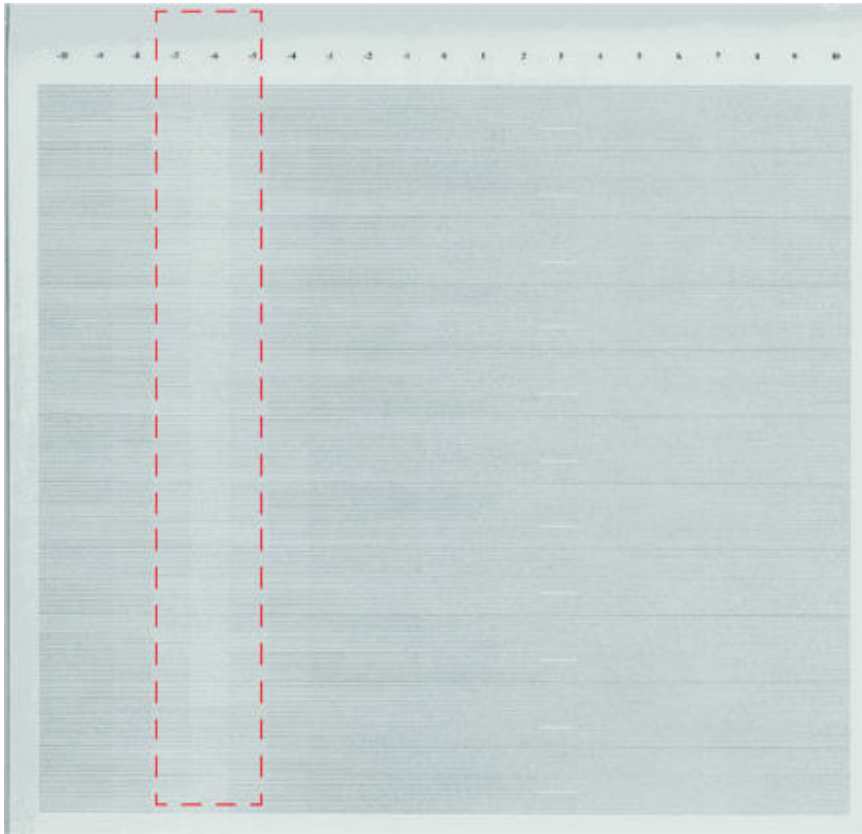
► **Calibrate Paper Advance.**

 **NOTE:** It is very important to verify that the loaded media is the same media type as selected in the front panel. You can verify the media type selected through the Front Panel. Tap , then the Paper icon. The wrong type of paper selected will produce an offset error in the Paper Advance.

The following plot shows correct media advance, there is a straight white line positioned close to the 0 column for the majority of the points.





The following plot shows a bad media advance, there is a straight white line positioned close to the -6 column, instead of the 0 column for the majority of the points.






Corrective Action


To fix Paper Advance problems, try the following:

1. Check the Paper Advance Calibration Status. Tap  (Optimize quality) ► Settings ► Calibration Status, the Front Panel displays the Paper Advance Calibration status. There are three status messages:
 - **DEFAULT.** The paper loaded is recognized as HP paper, which is already optimized and calibrated for the printer. Do not calibrate the Paper Advance for this paper.
 - **RECOMMENDED.** The paper loaded is NOT recognized as HP paper, and Paper Advance values have NOT been customized for this paper type. In this case, calibrate the Paper Advance from the user menu.
 - **OK.** This indicates that the paper loaded has been calibrated before. If the printer continues to have banding and graininess problems, calibrate the Paper Advance from the user menu.


 **NOTE:** Whenever the printer's firmware is upgraded, the paper advance calibration values will be reset to factory default.

2. To calibrate the Paper Advance from the user menu, tap , then select **Paper Advance Calibration** ► **Calibrate Paper Advance**.

 **NOTE:** It is very important to verify that the loaded media is the same media type as selected in the front panel. You can verify the media type selected through the Front Panel. Tap , then the Paper icon. The wrong type of paper selected will produce an offset error in the Paper Advance.

 **NOTE:** Some paper types are not suitable for Paper Advance Calibration. Do not use colored papers or transparent materials such as translucent bond, clear film, matte film, tracing paper, or vellum.

Paper Advance calibration from the user menu will only calibrate the Paper Advance for the paper type loaded in the printer at that moment.

3. If Calibrate Paper Advance has mostly solved the problem, try Adjust Paper Advance to fine tune the Paper Advance. Tap , then select **Paper Advance Calibration** ► **Adjust Paper Advance**.

Select the percentage of change from -100% to 100%. To correct light banding, decrease the percentage. To correct dark banding, increase the percentage.

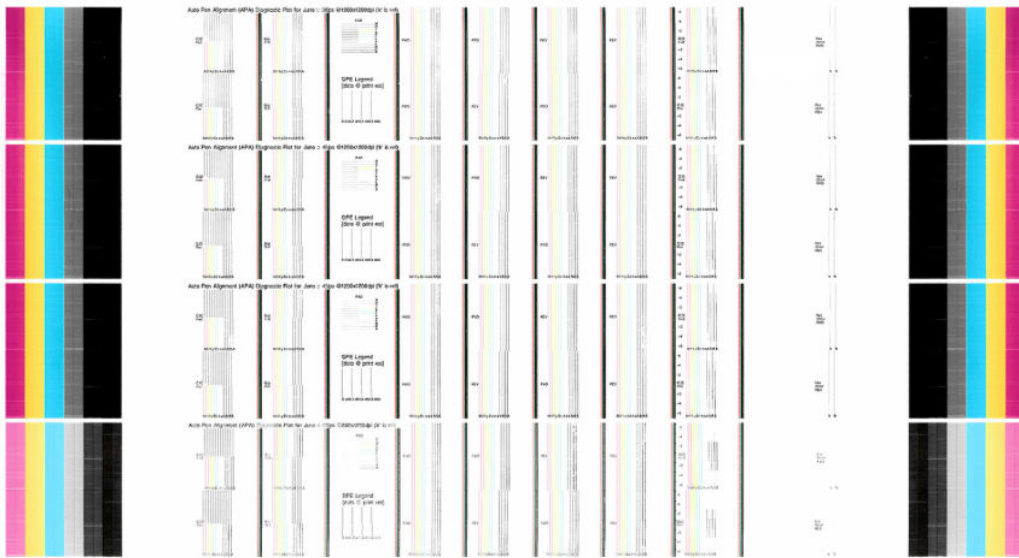
4. The Paper Advance calibration from the service menu will calibrate the Paper Advance for ALL paper types. This action is recommended when:
 - The Paper Advance calibration from the user menu does not solve the problem.
 - The Paper Advance problems affect ALL paper types.

The procedure for Paper Advance Calibration is in the service menu [Media advance calibration on page 218](#).

Printhead Alignment Check

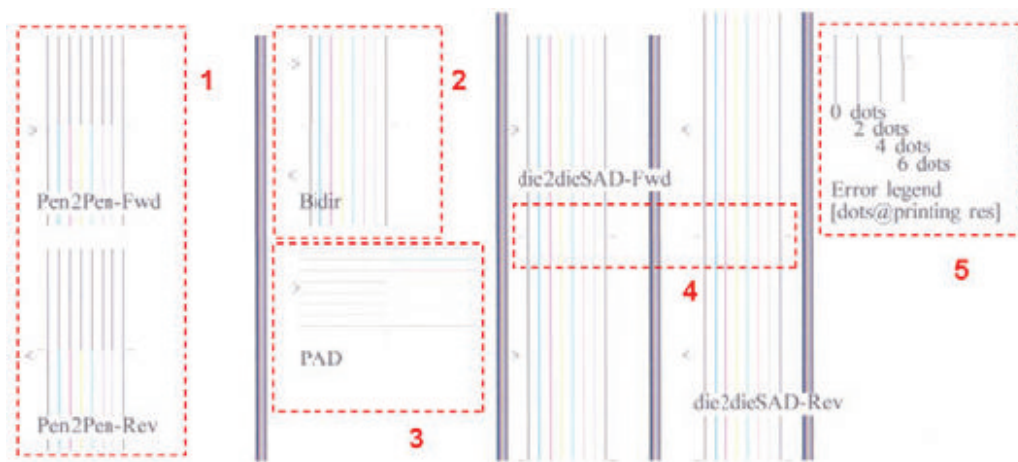
This plot helps you to visually check any alignment problems of the printer. You use it to precisely measure the alignment error with a one dot row accuracy. For the printer to be considered correctly aligned, the results must be within ± 2 dot row.

The illustration shows the complete Printhead Alignment that identifies each of the specific alignment test results covered. The plot is split into four areas printed at different speeds and resolutions: 30ips@1200dpi, 40ips@1200dpi, 45ips@1200dpi, 60ips@600dpi.

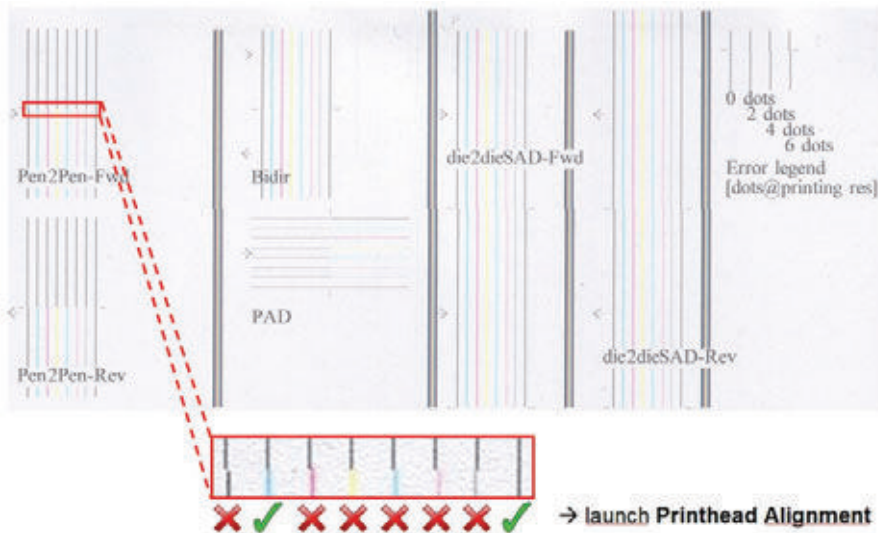


What to see in the AutoPen Alignment Diagnostics

1. At the left we have two checks for the pen to pen alignment in scan axis direction (Pen2Pen-Fwd & Pen2Pen-Rev). It is forward and reverse. The area to check is the junction (marked with “-”) of the black with the rest of colors. The arrows show the printing direction.
2. The bidirectional check is at the top, marked as number 2 (Bidir). Check that the lines are continuous without a gap. The junction is marked with “-”. The arrows show the printing direction.
3. The pen to pen alignment in paper axis direction (PAD) is marked as number 3. The area to check is the junction (marked with “|”) of the black with the rest of colors.
4. The ThetaZ of the printhead are checked in the area marked as 4. It checks in forward and reverse direction. The area to check is the junction (marked with “-”). The lines have to be continuous. The arrows show the printing direction.
5. The area marked as number 5 is a reference legend that shows junction misalignments of 2, 4 and 6 dots. The junction to check has to be equal to or below 2 in all the cases. If the error we appreciate is above 2 dots, then realign the printheads again.

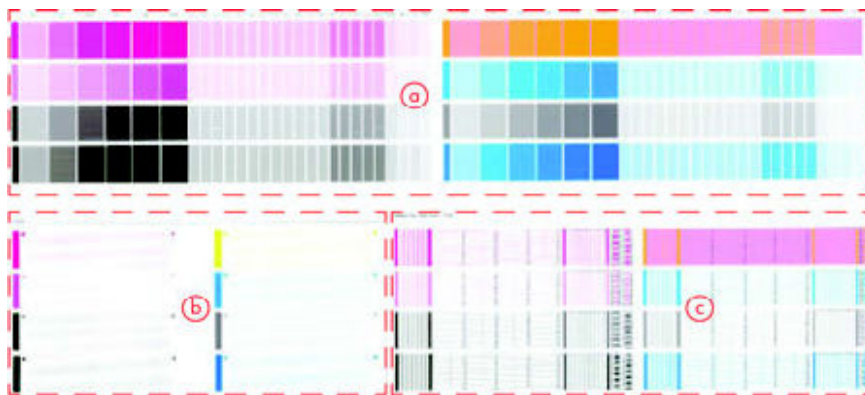


In the next example, the Pen2Pen (both Fwd and Rev) is above these 2 dots and the unit should be realigned. Same happens with the ThetaZ (die2dieSAD). The rest of the pattern shows a right alignment.



Nozzle Health

The print contains three separate parts.



1. The Variable Frequency Nozzle health plot with odd/even nozzles separation (marked as **a** in the image). This is used to detect misdirected or weak nozzles, nozzles not working correctly at all frequencies.
2. Inspector measuring tool test plot (marked as **b** in the image).

 **NOTE:** Test 2 should NOT be used by Service Engineers.


3. **Nozzle Print Test** which is also part of the Image Quality Service Plot (marked as **c** in the image). This test is designed to check that the Printhead nozzles print correctly. The test prints out every single nozzle of each Printhead. No error hiding or Printhead Alignment algorithm is applied. For each Printhead, you can see both the adjacent and the consecutive nozzles.

This is what you would see in the **Nozzle Print Test** part if there are nozzles not printing correctly:

1. On the right of each Printhead Nozzle test, there is a series of numbered stepped diagonal lines.
If one or more of the nozzles are malfunctioning or out of position, you will see that the stepped lines are broken or misdirected in one or more places.
2. On the left of each Printhead Nozzle test, there is a series of horizontal straight lines. If one or more nozzles are misdirected there will be unequal spaces between the corresponding lines.

Corrective Action for Nozzle Defects

If the printer has nozzle defects, it does not mean that you will not get perfect print quality results. The printer has automatic procedures to hide many nozzle defects.

1. Perform Printhead recovery using the option through the Front Panel. Tap  and then **Clean printheads**.
2. Reprint the Nozzle Print test to check that the defective nozzles have been corrected.
3. If the problem continues, replace the defective Printhead.

In the next example, the Pen2Pen (both Fwd and Rev) is above these 2 dots and the unit should be realigned. Same happens with the ThetaZ (die2dieSAD). The rest of the pattern shows a right alignment.

Force Drop Detection

If the **Nozzle Print Test** plot has persistent white point banding in only one color that cannot be fixed with a printhead recovery, you can use this option to resolve the problem by resetting the nozzle health data base so that all nozzles are assumed to be correct.


Once the nozzle health data base has been reset drop detection is forced. The normal cause of this white point banding in a single color is the incorrect detection of failed nozzles by the drop detector.


Troubleshooting print-quality issues

- [General advice](#)
- [Horizontal lines across the image \(banding\)](#)
- [Whole image is blurry or grainy](#)
- [Paper is not flat](#)
- [Print is scuffed or scratched](#)
- [Ink marks on the paper](#)
- [Black horizontal lines on yellow background](#)
- [Black ink comes off when you touch the print](#)
- [Edges of objects are stepped or not sharp](#)
- [Edges of objects are darker than expected](#)
- [Horizontal lines at the end of a cut sheet print](#)
- [Vertical lines of different colors](#)
- [White spots on the print](#)
- [Colors are inaccurate](#)
- [Colors are fading](#)
- [Image is incomplete \(clipped at the bottom\)](#)
- [Image is clipped](#)
- [Some objects are missing from the printed image](#)
- [Lines are too thick, too thin or missing](#)
- [Lines appear stepped or jagged](#)
- [Lines print double or in the wrong colors](#)
- [Lines are discontinuous](#)
- [Lines are blurred](#)
- [Line lengths are inaccurate](#)
- [Image Diagnostics Print](#)
- [If you still have a problem](#)

General advice

When you have any print-quality problem:

- To achieve the best performance from your printer, use only genuine manufacturer's supplies and accessories, whose reliability and performance have been thoroughly tested to give trouble-free performance and best-quality prints. For details of recommended papers, see the User Guide.
- Make sure that the paper type selected in the front panel is the same as the paper type loaded into the printer (To view the loaded paper information, tap , then the roll icon. See the User Guide for more information). At the same time, check that the paper type has been calibrated. Also make sure that the paper type selected in your software is the same as the paper type loaded into the printer.

 **CAUTION:** If you have the wrong paper type selected, you could experience poor print quality and incorrect colors, and perhaps even damage to the printheads.

- Check that you are using the most appropriate print-quality settings for your purposes (refer to the User Guide for more information on these settings). You are likely to see lower print quality if you have moved the print-quality slider to the 'Speed' end of the scale, or set the custom quality level to **Fast**.
- Check that your environmental conditions (temperature, humidity) are in the recommended range. See the Environmental specifications on the User Guide.
- Check that your ink cartridges and printheads have not passed their expiration dates: see [Maintaining the ink cartridges on page 27](#).


Horizontal lines across the image (banding)


Description of the problem

Your printed image suffers from added horizontal lines as shown (the color may vary):



Corrective action



1. Check that the paper type you have loaded corresponds to the paper type selected in the front panel and in your software. To view the loaded paper information, tap , then the roll icon. See the User Guide for more information.
2. Check that you are using appropriate print-quality settings for your purposes (refer to the User Guide for more information on these settings). In some cases, you can overcome a print-quality problem merely by selecting a higher print-quality level. For instance, if you have set the Print Quality slider to **Speed**, try setting it to **Quality**. If you change the print-quality settings, you may wish to reprint your job at this point in case the problem has been solved.

3. Print the Image Diagnostics Print. See [Image Diagnostics Print on page 66](#).
4. If the printheads are working correctly, go to the front panel and tap  (Optimize quality) ► Settings ► Calibration Status to see the paper advance calibration status. If the status is DEFAULT, try performing paper advance calibration: see [Media advance calibration on page 218](#).

If the problem persists despite all the above actions, contact your customer service representative for further support.

Whole image is blurry or grainy




1. Check that the paper type you have loaded corresponds to the paper type selected in the front panel and in your software. To view the loaded paper information, tap , then the roll icon. See the User Guide for more information.
2. Check that you are printing on the correct side of the paper.
3. Check that you are using appropriate print-quality settings (refer to the User Guide for more information). In some cases, you can overcome a print-quality problem merely by selecting a higher print-quality level. For instance, if you have set the Print Quality slider to **Speed**, try setting it to **Quality**. If you change the print-quality settings, you may wish to reprint your job at this point in case the problem has been solved.
4. Realign the printheads. See [Align the printheads on page 38](#). After alignment, you may wish to reprint your job in case the problem has been solved.
5. Go to the front panel and tap  (Optimize quality) ► Settings ► Calibration Status to see the paper advance calibration status. If the status is DEFAULT, you should perform paper advance calibration: see [Media advance calibration on page 218](#).

If the problem persists despite all the above actions, contact your customer service representative for further support.

Paper is not flat

If the paper does not lie flat when it comes out of the printer, but has shallow waves in it, you are likely to see defects in the printed image, such as vertical stripes. This can happen when you use thin paper that becomes saturated with ink.



1. Check that the paper type you have loaded corresponds to the paper type selected in the front panel and in your software. To view the loaded paper information, tap , then the roll icon. Refer to the User Guide for more information.
2. Try changing to a thicker paper type, such as HP Heavyweight Coated Paper or HP Super Heavyweight Plus Matte Paper.
3. Select a paper type that is slightly thinner than the paper you have loaded; this will persuade the printer to use less ink. Here are some example paper types in ascending order of thickness: Plain Paper, Coated Paper, Heavyweight Coated Paper, Super Heavyweight Plus Matte Paper.

Print is scuffed or scratched

The black ink pigment can be scuffed or scratched when touched by a finger, a pen or some other object. This is particularly noticeable on coated paper.

Glossy paper may be extremely sensitive to the basket or to anything else that it contacts soon after printing, depending on the amount of ink used and the environmental conditions at the time of printing.

To reduce the risk of scuffs and scratches:

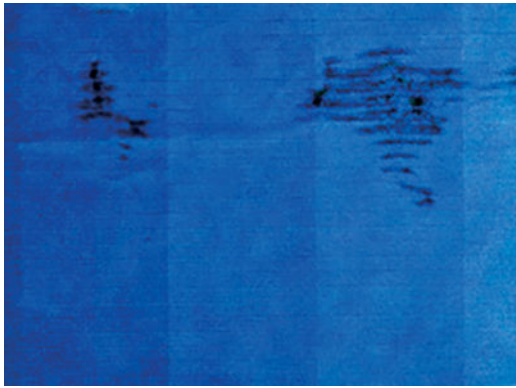
- Handle prints carefully.
- Avoid stacking prints on top of each other.
- Catch your prints as they are cut from the roll and do not let them fall into the basket. Alternatively, leave a sheet of paper in the basket so that freshly printed sheets do not make direct contact with the basket.

Ink marks on the paper

This problem can occur for several different reasons.


Horizontal smears on the front of coated paper

If a lot of ink is used on plain or coated paper, the paper absorbs the ink quickly and expands. As the printheads move over the paper, the printheads may come into contact with the paper and smear the printed image. This problem is normally seen only on cut sheets of paper (not on roll paper).



Whenever you notice this problem, cancel the printing job immediately. Cancel the job from the Front panel and also from your computer application. Soaked paper can damage the printheads.

Try the following suggestions to avoid this problem:

1. Check that the paper type you have loaded corresponds to the paper type selected in the front panel and in your software. To view the loaded paper information, tap , then the roll icon. Refer to the User Guide for more information.
2. Use a recommended paper type and the correct print settings.
3. If using sheet paper, try rotating the sheet 90 degrees. The orientation of the paper fibers may affect performance.
4. Try changing to a thicker paper type, such as HP Heavyweight Coated Paper and HP Super Heavyweight Plus Matte Paper.
5. Select a paper type that is slightly thinner than the paper you have loaded; this will persuade the printer to use less ink. Here are some example paper types in ascending order of thickness: Plain Paper, Coated Paper, Heavyweight Coated Paper, Super Heavyweight Plus Matte Paper.
6. Try to increase the margins by relocating the image to the center of the page using your software application.

Ink marks on the back of the paper

Clean the platen with a soft cloth. Clean each rib separately without touching the foam between the ribs.

Black horizontal lines on yellow background

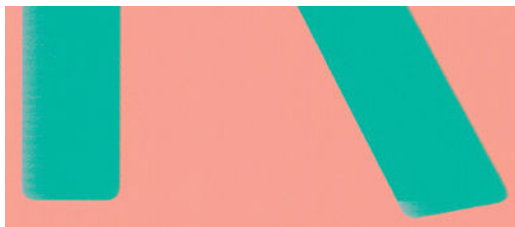
This problem may be caused by storing the printer in a cold environment.

Go to the front panel and tap , then **Clean printheads**.

Black ink comes off when you touch the print

This problem may be caused by printing with matte black ink on glossy paper. The printer will not use matte black ink if it knows that the paper will not retain it. To be sure of avoiding matte black ink, you can select any paper type from the Photo category.

Edges of objects are stepped or not sharp



1. If edges of objects or lines appear to be poorly defined or lighter in density, and you have already set the print-quality slider to **Quality** in the driver dialog, select the custom print-quality options, and try setting the quality level to **Normal**. Refer to the User Guide for more information on print-quality settings.
2. The issue may be related to orientation. Try rotating the image: you may find that the result looks better.

Edges of objects are darker than expected



1. If edges of objects seem darker than expected, and you have already set the print-quality slider to **Quality** in the driver dialog, select the custom print-quality options, and try setting the quality level to **Normal**. Refer to the User Guide for more information on print-quality settings.
2. The issue may be related to orientation. Try rotating the image: you may find that the result looks better.

Horizontal lines at the end of a cut sheet print

This type of defect affects only the end of a print, within approximately 30 mm of the trailing edge of the paper. You may see some very thin horizontal lines across the print.

To avoid this problem:

1. Consider using larger margins around your image.
2. Print the Image Diagnostics Print. See [Image Diagnostics Print on page 66](#).
3. Consider printing with roll paper.

Vertical lines of different colors

If your print has vertical bands of different colors along it:

1. Try using thicker paper, choosing from the recommended paper types such as HP Heavyweight Coated Paper and HP Super Heavyweight Paper. Refer to the User Guide for more information on recommended paper types.
2. Try using higher print-quality settings (refer to the User Guide for more information on print-quality settings). For instance, if you have set the Print Quality slider to **Speed**, try setting it to **Quality**.

White spots on the print



You may notice white spots on the print. This is probably due to paper fibers, dust or loose coating material. To avoid this problem:

1. Try cleaning the paper manually with a brush before printing, to remove any loose fibers or particles.
2. Always keep the cover of your printer closed.
3. Protect your paper rolls and sheets by storing them in bags or boxes.

Colors are inaccurate



If the colors of your print do not match your expectations, try the following:

1. Check that the paper type you have loaded corresponds to the paper type selected in the front panel and in your software. To view the loaded paper information, tap , then the roll icon. See the User Guide for more information.
2. Tap  (**Optimize quality**) ► **Settings** ► **Calibration Status** to check the color calibration status. If the status is PENDING or OBSOLETE, you should perform color calibration. If you have made any changes, you may wish to reprint your job in case the problem has been solved.
3. Check that you are printing on the correct side of the paper.
4. Check that you are using appropriate print-quality settings (refer to the User Guide for more information on print-quality settings). If you have selected the **Speed** or **Fast** options, you may not get the most accurate colors. If you change the print-quality settings, you may wish to reprint your job at this point in case the problem has been solved.
5. If you are using Application Color Management, check that the color profile you are using corresponds to the selected paper type and print-quality settings. If you have doubts about which color settings to use, refer to the User Guide.

6. If the problem consists of color differences between your print and your monitor, follow the instructions in the “How to calibrate your monitor” section of the HP Color Center. At this point, you may wish to reprint your job in case the problem has been solved.
7. Print the Image Diagnostics Print. See [Image Diagnostics Print on page 66](#).

If the problem persists despite all the above actions, contact your customer service representative for further support.

Colors are fading

If you print on instant-dry photo paper, your prints will fade rapidly. If you plan to display the prints for more than two weeks, you should laminate them to achieve longer life.

Alternatively, prints on swellable coated papers such as HP Universal Gloss Photo Paper or HP Universal Satin Photo Paper will fade much less rapidly.

Lamination can increase the life of prints on all paper types, depending on the type of lamination. For more information, consult your laminate provider.

Image is incomplete (clipped at the bottom)


- Did you press  before all the data were received by the printer? If so, you have ended the data transmission and will have to print the page again.
- The **I/O timeout** setting may be too short. This setting determines how long the printer waits for the computer to send more data, before deciding that the job is finished. From the front panel, increase the **I/O timeout** setting to a longer period and then send the print again. Tap **Settings** ► **Connectivity** ► **Network** ► **Select I/O timeout**.
- There may be a communications problem between your computer and the printer. Check your USB or network cable.
- Check to make sure that your software settings are correct for your current page size (for example, long-axis prints).
- If you are using network software, make sure it has not timed out.

Image is clipped

Clipping normally indicates a discrepancy between the actual printable area on the loaded paper and the printable area as understood by your software. You can often identify this kind of problem before printing by previewing your print.

- Check the actual printable area for the paper size you have loaded.
printable area = paper size – margins
- Check what your software understands to be the printable area (which it may call “printing area” or “imageable area”). For example, some software applications assume standard printable areas that are larger than those used in this printer.
- If you have defined a custom page size with very narrow margins, the printer may impose its own minimal margins, clipping your image slightly. You may want to consider using a larger paper size, or borderless printing (refer to the User Guide for information on margin options).

- If your image contains its own margins, you may be able to print it successfully by using the **Clip Contents by Margins** option (refer to the User Guide for information on margin options).
- If you are trying to print a very long image on a roll, check that your software is capable of printing an image of that size.
- If you try to print an image larger than your software can handle, the bottom of the image may be clipped. To print the whole image, try these suggestions:
 - Save the file in another format, such as TIFF or EPS, and open it with another application.
 - Use a RIP to print the file.
- You may have asked to rotate the page from portrait to landscape on a paper size that is not wide enough.
- If necessary, reduce the size of the image or document in your software application, so it fits between the margins.

Some objects are missing from the printed image

Large quantities of data may be necessary to print a high-quality large-format print job, and in some specific workflows there may be issues that can lead to some objects missing from the output. Here are some suggestions to help you to avoid this problem.

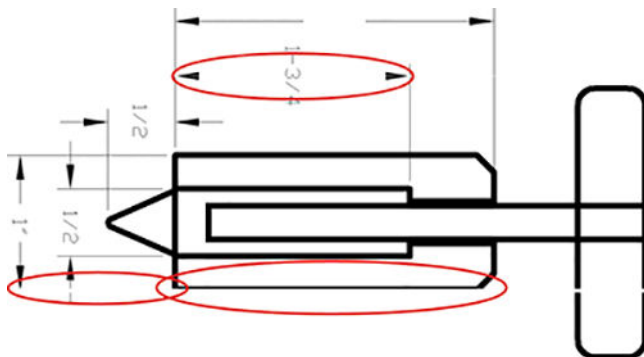
- Select a smaller page size and scale to the desired final page size in the driver or in the front panel.
- Save the file in another format, such as TIFF or EPS, and open it with another application.
- Use a RIP to print the file.
- Reduce the resolution of bitmap images in your application software.
- Select a lower print quality in order to reduce the resolution of the printed image.






NOTE: If you are working under Mac OS X, not all of these options are available.

These options are suggested for troubleshooting purposes and may adversely affect the final output quality or the time necessary to generate the print job. Therefore, they should be cancelled if they do not help to solve the problem.

Lines are too thick, too thin or missing



1. Check that the paper type you have loaded corresponds to the paper type selected in the front panel and in your software. To view the loaded paper information, tap , then the roll icon. See the User Guide for more information.
2. Check that you are using appropriate print-quality settings for your purposes (refer to the User Guide for more information on print-quality settings). Select the custom print-quality options in the driver dialog, and try turning on the **Maximum detail** option (if available). You may wish to reprint your job at this point in case the problem has been solved.
3. If the resolution of your image is greater than the printing resolution, you may notice a loss of line quality.
4. If lines are too thin or missing, print the Image Diagnostics Print. See [Image Diagnostics Print on page 66](#).
5. If the problem remains, go to the front panel and tap  (**Optimize quality**) ► **Settings** ► **Calibration Status** to see the printhead alignment status. If the status is PENDING, you should align the printheads. See [Align the printheads on page 38](#). After alignment, you may wish to reprint your job in case the problem has been solved.
6. Go to the front panel and tap  (**Optimize quality**) ► **Settings** ► **Calibration Status** to see the paper advance calibration status. If the status is DEFAULT, you should perform paper advance calibration: see [Media advance calibration on page 218](#).

If the problem persists despite all the above actions, contact your customer service representative for further support.

Lines appear stepped or jagged

If lines in your image appear stepped or jagged when printed:

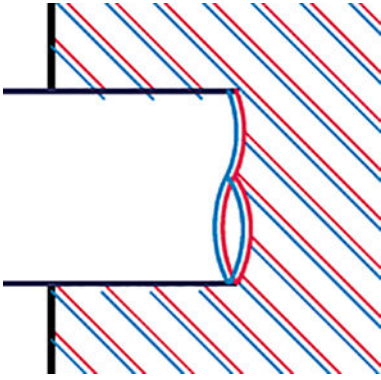


1. The problem may be inherent in the image. Try to improve the image with the application you are using to edit it.
2. Check that you are using appropriate print-quality settings. Refer to the User Guide for more information on this topic.
3. Select the custom print-quality options in the driver dialog, and turn on the **Maximum detail** option (if available).

Lines print double or in the wrong colors

This problem can have various visible symptoms:

- Colored lines are printed double, in different colors.



- The borders of colored blocks are wrongly colored.



To correct this kind of problem:

1. Reseat the printheads by removing them and then reinserting them. See [Remove a printhead on page 29](#) and [Insert a printhead on page 31](#).
2. Align the printheads. See [Align the printheads on page 38](#).

Lines are discontinuous

If your lines are broken in the following way:




1. Check that you are using appropriate print-quality settings. Refer to the User Guide for more information on this topic.
2. Reseat the printheads by removing them and then reinserting them. See [Remove a printhead on page 29](#) and [Insert a printhead on page 31](#).
3. Align the printheads. See [Align the printheads on page 38](#).

Lines are blurred



Humidity can cause ink to soak into the paper, making the lines blurred and fuzzy. Try the following:

1. Check that your environmental conditions (temperature, humidity) are suitable for high-quality printing. See the User Guide for more information.
2. Check that the paper type selected in the front panel is the same as the paper type you are using. To view the loaded paper information, tap , then the roll icon. See the User Guide for more information.
3. Select the custom print-quality options, then select **Best** and **Maximum detail** (if available). See the User Guide for more information.
4. Try changing to a heavier paper type, such as HP Heavyweight Coated Paper or HP Super Heavyweight Plus Matte Paper.
5. Select a paper type that is slightly thinner than the paper you have loaded; this will persuade the printer to use less ink. Here are some example paper types in ascending order of thickness: Plain Paper, Coated Paper, Heavyweight Coated Paper, Super Heavyweight Plus Matte Paper.
6. If you are using glossy paper, try changing to a different type of glossy paper.
7. Align the printheads. See [Align the printheads on page 38](#).

Line lengths are inaccurate

If you have measured your printed lines and find that the lengths are not sufficiently accurate for your purposes, you can try to improve line length accuracy in the following ways.

1. Print on HP Matte Film, for which your printer's line length accuracy is specified. See Functional specifications on the User Guide.



Polyester film is about ten times more dimensionally stable than paper. However, using film that is thinner or thicker than HP Matte Film will reduce line length accuracy.
2. Set the Print Quality slider to **Quality**.
3. Maintain the room at a steady temperature between 10°C and 30°C (50°F and 86°F).

4. Load the roll of film and let it rest for five minutes before printing.
5. If you are still not satisfied, try recalibrating the paper advance. See [Media advance calibration on page 218](#).

Image Diagnostics Print

The Image Diagnostics Print consists of patterns designed to highlight printhead reliability problems. It helps you to check the performance of the printheads that are currently installed in your printer, and whether any printhead suffers from clogging or other problems.

To print the Image Diagnostics Print:

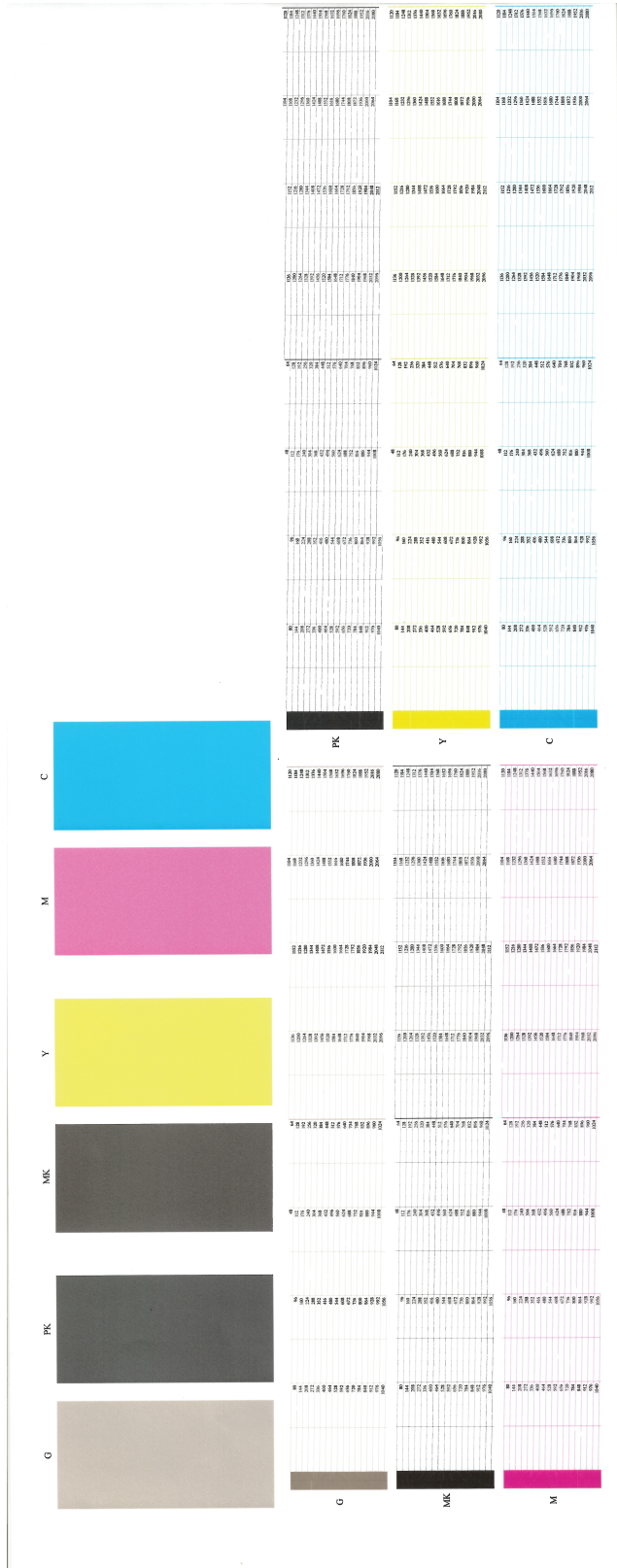
1. Use the same paper type that you were using when you detected a problem.
2. Check that the selected paper type is the same as the paper type loaded into the printer. To view the loaded paper information, tap , then the roll icon. See the User Guide for more information.
3. At the printer's front panel, tap  **(Optimize quality)** ► **Print diagnostic image**.

It takes about two minutes to print the Image Diagnostics Print.

The print is divided into two parts, both of which test printhead performance.

- Part 1 (top) consists of rectangles of pure colors, one for each printhead. This part represents the print quality that you will get from each color.
- Part 2 (bottom) consists of small dashes, one for each nozzle on each printhead. This part complements the first, and aims more specifically to detect how many faulty nozzles each printhead has.

Look carefully at the print. The names of the colors are shown above the rectangles and in the center of the patterns of dashes.



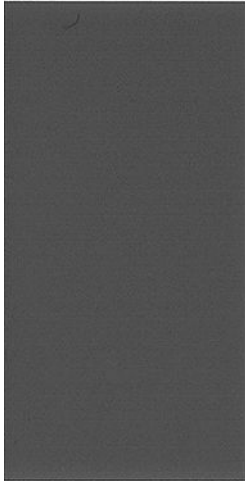
First look at the upper part of the print (part 1). Each colored rectangle should be a uniform color without any horizontal lines across it.

Then look at the bottom part of the print (part 2). For each individual colored pattern, check that most of the dashes are present.

If you see horizontal lines in part 1 and also missing dashes in part 2 for the same color, the printhead responsible needs cleaning. However, if the rectangles look solid, do not worry about just a few missing dashes in part 2; these are acceptable because the printer can compensate for a few clogged nozzles.

Here is an example of a gray printhead in a good state:

G



And here is an example of the same printhead in a bad state:

G



Corrective action

1. Clean any faulty printheads (see [Clean the printheads on page 35](#)). Then reprint the Image Diagnostics Print to see whether the problem has been solved.
2. If the problem remains, clean the printheads again, and reprint the Image Diagnostics Print to see whether the problem has been solved.
3. If the problem remains, consider cleaning your printheads manually (see [Clean the printheads on page 35](#)). You could also try reprinting your current print job, in case it now prints satisfactorily.

4. If the problem remains, try cleaning the printhead drop detector. The printer normally notifies you when this is necessary, but it may be worth trying even if the printer has not suggested it. See [Clean the printhead drop detector on page 36](#).
5. If the problem still remains, replace any persistently faulty printheads (see [Ink-supplies troubleshooting on page 24](#)), or contact HP Support.

If you still have a problem

If you still experience print-quality problems after applying the advice in this chapter, here are some further things that you can do:

- Try using a higher print-quality option. Refer to the User Guide for more information.
- Check the driver you are using to print with. If it is a non-HP driver, consult the driver vendor about the problem. You could also try using the correct HP driver, if feasible. The latest HP drivers can be downloaded from <http://www.hp.com/go/T2400/drivers>.
- If you are using a non-HP RIP, its settings may be incorrect. See the documentation that came with the RIP.
- Check that your printer's firmware is up to date. If not, update the firmware.
- Check that you have the right settings in your software application.

Connectivity problems

General network troubleshooting


Some symptoms are:

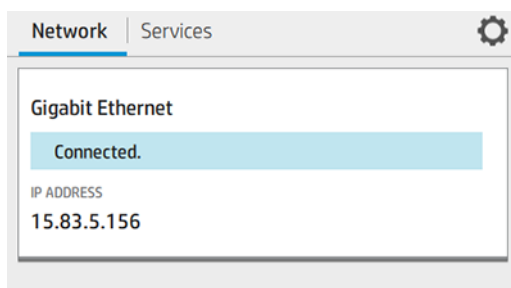
- The front panel display does not show the **Receiving** message when an image is sent to the printer.
- Computer displays an error message when trying to print.
- Computer or printer hangs (stays idle), while communication is taking place.
- Printed output shows random or inexplicable errors (misplaced lines, partial graphics, and so on).

To solve a communication problem:

- Ensure that the correct printer is selected in the application.
- Ensure that the printer works correctly when printing from other applications.
- Remember that very large prints may take some time to receive, process and print.
- If the printer is connected to a network, check the printer connectivity status: the printer should have an IP address and it should match the IP address specified in the printing computer. If the addresses do not match, then configure correctly; if the issue persists, check the network configuration.
- Try another ethernet cable.
- When a network device automatically configures itself on an IP address from the DHCP service, the IP address may differ from the time the device was last switched off to the time it is next switched on. This can lead to the device being shown as "offline" when driver port settings are configured with the original IP address. There are at least three possible ways to avoid this:
 - Increase the lease time of the DHCP server device.
 - Set a fixed IP address for the printer that will not be changed by DHCP.
 - Configure the printer and driver to refer to the hostname instead of the numeric IP address.

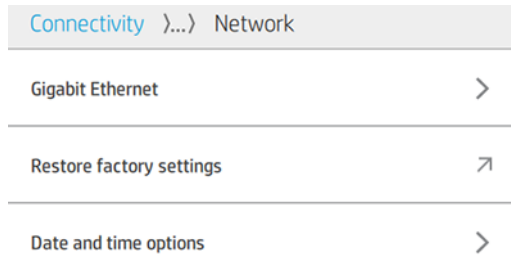
To set a fixed IP address for the printer:

1. Go to the front panel and press the  icon.
2. Select the Network tab.



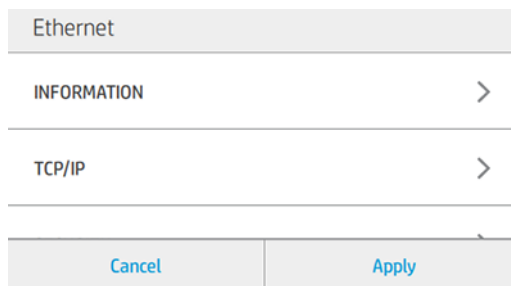
3. Press the  icon.
4. Press **Network**.

5. Press **Gigabit Ethernet**.

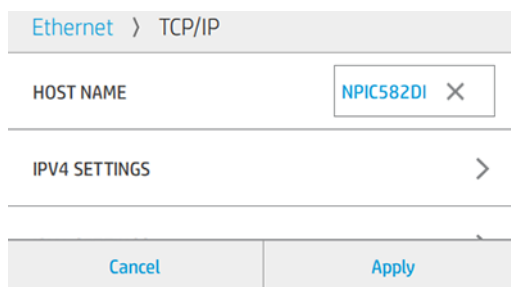


6. Press **Modify settings**.

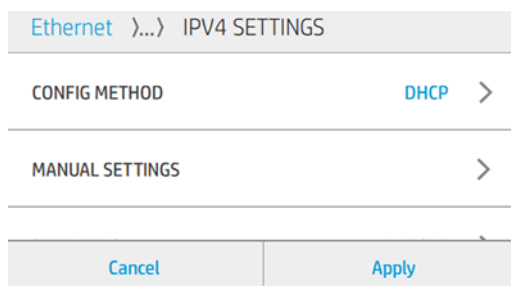
7. Press **TCP/IP**.



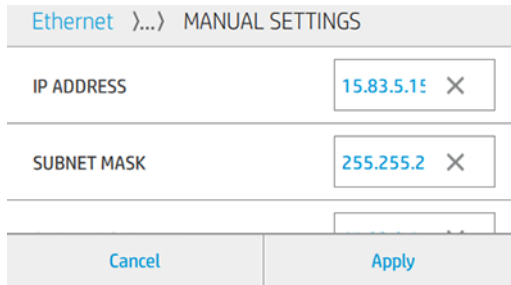
8. Press **IPV4 SETTINGS**.



9. Change the CONFIG METHOD from **DHCP** to **MANUAL**.




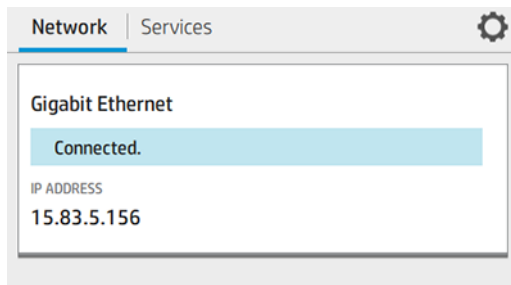
10. Press **MANUAL SETTINGS**.



11. Change the IP address, subnet mask, and default gateway as required.

To see the hostname instead of the numeric IP address:

1. Go to the front panel and press the  icon.
2. Select the Network tab.



3. Take a note of the IP address and the hostname. If the hostname is truncated, press it to see it in full.

To use either a fixed IP address or the hostname from Windows:

- ▲ At the computer, go to **Control Panel ► Printers**, right-click the printer and select **Properties ► Ports ► Configure Port**, and enter the IP address or Printer name.

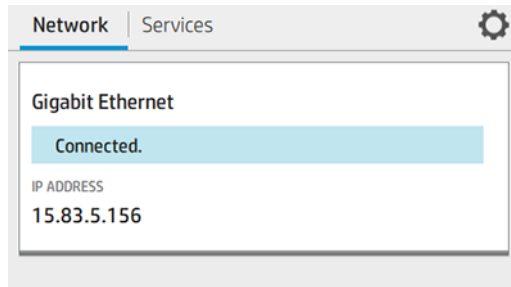
Finally, if unexpected printer behavior is experienced, you can restore most of the printer's settings:


- Basic networking settings can be reset by pressing some icons, then **Connectivity ► Network connectivity ► Network ► Restore factory settings**.
- Network security settings can be reset by pressing some icons, then **Connectivity ► Network connectivity ► Network ► Gigabit Ethernet ► Modify settings ► Security ► Reset Security**.

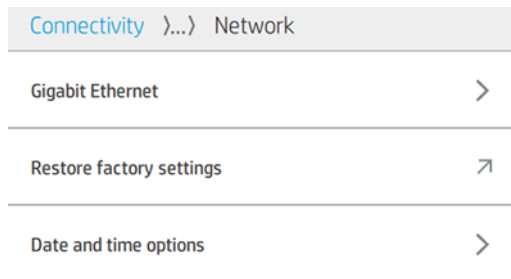
Restore basic networking settings

1. Go to the front panel and press the  icon.


2. Select the Network tab.

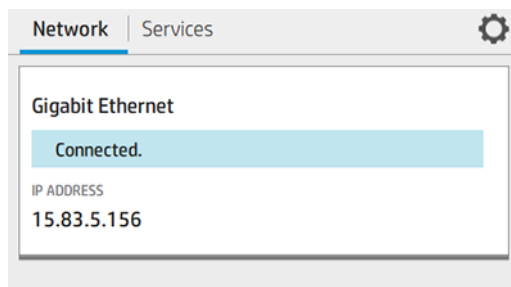


3. Press the  icon.
4. Press **Network**.
5. Press **Restore factory settings**.



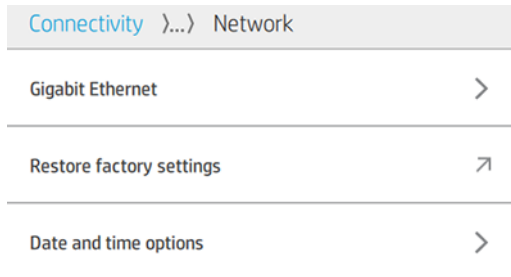
Restore network security settings

1. Go to the front panel and press the  icon.
2. Select the Network tab.



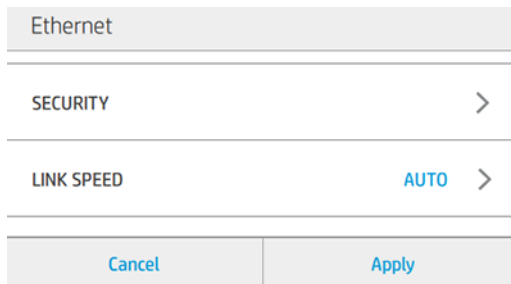
3. Press the  icon.
4. Press **Network**.

5. Press **Gigabit Ethernet**.

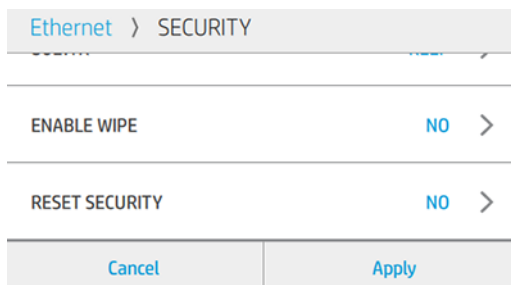


6. Press **Modify settings**.

7. Press **Security**.



8. Press **RESET SECURITY** and select **YES**.



Printer discovery


If unable to install the HP software provided with the printer, check that:

- All cable connections to the computer and the printer are secure.
- The network is operational and the network hub is turned on.
- All applications, including virus protection programs, spyware protection programs, and firewalls, are closed or disabled for computers running Windows.
- The printer is installed on the same subnet as the computers that use the printer. If the installation program cannot discover the printer, check the connectivity configuration card, and enter the IP address manually in the installation program.

Though it is not recommended that a static IP address is assigned to the printer, you could perhaps resolve some installation problems (such as a conflict with a personal firewall) by doing so.

Connectivity configuration card

The I/O configuration card provides comprehensive print servers status. This information provided is an important diagnostic tool, especially if network communications are not available. For a description of messages that may appear on the card, see the HP Jetdirect Print Servers Administrator's Guide for your print server model.

To access the detailed information about the printer connectivity, go to the Connectivity Menu pressing the  icon and click on the **Network** or **Services** cards to access all the available information.

The **Network** card provides details about the network configuration and status. The **Services** card provides information about the state of the connections to HP services such as HP ePrint.

To verify correct operation:

- On the **Network** card, look for the status message **I/O Card Ready**.
- If the **I/O Card Ready** message appears, the print server is operating properly. Proceed to the next section.
- If other message appears, try the following:
 - Turn off the printer and then on again to re-initialize the print server.
 - Check the status using the status indicator lights (LEDs) as described in the following section.

LEDs

The printer has status lights (LEDs) that indicate the link status and network activity.

- When the green light is on, the printer has successfully linked to the network.
- When the yellow light is blinking, there is network transmission activity.

Link troubleshooting

If the printer does not successfully connect to the network:

- Both LEDs will be off.
- An alert showing **No network cable connected** will appear in the front panel.

If a link failure is indicated, try the following:

- Check the cable connections, or try another cable.
- Manually configure the link setting to match the port configuration of the network hub or switch. Turn the printer off, then on again, to re-initialize the setting.
- Go to the Connectivity Configuration card and check link settings.

Port Config: If the printer is properly linked, this item has one of the following values:

- **10BASE-T HALF:** 10 Mbps, half-duplex
- **10BASE-T FULL:** 10 Mbps, full-duplex
- **100TX-HALF:** 100 Mbps, half-duplex

- **100TX-FULL:** 100 Mbps, full-duplex
- **1000TX FULL**

If the printer is not properly linked, one of the following messages will appear:

- **UNKNOWN:** The printer is in an initialization state.
- **DISCONNECTED:** A network connection has not been detected. Check network cables. Reconfigure the link settings, or restart the printer.



Auto-negotiation indicates whether auto-negotiation for link configuration is on or off:

- **ON (default):** The printer will attempt to configure itself automatically for the network at the proper speed and communication mode.
- **OFF:** Configure the link speed and communication mode manually, using the front panel. The settings must match those of the network for proper operation.

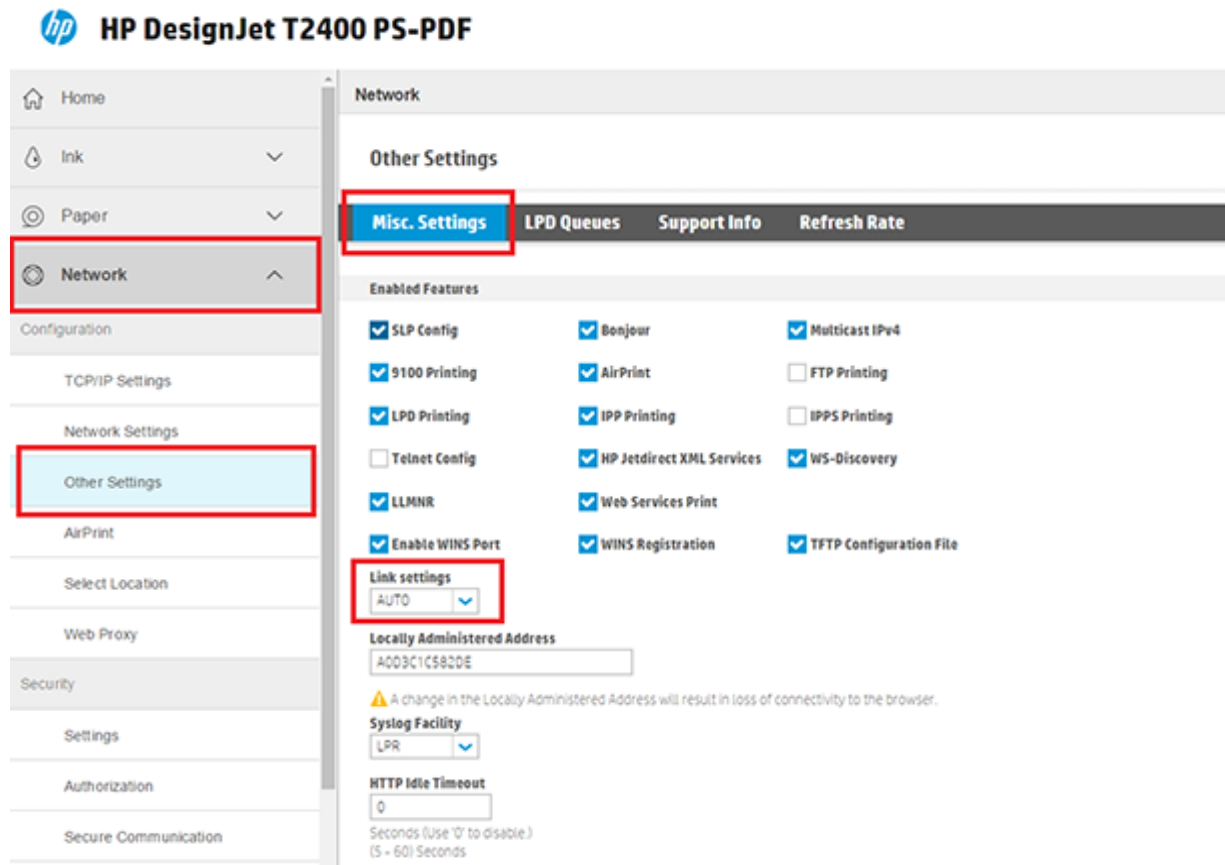
Link configuration methods

The printer supports 10, 100, or 1000 Mbps network link speeds using full-duplex or half-duplex communication modes (a 1000T half-duplex selection is not supported). By default, it will attempt to auto-negotiate its link operation with the network. When connecting to network hubs and switches that do not support auto-negotiation, the printer will configure itself for 10 Mbps or 100 Mbps half-duplex operation. For example, when connected to a non-negotiating 10 Mbps hub, the print server will automatically set itself to operate at 10 Mbps half-duplex.

If the printer is not able to connect to the network through auto-negotiation, set the link setting by one of the following methods:



- The front panel:
 1. Press the  icon.
 2. Select the Network tab.
 3. Press the  icon.
 4. Press **Network**.
 5. Press **Gigabit Ethernet**.
 6. Press **Modify settings**.
 7. Press **LINK SPEED** and set it as required.

- The Embedded Web Server:



- Telnet interface, through a system command prompt.
- A TFTP (Trivial File Transfer Protocol) configuration file that is downloaded, for example, from a BootP or DHCP server.
- Network management tools such as HP Web Jetadmin.

Reset network parameters

Network parameters (for example, the IP address) can be reset to factory default values: press  >  >

Network ► Restore factory settings, then turn the printer off and on again. After restoring, check the Connectivity Configuration card to confirm that factory reset values have been assigned.



⚠ CAUTION: A factory-installed HP Jetdirect X.509 certificate will be saved over a cold reset to factory default values. However, a Certificate Authority (CA) certificate that has been installed by the user to validate a network authentication server will not be saved.

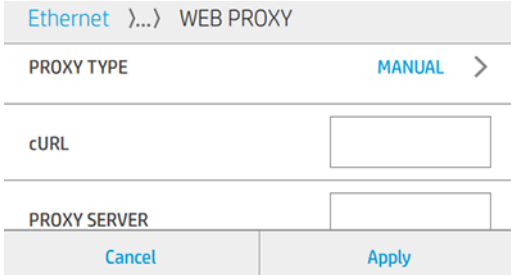
Automatic troubleshooting

There is some automatic connectivity troubleshooting each of the tabs available after pressing the  icon.

The tests are run periodically and the test results should be visible when going to the appropriate tabs.

Problems with proxy

If an automatic test of advanced connectivity (Internet) fails, you may need to enter the proxy address manually. To do that, press  >  > **Network** ► **Gigabit Ethernet** ► **Modify settings** ► **WEB PROXY**. Change the PROXY TYPE to **MANUAL**, and enter your proxy address in the PROXY SERVER field, followed by the single colon character ":" and the port.



The screenshot shows a dialog box titled "Ethernet }...} WEB PROXY". Below the title bar, there is a "PROXY TYPE" label with a dropdown menu currently set to "MANUAL" and a right-pointing arrow. Below this, there are two input fields: one labeled "cURL" and one labeled "PROXY SERVER", both of which are currently empty. At the bottom of the dialog, there are two buttons: "Cancel" on the left and "Apply" on the right.

A proxy is a server that acts as an intermediary between computers on your local network and servers on the Internet. Before setting up the printer, check whether your network requires a Web proxy.

To check this, open a Web browser on any computer within your network, and browse to <http://hp.com>. If you cannot connect to hp.com, your network does not have Internet access and you need to consult your IT provider about how to configure Internet access. If you can connect to hp.com, you can check the browser settings for proxy configuration as follows:

- For Internet Explorer, go to **Tools** ► **Internet Options** ► **Connections** ► **Local Area Network (LAN) Settings**. In the "Proxy server" part of the window, if the "Use a proxy server" box is unchecked, you do not need a Web proxy. If it is checked, make a note of the Address and Port settings in the main window, or in the HTTP part of the Advanced settings window.
- For Safari, go to **Preferences** ► **Advanced** ► **Proxies** ► **Change Settings**. If the "Web Proxy (HTTP)" box is unchecked, you do not need a Web proxy. If it is checked, make a note of the Web Proxy Server name (before the ":") and port (after the ":").
- Proxy server names are typically of the form "proxy.mycompany.com", and the proxy port is typically 80, but details are network-dependent.
- In some environments, you are provided with an automatic proxy configuration URL. If this is the case, the proxy type should be cURL and the cURL field should be filled.

If you are unable to determine whether you need a Web proxy or how to configure it, consult your network administrator or Internet Service Provider. If in doubt, you probably do not need a Web proxy.

Security

For security troubleshooting, see the *HP Designjet Security Settings* document at <http://www.hp.com/go/designjet/security>.

Special firmware upgrades

Emergency firmware upgrade using a USB flash drive


When it is not possible to perform a firmware upgrade using the normal procedures (for instance, in case of a System Error and the Embedded Web Server is unavailable), it is possible to perform an emergency firmware

upgrade using a USB flash drive. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).

Forced firmware upgrade

When the printer is started for the first time, a wizard will start.

In certain circumstances, the printer may require a firmware upgrade before it can initialize completely. When this occurs there will be a USB flash drive in the shipping box with the printer. Follow the instructions that come with the flash drive.

 **NOTE:** The USB flash drive is provided only to upgrade the printer's firmware. No other uses of the USB flash drive are supported.

If for any reason the USB flash drive upgrade option fails, download the firmware from the HP.com website instead. Load the firmware onto any empty FAT32 USB pen drive and insert it into one of the USB ports of the printer. The printer will recognize the firmware on the flash drive and display the install procedure on the Touch Control Panel.

3 System Error Codes

- [Introduction](#)
 - [Errors of three kinds](#)
 - [Reporting a system error to HP support](#)
 - [Printer logs](#)
- [What to do if the front panel fails to initialize](#)
- [System error codes in brief](#)
- [System error codes in full](#)
- [0 – Printer](#)
 - [01 – E-box](#)
 - [03 – Power supply](#)
 - [21 – Service station SVS](#)
 - [22 – Ink delivery system \(IDS\)](#)
 - [45 – BIOS](#)
 - [46 – Printer ID](#)
 - [0046-0000-0X99 – Printer ID – Generic error](#)
 - [58 – Carriage Color Sensor \(SPE\) \(Only for SKUs with Y-cutter\)](#)
 - [60 – Media input \(MI\)](#)
 - [65 – Media path](#)
 - [70 – Media output \(MO\): Y-cutter \(Only for SKUs with Y-cutter\)](#)
 - [80 – User interface](#)
 - [86 – Carriage](#)
 - [90 – Firmware](#)
 - [99 – System \(Only for SKUs with Y-cutter\)](#)
- [1 – Accessory \(Only for SKUs with Y-cutter\)](#)

For HP authorized personnel only

- [65 – TUR](#)
- [8XXX-XXXX-0000 Internal printer firmware error](#)
- [Appendix A: Emergency firmware upgrade with USB flash drive](#)
- [Appendix B: Obtaining the printer log and the diagnostics package](#)
- [Appendix C: How to check the display list memory for an HP-GL/2 job](#)
- [Appendix D: Correspondence between Motor drivers and motors](#)

Introduction

System error codes are generally used to report internal system errors. The following pages contain a list of system error codes with their respective descriptions and recommended corrective actions. Try only one recommended action at a time, in the order in which they appear in this manual, and restart the printer after each action. If the error code no longer appears, there is no need for any more corrective actions.


Errors of three kinds



- Some system errors are advisory, which means that you can press **OK** on the front panel and continue using the printer.
- Some system errors are continuable, the printer can still be used but a hardware issue was found, so the printer will disable the affected functions. For example, scanning could be disabled but the printer could continue working; or the other way around.
- Some system errors are non-continuable, which means that you cannot continue using the printer. In this case, turn the printer off and on again. If the error code reappears, then the printer requires HP Support to resolve the problem.


 **TIP:** Printer self-diagnostics work more accurately on printer start-up. Therefore, when a system error appears, you are recommended to restart the printer and repeat the action that caused the error, to get a more accurate diagnostic.

Reporting a system error to HP support


If you have an error code that you cannot resolve, then report the error to HP Support Office. When reporting the error, have the following information ready:

 **NOTE:** If you fail to provide any of the following information, HP Support cannot help you properly. Make sure you take time to gather all of this information.

- The **serial number and product number**, which can be seen on the HP label next to the connection panel.
- Which **firmware version** the printer is using, which can be found in , there go to: **Main menu ► About printer ► Firmware update**. If you cannot use the Front panel, check for the firmware version in the **Embedded Web Server**. To connect to the EWS enter the printer's IP address in a web browser, go to **About printer** and then to the **Firmware update** tab.
- The complete system error code, which can be found in the Front panel.
- Print all the Service information prints. To do so, press , and then go to **Internal Prints ► Service Information Prints**. Please, print all pages.
- Which software application the customer is using.
- The file, line number, error and error code, which can be found in the **Details** menu, available when a system error is shown on the front panel. To get the internal error code you will have to scroll down to the next printer screen.

 **NOTE:** The file and line fields are important to identify the source of the problem because the same internal error code can be reported in different files and line. In the **File** field, supply only the filename: the part after the last slash (“/”). For example, for a file `/ae/.../elektra/hal/motors/ControlledMotor/Elektra/ControlledMotorElektra.cpp` you only need to provide the `ControlledMotorElektra.cpp` part to HP support.

- The diagnostic package.

 **TIP:** When investigating a system error, you are recommended to use the diagnostic package to further understand the problem. To obtain the diagnostic package (which takes a few minutes), see [Appendix B: Obtaining the printer log and the diagnostics package on page 175](#).

Printer logs

It is possible to view all the actions the printer performs collected in a log file. To further understand a system error code, it is useful to have a log showing what the printer was doing at the time when the system error occurred.


To get the printer logs, see [Appendix B: Obtaining the printer log and the diagnostics package on page 175](#).

What to do if the front panel fails to initialize

The diagnostic LEDs and the ATX power supply can help you to troubleshoot a problem if the front panel is not working. The diagnostic LEDs are located in the connection panel, between the accessory connector and the LAN connector; and you can find the same LEDs in the Formatter PCA. The equivalence between the connection panel LEDs and the Formatter PCA LEDs is as follows: LED1 = left, LED2 = middle, LED3 = right.

Follow these steps to troubleshoot the issue.

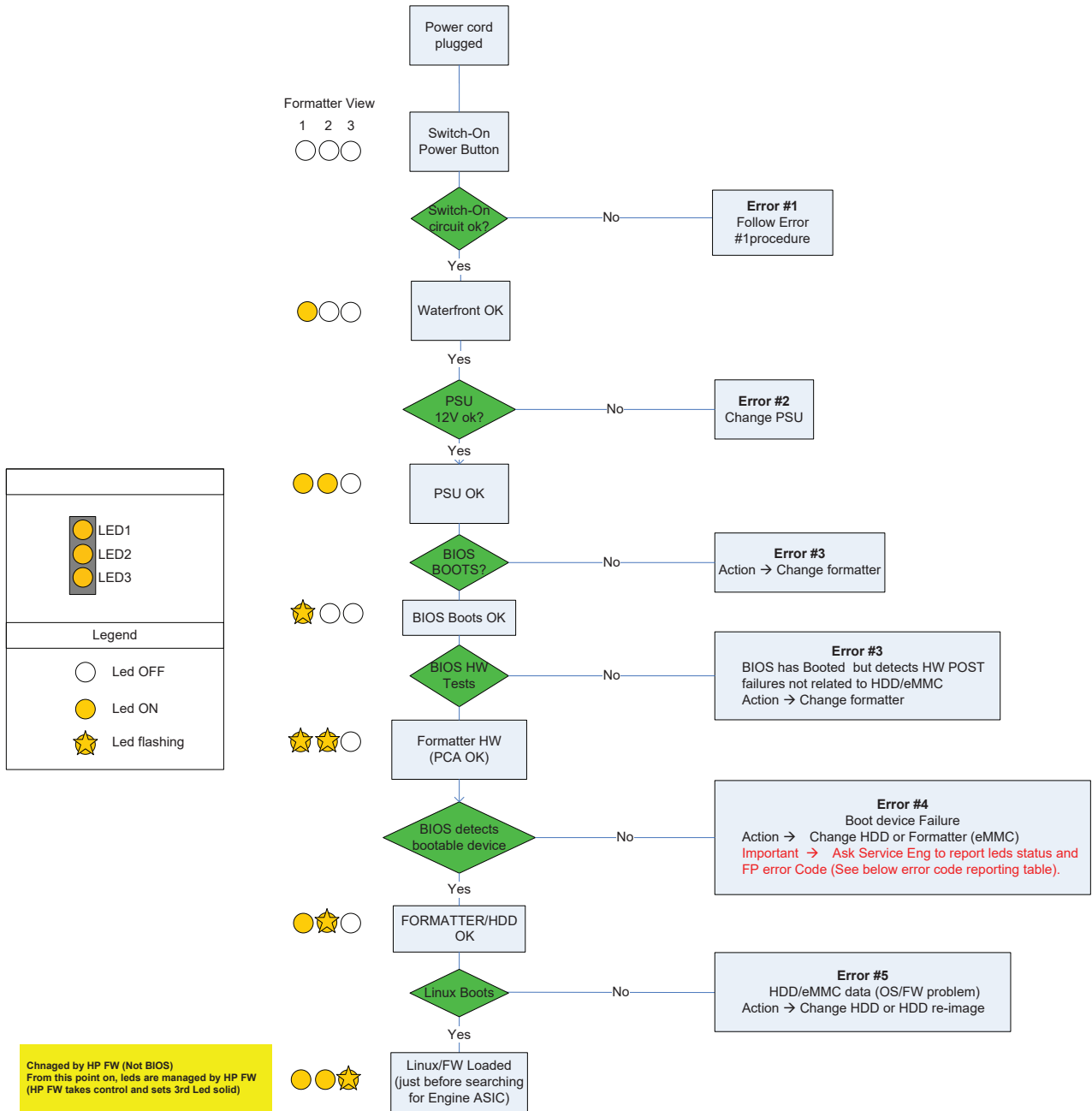
1. Switch the printer off and disconnect the power cord. Reconnect the power cord and switch on the printer .
2. Check that the front panel interface cable (T8W16-50048) is undamaged and correctly connected to the Formatter PCA. See the printer's [\[Xref Error! Target does not exist.\]](#) .
3. Use the following table to interpret the LEDs and find the source of the problem. Remember that you should read these LEDs when you turn on the printer. Some combinations may require the replacement of more than one component. In this case, always replace one component at a time. Check the LEDs again to see whether the problem has disappeared. If the same LED sequence appears, replace the next component indicated in the table.

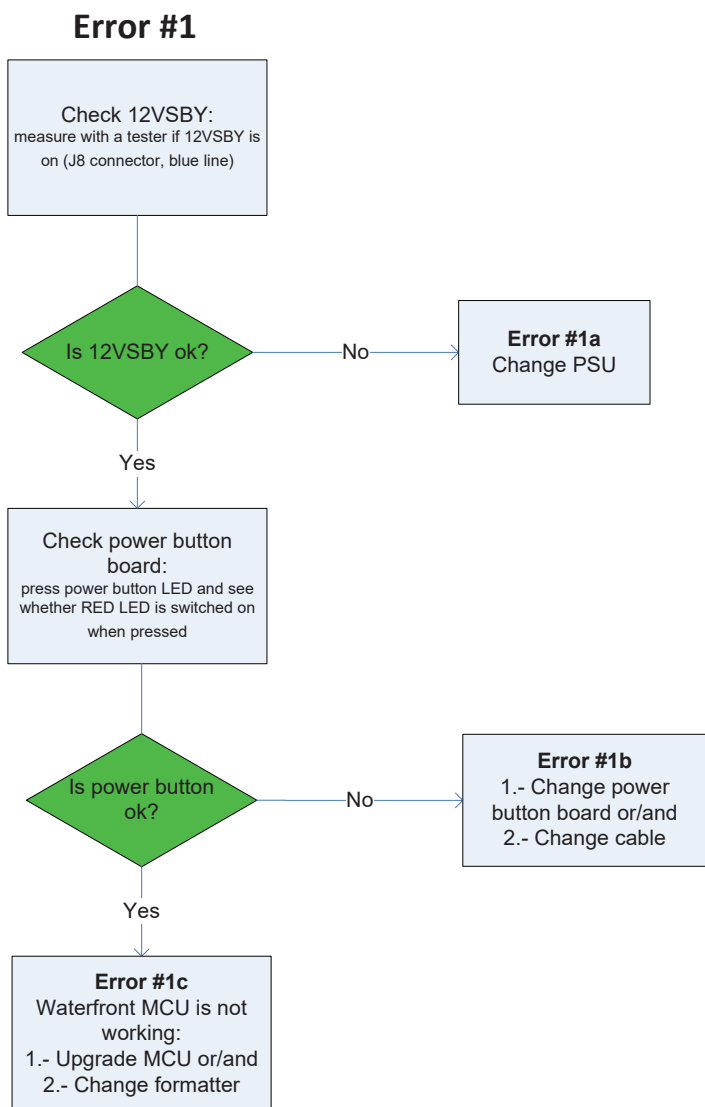
 **NOTE:** Once the printer has gone through the Ready state, the LEDs are no longer representative; in particular, you will notice that, when the printer is in Sleep mode, the LEDs are in the following state: LED1 - Off, LED2 - Off, and LED3 - On.

Connection panel LEDs			Situation
1	2	3	
Off	Off	Off	<p>Power input or Switch-On error</p> <p>Call agent</p> <ul style="list-style-type: none"> ▲ Check that the printer is connected to a power source. <p>Service Engineer</p> <ol style="list-style-type: none"> 1. Check that the 12VSBY line has 12 V (J8 connector, between blue line and ground). 2. Replace the PSU if the 12VSBY is not OK. 3. Check the power button board (press it and see whether the RED LED is switched on when pressed) if the 12VSBY is OK. 4. Replace the power button board or/and the cable if necessary. 5. If the Power button is OK, upgrade the Waterfront MCU or/and replace the Formatter.
On	Off	Off	<p>PSU 12 V error</p> <p>Call agent</p> <ul style="list-style-type: none"> ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site. <p>Service Engineer</p> <ol style="list-style-type: none"> 1. Make sure that the PSU is undamaged and properly connected to the Formatter and Engine PCA. 2. Replace the PSU, if needed.
On	On	Off	<p>BIOS boot error</p> <p>Call agent</p> <ul style="list-style-type: none"> ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site. <p>Service Engineer</p> <ul style="list-style-type: none"> ▲ Replace the Formatter.
Blinking	Off	Off	<p>BIOS error</p> <p>BIOS has booted but it detects HW POST failures not related to HDD/eMMC.</p> <p>Call agent</p> <ul style="list-style-type: none"> ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site. <p>Service Engineer</p> <ul style="list-style-type: none"> ▲ Replace the Formatter.

Connection panel LEDs			Situation
1	2	3	
Blinking	Blinking	Off	<p>Boot device failure</p> <p>Call agent</p> <ul style="list-style-type: none"> ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site. <p>Service Engineer</p> <ol style="list-style-type: none"> 1. If the error 0045-0008-0102 (Presence check failure) is shown, check if the HDD is correctly connected. If not connect it. 2. If, after rebooting, the issue persists, then replace the HDD or perform a HDD re-image. 3. If the errors 0045-0008-0140 (Empty HDD) or 0045-0008-0197 (Password locked) are shown, replace the HDD or perform a HDD re-image. <p>IMPORTANT: Ask the Service Engineer to report the status of the LEDs and the FP error code (see below the error code reporting table).</p>
On	Blinking	Off	<p>OS boot error</p> <p>Call agent</p> <ul style="list-style-type: none"> ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site. <p>Service Engineer</p> <ul style="list-style-type: none"> ▲ Replace the HDD or perform HDD re-image.
On	On	Blinking	<p>HW/FW error</p> <p>Call agent</p> <ul style="list-style-type: none"> ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site. <p>Service Engineer</p> <ul style="list-style-type: none"> ▲ Ready state. The printer was able to boot; if the front panel is not working, check that the front panel interface cable is undamaged and correctly connected to the Formatter PCA.

Diagnostic flows





System error codes in brief

Reading a system error code

System error codes explain which component or system is failing, and what action should be taken to resolve the problem.

System error codes are displayed directly on the Front panel's home page (but can also be seen on the Information page) and have been defined in the format **D0XX-nnYY-mmZZ**.

D: Device Information (1 digit)

- **0**: Printer
- **1**: Accessories
- **8**: Internal printer firmware error
- **9**: Internal host software error

Values of XX for device 0 (printer)

- **01**: E-box
- **03**: Power Supply
- **21**: Service SVS
- **45**: BIOS
- **22**: IDS (Ink delivery system)
- **60**: Media input
- **65**: Media path
- **70**: Media output. Y-cutter
- **80**: User interface
- **86**: Carriage
- **90**: Firmware

Values of XX for device 1 (accessories)

- **65**: TUR


Depending on the type of device (D), **XX** gives the module identification and **nn** gives the module index. If there is only one module, nn is 00.


YY gives the service part identification and **mm** gives the service part index. If there is only one service part, mm is 00.

ZZ indicates the cause of error as identified by self-diagnostics; see the next section for more details.

System error codes in full

The following sections describe each of the system error codes that may be encountered while using the printer and suggest actions to solve the problem in each case.

 **IMPORTANT:** Try only one recommended action at a time, in the order in which they appear in this chapter, and restart the printer after each action (unless the action was to restart the printer). If the error code no longer appears, there is no need for any more corrective actions.

 **NOTE:** Whenever is possible, a Call Agent should check if the latest firmware release is installed in the printer. If not, instruct the customer to perform a firmware upgrade.

0 – Printer

01 – E-box

0001-0001-0003 – E-box – Formatter PCA FW/HW mismatch

Formatter PCA firmware/hardware mismatch.

Call agent

1. Run the **0001-01 E-Box - Check main EE** diagnostic and check if **Formatter Status** is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the printer has the latest firmware version.
2. Upgrade the firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
3. Run the **0001-01 E-Box - Check main EE** diagnostic and check if **Formatter Status** is OK.
4. Replace the Formatter PCA if needed.

0001-0001-0004 – E-box – Formatter PCA comms error

Formatter PCA communications error.

Call agent

1. Run the **0001-01 E-Box - Check main EE** diagnostic and check if **Formatter Status** is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the printer has the latest firmware version.
2. Upgrade the firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).

3. Run the **0001-01 E-Box - Check main EE** diagnostic and check if **Formatter Status** is OK.
4. Replace the Formatter PCA if needed.

0001-0001-0040 – E-box – Formatter PCA empty/not purged/low battery

Formatter PCA empty/not purged/low battery. This error indicates that the RTC battery is low.

Call agent

1. Run the **0001-01 E-Box - Check main EE** diagnostic and check again if the battery voltage is within the operation range.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Replace the RTC battery. Check time and date settings.
2. Run the **0001-01 E-Box - Check main EE** diagnostic and check again if the battery voltage is within the operation range.

0001-0001-0067 – E-box – Formatter PCA USING_DEBUGGING_CODE

Formatter PCA USING_DEBUGGING_CODE.

Call agent

1. Run the **0001-03 E-Box - Check disk** diagnostic and check if the Hard Disk status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the printer has the latest firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Run the **0001-03 E-Box - Check disk** diagnostic and check if the Hard Disk status is OK.
3. Change the Hard Disk using the **0001-04 E-Box - Reset HDD to be removed** diagnostic if needed.
4. Replace the Formatter PCA if needed.

0001-0001-0069 – E-box – Formatter PCA EXECUTION_ERROR

Formatter PCA EXECUTION_ERROR

Call agent

1. Run the **0001-03 E-Box - Check disk** diagnostic and check if the Hard Disk status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the printer has the latest firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Run the **0001-03 E-Box - Check disk** diagnostic and check if the Hard Disk status is OK.
3. Change the Hard Disk using the **0001-04 E-Box - Reset HDD to be removed** diagnostic if needed.
4. Replace the Formatter PCA if needed.

0001-0001-0078 – E-box – Formatter PCA BIOS update needed

Formatter PCA BIOS update needed.

Call agent

1. Run the **0001-01 E-Box - Check main EE** diagnostic and check if the BIOS version is the current one.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the printer has the latest firmware version.
2. Upgrade the firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
3. Replace the RTC battery.
4. Run the **0001-01 E-Box - Check main EE** diagnostic and check if the BIOS version is the current one.
5. Replace the Formatter PCA if needed.

0001-0001-0089 – E-box – Formatter PCA Backlight issue

Backlight issue between the Formatter PCA and the Front Panel.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Front Panel is undamaged and correctly connected (T8W16-50048) to the Formatter PCA (J26).
2. Check that all the flat cable pins from the Front Panel to the Formatter PCA (T8W16-50048) are undamaged and replace the cable if needed.
3. Replace the Front Panel if needed.
4. If the problem persists, replace the Formatter PCA.

0001-0002-0003 – E-box – Mechatronics PCA FW/HW mismatch

Mechatronics PCA version PCA incorrect.

Call agent

1. Run the **0001-01 E-Box - Check main EE** diagnostic and check if the Mechatronics PCA version is correct.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the printer has the latest firmware version.
2. Upgrade the firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
3. Run the **0001-01 E-Box - Check main EE** diagnostic and check if the Mechatronics PCA version is correct.
4. Replace the Mechatronics PCA if needed.

0001-0002-0004 – E-box – Mechatronics PCA comms error

Mechatronics PCA communications error.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that all the pins from the Mechatronics data cable (T8W16-50038) are well connected.
2. Make sure that the printer has the latest firmware version.
3. Upgrade the firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
4. Turn on the printer and make sure that this system error is not displayed again.
5. Replace the Mechatronics PCA if needed.

0001-0002-0010 – E-box – Mechatronics PCA voltage out of range

Mechatronics PCA input voltage out of range.

Call agent

1. Run the **0001-01 E-Box - Check main EE** diagnostic and check if the input voltage from the Mechatronics PCA is within its operation range.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Replace the power supply.
2. Run the **0001-01 E-Box - Check main EE** diagnostic and check if the input voltage from the Mechatronics PCA is within its operation range.
3. Replace the Mechatronics PCA if needed.

0001-0002-0052 – E-box – Mechatronics PCA power cable error

Mechatronics PCA power cable error.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Engine power cable is undamaged and correctly connected to the PSU and the Mechatronics PCA.
2. Replace the power cable to the Mechatronics PCA if needed.

0001-0002-0053 – E-box – Mechatronics PCA data cable error

Mechatronics PCA data cable error.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the data cable (T8W16-50038) is undamaged and correctly connected to the Formatter PCA (J47) and the Mechatronics PCA (J21).
2. Replace the Data cable (T8W16-50038) if needed.

0001-0002-0095 – E-box – Mechatronics PCA 32V check

Mechatronics PCA output voltage out of range.

Call agent

1. Run the **0001-01 E-Box - Check main EE** diagnostic and check if the input and output voltages from the Mechatronics PCA are out of the operation range.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Run the **0001-01 E-Box - Check main EE** diagnostic and check if the input and output voltages from the Mechatronics PCA are out of the operation range.
2. If both the input voltage and the output voltage are out of the operation range, replace the Power supply.
3. If only the output voltage is out of the operation range, replace the Mechatronics PCA.

0001-0003-0001 – E-box – JDI Board malfunction, error status or state

Cannot communicate with JDI PCA micro.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the JDI PCA is undamaged and correctly connected to the Formatter PCA.
2. Run the **0001-07 E-Box - Hard reset JDI** diagnostic to reset its internal configuration.
3. Replace the JDI PCA if needed.
4. If the problem persists, replace the Formatter PCA.

0001-0003-0002 – E-box – JDI Board presence check failure, initialization error

JDI Board presence check failure, initialization error.

Call agent

1. Run the **0001-02 E-Box - Check connectivity** diagnostic and check if the JDI PCA status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the JDI PCA is undamaged and correctly connected to the Formatter PCA.
2. Run the **0001-02 E-Box - Check connectivity** diagnostic and check if the JDI PCA status is OK.
3. Replace the JDI PCA if needed.
4. If the problem persists, replace the Formatter PCA.

0001-0003-0043 – E-box – JDI Board memory fail

JDI Board memory fail.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the printer has the latest firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Check that the JDI PCA is undamaged and correctly connected to the Formatter PCA.
3. Run the **0001-07 E-Box - Hard reset JDI** diagnostic to reset its internal configuration.
4. Replace the JDI PCA if needed.
5. If the problem persists, replace the Formatter PCA.

0001-0003-0052 – E-box – JDI Board power cable error

JDI Board power cable error.

Call agent

1. Run the **0001-02 E-Box - Check connectivity** diagnostic and check if the JDI PCA status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the JDI PCA power cable (CZ309-50098) is properly connected to the Formatter PCA (J16).
2. Replace the JDI PCA power cable (CZ309-50098) if needed.
3. Check that the JDI PCA is not broken and undamaged.
4. Replace the JDI PCA if needed.
5. Run the **0001-02 E-Box - Check connectivity** diagnostic and check if the JDI PCA status is OK.
6. If the problem persists, replace the Formatter PCA.

0001-0003-0067 – E-box – JDI PCA USING_DEBUGGING_CODE

JDI PCA USING_DEBUGGING_CODE.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the printer has the latest firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Run the **0001-07 E-Box - Hard reset JDI** diagnostic to reset its internal configuration.
3. Replace the JDI PCA if needed.
4. If the problem persists, replace the Formatter PCA.

0001-0003-0068 – E-box – JDI PCA INVALID_BOOTLOADER_VERSION

JDI PCA INVALID_BOOTLOADER_VERSION.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the printer has the latest firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Run the **0001-07 E-Box - Hard reset JDI** diagnostic to reset its internal configuration.
3. Replace the JDI PCA if needed.
4. If the problem persists, replace the Formatter PCA.

0001-0003-0069 – E-box – JDI PCA EXECUTION_ERROR

JDI PCA EXECUTION_ERROR.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the printer has the latest firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Run the **0001-07 E-Box - Hard reset JDI** diagnostic to reset its internal configuration.
3. Replace the JDI PCA if needed.
4. If the problem persists, replace the Formatter PCA.

0001-0003-0086 – E-box – JDI Board no MAC address

JDI Board no MAC address.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the printer has the latest firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Check that the JDI PCA is undamaged and correctly connected to the Formatter PCA.
3. Run the **0001-07 E-Box - Hard reset JDI** diagnostic to reset its internal configuration.

4. Run the **Settings ► System ► Restore factory settings** option in the main menu and check if the system error is displayed after rebooting the printer.
5. Replace the JDI PCA if needed.
6. If the problem persists, replace the Formatter PCA.

0001-0004-0074 – E-box – HDD NVM issue

HDD NVM issue.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the HDD is undamaged and correctly connected. Cable (T8W16-50014) to Formatter PCA (J18).
2. Replace the HDD if needed.

0001-0006-0002 – E-box – RFID PCA presence check failure, initialization error

RFID PCA presence check failure, initialization error.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the RFID cable (T8W16-50050) is properly connected to the Formatter PCA (J24).
2. Replace the RFID cable (T8W16-50050) if needed.
3. Check that the RFID is not broken and undamaged.
4. Replace the RFID if needed.
5. If the problem persists, replace the Formatter PCA.

0001-0006-0048 – E-box – RFID PCA data expected not received

RFID PCA data expected not received.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the RFID is undamaged and correctly connected —cable (T8W16-50050)— to the Formatter PCA (J24).
2. Replace the RFID cable (T8W16-50050) if needed.

3. Replace the RFID if needed.
4. If the problem persists, replace the Formatter PCA.

0001-0009-0X09 – E-box – Harness connector/cable presence

(0001-0009-0109; 0001-0009-0209; 0001-0009-0309)

Where X indicates the Harness number.

Harness connector/cable presence.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Harness X T8W16-5003X (T8W16-50031, T8W16-50032 or T8W16-50033) is undamaged and correctly connected to the Mechatronics PCA (JX-J1, J2, J3).
2. Replace the Harness X T8W16-5003X (T8W16-50031, T8W16-50032 or T8W16-50033) if needed.
3. If the problem persists, replace the Mechatronics PCA.

03 – Power supply

0003-0000-0080 – Power supply – Power supply fan rotation fault

Power supply fan rotation fault.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the PSU is undamaged and properly connected to the Formatter PCA (J48, J47) and the Mechatronics PCA (J15).
2. Make sure that the PSU fan is not blocked and that it is working properly.
3. Replace the PSU if needed.
4. If the problem persists, replace the Formatter PCA.

21 – Service station SVS

0021-0001-0001 – Service SVS – Drop detector sensor malfunction, error status or state

Drop detector sensor malfunction, error status or state.

Call agent

1. Run the **0021-01 Service station SVS- Check Electronics** diagnostic and check if the Drop detector check is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Drop detector is undamaged and properly connected to Mechatronics PCA.
2. Run the **0021-01 Service station SVS- Check Electronics** diagnostic and check if the Drop detector check is OK.
3. Replace the Drop detector if needed.
4. If the problem persists, replace the Mechatronics PCA.

0021-0001-0080 – Service SVS – Drop detector fiber detected

Drop detector sensor has detected particles, such as fibers, hair or paper pieces, blocking the sensor as they can affect print-quality.

Call agent

1. Check the printhead health.
2. Make sure that the Drop detector is clear. Follow the instructions “Clean the printhead drop detector” in the [Ink-supplies troubleshooting on page 24](#) section.
3. Run the **0021-01 Service station SVS- Check Electronics** diagnostic and check if the Drop detector check is OK.
4. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check the printhead health.
2. Make sure that the Drop detector is clear. Follow the instructions “Clean the printhead drop detector” in the [Ink-supplies troubleshooting on page 24](#) section.
3. Check encoder strip has not dirty. Clean it, if possible.
4. Check that the Drop detector is undamaged and properly connected to Mechatronics PCA.
5. Run the **0021-01 Service station SVS- Check Electronics** diagnostic and check if the Drop detector check is OK.

6. Replace the Drop detector if needed.
7. If the problem persists, replace the Mechatronics PCA.

0021-0002-0017 – Service SVS – SVS motor movement blocked


SVS motor movement blocked.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Service station path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Service station motor.

 **NOTE:** If the carriage has stopped over the service station, check that the cutter is not activated. The cutter may be blocking the carriage over the service station. (Only for SKUs with Y-cutter)

2. Replace the Service station if needed.
3. Change the Mechatronics PCA if needed.

0021-0002-0059 – Service SVS – SVS motor servo shutdown

SVS motor servo shutdown.

Call agent

1. Run the **0021-02 Service station SVS- Check Service station motor** diagnostic and check if the Service station motor check is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Service station path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Service station motor.

 **NOTE:** If the carriage has stopped over the service station, check that the cutter is not activated. The cutter may be blocking the carriage over the service station. (Only for SKUs with Y-cutter.)

2. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0021-02 Service station SVS- Check Service station motor** diagnostic and check if the Service station motor check is OK.
4. Replace the Service station.
5. If the problem persists, replace the Mechatronics PCA.

0021-0002-0060 – Service SVS – SVS motor direction test fail

SVS motor direction test fail.

Call agent

1. Run the **0021-02 Service station SVS- Check Service station motor** diagnostic and check if the Service station motor check is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Service station path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Service station motor.

 **NOTE:** If the carriage has stopped over the service station, check that the cutter is not activated. The cutter may be blocking the carriage over the service station. (Only for SKUs with Y-cutter.)

2. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0021-02 Service station SVS- Check Service station motor** diagnostic and check if the Service station motor check is OK.
4. Replace the Service station if needed.
5. If the problem persists, replace the Mechatronics PCA.

0021-0002-0061 – Service SVS – SVS motor electrical fault

SVS motor electrical fault.

Call agent

1. Run the **0021-02 Service station SVS- Check Service station motor** diagnostic and check if the Service station motor check is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the SVS motor, encoder and connectors are properly connected to the Mechatronics PCA, not broken, not dirty and undamaged.
2. Run the **0021-02 Service station SVS- Check Service station motor** diagnostic and check if the Service station motor check is OK.
3. Replace the Service Station if needed.
4. If the problem persists, replace the Mechatronics PCA.

0021-0002-0062 – Service SVS – SVS motor electrical warm

SVS motor electrical warm. This check indicates an over-temperature in motor driver.

 **NOTE:** One motor driver can control more than one motor, so this error can be reported by any of these motors (see [Appendix D: Correspondence between Motor drivers and motors on page 179](#)).

Call agent

1. Run the **0021-02 Service station SVS- Check Service station motor** diagnostic and check if the Service station motor check is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Service station path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Service station motor.



NOTE: If the carriage has stopped over the service station, check that the cutter is not activated. The cutter may be blocking the carriage over the service station. (Only for SKUs with Y-cutter.)

2. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0021-02 Service station SVS- Check Service station motor** diagnostic and check if the Service station motor check is OK.



NOTE: If no problem is detected, run the diagnostic related to other motors in the same driver (see [Appendix D: Correspondence between Motor drivers and motors on page 179](#)).

4. Replace the Service station if needed.
5. If the problem persists, replace the Mechatronics PCA.

0021-0002-0063 – Service SVS – SVS motor driver fault

SVS motor driver fault.

Call agent

1. Run the **0021-02 Service station SVS- Check Service station motor** diagnostic and check if the Service station motor test is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Service station path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Service station motor.



NOTE: If the carriage has stopped over the service station, check that the cutter is not activated. The cutter may be blocking the carriage over the service station. (Only for SKUs with Y-cutter.)

2. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0021-02 Service station SVS- Check Service station motor** diagnostic and check if the Service station motor test is OK.
4. Replace the Service station if needed.
5. If the problem persists, replace the Mechatronics PCA.

0021-0003-0059 – Service SVS – Primer motor servo shutdown

Primer motor servo shutdown.

Call agent

1. Run the **0021-03 Service station SVS- Check Primer motor** diagnostic and check if the Primer motor test is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Primer motor power cable (T8W16-50032) is properly connected to the Mechatronics PCA.
2. Make sure that the Primer motor has no obstacles between its wheels blocking its movement.
3. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
4. Run the **0021-03 Service station SVS- Check Primer motor** diagnostic and check if the Primer motor test is OK.
5. Replace the Service station if needed.
6. If the problem persists, replace the Mechatronics PCA.

0021-0003-0061 – Service SVS – Primer motor electrical fault

Primer motor electrical fault.

Call agent

1. Run the **0021-03 Service station SVS- Check Primer motor** diagnostic and check if the Primer motor test is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Primer motor power cable (T8W16-50032) is properly connected to the Mechatronics PCA.
2. Check that the Primer motor, encoder and connectors are properly connected to the Mechatronics PCA, and its encoder are not broken, not dirty and undamaged.
3. Run the **0021-03 Service station SVS- Check Primer motor** diagnostic and check if the Primer motor test is OK.
4. Replace the Service Station if needed.
5. If the problem persists, replace the Mechatronics PCA.

0021-0003-0062 – Service SVS – Primer motor electrical warm

Primer motor electrical warm.

Call agent

1. Run the **0021-03 Service station SVS- Check Primer motor** diagnostic and check if the Primer motor test is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Primer motor has no obstacles between its wheels blocking its movement.
2. Check that the motor, encoder and cable (T8W16-50032) are properly connected, not broken, not dirty and undamaged.
3. Run the **0021-03 Service station SVS- Check Primer motor** diagnostic and check if the Primer motor test is OK.



NOTE: If no problem is detected, run the diagnostic related to other motors in the same driver (see [Appendix D: Correspondence between Motor drivers and motors on page 179](#)).

4. Replace the Service station parts related to the Primer motor (primer motor, ink tubes, camshaft, accumulator, peristaltic pump) if needed.
5. If the problem persists, replace the Mechatronics PCA.

0021-0003-0063 – Service SVS – Primer motor driver fault

Primer motor driver fault.

Call agent

1. Run the **0021-03 Service station SVS- Check Primer motor** diagnostic and check if the Primer motor test is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Primer motor power cable (T8W16-50032) is properly connected to the Mechatronics PCA.
2. Make sure that the Primer motor has no obstacles between its wheels blocking its movement.
3. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
4. Run the **0021-03 Service station SVS- Check Primer motor** diagnostic and check if the Primer motor test is OK.
5. Replace the Service station if needed.
6. If the problem persists, replace the Mechatronics PCA.

0021-0004-0001 – Service SVS – Primer zero sensor malfunction, error status or state

Primer sensor malfunction, error status or state.

Call agent

1. Run the **0021-03 Service station SVS- Check Primer motor** diagnostic and check if the Primer motor test is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Primer zero sensor is undamaged and properly connected, cable (T8W16-50032), to the Mechatronics PCA.
2. Run the **0021-03 Service station SVS- Check Primer motor** diagnostic and check if the Primer motor test is OK.
3. Replace the Service Station if needed.
4. If the problem persists, replace the Mechatronics PCA.

0021-0004-0047 – Service SVS – Primer zero sensor zero calibration, zero not found, homing error

Primer sensor zero calibration, zero not found, homing error.

Call agent

1. Run the **0021-03 Service station SVS- Check Primer motor** diagnostic and check if the Primer motor test is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Primer sensor is undamaged and properly connected, cable (T8W16-50032), to the Mechatronics PCA.
2. Run the **0021-03 Service station SVS- Check Primer motor** diagnostic and check if the Primer motor test is OK.
3. Replace the Service Station if needed.
4. If the problem persists, replace the Mechatronics PCA.

0021-0005-0001 – Service SVS – Aerosol fan malfunction, error status or state (Only for SKUs with Y-cutter)

Aerosol fan malfunction, error status or state.

Call agent

1. Run the **0021-04 Service station SVS- Check Aerosol fan** diagnostic and check if the Aerosol fan test is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the aerosol fan is not blocked.
2. Check that the Aerosol fan cable is undamaged and correctly connected to the Mechatronics PCA.
3. Run the **0021-04 Service station SVS- Check Aerosol fan** diagnostic and check if the Aerosol fan test is OK.
4. Replace the Aerosol Fan if needed.
5. Replace the Mechatronics PCA if needed.

22 – Ink delivery system (IDS)

0022-0Y01-0009 – IDS – ISS PCA connector/cable presence

(0022-0101-0009; 0022-0201-0009)

Where Y indicates the ISS PCA number: 1 – ISS (left); 2 – ISS (FP side).

ISS PCA connector/cable presence.

Call agent

1. Run the **0022-01 E-Box - Check electronics** diagnostic and check if the ISS PCA status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check the ISS Y cable (T8W16-50019/T8W16-50020) connected to the Mechatronics PCA (J12, J11).



NOTE: In Mechatronics PCAs of SKUs with Y-cutter, it is possible to switch the ISS PCA cable and the Y-cutter PCA cable.

2. Check the 5V-diagnostic LED of the ISS PCA.
3. Run the **0022-01 E-Box - Check electronics** diagnostic and check if the ISS PCA status is OK.

Replace the ISS Y cable (T8W16-50019/T8W16-50020) connected to the Mechatronics PCA (5V-diagnostic LED OFF).

-or-

Replace the ISS Y PCA if needed (5V-diagnostic LED ON).

4. If the problem persists, replace the Mechatronics PCA.

0022-0Y01-0067 – IDS – ISS PCA USING_DEBUGGING_CODE

(0022-0101-0067; 0022-0201-0067)

Where Y indicates the ISS PCA number: 1 – ISS (left); 2 – ISS (FP side).

ISS PCA USING_DEBUGGING_CODE.

Call agent

1. Run the **0001-03 E-Box - Check disk** diagnostic and check if the Hard Disk status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the printer has the latest firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Run the **0001-03 E-Box - Check disk** diagnostic and check if the Hard Disk status is OK.

For HP authorized personnel only

3. Replace the ISS PCA if needed.
4. Change the Hard disk using the **0001-04 E-Box - Reset HDD to be removed** diagnostic if needed.

0022-0Y01-0068 – IDS – ISS PCA INVALID_BOOTLOADER_VERSION

(0022-0101-0068; 0022-0201-0068)

Where Y indicates the ISS PCA number: 1 – ISS (left); 2 – ISS (FP side).

ISS PCA INVALID_BOOTLOADER_VERSION

Call agent

1. Run the **0001-03 E-Box - Check disk** diagnostic and check if the Hard Disk status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the printer has the latest firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Run the **0001-03 E-Box - Check disk** diagnostic and check if the Hard Disk status is OK.
3. Replace the ISS PCA if needed.
4. Change the Hard disk using the **0001-04 E-Box - Reset HDD to be removed** diagnostic if needed.

0022-0Y01-0069 – IDS – ISS PCA EXECUTION_ERROR

(0022-0101-0069; 0022-0201-0069)

Where Y indicates the ISS PCA number: 1 – ISS (left); 2 – ISS (FP side).

ISS PCA EXECUTION_ERROR

Call agent

1. Run the **0001-03 E-Box - Check disk** diagnostic and check if the Hard Disk status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the printer has the latest firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Run the **0001-03 E-Box - Check disk** diagnostic and check if the Hard Disk status is OK.
3. Replace the ISS PCA if needed.
4. Change the Hard disk using the **0001-04 E-Box - Reset HDD to be removed** diagnostic if needed.

0022-0Y01-0095 – IDS – ISS PCA 32V check

(0022-0101-0095; 0022-0201-0095)

Where Y indicates the ISS PCA number: 1 – ISS (left); 2 – ISS (FP side).

ISS PCA input voltage check.

Call agent

1. Run the **0022-01 Ink Supply Station ISS - Check electronics** diagnostic and check if the Printer Mechatronics PCA 32V signal is within the valid range.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the ISS Y cable (T8W16-50019/T8W16-50020) connected to the Mechatronics PCA (J12, J11) is undamaged.
2. Replace the ISS Y cable (T8W16-50019/T8W16-50020) if needed.
3. Run the **0022-01 Ink Supply Station ISS - Check electronics** diagnostic and check if the Printer Mechatronics PCA 32V signal is within the valid range.
4. Replace the ISS Y PCA if needed.
5. If the problem persists, replace the Mechatronics PCA.

0022-0Y02-0X41 – IDS – Slot leakage or broken bag

(0022-0102-0141; 0022-0102-0241; 0022-0102-0341; 0022-0102-0441; 0022-0102-0541;
0022-0102-0641; 0022-0202-0141; 0022-0202-0241; 0022-0202-0341)

Where Y indicates the ISS PCA number: 1 – ISS (left); 2 – ISS (FP side); and X indicates the cartridge number (left to right direction).

Slot leakage or broken bag.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Replace any broken or clogged element and clean the other printer parts involved.
2. Look for rests of ink in PCAs, cables, sensors, air tubes, etc. Clean or replace the affected parts.

0022-0Y03-0X09 – IDS – Home sensor connector/cable presence

(0022-0103-0109; 0022-0103-0209; 0022-0203-0109; 0022-0203-0209)

Where Y indicates the ISS PCA number: 1 – ISS (left); 2 – ISS (FP side); and X the number of Home sensor.

Home sensor connector/cable presence.

Call agent

1. Run the **0022-01 Ink Supply Station ISS - Check electronics** diagnostic and check if the Home sensor presence status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the affected ISS is undamaged and properly connected.
2. Check the home sensor cables (T8W16-50035) connected to the ISS Y PCA (J7).
3. Replace the ISS Y home sensors cables (T8W16-50035) if needed.
4. Run the **0022-01 Ink Supply Station ISS - Check electronics** diagnostic and check if the Home sensor presence status is OK.
5. If the problem persists, replace the ISS Y home sensors.
6. If the problem persists, replace the ISS Y PCA.

0022-0Y04-0X05 – IDS – ISS motor timeout

(0022-0104-0105; 0022-0104-0205; 0022-0204-0105; 0022-0204-0205)

Where Y indicates the ISS PCA number: 1 – ISS (left); 2 – ISS (FP side); and X the number of the ISS motor.

ISS motor timeout.

Call agent

1. Run the **0022-02 Ink Supply Station ISS - Check mechatronics** diagnostic and check if the motor X (ISS Y) status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the ISS motor path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the ISS motor.
2. Check that the motor, home and trip sensors, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the ISS diagnostic. (Check electronics and mechatronics.)
4. Run the **0022-02 Ink Supply Station ISS - Check mechatronics** diagnostic and check if the motor X (ISS Y) status is OK.
5. If the problem persists, replace the ISS Y PCA.
6. If the problem persists, replace the Mechatronics PCA.

0022-0Y04-0X09 – IDS – ISS motor connector/cable presence

(0022-0104-0109; 0022-0104-0209; 0022-0204-0109; 0022-0204-0209)

Where Y indicates the ISS PCA number: 1 – ISS (left); 2 – ISS (FP side); and X the number of the ISS motor.

ISS motor connector/cable presence.

Call agent

1. Run the **0022-01 Ink Supply Station ISS - Check electronics** diagnostic and check again if the motor X (ISS Y) presence is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the ISS 1 motor is undamaged.
2. Check the motor 1 cable (T8W16-50035) connected to the ISS Y PCA (J7).
3. Replace the ISS motor cable (T8W16-50035) if needed.
4. Run the **0022-01 Ink Supply Station ISS - Check electronics** diagnostic and check again if the motor X (ISS Y) presence is OK.
5. If the problem persists, replace the ISS motor.
6. If the problem persists, replace the ISS Y PCA.
7. If the problem persists, replace the Mechatronics PCA.

0022-0Y04-0X61 – IDS – ISS motor electrical fault

(0022-0104-0161; 0022-0104-0261; 0022-0204-0161; 0022-0204-0261)

Where Y indicates the ISS PCA number: 1 – ISS (left); 2 – ISS (FP side); and X the number of ISS motor.

ISS motor electrical fault.

Call agent

1. Run the **0022-02 Ink Supply Station ISS - Check mechatronics** diagnostic and check if the motor X (ISS Y) status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the ISS motor, encoder and connectors are properly connected to the Mechatronics PCA, not broken, not dirty and undamaged.
2. Run the **0022-02 Ink Supply Station ISS - Check mechatronics** diagnostic and check if the motor X (ISS Y) status is OK.
3. Replace the ISS Y motor if needed.
4. If the problem persists, replace the ISS Y PCA.
5. If the problem persists, replace the Mechatronics PCA.

0022-0Y04-0X63 – IDS – ISS motor driver fault

(0022-0104-0163; 0022-0104-0263; 0022-0204-0163; 0022-0204-0263)

Where Y indicates the ISS PCA number: 1 – ISS (left); 2 – ISS (FP side); and X the number of ISS motor.

ISS motor driver fault.

Call agent

1. Run the **0022-02 Ink Supply Station ISS – Check mechatronics** diagnostic and check if the motor X (ISS Y) status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the ISS motor path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the ISS motor.
2. Check that the motor, home and trip sensors, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0022-02 Ink Supply Station ISS – Check mechatronics** diagnostic and check if the motor X (ISS Y) status is OK.
4. Replace the ISS parts (ISS motor, pistons, ink tubes, camshaft) if needed.
5. If the problem persists, replace the ISS Y PCA.
6. If the problem persists, replace the Mechatronics PCA.

0022-0Y05-0X09 – IDS – Trip ISS sensor connector/cable presence

(0022-0105-0109; 0022-0105-0209; 0022-0105-0309; 0022-0105-0409; 0022-0105-0509; 0022-0205-0609)

Where Y indicates the ISS PCA number: 1 – ISS (left); 2 – ISS (FP side); and X the number of the ISS trip sensor connector.

ISS trip sensor connector/cable presence.

Call agent

1. Run the **0022-02 Ink Supply Station ISS – Check mechatronics** diagnostic and check if the trip sensor presence is OK (Y=1 is related to trip sensor 1,2,3,4 and 5 and Y=2 is related to trip sensor 6).
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the ISS Y trip sensors (1, 2, 3, 4 or 5 / 6) are undamaged.
2. Check that the trip sensor cable (T8W16-50034) is properly connected to the ISS Y PCA (J11 if Y=1 and J14 if Y=2).
3. Replace the ISS Y trip sensor cable (T8W16-50034) if needed.

4. Run the **0022-02 Ink Supply Station ISS - Check mechatronics** diagnostic and check if the trip sensor presence is OK (Y=1 is related to trip sensor 1,2,3,4 and 5 and Y=2 is related to trip sensor 6).
5. Replace the trip sensor cable X from ISS Y (T8W16-50034) if needed.
6. If the problem persists, replace the ISS Y PCA.

0022-0Y06-0010 – IDS – Acumen voltage out of range

(0022-0106-0010; 0022-0206-0010)

Where Y indicates the ISS PCA number: 1 – ISS (left); 2 – ISS (FP side).

Acumen voltage out of range

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Acumen cable (T8W16-50036) is undamaged and correctly connected to the ISS Y PCA.
2. Replace the supply or acumen cables (T8W16-50036) if necessary.

45 – BIOS

0045-0002-0001 – BIOS – Formatter Malfunction, error status or state

Formatter PCA malfunction, error status or state.

Call agent

1. Run the **0001-01 E-box - Check main electronics** diagnostic and check if the BIOS version is updated and the HDD status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the printer has the latest firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Replace the Hard disk with one that has been used in another printer, use the **0001-04 E-box - Rest HDD to be removed** diagnostic in that printer.
3. Run the **0001-01 E-box - Check main electronics** diagnostic and check if the BIOS version is updated and the HDD status is OK.
4. If the problem persists, replace the Formatter PCA.

0045-0008-0102 – BIOS – HDD Presence check failure, initialization error

HDD Presence check failure, initialization error.

Call agent

1. Run the **0001-01 E-box - Check main electronics** diagnostic and check if the BIOS version is updated and the HDD status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check if the HDD is properly connected (T8W16-50014 and T8W16-50051) to the Formatter PCA (J18 and J19).
2. Replace the Hard disk with one that has been used in another printer, use the **0001-04 E-box - Rest HDD to be removed** diagnostic in that printer.
3. Run the **0001-01 E-box - Check main electronics** diagnostic and check if the BIOS version is updated and the HDD status is OK.
4. If the problem persists, replace the Formatter PCA.

0045-0008-0140 – BIOS – HDD Empty/Not Purged/Low battery

HDD empty.

Call agent

1. Run the **0001-01 E-box - Check main electronics** diagnostic and check if the BIOS version is updated and the HDD status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the printer has the latest firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Replace the Hard disk with one that has been used in another printer, use the **0001-04 E-box - Rest HDD to be removed** diagnostic in that printer.
3. Run the **0001-01 E-box - Check main electronics** diagnostic and check if the BIOS version is updated and the HDD status is OK.
4. If the problem persists, replace the Formatter PCA.

0045-0008-0181 – BIOS – HDD Boot loader issue (BIOS)

HDD boot loader issue.

Call agent

1. Run the **0001-01 E-box - Check main electronics** diagnostic and check if the BIOS version is updated and the HDD status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the printer has the latest firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Replace the Hard disk with one that has been used in another printer, use the **0001-04 E-box - Rest HDD to be removed** diagnostic in that printer.
3. Run the **0001-01 E-box - Check main electronics** diagnostic and check if the BIOS version is updated and the HDD status is OK.
4. If the problem persists, replace the Formatter PCA.

0045-0008-0197 – BIOS – HDD PWD locked issue (BIOS)

HDD password locked issue.

Call agent

1. Run the **0001-01 E-box - Check main electronics** diagnostic and check if the BIOS version is updated and the HDD status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Replace the Hard disk with one that has been used in another printer, use the **0001-04 E-box - Rest HDD to be removed** diagnostic in that printer.
2. Run the **0001-01 E-box - Check main electronics** diagnostic and check if the BIOS version is updated and the HDD status is OK.
3. If the problem persists, replace the Formatter PCA.

46 – Printer ID

0046-0000-0X82 – Printer ID hardware failure

(0046-0000-0182; 0046-0000-0282)

Where X indicates Printer ID PCA number: 1 – Printer ID PCA; 2 – Mechatronics PCA (Only for SKUs with Y-cutter).

Printer ID is not properly connected to the printer.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

Case 1 – Printer ID PCA

1. Run the **00046-01 Secure electronics - Check Electronics** diagnostic and check if the Printer ID PCA status is OK.
2. Check that the Printer ID PCA is not broken and undamaged and it is properly connected to the Formatter PCA.
3. Order a CryptASIC Service Kit. Escalate to Level 3, providing the printer's serial number and product number, and the serial number of the CryptASIC Service Kit. Replace the Printer ID PCA. Write the file provided by Level 3 to a USB flash drive. Plug the USB flash drive into the printer and restart. If startup fails, enable the diagnostic package with the USB flashdrive and provide system logs to Level 3.
4. If the problem persists, replace the Formatter PCA.

Case 2 – Mechatronics PCA

1. Run the **00046-01 Secure electronics - Check Electronics** diagnostic and check if the Printer ID PCA status is OK.
2. Check that the Mechatronics PC is not broken and undamaged.
3. Replace the Mechatronics PCA if needed.

0046-0000-0X83 – Printer ID – Wrong family

(0046-0000-0183; 0046-0000-0283)

Where X indicates Printer ID PCA number: 1 – Printer ID PCA; 2 – Mechatronics PCA (Only for SKUs with Y-cutter).

Printer has detected that the Printer ID is from another family

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

Case 1 – Printer ID PCA

1. Run the **00046-01 Secure electronics - Check Electronics** diagnostic and check if the Printer ID PCA status is OK.
2. Check that the Printer ID PCA is not broken and undamaged and it is properly connected to the Formatter PCA.
3. Order a CryptASIC Service Kit. Escalate to Level 3, providing the printer's serial number and product number, and the serial number of the CryptASIC Service Kit. Replace the Printer ID PCA. Write the file provided by Level 3 to a USB flash drive. Plug the USB flash drive into the printer and restart. If startup fails, enable the diagnostic package with the USB flashdrive and provide system logs to Level 3.
4. If the problem persists, replace the Formatter PCA.

Case 2 – Mechatronics PCA

1. Run the **00046-01 Secure electronics - Check Electronics** diagnostic and check if the Printer ID PCA status is OK.
2. Check that the Mechatronics PC is not broken and undamaged.
3. Replace the Mechatronics PCA if needed.

0046-0000-0X84 – Printer ID – SN Mismatch

(0046-0000-0184; 0046-0000-0284)

Where X indicates Printer ID PCA number: 1 – Printer ID PCA; 2 – Mechatronics PCA (Only for SKUs with Y-cutter).

Printer has detected that the Printer ID has a different Service Number

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

Case 1 – Printer ID PCA

1. Run the **00046-01 Secure electronics - Check Electronics** diagnostic and check if the Printer ID PCA status is OK.
2. Check that the Printer ID PCA is not broken and undamaged and it is properly connected to the Formatter PCA.
3. Order a CryptASIC Service Kit. Escalate to Level 3, providing the printer's serial number and product number, and the serial number of the CryptASIC Service Kit. Replace the Printer ID PCA. Write the file provided by Level 3 to a USB flash drive. Plug the USB flash drive into the printer and restart. If startup fails, enable the diagnostic package with the USB flashdrive and provide system logs to Level 3.
4. If the problem persists, replace the Formatter PCA.

Case 2 – Mechatronics PCA

1. Run the **00046-01 Secure electronics - Check Electronics** diagnostic and check if the Printer ID PCA status is OK.
2. Check that the Mechatronics PC is not broken and undamaged.
3. Replace the Mechatronics PCA if needed.

0046-0000-0X99 – Printer ID – Generic error

(0046-0000-0199; 0046-0000-0299)

Where X indicates Printer ID PCA number: 1 – Printer ID PCA; 2 – Mechatronics PCA (Only for SKUs with Y-cutter).

Printer has detected an error in the Printer ID.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

Case 1 – Printer ID PCA

1. Run the **00046-01 Secure electronics - Check Electronics** diagnostic and check if the Printer ID PCA status is OK.
2. Check that the Printer ID PCA is not broken and undamaged and it is properly connected to the Formatter PCA.
3. Order a CryptASIC Service Kit. Escalate to Level 3, providing the printer's serial number and product number, and the serial number of the CryptASIC Service Kit. Replace the Printer ID PCA. Write the file provided by Level 3 to a USB flash drive. Plug the USB flash drive into the printer and restart. If startup fails, enable the diagnostic package with the USB flashdrive and provide system logs to Level 3.
4. If the problem persists, replace the Formatter PCA.

Case 2 – Mechatronics PCA

1. Run the **00046-01 Secure electronics - Check Electronics** diagnostic and check if the Printer ID PCA status is OK.
2. Check that the Mechatronics PC is not broken and undamaged.
3. Replace the Mechatronics PCA if needed.

58 – Carriage Color Sensor (SPE) (Only for SKUs with Y-cutter)

0058-0001-0001 – Color sensor (SPE) malfunction

0058-0001-0001 – Color sensor (SPE) malfunction

Printer has detected that the door from Color Sensor (SPE) could have not been opened or closed properly.

Call agent

1. Make sure that the Color Sensor (SPE) door is not broken or damaged.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the door from Color Sensor (SPE) has no problem to open and close.
2. Check that the Color Sensor (SPE) is properly connected, not broken, not dirty and undamaged.
3. Check that the cable from Color Sensor (SPE) to Carriage PCA is not damaged.
4. Install a new Color Sensor (SPE) (Q5669-80003).
5. If the problem persists, replace the Carriage PCA (T8W16-60003).

0058-0001-0002 – Color sensor (SPE) presence check failure

0058-0001-0002 – Color sensor (SPE) presence check failure

The printer has detected that the cable from the Color Sensor (SPE) is not properly connected to Carriage PCA.

Call agent

1. Make sure that the Color Sensor (SPE) is properly connected, not broken and undamaged.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Color Sensor (SPE) is properly connected, not broken and undamaged.
2. Check that the cable from Color Sensor (SPE) to Carriage PCA is not damaged.
3. Install a new Color Sensor (SPE) (Q5669-80003).
4. If the problem persists, replace the Carriage PCA (T8W16-60003).

0058-0001-0004 – Color sensor (SPE) communication error

0058-0001-0004 – Color sensor (SPE) communication error.

When the printer is starting, it communicates with the Color Sensor (SPE) through the Carriage PCA. If this communication fails, this system error is raised.

Call agent

1. Make sure that the Color Sensor (SPE) is not broken or damaged.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Color Sensor (SPE) is properly connected, not broken, not dirty and undamaged.
2. Check that the cable from Color Sensor (SPE) to Carriage PCA is not damaged.
3. Install a new Color Sensor (SPE) (Q5669-80003).
4. If the problem persists, replace the Carriage PCA (T8W16-60003).

0058-0001-0047 – Color sensor (SPE) zero calibration, zero not found or homing error

0058-0001-0047 – Color sensor (SPE) zero calibration, zero not found or homing error

Printer has detected that Color Sensor (SPE) lens is not working properly, so there has been found a zero calibration or homing error.

Call agent

1. Make sure that the Color Sensor (SPE) door is not broken or undamaged.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the door from Color Sensor (SPE) has no problem to open and close..
2. Check that the Color Sensor (SPE) lens is not dirty. Clean it if is possible.
3. Check that the Color Sensor (SPE) is properly connected, not broken, not dirty and undamaged.
4. Check that the cable from Color Sensor (SPE) to Carriage PCA is not damaged.
5. Install a new Color Sensor (SPE) (Q5669-80003).
6. If the problem persists, replace the Carriage PCA (T8W16-60003).

0058-0001-0048 – Color sensor (SPE) data expected not received

0058-0001-0048 – Color sensor (SPE) data expected not received

Printer has detected that the data sent to print has not been received as expected.

Call agent

1. Make sure that the Color Sensor (SPE) door is not broken or undamaged.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the door from the Color Sensor (SPE) has no problem to open and close.
2. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Check that the cable connecting the Color Sensor (SPE) to the Carriage PCA is not damaged.
4. Install a new Color Sensor (SPE) (Q5669-80003).
5. If the problem persists, replace the Carriage PCA (T8W16-60003).

60 – Media input (MI)

0060-0001-0X59 – Media Input – Rewinder servo shutdown

(0060-0001-0159; 0060-0001-0259)

Where X indicates the rewinder number: 1 – rewinder top; 2 – rewinder bottom.

Rewinder servo shutdown.

Call agent

1. Make sure that there is no paper jam restricting the movement in the top/bottom roll.
2. Run the **0060-02 Media Input – Check mechatronics** diagnostic and check if the Rewinder motor status is OK.
3. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Rewinder motor path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Rewinder motor.



NOTE: Make sure that the Roll is correctly loaded.

2. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0060-02 Media Input – Check mechatronics** diagnostic and check if the Rewinder motor status is OK.
4. Replace mechanical parts (gears) if needed.
5. Replace the Rewinder motor if needed.
6. If the problem persists, replace the Mechatronics PCA.

0060-0001-0X60 – Media Input – Rewinder direction test fail

(0060-0001-0160; 0060-0001-0260)

Where X indicates the rewinder number: 1 – rewinder top; 2 – rewinder bottom.


Rewinder direction test fail.

Call agent

1. Make sure that there is no paper jam restricting the movement in the top/bottom roll.
2. Run the **0060-02 Media Input – Check mechatronics** diagnostic and check if the Rewinder motor status is OK.
3. Make sure that the roll is loaded correctly, and that its width and diameter are supported by the printer.
4. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Rewinder motor path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Rewinder motor.

 **NOTE:** Make sure that the Roll is correctly loaded.

2. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Replace mechanical parts (gears) if needed.
4. Replace the Rewinder motor if needed.
5. If the problem persists, replace the Mechatronics PCA.

0060-0001-0X61 – Media Input – Rewinder electrical fault

(0060-0001-0161; 0060-0001-0261)

Where X indicates the rewinder number: 1 – rewinder top; 2 – rewinder bottom.

Rewinder electrical fault.

Call agent

1. Run the **0060-02 Media Input - Check mechatronics** diagnostic and check if the Rewinder motor status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer


1. Check that the Rewinder motor, encoder and connectors are properly connected to the Mechatronics PCA, not broken, not dirty and undamaged.
2. Replace the Rewinder motor if needed.
3. If the problem persists, replace the Mechatronics PCA.

0060-0001-0X62 – Media Input – Rewinder electrical warm

(0060-0001-0162; 0060-0001-0262)

Where X indicates the rewinder number: 1 – rewinder top; 2 – rewinder bottom.

Rewinder electrical warm. This check indicates an over-temperature in the motor driver.

 **NOTE:** One motor driver can control more than one motor, so this error can be reported by any of these motors (see [Appendix D: Correspondence between Motor drivers and motors on page 179](#)).

Call agent

1. Make sure that there is no paper jam restricting the movement in the top/bottom roll.
2. Run the **0060-02 Media Input - Check mechatronics** diagnostic and check if the Rewinder motor status is OK.



NOTE: If no problem is detected, run the diagnostic related to other motors in the same driver (see [Appendix D: Correspondence between Motor drivers and motors on page 179](#)).

3. Make sure that the roll is loaded correctly, and that its width and diameter are supported by the printer.
4. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Rewinder motor path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Rewinder motor.



NOTE: Make sure that the Roll is correctly loaded.

2. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Replace mechanical parts (gears) if needed.
4. Replace the Rewinder motor if needed.
5. If the problem persists, replace the Mechatronics PCA.

0060-0001-0X63 – Media Input – Rewinder driver fault

(0060-0001-0163; 0060-0001-0263)

Where X indicates the rewinder number: 1 – rewinder top; 2 – rewinder bottom.

Rewinder driver fault.

Call agent

1. Make sure that there is no paper jam restricting the movement in the top/bottom roll.
2. Run the **0060-02 Media Input - Check mechatronics** diagnostic and check if the Rewinder motor status is OK.
3. Make sure that the roll is loaded correctly, and that its width and diameter are supported by the printer.
4. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Rewinder motor path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Rewinder motor.



NOTE: Make sure that the Roll is correctly loaded.

2. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Replace mechanical parts (gears) if needed.
4. Replace the Rewinder motor if needed.
5. If the problem persists, replace the Mechatronics PCA.

65 – Media path

0065-0002-0008 – Media Path – Paper motor jam (generic)

Paper motor jam (generic)

Call agent

1. Make sure that there is no paper jam restricting the movement in the paper path, and that the media loaded is supported by the printer.
2. Run the **0060-02 Media Input - Check mechatronics** diagnostic and check if the Paper motor status is OK.
3. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Media path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Paper motor.



NOTE: Make sure that the Roll is correctly loaded with no folded pieces of the paper through the Media path.

2. Check that the motor, analog encoder and connectors are properly connected, not broken, not dirty and undamaged. Replace the analog encoder if needed.
3. Run the **0065-02 Media Path - Check Grid Roller Motor** diagnostic and check if the Paper motor status is OK

0065-0002-0059 – Media Path – Paper motor servo shutdown

Paper motor servo shutdown.

Call agent

1. Make sure that there is no paper jam restricting the movement in the paper path, and that the media loaded is supported by the printer.
2. Run the **0060-02 Media Input - Check mechatronics** diagnostic and check if the Paper motor status is OK.
3. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Media path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Paper motor.
2. Check that the motor, analog encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0065-02 Media Path - Check Grid Roller Motor** diagnostic and check if the Paper motor status is OK.
4. Replace mechanical parts (gear, bar) if needed.

5. Replace the Paper motor if needed.
6. If the problem persists, replace the Mechatronics PCA.

0065-0002-0060 – Media Path – Paper motor direction test fail

Paper motor direction test fail.

Call agent

1. Make sure that there is no paper jam restricting the movement in the paper path, and that the media loaded is supported by the printer.
2. Run the **0060-02 Media Input - Check mechatronics** diagnostic and check if the Paper motor status is OK.
3. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Media path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Paper motor.
2. Check that the motor, analog encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0065-02 Media Path - Check Grid Roller Motor** diagnostic and check if the Paper motor status is OK.
4. Replace mechanical parts (gear, bar) if needed.
5. Replace the Paper motor if needed.
6. If the problem persists, replace the Mechatronics PCA.

0065-0002-0061 – Media Path – Paper motor electrical fault

Paper motor electrical fault.

Call agent

1. Run the **0060-02 Media Input - Check mechatronics** diagnostic and check if the Paper motor status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Paper motor, analog encoder and connectors are properly connected, not broken, not dirty and undamaged.
2. Run the **0065-02 Media Path - Check Grid Roller Motor** diagnostic and check if the Paper motor status is OK.
3. Replace the Paper motor if needed.
4. If the problem persists, replace the Mechatronics PCA.

0065-0002-0062 – Media Path – Paper motor electrical warm

Paper motor electrical warm.

Call agent

1. Run the **0060-02 Media Input - Check mechatronics** diagnostic and check if the Paper motor status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Media path is clear, and that the media loaded is supported by the printer. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Paper motor.
2. Check that the motor, analog encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0065-02 Media Path - Check Grid Roller Motor** diagnostic and check if the Paper motor status is OK.



NOTE: If no problem is detected, run the diagnostic related to other motors in the same driver (see [Appendix D: Correspondence between Motor drivers and motors on page 179](#)).

4. Replace mechanical parts (gear, bar) if needed.
5. Replace the Paper motor if needed.
6. If the problem persists, replace the Mechatronics PCA.

0065-0002-0063 – Media Path – Paper motor driver fault

Paper motor driver fault.

Call agent

1. Run the **0060-02 Media Input - Check mechatronics** diagnostic and check if the Paper motor status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Media path is clear, and that the media loaded is supported by the printer. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Paper motor.
2. Check that the motor, analog encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0065-02 Media Path - Check Grid Roller Motor** diagnostic and check if the Paper motor status is OK.
4. Replace mechanical parts (gear, bar) if needed.
5. Replace the Paper motor if needed.
6. If the problem persists, replace the Mechatronics PCA.

0065-0003-0047 – Media Path – Analog encoder PCA zero calibration, zero not found, homing error

Analog encoder PCA zero calibration, zero not found, homing error

Call agent

1. Run the **0060-03 Media Input - Check sensors** diagnostic and check if the Analog encoder PCA status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Analog encoder is undamaged and correctly connected to the Mechatronics PCA.
2. Make sure that the Analog encoder strip is not dirty.
3. Run the **0065-01 Media Path - Check electronics** diagnostic and check if the Analog encoder status is OK.
4. Replace the Analog encoder if needed.
5. If the problem persists, replace the Paper motor.
6. If the problem persists, replace the Mechatronics PCA.

0065-0003-0074 – Media Path – Analog encoder PCA NVM backup issue

NVM backup read/write failed.

Call agent

1. Check that the Analog encoder is properly connected, not broken, not dirty and undamaged.
2. Run the **0060-03 Media Input - Check sensors** diagnostic and check if the Analog encoder PCA status is OK.
3. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Analog encoder to Mechatronics PCA cable is unbroken, undamaged, and properly connected.
2. Check that the Analog encoder is properly connected, not broken and undamaged.
3. Replace cable or connector if needed.
4. Replace the Analog encoder PCA.
5. Replace the Mechatronics PCA.

0065-0004-0059 – Media Path – D-Pinch wheels motor servo shutdown

Auto pinch wheels motor servo shutdown.

Call agent

1. Make sure that there is no paper jam restricting the movement in the paper path, and that the media loaded is supported by the printer.
2. Run the **0065-03 Media Input - Check D-Pinch motor** diagnostic and check if the motor status is OK.
3. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Auto Pinch wheels path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Auto Pinch wheels motor.
2. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0065-03 Media Path - Check D-pinch motor** diagnostic and check if the Auto Pinch motor status is OK.
4. Replace mechanical parts (gear, bar) if needed.
5. Replace the Auto Pinch wheels motor if needed.
6. If the problem persists, replace the Mechatronics PCA.

0065-0004-0060 – Media Path – D-Pinch wheels motor direction test fail

Auto Pinch wheels motor direction test fail.

Call agent

1. Make sure that there is no paper jam restricting the movement in the paper path, and that the media loaded is supported by the printer.
2. Run the **0065-03 Media Input - Check D-Pinch motor** diagnostic and check if the motor status is OK.
3. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Auto Pinch wheels path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Auto Pinch wheels motor.
2. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0065-03 Media Path - Check D-pinch motor** diagnostic and check if the Auto Pinch motor status is OK.
4. Replace mechanical parts (gear, bar) if needed.
5. Replace the Auto Pinch wheels motor if needed.
6. If the problem persists, replace the mechatronics PCA.

0065-0004-0061 – Media Path – D-Pinch wheels motor electrical fault

Auto Pinch wheels motor electrical fault.

Call agent

1. Run the **0065-03 Media Input - Check D-Pinch motor** diagnostic and check if the motor status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Auto Pinch wheels motor, encoder and connectors are properly connected to the Mechatronics PCA, not broken, not dirty and undamaged.
2. Run the **0065-03 Media Path - Check D-pinch motor** diagnostic and check if the Auto Pinch motor status is OK.
3. Replace the Auto Pinch wheels motor if needed.
4. If the problem persists, replace the Mechatronics PCA.

0065-0004-0062 – Media Path – D-Pinch wheels motor electrical warm

Auto Pinch wheels motor electrical warm.

Call agent

1. Run the **0065-03 Media Input - Check D-Pinch motor** diagnostic and check if the motor status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Auto Pinch wheels path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Auto Pinch wheels motor.
2. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0065-03 Media Path - Check D-pinch motor** diagnostic and check if the Auto Pinch motor status is OK.
4. Replace mechanical parts (gear, bar) if needed.
5. Replace the Auto Pinch wheels motor if needed.
6. If the problem persists, replace the Mechatronics PCA.

0065-0004-0063 – Media Path – D-Pinch wheels motor driver fault

Auto Pinch wheels motor driver fault.

Call agent

1. Run the **0065-03 Media Input - Check D-Pinch motor** diagnostic and check if the motor status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Auto Pinch wheels path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Auto Pinch wheels motor.
2. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0065-03 Media Path - Check D-pinch motor** diagnostic and check if the Auto Pinch motor status is OK.
4. Replace mechanical parts (gear, bar) if needed.
5. Replace the Auto Pinch wheels motor if needed.
6. If the problem persists, replace the Mechatronics PCA.

0065-0006-0008 – Media Path – Scan-axis motor jam (Generic)

Scan-axis motor jam (Generic).

Call agent

1. Make sure that there is no paper jam restricting the movement in the paper path.
2. Run the **0065-04 Media Input - Check Scan motor** diagnostic and check if the motor status is OK.
3. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Paper path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the carriage.



NOTE: Make sure that the Roll is correctly loaded with no folded pieces of the paper through the Carriage path.

2. Check that the motor, strip encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0065-04 Media Path - Check Scan Motor** diagnostic and check again if the Scan-axis motor status is OK.

0065-0006-0059 – Media Path – Scan-axis motor servo shutdown

Scan-axis motor servo shutdown.

Call agent

1. Run the **0065-04 Media Input - Check Scan motor** diagnostic and check if the motor status is OK.
2. Make sure that there is no paper jam restricting the movement in the paper path.
3. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Carriage path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Carriage.
2. Check that the motor is properly connected to the Mechatronics PCA and undamaged. Then, make sure that all connections from the Carriage PCA are well connected. Finally, check that all connections from the Mechatronics PCA and Formatter PCA are well connected such as the Trailing cable or Harness connectors.
3. Check that the encoder strip and connectors are properly connected (to the Carriage PCA), not broken, not dirty and undamaged.
4. Run the **0065-04 Media Path - Check Scan Motor** diagnostic and check if the Scan-axis motor status is OK.
5. Replace mechanical parts (gear, bar) if needed.
6. Replace the Scan-axis motor if needed.
7. If the problem persists, replace the Carriage PCA.
8. If the problem persists, replace the Mechatronics PCA.

0065-0006-0060 – Media Path – Scan-axis motor direction test fail

Scan-axis motor direction test fail.

Call agent

1. Make sure that there is no paper jam restricting the movement in the paper path.
2. Run the **0065-04 Media Input - Check Scan motor** diagnostic and check if the motor status is OK.
3. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Carriage path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Carriage.
2. Check that the motor is properly connected to the Mechatronics PCA and undamaged. Then, make sure that all connections from the Carriage PCA are well connected. Finally, check that all connections from the Mechatronics PCA and Formatter PCA are well connected such as the Trailing cable or Harness connectors.
3. Check that the encoder strip and connectors are properly connected (to the Carriage PCA), not broken, not dirty and undamaged.
4. Run the **0065-04 Media Path - Check Scan Motor** diagnostic and check if the Scan-axis motor status is OK.
5. Replace mechanical parts (gear, bar) if needed.

6. Replace the Scan-axis motor if needed.
7. If the problem persists, replace the Carriage PCA.
8. If the problem persists, replace the Mechatronics PCA.

0065-0006-0061 – Media Path – Scan-axis motor electrical fault

Scan-axis motor electrical fault.

Call agent

1. Run the **0065-04 Media Input - Check Scan motor** diagnostic and check if the motor status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Scan-axis motor is properly connected to the Mechatronics PCA and undamaged. Then, make sure that all connections from the Carriage PCA are well connected. Finally, check that all connections from the Mechatronics PCA and Formatter PCA are well connected such as the Trailing cable or Harness connectors.
2. Run the **0065-04 Media Path - Check Scan Motor** diagnostic and check if the Scan-axis motor status is OK.
3. Replace the Scan-axis motor if needed.
4. If the problem persists, replace the Carriage PCA.
5. If the problem persists, replace the Mechatronics PCA.

0065-0006-0062 – Media Path – Scan-axis motor electrical warm

Scan-axis motor electrical warm.

Call agent

1. Run the **0065-04 Media Input - Check Scan motor** diagnostic and check if the motor status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Carriage path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Carriage.
2. Check that the motor is properly connected to the Mechatronics PCA and undamaged. Then, make sure that all connections from the Carriage PCA are well connected. Finally, check that all connections from the Mechatronics PCA and Formatter PCA are well connected such as the Trailing cable or Harness connectors.
3. Check that the encoder strip and connectors are properly connected (to the Carriage PCA), not broken, not dirty and undamaged. Then, make sure that all connections from the Carriage PCA are well connected. Finally, check that all connections from the Mechatronics PCA and Formatter PCA are well connected such as the Trailing cable or Harness connectors.
4. Run the **0065-04 Media Path - Check Scan Motor** diagnostic and check if the Scan-axis motor status is OK.

 **NOTE:** If no problem is detected, run the diagnostic related to other motors in the same driver (see [Appendix D: Correspondence between Motor drivers and motors on page 179](#)).

5. Replace mechanical parts (gear, bar) if needed.
6. Replace the Scan-axis motor if needed.
7. If the problem persists, replace the Carriage PCA.
8. If the problem persists, replace the Mechatronics PCA.

0065-0006-0063 – Media Path – Scan-axis motor driver fault

Scan-axis motor driver fault.

Call agent

1. Run the **0065-04 Media Input - Check Scan motor** diagnostic and check if the motor status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Carriage path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Carriage.
2. Check that the motor is properly connected to the Mechatronics PCA and undamaged. Then, make sure that all connections from the Carriage PCA are well connected. Finally, check that all connections from the Mechatronics PCA and Formatter PCA are well connected such as the Trailing cable or Harness connectors.
3. Check that the encoder strip and connectors are properly connected (to the Carriage PCA), not broken, not dirty and undamaged.
4. Run the **0065-04 Media Path - Check Scan Motor** diagnostic and check if the Scan-axis motor status is OK.
5. Replace mechanical parts (gear, bar) if needed.
6. Replace the Scan-axis motor if needed.
7. If the problem persists, replace the Carriage PCA.
8. If the problem persists, replace the Mechatronics PCA.

0065-0007-0017 – Media Path – PPS movement blocked

PPS movement blocked.

Call agent

1. Run the **0065-06 Media Input - Check PPS** diagnostic and check if the motor status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the PPS path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the PPS.
2. Check that all the PPS mechanical parts as well as their connector are properly connected, not broken, not dirty and undamaged.
3. Run the **0065-06 Media Path - Check PPS** diagnostic and check if the PPS status is OK.
4. Replace the PPS if needed.
5. If the problem persists, replace the Mechatronics PCA.

0065-0007-0080 – Media Path – PPS not activated

PPS not activated.

Call agent

1. Run the **0065-06 Media Input - Check PPS** diagnostic and check if the motor status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the PPS path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the PPS.
2. Check that all the PPS mechanical parts as well as their connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0065-06 Media Path - Check PPS** diagnostic and check if the PPS status is OK.
4. Replace the PPS if needed.
5. If the problem persists, replace the Mechatronics PCA.

0065-0007-0081 – Media Path – PPS not deactivated

PPS not deactivated.

Call agent

1. Run the **0065-06 Media Input - Check PPS** diagnostic and check if the motor status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the PPS path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the PPS.
2. Check that all the PPS mechanical parts as well as their connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0065-06 Media Path - Check PPS** diagnostic and check if the PPS status is OK.

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4. Replace the PPS if needed.
5. If the problem persists, replace the Mechatronics PCA.

0065-0008-0059 – Media Path – Starwheels motor servo shutdown

Starwheels motor servo shutdown.

Call agent

1. Make sure that there is no paper jam restricting the movement in the paper path.
2. Run the **0065-05 Media Path - Check Starwheels** diagnostic and check if the Starwheels motor status is OK.
3. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Starwheels path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Starwheels motor.
2. Check that the motor, cogwheels, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0065-05 Media Path - Check Starwheels** diagnostic and check if the Starwheels motor status is OK.
4. Replace mechanical parts (gear, bar) if needed.
5. Replace the Starwheels motor if needed.
6. If the problem persists, replace the Mechatronics PCA.

0065-0008-0060 – Media Path – Starwheels motor direction test fail

Starwheels motor direction test fail.

Call agent

1. Make sure that there is no paper jam restricting the movement in the paper path.
2. Run the **0065-05 Media Path - Check Starwheels** diagnostic and check if the Starwheels motor status is OK.
3. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Starwheels path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Starwheels motor.
2. Check that the motor, cogwheels, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0065-05 Media Path - Check Starwheels** diagnostic and check if the Starwheels motor status is OK.
4. Replace mechanical parts (gear, bar) if needed.

5. Replace the Starwheels motor if needed.
6. If the problem persists, replace the Mechatronics PCA.

0065-0008-0061 – Media Path – Starwheels motor electrical fault

Starwheels motor electrical fault.

Call agent

1. Run the **0065-05 Media Path - Check Starwheels** diagnostic and check if the Starwheels motor status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Starwheels motor, encoder and connectors are properly connected to the Mechatronics PCA, not broken, not dirty and undamaged.
2. Run the **0065-05 Media Path - Check Starwheels** diagnostic and check if the Starwheels motor status is OK.
3. Replace the Starwheels motor if needed.
4. If the problem persists, replace the Mechatronics PCA.

0065-0008-0062 – Media Path – Starwheels motor electrical warm

Starwheels motor electrical warm.

Call agent

1. Run the **0065-05 Media Path - Check Starwheels** diagnostic and check if the Starwheels motor status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Starwheels path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Starwheels motor.
2. Check that the motor, cogwheels, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0065-05 Media Path - Check Starwheels** diagnostic and check if the Starwheels motor status is OK.



NOTE: If no problem is detected, run the diagnostic related to other motors in the same driver (see [Appendix D: Correspondence between Motor drivers and motors on page 179](#))

4. Replace mechanical parts (gear, bar) if needed.
5. Replace the Starwheels motor if needed.
6. If the problem persists, replace the Mechatronics PCA.

0065-0008-0063 – Media Path – Starwheels motor driver fault

Starwheels motor driver fault.

Call agent

1. Run the **0065-05 Media Path - Check Starwheels** diagnostic and check if the Starwheels motor status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Starwheels path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Starwheels motor.
2. Check that the motor, cogwheels, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0065-05 Media Path - Check Starwheels** diagnostic and check if the Starwheels motor status is OK.
4. Replace mechanical parts (gear, bar) if needed.
5. Replace the Starwheels motor if needed.
6. If the problem persists, replace the Mechatronics PCA.

70 – Media output (MO): Y-cutter (Only for SKUs with Y-cutter)

0070-0001-0009 – Y Cutter – Y-cutter PCA connector/cable presence


Y-cutter PCA connector/cable presence.

Call agent

1. Run the **0070-01 Y-Cutter - Check electronics** diagnostic and check if the Y-cutter PCA status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check the Y-cutter cable (T8W16-50003) connected to the Mechatronics PCA.

 **NOTE:** In the Mechatronics PCAs of SKUs with Y-cutter, it is possible to switch the ISS PCA cable and the Y-cutter PCA cable.

2. Check the 5V-diagnostic LED of the Y-cutter PCA.
3. Run the **0070-01 Y-Cutter - Check electronics** diagnostic and check if the Y-cutter PCA status is OK.
4. Replace the Y-cutter cable (T8W16-50003) connected to the Mechatronics PCA (5V-diagnostic LED OFF).

-or-

 Replace the Y-cutter PCA if needed (5V-diagnostic LED ON).
5. If the problem persists, replace the Mechatronics PCA.

0070-0001-0010 – Y Cutter – Y-cutter PCA voltage out of range

Y-cutter PCA voltage out of range.

Call agent

1. Run the **0070-01 Y-Cutter - Check electronics** diagnostic and check if the Y-cutter PCA status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check the 5V and 3.3V-diagnostic LED of the Y-cutter PCA.
2. Run the **0070-01 Y-Cutter - Check electronics** diagnostic and check if the Y-cutter PCA status is OK.
3. Replace the Y-cutter cable (T8W16-50003) connected to the Mechatronics PCA (5V and 3.3V-diagnostic LED OFF).

-or-

 Replace the Y-cutter PCA if needed (5V and 3.3V-diagnostic LED ON).
4. If the problem persists, replace the Mechatronics PCA.

0070-0001-0067 – Y Cutter – Y-cutter PCA USING_DEBUGGING_CODE

Y-cutter PCA USING_DEBUGGING_CODE.

Call agent

1. Run the **0070-01 Y-Cutter - Check electronics** diagnostic and check if the Y-cutter PCA status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the printer has the latest firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Run the **0001-03 E-box - Check disk** diagnostic and check if the Hard disk status is OK.
3. Run the **0070-01 Y-Cutter - Check electronics** diagnostic and check if the Y-cutter PCA status is OK.
4. Replace the Y-cutter PCA if needed.
5. Change the Hard disk using the **0001-04 E-box - Rest HDD to be removed** diagnostic if needed.

0070-0001-0068 – Y Cutter – Y-cutter PCA INVALID_BOOTLOADER_VERSION

Y-cutter PCA INVALID_BOOTLOADER_VERSION.

Call agent

1. Run the **0070-01 Y-Cutter - Check electronics** diagnostic and check if the Y-cutter PCA status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the printer has the latest firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Run the **0001-03 E-box - Check disk** diagnostic and check if the Hard disk status is OK.
3. Run the **0070-01 Y-Cutter - Check electronics** diagnostic and check if the Y-cutter PCA status is OK.
4. Replace the Y-cutter PCA if needed.
5. Change the Hard disk using the **0001-04 E-box - Rest HDD to be removed** diagnostic if needed.

0070-0001-0069 – Y Cutter – Y-cutter PCA EXECUTION_ERROR

Y-cutter PCA EXECUTION_ERROR.

Call agent

1. Run the **0070-01 Y-Cutter - Check electronics** diagnostic and check if the Y-cutter PCA status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the printer has the latest firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Run the **0001-03 E-box - Check disk** diagnostic and check if the Hard disk status is OK.
3. Run the **0070-01 Y-Cutter - Check electronics** diagnostic and check if the Y-cutter PCA status is OK.
4. Replace the Y-cutter PCA if needed.
5. Change the Hard disk using the **0001-04 E-box - Rest HDD to be removed** diagnostic if needed.

0070-0001-0080 – Y Cutter – Y-cutter PCA Communication Asic.

Y-cutter PCA communication Asic.

Call agent

1. Run the **0070-01 Y-Cutter - Check electronics** diagnostic and check if the Y-cutter PCA status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Run the **0070-01 Y-cutter - Check electronics** diagnostic and check if the Communication status is OK.
2. Replace the Y-cutter PCA if needed.
3. Replace the Mechatronics PCA if needed.

0070-0001-0095 – Y Cutter – Y-cutter PCA 32V check

Y-cutter PCA 32V check.

Call agent

1. Run the **0070-01 Y-Cutter - Check electronics** diagnostic and check if the Y-cutter PCA status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check the 32V-diagnostic LED of the Y-cutter PCA.
2. Run the **0070-01 Y-Cutter - Check electronics** diagnostic and check if the Y-cutter PCA status is OK.
3. Replace the Y-Cutter cable (T8W16-50003) connected to the Mechatronics PCA (32V-diagnostic LED OFF).
-or-
 Replace the Y-cutter PCA if needed (32V-diagnostic LED ON).
4. If the problem persists, replace the Mechatronics PCA.

0070-0002-0X59 – Y Cutter – X position motor servo shutdown

(0007-0002-0159; 0007-0002-0159)

Where X indicates the X position of the Y-cutter: 1 – Y-cutter FP side; 2 – Y-cutter left.

X position motor servo shutdown.

Call agent

1. Run the **0070-02 Y-cutter - Check mechatronics** diagnostic and check if the Y-cutter with X motor position status is OK.
2. Make sure that the X-Positioner path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the X-Positioner.
3. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
2. Run the **0070-02 Y-cutter - Check mechatronics** diagnostic and check if the Y-cutter with X motor position status is OK.
3. Replace mechanical parts (belt, positioner) if needed.
4. Replace the X position motor if needed.
5. If the problem persists, replace the Y-cutter PCA.
6. If the problem persists, replace the Mechatronics PCA.

0070-0002-0X60 – Y Cutter – X position motor direction test fail

(0007-0002-0160; 0007-0002-0160)

Where X indicates the X position of the Y-cutter: 1 – Y-cutter FP side; 2 – Y-cutter left.

X position motor direction test fail.

Call agent

1. Run the **0070-02 Y-cutter - Check mechatronics** diagnostic and check if the Y-cutter with X motor position status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the X-Positioner path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the X-Positioner.
2. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.

3. Run the **0070-02 Y-cutter - Check mechatronics** diagnostic and check if the Y-cutter with X motor position status is OK.
4. Replace mechanical parts (belt, positioner) if needed.
5. Replace the X position motor if needed.
6. If the problem persists, replace the Y-cutter PCA.
7. If the problem persists, replace the Mechatronics PCA.

0070-0002-0X61 – Y Cutter – X position motor electrical fault

(0007-0002-0161; 0007-0002-0161)

Where X indicates the X position of the Y-cutter: 1 – Y-cutter FP side; 2 – Y-cutter left.

X position motor electrical fault

Call agent

1. Run the **0070-02 Y-cutter - Check mechatronics** diagnostic and check if the Y-cutter with X motor position status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the X position motor, encoder and connectors are properly connected to the Mechatronics PCA, not broken, not dirty and undamaged.
2. Run the **0070-02 Y-cutter - Check mechatronics** diagnostic and check if the Y-cutter with X motor position status is OK.
3. Replace the X position motor if needed.
4. If the problem persists, replace the Y-cutter PCA.
5. If the problem persists, replace the Mechatronics PCA.

0070-0002-0X62 – Y Cutter – X position motor electrical warm

(0007-0002-0162; 0007-0002-0162)

Where X indicates the X position of the Y-cutter: 1 – Y-cutter FP side; 2 – Y-cutter left.

X position motor electrical warm.

Call agent

1. Run the **0070-02 Y-cutter - Check mechatronics** diagnostic and check if the Y-cutter with X motor position status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the X-Positioner path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the X-Positioner.
2. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0070-02 Y-cutter - Check mechatronics** diagnostic and check if the Y-cutter with X motor position status is OK.



NOTE: If no problem is detected, run the diagnostic related to other motors in the same driver (see [Appendix D: Correspondence between Motor drivers and motors on page 179](#)).

4. Replace mechanical parts (belt, positioner) if needed.
5. Replace the X position motor if needed.
6. If the problem persists, replace the Y-cutter PCA.
7. If the problem persists, replace the Mechatronics PCA.

0070-0002-0X63 – Y Cutter – X position motor driver fault

(0007-0002-0163; 0007-0002-0163)

Where X indicates the X position of the Y-cutter: 1 – Y-cutter FP side; 2 – Y-cutter left.

X position motor driver fault.

Call agent

1. Run the **0070-02 Y-cutter - Check mechatronics** diagnostic and check if the Y-cutter with X motor position status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the X-Positioner path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the X-Positioner.
2. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0070-02 Y-cutter - Check mechatronics** diagnostic and check if the Y-cutter with X motor position status is OK.
4. Replace mechanical parts (belt, positioner) if needed.
5. Replace the X position motor if needed.
6. If the problem persists, replace the Y-cutter PCA.
7. If the problem persists, replace the Mechatronics PCA.

0070-0003-0059 – Y Cutter – Y-cutter bar motor servo shutdown

Y-cutter bar motor servo shutdown.

Call agent

1. Run the **0070-02 Y-cutter - Check mechatronics** diagnostic and check if the Y-cutter with X motor position status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Y-cutter bar path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Y-cutter bar.
2. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0070-02 Y-cutter - Check mechatronics** diagnostic and check if the Y-cutter bar motor status is OK.
4. Replace mechanical parts (gear, bar, Y-cutter bodies) if needed.
5. Replace the Y-cutter bar motor if needed.
6. If the problem persists, replace the Y-cutter PCA.
7. If the problem persists, replace the Mechatronics PCA.

0070-0003-0060 – Y Cutter – Y-cutter bar motor direction test fail

Y-cutter bar motor direction test fail.

Call agent

1. Run the **0070-02 Y-cutter - Check mechatronics** diagnostic and check if the Y-cutter with X motor position status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Y-cutter bar path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Y-cutter bar.
2. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0070-02 Y-cutter - Check mechatronics** diagnostic and check if the Y-cutter bar motor status is OK.
4. Replace mechanical parts (gear, bar, Y-cutter bodies) if needed.
5. Replace the Y-cutter bar motor if needed.
6. If the problem persists, replace the Y-cutter PCA.
7. If the problem persists, replace the Mechatronics PCA.

0070-0003-0061 – Y Cutter – Y-cutter bar motor electrical fault

Y-cutter bar motor electrical fault.

Call agent

1. Run the **0070-02 Y-cutter - Check mechatronics** diagnostic and check if the Y-cutter with X motor position status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Y-cutter bar motor, encoder and connectors are properly connected to the Mechatronics PCA, not broken, not dirty and undamaged.
2. Run the **0070-02 Y-cutter - Check mechatronics** diagnostic and check if the Y-cutter bar motor status is OK.
3. Replace the Y-cutter bar motor if needed.
4. If the problem persists, replace the Y-cutter PCA.
5. If the problem persists, replace the Mechatronics PCA.

0070-0003-0062 – Y Cutter – Y cutter bar motor electrical warm

Y cutter bar motor electrical warm.

Call agent

1. Run the **0070-02 Y-cutter - Check mechatronics** diagnostic and check if the Y-cutter with X motor position status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Y-cutter bar path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Y-cutter bar.
2. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0070-02 Y-cutter - Check mechatronics** diagnostic and check if the Y-cutter bar motor status is OK.



NOTE: If no problem is detected, run the diagnostic related to other motors in the same driver (see [Appendix D: Correspondence between Motor drivers and motors on page 179](#)).

4. Replace mechanical parts (gear, bar, Y-cutter bodies) if needed.
5. Replace the Y-cutter bar motor if needed.
6. If the problem persists, replace the Y-cutter PCA.
7. If the problem persists, replace the Mechatronics PCA.

0070-0003-0063 – Y Cutter – Y-cutter bar motor driver fault

Y-cutter bar motor driver fault.

Call agent

1. Run the **0070-02 Y-cutter - Check mechatronics** diagnostic and check if the Y-cutter with X motor position status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the Y-cutter bar path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the Y-cutter bar.
2. Check that the motor, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Run the **0070-02 Y-cutter - Check mechatronics** diagnostic and check if the Y-cutter bar motor status is OK.
4. Replace mechanical parts (gear, bar, Y-cutter bodies) if needed.
5. Replace the Y-cutter bar motor if needed.
6. If the problem persists, replace the Y-cutter PCA.
7. If the problem persists, replace the Mechatronics PCA.

80 – User interface

0080-0002-0X09 – User interface – ISS cover connector/cable presence

(0080-0002-0109; 0080-0002-0209)

Where X indicates the position of the ISS: 1 – FP side cover; 2 – left cover (only SKUs with Y-cutter).

ISS cover connector/cable presence.

Call agent

1. Run the **0080-01 User interface- Check cover** diagnostic and check if the ISS X cover status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the ISS X cover switch is undamaged.
2. Check that the switch cable (W3Z72-60017) is properly connected to the ISS X PCA.
3. Replace the ISS X cover switch if needed.
4. If the problem persists, replace the ISS X PCA.
5. If the problem persists, replace the Mechatronics PCA.

0080-0002-0X18 – User interface – ISS cover open or closed state

(0080-0002-0118; 0080-0002-0218)

Where X indicates the position of the ISS: 1 – FP side cover; 2 – left cover (only SKUs with Y-cutter).

ISS cover open or closed state.

Call agent

1. Run the **0080-01 User interface- Check cover** diagnostic and check if the ISS X cover status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the ISS X cover switch is undamaged and correctly connected to the ISS PCA.
2. Run the **0080-01 User interface- Check cover** diagnostic and check if the ISS X cover status is OK.
3. Replace the ISS X cover switch if needed.
4. If the problem persists, replace the ISS X PCA.
5. If the problem persists, replace the Mechatronics PCA.

0080-0003-0009 – User interface – Y-cutter cover connector/cable presence (Only for SKUs with Y-cutter)

Y-Cutter cover connector/cable presence.

Call agent

1. Run the **0080-01 User interface- Check cover** diagnostic and check if the ISS X cover status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Y-cutter cover switch is undamaged.
2. Check that the Y-cutter cover switch cable (T8W18-50001) is properly connected to the Y-cutter PCA.
3. Run the **0080-01 User interface- Check cover** diagnostic and check if the Y-cutter cover status is OK.
4. Replace the Y-cutter cover switch if needed.
5. If the problem persists, replace the Y-cutter PCA.
6. If the problem persists, replace the Mechatronics PCA.

0080-0005-0002 – User interface – Front Panel presence check failure, initialization error

Front Panel presence check failure, initialization error.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Front Panel is undamaged and correctly connected (T8W16-50048) to the Formatter PCA (J26).
2. Check that all the flat cable pins from the Front Panel to the Formatter PCA (T8W16-50048) are undamaged; replace the cable if needed.
3. Replace the Front Panel if needed.
4. If the problem persists, replace the Formatter PCA.

86 – Carriage

0086-0001-0004 – Carriage – Trailing cable Comms error

Trailing cable communications error.

Call agent

1. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Trailing cable presence status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Trailing cable (W3Z71-50032) from the Formatter PCA (J1009) to the Carriage PCA is undamaged and correctly connected.
2. Replace the Trailing cable (W3Z71-50032) if needed. (32V-diagnostic LED of the Formatter PCA ON and the Carriage PCA OFF.)

-or-
Replace the Carriage PCA if needed. (32V-diagnostic LED of the Formatter PCA ON and the Carriage PCA ON.)
3. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Trailing cable presence status is OK.
4. If the problem persists, replace the Formatter PCA.
5. If the problem persists, replace the Mechatronics PCA.

0086-0001-0009 – Carriage – Trailing cable connector/cable presence

Trailing cable connector/cable presence.

Call agent

1. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Trailing cable presence status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Trailing cable (W3Z71-50032) from the Formatter PCA to the Carriage PCA is undamaged and correctly connected.
2. Check that the VPS cable (T8W16-50038) from the Formatter PCA to the Mechatronics PCA is undamaged and correctly connected.
3. Check the 32V-diagnostic LED of the Carriage PCA.
4. Check the 32V-diagnostic LED of the Formatter PCA.

5. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Trailing cable presence status is OK.
6. Replace the VPS cable (T8W16-50038) if needed. (32V-diagnostic LED of the Formatter PCA OFF)

-or-

Replace the Trailing cable (W3Z71-50032) if needed. (32V-diagnostic LED of the Formatter PCA ON and the Carriage PCA OFF)

-or-

Replace the Carriage PCA if needed. (32V-diagnostic LED of the Formatter PCA ON and the Carriage PCA ON)
7. If the problem persists, replace the Formatter PCA.
8. If the problem persists, replace the Mechatronics PCA.

0086-0002-0004 – Carriage – Carriage PCA comms error

Carriage PCA internal communications error.

Call agent

1. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Bulli comm to Carriage Board status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the printer has the latest firmware. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Replace the Trailing cable (W3Z71-50032) if needed. (32V-diagnostic LED of the Formatter PCA ON and the Carriage PCA OFF)

-or-

Replace the Carriage PCA if needed. (32V-diagnostic LED of the Formatter PCA ON and the Carriage PCA ON.)
3. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Bulli comm to Carriage Board status is OK.
4. If the problem persists, replace the Formatter PCA.

0086-0002-0054 – Carriage – Carriage PCA voltage failure

Carriage PCA output voltage failure.

Call agent

1. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Carriage voltages status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Trailing cable (W3Z71-50032) from the Formatter PCA (J1009) to the Carriage PCA is undamaged and correctly connected.
2. Check that the VPS cable (T8W16-50038) from the Formatter PCA to the Mechatronics PCA is undamaged and correctly connected.
3. Check the 32V-diagnostic LED of the Carriage PCA.
4. Check the 32V-diagnostic LED of the Formatter PCA.
5. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Carriage voltages status is OK.
6. Replace the VPS cable (T8W16-50038) if needed. (32V-diagnostic LED of the Formatter PCA OFF)
-or-
Replace the Trailing cable (W3Z71-50032) if needed. (32V-diagnostic LED of the Formatter PCA ON and the Carriage PCA OFF)
-or-
Replace the Carriage PCA if needed. (32V-diagnostic LED of the Formatter PCA ON and the Carriage PCA ON.)
7. Replace the Carriage PCA if needed.
8. If the problem persists, replace the Formatter PCA.

0086-0002-0067 – Carriage – Carriage PCA USING_DEBUGGING_CODE

Carriage PCA USING_DEBUGGING_CODE.

Call agent

1. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Carriage PCA status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the printer has the latest firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Run the **0001-03 E-box - Check disk** diagnostic and check if the Hard disk status is OK.
3. Replace the Carriage PCA if needed.
4. Change the Hard disk using the **0001-04 E-box - Rest HDD to be removed** diagnostic if needed.

0086-0002-0068 – Carriage – Carriage PCA INVALID_BOOTLOADER_VERSION

Carriage PCA INVALID_BOOTLOADER_VERSION.

Call agent

1. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Carriage PCA status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the printer has the latest firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Run the **0001-03 E-box - Check disk** diagnostic and check if the Hard disk status is OK.
3. Replace the Carriage PCA if needed.
4. Change the Hard disk using the **0001-04 E-box - Rest HDD to be removed** diagnostic if needed.

0086-0002-0069 – Carriage – Carriage PCA EXECUTION_ERROR

Carriage PCA EXECUTION_ERROR.

Call agent

1. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Carriage PCA status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the printer has the latest firmware version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Run the **0001-03 E-box - Check disk** diagnostic and check if the uC code for the Carriage hardware is properly detected.
3. Replace the Carriage PCA if needed.
4. Change the Hard disk using the **0001-04 E-box - Rest HDD to be removed** diagnostic if needed.

0086-0002-0093 – Carriage – Carriage PCA communication uC-FPGA error

Carriage PCA communication uC-FPGA error.

Call agent

1. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Carriage PCA status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Trailing cable presence status is OK.
2. Replace the Carriage PCA if needed.
3. Replace the Formatter PCA if needed.

0086-0002-0093 – Carriage – Carriage PCA communication FPGA issue

Carriage PCA has issue with FPGA's communication

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Carriage FPGA link status is OK.
2. Replace the Carriage PCA if needed.

0086-0002-0094 – Carriage – Carriage PCA communication issue between the Formatter and the Carriage PCA FPGA

Carriage PCA has an issue in the communication between the Carriage PCA FPGA to the Formatter.

Call agent

1. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Carriage PCA FPGA to Formatter status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Carriage PCA FPGA to Formatter status is OK.
2. Replace the Carriage PCA if needed.
3. Replace the Formatter PCA if needed.

0086-0003-0082 – Carriage – Encoder strip dirty

Carriage movement failure due to encoder strip dirty.

Call agent

1. Check that the carriage movement is not jammed.
2. Clean the encoder strip if possible.
3. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the carriage movement is not jammed.
2. Check encoder strip is not dirty. Clean it, if possible.
3. Check that the carriage encoder is unbroken, undamaged, and properly connected.
4. Replace the encoder strip.
5. Replace the carriage encoder.

0086-0005-0009 – Carriage – Line sensor connector/cable presence

Line sensor connector/cable presence.

Call agent

1. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Line sensor status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Line sensor is undamaged.
2. Check that the Line sensor cable (Q5669-80005) is properly connected to the Carriage PCA and change it if needed.
3. Replace the Line sensor if needed.
4. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Line sensor status is OK.
5. If the problem persists, replace the Carriage PCA.
6. Replace the Formatter PCA if needed.
7. Replace the Mechatronics PCA if needed.

0086-0005-0043 – Carriage – Line sensor memory failure

Line sensor memory failure.

Call agent

1. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Line sensor status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Line sensor is undamaged.
2. Check that the Line sensor cable (Q5669-80005) is properly connected to the Carriage PCA and change it if needed.
3. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Line sensor status is OK.

For HP authorized personnel only

4. Replace the Line sensor if needed.
5. If the problem persists, replace the Carriage PCA.
6. Replace the Formatter PCA if needed.
7. Replace the Mechatronics PCA if needed.

0086-0005-0046 – Carriage – Line sensor unable to calibrate

The value obtained by the line sensor calibration cannot be found.

Call agent

1. Check that the paper loaded is suitable for calibration.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the paper loaded is suitable for calibration.
2. Check the printhead health.
3. Check that the line sensor to the Carriage PCA cable (Q5669-80005) is unbroken, undamaged, and properly connected.
4. Replace the cable (Q5669-80005) or the connector as needed.
5. Replace the line sensor.
6. Replace the Carriage PCA.

0086-0005-0065 – Carriage – Line sensor distance check failure

Line sensor distance check failure.

Call agent

1. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Line sensor status is OK.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Line sensor is undamaged.
2. Check that the Line sensor cable (Q5669-80005) is properly connected to the Carriage PCA and change it if needed.
3. Run the **0086-01 Carriage - Check electronics** diagnostic and check if the Line sensor status is OK.
4. Replace the Line sensor if needed.
5. If the problem persists, replace the Carriage PCA.

6. Replace the Formatter PCA if needed.
7. Replace the Mechatronics PCA if needed.

90 – Firmware

0090-0001-0097 – FW – SYSMGR-BABYSIT babysit threat lost

SYSMGR-BABYSIT babysit threat lost.

Call agent

1. Use the power switch at the rear to turn off the printer, then disconnect the power cord. Reconnect the power cord and turn on the printer.
2. Update the firmware. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
3. Note all the information available by pressing on the touchscreen while viewing the system error screen; or, preferably, provide the printer log. See Obtaining the printer log and the diagnostics package.

Service Engineer

1. Reboot the printer
2. Update the firmware if needed. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
3. Change the Formatter PCA if needed.

0090-0001-0099 – FW – SYSMGR-BABYSIT process lost

SYSMGR-BABYSIT process lost.

Call agent

1. Use the power switch at the rear to turn off the printer, then disconnect the power cord. Reconnect the power cord and turn on the printer.
2. Update the firmware. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
3. Note all the information available by pressing on the touchscreen while viewing the system error screen; or, preferably, provide the printer log. See [Appendix B: Obtaining the printer log and the diagnostics package on page 175](#).

Service Engineer

1. Reboot the printer
2. Update the firmware if needed. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
3. Change the Formatter PCA if needed.

0090-0004-0080 – FW – FSM-FSM transition not found

FSM-FSM generic issue.

Call agent

1. Check that the printer has the latest firmware; if not, update it. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Upgrade the firmware to the latest version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Run the **Settings ► System ► Restore factory settings** option in the main menu and check if the system error is displayed after rebooting the printer.
3. Clean the HDD using the Front Panel tool.
4. Change the Hard disk using the **0001-04 E-box - Rest HDD to be removed** diagnostic if needed.
5. Change the Formatter PCA if needed.

0090-0006-0084 – FW – (EH-CIO) connectivity JDI failure after cold reset

(EH-CIO) connectivity JDI failure after cold reset.

Call agent

1. Check that the printer has the latest firmware; if not, update it. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the printer has the latest firmware. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Check that the JDI PCA is undamaged and correctly connected.
3. Change the JDI PCA if needed.
4. Run the **Settings ► Connectivity ► Restore connectivity factory settings** option in the main menu and check if the system error is displayed approximately 5 minutes after the main menu appears in the Front Panel.
5. Run the **Settings ► System ► Restore factory settings** option in the main menu and check if the system error is displayed after rebooting the printer.
6. Clean the HDD using the Front Panel tool.
7. Change the Hard disk using the **0001-04 E-box - Rest HDD to be removed** diagnostic if needed.
8. Change the Formatter PCA if needed.

0090-0006-0086 – FW – (EH-CIO) connectivity heart beat stop / process lost

(EH-CIO) connectivity heart beat stop / process lost.

Call agent

1. Check that the printer has the latest firmware; if not, update it. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the printer has the latest firmware. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Check that the JDI PCA is undamaged and correctly connected.
3. Change the JDI PCA if needed.
4. Run the **Settings ► Connectivity ► Restore connectivity factory settings** option in the main menu and check if the system error is displayed approximately 5 minutes after the main menu appears in the Front Panel.
5. Run the **Settings ► System ► Restore factory settings** option in the main menu and check if the system error is displayed after rebooting the printer.
6. Clean the HDD using the Front Panel tool.
7. Change the Hard disk using the **0001-04 E-box - Rest HDD to be removed** diagnostic if needed.
8. Change the Formatter PCA if needed.

0090-0007-0005 – FW – EH-PDL timeout

EH-PDL timeout.

Call agent

1. Check that the printer has the latest firmware; if not, update it. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Upgrade the firmware to the latest version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Check the customer's network to ensure that the network speed is adequate and that there are no breaks in communication.
3. Run the **Settings ► System ► Restore factory settings** option in the main menu and check if the system error is displayed after rebooting the printer.
4. Clean the HDD using the Front Panel tool.
5. Change the Hard disk using the **0001-04 E-box - Rest HDD to be removed** diagnostic if needed.
6. Replace the Formatter PCA if needed.

0090-0007-0044 – FW – EH-PDL out of memory – No memory to start PDL

EH-PDL out of memory.

Call agent

1. Check that the printer has the latest firmware; if not, update it. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Run the **0001-05 E-box - Delete job manager queue** diagnostic.
2. Clean the HDD using the tool of the FP.
3. Change the Hard disk using the **0001-04 E-box - Rest HDD to be removed** diagnostic if needed.
4. Upgrade the firmware to the latest version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).

0090-0007-0082 – FW – EH-PDL file locked/protected for printing

EH-PDL file locked/protected for printing.

Call agent

1. Check that the PDF job that is trying to print has no password.
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Upgrade the firmware to the latest version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Change the Hard disk using the **0001-04 E-box - Rest HDD to be removed** diagnostic if needed.
3. Run the **0001-03 E-box - Check disk** diagnostic and check if the Hard disk status is OK.
4. Replace the Formatter PCA if needed.

0090-0007-0085 – FW – EH-PDL disk full

EH-PDL disk full.

Call agent

1. Check that the printer has the latest firmware; if not, update it. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Run the **0001-05 E-box - Delete job manager queue** diagnostic.
2. Clean the HDD using the tool of the FP.
3. Change the Hard disk using the **0001-04 E-box - Rest HDD to be removed** diagnostic if needed.
4. Replace the Formatter PCA if needed.

0090-0007-0087 – FW – EH-PDL PS fonts missing

EH-PDL PS fonts missing.

Call agent

1. Check that the printer has the latest firmware; if not, update it. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Upgrade the firmware to the latest version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Run the **Settings ► System ► Restore factory settings** option in the main menu and check if the system error is displayed after rebooting the printer.
3. Change the Hard disk using the **0001-04 E-box - Rest HDD to be removed** diagnostic if needed.

0090-0007-0089 – FW – EH-PDL unexpended end of job

EH-PDL unexpended end of job.

Call agent

1. Check that the printer has the latest firmware; if not, update it. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check the customer's network to ensure that the network speed is adequate and that there are no breaks in communication.
2. Run the **0001-05 E-box - Delete job manager queue** diagnostic.
3. Upgrade the firmware to the latest version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).

0090-0007-0094 – FW – EH-PDL virtual memory issue

EH-PDL virtual memory issue.

Call agent

1. Check that the printer has the latest firmware; if not, update it. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Run the **0001-05 E-box - Delete job manager queue** diagnostic.
2. Clean the HDD using the tool of the FP.
3. Change the Hard disk using the **0001-04 E-box - Rest HDD to be removed** diagnostic if needed.
4. Upgrade the firmware to the latest version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).

0090-0007-0096 – FW – EH-PDL parse error

EH-PDL parse error.

Call agent

1. Check that the printer has the latest firmware; if not, update it. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Clean the HDD using the tool of the FP.
2. Change the Hard disk using the **0001-04 E-box - Rest HDD to be removed** diagnostic if needed.
3. Upgrade the firmware to the latest version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
4. Replace the Formatter PCA if needed.

0090-0008-0080 – FW – EH-VPM Raster configure failed / JPEG library error / Image swath / Open page

EH-VPM generic issue.

Call agent

1. Check that the printer has the latest firmware; if not, update it. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Clean the HDD using the tool of the FP.
2. Change the Hard disk using the **0001-04 E-box - Rest HDD to be removed** diagnostic if needed.
3. Upgrade the firmware to the latest version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
4. Replace the Formatter PCA if needed.

0090-0009-0080 – FW – EH-FS File copy / Check disk / Make directory / Remove directory / Open directory / Close directory / Read directory / Rewind directory / File stat / File delete / File rename / File open / File close / File read / File write / File seek / File ioctl / Async file read / Async file write / Volume stat

EH-FS generic issue.

Call agent

1. Check that the printer has the latest firmware; if not, update it. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Clean the HDD using the tool of the FP.
2. Change the Hard disk using the **0001-04 E-box - Rest HDD to be removed** diagnostic if needed.
3. Upgrade the firmware to the latest version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
4. Replace the Formatter PCA if needed.

0090-0010-0080 – FW – EH-JS Generic issue

EH-JS generic issue.

Call agent

1. Check that the printer has the latest firmware; if not, update it. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Clean the HDD using the tool of the FP.
2. Change the Hard disk using the **0001-04 E-box - Rest HDD to be removed** diagnostic if needed.
3. Upgrade the firmware to the latest version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
4. Replace the Formatter PCA if needed.

0090-0012-0083 – FW – EH-PM File format issue/not supported PDL

EH-PM File format issue/not supported PDL.

Call agent

1. Check if the job that is trying to print has the proper format and is supported by the software.
2. Check that the printer has the latest firmware; if not, update it. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
3. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Run the **0001-05 E-box - Delete job manager queue** diagnostic.
2. Upgrade the firmware to the latest version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).

0090-0018-0004 – FW – Unable to connect to FP / FP connection lost

Communication error.

Call agent

1. Check that the Front Panel is undamaged and not broken.
2. Check that the printer has the latest firmware; if not, update it. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
3. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Front Panel flat cable (T8W16-50048) is properly connected and all pins from it are in proper conditions. Change it if needed.
2. Upgrade the firmware to the latest version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
3. Replace the Front Panel if needed.
4. Replace the Formatter PCA if needed.

0090-0085-0042 – FW – Tupperware error MORE_THAN_ONE_TUPPERWARE_IN_USB_ROOT

Tupperware error MORE_THAN_ONE_TUPPERWARE_IN_USB_ROOT

Service Engineer

- ▲ Remove the USB and make sure that there is only one tupperware.

0090-0085-0069 – FW – Tupperware error INCORRECT_TUPPERWARE

Tupperware error INCORRECT_TUPPERWARE.

Service Engineer

- ▲ Remove the USB and make sure that there is only one tupperware.

0090-0090-0003 – FW – General FW/HW mismatch

General FW/HW mismatch.

Call agent

1. Check that the printer has the latest firmware; if not, update it. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Upgrade the firmware to the latest version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
2. Change the Hard disk using the **0001-04 E-box - Rest HDD to be removed** diagnostic if needed.

99 – System (Only for SKUs with Y-cutter)

0099-0001-0080 – System license error

Printer has detected a license issue related to Gloss Enhancer upgrade.

Call agent

1. Uninstall the Gloss Enhancer upgrade.
2. Check that the printer already has the latest firmware installed; if not, update it. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
3. Install the Gloss Enhancer upgrade.
4. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the Gloss Enhancer license is already installed.
2. Uninstall the Gloss Enhancer upgrade.
3. Upgrade the firmware to the latest version. See [Appendix A: Emergency firmware upgrade with USB flash drive on page 174](#).
4. Install the Gloss Enhancer upgrade.

1 – Accessory (Only for SKUs with Y-cutter)

65 – TUR

1065-0000-0002 – TUR – Presence check failure, initialization error – while printing/powered off

TUR (PCA) presence check failure, initialization error.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Check that the TUR cable is properly connected to the Mechatronics PCA.
2. Replace the TUR cable if needed.
3. Check that the TUR PCA is not broken and undamaged.
4. Replace the TUR PCA if needed.
5. If the problem persists, replace the Mechatronics PCA.

1065-0000-0005 – TUR – Timeout – Early media jam / Media jam

TUR (PCA) timeout.

Call agent

- ▲ If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Service Engineer

1. Make sure that the TUR motor path is clear. Remove any visible obstacles (screws, plastic parts, etc.) restricting the movement of the TUR motor.
2. Check that the motor, sensors, encoder and connectors are properly connected, not broken, not dirty and undamaged.
3. Replace the TUR parts (TUR motor, PCA) if needed.
4. If the problem persists, replace the Mechatronics PCA.

8XXX-XXXX-0000 Internal printer firmware error

Where X can be any hexadecimal value.

Call agent

1. Check that the printer already has the latest firmware installed.
2. Restart the printer and update the firmware to the latest version, if necessary.
3. If, after rebooting, the issue persists, then your Support representative is needed to repair the printer on site.

Appendix A: Emergency firmware upgrade with USB flash drive

When it is not possible to perform a firmware upgrade using the normal procedures (for instance, in case of a System Error and the Embedded Web Server is unavailable), it is possible to perform an emergency firmware upgrade using a USB flash drive. Follow the next steps:

1. Copy a valid FMW firmware file onto a USB flash drive (formatted in FAT32). This file is provided in DesignJet Online. Remove all other contents in the flash drive.
2. Turn off the printer.
3. Connect the USB flash drive to the USB port next to the Front Panel.
4. Turn on the printer and follow the instruction on the Front Panel.

Appendix B: Obtaining the printer log and the diagnostics package

The printer keeps an internal log of its own actions. When a system error occurs, the printer log can help to find the cause and the solution. By default, whenever it restarts, the printer deletes the current log and starts a new one, to avoid using a lot of hard disk space. Once the logs have been captured, the information can then be escalated to HP division for analysis.

Retrieving the diagnostic package

There are two ways of retrieving the diagnostic packages:

- From the Front Panel with a USB flash drive.
- From the Embedded Web Server.

When you have obtained the information, it should be attached to the customer case.

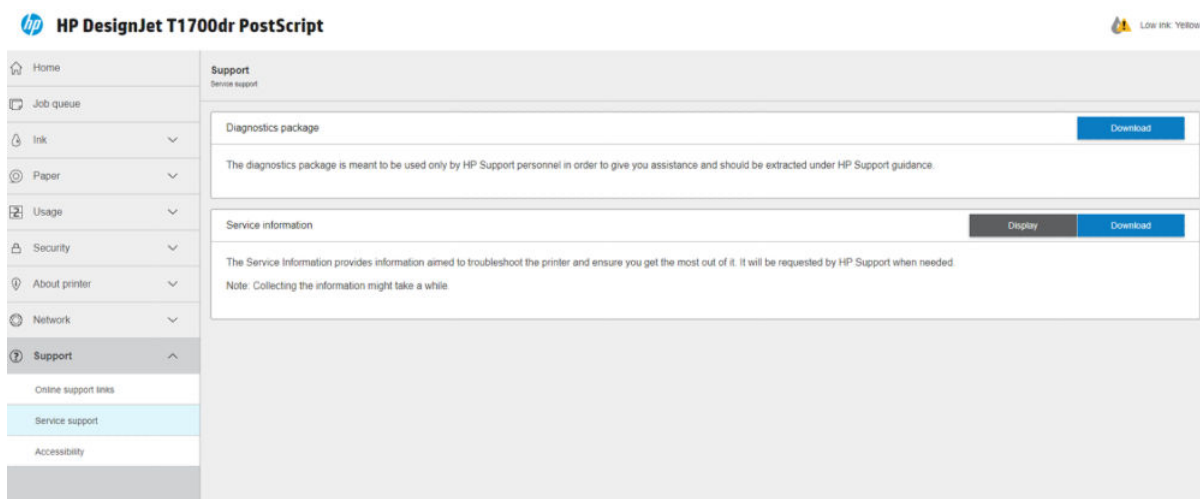
Retrieving the diagnostic package through the Front Panel method

This method works only if you have a standard USB flash drive. If you do not have a flash drive, use the Embedded Web Server method.

1. Take a standard USB flash drive, formatted as FAT32.
2. Create an empty file in the USB flash drive (right-click, **New ► Text Document**) and name it **pdipu_enable.log**. Then insert the USB flash drive into the printer. Once the printer recognizes the USB, a short beep will be emitted.
3. The printer starts to copy the diagnostic package to the USB flash drive. You may hear several short beeps for each file copied to the USB flash drive.
4. Wait until the message **Finished** appears. You will hear one long beep, that means the entire diagnostics package and the printer log have been copied to the USB flash drive. You can now remove the drive.
5. It will have created a folder with the name *part number_serial number_time stamp*, and in this folder you'll find one or more files with the extension **trb**. As the name of the folder contains the serial number, you can reuse the flash drive for different products and the information will not be lost.
6. Disable the logs in the printer after the diagnostic package has been retrieved. See [Disabling the logs in the printer through the touch control screen on page 176](#).

Retrieving the diagnostic package through the Embedded Web server method

1. You can access the Embedded Web Server by typing the IP address of the printer in a Web browser. In the Support menu, click Service support to display the following page.



2. You can download the package by clicking the **Download** button under the Diagnostics package section of the page.
3. When you have finishing using the extended diagnostics package, remember to disable it; otherwise it could affect printer performance or even cause undesirable side-effects..

Retrieving logs without the diagnostic package

1. Turn off the printer with the Power key below the Front Panel.
2. Enable logs.
3. After **DO NOT REBOOT** is displayed, retrieve at least the current printer log from the following URL:
`http:<' IP address'>hp/device/3432/8828/tmp/`. Click the file once to select it, then right-click and select Save target as.
4. The printer.log file contains a log of the printer activity since it was last restarted. Typically, you will find a file called printer_previous.log, that contains the printer.log as it was before the last restart. Previous logs are compressed and stored in .gz files whose names contain the date and time of the printer restart. You may wish to download some of these files as well.
5. Disable the logs in the printer (see next).

Disabling the logs in the printer through the touch control screen

1. Turn off the printer with the Power key below the Front Panel.
2. Press and release the Power Key to switch on the printer.
3. Wait for about 10 seconds until the 6 buttons on the Front Panel come on and then press and release twice the **HELP** button.
4. Wait for the unit to complete the booting process. The logs are disabled.
5. Disable the logs in the printer (see next).

Appendix C: How to check the display list memory for an HP-GL/2 job

The display list memory is the memory the printer needs to process an HP-GL/2 file.


If the display list memory that the printer needs is greater than the dedicated file processing memory available, the printer will show an out-of-memory message SE 0090-0007-0094.

Table 3-1 Different memory capacities

Printer Series	Virtual memory ¹	Physical memory	Hard drive
T1700 & T1708	32GB	N/A	TBC
Z6 & Z9+	32GB	N/A	TBC

¹ Dedicated file processing memory is a partition of the internal hard disk that enables file processing. This is the maximum display list memory that an HP-GL/2 job can use.

Check the display list memory

1. Restart the printer, to clear the previous display list.
 2. Send the job that you want to check to the printer.
-
-  **TIP:** You don't need to print the job, the print preview is enough.
-
3. Generate the diagnostic package using the Embedded Web Server (from the **Support** tab, not the extended diagnostic package).
 4. Open the diagnostic package and go to the file *.trb\SESSION.CURRENT\tmp\ls_pdl.txt.
 5. Sum each row (HPG.0, HPG.1, HPG.X, ...) to get the display list memory needed for this job.
 - Each HPG vector can hold 2GB.
 - Each row from HPG.0 to HPG.15 is a vector of dedicated file processing memory.
 - Each row shows units in bytes. See the example below.

Example:

```
total 1480
-rw-rw-rw- 1 root root 10485760 Jan 4 11:09 HPG.0
-rw-rw-rw- 1 root root

0 Jan 4 11:09 HPG.1
-rw-rw-rw- 1 root root 0 Jan 4 11:09 HPG.10
-rw-rw-rw- 1 root root 0 Jan 4 11:09 HPG.11
-rw-rw-rw- 1 root root 0 Jan 4 11:09 HPG.12
-rw-rw-rw- 1 root root 0 Jan 4 11:09 HPG.13
-rw-rw-rw- 1 root root 0 Jan 4 11:09 HPG.14
-rw-rw-rw- 1 root root 0 Jan 4 11:09 HPG.15
-rw-rw-rw- 1 root root 0 Jan 4 11:09 HPG.2
-rw-rw-rw- 1 root root 0 Jan 4 11:09 HPG.3
-rw-rw-rw- 1 root root 0 Jan 4 11:09 HPG.4
-rw-rw-rw- 1 root root 0 Jan 4 11:09 HPG.5
-rw-rw-rw- 1 root root 0 Jan 4 11:09 HPG.6
-rw-rw-rw- 1 root root 0 Jan 4 11:09 HPG.7
```

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```
-rw-rw-rw- 1 root root 0 Jan 4 11:09 HPG.8  
-rw-rw-rw- 1 root root 0 Jan 4 11:09 HPG.9
```

```
Display list => HPG.0 10485760 bytes
```

Appendix D: Correspondence between Motor drivers and motors

Each driver in the Mechatronics PCA may control more than one motor. This is the list of motors controlled by each driver.

- Driver 1
 - Scan-axis motor
 - Primer motor
 - SVS motor
- Driver 2
 - Rewinder motor (top)
 - PRS
- Driver 3
 - Paper advance motor
 - Starwheels motor
 - Auto Pinch motor
- Driver 4
 - Rewinder motor (bottom)












4 Diagnostics Menu


- [Entering the Diagnostic menu \(service bootmode\)](#)
- [0001 E-box](#)
 - [0001-01 Check main electronics](#)
 - [0001-02 Check connectivity](#)
 - [0001-03 Check disk](#)
 - [0001-04 Reset HDD to be removed](#)
 - [0001-05 Delete job manager queue](#)
 - [0001-06 Enable extended log for next boot](#)
 - [0001-07 Hard reset JDI](#)
 - [0001-08 Set printer installed](#)
 - [0001-09 Activate DFE Power State](#)
- [0021 Service station – SVS](#)
 - [0021-01 Check electronics](#)
 - [0021-02 Check Service station motor](#)
 - [0021-03 Check Primer motor](#)
 - [0021-04 Check Aerosol fan \(Only for SKUs with Y-cutter\)](#)
- [0022 ISS](#)
 - [0022-01 Check electronics](#)
 - [0022-02 Check mechatronics](#)
 - [0022-03 Check Ink delivery subsystem](#)
 - [0022-04 Set Ink tubes as purged/empty](#)
- [0046 Secure electronics](#)
 - [0046-01 Check electronics](#)
- [0060 Media input](#)

For HP authorized personnel only


- [0060-01 Check electronics](#)
- [0060-02 Check mechatronics](#)
- [0060-03 Check sensors](#)
- [0065 Media path](#)
 - [0065-01 Check electronics](#)
 - [0065-02 Check Grid roller motor](#)
 - [0065-03 Check D-pinch motor](#)
 - [0065-04 Check Scan motor](#)
 - [0065-05 Check Starwheels](#)
 - [0065-06 Check PPS](#)
 - [0065-07 Check sensors](#)
 - [0065-08 Media advance calibration reset](#)
- [0070 Y-CUTTER \(Only for SKUs with Y-cutter\)](#)
 - [0070-01 Check electronics](#)
 - [0070-02 Check mechatronics](#)
- [0080 User Interface](#)
 - [0080-01 Check cover status](#)
 - [0080-02 Check Speaker](#)
- [0086 Carriage](#)
 - [0086-01 Check electronics](#)
 - [0086-02 Check mechatronics](#)
 - [0086-03 Check X-cutter](#)
- [0099 Utilities](#)
 - [0099-01 EEROM reset utility](#)


Entering the Diagnostic menu (service bootmode)


1. Ensure that the printer is switched off using the **Power** key on the side of the front panel, and not with the power switch at the rear of the printer.
2. Press and release the **Power** key to switch on the printer.
3. Wait for the  icon to appear.
4. Tap the  icon, which then begins to flash.
5. Wait for the , ,  icons to appear.
6. Tap and release three icons, one after another, in this order:
 - , ,  to use the diagnostics as a customer.
 - , ,  to use the diagnostics as a service engineer.

 **IMPORTANT:** Do not press the icons at the same time: press each icon and release it before pressing the next one

7. All the six icons at the sides of the front panel will blink four times
8. Wait until the printer completes the initialization sequence and shows the **Diagnostics** menu
9. In the **Diagnostics** menu, scroll up or down by sliding your finger up or down the front panel, and press an option to select it.

 **NOTE:** The diagnostic tests and utilities work in a special mode that does not require the full initialization of the printer. Therefore, whenever you have finished a test, you must turn off the printer and turn it on again before trying to print or before executing another test

 **NOTE:** In some cases, the front panel may not respond to a quick tap of an icon. When tapping an icon, it is best to tap it deliberately for about 1 second

 **NOTE:** If the printer hangs up during a test, go back to step 1 above and restart from the beginning

The **Diagnostics** menu can vary according to the user. The following table shows which diagnostics are available for each kind of user (service or customer)

Subsystem	Code	Diagnostic	Customer	Service
0001-E-Box	0001-01	Check main EE	Y	Y
	0001-02	Check connectivity	Y	Y
	0001-03	Check disk	Y	Y
	0001-04	Reset HDD to be removed	N	Y
	0001-05	Delete Job Manager Queue	N	Y
	0001-06	Enable extended log for next boot	N	Y

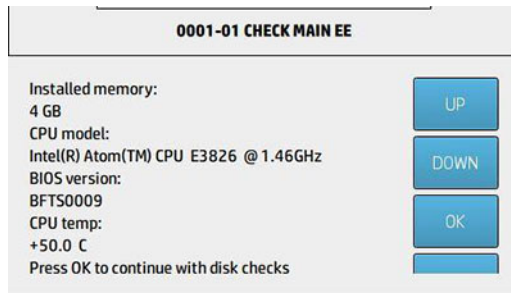
Subsystem	Code	Diagnostic	Customer	Service
	0001-07	Hard reset JDI	N	Y
	0001-08	Set printer installed	Y	Y
	0001-09	Activate DFE Power State	Y	Y
0021-Service station	0021-01	Check electronics	Y	Y
	0021-02	Check service station motor	Y	Y
	0021-03	Check primer motor	Y	Y
	0021-04	Check Aerosol fan	Y	Y
0022-Ink supply station	0022-01	Check electronics	Y	Y
	0022-02	Check mechatronics	Y	Y
	0022-03	Check ink delivery subsystem	Y	Y
	0022-04	Set ink tubes as Purged/ Empty	N	Y
0046-Secure electronics	0046-01	Check EE	N	Y
0060-Media input	0060-01	Check electronics	Y	Y
	0060-02	Check mechatronics	Y	Y
	0060-03	Check sensors	Y	Y
0065-Media path	0065-01	Check electronics	Y	Y
	0065-02	Check grid roller motor	Y	Y
	0065-03	Check Auto Pinch motor	Y	Y
	0065-04	Check Scan motor	Y	Y
	0065-05	Check starwheels	Y	Y
	0065-06	Check PPS	Y	Y
	0065-07	Check sensors	Y	Y
	0065-08	Media advance calibration reset	N	Y
0070-Y-CUTTER	0070-01	Check electronics	Y	Y
	0070-02	Check Mechatronics	Y	Y
0080-User interface	0080-01	Check cover status	Y	Y
	0080-02	Check Speaker	Y	Y
0086-Carriage	0086-01	Check electronics	Y	Y
	0086-02	Check mechatronics	Y	Y
	0086-03	Check X-cutter	Y	Y
0099-Utilities	0099-01	EEROM Reset	Y	Y

0001 E-box

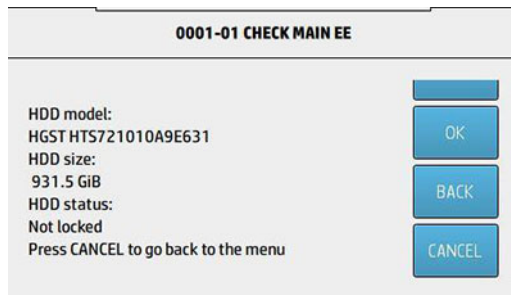
0001-01 Check main electronics

Description: This test checks the single rail PSU voltage, the formatter (processor, RAM, BIOS), the mechatronic PCA and the hard disk status.

1. First, it will show all the formatter information (memory, BIOS, CPU), as seen in the image below.



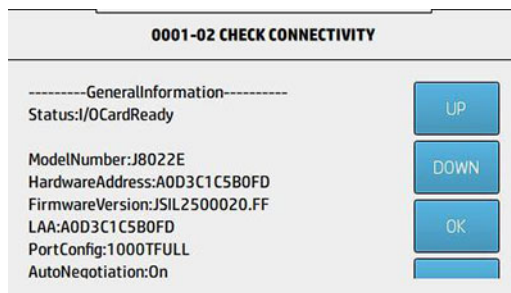
2. Press the **OK** button to continue the process. The HDD information will be shown.

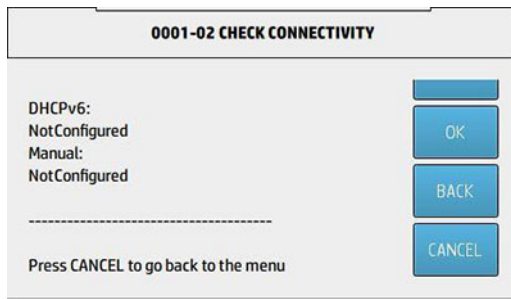


0001-02 Check connectivity

Description: This test checks the connectivity board status.

- ▲ All the network information is displayed on the Front panel.

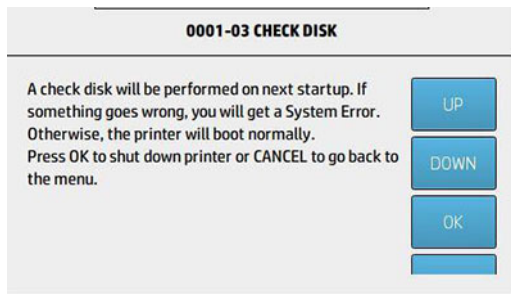




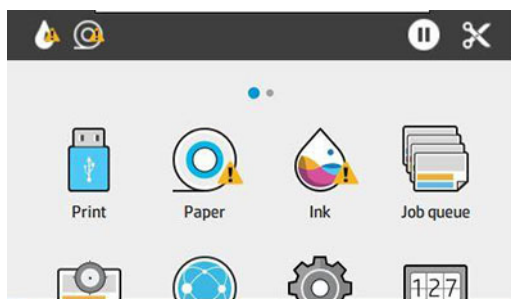
0001-03 Check disk

Description: This test checks whether the hard disk drive is in optimal condition (if the printer has a hard disk drive).

1. A message warning that a boot will be necessary and the way to find out if there is any problem with disks appears on the Front Panel.




2. Press the **OK** button to turn off the printer or the **Cancel** button to go back.
3. After pressing **OK**, the printer will reboot and the main menu will be displayed without any system error if there is no problem with the HDD.



0001-04 Reset HDD to be removed

This utility resets the NVM values found in the HDD, so it can be removed from the printer.

If, for troubleshooting purposes, you install a hard disk drive as a service part, and you want to remove it, run this diagnostic in order to enable the service part to be used again.

 **NOTE:** The hard disk drive and the Central distribution board should never be replaced at the same time, and you should never try to reuse those parts from other printers, the printer will not accept reused parts.

0001-05 Delete job manager queue

This utility deletes the job manager queue.

0001-06 Enable extended log for next boot

This utility activates traces as if it were in developer mode, for the next boot only.

0001-07 Hard reset JDI

This utility resets the connectivity configuration. It deletes some configuration files and data, and generates the clean ones.

0001-08 Set printer installed

This option allows to set whether the printer has been installed.

0001-09 Activate DFE Power State

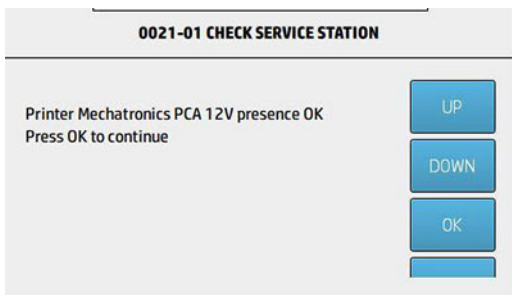
This utility activates the DFE (Digital Front End) to do measurements. Activate it immediately, and deactivate it in the next boot.

0021 Service station – SVS

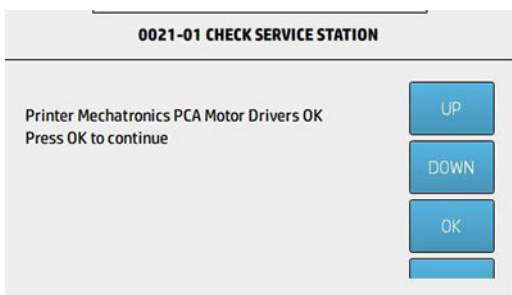
0021-01 Check electronics

Description: This test raises and checks the minimum electronics and connections related to the Service station functionality (Mechatronic PCA, Primer zero presence and Drop detector functionality).

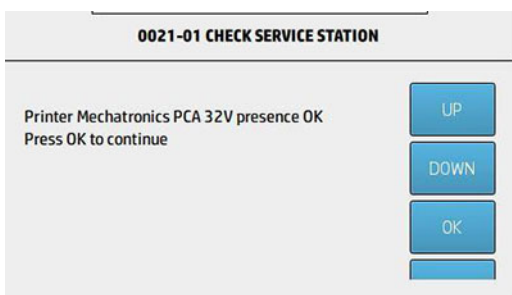
1. This test performs the Printer Mechatronics PCA 12V presence check.



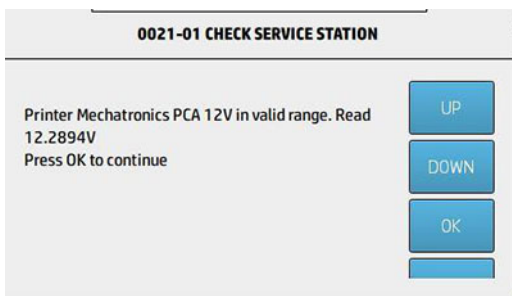
2. It checks the Printer Mechatronics Motor Drivers presence.



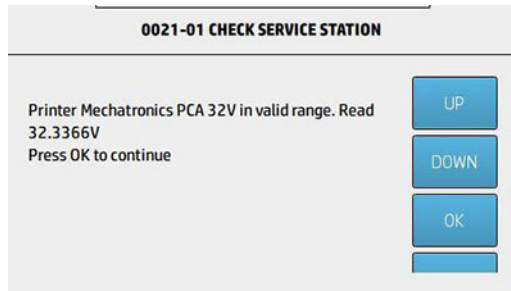
3. It checks the Printer Mechatronics PCA 32V presence.



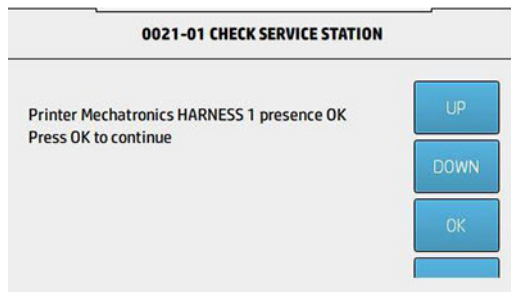
4. It displays the Printer Mechatronics PCA 12V voltage status value.



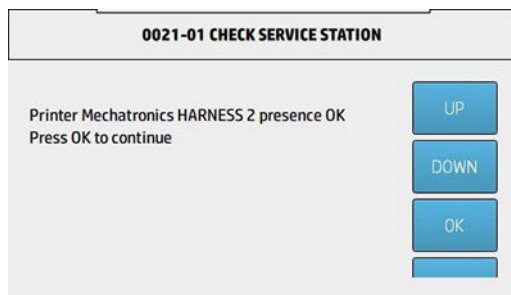
- It displays the Printer Mechatronics PCA 32V voltage status value.



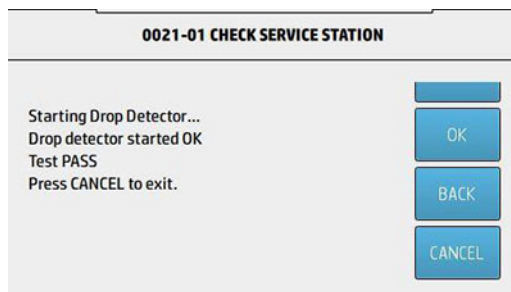
- It checks the presence of the Printer Mechatronics HARNESS 1.



- It checks the presence of the Printer Mechatronics HARNESS 2.



- Finally, it performs the Drop detector check.

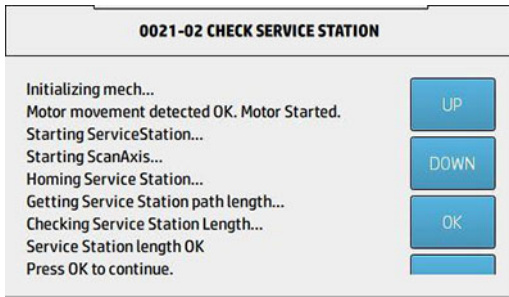


0021-02 Check Service station motor

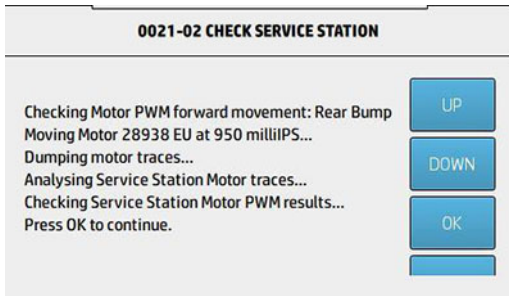
Description: This test checks the Service Station motor and collects all the related PWM data.

 **NOTE:** It may be necessary to raise and test some electronics before the mechatronics testing.

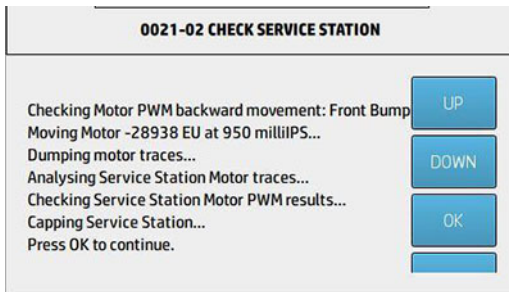
- This test checks first the Service station motor initialization.



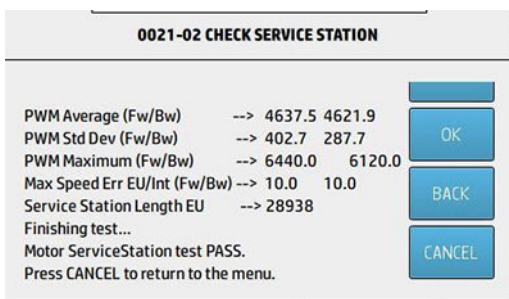
2. Then, it will check the Rear bump PWM forward movement.



3. Finally, it will check the Front bump PWM forward movement.



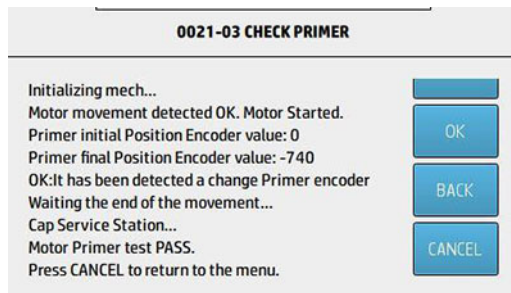
4. All the test results will be displayed in the last screen.



0021-03 Check Primer motor

Description: This test checks the Primer motor and if its behavior is correct, depending of the collected encoder data

- ▲ The system will check the Primer motor movement.



0021-04 Check Aerosol fan (Only for SKUs with Y-cutter)

Description: This test checks if the Aerosol Fan is working correctly.

- ▲ The system will check the Aerosol Fan. It will activate the fan and check its movement.

0022 ISS

0022-01 Check electronics

Description: This test raises and checks the minimum electronics and connections related to the Ink Supply Station functionality. (Mechatronic PCA, ISS PCA, ISS motors and home sensors presence, acumens).

0022-02 Check mechatronics

This test checks the Ink Supply Station mechatronic components (ISS motors, trip sensors).



NOTE: It may be necessary to raise and test some electronics before the mechatronics testing.

0022-03 Check Ink delivery subsystem

1. Test communication with cartridges (6/10).
2. Check Ink supply subsystem (pistons) (6/10).
3. Check cartridges leakage (6/10) or tubes leakage.
4. Show tubes usage.

0022-04 Set Ink tubes as purged/empty

1. **Purged**, select this option only if you have manually purged the ink tubes.
2. **Empty**, select this option to restart the OOB workflow.




NOTE: The recommended workflow is the automatic tube purging process.

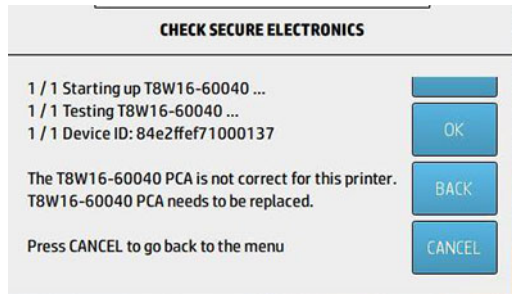
0046 Secure electronics

0046-01 Check electronics

Description: This test checks both the primary and secondary Printer ID PCAs.

- ▲ This test checks if all the devices are compatible with the printer. If there is one device not compatible, the check will ask for a replacement.

 **NOTE:** For SKUs with Y-Cutter, there is a second test step for the Printer ID that is located in the Mechatronics PCA

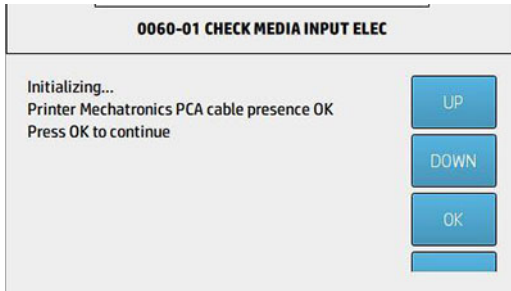


0060 Media input

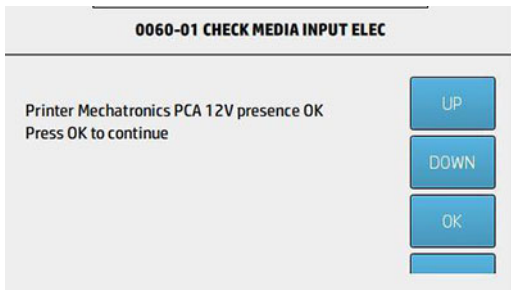
0060-01 Check electronics

Description: This test raises and checks the minimum electronics and connections related to the Media Input functionality (Mechatronic PCA, Rewinder motors presence and Single sheet sensors).

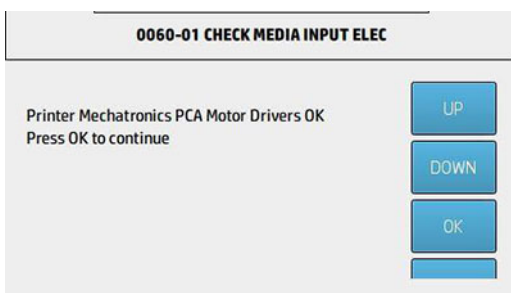
1. This test checks if the Printer Mechatronics PCA cable presence is OK.



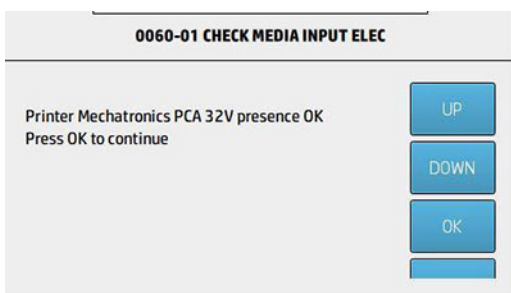
2. It checks if the Printer Mechatronics PCA 12V presence is OK.



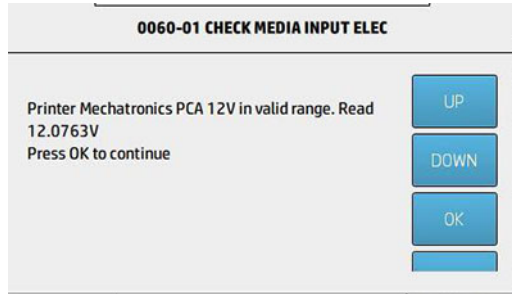
3. It checks if the Printer Mechatronics PCA motor drivers are OK.



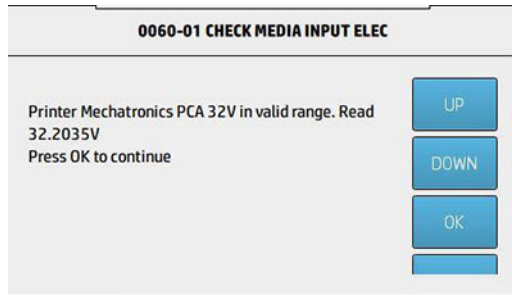
4. It checks if the Printer Mechatronics PCA 32V presence is OK.



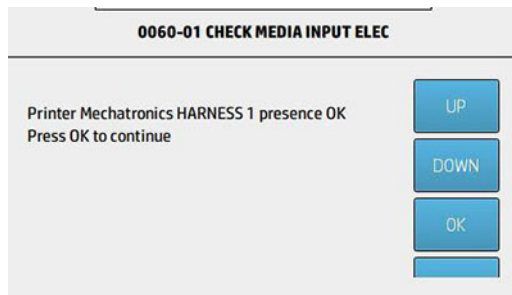
5. It checks if the Printer Mechatronics PCA 12V is in a valid range.



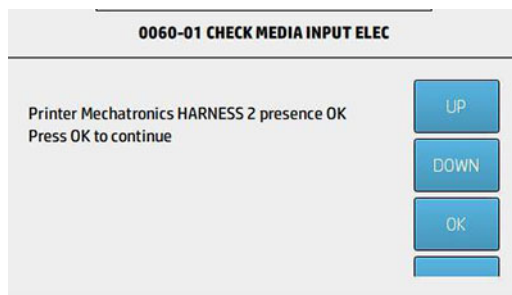
6. It checks if the Printer Mechatronics PCA 32V is in a valid range.



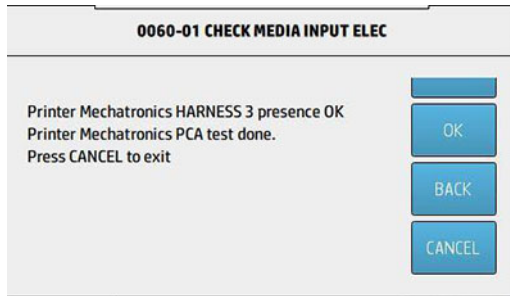
7. It checks if the HARNESS 1 presence is OK.



8. It checks if the HARNESS 2 presence is OK.



9. And finally it checks if the HARNES 3 presence is OK.

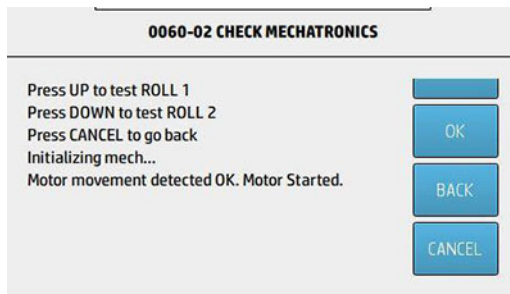


0060-02 Check mechatronics

Description: This test checks the Media Input mechatronics components (Rewinder motors).


 **NOTE:** It may be necessary to raise and test some electronics before the mechatronics testing

- ▲ A screen will appear showing some basic instructions to test both rolls from the printer. If it has been decided to test Roll 1, it will be necessary to press **UP**.

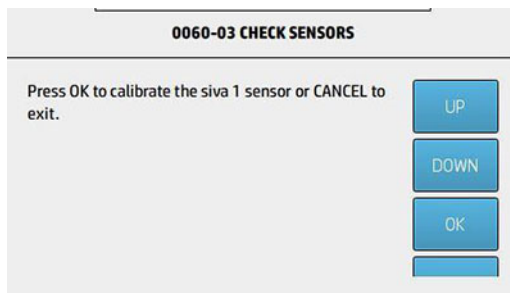


0060-03 Check sensors

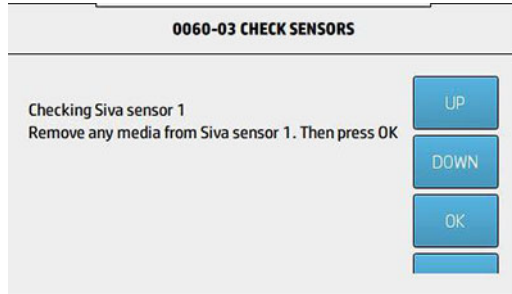
Description: This test checks the Media Input sensors (Single sheet sensors) work properly.

 **NOTE:** It may be necessary to raise and test some electronics before the sensors testing

1. Start the Single sheet sensor 1 calibration.

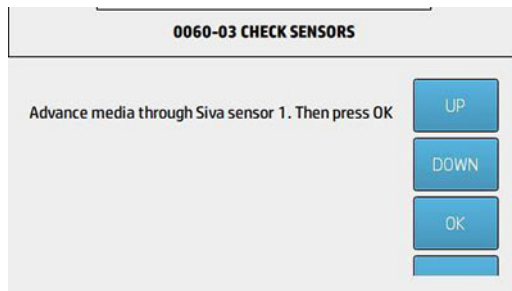


2. Remove any media from the Single sheet sensor 1.

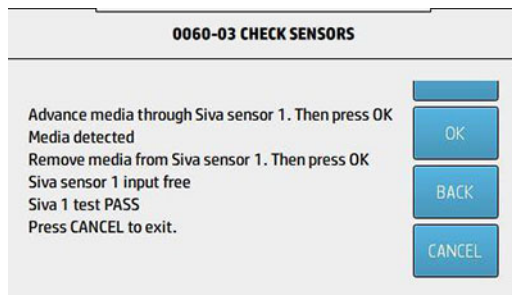


3. Make sure that you have removed all the media from the Single sheet sensor 1 and press **OK**.

4. Place some paper through the Single sheet sensor 1.



5. Make sure that you have placed a paper through the Single sheet sensor 1 and press **OK**.

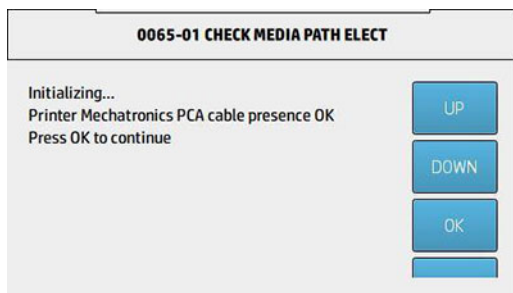


0065 Media path

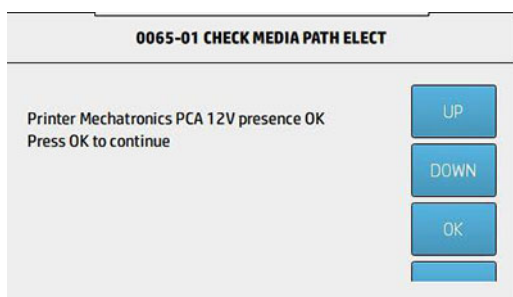
0065-01 Check electronics

Description: This test raises and checks the minimum electronics and connections related to the Media Path functionality. (Mechatronics PCA, Grid roller motor, Auto Pinch motor, Scan axis motor, Starwheels motor, PPS, Analog encoder and OPPS presence).

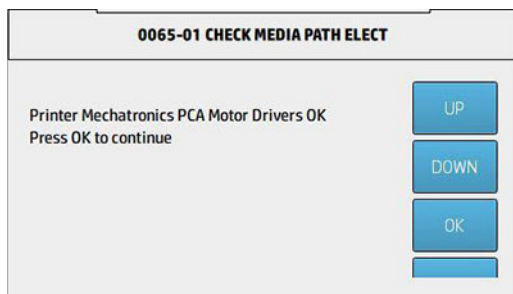
1. It checks if the Printer Mechatronics PCA cable presence is OK.



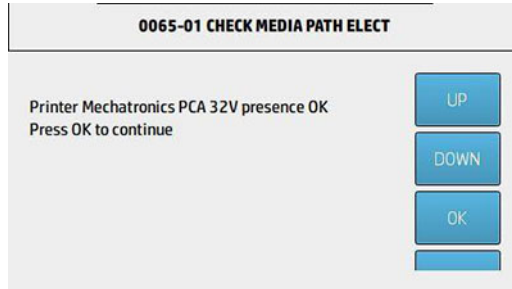
2. It checks if the Printer Mechatronics PCA 12V presence is OK.



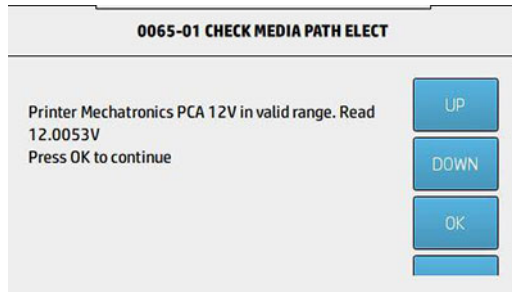
3. It checks if the Printer Mechatronics PCA motor drivers are OK.



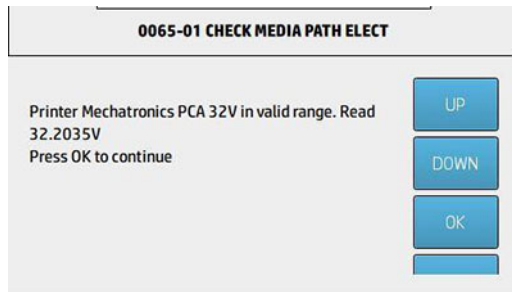
4. It checks if the Printer Mechatronics PCA 32V presence is OK.



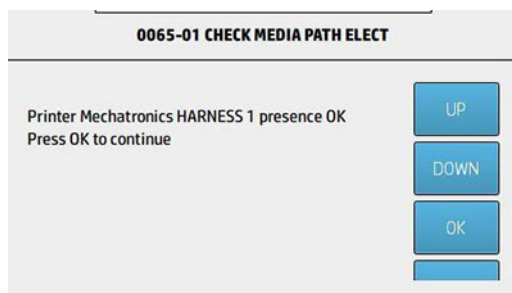
5. It checks if the Printer Mechatronics PCA 12V is a valid range.



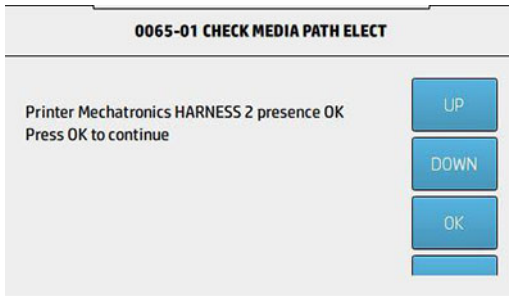
6. It checks if the Printer Mechatronics PCA 32V is in a valid range.



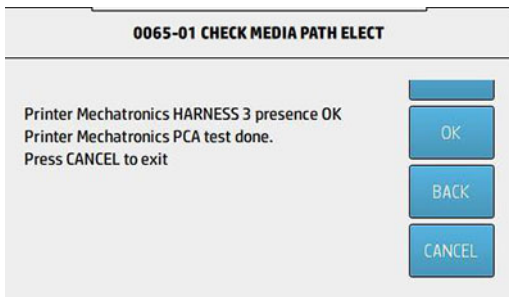
7. It checks if the HARNESS 1 presence is OK.



- It checks if the HARNESS 2 presence is OK.



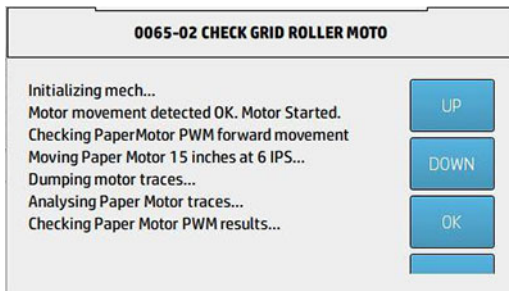
- It checks if the HARNESS 3 presence is OK.



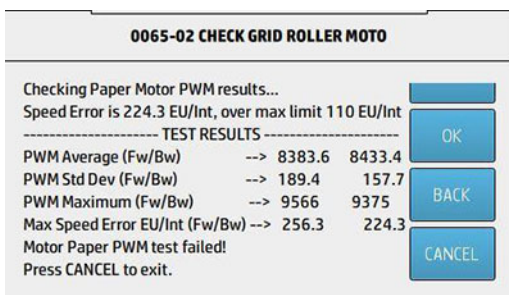
0065-02 Check Grid roller motor

Description: This test checks the Media Path mechatronics components related to the Grid roller motor and evaluates if the PWM collected data is in the stipulated range.

- The system will first check the Grid roller motor (or Paper motor) movement and it will collect all the motor traces.



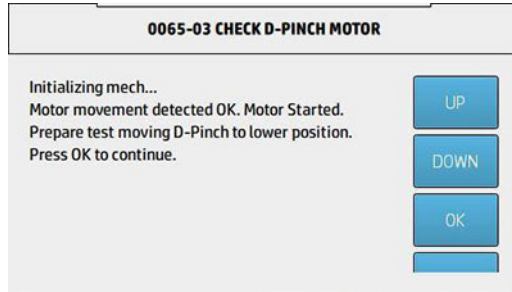
- All the test results will be displayed in the last screen.



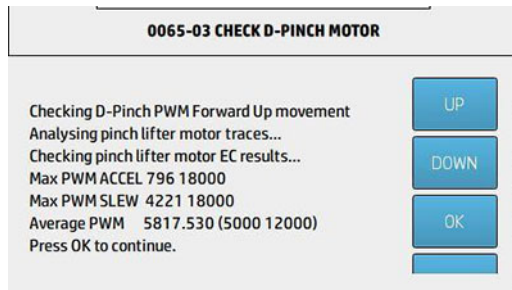
0065-03 Check D-pinch motor

Description: This test checks the Media Path mechatronics components related to the Auto Pinch motor and evaluates if the PWM collected data is in the stipulated range.

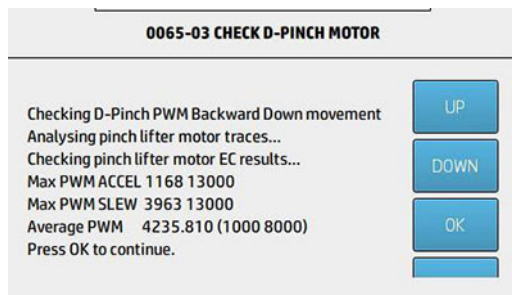
1. The system initializes the mechatronics to detect the Auto Pinch motor movement.



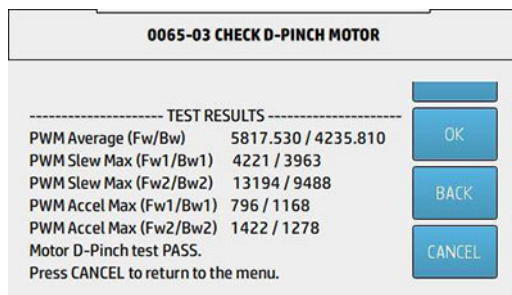
2. The Auto Pinch PWM forward up movement will start; traces will be collected.



3. The Auto Pinch PWM backward down movement will start; traces will be collected.



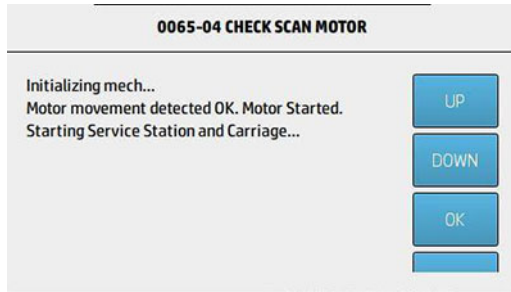
4. All the test results will be displayed in the last screen.



0065-04 Check Scan motor

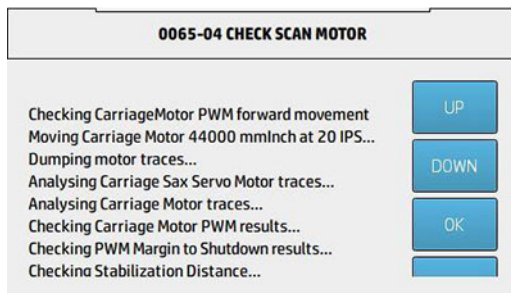
Description: This test checks the Media Path mechatronics components related to the Scan motor and evaluates if the PWM collected data is in the stipulated range

1. The system initializes the mechatronics to detect the Scan motor movement.

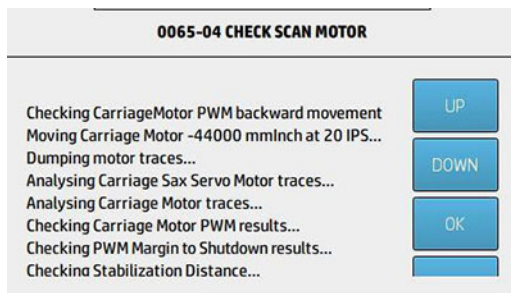


2. When the Service station and the Carriage have finished the loading process, press **OK** to continue.

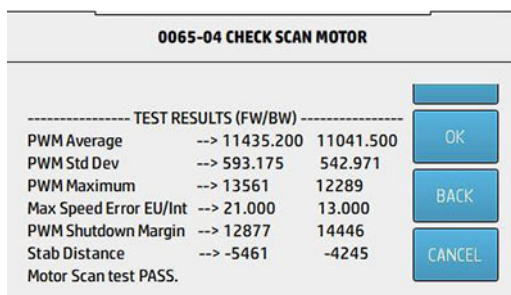
3. The Carriage motor PWM forward movement will start; traces will be collected.



4. The Carriage motor PWM backward movement will start; traces will be collected.



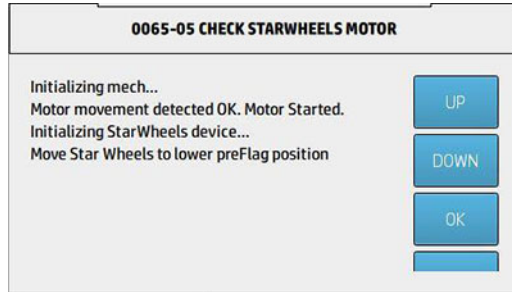
5. All the test results will be displayed in the last screen.



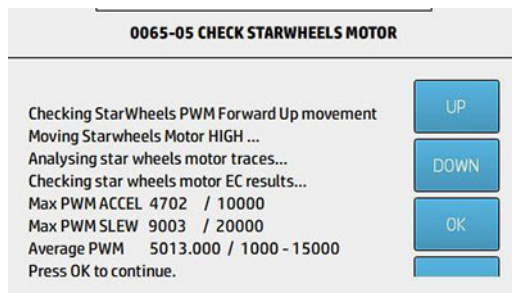
0065-05 Check Starwheels

Description: This test checks the Media Path mechatronics components related to the Starwheels and evaluates if the PWM collected data is in the stipulated range.

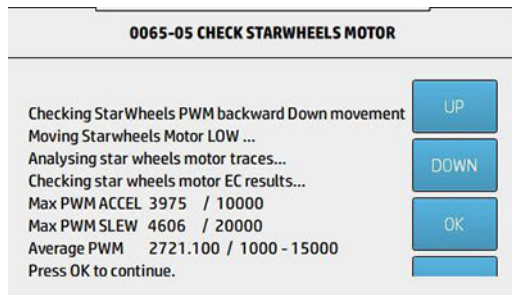
1. The system initializes the mechatronics to detect the Starwheels movement.



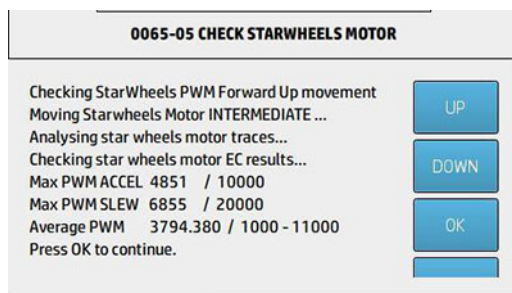
2. The Starwheels PWM forward movement will start and will go to the high position; traces can be collected and showed.



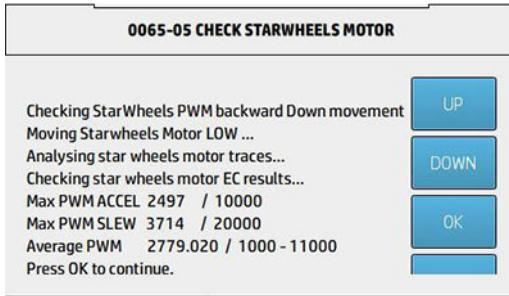
3. The Starwheels PWM forward movement will start and will go to the low position.



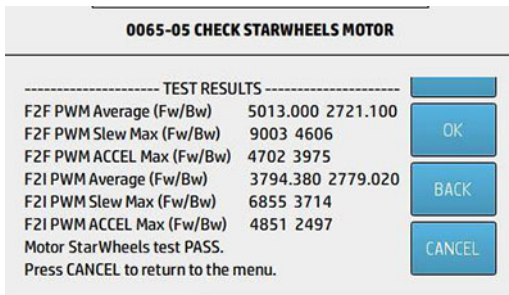
4. The Starwheels PWM forward movement will start and will go to the intermediate position.



- The Starwheels PWM forward movement will start and will go again to the low position.



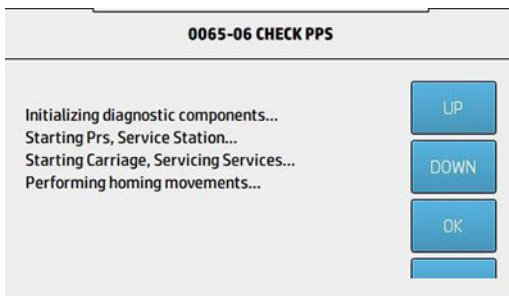
- All the test results will be displayed in the last screen.



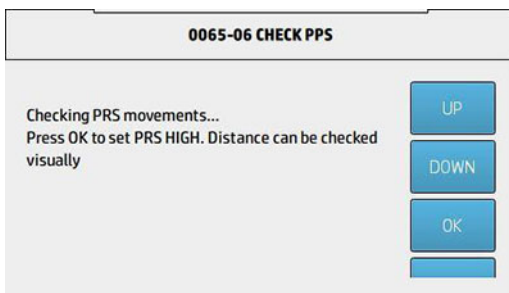
0065-06 Check PPS

Description: This test checks the PPS movement to make sure its behavior is visually correct.

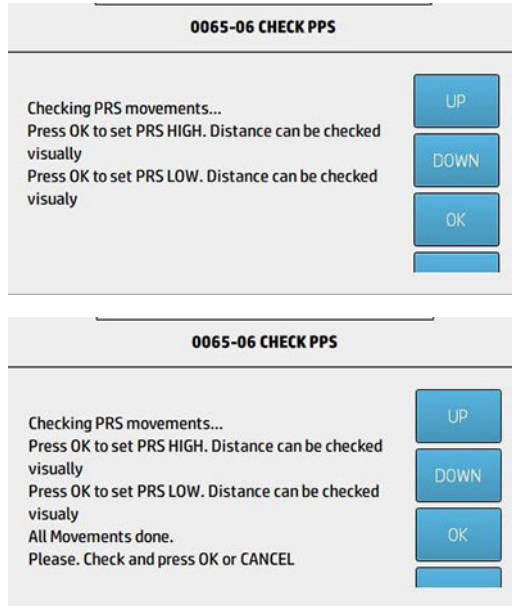
- Before starting the PPS movement, some preparations will be performed.



- Press **OK** to make the PPS move to the high position.



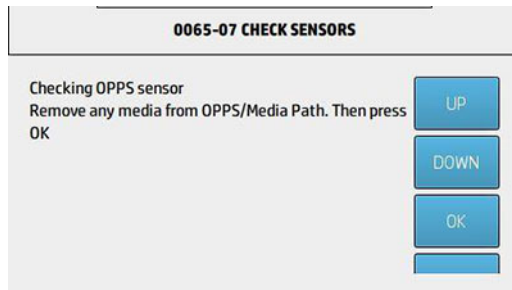
- Press **OK** to make the PPS move to the low position.



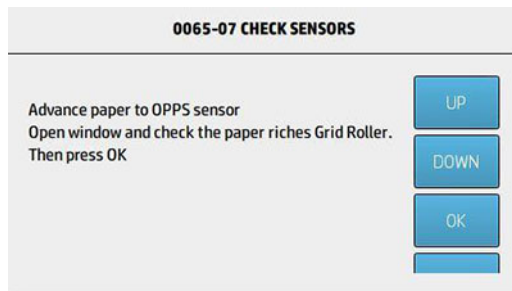
0065-07 Check sensors

Description: This test checks if the OPPS sensor is working properly.

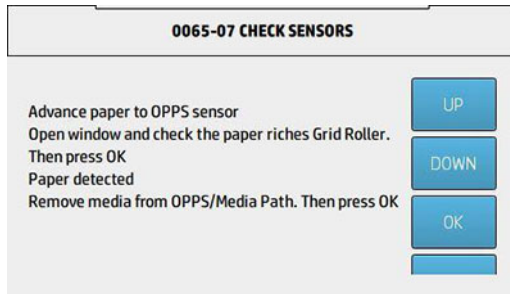
- First, remove all media from the OPPS/Media path. If you have a loaded roll paper, you need to remove it.



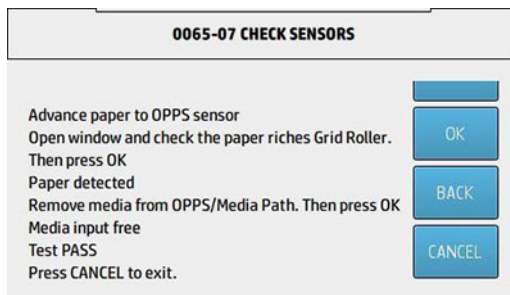
- Advance the paper until it reaches the Grid roller.



3. If the previous steps is successfully done, the message **Paper detected** will appear.



4. Remove again the paper from the Media path and press **OK**.
5. If the system detects that the media input is free of paper, the test will display the message **PASS**.



0065-08 Media advance calibration reset

This test resets the values set in paper-advance calibration, available in the service utilities.

0070 Y-CUTTER (Only for SKUs with Y-cutter)

0070-01 Check electronics

Description: This test raises and checks the minimum electronics and connections related to the Y-Cutter functionality (Mechatronic PCA, Ycutter PCA, Comms and Ycutter voltages functionality).

1. Check the cable presence from Mechatronics to Motor driver PCA.
2. Check the 12v voltage in Mechatronics PCA.
3. It checks if the Printer Mechatronics PCA motor drivers are OK.
4. Check the 32v voltage in Mechatronics PCA.
5. Check the 12v range voltage in Mechatronics PCA.
6. Check the 32v range voltage in Mechatronics PCA.
7. Check that the Harness 1 cable is connected to Mechatronics PCA.
8. Check that the Harness 2 cable is connected to Mechatronics PCA.
9. Check that the Harness 3 cable is connected to Mechatronics PCA.
10. Check the Y cutter board PCA (revision, bootloader, firmware and voltages) and window sensor.

0070-02 Check mechatronics

Description: This test checks the Y-Cutter components (Module1 motor and Blades motor).

0080 User Interface

0080-01 Check cover status

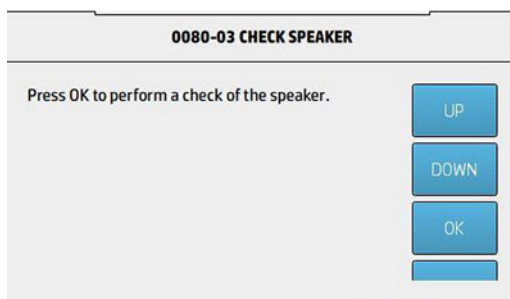
Description: This test checks the switches and optic sensors of all the covers (Window cover, Top paper cover, Low paper cover, ISS covers and Y-cutter cover).

(Not implemented)

0080-02 Check Speaker

Description: This test checks the speaker functionality.

- ▲ If you tap **OK**, you will be able to listen some whistles from the speaker; then, the menu closes automatically.

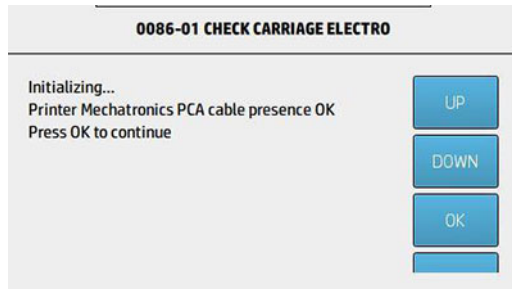


0086 Carriage

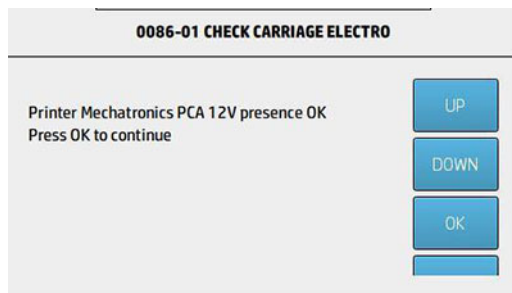
0086-01 Check electronics

Description: This test raises and checks the minimum electronics and connections related to the Carriage functionality (Mechatronics PCA, Carriage PCA, SOL, Carriage voltages, Line sensor and Printheads, trailing cable presence, bulli comm, FPGA code, FPGA link, etc).

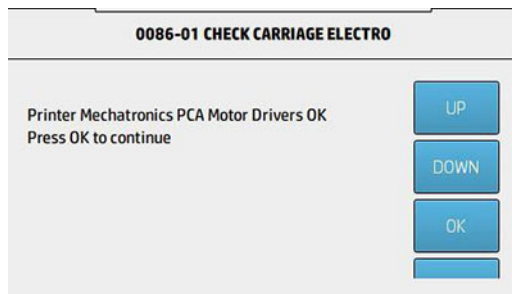
1. It checks if the Printer Mechatronics PCA cable presence is OK.



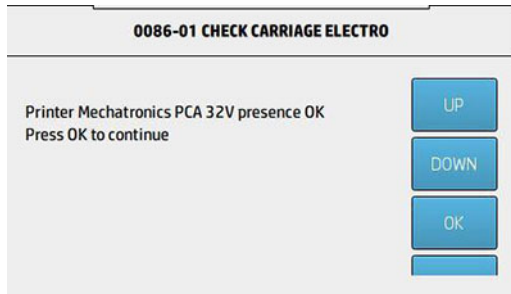
2. It checks if the Printer Mechatronics PCA 12V presence is OK.



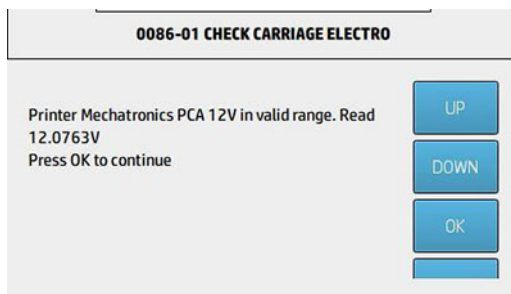
3. It checks if the Printer Mechatronics PCA motor drivers are OK.



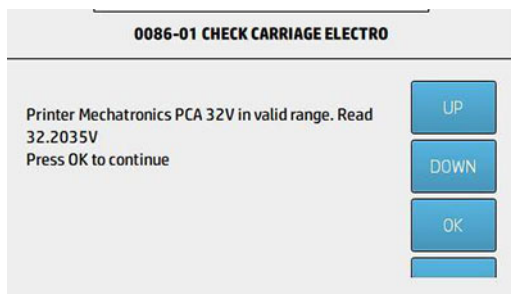
4. It checks if the Printer Mechatronics PCA 32V presence is OK.



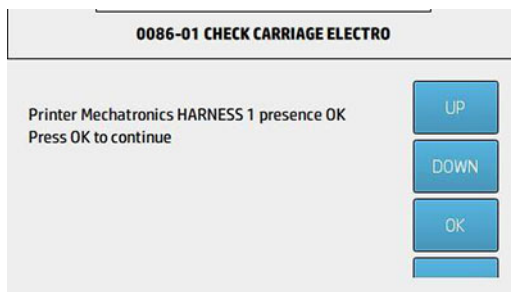
5. It checks if the Printer Mechatronics PCA 12V is in a valid range.



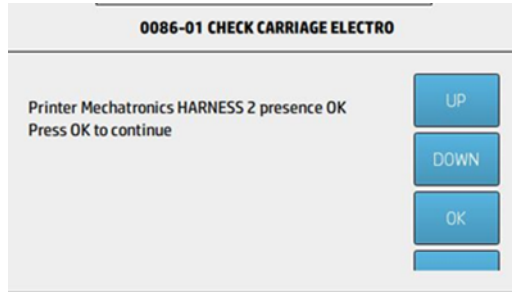
6. It checks if the Printer Mechatronics PCA 32V is in a valid range.



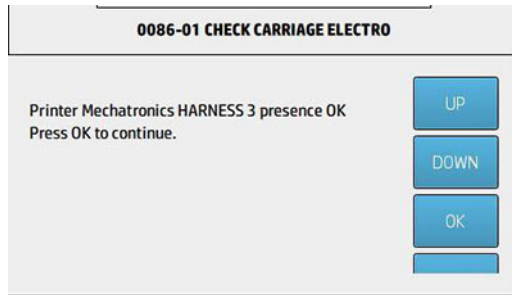
7. It checks if the HARNESS 1 presence is OK.



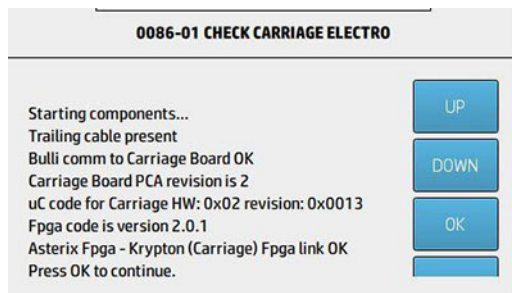
- It checks if the HARNESS 2 presence is OK.



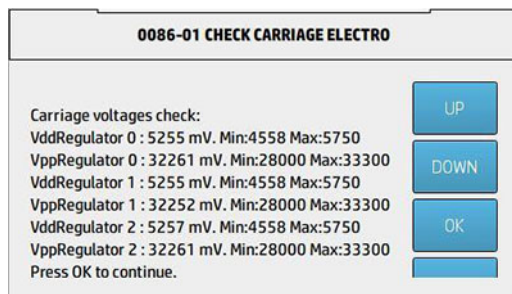
- It checks if the HARNESS 3 presence is OK.



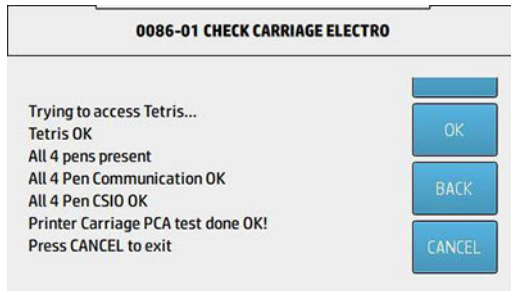
- It checks some related components as trailing cable presence, bulli comm, FPGA code, Mech control FPGA link, etc.



- The system checks all Vdd and Vpp voltage values from the Carriage. It is possible to check that all the values are within the stipulated ranges.



12. Finally, it will check the Line sensor and Pens presence, and their communications.

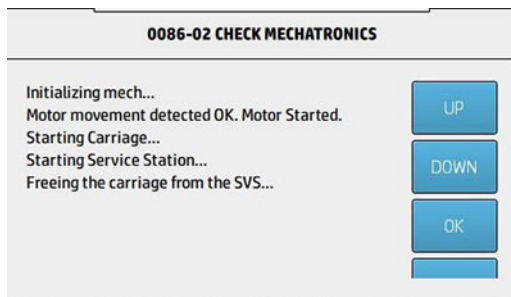


0086-02 Check mechatronics

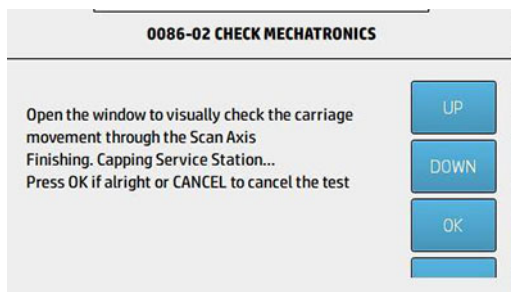
Description: This test checks the Carriage mechatronics components (Scan axis motor) to verify if its movement is doing properly.

 **NOTE:** It may be necessary to raise and test some electronics before the mechatronics testing

1. This test checks the initialization of the motor.



2. Once the window has been opened and the Carriage movement has finished, the service station will start to cap itself. Then, it will ask you to press **OK** after you have checked that all the movements have been done properly.

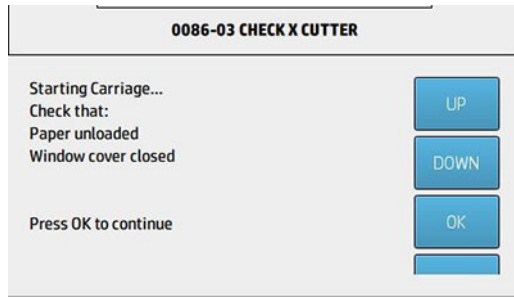


0086-03 Check X-cutter

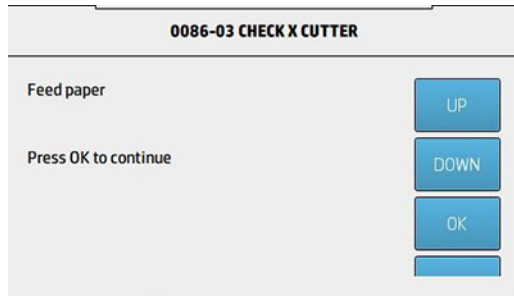
Description: This test checks the X-cutter functionality.

 **NOTE:** It may be necessary to raise and test some electronics before the mechatronics testing

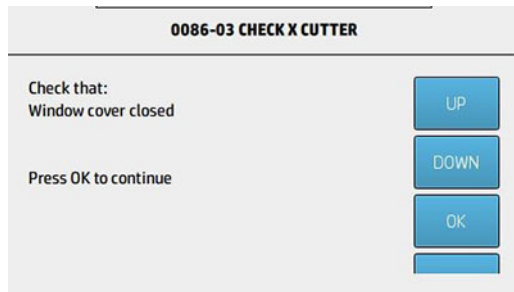
1. First of all, remove paper in case you have loaded it. Check also that the window cover is closed before tapping **OK**.



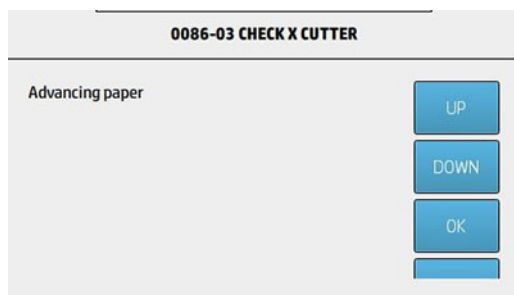
2. Now, the system asks you to feed paper to cut it through the X-cutter and verify its functionality.



3. Once the paper has been loaded, check that the window cover is closed.

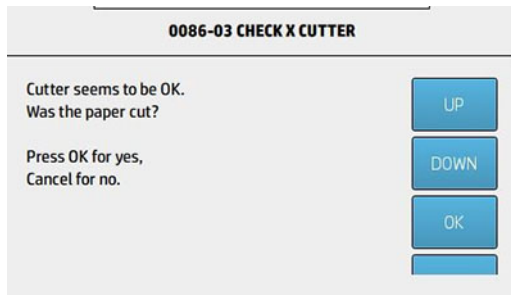


4. The system starts to advance the loaded paper in order to be cut by the X-cutter.



For HP authorized personnel only

5. Once the test is done, it will ask you to confirm if the paper has been actually cut. Tap **OK** if the paper has been properly cut.



0099 Utilities

0099-01 EEROM reset utility

Description: This test resets the printer to the factory default settings and deletes any user information/files.

For HP authorized personnel only

5 Service Menu

- [Service Utilities \(bootmode “full”\)](#)
 - [Calibrations](#)
 - [Diagnostic Print](#)
 - [Printer settings](#)
 - [Disk utilities](#)
 - [ISS utilities](#)
 - [Hardware utilities](#)
 - [PMKs replacements](#)
 - [EEROM reset utility](#)
 - [Unit information utility](#)
 - [CryptoAsic PCA utility](#)
 - [Touch Control panel lock reset](#)
 - [File System Check](#)

Service Utilities (bootmode “full”)

Calibrations

Drop detection calibration

The purpose of this Service calibration is to calibrate the Drop detector (located in the Service station) in relation to the Carriage assembly. There are two menu options to calibrate the Drop detector:

- Calibrate Drop detector
- Reset calibration flag

 **NOTE:** Always perform the **Reset Calibration Flag** calibration **before** calibrating the Drop detector.

Service calibrations also need to be performed after removing or replacing certain product components. If you have removed or replaced product components, check the [Service Calibration Guide to Removal and Installation on page 260](#) to see which tests and calibrations you need to perform.

Reset Calibration Flag

- Run this option before replacing the Drop detector (Service station), so that the product will not try to perform a Drop detection until the new Drop detector has been calibrated.

Line sensor calibration

The purpose of this Service calibration is to calibrate the intensity of the Line sensor in the Carriage PCA. An incorrect calibration can result in edge-detection failures during paper loading and incorrect reading of prints that are used for alignment or calibration.

Perform the Line sensor calibration in the following cases:

- If the edge detect procedure fails during paper loading.
- If the Carriage is disassembled or replaced.
- If the Line sensor is disassembled or replaced.
- If banding is detected in prints.
- If misalignment between colors is detected.

Service calibrations also need to be performed after removing or replacing certain product components. If you have removed or replaced product components, check the [Service Calibration Guide to Removal and Installation on page 260](#) to see which tests and calibrations you need to perform.

Calibrate sheet sensor

The purpose of this Service calibration is to calibrate the sheet sensor. This sensor should be calibrated whenever a new sensor is installed. This calibration should also be performed if the following problems are encountered:

- While attempting to load roll media, if the Touch control panel prompts you to remove paper, although there is no paper in the path.
- When attempting to load sheet paper from the Touch control panel, if the printer repeatedly displays a paper skew message, and the sheet cannot be loaded.

Media advance calibration

The purpose of this Service calibration is to calibrate the nominal advance of the paper. This calibration is necessary to control the exact movement of the paper in order to avoid print quality problems like banding.

If you need to perform a Paper advance calibration to solve a print quality problem, it is recommended that you first try the Paper advance calibration from the user's menu, which will calibrate the product to a specific paper type.


Perform the Service accuracy calibration whenever Banding is detected in prints.

Service calibrations also need to be performed after removing or replacing certain product components. If you have removed or replaced product components, check the [Service Calibration Guide to Removal and Installation on page 260](#) to see which tests and calibrations you need to perform.

The Paper advance calibration is split into two parts and should always be done in this order:

1. Print calibration pattern – The product first calibrates the Analog encoder and then prints the Paper advance calibration pattern.
2. Scan calibration pattern – The product scans the Paper advance calibration pattern in order to calibrate the nominal advance of the paper.

Only scan the Calibration pattern in the product that was used to actually print it. Using the Calibration in a different product could cause it to experience paper advance problems. After scanning the Calibration pattern, it should be discarded.

 **TIP:** If you are using roll paper, you are recommended to calibrate using the upper roll, which will give better results.

Diagnostic Print

Force Drop detection

If the Nozzle print test plot has persistent white point banding in only one color that cannot be fixed with a printhead recovery, you can use this option to resolve the problem by resetting the nozzle health database so that all the nozzles are assumed to be correct.

Once the nozzle health database has been reset, drop detection is forced. The normal cause of this white point banding in a single color is the incorrect detection of failed nozzles by the Drop detector.

Printer settings

Set date and time

The purpose of this Service utility is to set the internal clock of the product.

Enable/disable firewall

The purpose of this Service utility is to enable or disable the system firewall. There are currently no known cases when this will be needed, but it may help some users experiencing unexplained connectivity failures on embedded LANs.

Enable/disable sleep mode

The purpose of this Service utility is to enable or disable the sleep mode.

Show/hide Touch control panel information

The purpose of this utility is to prevent network information from being viewed directly from the EWS or the screen of the Touch control panel.

Enable/disable port 280

This security utility allows you to enable or disable port 280 communication with the Embedded Web Server using the embedded LAN connection.

Reset access control

This utility is used to reset the administration password that protects the access to the EWS and to some options in the Touch control panel of the printer.

Uninstall applications

This utility is used to uninstall any application that is available through the **Applications** option in the Touch control panel.

Accounting mode

This utility is used to enable the Abacus accounting tool.

Reset life counters

The purpose of this Service utility is to reset the internal life counters, related to a Preventive Maintenance Kit (PMK) or a specific replaced part.

Disk utilities

Disk wipe DoD 5220.220M

The purpose of this Service utility is to erase data from the internal Hard Disk securely, according to the directive DoD 5220.220M.

The product's hard disk is used as a temporary storage area for print jobs. The Secure disk wipe utility can erase your information from the hard disk to prevent unauthorized access.

Secure disk wipe provides three different levels of security:

- **Insecure mode:** All pointers to the information are erased. The information itself is not erased, and remains on the hard disk until the disk space it occupies is needed for new print jobs. The new print information overwrites the old information. While the information remains on the disk, it is difficult for most people to access, but may be accessed using software designed for that purpose. This is the normal method in which files are erased on most computer systems; it is the fastest method but the least secure. This is the default security level when using Secure Disk Erase.
- **1 Pass mode:** All pointers to the information are erased, and the information itself is overwritten with a fixed character pattern. This method is slower than Insecure Fast Erase, but more secure. It may still be possible to access fragments of the erased information by using special tools to detect residual magnetic traces.
- **5 Pass mode:** All pointers to the information are erased, and the information itself is repetitively overwritten using an algorithm designed to eliminate any residual traces. This is the slowest method, but the most secure. Secure Sanitizing Erase meets the US Department of Defense 5220-220M requirements for clearing and sanitization of disk paper.

Hard Disk recovery utility

The Hard Disk recovery utility erases the hard disk and restores the factory firmware.

ISS utilities

The purpose of this Service utility is to prime the Tubes when the Ink tubes are not new and they need to be re-primed or when automatic priming was not completed correctly.

Hardware utilities

Turn drive roller

The purpose of this Service utility is to rotate the Drive roller and the overdrive in order to clean them.

Rewinder adjust

Adjust Rewinder 1

The Rewinder adjust utility clears the calibration parameters associated with a Rewinder motor when it has to be replaced.

Adjust Rewinder 2

The Rewinder adjust utility clears the calibration parameters associated with a Rewinder motor when it has to be replaced.

Disable Upper roll cover

With the Upper roll cover enabled, the arm pinches may leave marks on some types of glossy instant-dry paper; these marks may be particularly visible in prints with black area fills. This utility disables the Upper roll cover in order to allow the product to print with the Upper roll cover opened. The roll cover will be re-enabled automatically when the product is restarted.

Enable Upper roll cover

This utility re-enables the upper roll cover without restarting the product.

Special cutter mode

The purpose of this utility is to improve the cut quality for some papers that present some cut-quality problems (straightness problems) using the normal mode. When this mode is enabled, this utility changes the cutting mode for all generic natural tracing papers. This mode reduces the problems, but cuts more slowly.

Carriage uncap

This utility is used to uncap the Carriage from the Service station.

PMKs replacements

This is used to reset the PMK counters.

EEROM reset utility

This test resets the printer to the factory defaults and delete any user information/files.

Unit information utility

The Unit information test retrieves the firmware version, serial number and part number of the printer.

CryptoAsic PCA utility

This utility allows to check the CryptoAsic PCA or to install a new part.

Touch Control panel lock reset

This utility enables the Touch Control panel to be unlocked when it has been locked by mistake and cannot be remotely unlocked from the Web JetAdmin.

File System Check

The File System Check checks the file system on the hard disk and automatically corrects any problems that it finds. This option is also available from the Service Menu.

6 Parts and Diagrams

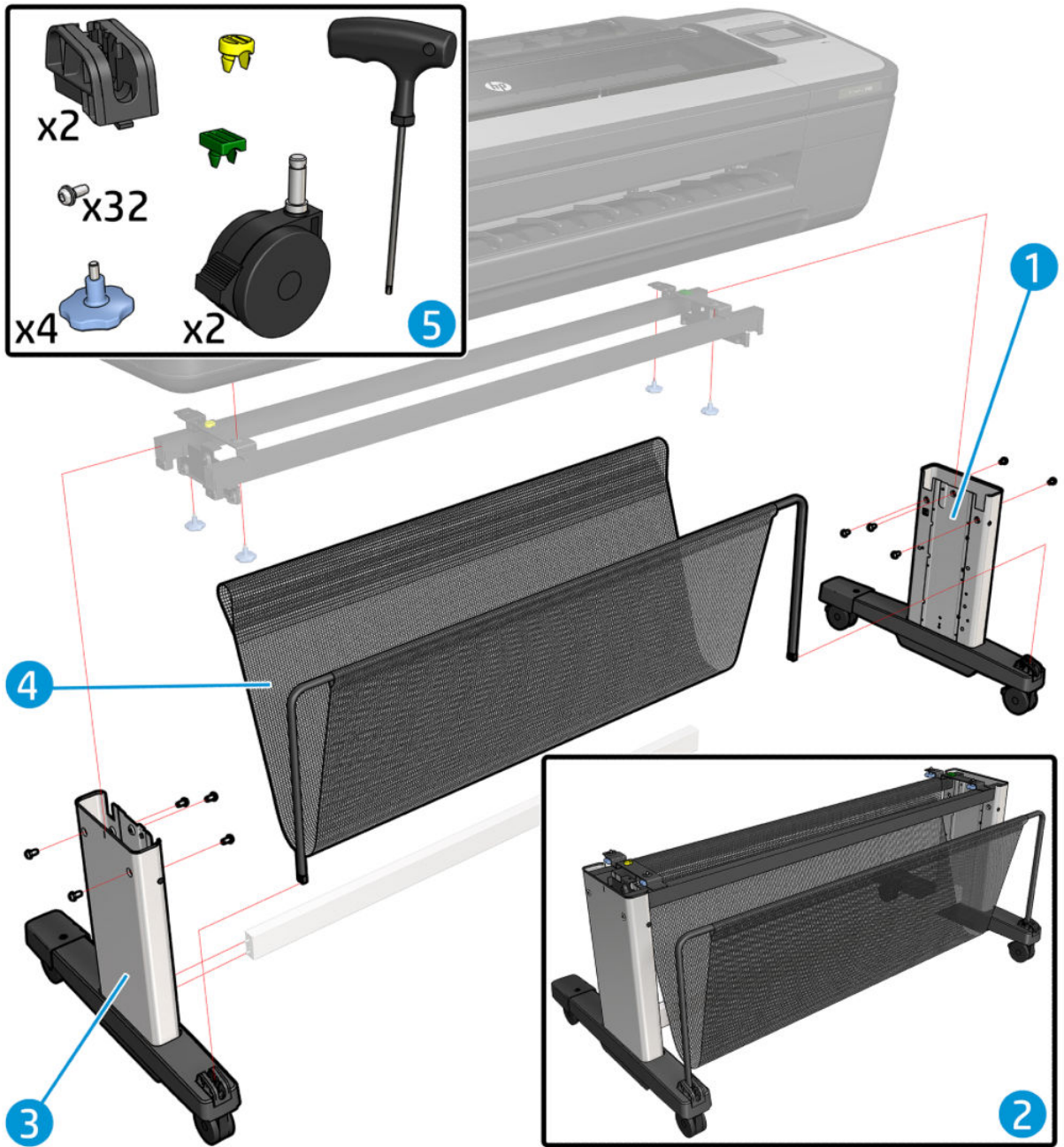
- [Introduction](#)
- [Product support](#)
- [Right covers](#)
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- [Center covers Front \(T1700, T1708, Z6 & Z9+\)](#)
- [Center covers Front \(Z6 & Z9+ only\)](#)
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Introduction

The list of parts in this chapter include the notation (CSR A) or (CSR B) for parts that can be replaced by the customer. All other parts must be replaced by an engineer. See [Customer Self Repair parts on page 259](#).

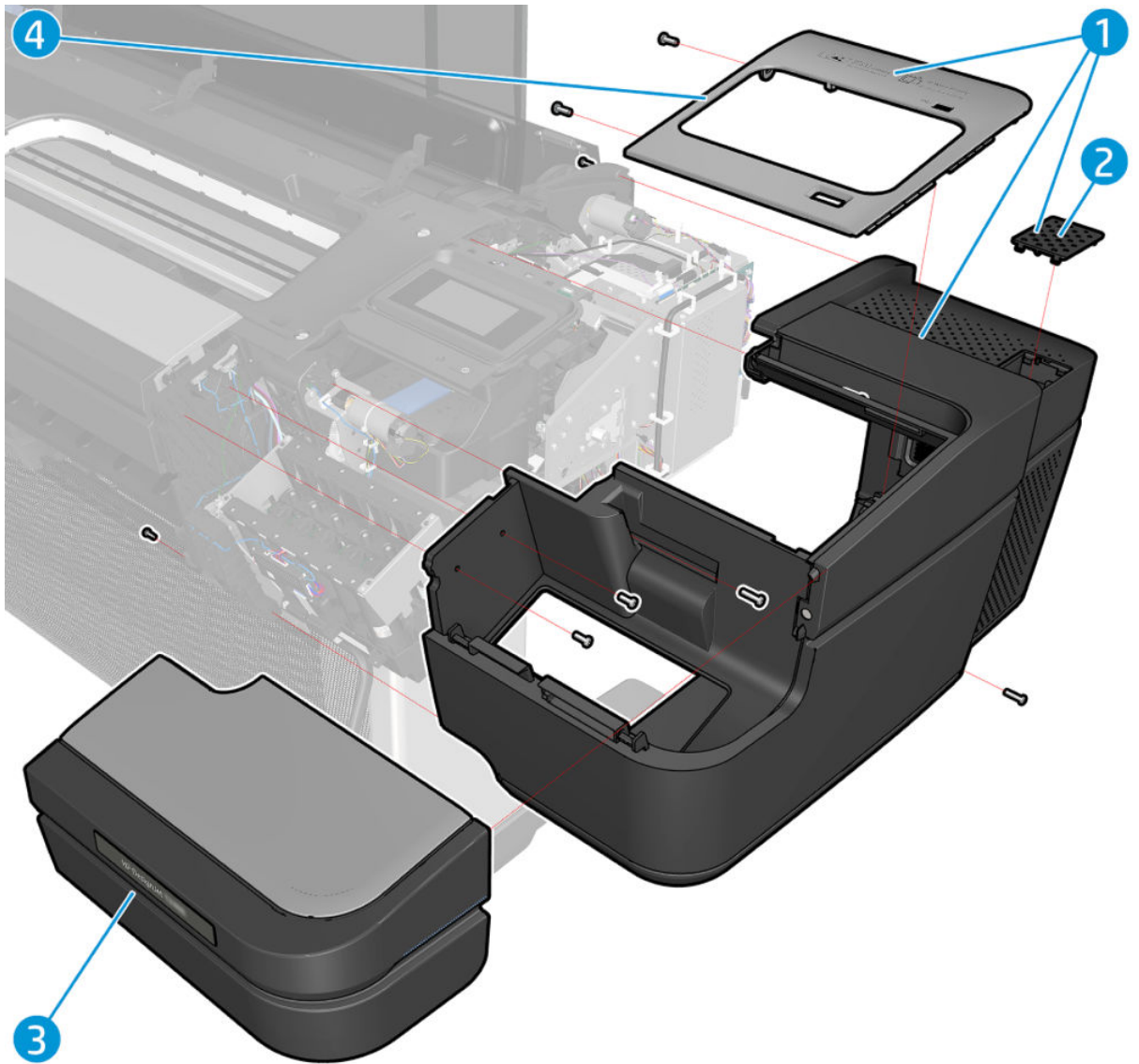
Product support

	Part Number	Part Description	Cross-reference	Products Applicable
1	T8W16-67007	Stand 44 TUR compatible Service Kit	Stand (T1700 & T1708) on page 449	Z6 & Z9+ 44 inch
	W6B55-67002	Stand 44 TUR non compatible Service Kit		T1700 & T1708
	T8W15-67006	Stand 24 service kit		Z6 & Z9+ 24 inch
2	T8W16-67011	Stand – Basket 44 Service Kit	Stand basket on page 454	T1700, T1708, Z6 44 inch, Z9+ 44 inch
	T8W15-67042	Stand – Basket 24 Service Kit		Z6 & Z9+ 24 inch
3	T8W16-67020	Stand service HW kit		T1700, T1708, Z6 44 inch, Z9+ 44 inch



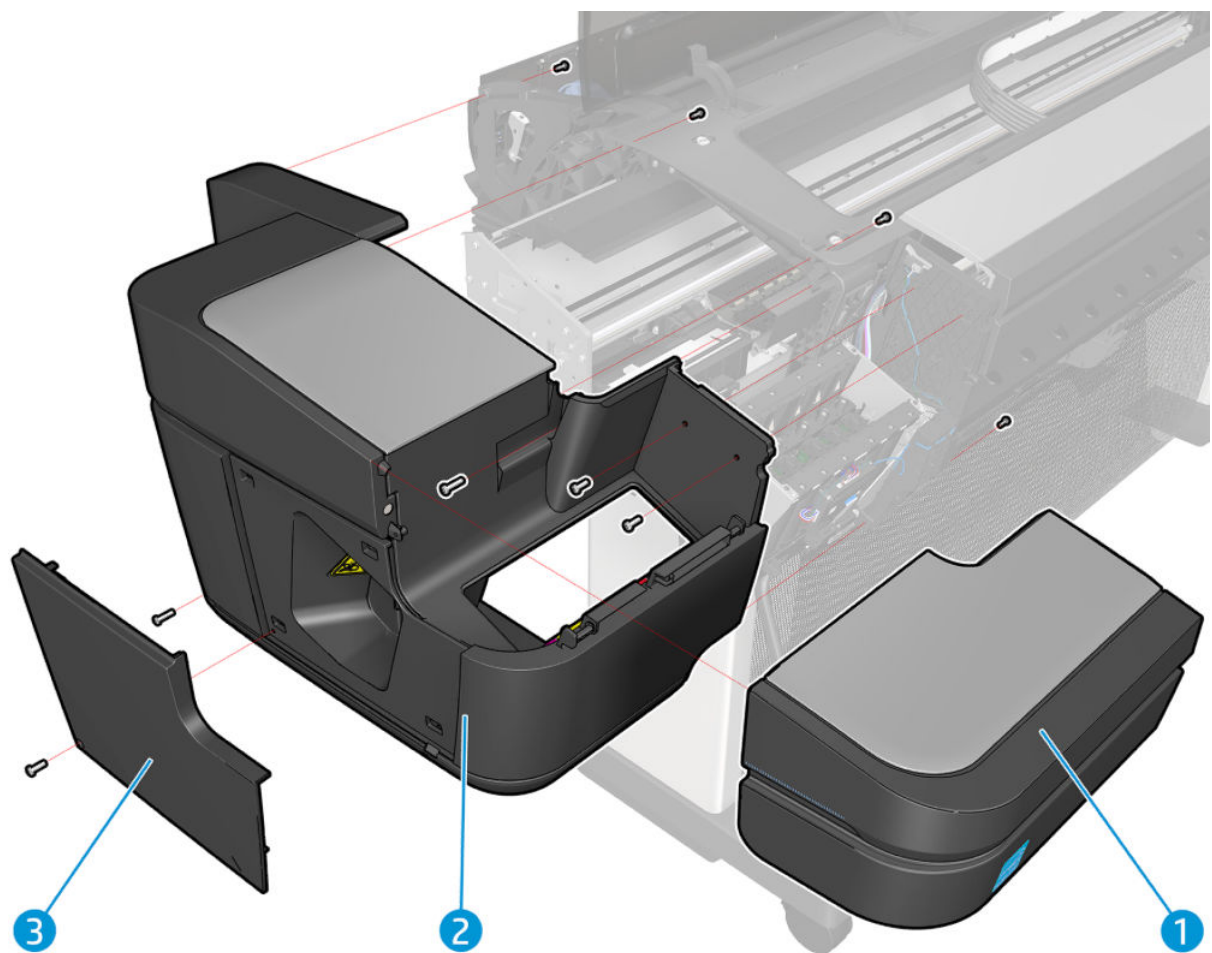
Right covers

	Part Number	Part Description	Cross-reference	Products Applicable
1	W6B55-67013	Right cover Technical Service Kit	Right cover on page 407	T1700 & T1708
	T8W15-67047	Right cover Graphics 6–inks Service Kit		Z6
	W3Z71-67017	Right cover Graphics 9–inks Service Kit		Z9*
2	T8W15-67034	WiFi cover Service Kit	WiFi cover on page 510	All
3	W6B55-67011	Right ink cover Technical Service Kit	Ink cartridge door, Right on page 344	T1700 & T1708
	T8W15-67033	Right ink cover Graphics Service Kit		Z6 & Z9*
4	W6B55-67014	Control panel cover Technical Service Kit	Control panel cover on page 310	T1700 & T1708
	T8W18-67023	Control panel cover Graphics service kit		Z6 & Z9*



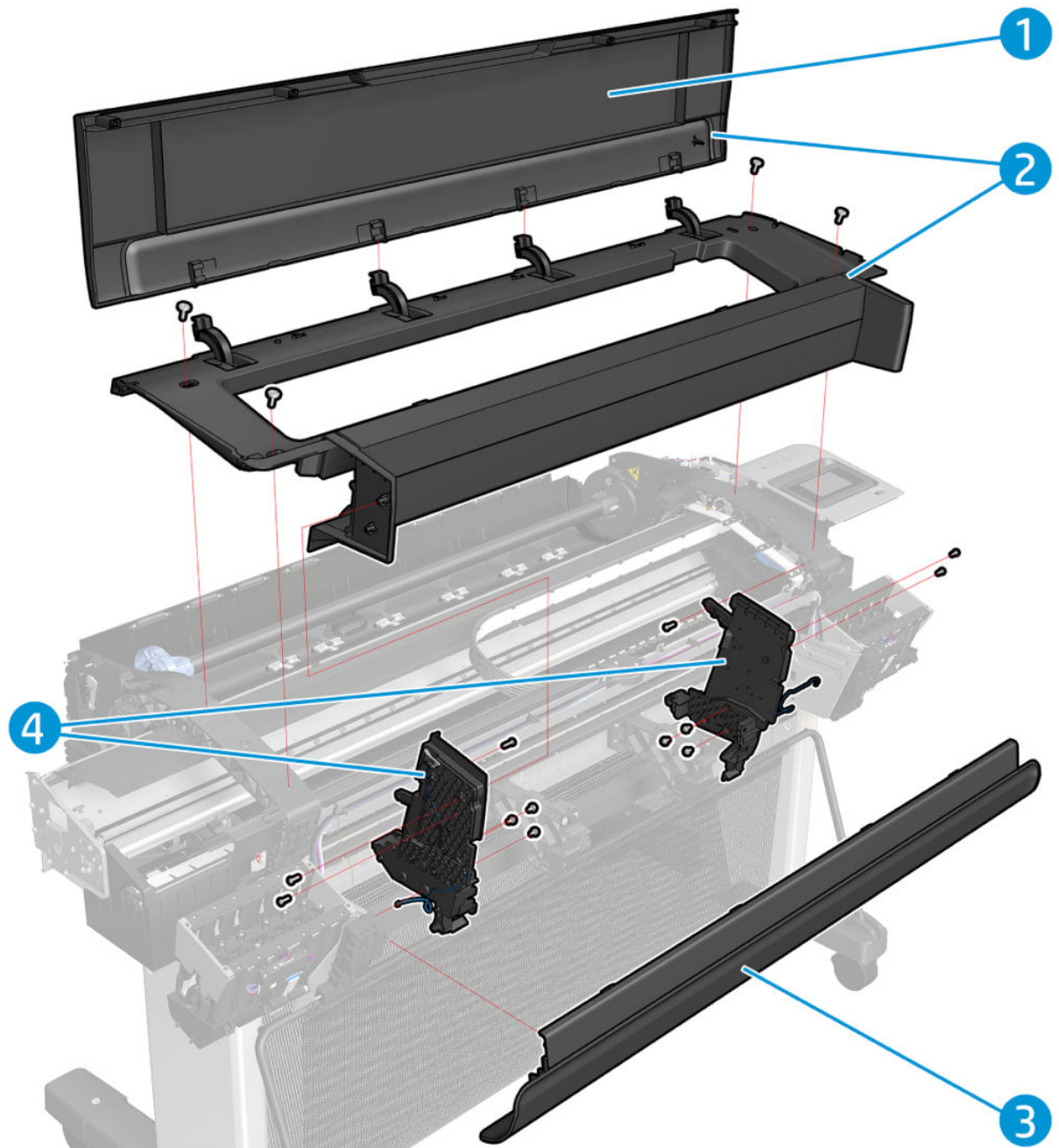
Left covers

	Part Number	Part Description	Cross-reference	Products Applicable
1	W3Z71-67013	Left ink cover Graphics 9–inks Service Kit	Ink cartridge door, Left on page 343	Z9*
	T8W15-67032	Left ink cover Graphics 6–inks Service Kit		Z6
	W6B55-67010	Left ink cover Technical Service Kit		T1700 & T1708
2	W6B55-67012	Left cover Technical Service Kit	Left cover on page 359	T1700 & T1708
	T8W15-67046	Left cover Graphics 6–inks Service Kit		Z6
	W3Z71-67016	Left cover Graphics 9–inks Service Kit		Z9*
3	T8W15-67048	Horizontal cutter cover Service Kit	Horizontal cutter cover on page 340	All



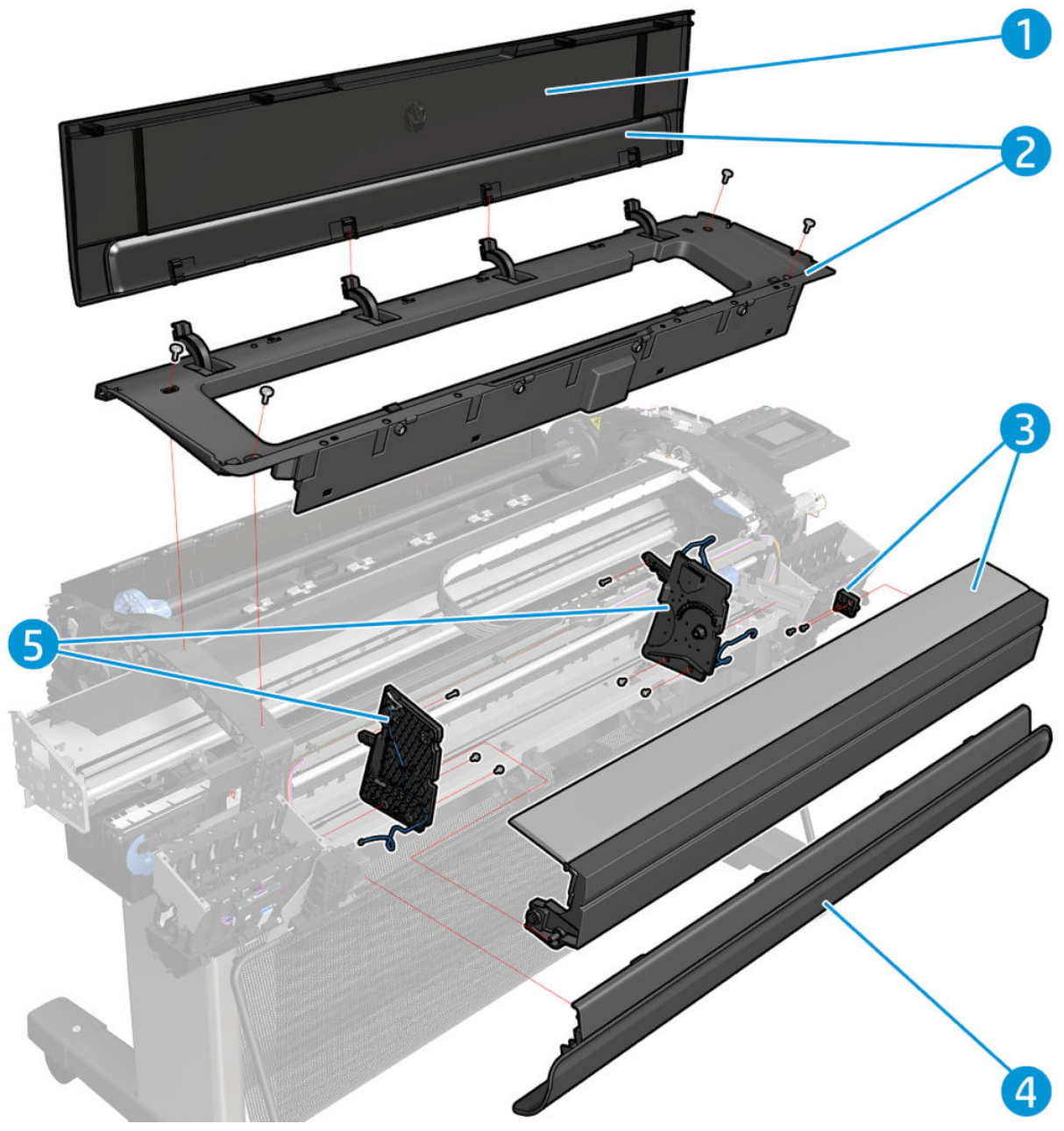
Center covers Front (T1700, T1708, Z6 & Z9+)

	Part Number	Part Description	Cross-reference	Products Applicable
1	T8W16-67009	Window opaque 44 Service Kit	Window, Opaque on page 511	T1700, T1708, Z6 44inch
	W3Z72-67003	Window translucent 44 Service Kit		Z9* 44 inch
	T8W15-67011	Window opaque 24 Service Kit		Z6 24 inch
	W3Z71-67007	Window translucent 24 Service Kit		Z9* 24 inch
2	T8W16-67018	Cover frame assembly 44 6-inks Service Kit	Front top cover on page 331	T1700, T1708, z6 44inch
	W3Z72-67008	Cover frame assembly 44 9-inks Service Kit		Z9* 44 inch
	T8W15-67035	Cover frame assembly 24 6-inks Service Kit		Z6 24 inch
	W3Z71-67014	Cover frame assembly 24 9-inks Service Kit		Z9* 24 inch
3	T8W16-67012	Front cover 44 Service Kit	Front cover on page 330	All 44 inch
	T8W15-67019	Front cover 24 Service Kit		Z6 & Z9* 24 inch
4	T8W15-67004	Front Trims without V-Trimmer Service Kit	Front trims (T1700 & T1708) on page 333	T1700, T1708, Z6 and Z9*
	T8W15-67004	Front Trims with V-Trimmer Service Kit		Z6 & Z9* with V-Trimmer



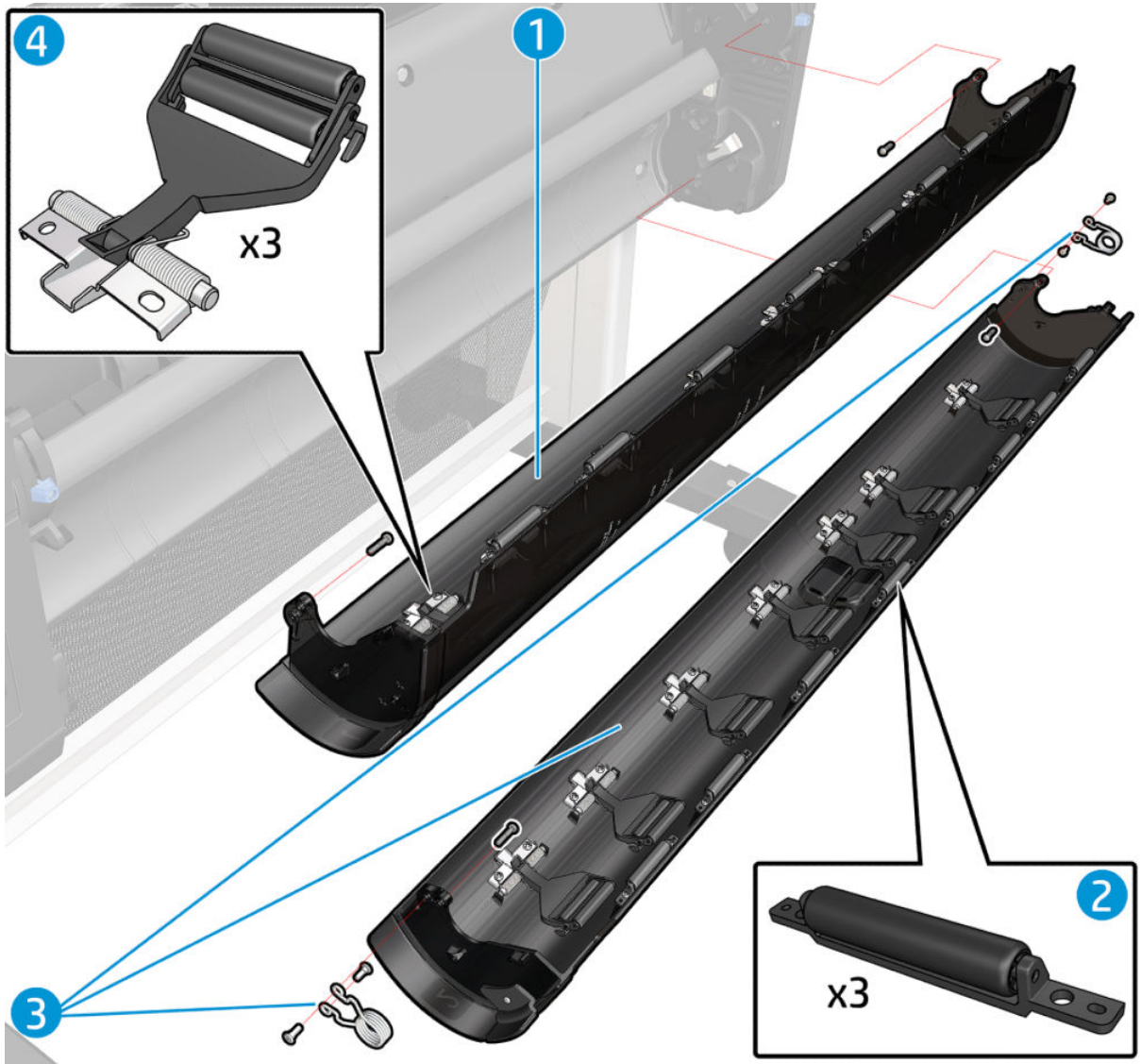
Center covers Front (Z6 & Z9+ only)

	Part Number	Part Description	Cross-reference	Products Applicable
1	T8W16-67009	Window translucent 44 Service Kit	Window, Opaque on page 511	T1700, T1708, Z6 44inch
	W3Z72-67003	Window opaque 44 Service Kit		Z9* 44 inch
	T8W15-67011	Window translucent 24 Service Kit		Z6 24 inch
	W3Z71-67007	Window opaque 24 Service Kit		Z9* 24 inch
2	X9D24-67002	Cover frame assembly V- Trimmer 9–inks Service Kit		Z9*
	T8W18-67011	Cover frame V- Trimmer 6–inks Service Kit		Z6
3	T8W18-67010	V- Trimmer cover Service Kit	V- Trimmer cover on page 470	Z6 & Z9*
4	T8W16-67012	Front Cover 44 Service Kit	Front cover on page 330	Z6 & Z9* (44 inch)
	T8W15-67019	Front Cover 24 Service Kit		Z6 & Z9* (24 inch)
5	T8W18-67004	Front Trims with V- Trimmer Service Kit	Left Front Trim (Z6 & Z9*) – Removal on page 335	Z6 & Z9* with V- Trimmer



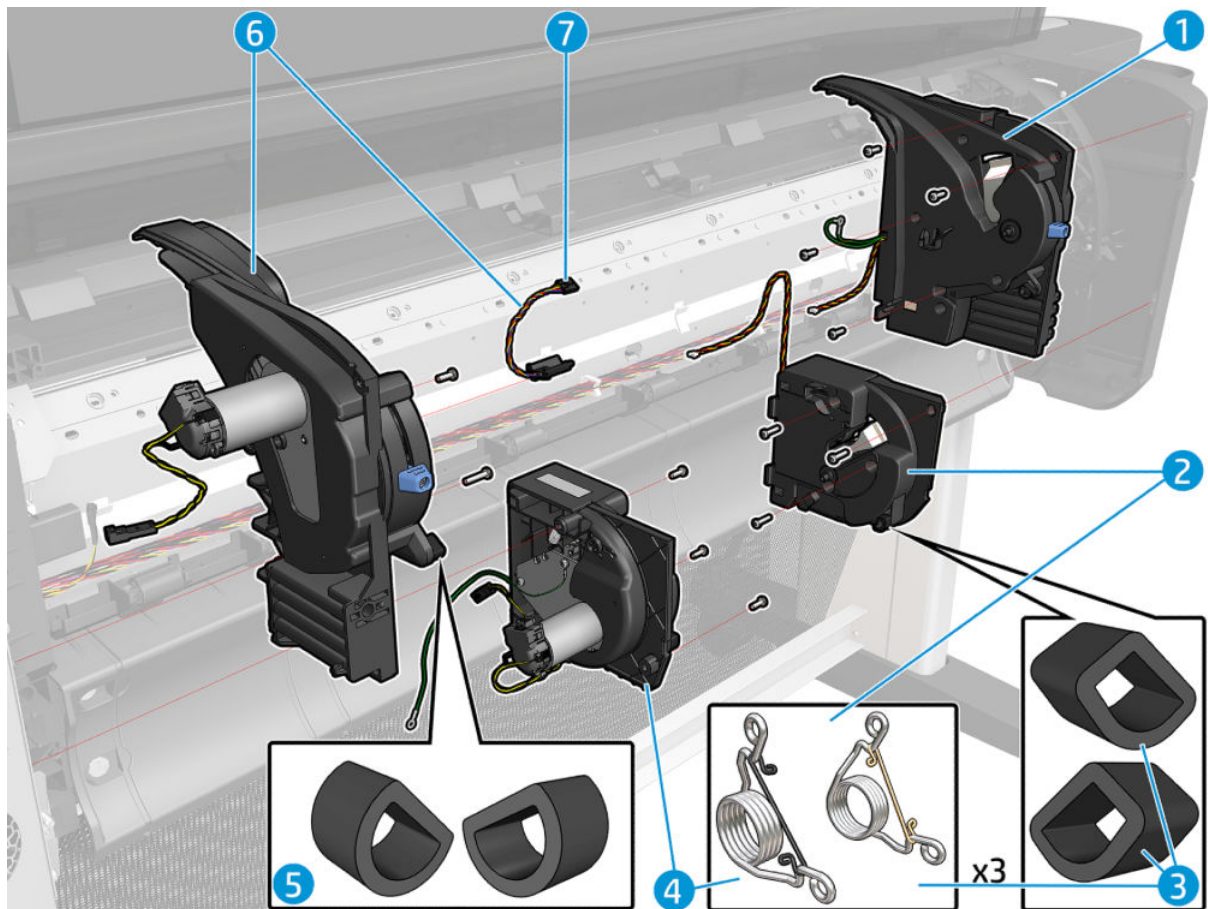
Roll covers

	Part Number	Part Description	Cross-reference	Products Applicable
1	T8W18-67002	Upper roll cover assembly w ARSS	Roll cover, Upper on page 415	All dual-roll printers
	T8W16-67001	Upper roll cover assembly wo ARSS		All 44 in Single Roll Printers
	T8W15-67036	Upper roll cover assembly 24		Z6 & Z9* (24 in model)
2	CH538-67050	Roll cover freewheel assembly	Freewheel assembly on page 327	All
3	T8W18-67001	Lower roll cover assembly w ARSS	Roll cover, Lower on page 411	All
4	CH538-67037	Pinch arm assembly for roll cover	Pinch arm assembly on page 384	All



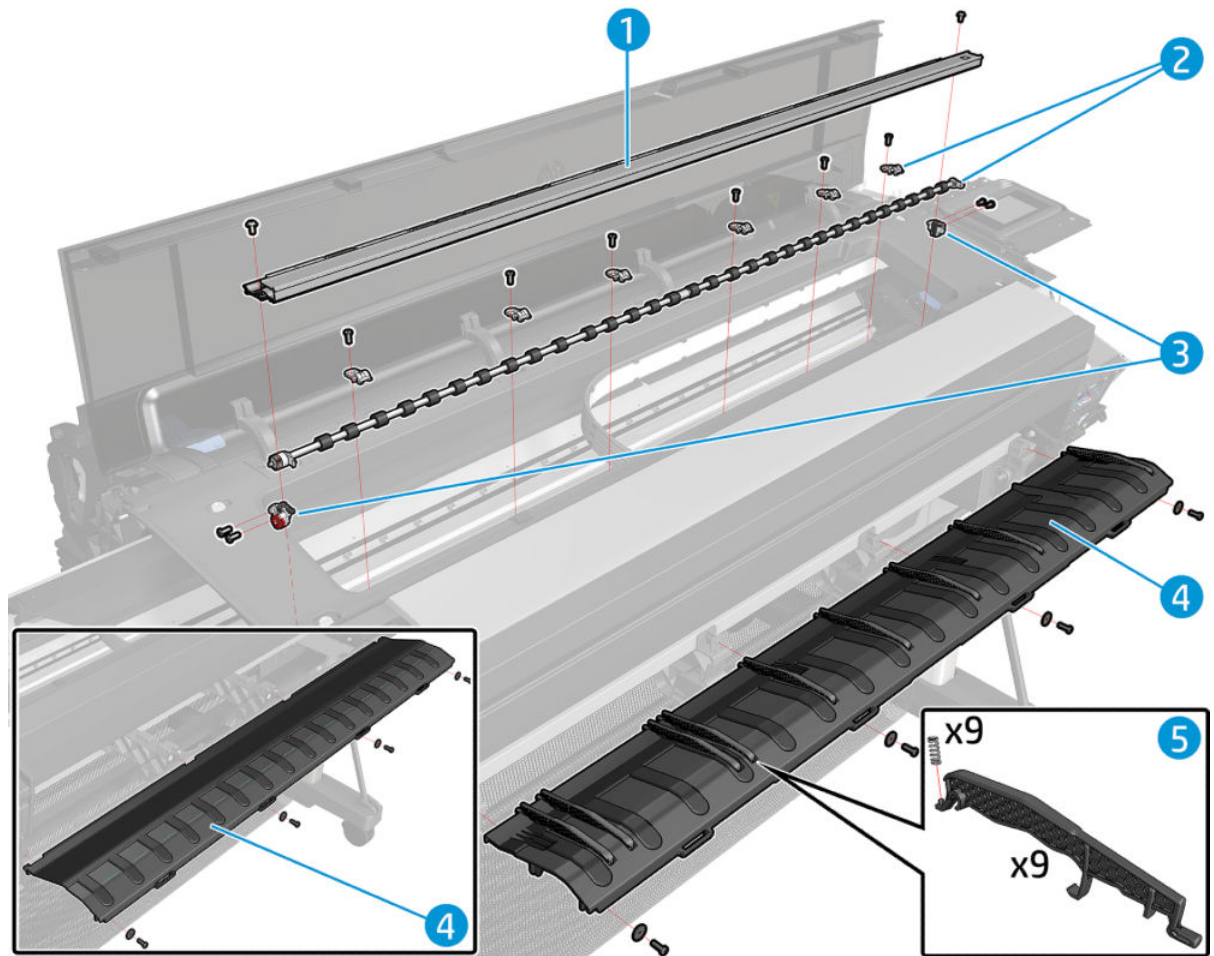
Roll supports

	Part Number	Part Description	Cross-reference	Products Applicable
1	T8W15-67013	Upper left roll support Service Kit	Roll support, Upper left on page 428	All
2	T8W18-67006	Lower left support assembly Service Kit	Roll support, Lower left on page 425	All
3	CH538-67052	T1200 Roll cover lower bumper	Roll cover lower bumpers on page 417	All
4	T8W18-67005	Lower right support assembly Service Kit	Roll support, Lower left on page 425	All
5	CH538-67051	Roll cover upper bumpers	Roll cover upper bumpers on page 420	All
6	T8W15-67012	Upper right roll support Service Kit	Roll support, Upper right on page 430	All
7	CH538-67033	T1200/T770 Single sheet sensor	Single-sheet sensor on page 442	All
	W3Z71-67018	Single sheet sensor w holder Service Kit	Roll cover upper bumpers on page 526	Z9+



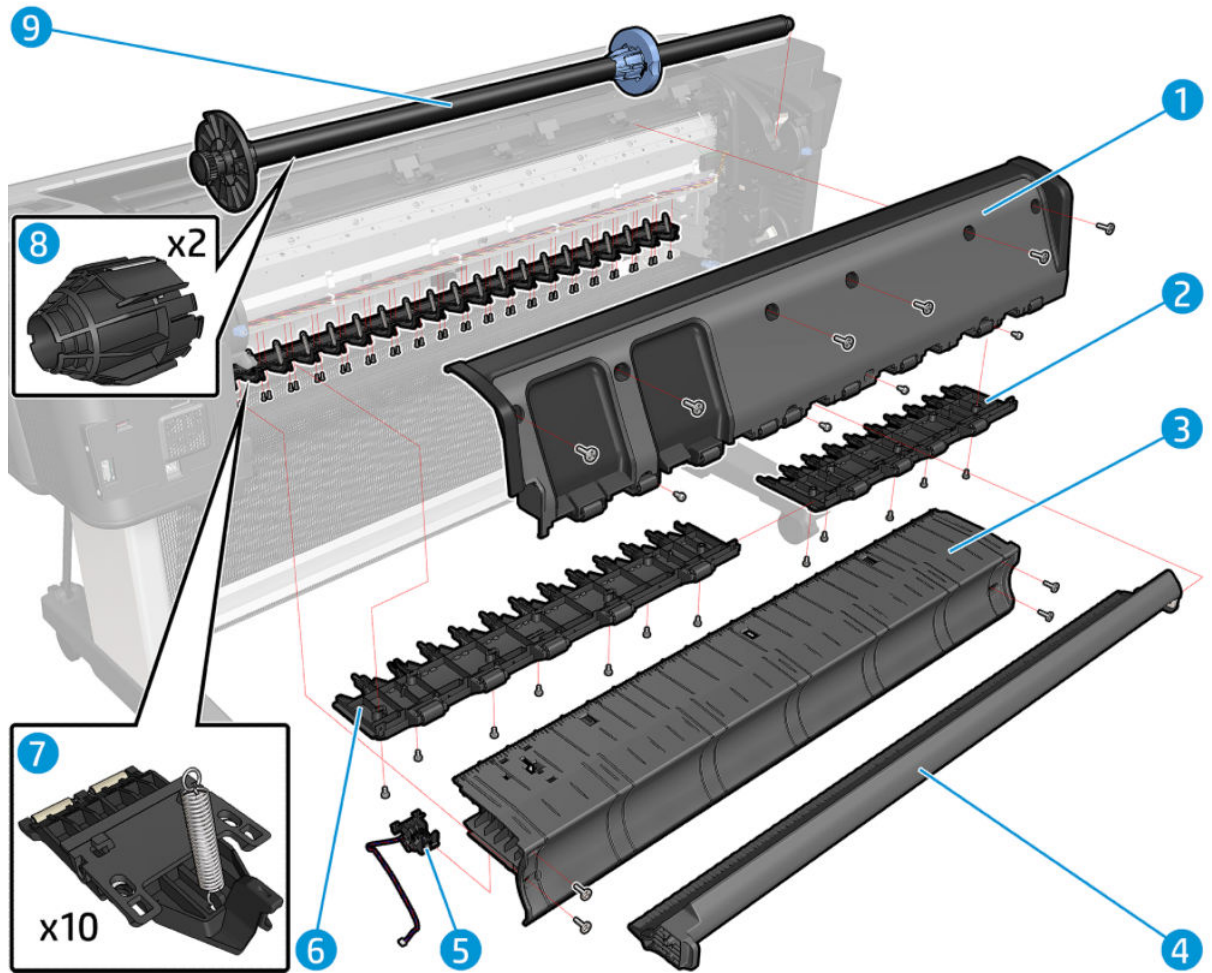
Paper path assemblies (Front)

	Part Number	Part Description	Cross-reference	Products Applicable
1	Q6687-60060	T1100/610 Starwheel assembly 44 SV	Starwheel assembly on page 455	T1700 & T1708
	Q6719-67004	Z3200 Starwheel with actuator		Z6 & Z9* (44 inch)
	Q6718-67014	Z3200 Starwheel w/o actuator S		Z6 & Z9* (24 inch)
2	T0B51-67014	Puma Print zone overdrive 44 S	Print zone overdrive on page 395	All 44 inch printers
	T0B52-67012	Puma 24-in Print zone overdrive		Z6 & Z9* (24 inch)
	Q6675-60042	Print zone overdrive 24		Z6 & Z9* (24 inch)
	Q6677-60018	Print zone overdrive 44		All 44 inch printers
3	T8W16-67017	Anti-ESD media output assembly Service Kit	Media output assembly on page 379	All
	Q5669-67054	Starwheel Support Assembly SV		T1700 & T1708
	Q6718-67013	Z3200 Starwheel support assembly		Z6 & Z9*
4	T8W18-67007	Anti-ESD Media Output V- Trimmer assembly service kit		Z6 & Z9* (44 inch)
	T8W15-67045	Anti-ESD Media Output 24 Service Kit		Z6 & Z9* (24 inch)
5	T8W18-67016	Retractable Media Output Ribs Service Kit	Starwheel lifter, Right on page 459	Z6 & Z9*



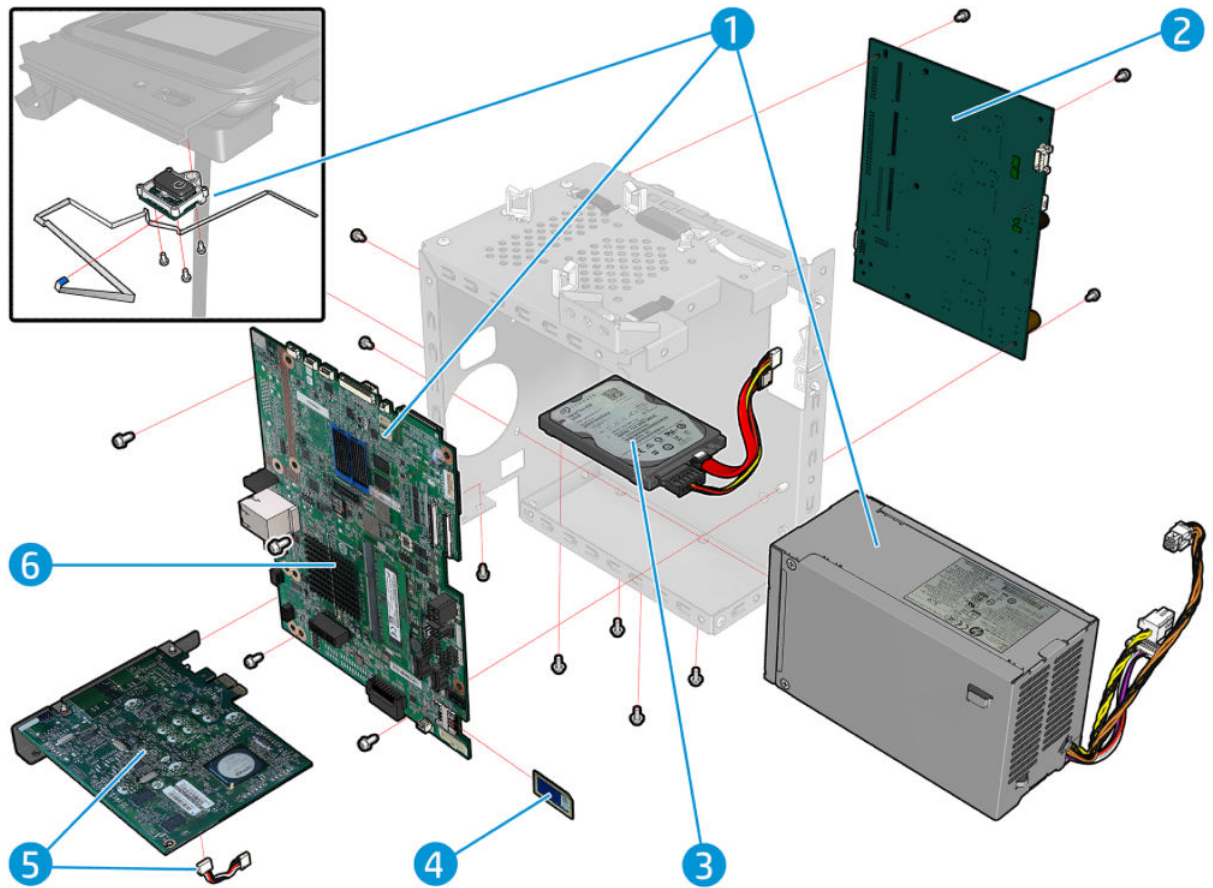
Paper path assemblies (Rear)

	Part Number	Part Description	Cross-reference	Products Applicable
1	T8W16-67008	Back cover 44 Service Kit	Rear cover on page 405	All 44 inch
	T8W15-67041	Back cover 24 Service Kit		Z6 & Z9* 24 inch
2	Q6677-60019	Left roll guide SV	Left roll guide on page 423	All
3	T8W15-67039	Clean out assembly 24 Service Kit	Cleanout on page 308	Z6 & Z9* 24 inch
	T8W16-67005	Clean out assembly 44 Service Kit		All 44 inch
4	CH538-67022	Converger assembly 2R	Converger on page 311	All Dual roll 44 in
	T8W16-67003	Converger assembly 1 roll Service Kit		All Single Roll 44 in
	T8W15-67037	Converger 24 Service Kit		Z6 & Z9* 24 inch
5	Q5669-67801	Media sensor SV	Media sensor on page 381	All
6	Q6675-60044	Right roll guide	Right roll guide on page 424	All
7	T0B51-67015	Puma Pinchwheel assembly SV	Pinchwheel assembly on page 387	Z6 & Z9*
	Q6687-60085	Pinchwheel assembly SV		T1700 & T1708
8	Q6675-60093	Adaptor kit 3-inch rolls		All
9	T8W16-67014	Spindle 44 Service Kit	Spindle on page 446	All 44 inch
	T8W15-67043	Spindle 24 Service Kit		Z6 & Z9* 24 inch



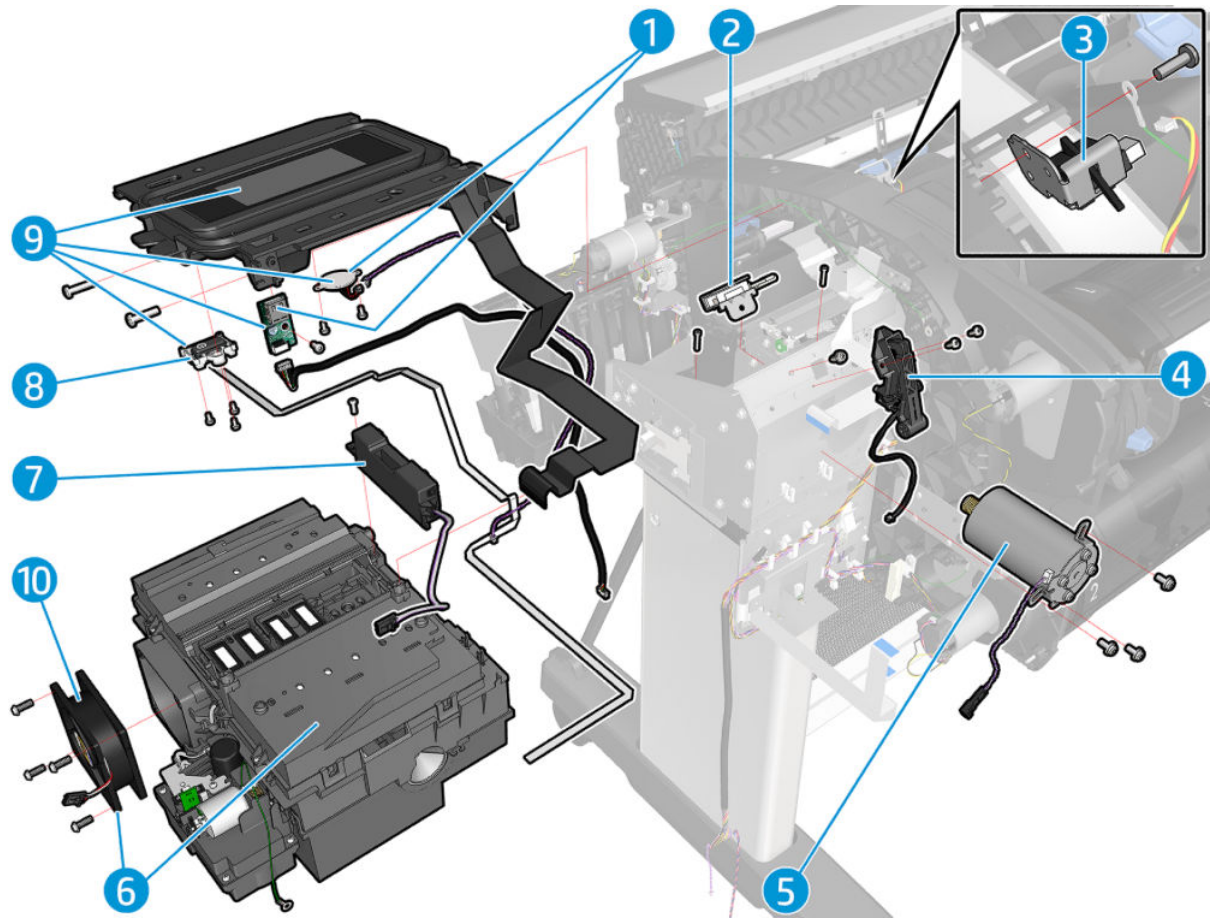
Electronics

	Part Number	Part Description	Cross-reference	Products Applicable
1	W6B56-67002	Formatter w PSU wo CryptoAsic Service Kit	Power supply unit on page 402	T1700 & T1708
	T8W15-67008	Formatter w PSU wo CryptoAsic Service Kit		Z6 & Z9*
2	T8W15-67009	Mechatronics PCA Service Kit	Mechatronics PCA on page 369	All
3	1VD88-67003	SATA HDD w/ FW Technical 6 inks	Hard disk drive on page 338	T1700
	T8W15-67010	SATA HDD w/ FW Graphics 6 inks		Z6
	W3Z71-67006	SATA HDD w/ FW Graphics 9 inks		Z9*
	1VD83-67006	SATA HDD w/ FW Technical 6 inks		T1708
	1VD88-67002	US GOV EE SVkit (includes US GOV HDD w/ FW/OS)		T1700 Only for rev B printers
	T8W18-67027	US GOV EE SVkit (includes US GOV HDD w/ FW/OS)		Z6 Only for rev B printers
	X9D24-67008	US GOV EE SVkit (includes US GOV HDD w/ FW/OS)		Z9 Only for rev B printers
4	T8W15-67028	CryptoAsic PCA Service Kit	CryptoAsic PCA on page 313	All
5	T8W15-67007	JESTER JDI PCA Service Kit	Jester JDI PCA on page 341	All
6	W6B56-67003	Formatter PCA Service Kit	Formatter PCA on page 325	T1700 & T1708
	T8W18-67021	Formatter PCA Service Kit		Z6 & Z9*



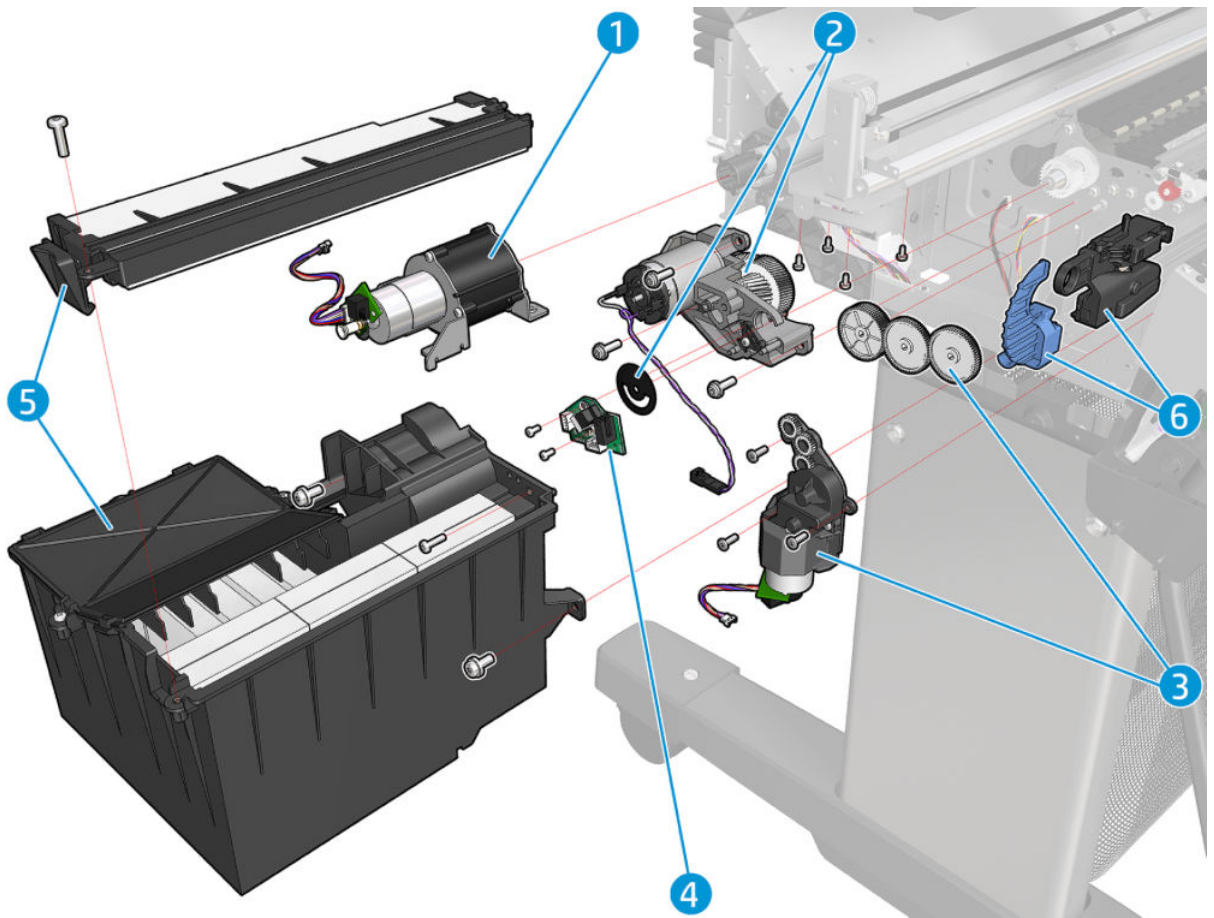
Right hand assemblies

	Part Number	Part Description	Cross-reference	Products Applicable
1	T8W15-67031	Speaker and USB host Service Kit	Speaker and USB host on page 444	All
2	Q6675-60043	Rail oiler	Carriage rail oiler on page 303	All
3	CH538-67071	Window position sensor w Shield	Window position sensor on page 513	All
4	Q5669-67807	PRS Actuator SV		All
5	CH538-67076	Scan-axis motor Poly-V SV	Scan-axis motor on page 434	All
6	T8W15-67026	Service station Graphic 6–ink Service Kit (includes drop detector)		Z6
	W6B55-67009	Service station Technical 6–inks Service Kit (includes drop detector)	Service station on page 438	T1700 & T1708
	W3Z71-67011	Service station Graphics 9–inks Service Kit (includes drop detector)		Z9*
7	T8W15-67015	Drop detector Service Kit	Drop detector on page 314	All
8	T8W15-67030	Power button Service Kit	Power button on page 399	All
9	T8W15-67027	Front panel Service Kit	Touch control panel on page 468	All
10	T8W15-67014	Aerosol fan with cable Service Kit		Z6 & Z9*



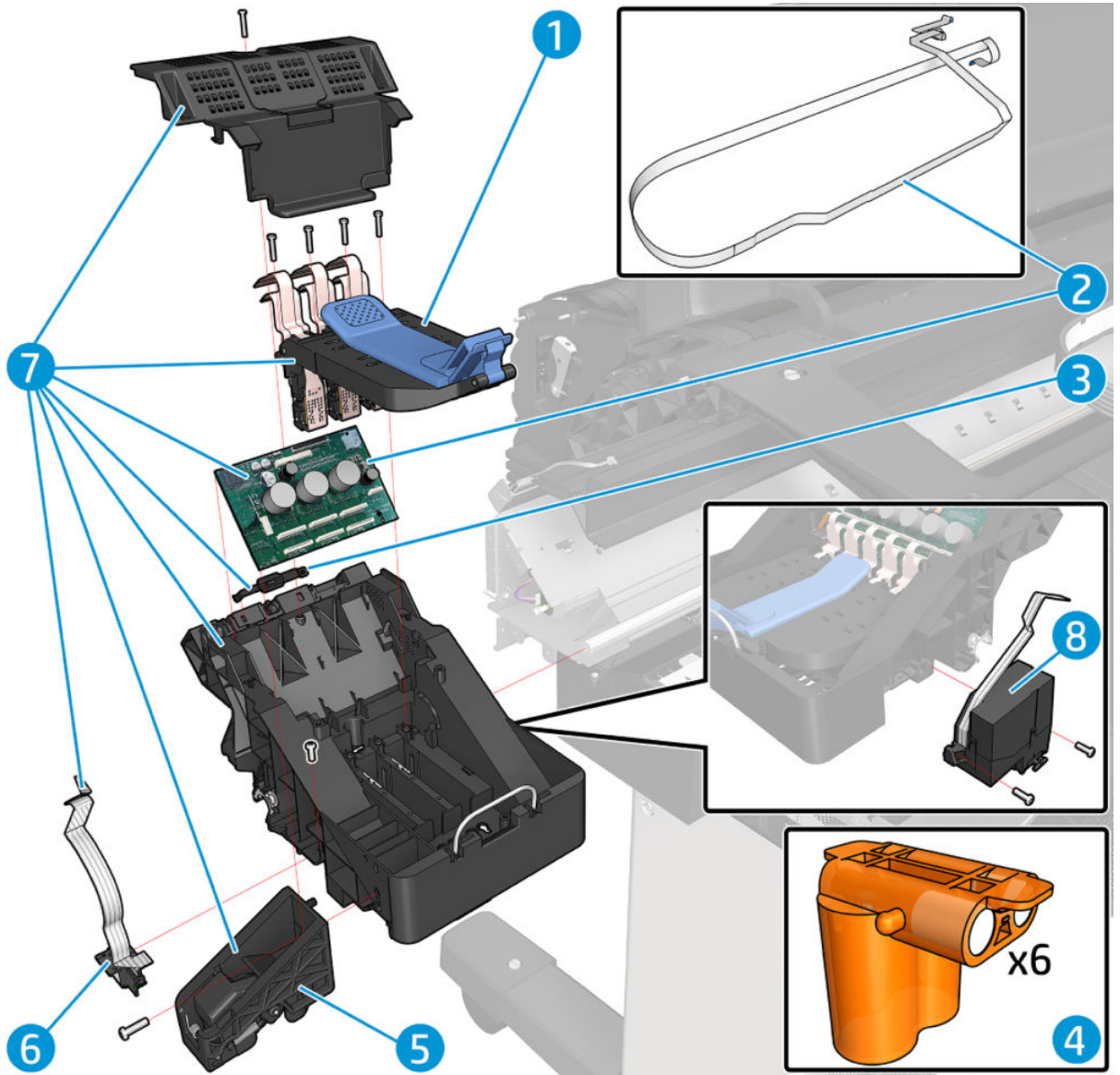
Left hand assemblies

	Part Number	Part Description	Cross-reference	Products Applicable
1	T8W15-67049	Auto pinch lifter assembly Service Kit	Auto pinch lifter on page 262	All
2	T8W16-67004	Media advance kit Service Kit		All
3	T8W15-67020	Starwheel motor Service Kit	Starwheel motor on page 462	All
4	CR647-67023	MSG signed analog encoder PCA		All
5	T8W15-67018	Left spittoon Service Kit	Spittoon, Left on page 447	All
6	T8W15-67056	Cutter assembly with pinion Service Kit	Cutter Assembly with pinion on page 502	All



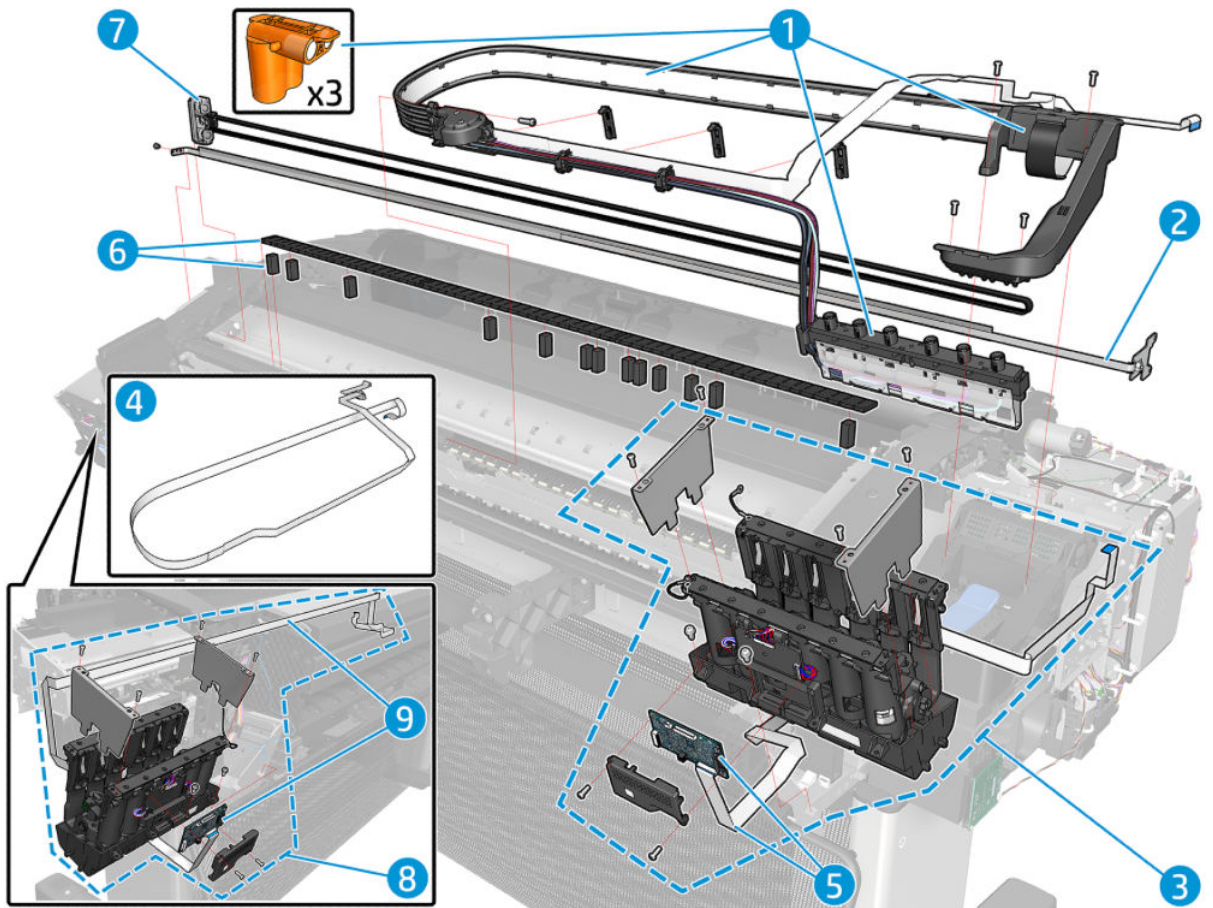
Carriage assembly

	Part Number	Part Description	Cross-reference	Products Applicable
1	T8W15-67002	Carriage cover 3 Service Kit	Carriage cover and Carriage latch on page 295	T1700, T1708 & Z6
	W3Z71-67003	Carriage cover 6 Service Kit		Z9+
2	T8W16-67006	Carriage 3 PCA w TC44 Service Kit	Carriage PCA on page 299	T1700, T1708 & Z6
	T8W15-67003	Carriage 3 PCA w TC24 Service Kit		Z6
	W3Z71-67004	Carriage 6 PCA w TC44 Service Kit		Z9+
	W3Z71-67005	Carriage 6 PCA w TC24 Service Kit		Z9+
3	Q5669-60687	Carriage rear bushing SV	Carriage bushing, Rear on page 293	All
4	Q6675-67004	Purgers (6 units) SV		All
5	CN727-67023	Cutter assembly with screw		T1700 & T1708
6	T8W15-67025	Signed line sensor 6–inks graphics Service Kit		Z6
	W6B55-67008	Signed line sensor 6–inks Technical Service Kit		T1700 & T1708
	W3Z71-67010	Line sensor 10–inks graphics Service Kit		Z9+
7	T8W15-67024	Carriage 3 wo/ cutter Service Kit	Carriage and cutter assembly on page 277	Z6
	W6B55-67007	Carriage 3 w/ cutter Service Kit		T1700 & T1708
	W3Z72-67006	Carriage 6 wo/ cutter Service Kit		Z9+
8	Q5669-60684	Z2100/3100 Color sensor (SPE)		Z9+



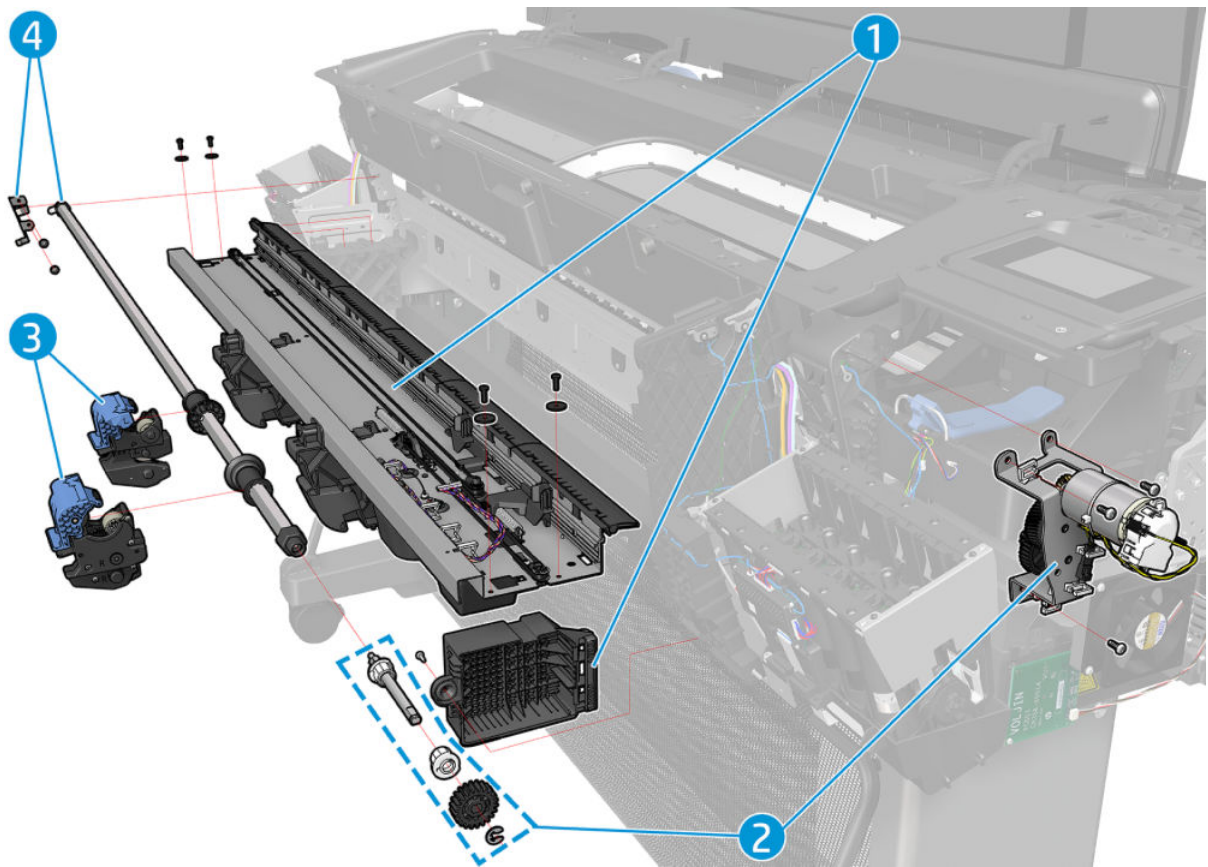
Scan-axis assemblies

	Part Number	Part Description	Cross-reference	Products Applicable
1	T8W16-67015	Tube system Graphics 44 6-ink Service Kit		Z6
	W6B55-67005	Tube system Technical 44 6-inks assembly Service Kit	Ink supply tubes & Trailing cable on page 352	T1700 & T1708
	W3Z72-67004	Tube system Graphics 44 9-inks assembly Service Kit		Z9+
	T8W15-67044	Tube system 24 6-inks assembly Service Kit		Z6
	W3Z71-67015	Tube system 24 9-inks assembly Service Kit		Z9+
2	CK839-67005	Spring, Encoder strip 44 and Sensor SV	Encoder strip, spring and attachment nut on page 322	All 44 inch
	T8W15-67040	Spring, Encoder strip 24 and Sensor SK		Z6 & Z9+ 24 inch
3	T8W15-67022	ISS graphics 6/9-ink Service Kit	[Xref Error! Target does not exist.]	Z6
	W3Z71-67008	ISS graphics 9-inks Service Kit		Z9+
	W6B55-67004	Ink supply station Technical Service Kit		T1700
	1VD85-67001	Ink supply station Technical AP Service Kit		T1708
4	T8W16-67019	Trailing cable 44 Service Kit	Trailing cable on page 464	All 44 inch
	T8W15-67050	Trailing cable 24 Service Kit		Z6 & Z9+ 24 inch
5	T8W15-67029	Ink supply station PCA right Service Kit	Ink supply station PCA on page 350	All
6	Q6659-60182	Full bleed foam 44 Kit Sv	Full bleed foam on page 337	All 44 inch
7	CQ305-60016	T770 Belt 24 SV	Belt assembly on page 266	Z6 & Z9+
	CH538-67018	T1200/T770 Belt 44 SV		All
8	W3Z71-67019	Left Ink supply station graphics 9 inks		Z9+
9	W3Z72-67007	Ink supply station PCA left 44 Service Kit		Z9+
	W3Z71-67012	Ink supply station PCA left 24 Service Kit		Z9+



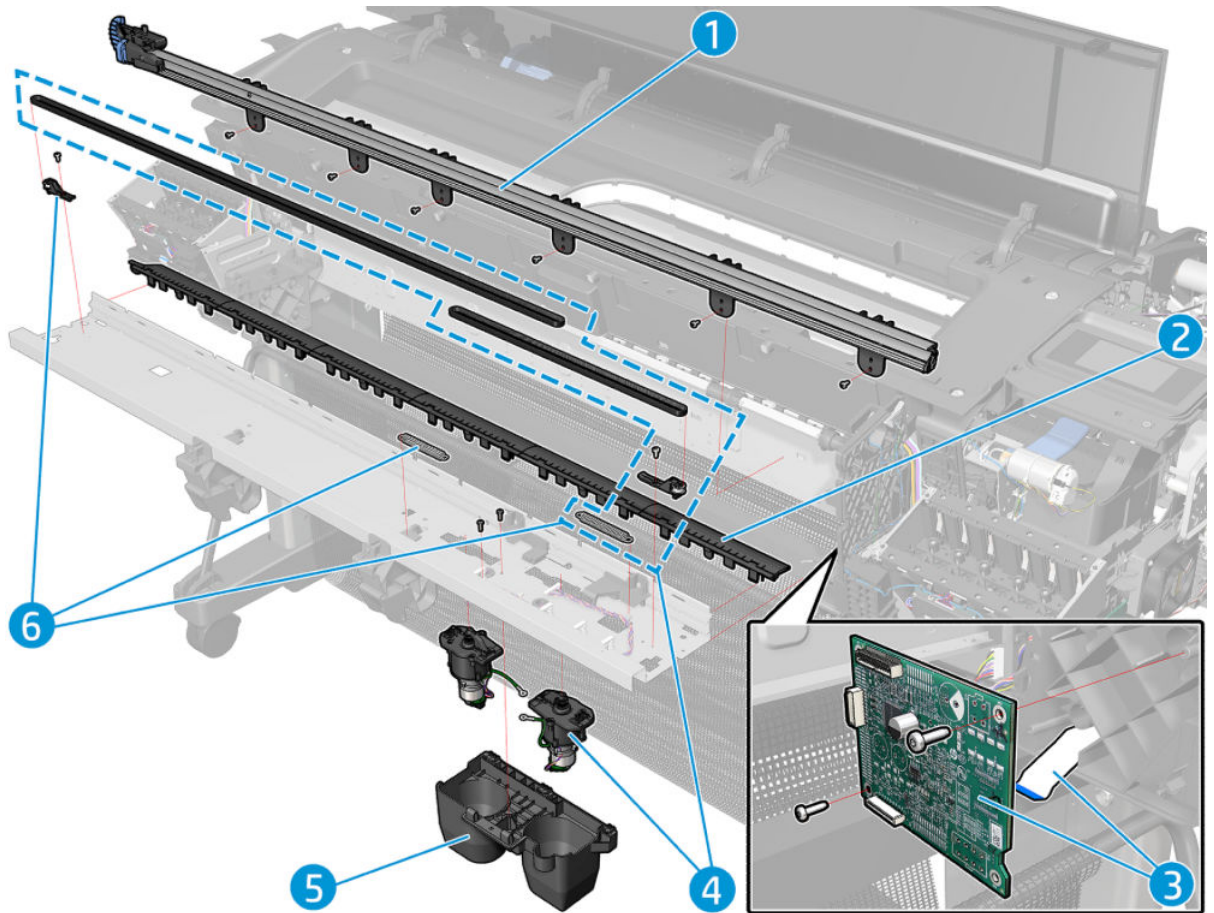
Vertical Trimmer

	Part Number	Part Description	Cross-reference	Products Applicable
1	T8W18-67019	V-Trimmer Structure assembly Service Kit	V-Trimmer structure assembly on page 478	Z6 & Z9*
2	T8W18-67012	V-Trimmer transmission Service Kit	V-Trimmer transmission on page 475	Z6 & Z9*
3	T8W18-67009	V-Trimmer modules Service Kit	V-Trimmer transmission on page 475	Z6 & Z9*
4	T8W18-67013	V-Trimmer Drive shaft assembly Service Kit	V-Trimmer transmission on page 475	Z6 & Z9*



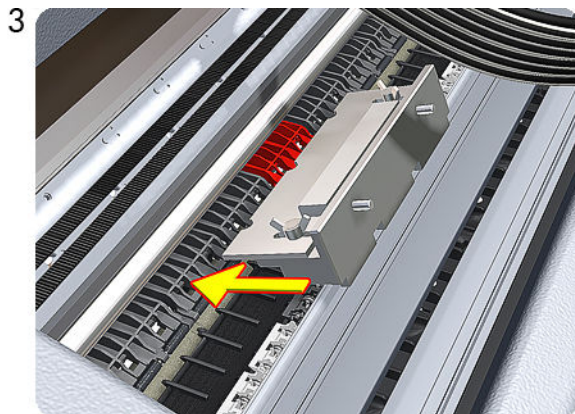
	Part Number	Part Description	Cross-reference	Products Applicable
1	T8W18-67028	Rack Rail 44 cutter with support	Rack Rail 44 Cutter with support on page 507	Z6 & Z9*
	T8W15-67054	Rack Rail 24 cutter with support		Z6 & Z9*
2	T8W18-67014	V-Trimmer Trenches assembly Service Kit	V-Trimmer Trenches on page 504	Z6 & Z9*
3	T8W18-67008	V-Trimmer PCA Service Kit	V-Trimmer PCA on page 482	Z6 & Z9*
4	T8W18-67015	V-Trimmer Modules Positioner Motor SV	V-Trimmer Modules Positioner Motor on page 487	Z6 & Z9*

	Part Number	Part Description	Cross-reference	Products Applicable
5	T8W18-67018	V-Trimmer Motor Cover Service Kit	V-Trimmer Motor Cover on page 485	Z6 & Z9*
6	T8W18-67020	V-Trimmer Belt with Support Service Kit	V-Trimmer Belt with Support on page 495	Z6 & Z9*



Tools 1

	Part Number	Part Description	Products Applicable
1	Q6675-67018	Media Driver Tool Kit (includes the Handle for Media Driver Tool Support and the Media Driver Adjustment Tool)	All
2	Q5669-60690	Flex Contacts Cleaning Tool (CSR A)	All
3-4	Q6687-60084	Pinchwheel Insertion Tool	All
	Q6687-60093	Paper Advance Calibration T Se	All (for 44 inch plotters)
	Q6683-60241	Paper Advance Calibration T Se	Z6 & Z9* (for 24 inch plotters)



Tools 2

	Part Number	Part Description	Products Applicable
5	Q6675-67017	Spanner Tool	All
6	Q6683-67001	Tool Kit (includes pinchwheel alignment tool, paper driver tool, spanner # 13, oil dispenser, insert spring tool, tweezers, T15 screwdriver, 100 cc isopropyl alcohol, lubricant oil, plastic gloves, flex contacts cleaning tool and cleaning kit)	All
7	Q5669-60692	Lubrication Kit (CSR A)	All
8	CH538-67047	Bi-stable Spring Left and Right	All



Miscellaneous Parts

Part Number	Part Description	Products Applicable
W6B55-67006	PM Kit 1 - 44 6–inks technical	T1700 & T1708
T8W16-67016	PM Kit 1 - 44 6–inks graphics	Z6
W3Z72-67005	PM Kit 1 - 44 9–inks graphics	Z9+
T8W15-67023	PM Kit 1 - 24 6–inks graphics	Z6
W3Z71-67009	PM Kit 1 - 24 9–inks graphics	Z9+
T8W18-67024	PM Kit 2 - 6–inks graphics	Z6
W3Z72-67009	PM Kit 2 - 9–inks graphics	Z9+
W6B55-67016	PM Kit 2 - 6–inks technical	T1700 & T1708
T8W15-67001	Engine cables 6–inks 24inch Service Kit	Z6
W3Z71-67002	Engine cables 9–inks 24inch Service Kit	Z9+
T8W16-67002	Engine cables 6–ink 44inch 1R Service Kit	T170X & Z6
W3Z72-67002	Engine cables 9–ink 44inch 1R Service Kit	Z9+
W6B55-67001	Engine cables 6–ink 44inch 2R Service Kit	T1700 & T1708
T8W18-67003	Engine cables V-cutter 6–ink Service Kit	Z6
X9D24-67001	Engine cables V-cutter 9–ink Service Kit	Z9+
T8W15-67021	Serial Label Service Kit	
Q5669-60692	Lubrication kit	All
X9D24-67003	IDS cables SV Kit	All
X9D24-67004	Harness cables Sv kit	All
X9D24-67005	Mechatronics PCA cables	All
X9D24-67006	JDI power cable	All
1VD88-67001	US GOV ID Kit	T1700 (only for rev B printers)
X9D24-67007	9 ink US GOV ID Kit	Z9+ (Only for rev B printers)
T8W18-67026	6 ink US GOV ID Kit	Z6 (Only for rev B printers)

7 Removal and Installation

- [Introduction](#)
- [Customer Self Repair parts](#)
- [Service Calibration Guide to Removal and Installation](#)
- [Auto pinch lifter](#)
- [Belt assembly](#)
- [Bi-stable springs](#)
- [Bumpers, Left and Right](#)
- [Carriage and cutter assembly](#)
- [Cutter assembly \(T1700 & T1708\)](#)
- [Cutter assembly \(Z6 & Z9+\)](#)
- [Carriage bushing, Rear](#)
- [Carriage cover and Carriage latch](#)
- [Carriage PCA](#)
- [Carriage rail oiler](#)
- [Center support](#)
- [Cleanout](#)
- [Control panel cover](#)
- [Converger](#)
- [CryptoAsic PCA](#)
- [Drop detector](#)
- [E-box](#)
- [Encoder disk and Encoder sensor](#)
- [Encoder strip](#)
- [Encoder strip, spring and attachment nut](#)

For HP authorized personnel only

- [Formatter PCA](#)
- [Freewheel assembly](#)
- [Front cover](#)
- [Front top cover](#)
- [Front trims \(T1700 & T1708\)](#)
- [Full bleed foam](#)
- [Hard disk drive](#)
- [Horizontal cutter cover](#)
- [Jester JDI PCA](#)
- [Ink cartridge door, Left](#)
- [Ink cartridge door, Right](#)
- [Right ink supply station](#)
- [Ink supply station PCA](#)
- [Ink supply tubes & Trailing cable](#)
- [Left cover](#)
- [Line sensor](#)
- [Mechatronics PCA](#)
- [Media advance drive](#)
- [Media output assembly](#)
- [Media sensor](#)
- [Pen to paper space \(PPS\) solenoid](#)
- [Pinch arm assembly](#)
- [Pinchwheel assembly](#)
- [Print zone overdrive](#)
- [Power button](#)
- [Power supply unit](#)
- [Rear cover](#)
- [Right cover](#)
- [Roll cover, Lower](#)
- [Roll cover, Upper](#)
- [Roll cover lower bumpers](#)

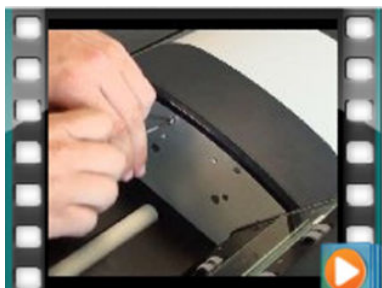
- [Roll cover upper bumpers](#)
- [Left roll guide](#)
- [Right roll guide](#)
- [Roll support, Lower left](#)
- [Roll support, Lower right](#)
- [Roll support, Upper left](#)
- [Roll support, Upper right](#)
- [Roll support sensor, Lower left](#)
- [Roll support sensor, Upper left](#)
- [Scan-axis motor](#)
- [Service station](#)
- [Single-sheet sensor](#)
- [Speaker and USB host](#)
- [Spindle](#)
- [Spittoon, Left](#)
- [Stand \(T1700 & T1708\)](#)
- [Stand basket](#)
- [Starwheel assembly](#)
- [Starwheel lifter, Left](#)
- [Starwheel lifter, Right](#)
- [Starwheel motor](#)
- [Trailing cable](#)
- [Touch control panel](#)
- [V-Trimmer cover](#)
- [V-Trimmer modules](#)
- [V-Trimmer Drive shaft assembly](#)
- [V-Trimmer transmission](#)
- [V-Trimmer structure assembly](#)
- [V-Trimmer PCA](#)
- [V-Trimmer Motor Cover](#)
- [V-Trimmer Modules Positioner Motor](#)

- [V-Trimmer Belt with Support](#)
- [Retractable Media Output Rib](#)
- [Cutter Assembly with pinion](#)
- [V-Trimmer Trenches](#)
- [Rack Rail 44 Cutter with support](#)
- [Wall spacers](#)
- [WiFi cover](#)
- [Window, Opaque](#)
- [Window position sensor](#)


Introduction

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

Some of the procedures have a video available which can be downloaded. When a video is available the following graphic is shown. Click on the graphic to download the video. These videos and others, are also available from **HP LFP MyKnowledge App**.



- HP LFP MyKnowledge App: <https://hpsupportknowledgemanagement.azurewebsites.net/>
- HP Youtube support channel: <https://www.youtube.com/user/hpsupportadvanced>

 **NOTE:** 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

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

 **NOTE:** 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 off the printer, 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 printer's 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 printer.
5. After removing a cover from the printer, 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 printer.
6. After removing any PCA from the printer, place it on a conductive foam pad or into its conductive packaging to prevent ESD damage to any ICs on the PCA.

Required Tools

All the special tools and equipment required to disassemble, service and repair the printer are provided in the Toolkit P/N Q6683-67001. Some tools can be ordered separately from the toolkit. See [Tools 1 on page 250](#) and [Tools 2 on page 251](#).

The Toolkit contains the following tools:

Description/Comments	HP Part Number
13 mm Combination Spanner	Q6675-67011
Alcohol	Q6675-60091
Allen Key #2	Q6675-60041
Cleaning Cloth	9300-2531
Flex Contacts Cleaning Support	Q1271-40384
Lubricant Oil	Q6675-60090
Media Driver Adjustment Tool	Q6675-67009
Handle for Media Driver Tool Support	Q6675-67010
Spanner	Q6675-67011
Oil Dispenser	Q6675-60062
Manual Pinch Arm Alignment Tool	Q5669-20595
Spring Insertion Tool	Q5669-20594
Protective Plastic Gloves	Q6675-60035
Screwdriver	8710-2456

For HP authorized personnel only

Description/Comments	HP Part Number
Tweezers	Q6675-60037
T Series Cleaning Assembly	C6071-60218

You will also need the following standard hand tools:

Description/Comments	Size
Long Torx Screwdriver	1/4 inch drive
Torx Bit (75 mm)	8
	10
	15
	20
Phillips Screwdriver	1
Pliers	N/A
Snips	N/A
Pipe Spanner	5.5 mm
Flat-bladed Screwdriver	N/A

Customer Self Repair parts

Some printer parts are designated Customer Self Repair (CSR) parts, which means that a faulty part can be replaced by the customer. Non-CSR parts need to be replaced by an engineer.

CSR A: Customer self-repair is mandatory, as mentioned in the printer's warranty statement. If HP is asked to replace such parts, the customer will be charged for travel and labor costs. Parts should be replaceable by end users (customers) from a mechanical perspective within 5 minutes, with simple or no tools required. Examples include spindles and cartridges.

CSR B: Parts are easy to replace, but some knowledge of the product and technical skills may be required. The customer can decide whether to replace the part or to call for an engineer.

The CSR parts are listed below.

Part number	Description	CSR type	In box
Q5669-60690	Flex Contacts Cleaning Tool SV	A	No
Q5669-60692	Troja Lubrication Kit SV	A	No
Q6687-60093	Paper Advance Calibration T Se	A	No
CN727-67023	Cutter Assy with screw (see Cutter assembly (T1700 & T1708) on page 289)	A	Yes
CH538-67050	T1200/T770 Roll Cover Freewheel SV (see Freewheel assembly on page 522)	B	Yes
T8W16-67014	Spindle 44 SV	A	No
Q6675-60093	3" Adaptor kit - Troja Service	A	No
T8W15-67021	Serial Label SV	A	No
T8W16-67011	Stand - Basket 44 Service Kit	A	No
T8W16-67011	Bin Assembly 44 SV	A	No
Q6675-67004	Ink System Purgers (6 units)	A	Yes
CH538-67037	Pinch Arm Assembly for Roll Cover SV (see Pinch arm assembly on page 524)	A	Yes
CH538-67051	Roll Cover Upper Bumpers (see Roll cover upper bumpers on page 526)	A	Yes
CH538-67052	Roll Cover Lower Bumpers	A	Yes

For further information

- HP Support center: <https://support.hp.com/>
- CSR Web site: <http://www.hp.com/go/csraparts/>
- HP Parts Page: <https://parts.hp.com/Hpparts/Default.aspx>

Service Calibration Guide to Removal and Installation

Using the Service Calibration Guide

When you remove most printer components, you will need to perform a particular set of Service Calibrations and Diagnostic tests to ensure proper printer performance.

The Service Calibration Table explains which service calibrations and diagnostic tests need to be performed whenever you remove and install particular printer components.

The calibrations and tests must be performed in the order in which they are listed.



NOTE: Even if you do not replace the removed component with a new component, you still need to perform the calibrations indicated in the table.

Diagnostics and Calibration Table

Component	Diagnostic Tests	Service Utilities & Calibrations
Carriage Assembly	Carriage	Line Sensor Calibration. After replacement, Reset Life Counters.
Carriage Cover, Carriage Latch, Carriage PCA	Carriage	Line Sensor Calibration.
Carriage Rear Bushing	Carriage	Line Sensor Calibration.
Cleanout Assembly	Carriage TBD	
Cutter Assembly	Carriage, Mechatronics and Cutter	
Drop Detector	Service station, Electronics	Reset Calibration Flag TBD, Drop Detector Calibration
Encoder Disk, Encoder Sensor	Media path	Paper Advance Calibration
Encoder Strip	Carriage	
Formatter, Front Panel, Hard Disk Drive, Mechatronics PCA, Power Supply Unit	E-box	
Ink Supply Station Left	ISS, Electronics and Mechatronics	After replacement, reset Life Counters
Ink Supply Tubes, Support Rail	ISS	
Line Sensor	Carriage, Electronics	Line Sensor Calibration
Media Advance Drive	Media path, Electronics and Mechatronics	Paper Advance Calibration
Media Advance Roller	Media path, Electronics and Mechatronics	Paper Advance Calibration
Out of Paper Sensor	Media input, Sensors	
Pen to Paper Space (PPS) Solenoid	Media path, Electronics and Mechatronics	
Preventative Maintenance #1	Carriage	Line Sensor Calibration. After replacement, reset Life Counters
Preventative Maintenance #2	Service Station	Drop Detector Calibration. After replacement, reset Life Counters
Primer Assembly	Service Station	Drop Detector Calibration
Print Zone Overdrive	Media path, Electronics and Mechatronics	

Performing the Service Calibrations and Diagnostic Tests

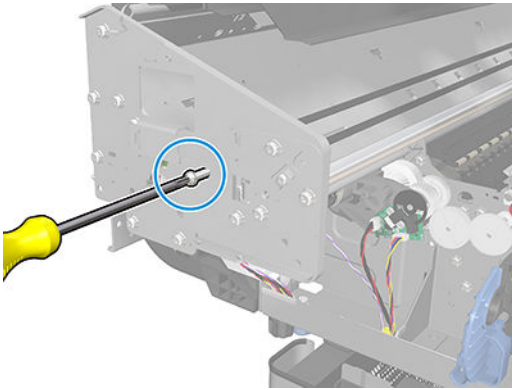
When you are ready to perform the service calibrations and diagnostic tests that correspond to the component you have installed or replaced, consult the following sections for procedures:

- Paper drive test
- Electronics module test
- Carriage assembly test. See [0086 Carriage on page 209](#)
- Sensors test
- Rewinder test. See [0060 Media input on page 194](#).
- Ink Delivery System test. See [0022 ISS on page 192](#).
- Service station test. See [0021 Service station – SVS on page 188](#).
- Paper advance calibration. See [Media advance calibration on page 218](#).
- Drop detector calibration. See [Drop detection calibration on page 217](#).
- Line sensor calibration. See [Line sensor calibration on page 218](#).

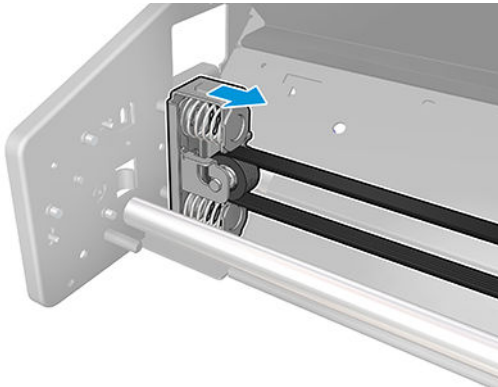
Auto pinch lifter

Removal

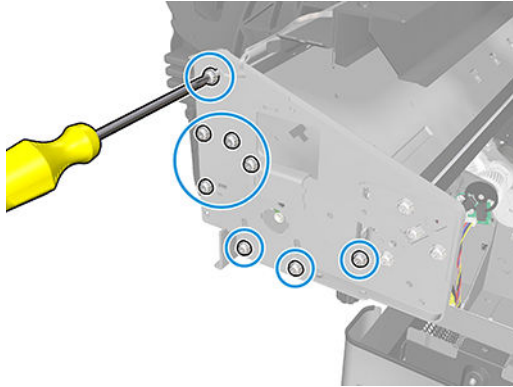
1. Switch off the printer and remove the power cable.
2. Remove the Left cover. See [Left cover on page 359](#).
3. Remove the Left spittoon. See [Spittoon, Left on page 447](#).
4. Remove the Encoder strip, spring and attachment nut. See [Encoder strip, spring and attachment nut on page 322](#).
5. Loosen the T-15 screw Belt tensioner to the printer to remove the tension from the belt.



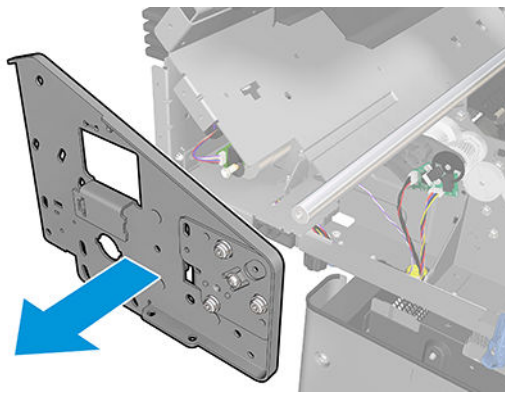
6. Leave the Belt tensioner in place with all the tension removed.



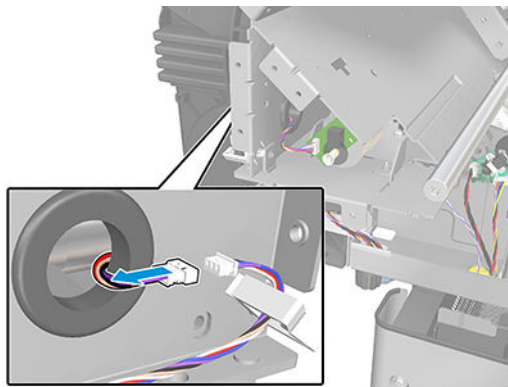
7. Remove the seven T-15 screws that secure the Scan side panel to the printer.



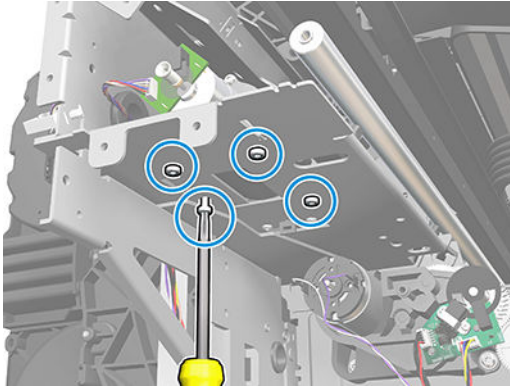
8. Remove the Scan side panel.



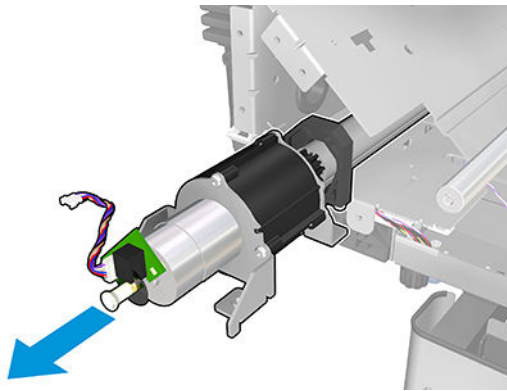
9. Disconnect the cable connector shown.



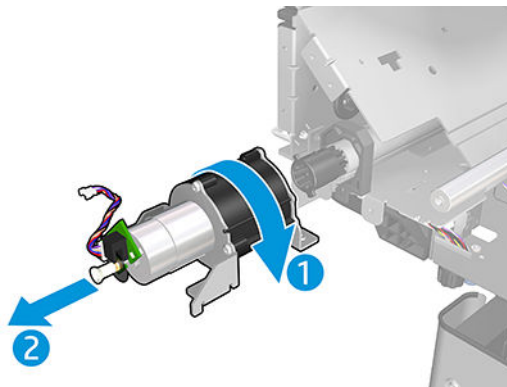
10. Remove 4 screws



11. Move the pinch structure as shown

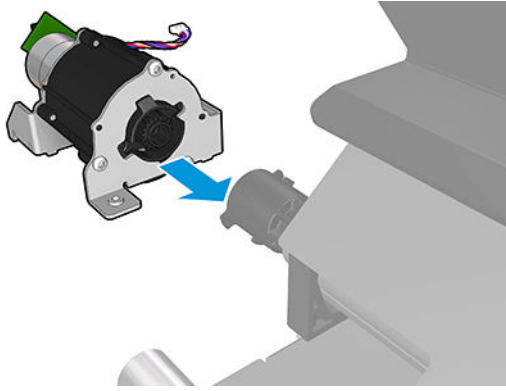


12. Remove the Auto pinch lifter.



Installation

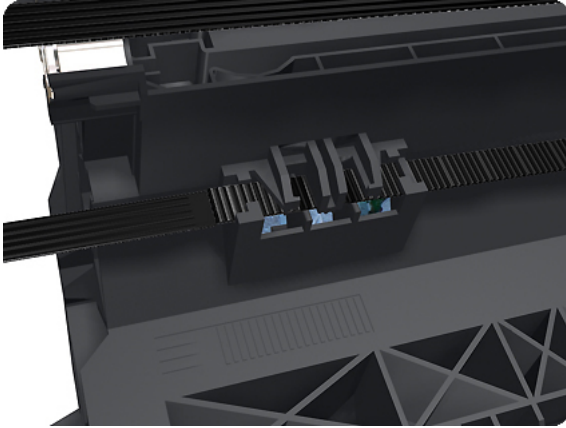
- ▲ Install the Auto pinch lifter.




Belt assembly


Removal

1. Switch off the printer and remove the power cable.
2. Remove the Carriage Assembly. See [Carriage assembly on page 244](#).
3. Slide the Belt Assembly out of the attachment on the Carriage Assembly.



4. Remove the Belt Tensioner Assembly.

 **NOTE:** When reinstalling the belt, make sure it is correctly routed.

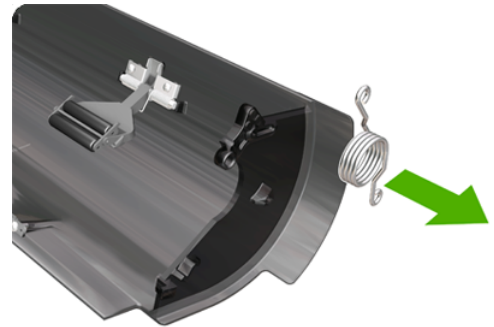
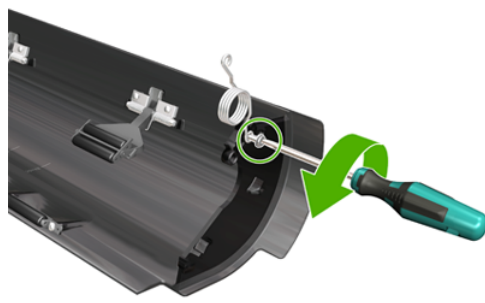
 **NOTE:** When you finish installing or replacing this component, you must perform the necessary Service Calibrations. To find which calibrations you must perform, see [Service Calibration Guide to Removal and Installation on page 260](#).

Bi-stable springs

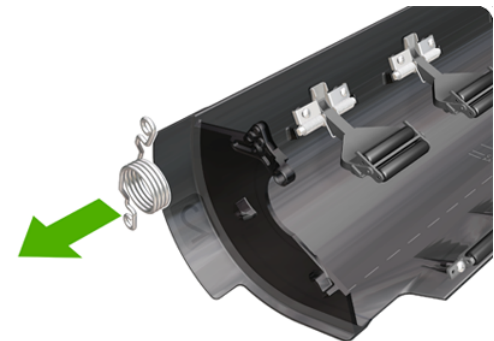
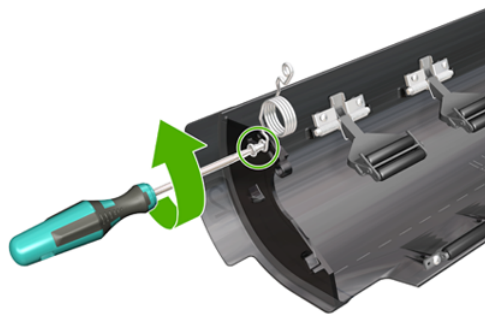
These parts should not be replaced by customers.

Removal

1. Remove the [Roll cover, Lower on page 411](#).
2. Unscrew the Left Bi-stable Spring from the Lower Roll Cover.



3. Unscrew the Right Bi-stable Spring from the Lower Roll Cover.

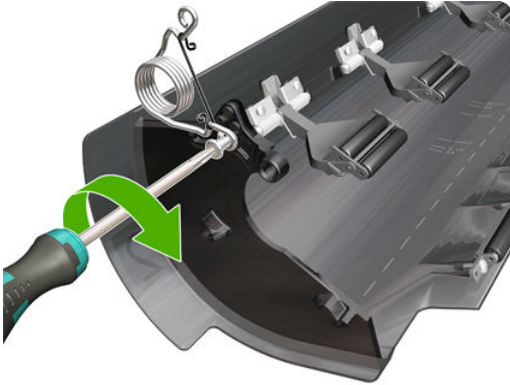


Installation

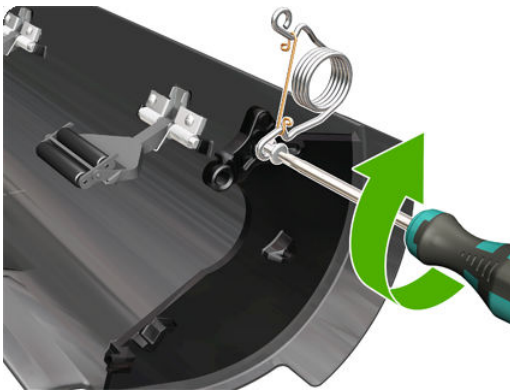
1. There are two pre-loaded Bi-stable Springs, one for the left side (gold link) and one for the right side (black link). There are two screws for each Bi-stable Spring (total four screws).



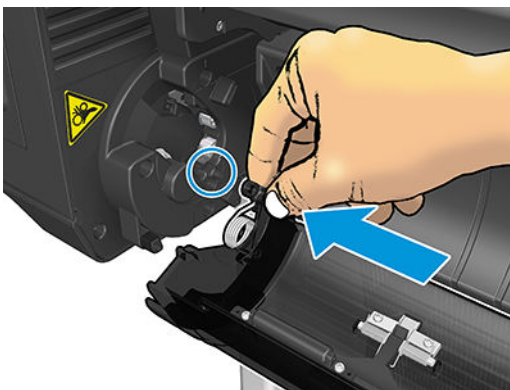
2. Screw the right Bi-stable Spring (black link) onto the right side of the Lower Roll Cover.



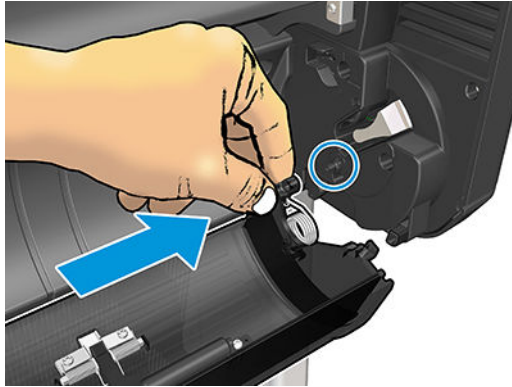
3. Screw the left Bi-stable Spring (gold link) onto the left side of the Lower Roll Cover.



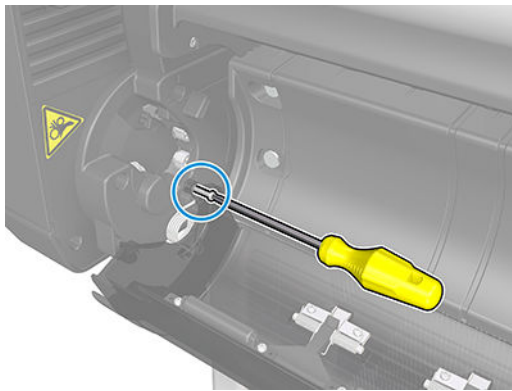
4. Hold the Roll Cover with two hands while mounting it in the Roll Support.
5. Insert the Lower Roll Cover right-side hinge into the Lower Right Roll Support pin.



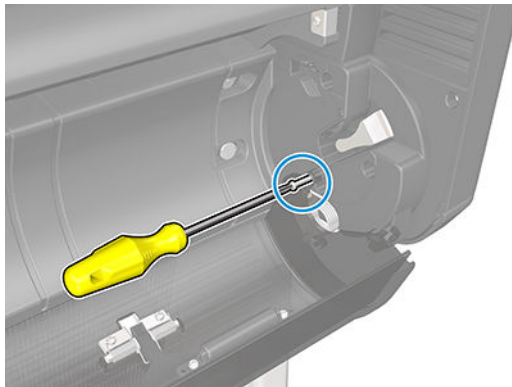
6. Insert the Lower Roll Cover left-side hinge into the Lower Left Roll Support pin.



7. Screw the Lower Roll Cover to the Lower Right Roll Support.



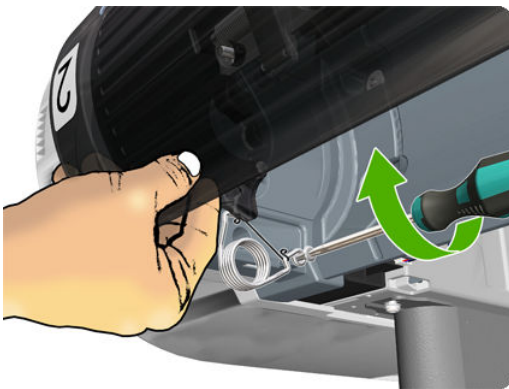
8. Screw the Lower Roll Cover to the Lower Left Roll Support.



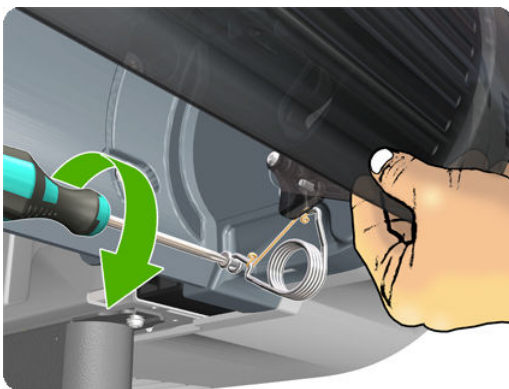
9. Close the Lower Roll Cover until the other end of the Bi-stable Screw is in front of the hole on the Lower Left Roll Support (if necessary, hold the Roll Cover for a moment with your head).



10. Screw the left pre-loaded Bi-stable Spring to the Lower Left Roll Support. Do not let the cover close completely.

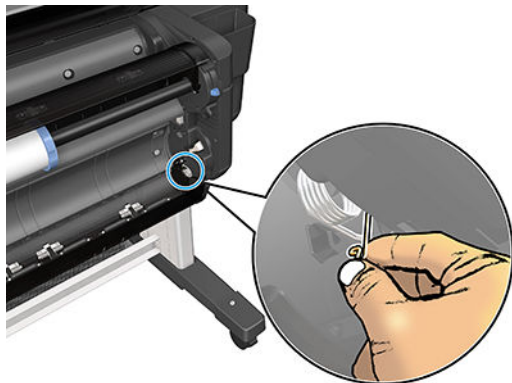


11. Screw the right pre-loaded Bi-stable Spring to the Lower Right Roll Support.

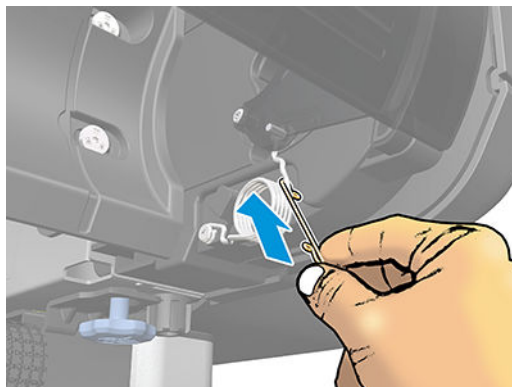


12. Close the Lower Roll Cover completely.

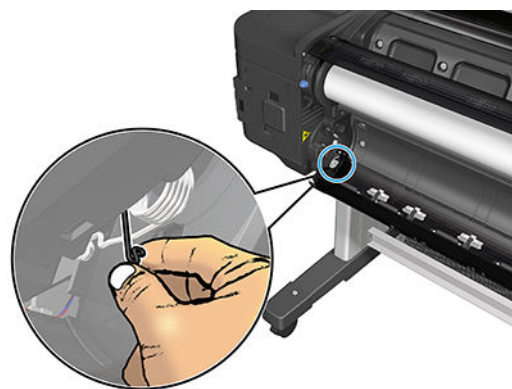
13. Free one end of the right metal link of the right Bi-stable Spring.



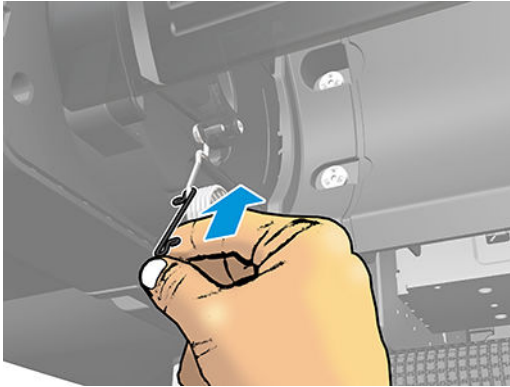
14. Free the other end of the right metal link of the right Bi-stable Spring (if necessary, play slightly with the Lower Roll Cover).



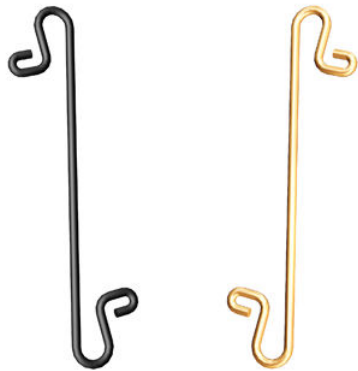
15. Free one end of the left metal link of the left Bi-stable Spring (if necessary, play slightly with the Lower Roll Cover).



16. Free the other end of the metal link of the left Bi-stable Spring.



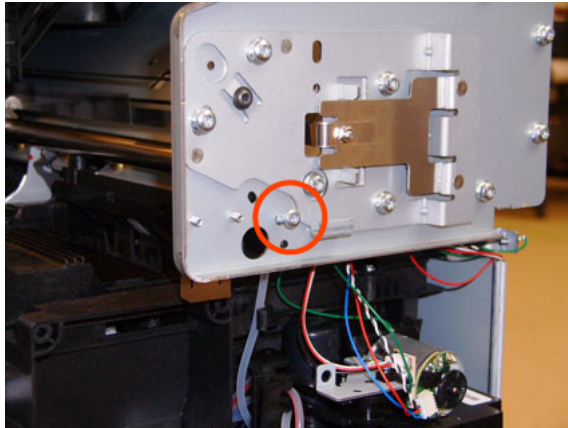
17. Store the metal links that you have removed.



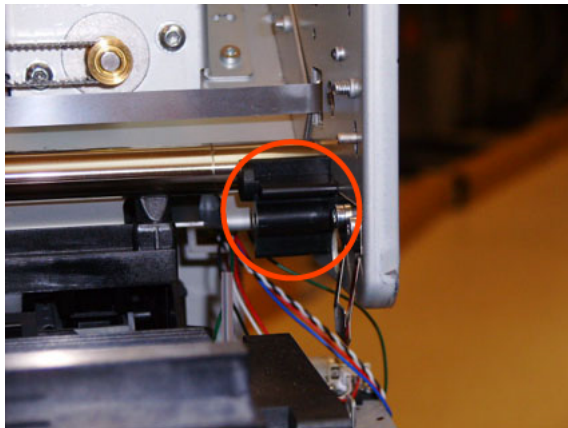
Bumpers, Left and Right

Removal

1. Switch off the printer and remove the power cable.
2. Remove the [Right cover on page 407](#).
3. Remove the [Left cover on page 359](#).
4. Remove the T-15 screw that secures the right bumper.

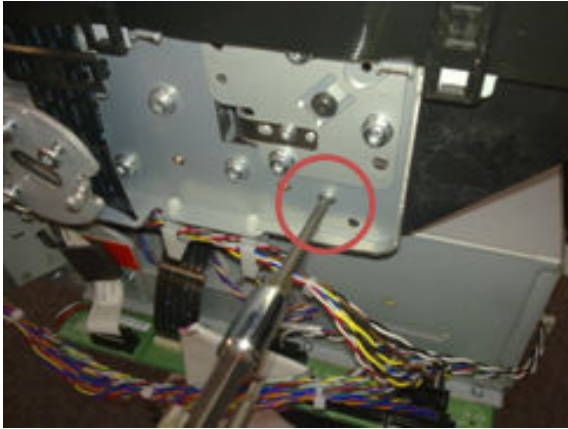


5. Remove the right bumper.



For HP authorized personnel only

6. Remove the T-15 screw that secures the left bumper.



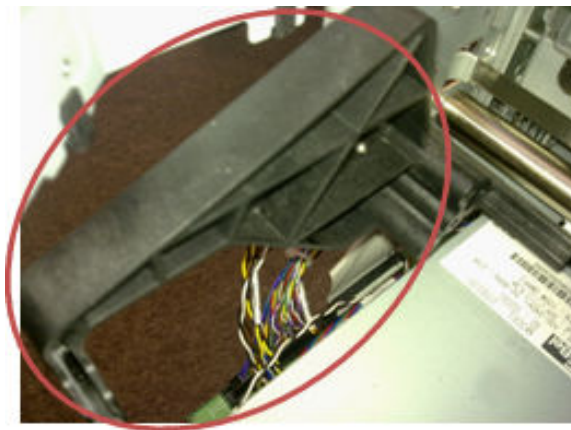
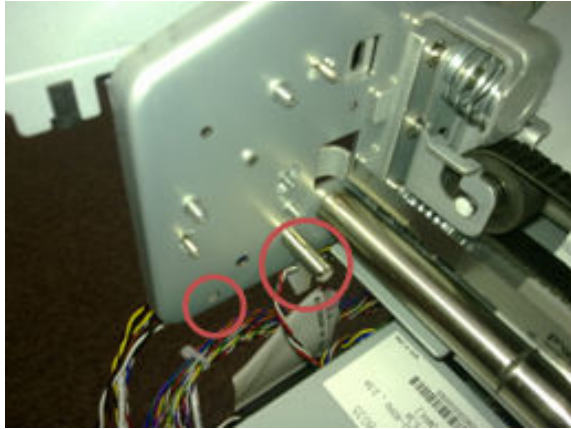
7. Remove the left bumper.



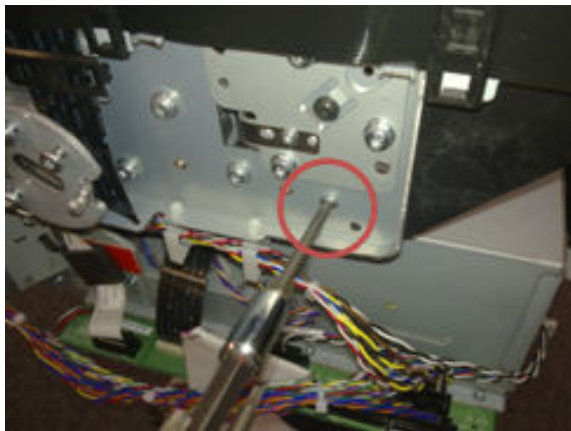
Installation

1. Switch off the printer and remove the power cable.
2. Remove the [Right cover on page 407](#).
3. Remove the [Left cover on page 359](#).

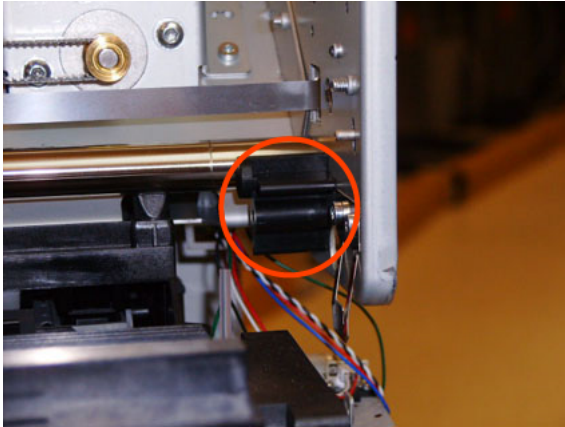
4. Attach the left bumper. Make sure to snap the bumper on to both parts shown.



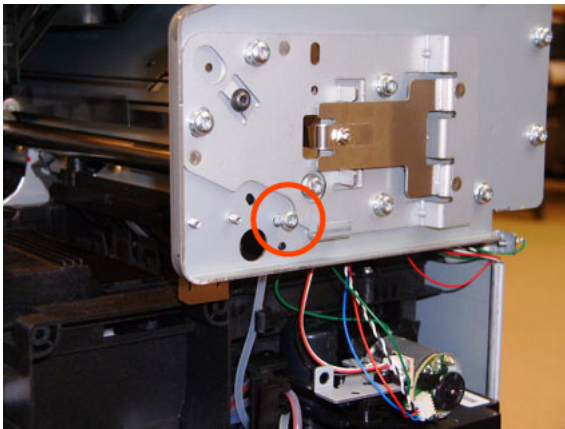
5. Secure the left bumper to the printer with a T-15 screw.



6. Attach the right bumper.



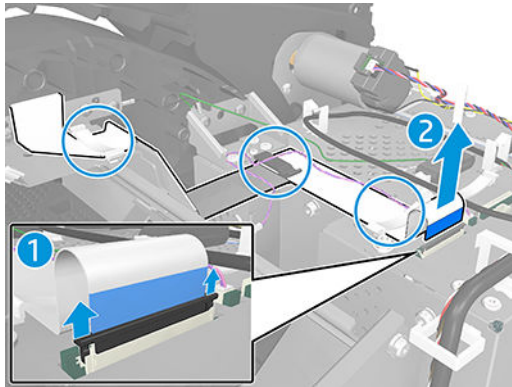
7. Secure the right bumper to the printer with a T-15 screw.



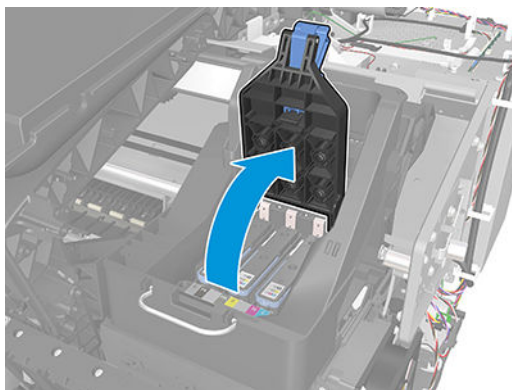
Carriage and cutter assembly

Removal – T1700/T1708

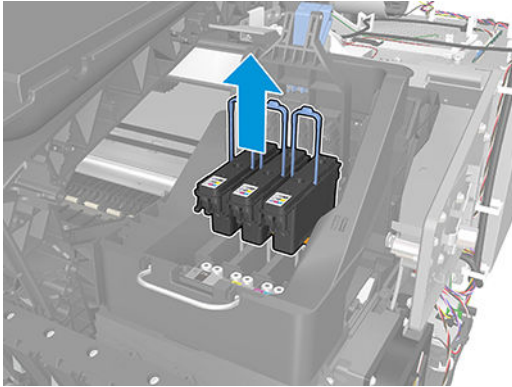
1. Switch off the printer and remove the power cable.
2. Remove the [Front cover on page 330](#).
3. Remove the [Right cover on page 407](#).
4. Remove the [Left cover on page 359](#).
5. Remove the [Touch control panel on page 468](#).
6. Remove the [Front top cover on page 331](#).
7. Remove the [Encoder strip, spring and attachment nut on page 322](#).
8. Disconnect the ribbon cable of the Trailing cables from the Electronics module.



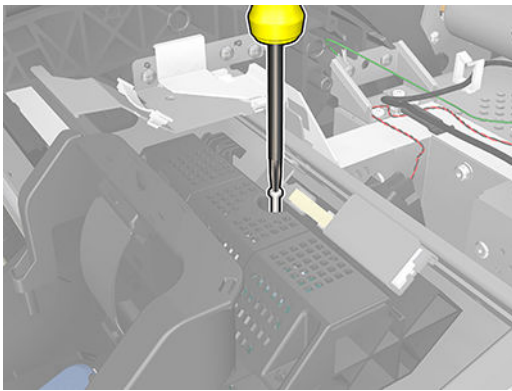
9. Open the Carriage Cover.



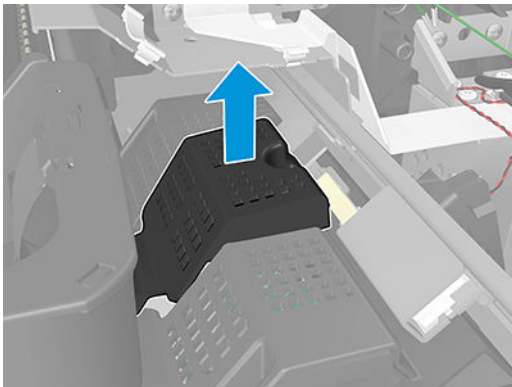
10. Remove all the Printheads.



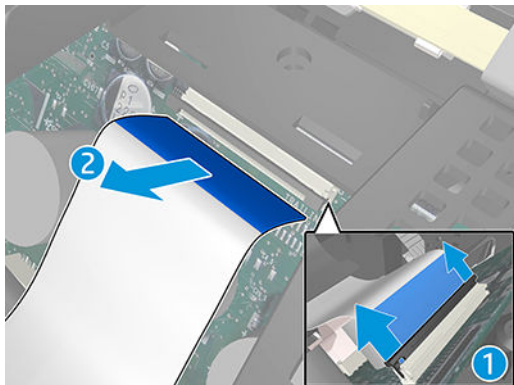
11. Unscrew the small cover of the Carriage PCA.



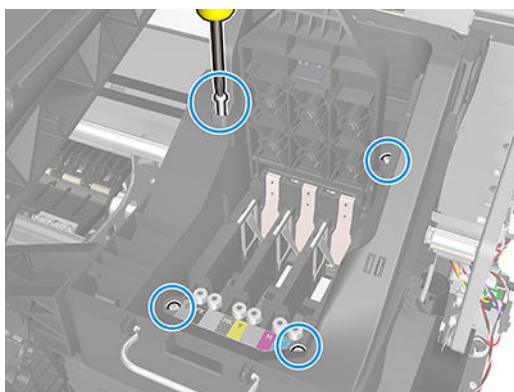
12. Remove the small cover of the Carriage PCA.



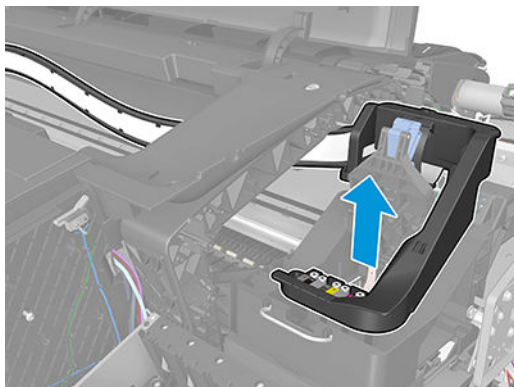
13. Disconnect the ribbon cable of the Trailing cable from the Carriage PCA.



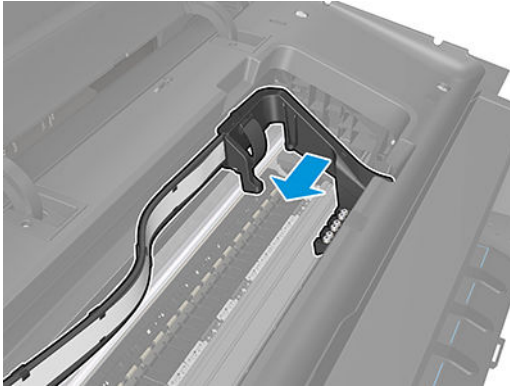
14. Remove the four T-15 screws that secure the Ink supply tubes to the Carriage assembly.



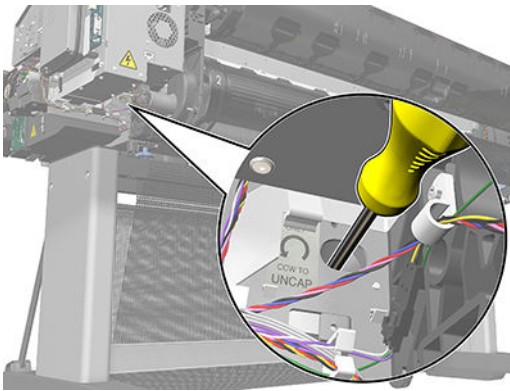
15. Carefully lift out the Ink supply tubes and close the carriage cover at the same time.



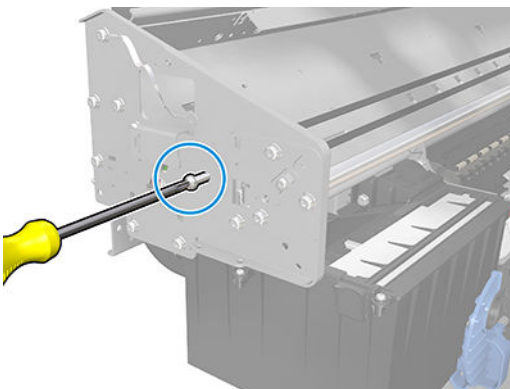
16. Carefully move the Ink supply tubes into the print path.



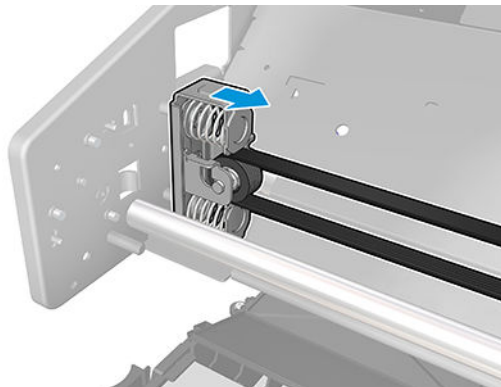
17. Loosen the T-10 uncapping screw sufficiently so you can manually move the Carriage assembly.



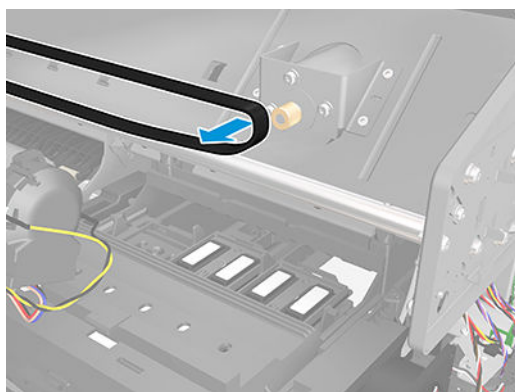
18. Loosen the T-15 screw that goes from the Belt tensioner to the printer to remove the tension from the belt.



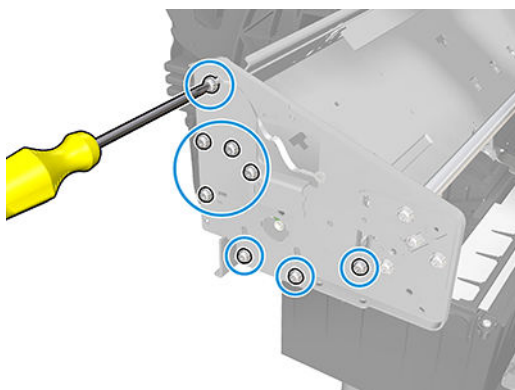
19. Leave the Belt tensioner in place with all the tension removed.



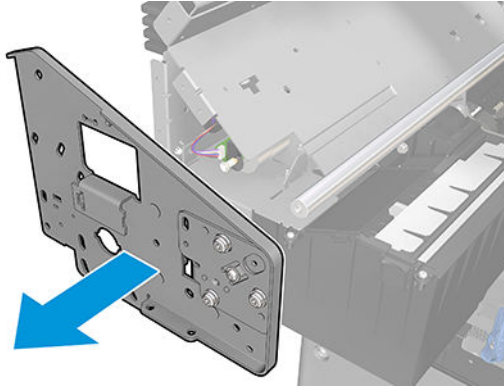
20. Remove the Belt assembly from the Scan-axis motor drive wheel.



21. Remove the seven T-15 screws that secure the Scan side panel to the printer.

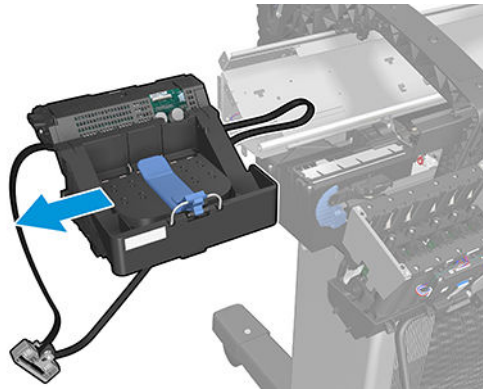


22. Remove the Scan side panel.



23. Carefully slide the Carriage assembly and the Belt assembly out of the printer (and the Trailing cable if you are removing it with the Carriage assembly).

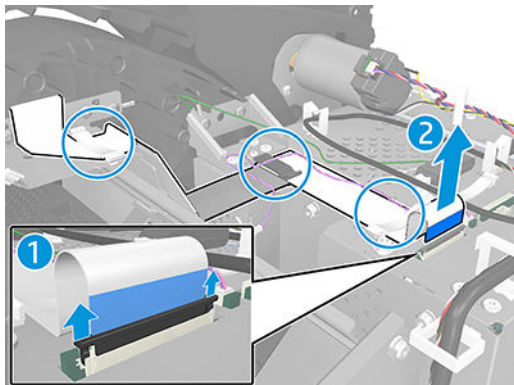
⚠ CAUTION: Be careful not to damage the PRS Slider.



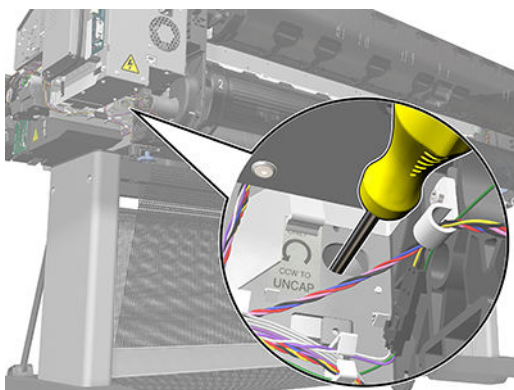
Removal – Z6 & Z9+

1. Switch off the printer and remove the power cable.
2. Remove the Front cover. See [Front cover on page 330](#).
3. Remove the Right cover. See [Right cover on page 407](#).
4. Remove the Left cover. See [Left cover on page 359](#).
5. Remove the Touch control panel. See [Touch control panel on page 468](#).
6. Remove the Front top cover. See [Front top cover on page 331](#).
7. Remove the Encoder strip, spring and attachment nut. See [Encoder strip, spring and attachment nut on page 322](#).
8. Remove the Ink supply tubes support rail.

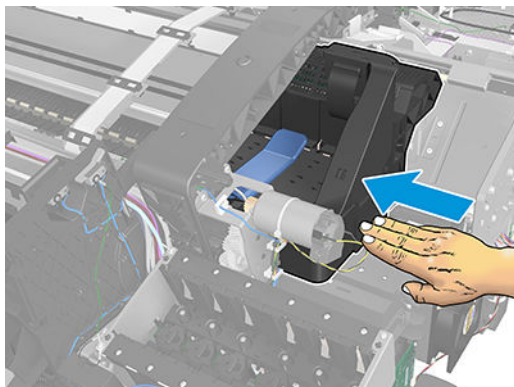
9. Disconnect the ribbon cable of the Trailing cables from the Electronics module.



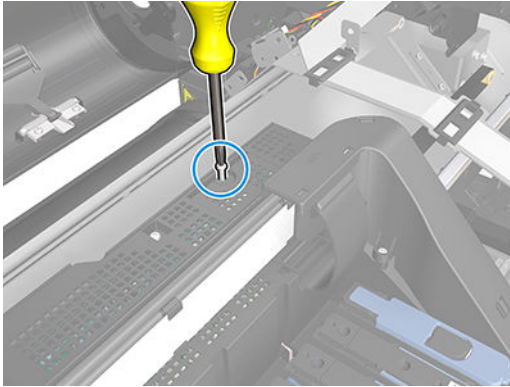
10. Loosen the T-10 uncapping screw sufficiently so you can manually move the Carriage assembly.



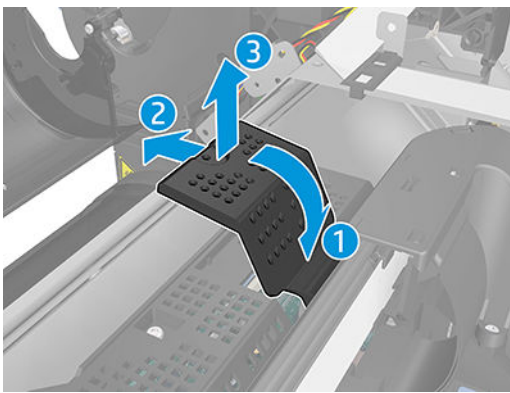
11. Push the Carriage assembly into the print path.



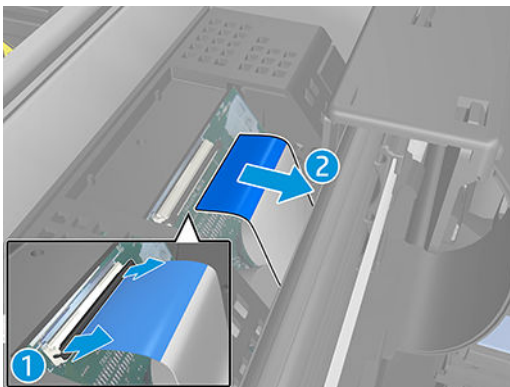
12. Unscrew the small cover of the Carriage PCA.



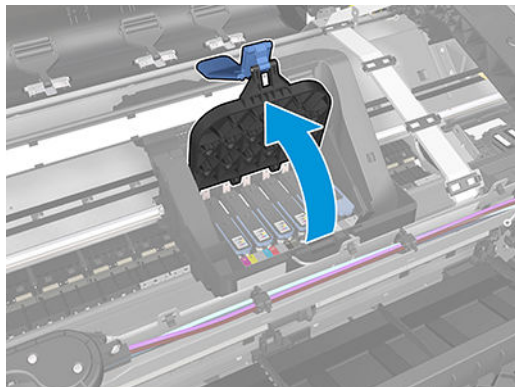
13. Remove the small cover of the Carriage PCA.



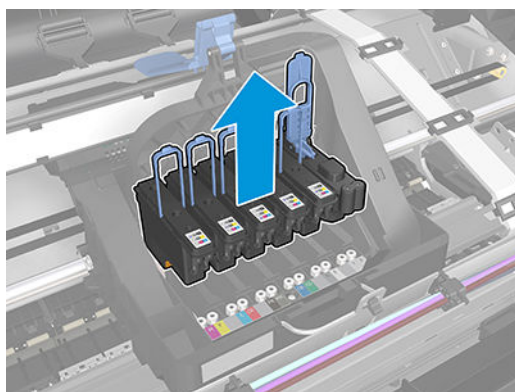
14. Disconnect the ribbon cable of the Trailing cable from the Carriage PCA.



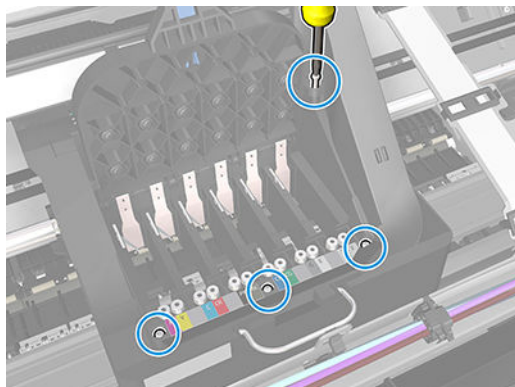
15. Open the Carriage cover.



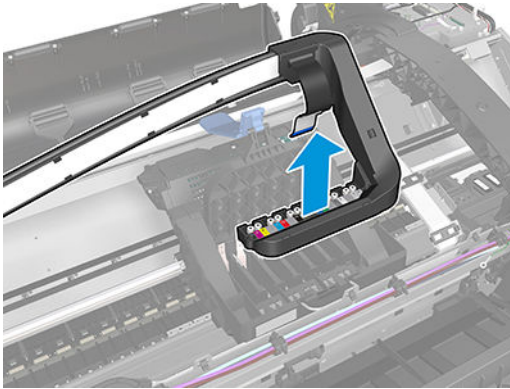
16. Remove all the printheads.



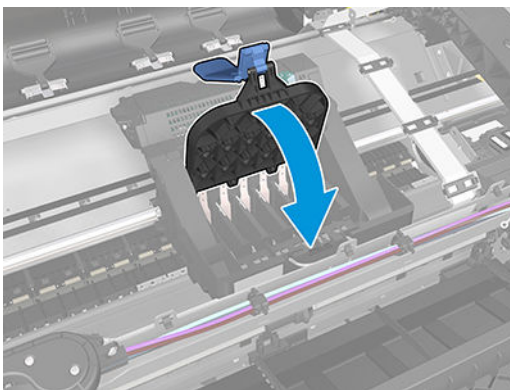
17. Open the latch, and remove the four T-15 screws that secure the Ink supply tubes to the Carriage.



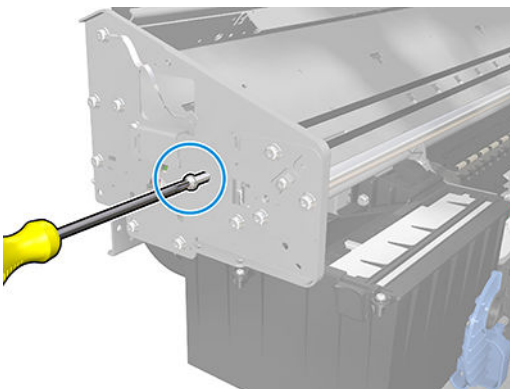
18. Carefully lift out the Ink supply tubes and close the carriage cover at the same time.



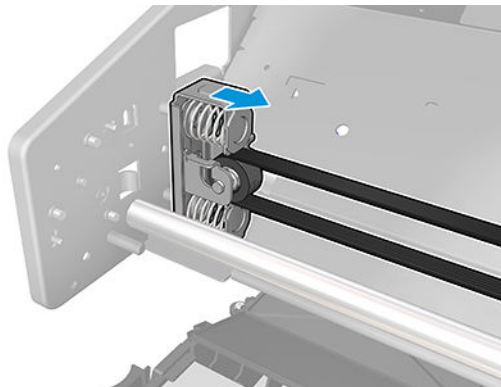
19. Close and lock the Carriage cover.



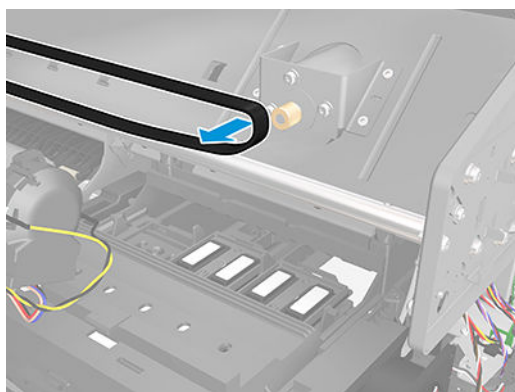
20. Loosen the T-15 screw that goes from the Belt tensioner to the printer to remove the tension from the belt.



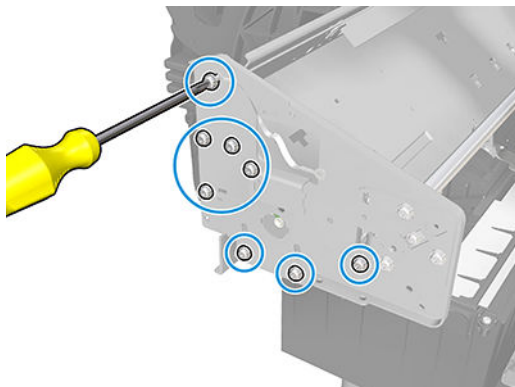
21. Leave the Belt tensioner in place with all the tension removed.



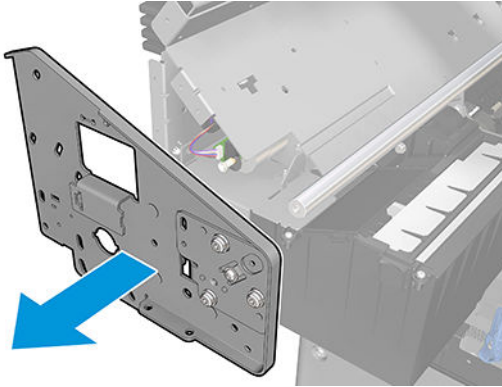
22. Remove the Belt assembly from the Scan-axis motor drive wheel.



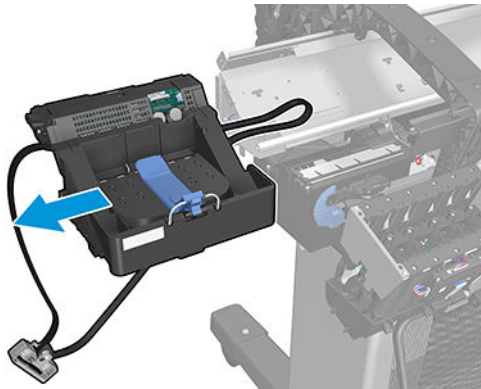
23. Remove the seven T-15 screws that secure the Scan side panel to the printer.




24. Remove the Scan side panel.



25. Carefully slide the Carriage assembly and the Belt assembly out of the printer (and the Trailing cable if you are removing it with the Carriage assembly).

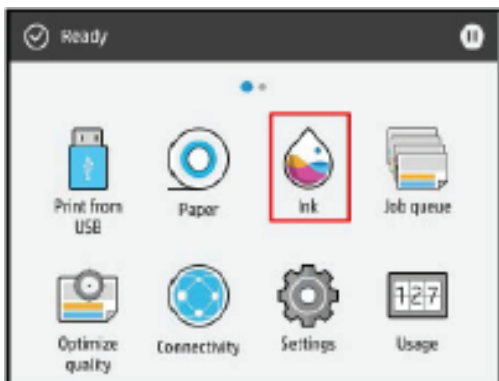


 **NOTE:** When you reinstall the Carriage assembly, take care not to damage the PRS Slider.

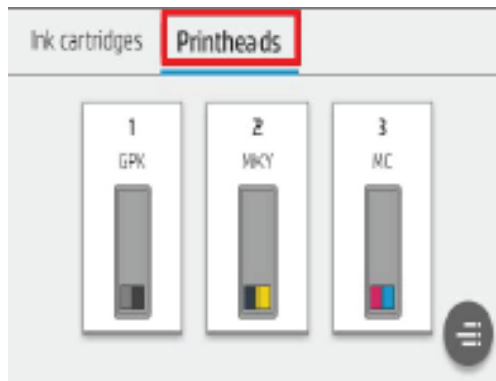
 **NOTE:** When you finish installing or replacing this component, you must perform the necessary Service Calibrations. To find which calibrations you must perform, see [Service Calibration Guide to Removal and Installation on page 260](#).

Cutter assembly (T1700 & T1708)

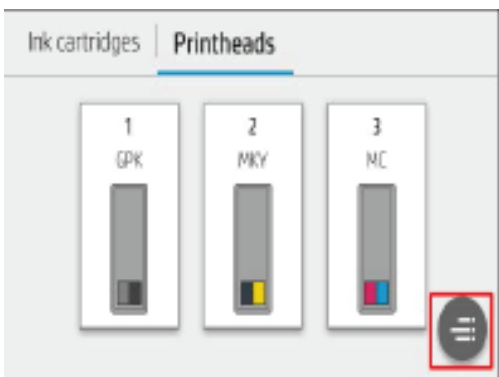
1



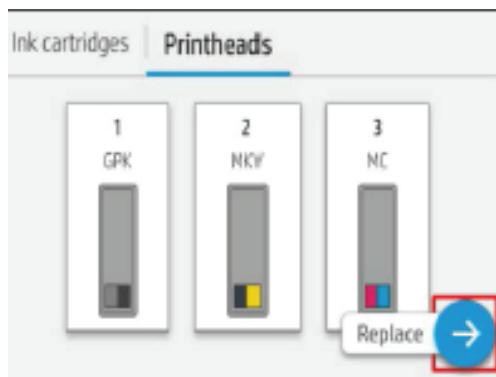
2



3



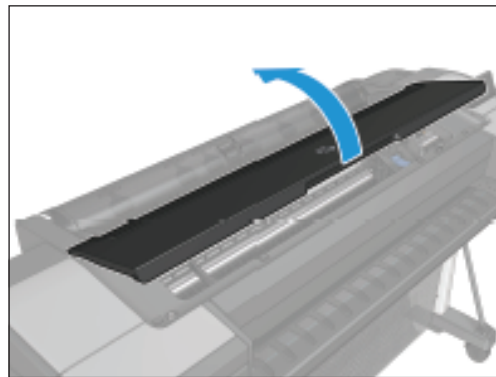
4



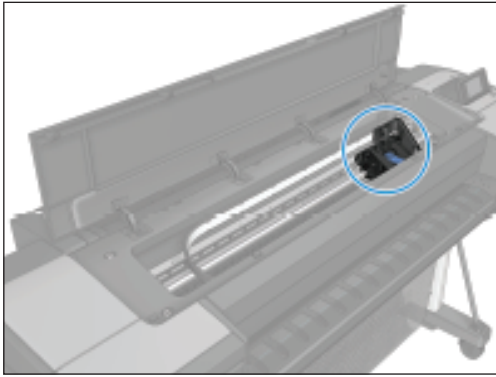
5



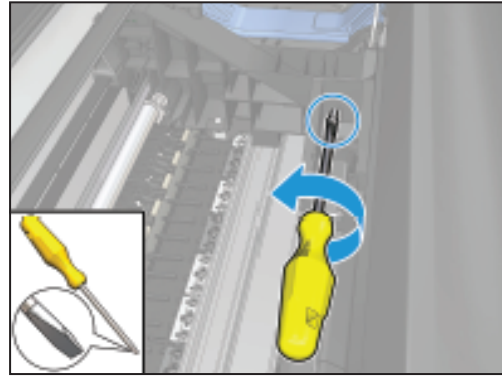
6



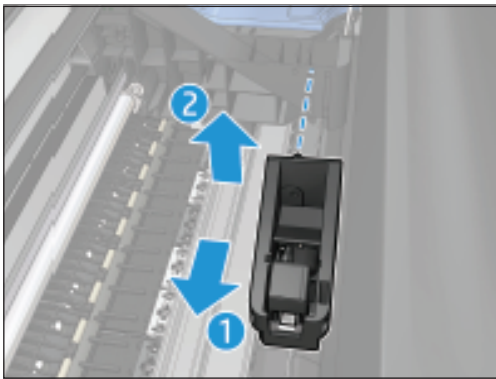
7



8



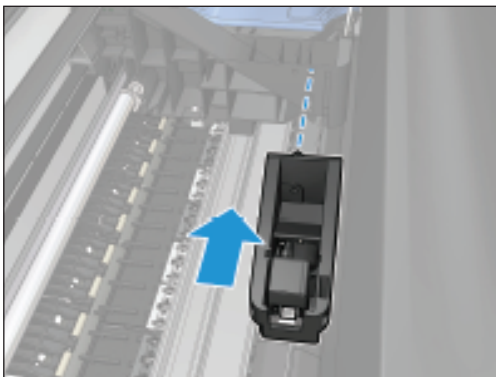
9



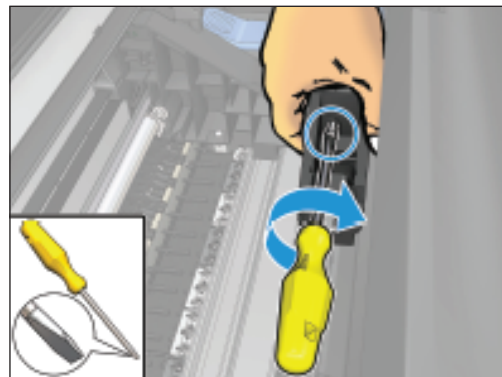
10



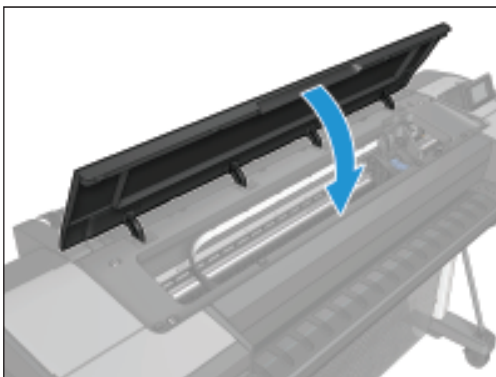
11



12



13



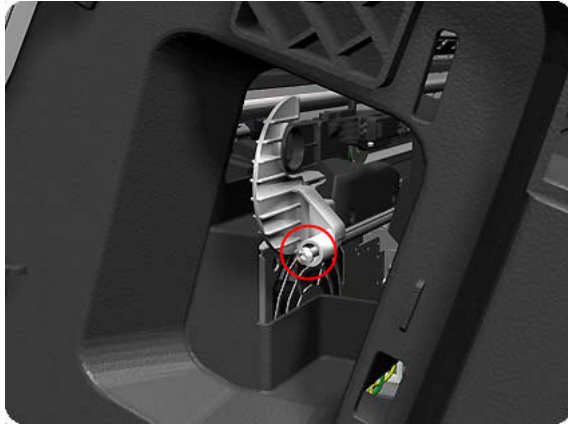
14



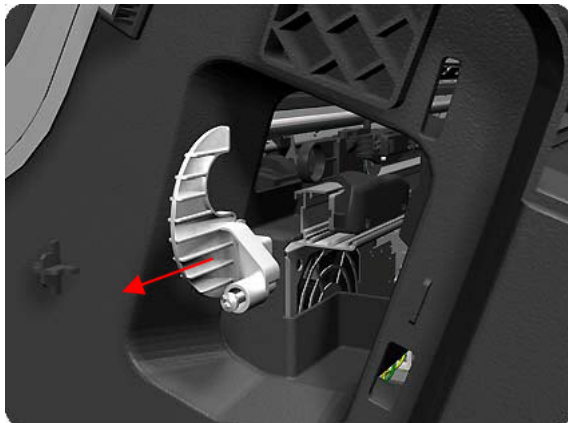
Cutter assembly (Z6 & Z9+)

Removal

1. Switch off the printer and remove the power cable.
2. Remove the Left Cover Finishing Panel. See [Left cover on page 359](#)
3. Fully loosen the cutter rail end cap attachment screw.

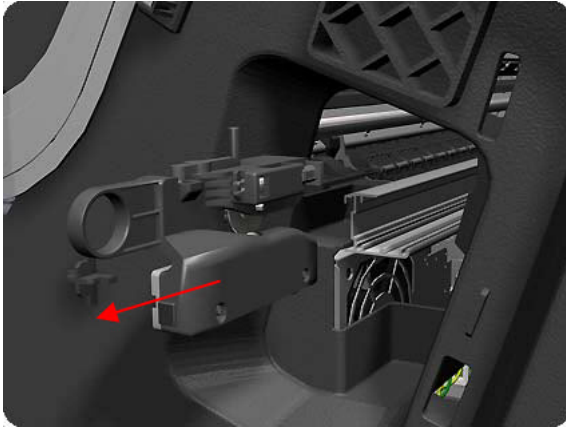


4. Remove the cutter rail end cap.



5. Slide the Cutter Assembly out of the printer.

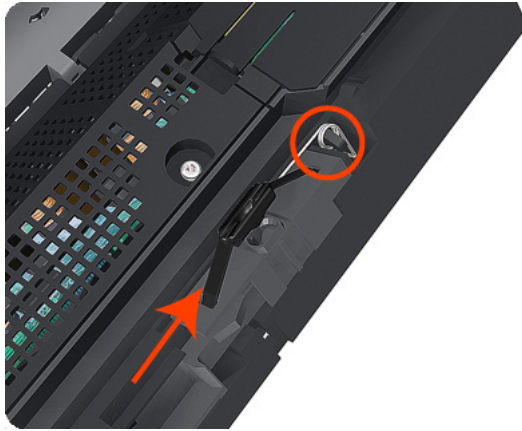
 **NOTE:** When you install the new Cutter Assembly, follow the installation instructions provided with it.



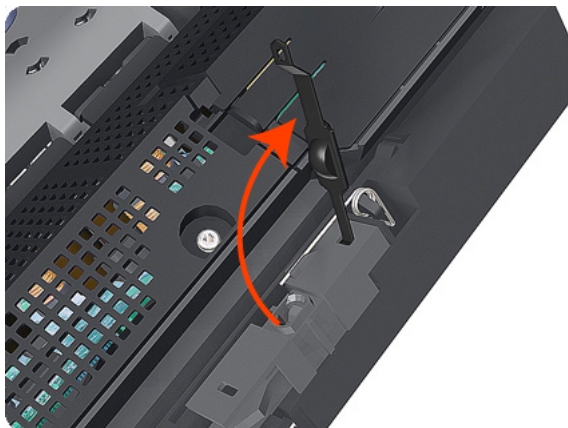
Carriage bushing, Rear


Removal

1. Switch off the printer and remove the power cable.
2. Remove the [Front cover on page 330](#).
3. Remove the [Right cover on page 407](#).
4. Remove the [Left cover on page 359](#).
5. Remove the [Cutter assembly \(Z6 & Z9*\) on page 291](#).
6. Remove the [Touch control panel on page 468](#).
7. Remove the [Front top cover on page 331](#).
8. Remove the [Encoder strip, spring and attachment nut on page 322](#).
9. Remove the [Carriage assembly on page 244](#).
10. Squeeze the left hand clip of the Carriage Rear Bushing sufficiently to be able to release it from the Carriage Assembly.




11. Rotate the Carriage Rear Bushing vertically and remove it from the Carriage Assembly.



 **NOTE:** When you reinstall the Carriage Rear Bushing, use the Oil and Oil Dispenser from the Lubrication Kit to add 2 or 3 drops of oil to the small depression in it.

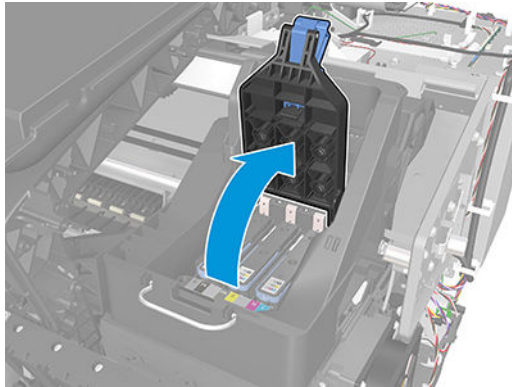


 **NOTE:** When you finish installing or replacing this component, you must perform the necessary Service Calibrations. To find which calibrations you must perform, see [Service Calibration Guide to Removal and Installation on page 260](#).

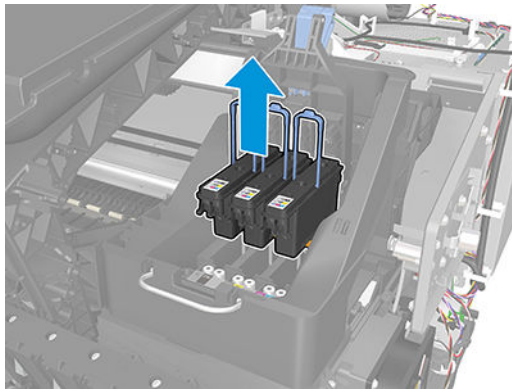
Carriage cover and Carriage latch

Removal

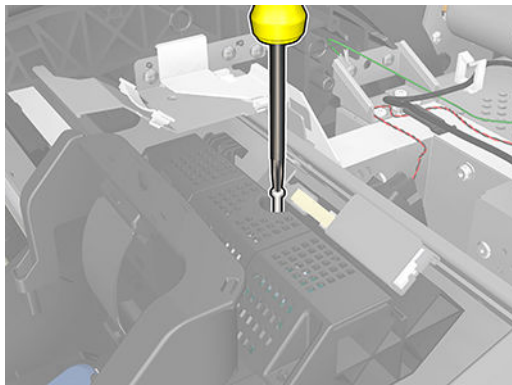
1. Switch off the printer and remove the power cable.
2. Remove the Front cover. See [Front cover on page 330](#).
3. Remove the Right cover. See [Right cover on page 407](#).
4. Remove the Touch control panel. See [Touch control panel on page 468](#).
5. Open the Carriage cover.



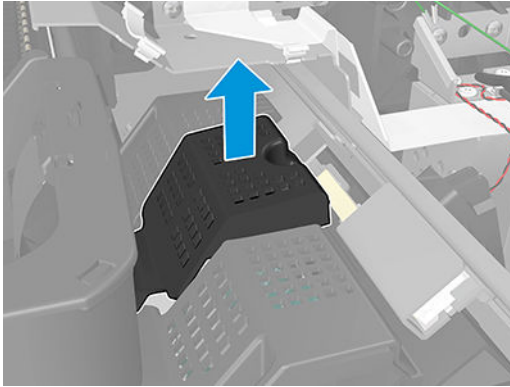
6. Remove all the Printheads.



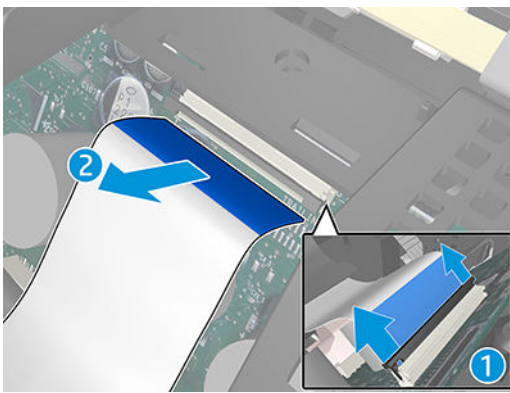
7. Unscrew the small cover of the Carriage PCA.



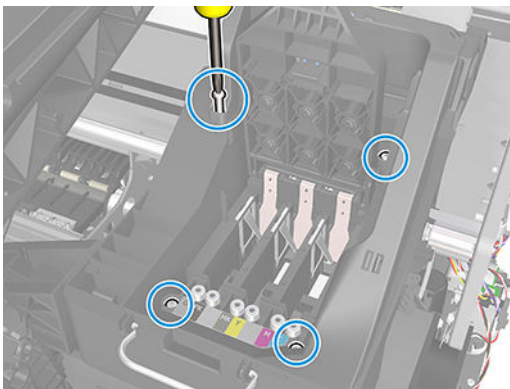
8. Remove the small cover of the Carriage PCA.



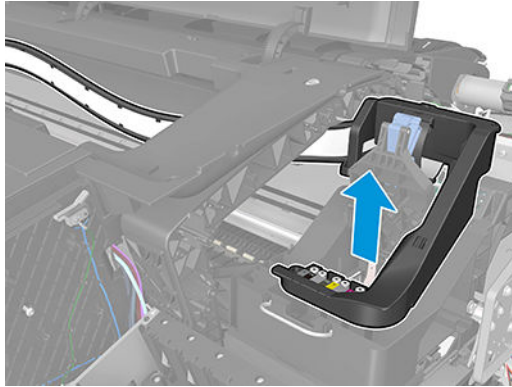
9. Disconnect the ribbon trailing cable from the Carriage PCA.



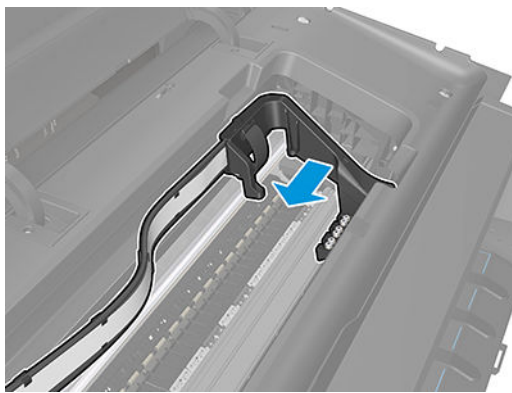
10. Remove the four T-15 screws that secure the Ink Supply Tubes to the Carriage assembly.



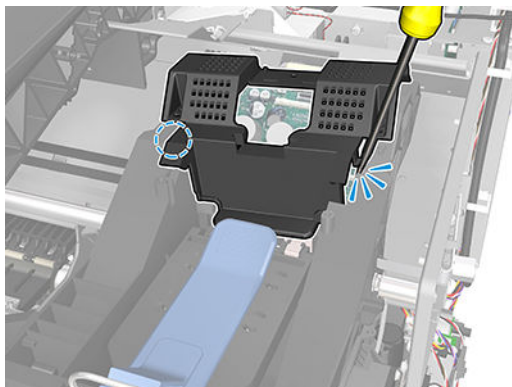
11. Carefully lift out the Ink Supply Tubes and close the carriage cover at the same time.



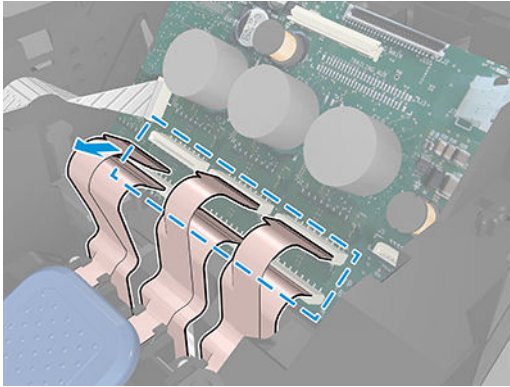
12. Carefully move the Ink Supply Tubes into the print path.



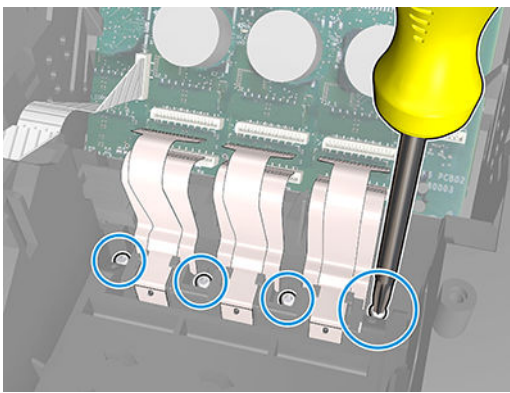
13. Remove the cover on each side of the Carriage PCA using a screwdriver to unclip it.



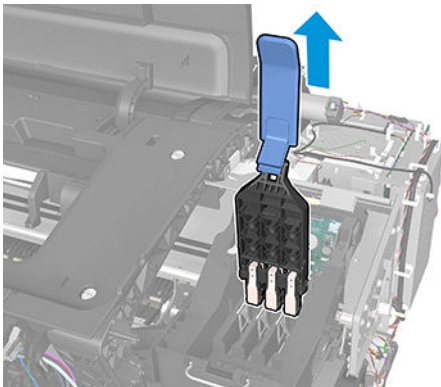
14. Disconnect all the cables from the Carriage Assembly PCB.



15. Remove the four T-8 screws that secure the Carriage assembly cover hinge.



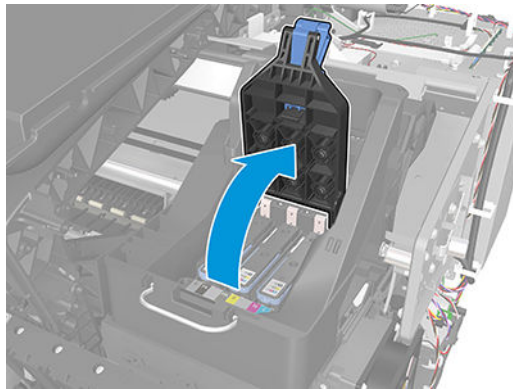
16. Carefully lift the Carriage cover in vertical position to remove it from the Carriage assembly.



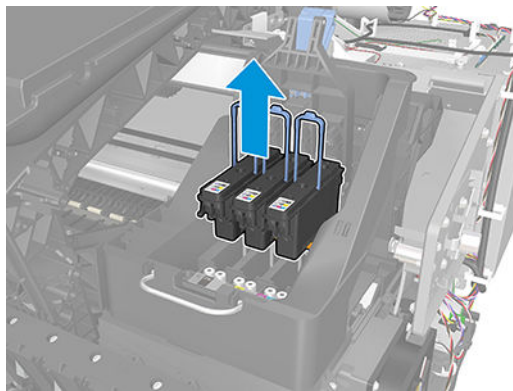
Carriage PCA

Removal

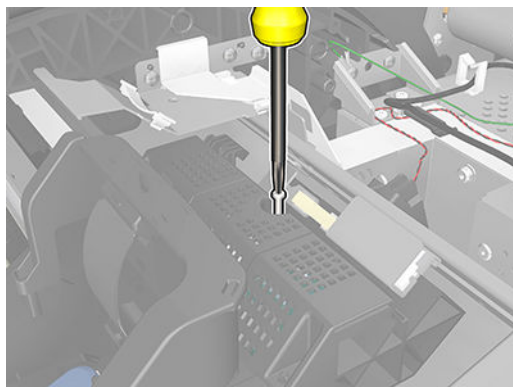
1. Switch off the printer and remove the power cable.
2. Remove the Front cover. See [Front cover on page 330](#).
3. Remove the Right cover. See [Right cover on page 407](#).
4. Remove the Touch control panel. See [Touch control panel on page 468](#).
5. Open the Carriage cover.



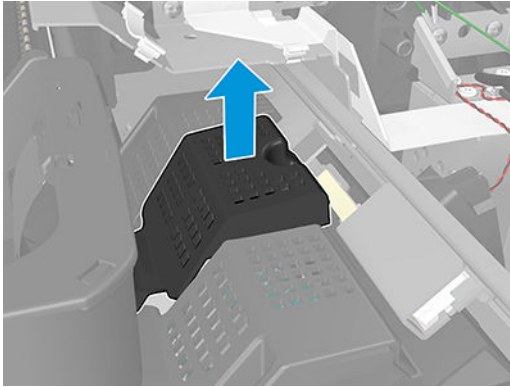
6. Remove all the Printheads.



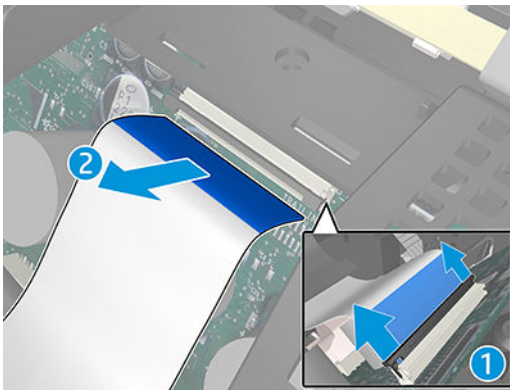
7. Unscrew the small cover of the Carriage PCA.



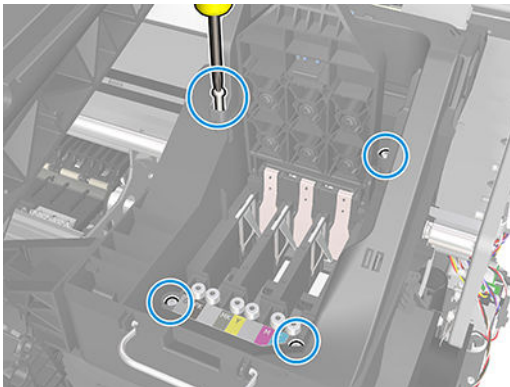
8. Remove the small cover of the Carriage PCA.



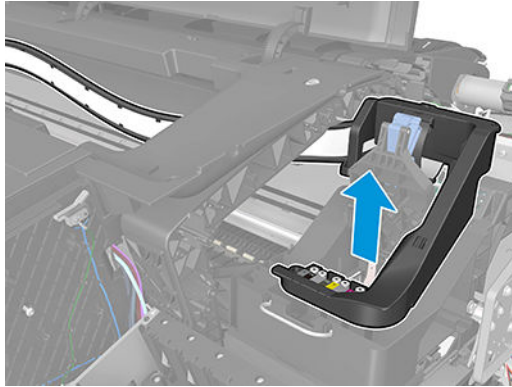
9. Disconnect the ribbon trailing cable from the Carriage PCA.



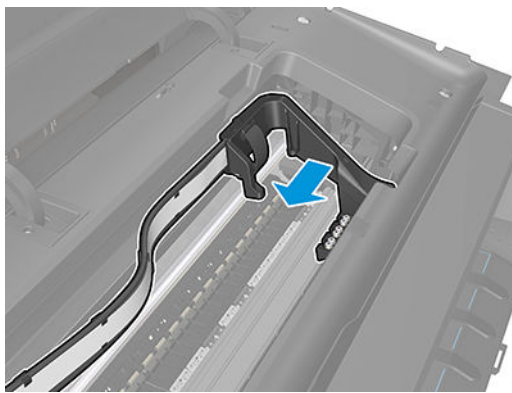
10. Remove the four T-15 screws that secure the Ink Supply Tubes to the Carriage assembly.



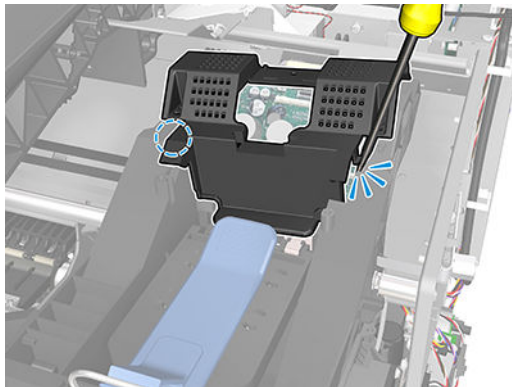
11. Carefully lift out the Ink Supply Tubes and close the carriage cover at the same time.



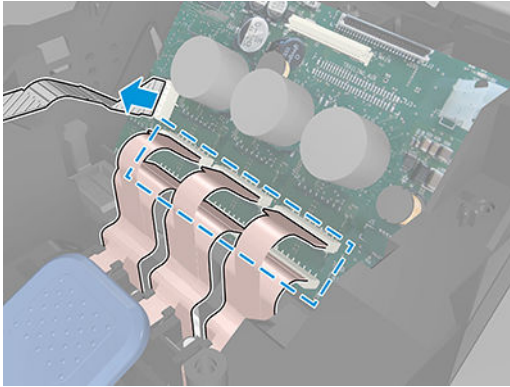
12. Carefully move the Ink Supply Tubes into the print path.



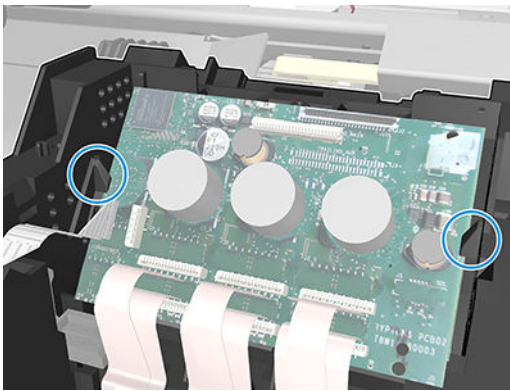
13. Remove the cover on each side of the Carriage PCA using a screwdriver to unclip it.



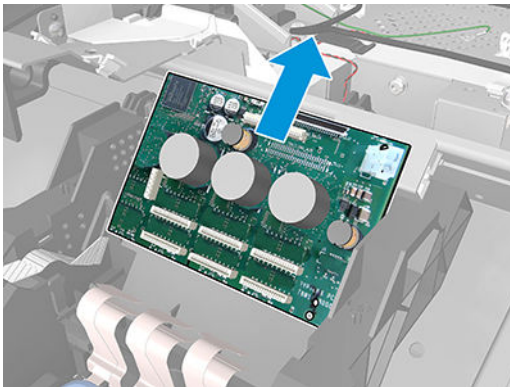
14. Disconnect all the cables from the Carriage Assembly PCB.



15. Press the locking clip to release the Carriage Assembly PCB from the carriage.



16. Remove the Carriage PCA from the carriage.



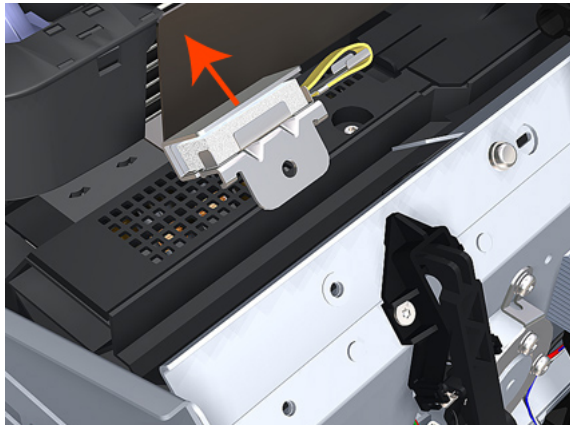
Carriage rail oiler

Removal

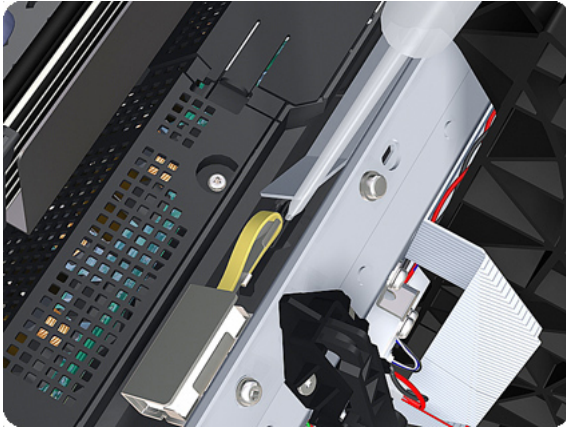
1. Switch off the printer and remove the power cable.
2. Remove the [Right cover on page 407](#).
3. Remove the T-20 Carriage Rail Oiler attachment screw.




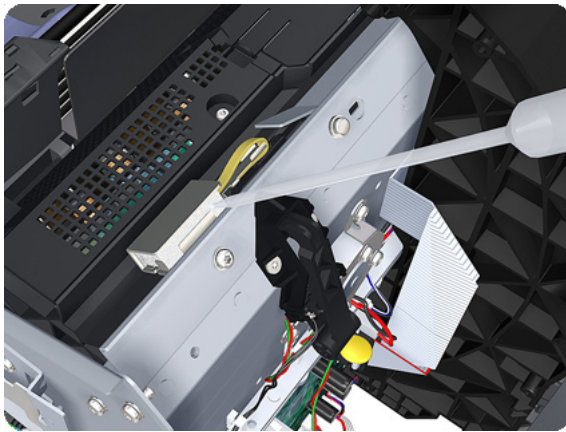
4. Remove the Carriage Rail Oiler from the printer.



5. Add 2 or 3 drops of oil in the depression where the Slider fits.



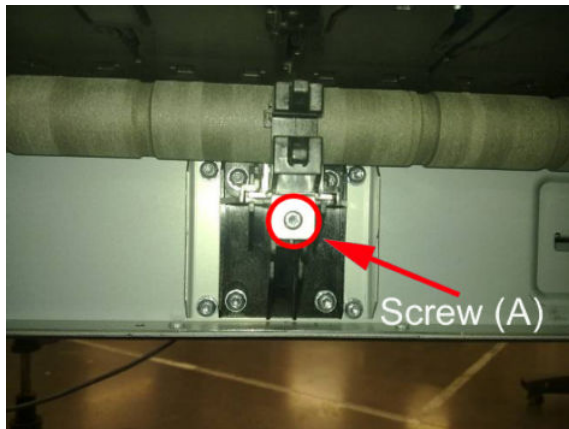
 **NOTE:** When you reinstall the Carriage Rail Oiler, use the Oil and Oil Dispenser from the Lubrication Kit to add 2 or 3 drops of oil to the foam of the Carriage Rail Oiler and in the small depression of the Carriage Rear Bushing.



Center support

Removal

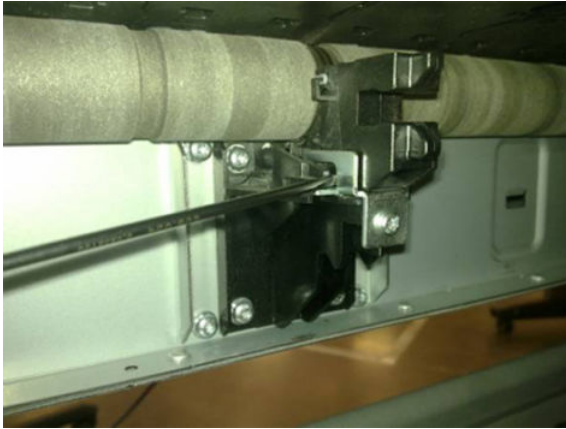
1. Switch off the product and remove the power cable.
2. Remove the [Cleanout on page 308](#).
3. Remove the T-15 screw indicated (A). Do not loosen or remove the other screws.



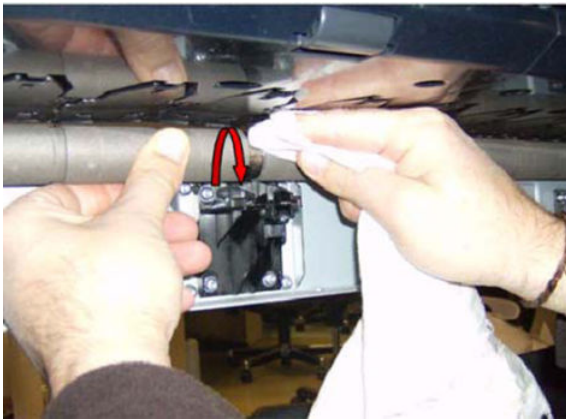
4. Do not remove the screws circled.



5. Remove the Slider Support. Use a flat end screw driver as a lever to remove the part.



6. Clean the roller at the center support section, you can push with a dust cloth, while moving the center support from the print zone area and from the center support area.



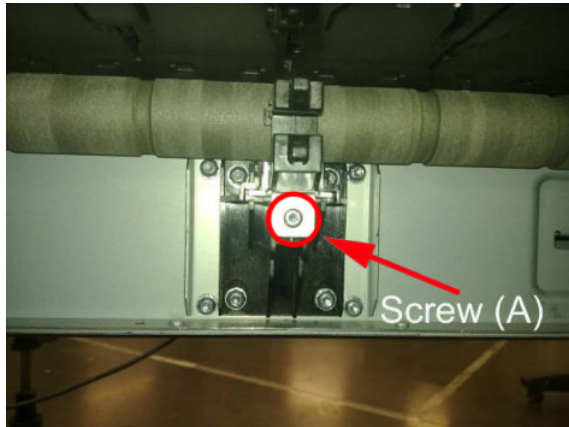
7. Remove as much of the metallic particles from the roller as you can. Use a dust cloth.

Installation

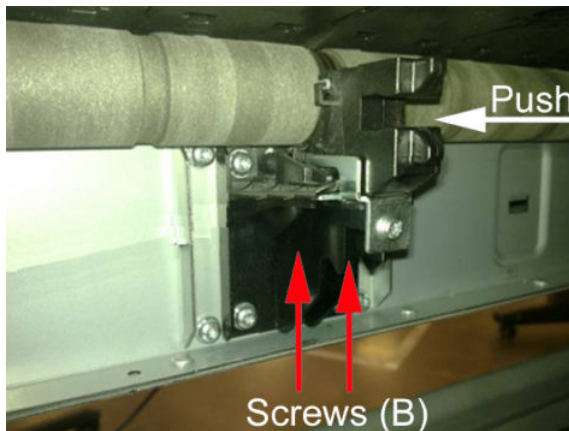
1. The two screws indicated here must be loosen before installing the part.



2. Insert the slider on to the center support and tighten the T-15 screw indicated (A).



3. Adjust the center support. While pushing the plastic part of the slider center support against the roller (A), tighten loose screws B. To tighten the screws, insert the screw driver from below, in the direction indicated by the arrows.

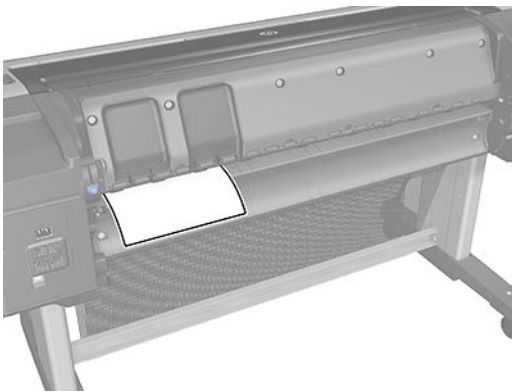


4. Install the [Cleanout on page 308](#)
5. Perform the Scan-axis test.

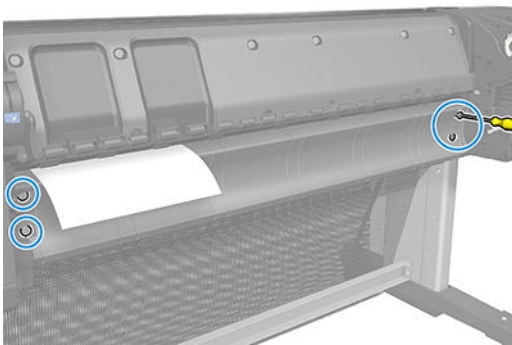
Cleanout

Removal

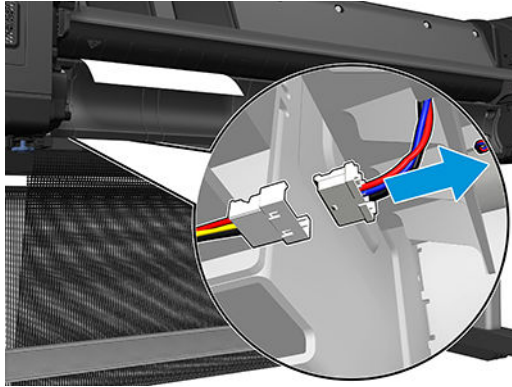
1. Switch off the printer and remove the power cable.
2. Remove the [Roll cover, Lower on page 411](#).
3. Remove the [Converger on page 311](#).
4. In order to avoid any damage to the paper sensor, you are recommended to introduce a sheet of A4 bond paper into the paper path, as shown, so that the paper sensor flag will be down and out of the way when you are handling the cleanout.



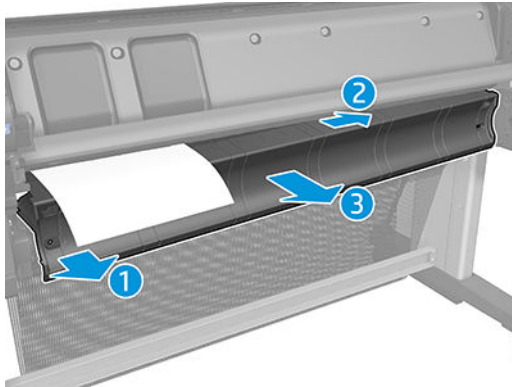
5. Unscrew four T-15 screws as shown.



6. Disconnect the paper sensor cable connector.



7. Extract the right side of the cleanout, as shown, and then the left side. Be careful with the paper sensor cable.



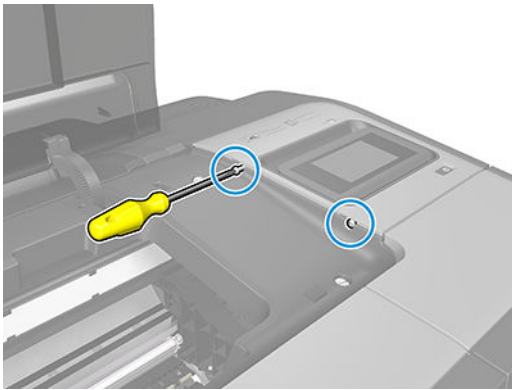
Control panel cover

Removal

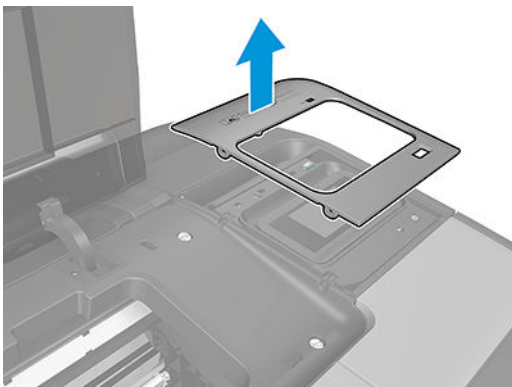
1. Switch off the printer and remove the power cable.
2. Open the window.



3. Unscrew 2 screws.



4. Remove the trim right cover.

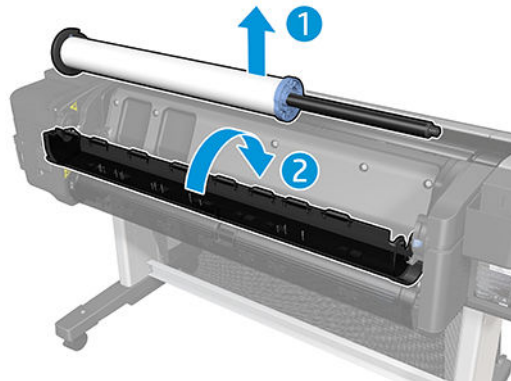


Converger

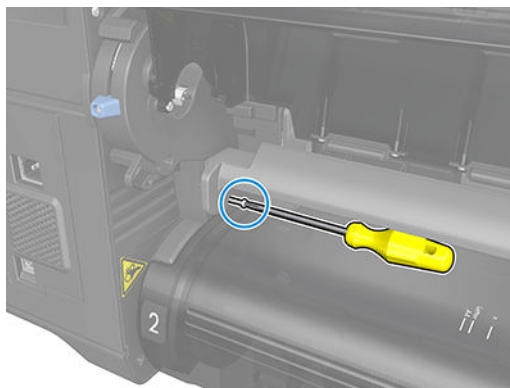
Switch off the printer and remove the power cable.

Removal

1. Open the upper roll cover and rewind the upper roll.
2. Remove the upper roll and spindle and close the upper roll cover.



3. Rewind and remove the lower roll in the same way.
4. Remove the screw on the left side of the converger at the rear of the printer.



5. Move the converger slightly in the direction of the arrow.

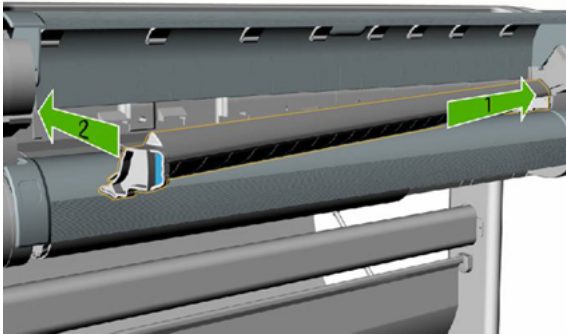


6. Move the right side of the converger in the direction of the arrow, then remove the whole converger from the printer.



Installation

1. Replace the converger by inserting the right end into position first, and then pushing the handle into place.

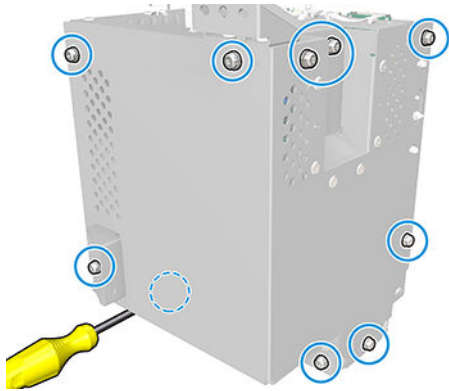


2. Replace the screw.
3. Replace and reload the rolls of paper.
4. Close the covers.

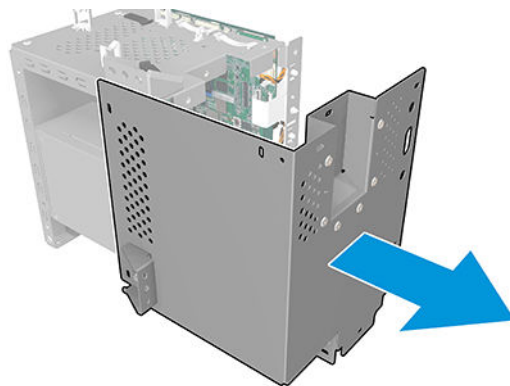
CryptoAsic PCA

Removal

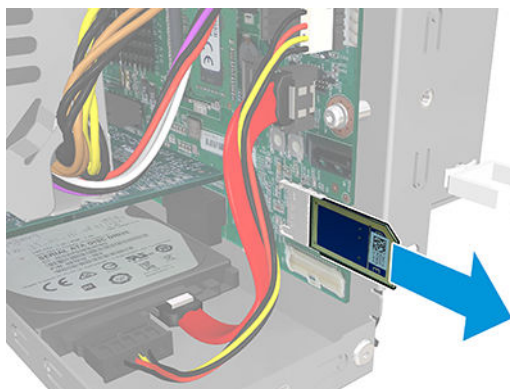
1. Switch off the printer and remove the power cable.
2. Remove the Right cover. See [Right cover on page 407](#).
3. Remove the E-box. See [E-box on page 316](#).
4. Remove 10 screws.



5. Remove the cover.



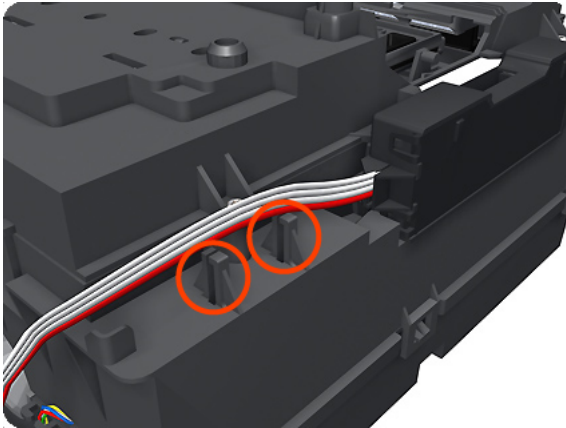
6. Remove the CryptoAsic PCA.



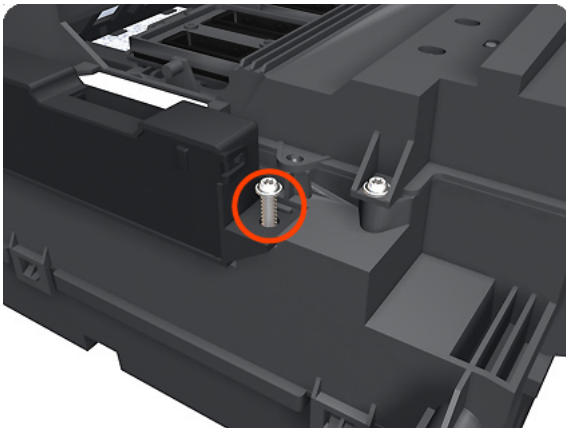
Drop detector

Removal

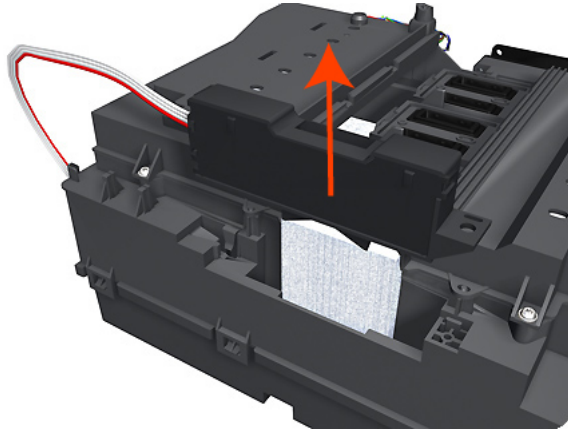
1. Switch off the printer and remove the power cable.
2. Remove the [Right cover on page 407](#).
3. Remove the [Service station on page 438](#).
4. Unroute the Drop Detector ribbon cable from the Service Station cable clamps.




5. Remove the T-10 screw that secures the Drop Detector to the Service Station.



6. Lift the Drop Detector off the Service Station.

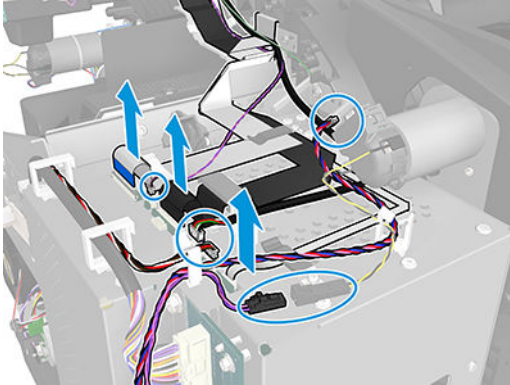


 **NOTE:** When you finish installing or replacing this component, you must perform the necessary Service Calibrations. To find which calibrations you must perform, see [Service Calibration Guide to Removal and Installation on page 260](#).

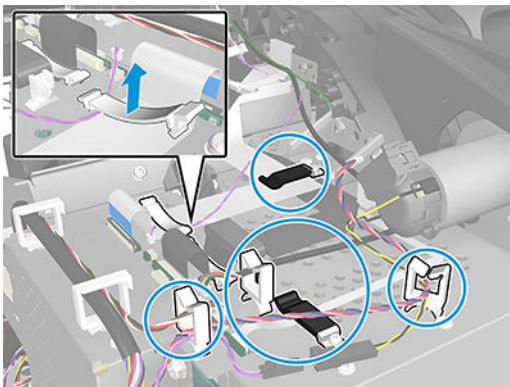
E-box

Removal

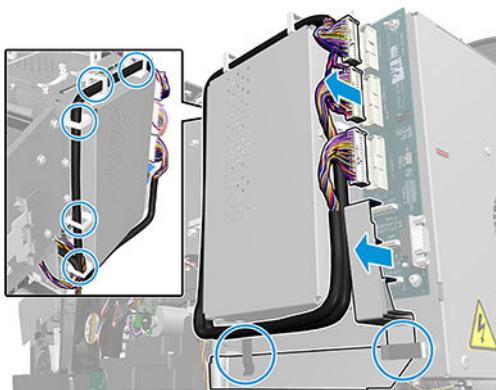
1. Switch off the printer and remove the power cable.
2. Remove the Right cover. See [Right cover on page 407](#).
3. Disconnect the cables as shown.



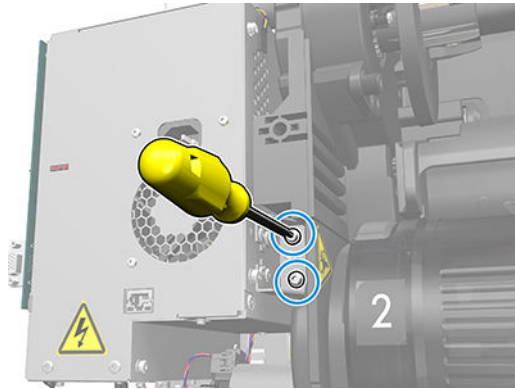
4. Unroute all the cables.



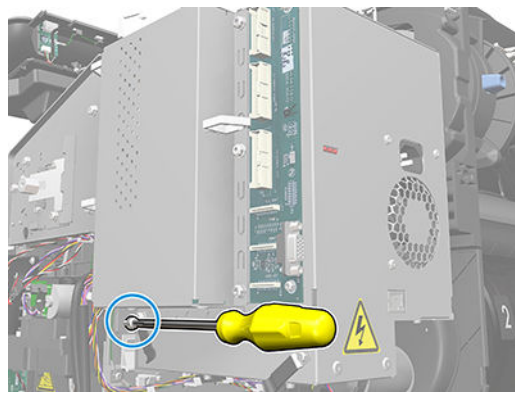
5. Disconnect and unroute the cables as shown.



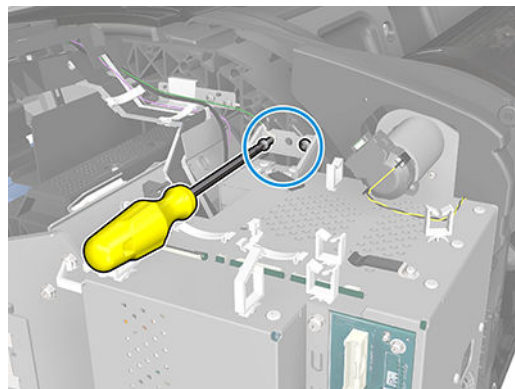
6. Remove two screws.



7. Remove the screw.

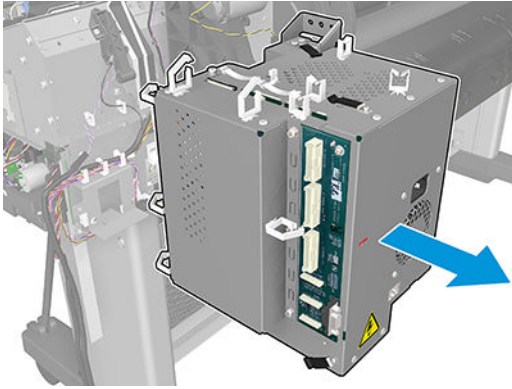


8. Remove the two screws on the top of the E-box.




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9. Remove the E-box.



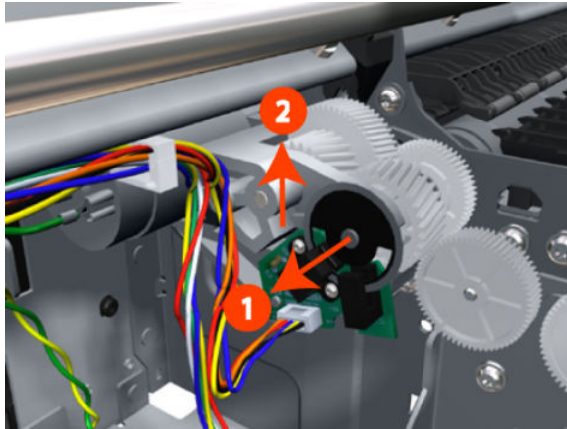
Encoder disk and Encoder sensor

 **NOTE:** Never install a previously used Encoder Sensor PCA. This can cause serious problems, and may make the printer unusable.

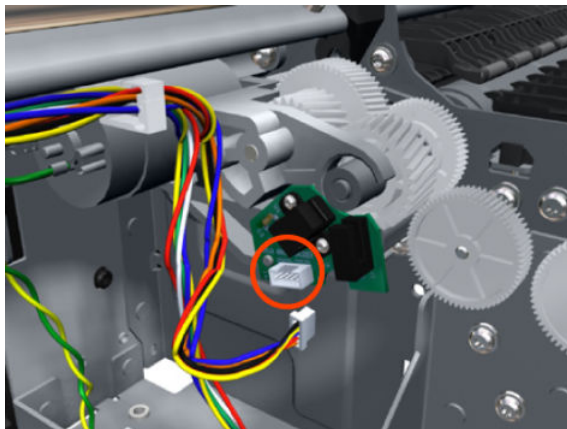
Removal

1. Switch off the printer and remove the power cable.
2. Remove the [Left cover on page 359](#).
3. Remove the [E-box on page 316](#).
4. Remove the [Spittoon, Left on page 447](#).
5. Remove the Encoder Disk from the Media Advance Roller spindle, and lift it straight out of the printer.

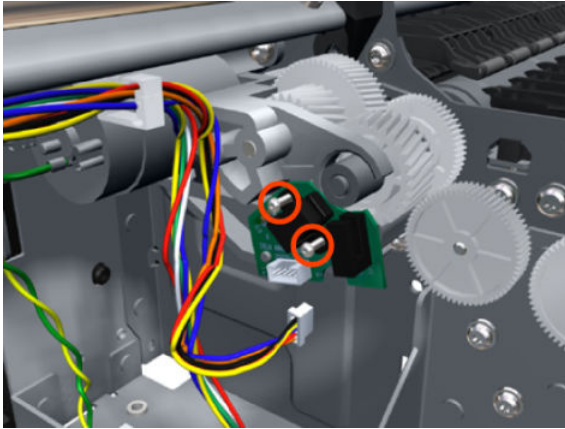
 **NOTE:** The Media Advance Roller spindle is delicate. Remove the Encoder Disk gently.



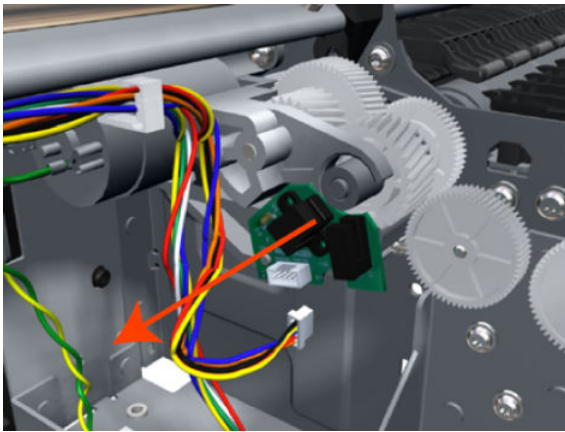
6. Disconnect the two Encoder Sensor connectors.



7. Remove two T-6 screws that secure the Encoder Sensor to the Media Advance Drive.



8. Remove the Encoder Sensor PCA from the printer.

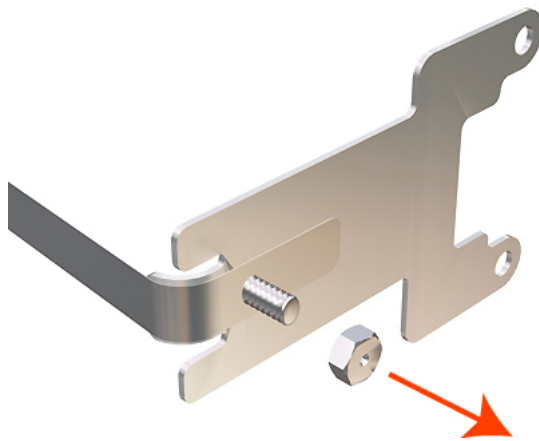


Encoder strip

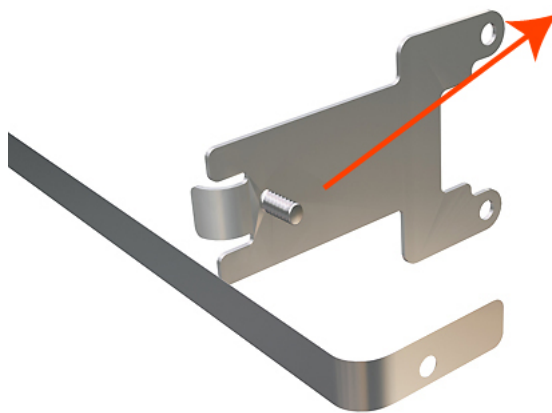
For information about the Encoder Strip service parts, see [Scan-axis assemblies on page 246](#).


Removal

1. Switch off the printer and remove the power cable.
2. Remove the [Right cover on page 407](#).
3. Remove the [Left cover on page 359](#).
4. Remove the [Encoder strip, spring and attachment nut on page 322](#).
5. Use the spanner provided in the tool kit to remove the 13 mm locking nut that secures the Encoder Strip to the Encoder Strip Spring.



6. Remove the Encoder Strip Spring.

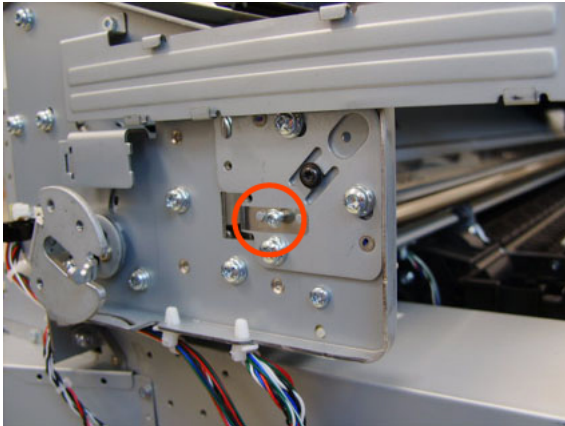


 **NOTE:** When you finish installing or replacing this component, you must perform the necessary Service Calibrations. To find which calibrations you must perform, see [Service Calibration Guide to Removal and Installation on page 260](#).

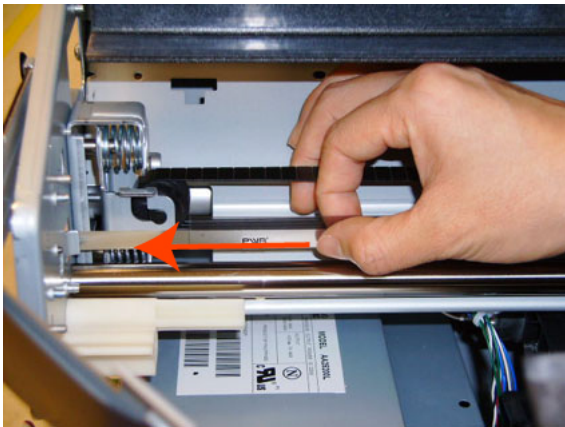
Encoder strip, spring and attachment nut

Removal

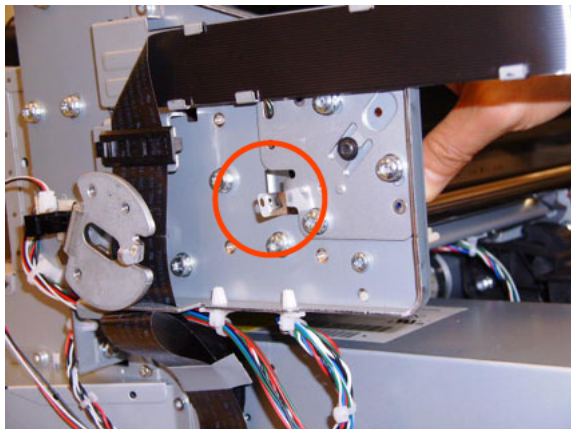
1. Switch off the printer and remove the power cable.
2. Remove the [Right cover on page 407](#).
3. Remove the [Left cover on page 359](#).
4. Remove the T-10 screw that secures Encoder strip to the printer.



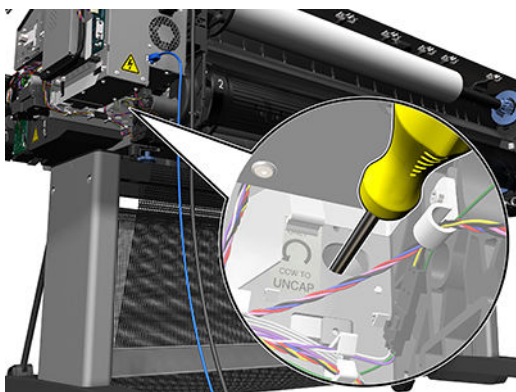
5. Grip the Encoder strip and move it towards the left to take off the tension until you have completed the next step.



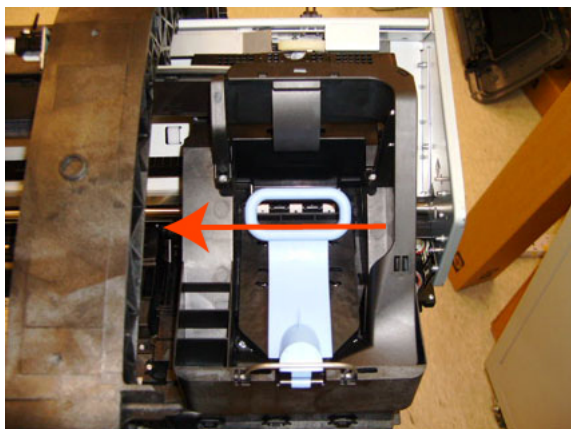
6. Unclip the Encoder strip from its attachment lugs.



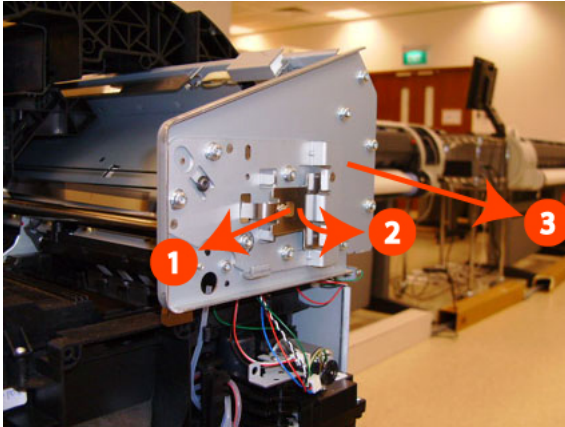
7. Loosen the T-10 uncapping screw sufficiently so you can manually move the Carriage assembly in the next step.




8. Push the Carriage assembly into the print path.



9. Unclip the Encoder strip tensioner from the right hand end and pull the encoder strip straight out.

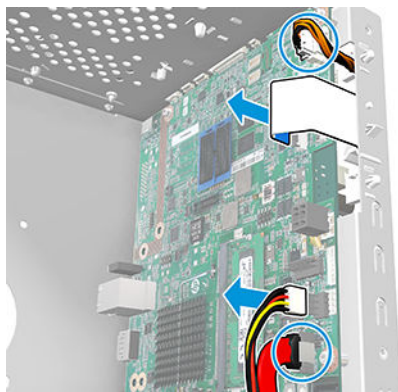


 **NOTE:** When you finish installing or replacing this component, you must perform the necessary Service Calibrations. To find which calibrations you must perform, see [Service Calibration Guide to Removal and Installation on page 260](#).

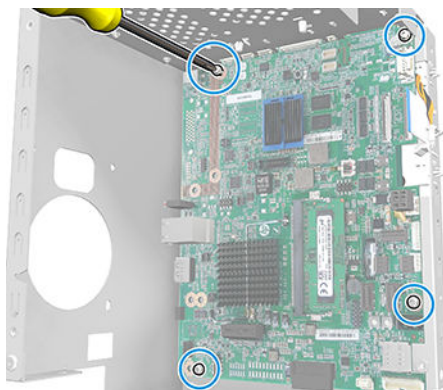
Formatter PCA

Removal

1. Switch off the printer and remove the power cable.
2. Remove the Right cover. See [Right cover on page 407](#).
3. Remove the E-box. See [E-box on page 316](#).
4. Remove the Jester JDI PCA. See [Jester JDI PCA on page 341](#).
5. Remove the Power supply. See [Power supply unit on page 402](#).
6. Remove the CryptoAsic PCA. See [CryptoAsic PCA on page 313](#).
7. Disconnect the cables.



8. Remove the 4 screws.



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9. Remove the Formatter PCA.

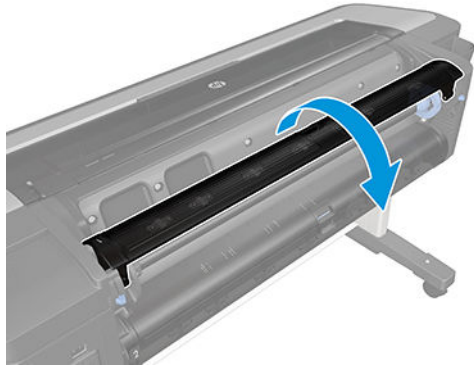


Freewheel assembly

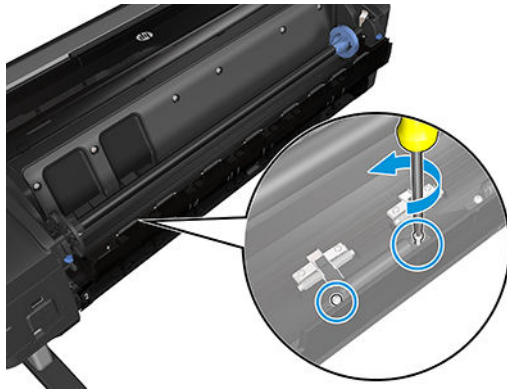
These parts can be replaced by customers who have the appropriate flier.

Removal and installation

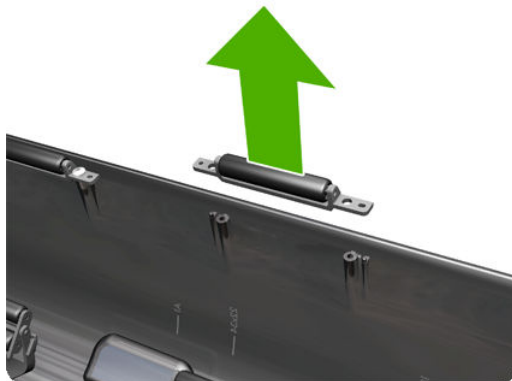
1. Open the upper roll cover.



2. Unscrew the freewheel assembly.



3. Remove the freewheel assembly.



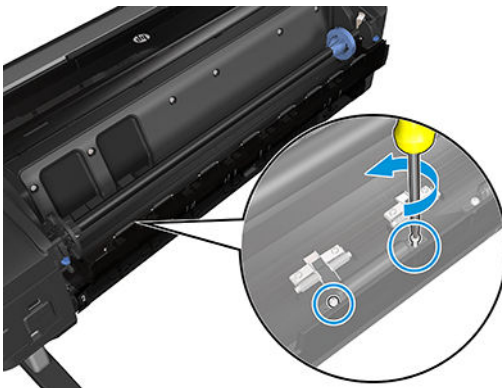
4. Locate the new freewheel assembly and screws.



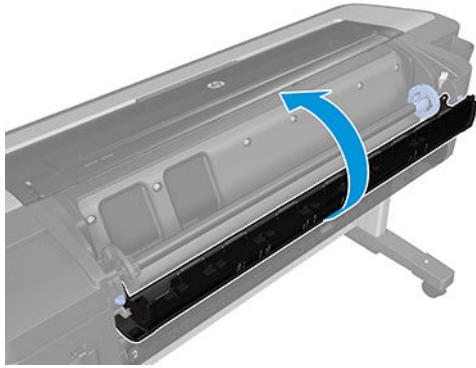
5. Fit the freewheel assembly to the roll cover.



6. Screw the freewheel assembly to the roll cover.



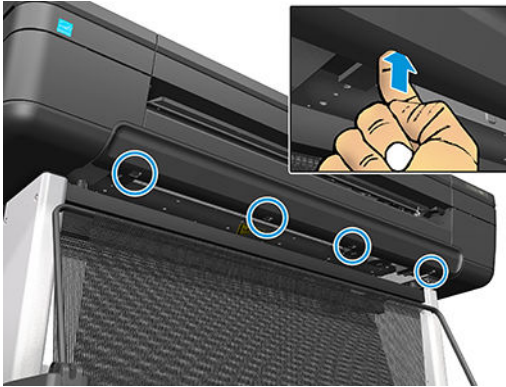
7. Close the roll cover.



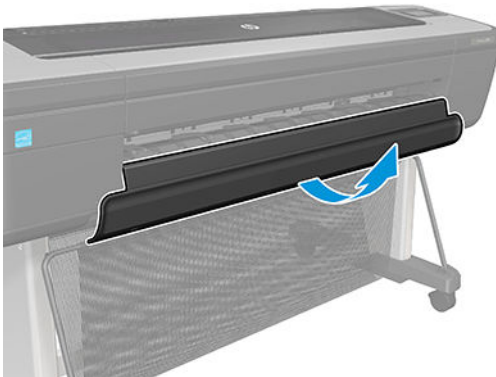
Front cover

Removal

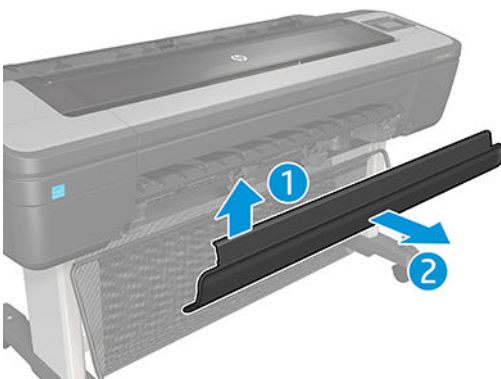
1. Switch off the printer and remove the power cable.
2. Squeeze each of the four attachment clips under the Front cover to release it from the printer.



3. Carefully pull forward the bottom of the Front cover until you can release it from its attachments.



4. Unhook the Front cover from the four attachments and remove it from the printer.



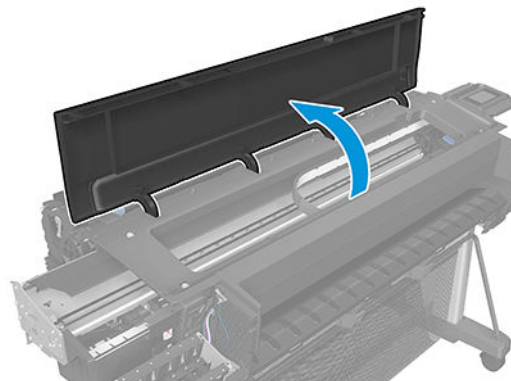
Front top cover

Removal

1. Remove the Front cover. See [Front cover on page 330](#).
2. Remove the Left cover. See [Left cover on page 359](#).
3. Remove the Right cover. See [Right cover on page 407](#).
4. Remove the Rear cover. See [Rear cover on page 405](#).
5.
 - a. Remove four screws, two on the left side and another two on the right side. (T8W16-67018 / T8W15-67035 / W3Z71-67014).
 - b. Open the V-Trimmer cover (W3Z72-67008 only).

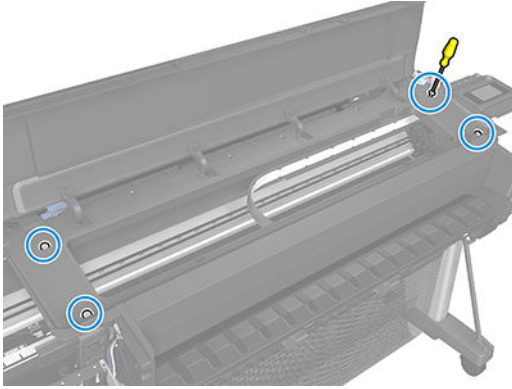


6. Open the window.

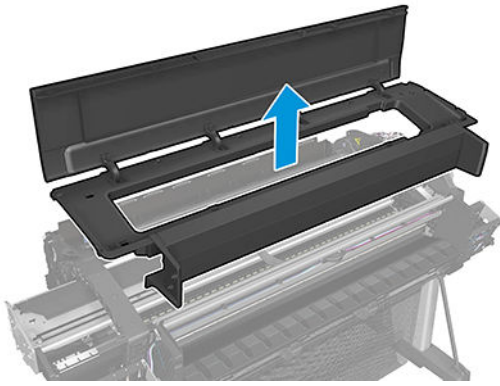


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7. Unscrew the four HP screws.



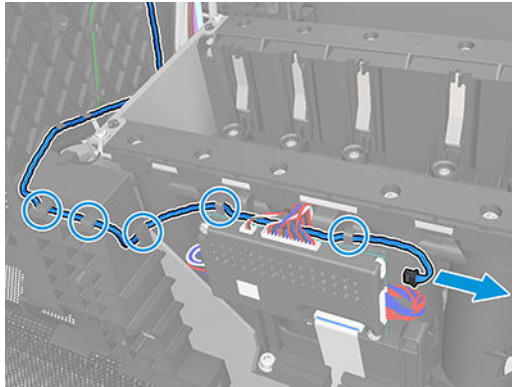
8. Remove the Front top cover.



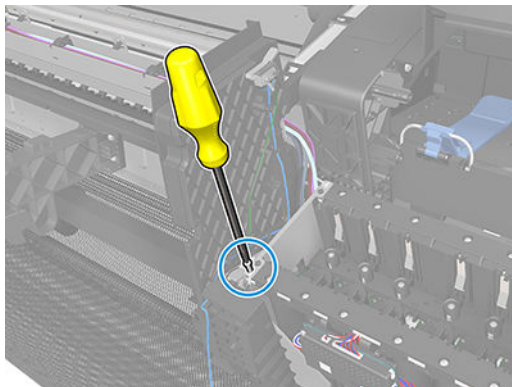
Front trims (T1700 & T1708)

Right Front Trim – Removal

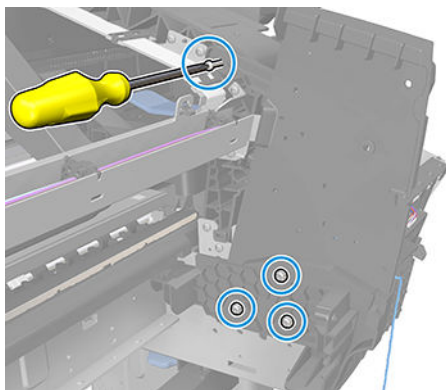
1. Remove the [Media output assembly on page 379](#).
2. Remove the [Front top cover on page 331](#).
3. Disconnect and unrout the sensor cable as shown.



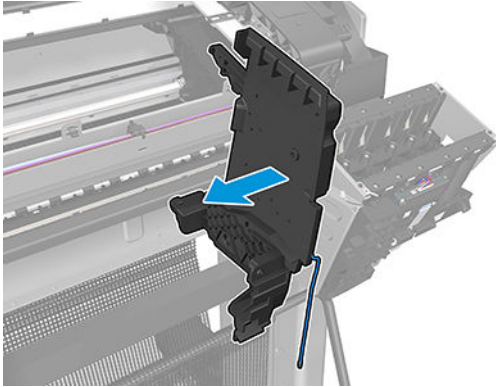
4. Remove the screw shown and the grounding cable



5. Remove the 4 screws.

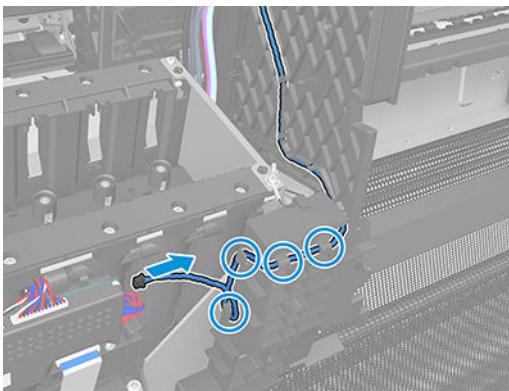


6. Remove the Right front trim.

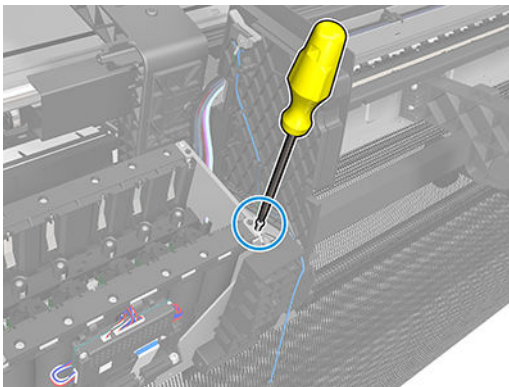


Left Front Trim (T1700/T1708)– Removal

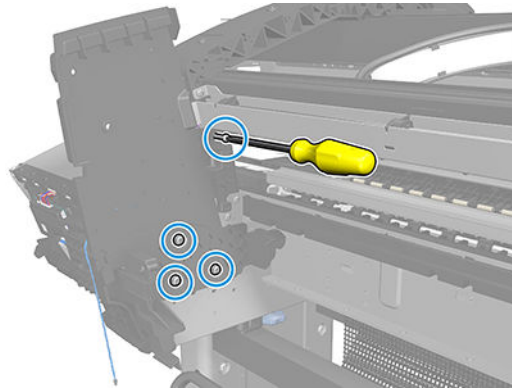
1. Remove the [Media output assembly on page 379](#).
2. Remove the [Front top cover on page 331](#).
3. Disconnect and unroute the sensor cable as shown.



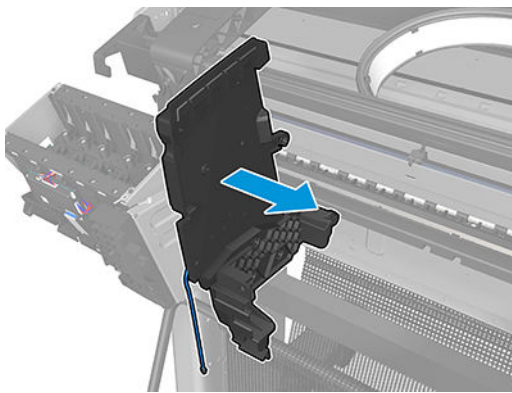
4. Remove the screw shown and the grounding cable



5. Remove the 4 screws.

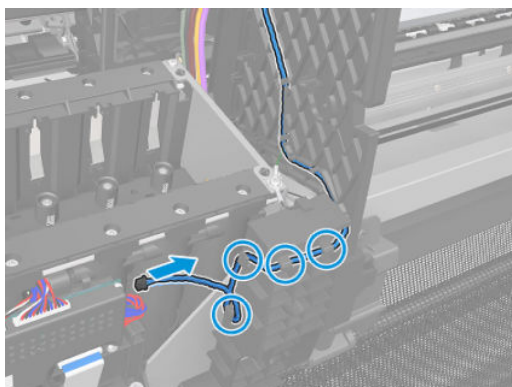


6. Remove the Left front trim.

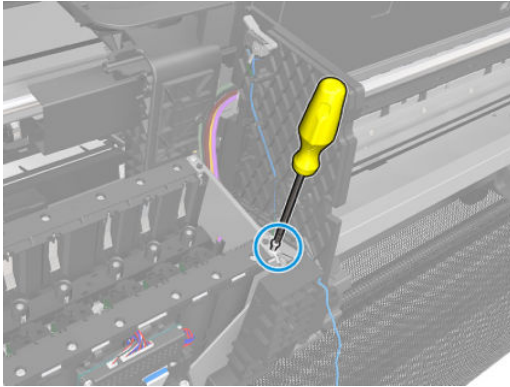


Left Front Trim (Z6 & Z9+) – Removal

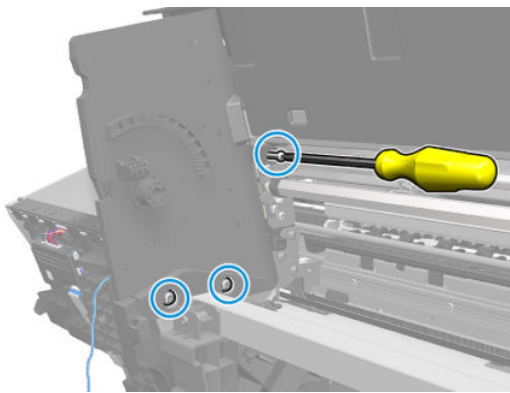
1. Remove the [Front cover on page 330](#).
2. Remove the [Left cover on page 359](#).
3. Remove the [Media output assembly on page 379](#).
4. Remove the [V-Trimmer cover on page 470](#).
5. Disconnect and unrout the sensor cable as shown.



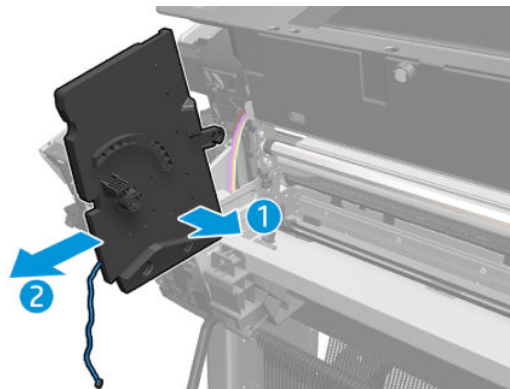
6. Remove the screw shown and the grounding cable



7. Remove the 3 screws.



8. Remove the Left front trim.

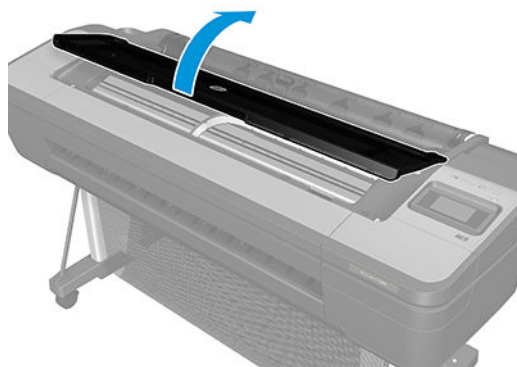


Full bleed foam

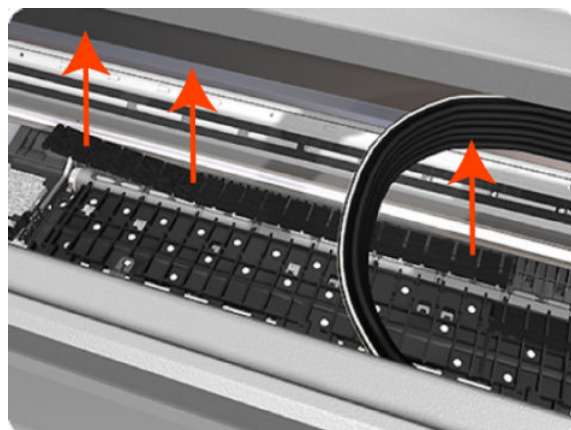
Removal

The complete Full Bleed Foam is constructed of three separate sections, left, center and right. This procedure describes how to remove the left section only. Removal of the other two sections is done in the same way.

1. Switch off the printer and remove the power cable.
2. Open the Window.



3. Remove the Left Full Bleed Foam from the left platen, and remove the Platen Middle Foams that are exposed once the Full Bleed Foam has been removed.

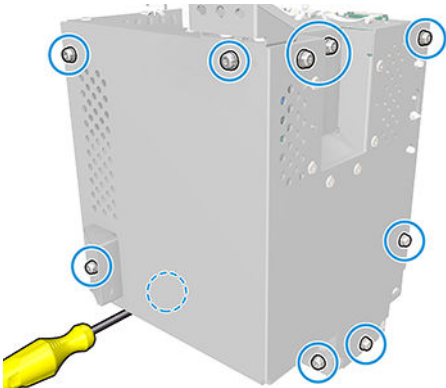


 **NOTE:** When you reinstall the full bleed foams, take care to correctly seat them to avoid possible damage to the Carriage Assembly

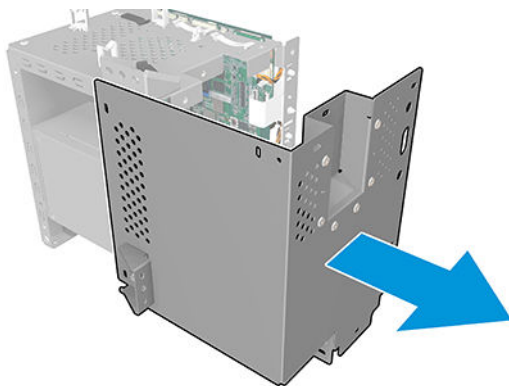
Hard disk drive

Removal

1. Switch off the printer and remove the power cable.
2. Remove the Right cover. See [Right cover on page 407](#).
3. Remove the E-box. See [E-box on page 316](#).
4. Remove 10 screws.



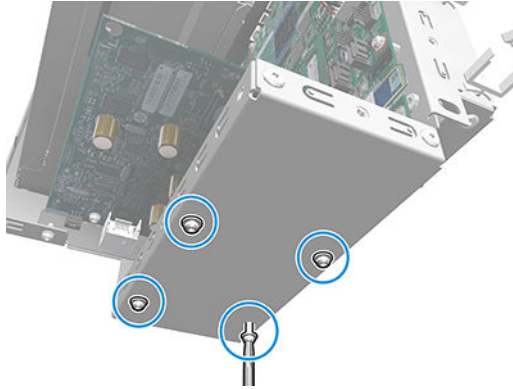
5. Remove the cover.



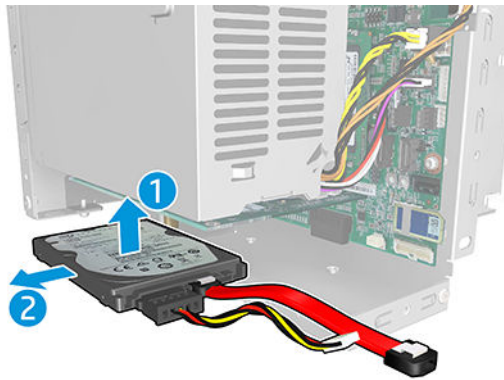
6. Disconnect the 2 cables as shown.



7. Remove 4 screws.



8. Remove the Hard disk.

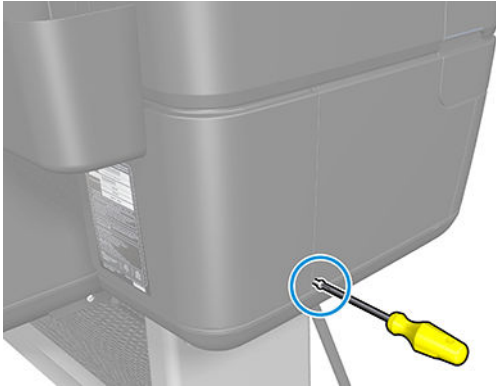


9. Install the new Hard disk, and reassemble the parts following the previous steps in reverse order.
10. Plug in the power cable.
11. Plug the USB provided with the Service Kit into the USB port next to the Front Panel.
12. Power ON the printer.
13. Once the printer boots up, a System Error (0001-0004-0074 - Part Number Mismatch) will appear.
14. Reboot the printer.
15. Accept the firmware upgrade message that will appear in the Front Panel.

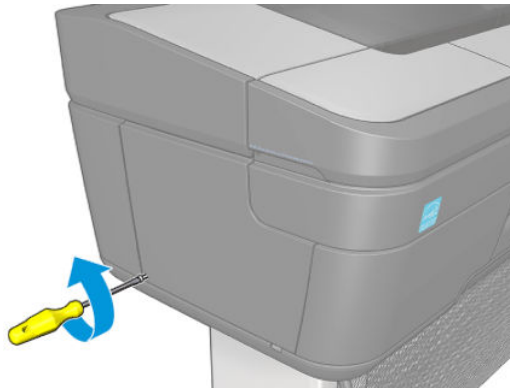
Horizontal cutter cover

Removal

1. Switch off the printer and remove the power cable.
2. Remove the screw.



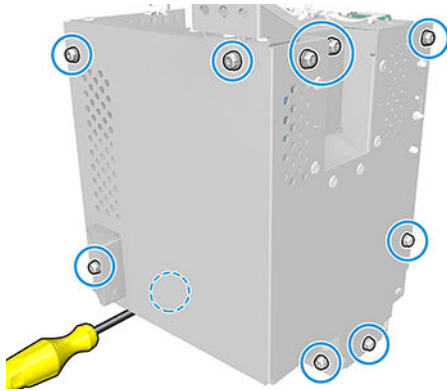
3. Remove the Horizontal cutter cover as shown.



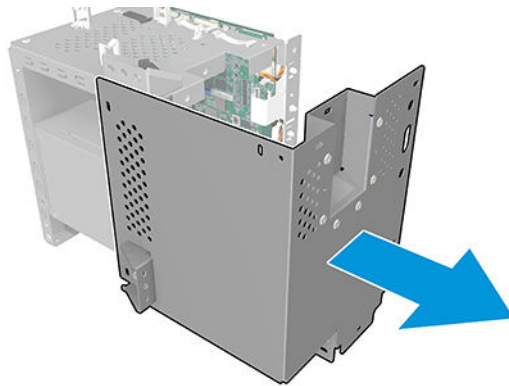
Jester JDI PCA

Removal

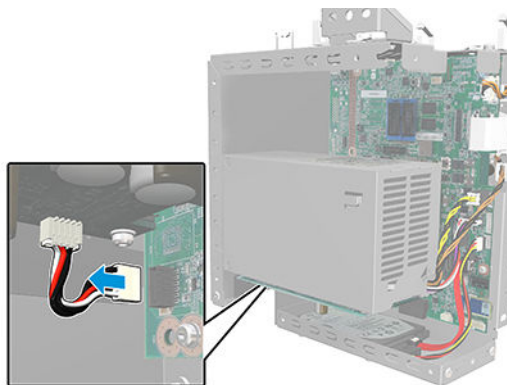
1. Switch off the printer and remove the power cable.
2. Remove the Right cover. See [Right cover on page 407](#).
3. Remove the E-box. See [E-box on page 316](#).
4. Remove 10 screws.



5. Remove the cover.

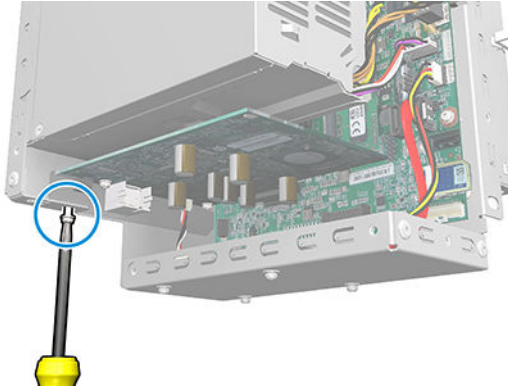


6. Disconnect the cable as shown.

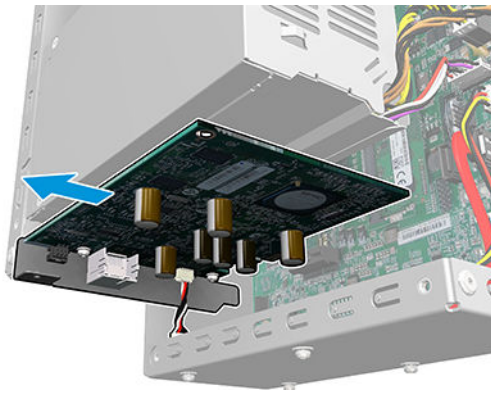


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7. Remove the screw.



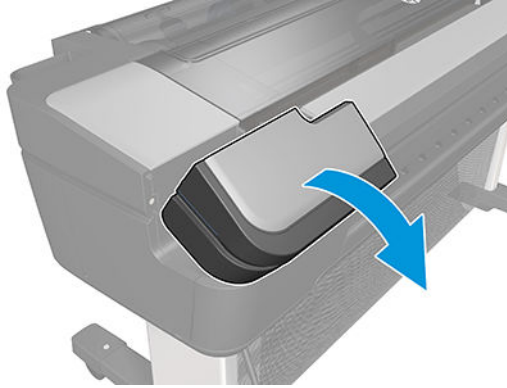
8. Remove the Jester JDI PCA.



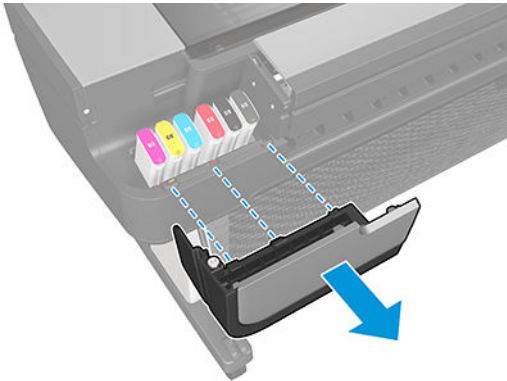
Ink cartridge door, Left

Removal

1. Open the Left ink cartridge door.



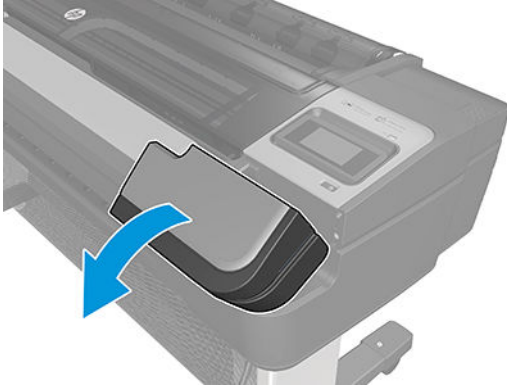
2. Remove the Left ink cartridge door.



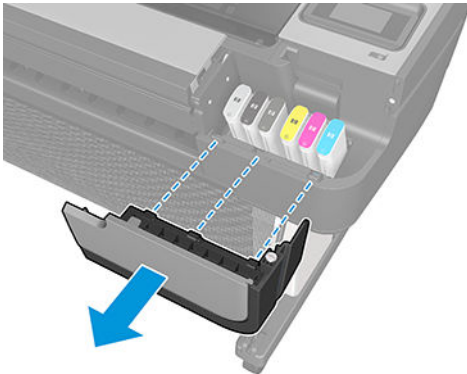
Ink cartridge door, Right

Removal

1. Open the Right ink cartridge door.



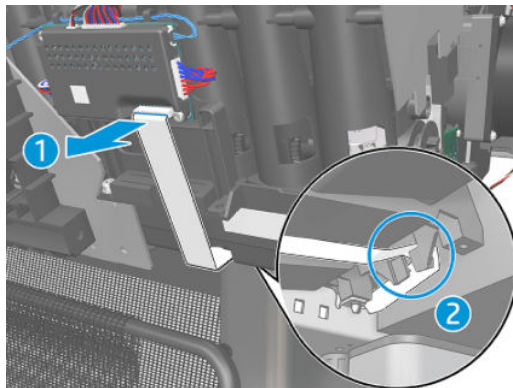
2. Remove the Right ink cartridge door.



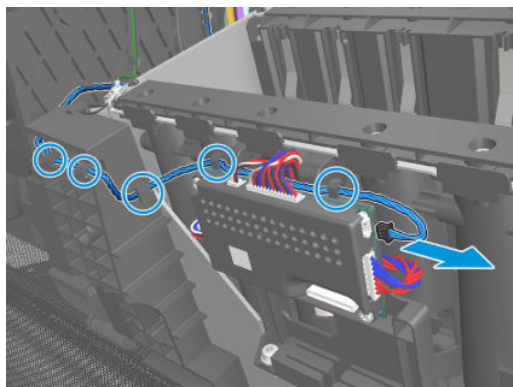
Right ink supply station

Removal

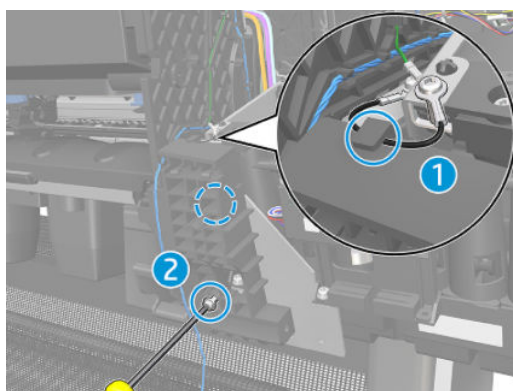
1. Switch off the printer and remove the power cable.
2. Remove the Right cover. See [Right cover on page 407](#).
3. Disconnect the flat cable and unroute it from the Right ink supply station.



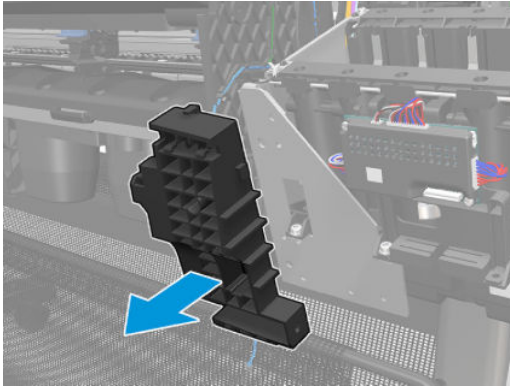
4. Disconnect the connector from the Right Ink supply station and unroute it.



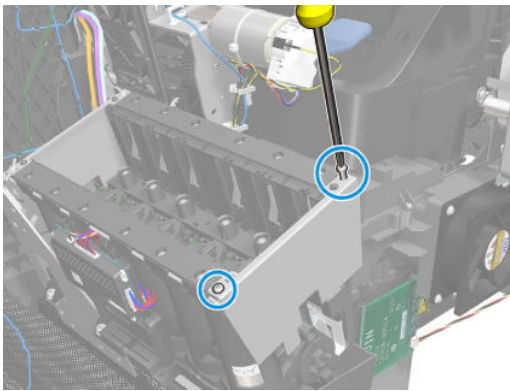
5. Unroute the grounding cable and remove the two T-20 screws.



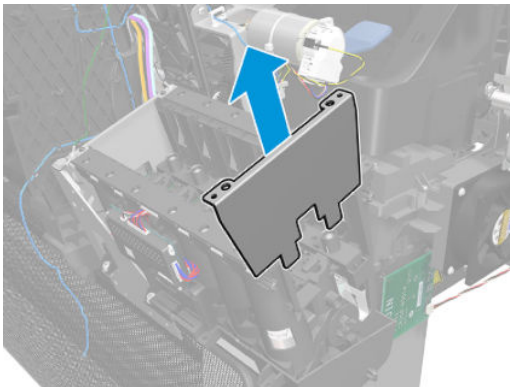
6. Remove the Right shock transmission.



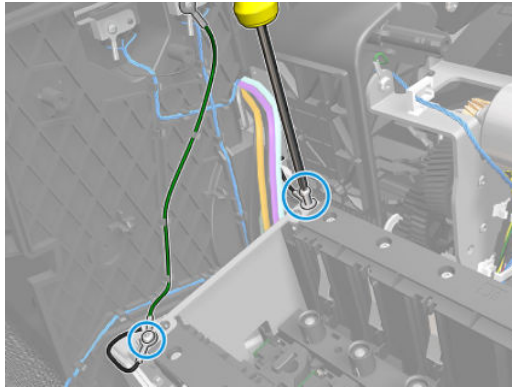
7. Remove the two T-10 screws that secure one of the side plates of the Ink supply station.



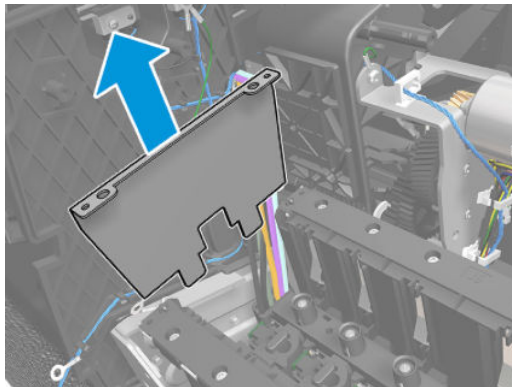
8. Remove the side plate of the Ink supply station.



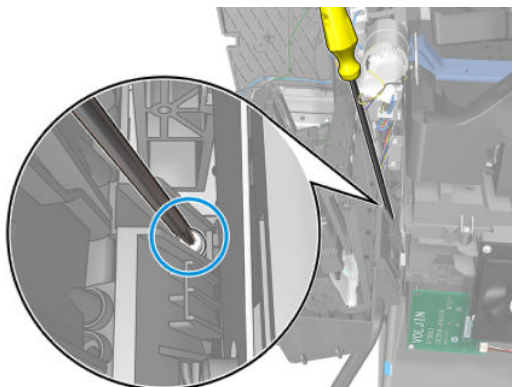
9. Remove the two T-10 screws that secure the other side plate of the Ink supply station; then remove the three grounding cables.



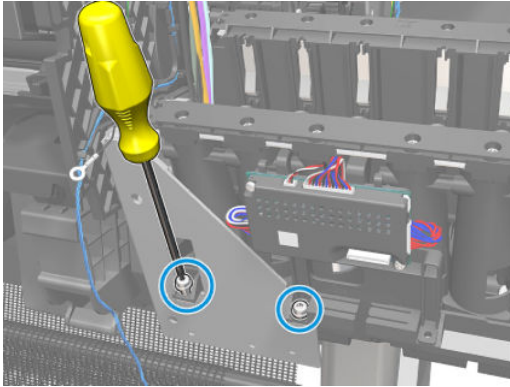
10. Remove the side plate of the Ink supply station.



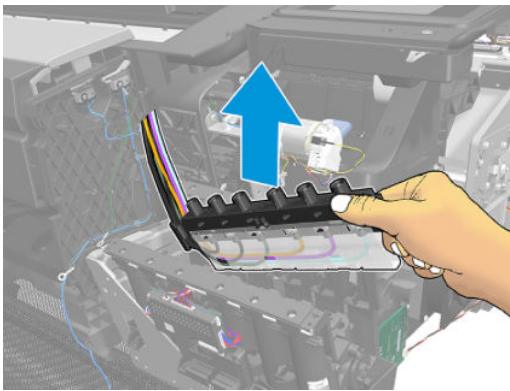
11. Remove the T-20 screws that secure the Ink supply station to the printer.



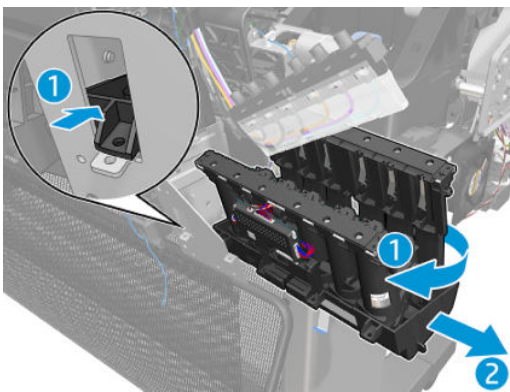
12. Remove the other two T-20 screws that secure the Ink supply station to the printer.



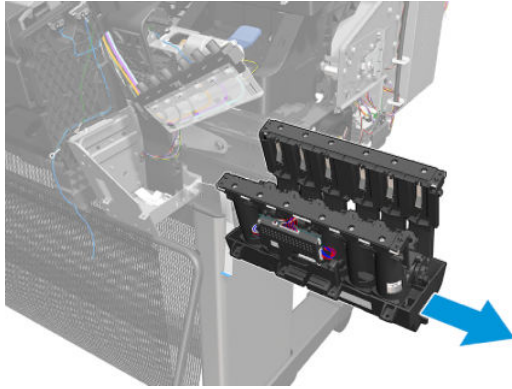
13. Carefully lift the Cartridge tubes connector out of the Ink supply station.



14. Carefully lift the Ink supply station enough so that you can rotate it counterclockwise to release the front attachment from the printer.



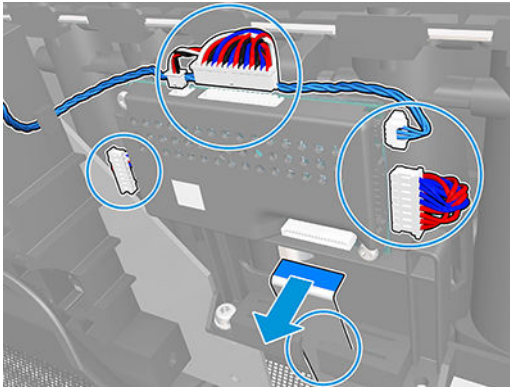
15. Carefully remove the Ink supply station completely out of the printer.



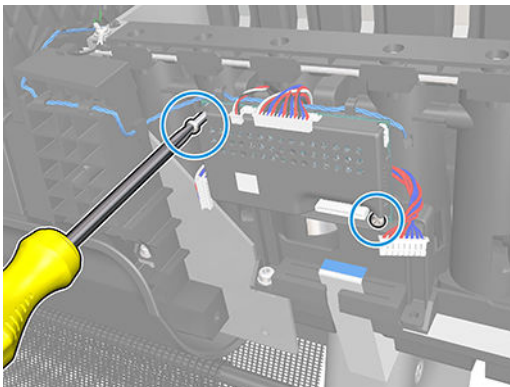
Ink supply station PCA

Removal

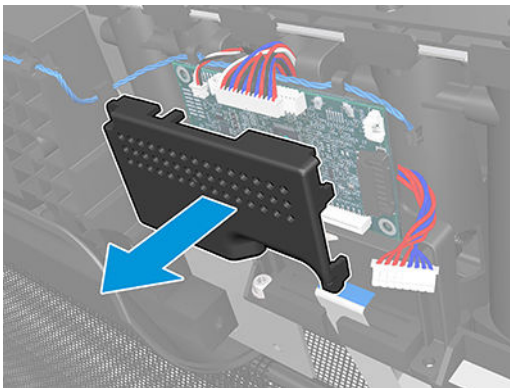
1. Switch off the printer and remove the power cable.
2. Remove the Right cover. See [Right cover on page 407](#).
3. Disconnect all the cables and unrout the flat cable as shown.



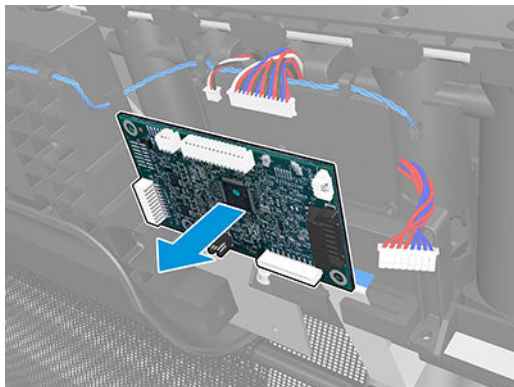
4. Remove 2 screws.



5. Remove the cover.

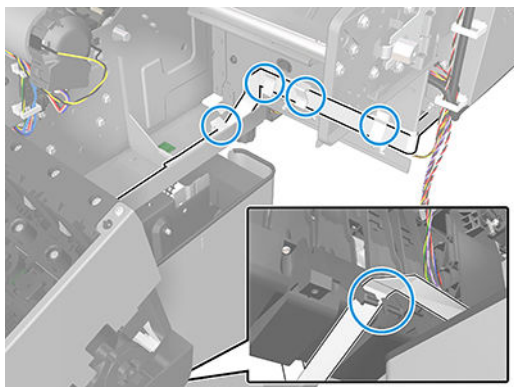


6. Remove the PCA.

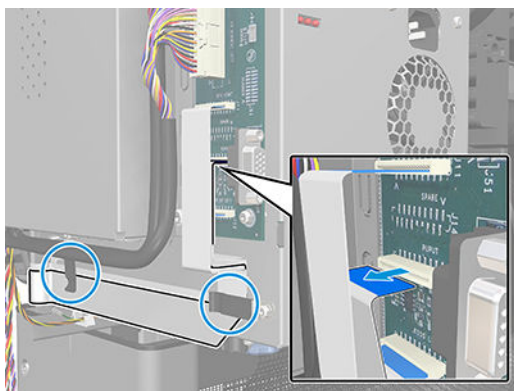


7. Remove the Service station. See [Service station on page 438](#).

8. Unroute the cable.



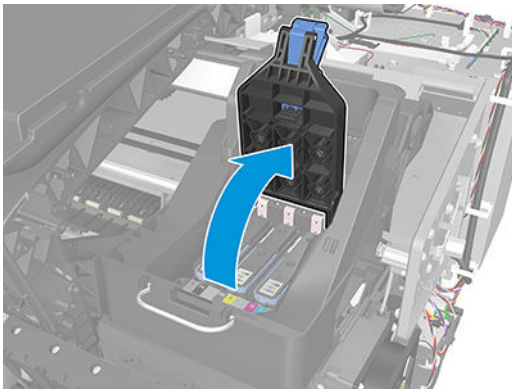
9. Unroute the cable and disconnect it as shown.



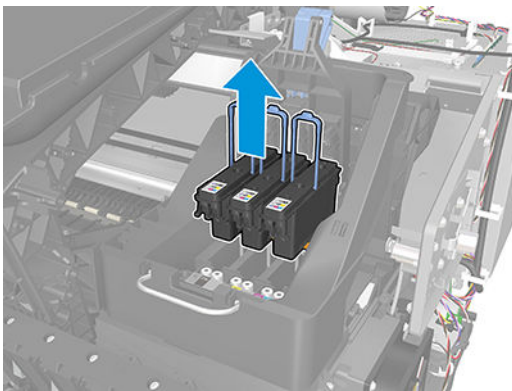
Ink supply tubes & Trailing cable

Removal

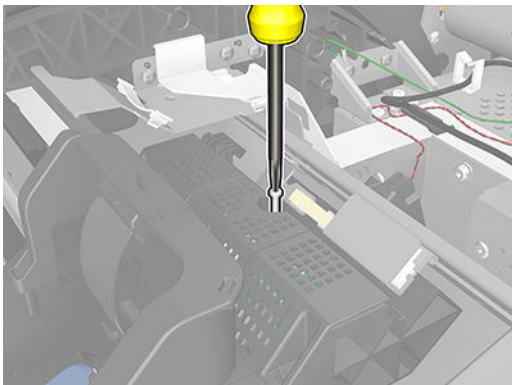
1. Switch off the printer and remove the power cable.
2. Remove the Right cover. See [Right cover on page 407](#).
3. Remove the Touch control panel. See [Touch control panel on page 468](#).
4. Remove the Front top cover. See [Front top cover on page 331](#).
5. Open the Carriage cover.



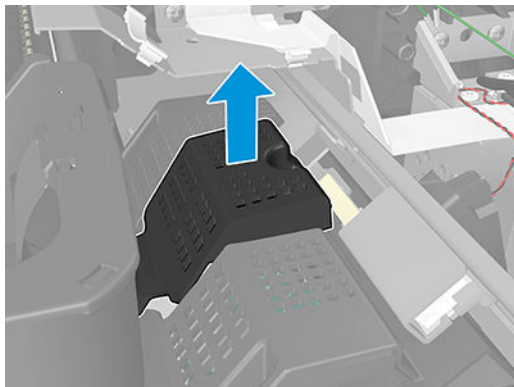
6. Remove all the Printheads.



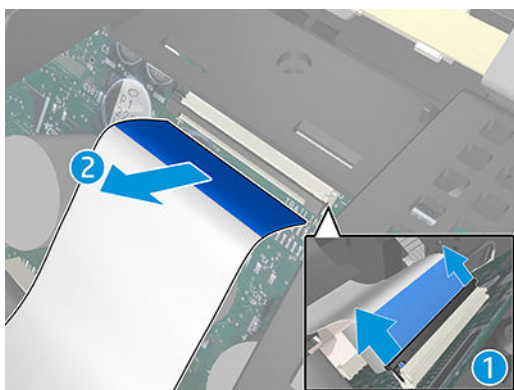
7. Unscrew the small cover of the Carriage PCA.



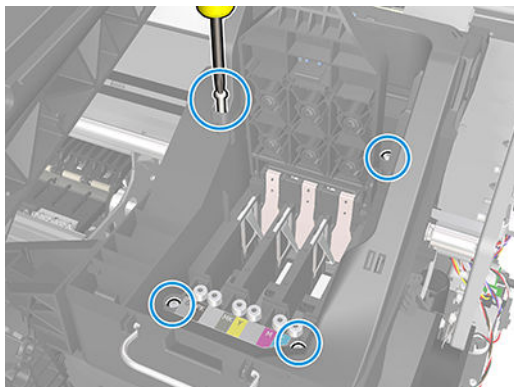
8. Remove the small cover of the Carriage PCA.



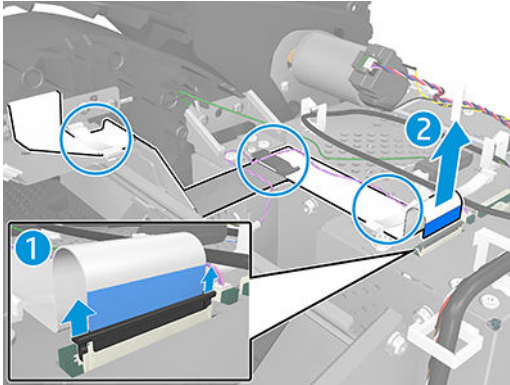
9. Disconnect the ribbon trailing cable from the Carriage PCA.



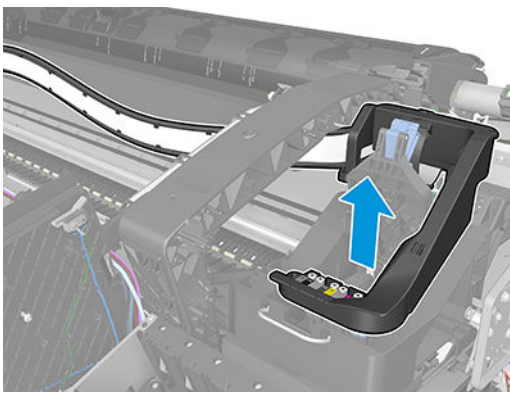
10. Remove the four T-15 screws that secure the Ink supply tubes to the Carriage assembly.



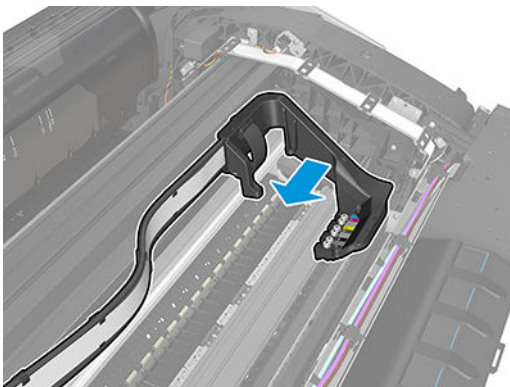
11. Disconnect and unroute the trailing cable.



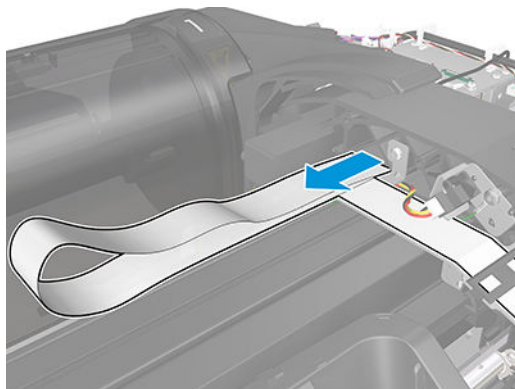
12. Carefully lift out the Ink Supply Tubes and close the carriage cover at the same time.



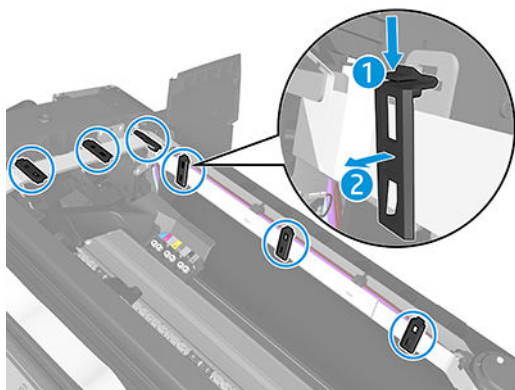
13. Carefully move the Ink supply tubes into the print path.



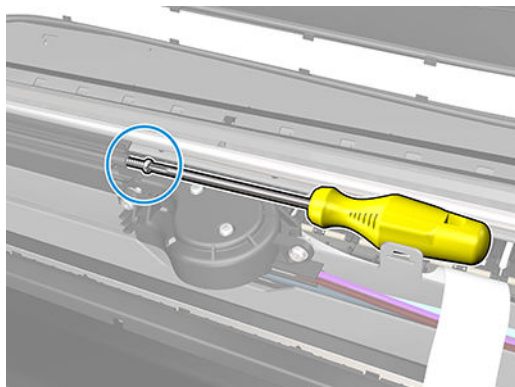
14. Unroute the Trailing cable as shown.



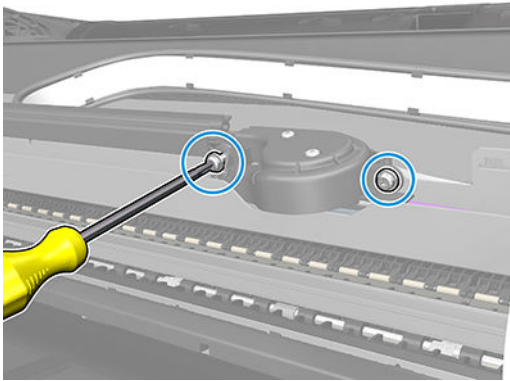
15. Remove all the Trailing cable clips.



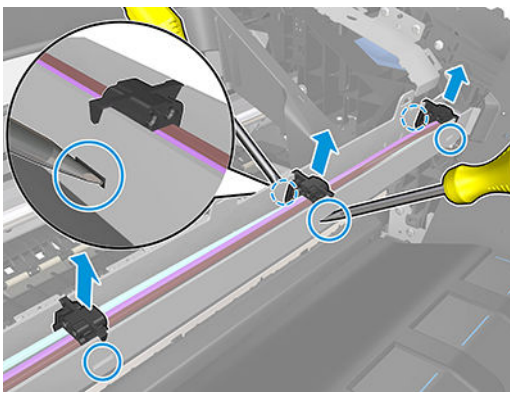
16. Remove the top T-15 screw that secures the Ink supply tubes guide to the printer.



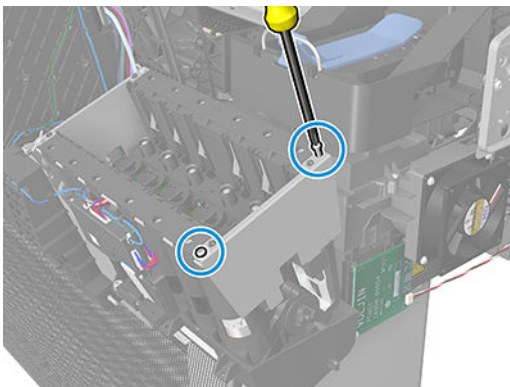
17. Remove the top T-15 screw that secures the Ink supply tubes guide to the printer.



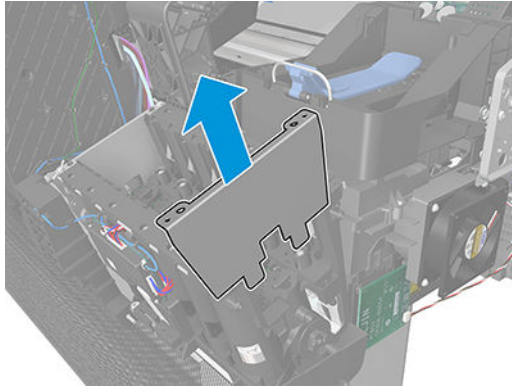
18. Remove all the Front tube guide clips.



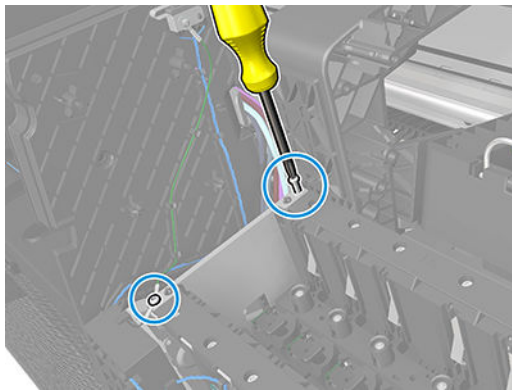
19. Remove the two T-10 screws that secure the Right side plate of the Right ink supply station.



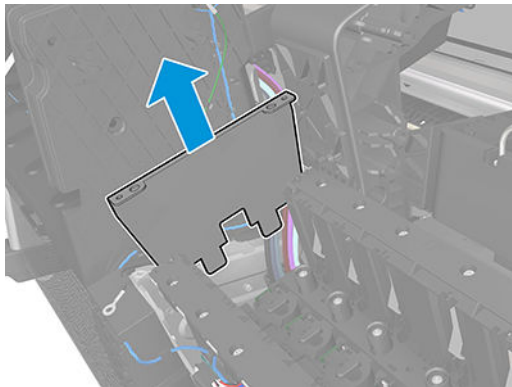
20. Remove the Right side plates of the Right ink supply station.



21. Remove the two T-10 screws that secure the Left side plate of the Right ink supply station.



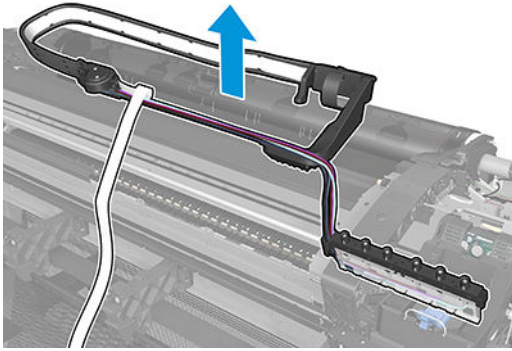
22. Remove the Left side plates of the Right ink supply station.



23. Remove the Right front trim. See [Front trims \(T1700 & T1708\) on page 333](#).

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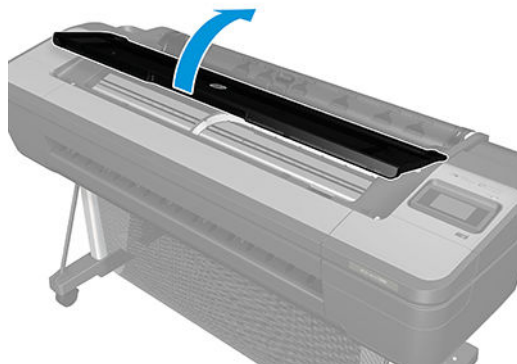
24. Carefully remove the Ink Supply Tubes from the assembly.



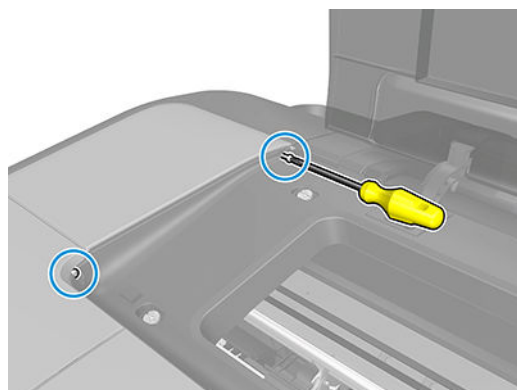
Left cover

Removal

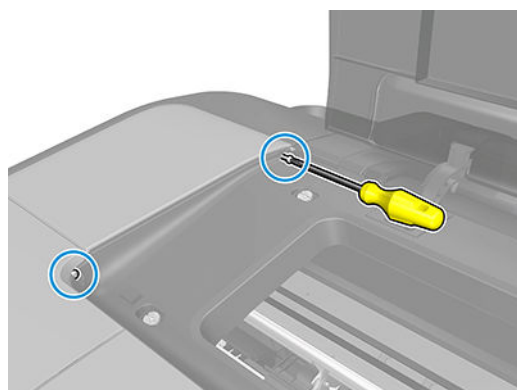
1. Remove the Front cover. See [Front cover on page 330](#).
2. Open the window.



3. For T1700/T1708: Unscrew 2 screws.

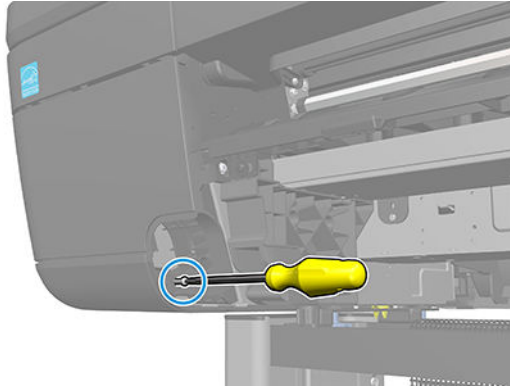


For Z6 & Z9+: Unscrew 1 screws.

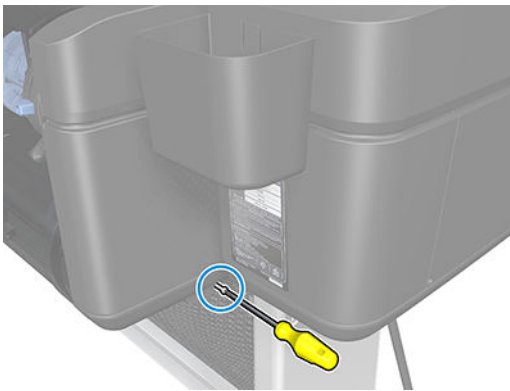


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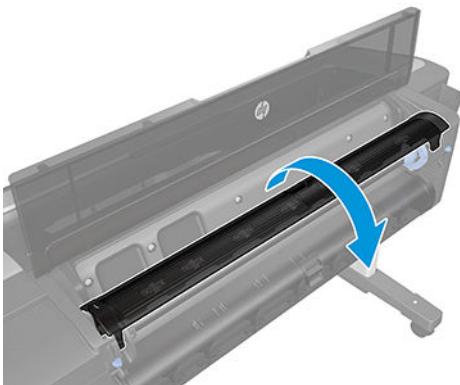
4. Unscrew the bottom front screw.



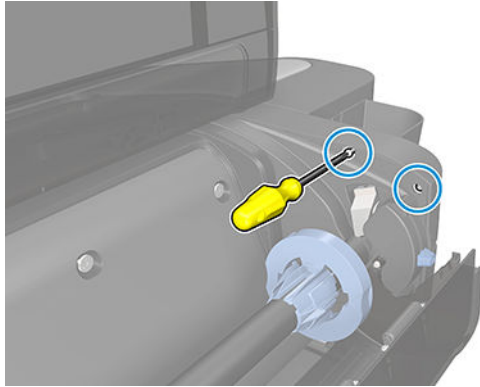
5. Unscrew the bottom back screw.



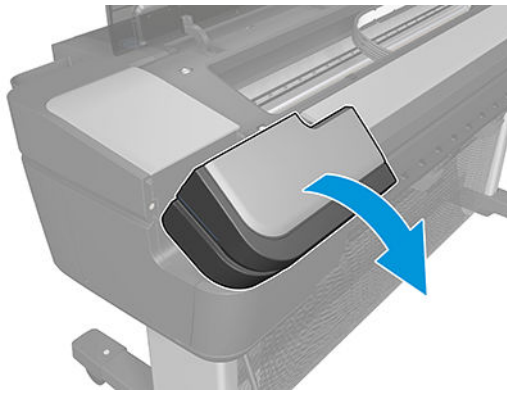
6. Open the Top roll cover.



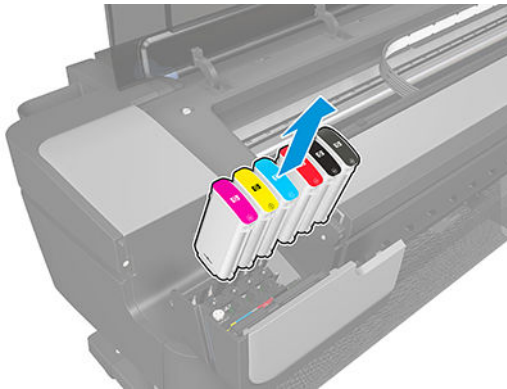
7. Unscrew 2 screws.



8. Open the Ink cover.

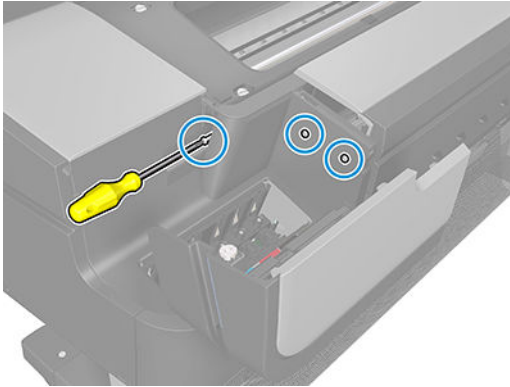


9. Remove the cartridges.

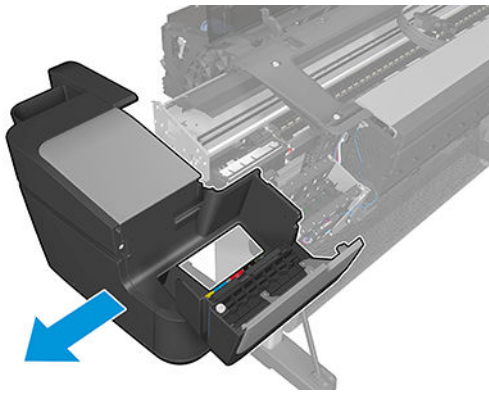


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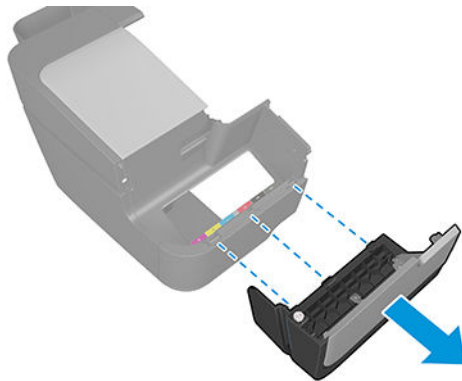
10. Unscrew 3 screws.



11. Remove the Left cover.



12. Remove the Left ink cartridge door.



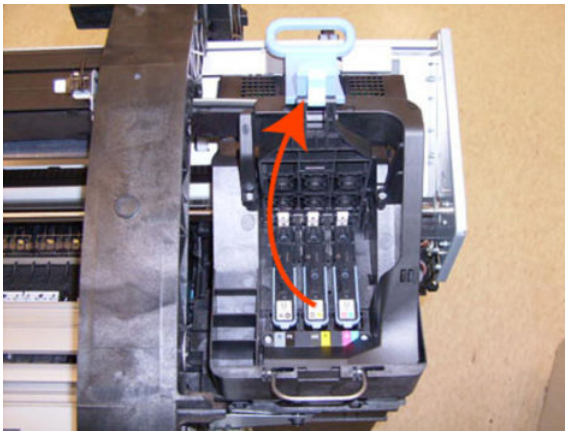
13. Remove Rear pocket.



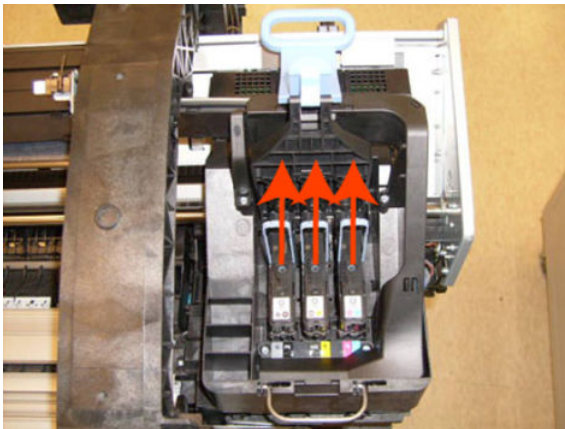
Line sensor

Removal

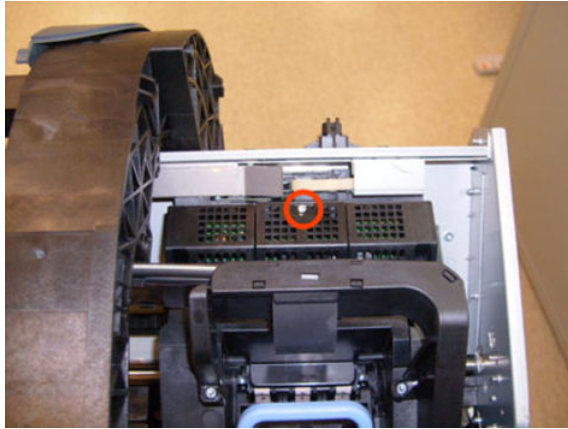
1. Switch off the product and remove the power cable.
2. Remove the [Right cover on page 407](#).
3. Remove the [Left cover on page 359](#).
4. Remove the [Touch control panel on page 468](#).
5. Remove the [Front top cover on page 331](#)
6. Open the Carriage cover.



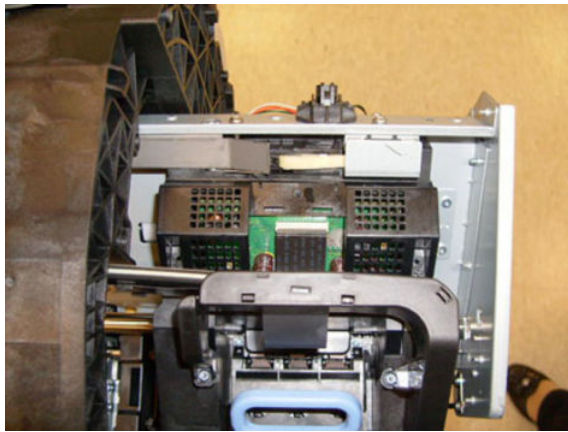
7. Remove all the Printheads.



8. Remove one T-10 screw from the small cover.



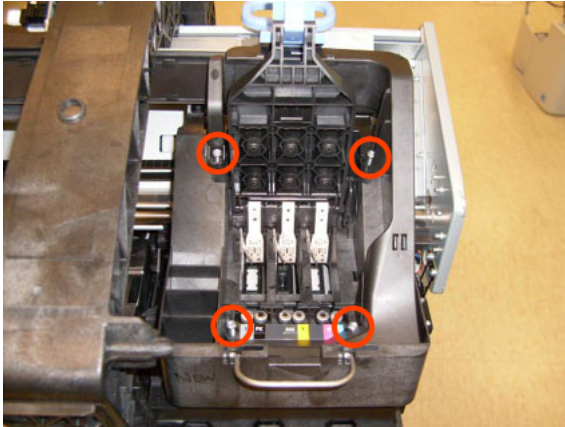
9. Remove the small cover of the Carriage PCA.



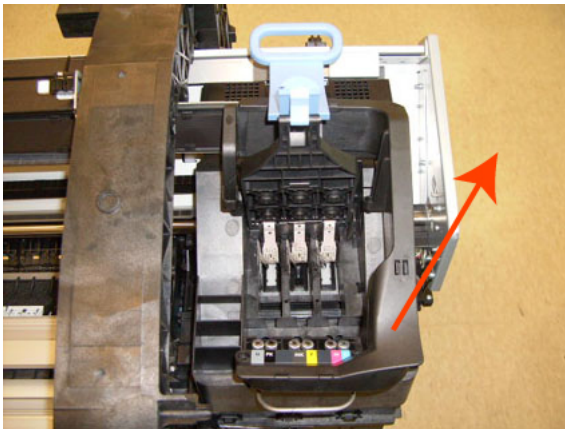
10. Disconnect the ribbon cable of the Trailing cables from the Carriage PCA.



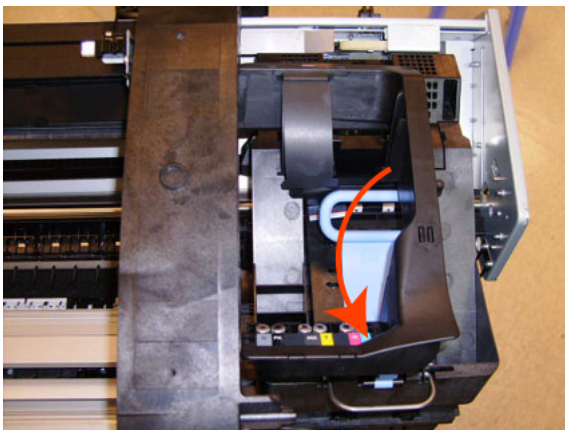
11. Remove the four T-15 screws that secure the Ink supply tubes to the Carriage assembly.



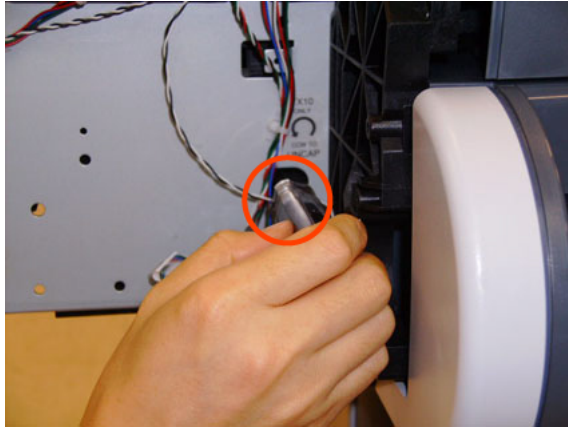
12. Carefully lift out the Ink supply tubes and close the carriage cover at the same time.



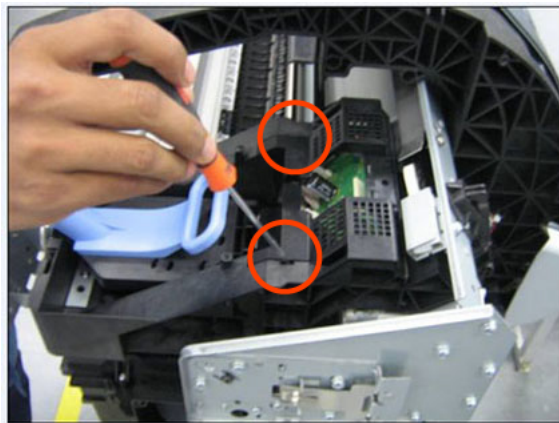
13. Close and lock the Carriage cover.



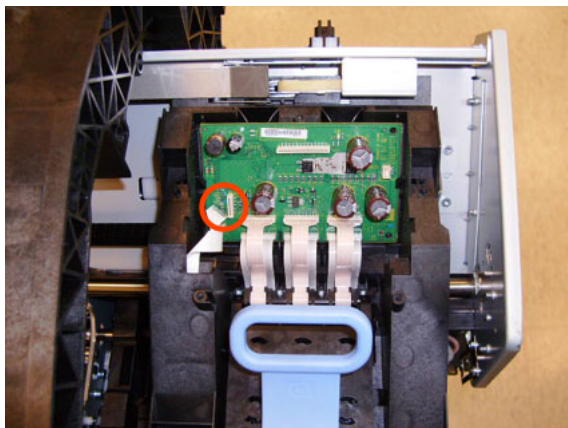
14. Loosen the T-10 uncapping screw sufficiently so you can move the Carriage assembly manually.



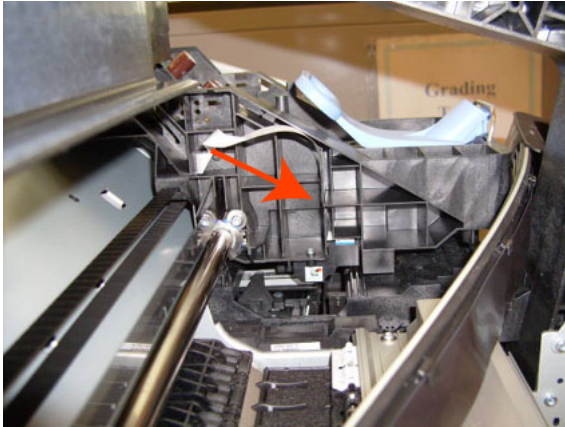
15. Remove the cover on each side of the Carriage PCA using a screwdriver to unclip it.



16. Disconnect the Line Sensor electrical connection from the Carriage PCA.



17. Carefully unrout the Line sensor cable from the Carriage assembly.




18. Remove one T-10 screw that secures the Line sensor to the Carriage assembly.



19. Remove the Line sensor from Carriage assembly.

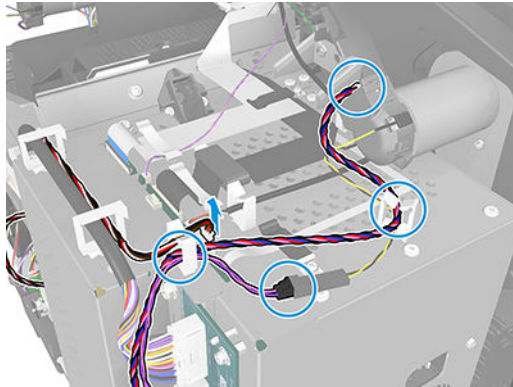


 **NOTE:** When you finish installing or replacing this component, you must perform the necessary Service Calibrations. To find which calibrations you must perform, see [Service Calibration Guide to Removal and Installation on page 260](#).

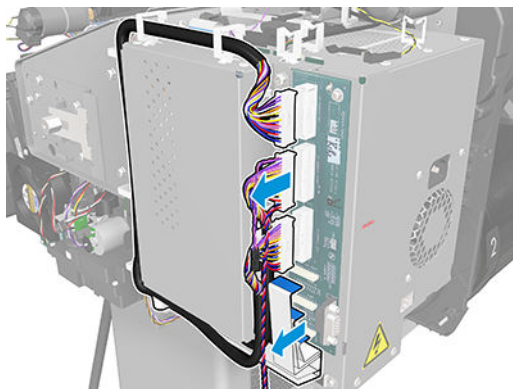
Mechatronics PCA

Removal

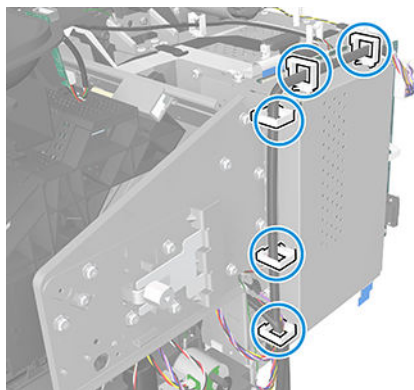
1. Switch off the printer and remove the power cable.
2. Remove the Right cover. See [Right cover on page 407](#).
3. Disconnect the cables and unroute as shown.



4. Disconnect the cables.

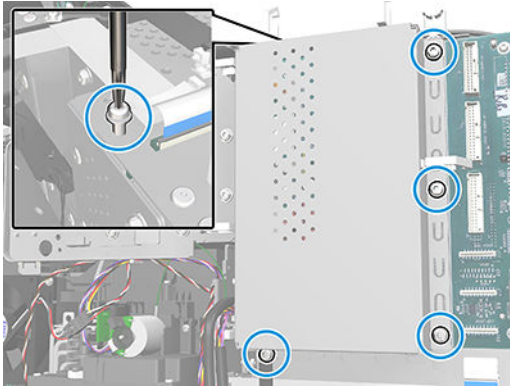


5. Unroute the cables as shown.

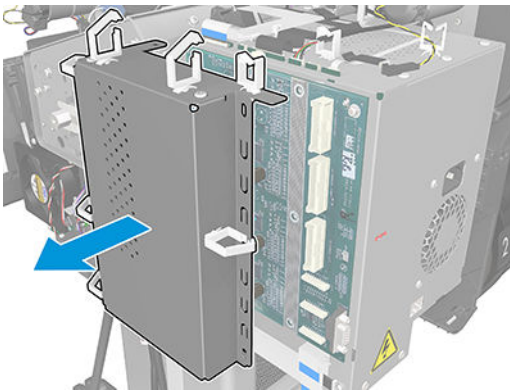


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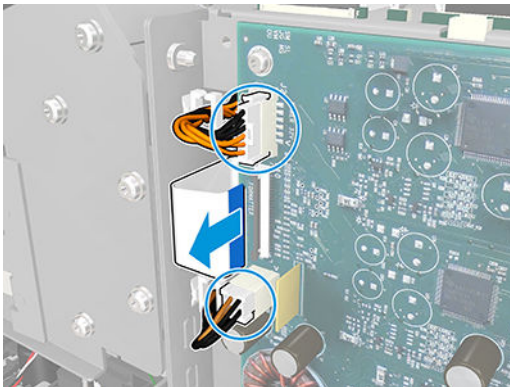
6. Remove 5 screws.



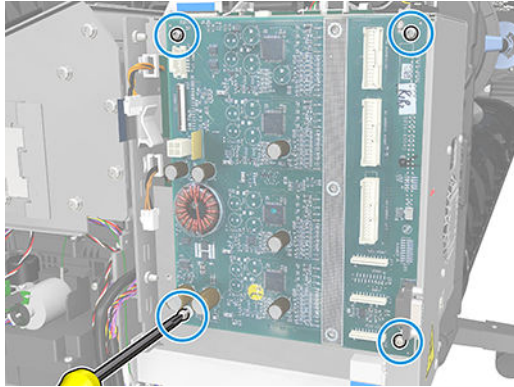
7. Remove the cover.



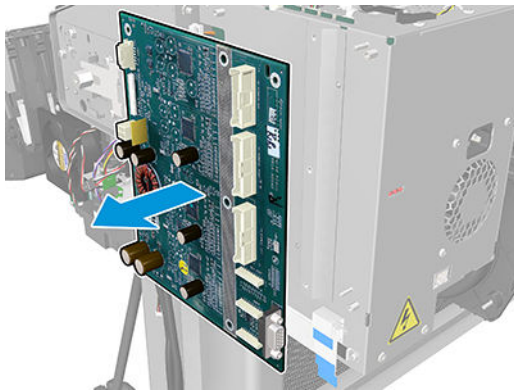
8. Remove the cables as shown.



9. Remove 4 screws.



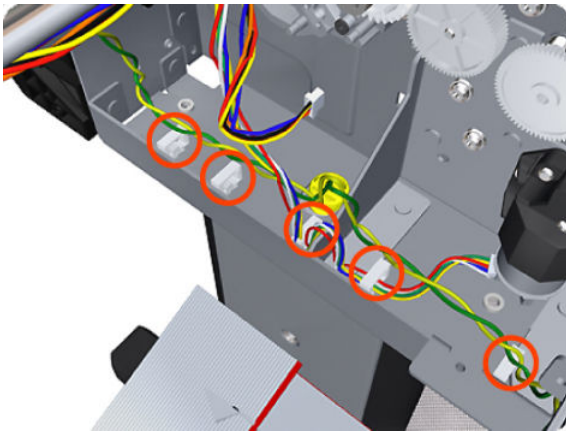
10. Remove the Mechatronics PCA.



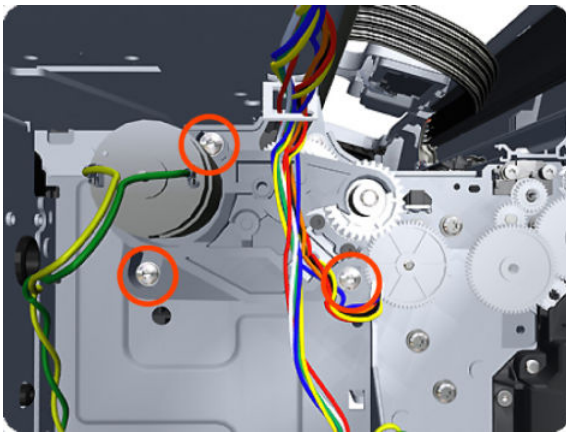
Media advance drive

Removal

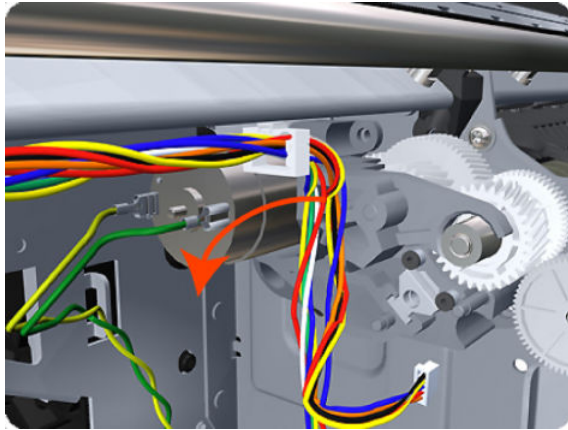
1. Switch off the product and remove the power cable.
2. Remove the [Left cover on page 359](#).
3. Remove the [Spittoon, Left on page 447](#).
4. Remove the [Encoder disk and Encoder sensor on page 319](#).
5. Unroute the Media Advance Drive power cable.



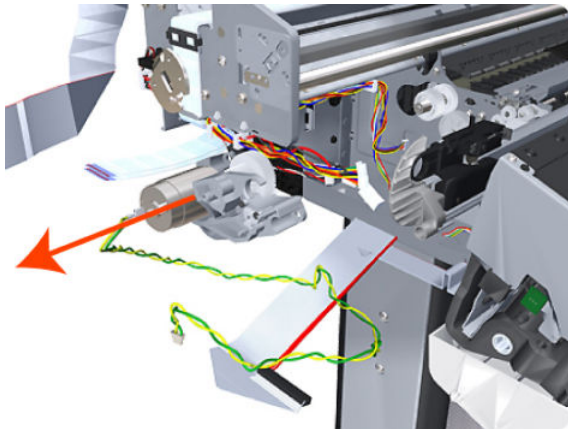
6. Remove three T-20 screws that secure the Media Advance Drive to the product.



7. Grip the motor housing of the Media Advance Drive and gently pull it towards you sufficiently to allow you to disengage the Media Advance Drive from the product.



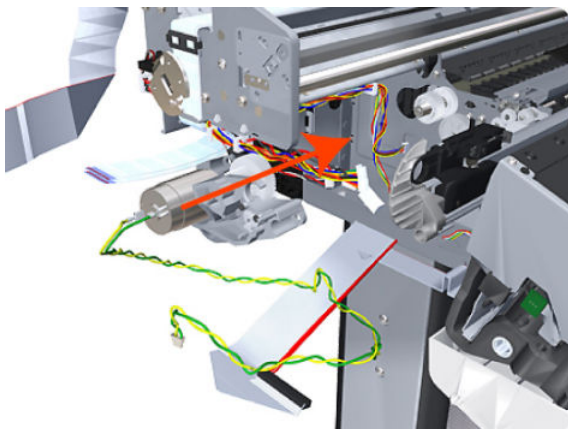
8. Carefully lift the Media Advance Drive out of the product.



Installation without encoder sensor adjustment

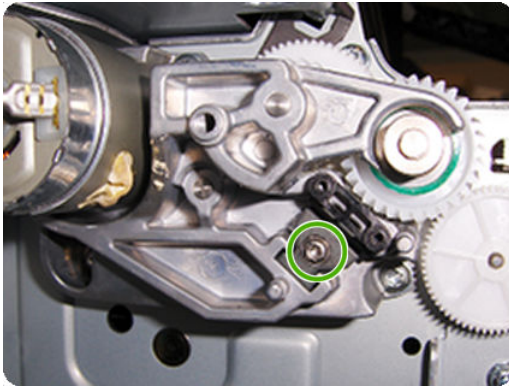
Use the following procedure to install and adjust a new Media Advance Drive. This is the normal procedure that should be followed in most cases. You will need Media Advance Drive Adjustment Tool from the Tool Kit (Q6683-67001).

1. Carefully position the Media Advance Drive in the product.

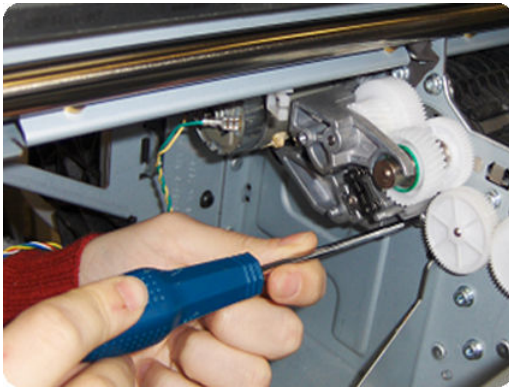


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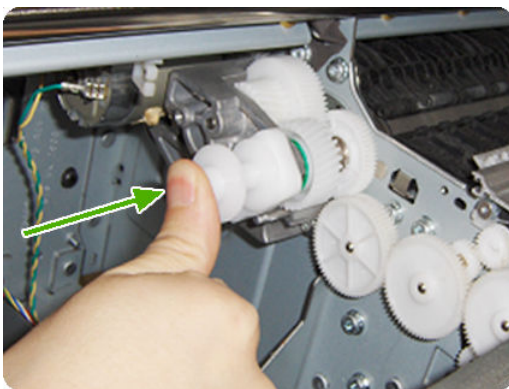
2. Be careful not to touch the encoder sensor adjustment screw; not even when replacing the encoder disc and sensor.



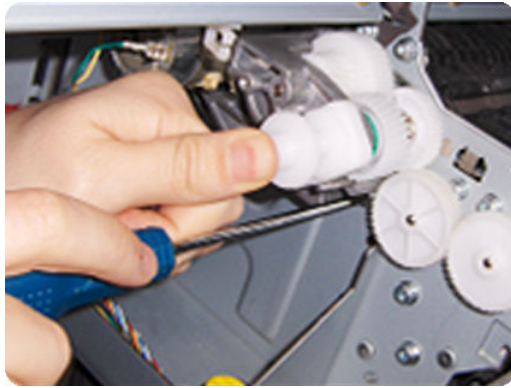
3. Insert the three T-15 attachment screws, but do **not** fully tighten them.



4. Position the Media Advance Drive Adjustment Tool on the end Media Advance Roller shaft, push it firmly onto the shaft and maintain a constant pressure to ensure it is flush to the Media Advance Drive.



5. While maintaining pressure on the Media Advance Drive Adjustment Tool, fully tighten the three T-15 attachment screws in the order shown.

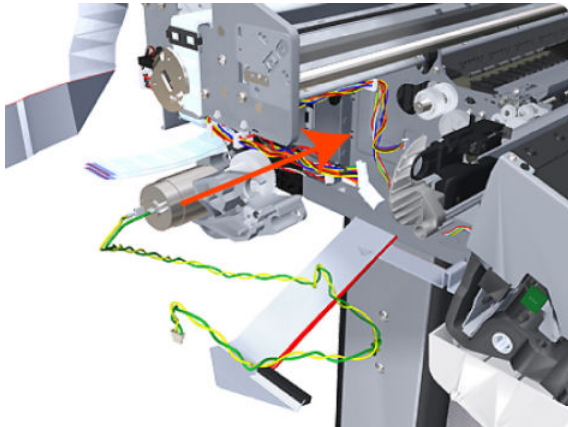


6. Remove the Media Advance Drive Adjustment Tool.

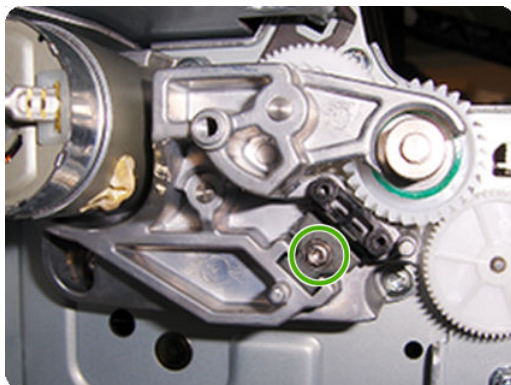
Installation with encoder sensor adjustment

Use the following procedure to install and adjust a new Media Advance Drive, and to adjust the encoder sensor. This procedure is recommended only when the motor mount has to be replaced or the encoder sensor has to be readjusted. You will need Media Advance Drive Adjustment Tool from the Tool Kit (Q6683-67001).

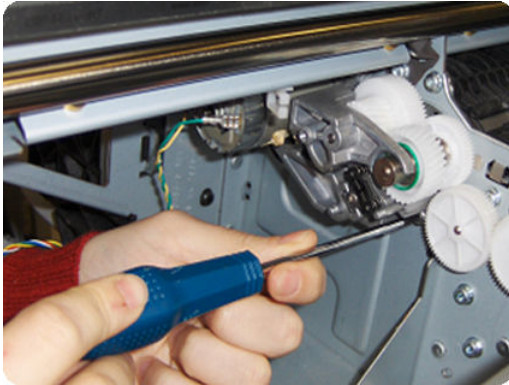
1. Carefully position the Media Advance Drive in the product.



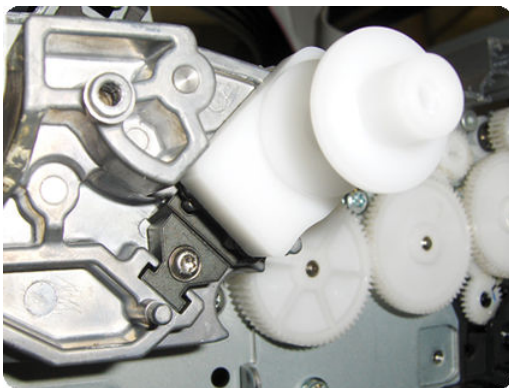
2. Be careful not to touch the encoder sensor adjustment screw; not even when replacing the encoder disc and sensor.



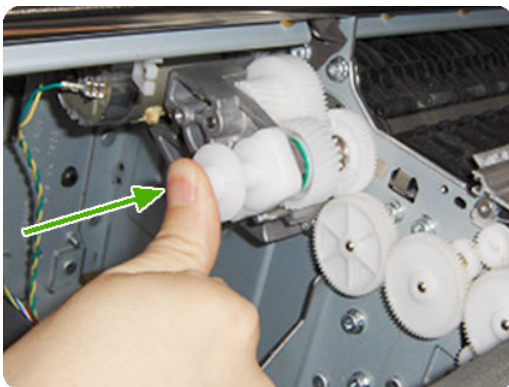
3. Insert the three T-15 attachment screws, but do **not** fully tighten them.



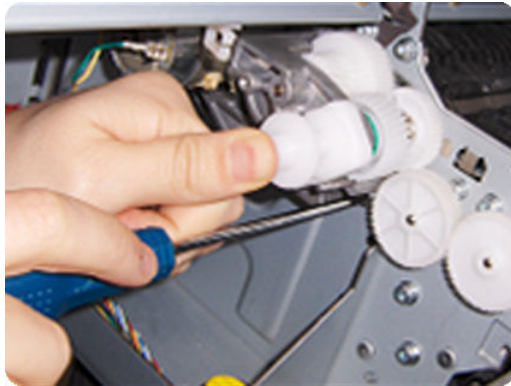
4. Add the Encoder Sensor Tool to the Media Drive Adjustment Tool.



5. Position the Media Advance Drive Adjustment Tool on the end Media Advance Roller shaft, push it firmly onto the shaft and maintain a constant pressure to ensure it is flush to the Media Advance Drive.



6. While maintaining pressure on the Media Advance Drive Adjustment Tool, fully tighten the three T-15 attachment screws in the order shown.



7. While maintaining pressure on the Media Advance Drive Adjustment Tool, fully tighten the encoder sensor adjustment screw.



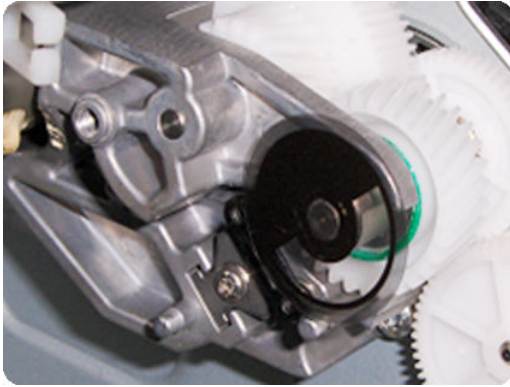
8. Remove the Media Advance Drive Adjustment Tool.

Encoder disk assembly

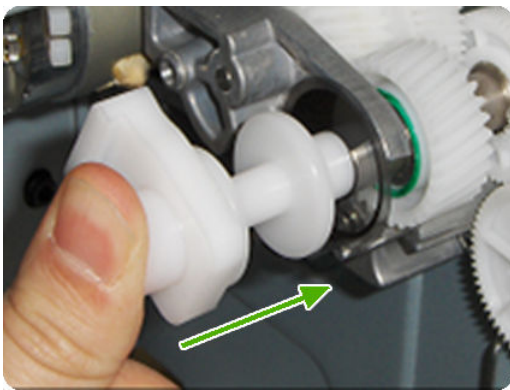
1. Remove the paper that protects the glue of a new encoder.




2. Pre-assemble the encoder on the roller without using pressure.



3. Press the encoder using the Media Advance Drive Adjustment Tool (reversed) so that it sticks to the roller.

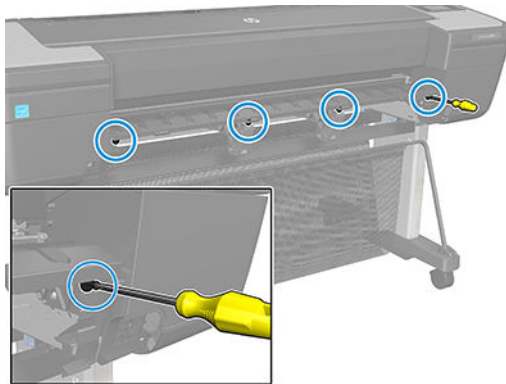


 **NOTE:** When you finish installing or replacing these components, you must perform the necessary Service Calibrations. To find which calibrations you must perform, see [Service Calibration Guide to Removal and Installation on page 260](#).

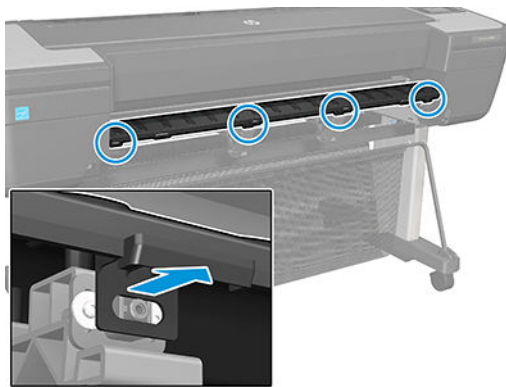
Media output assembly

Removal

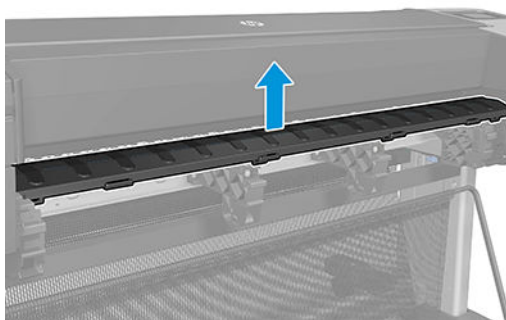
1. Switch off the printer and remove the power cable.
2. Remove the Front Cover. See [Front cover on page 330](#).
3. Remove the four T-15 screws that secure the Media output assembly to the printer.



4. Release the four attachment clips.

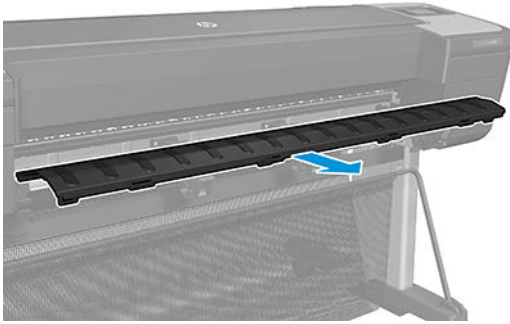


5. Lift the front of the Media output assembly.



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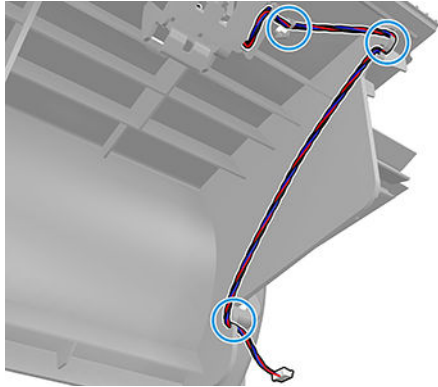
6. Slide forward the Media output assembly out of the printer.



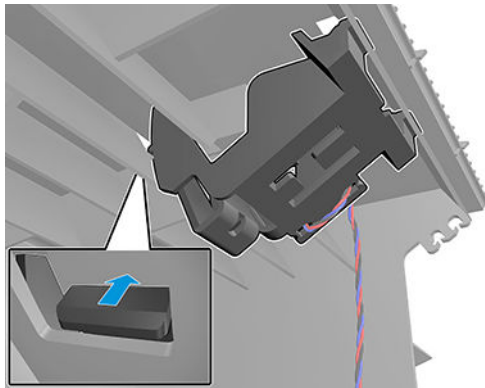
Media sensor

Removal

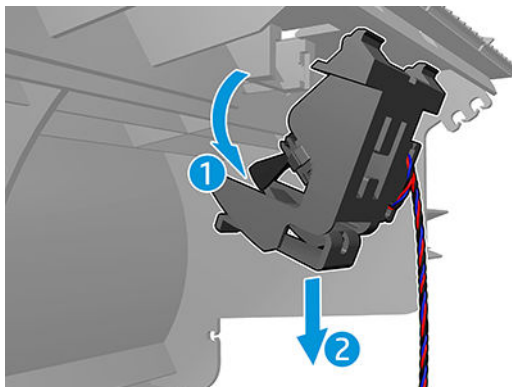
1. Remove the cleanout. See [Cleanout on page 308](#).
2. Unroute the cable as shown.



3. Unclip the media sensor.



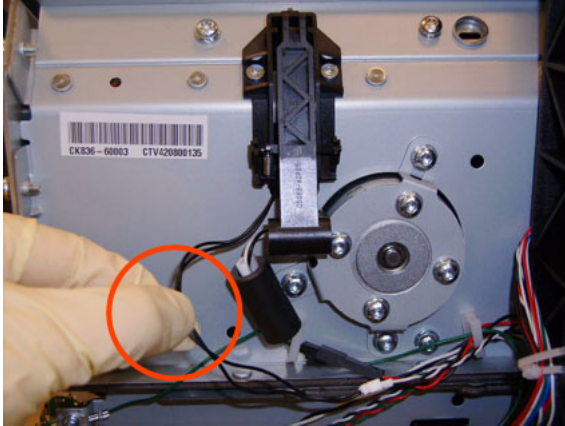
4. Remove the media sensor.



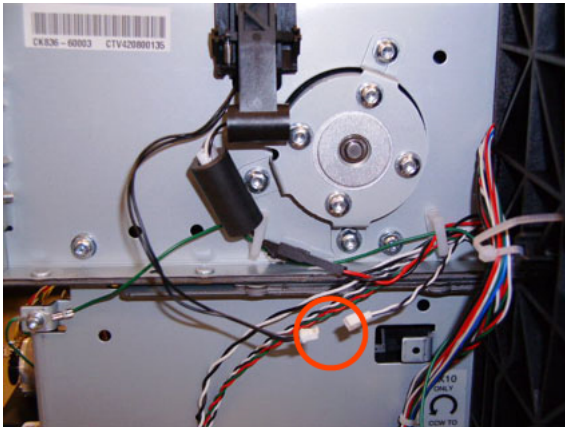
Pen to paper space (PPS) solenoid

Removal

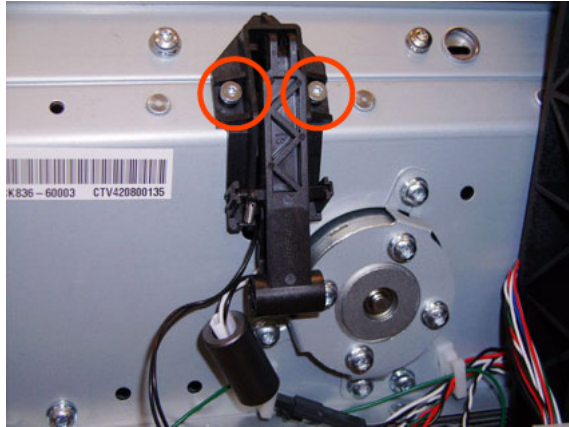
1. Switch off the printer and remove the power cable.
2. Remove the [Right cover on page 407](#).
3. Unroute the Pen to Paper Space (PPS) Solenoid cable from the cable clamp.



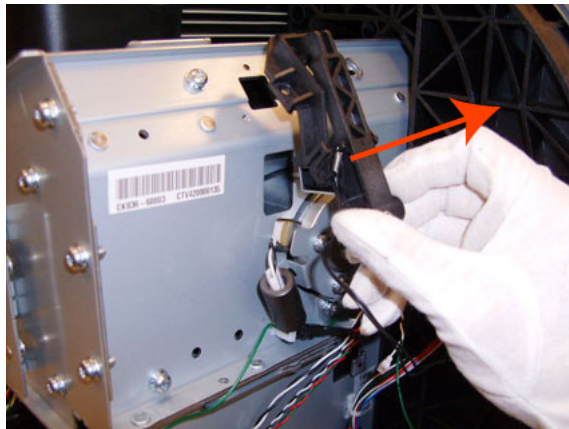
4. Disconnect the Pen to Paper Space (PPS) Solenoid connector from the L1 Data Harness.




5. Remove two T-10 screws that secure the Pen to Paper Space (PPS) Solenoid to the printer.



6. Remove the Pen to Paper Space (PPS) Solenoid from the printer.



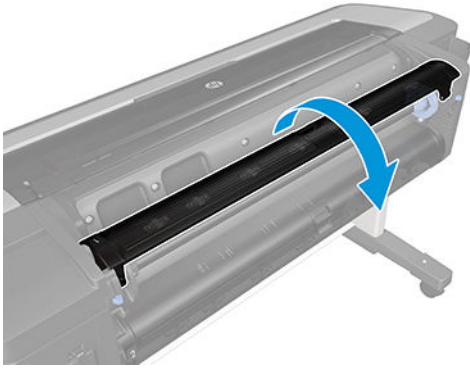
 **NOTE:** When you finish installing or replacing this component, you must perform the necessary Service Calibrations. To find which calibrations you must perform, see [Service Calibration Guide to Removal and Installation on page 260](#).

Pinch arm assembly

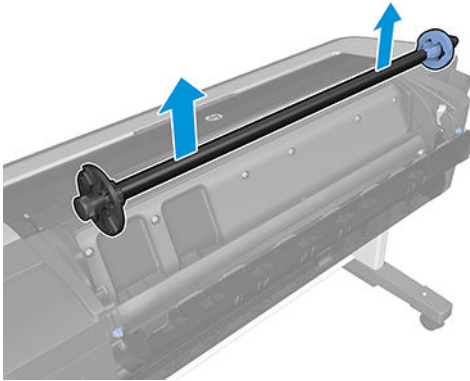
These parts can be replaced by customers who have the appropriate flier.

Removal and installation

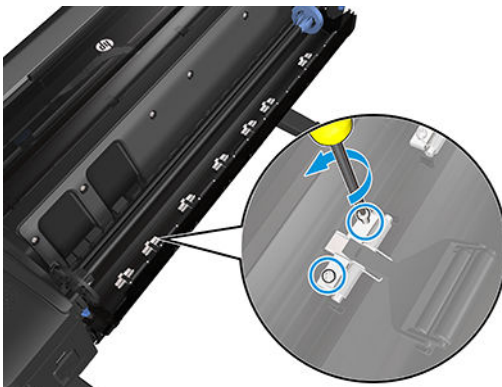
1. Open the upper or lower roll cover.



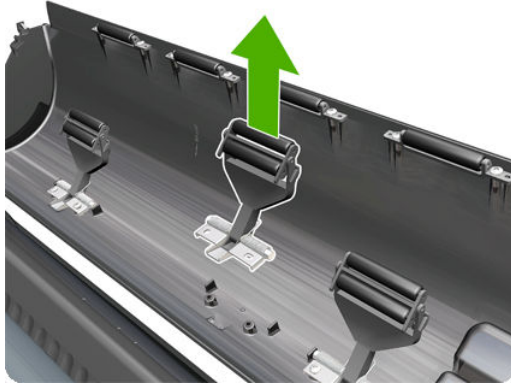
2. Remove the spindle.



3. Unscrew the pinch arm assembly.



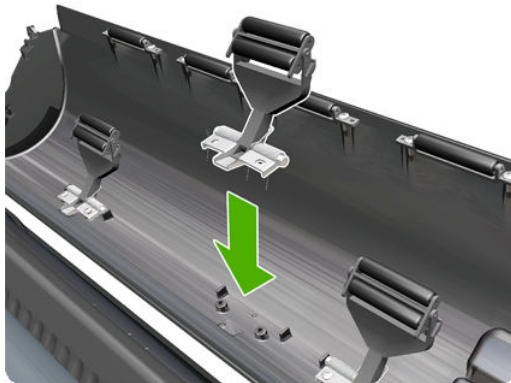
4. Remove the pinch arm assembly.



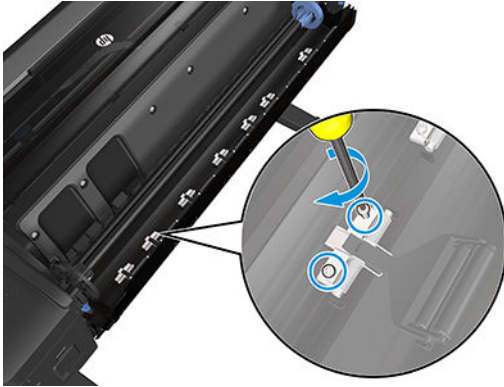
5. Locate the new pinch arm assembly and screws.



6. Fit the pinch arm assembly to the roll cover.



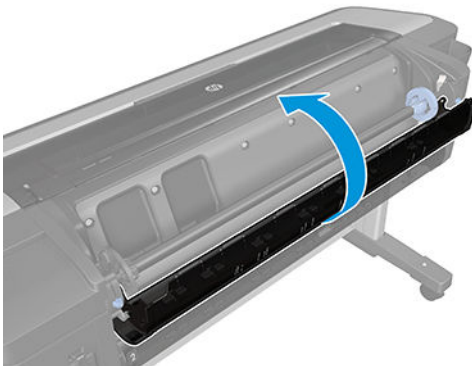
7. Screw the pinch arm assembly to the roll cover.



8. Insert the spindle.



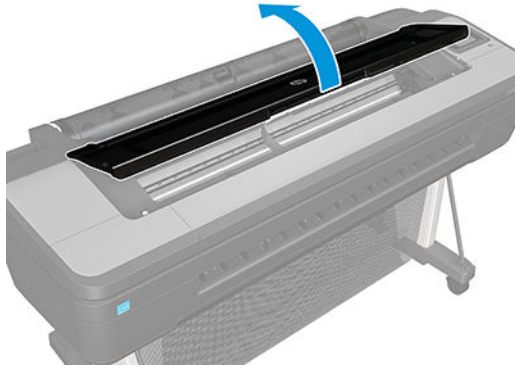
9. Close the roll cover.



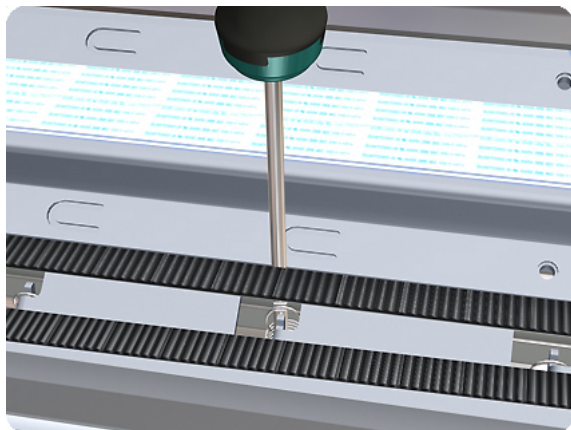
Pinchwheel assembly

Removal

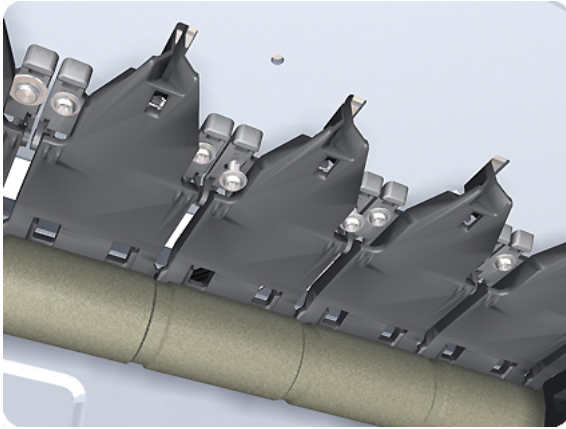
1. Switch off the product and remove the power cable.
2. Open the Window.



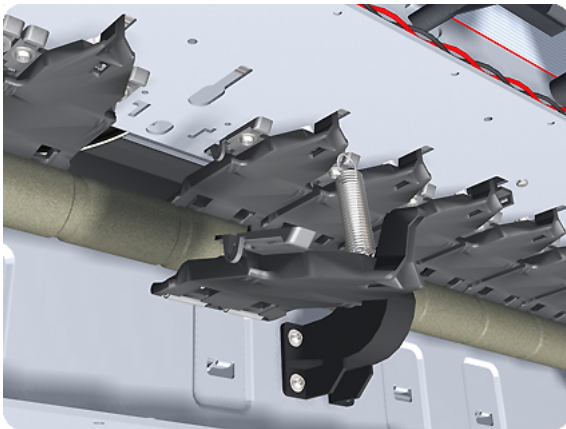
3. Remove the [Spindle on page 446](#).
4. Remove the [Left roll guide on page 423](#).
5. Remove the [Right roll guide on page 424](#).
6. Use the Pinchwheel Insertion Tool to remove the spring from the attachment on the product.



7. Remove two T-10 screws that secure the Pinchwheel to the printer.




8. Remove the Pinchwheel from the printer.




Installation and alignment

Use the following procedure to align the Pinchwheel using the Pinchwheel Alignment Tool during reassembly.

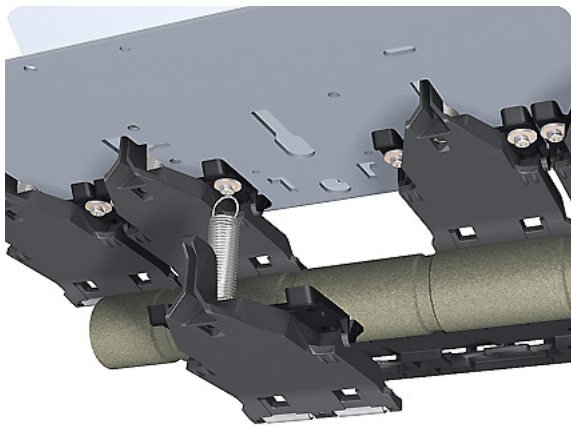
 **NOTE:** Never remove and replace all the Pinchwheel assemblies at the same time. In order to align a Pinchwheel, you need minimum one correctly aligned by the manufacturer.

1. Insert the Pinchwheel Insertion Tool through the appropriate access hole for the Pinchwheel you are installing.

 **CAUTION:** Be very careful not to damage the Encoder strip or the Belt assembly with the Pinchwheel Insertion Tool.



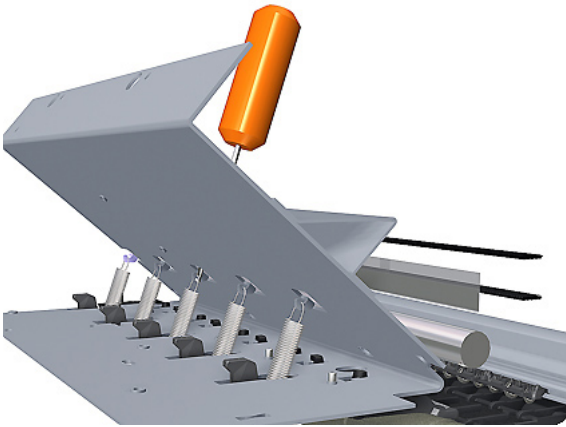
2. Position the new Pinchwheel correctly on its hanger.



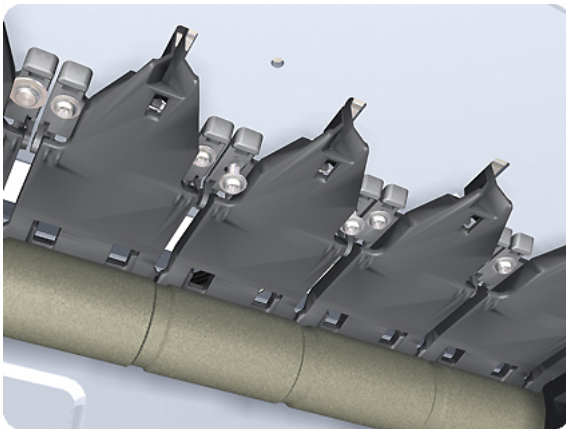
3. Hook the spring of the Pinchwheel you are installing with the Pinchwheel Insertion Tool.



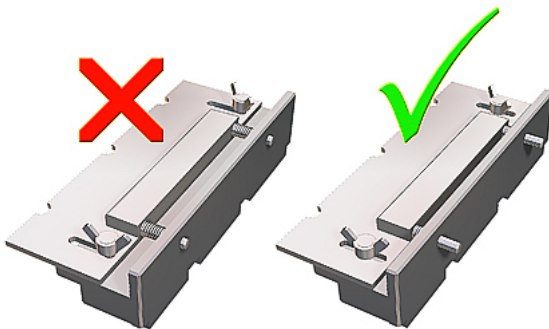
4. Attach the spring to its attachment point on the hanger and remove the Pinchwheel Insertion Tool.



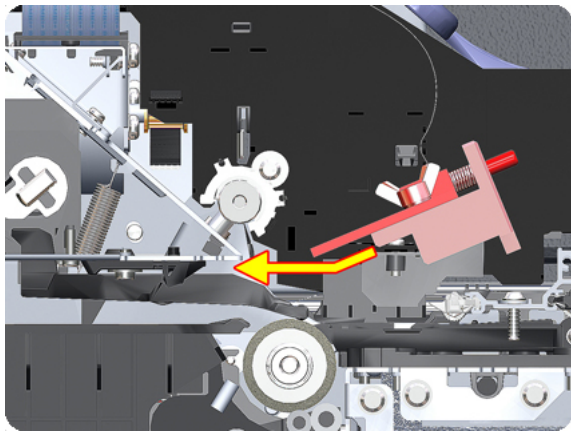
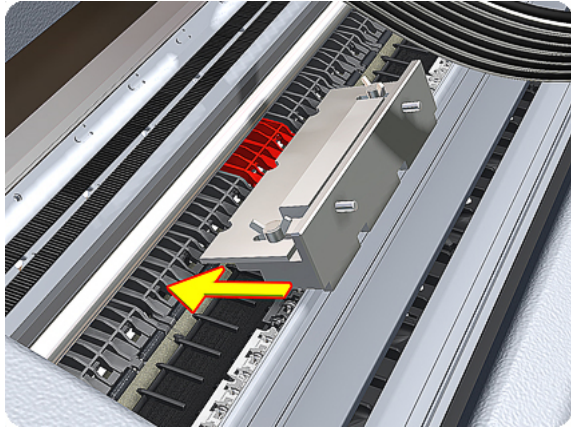
5. Attach the new Pinchwheel with the two T-15 screws that secure to the product but do **not** fully tighten the screws.



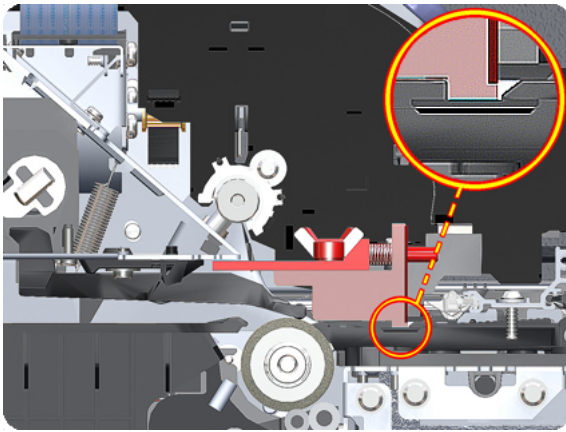
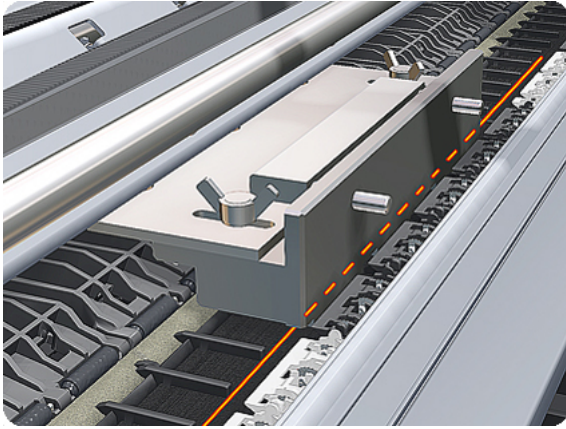
6. Make sure the Pinchwheel Alignment Tool is in the collapsed position.



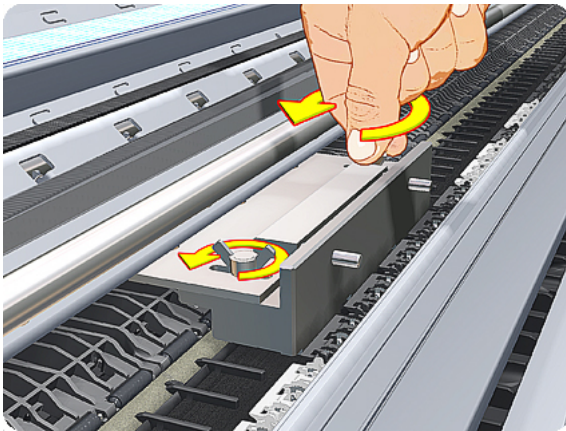
7. Fit the end of the Pinchwheel Alignment Tool to the Pinchwheel you need to align.



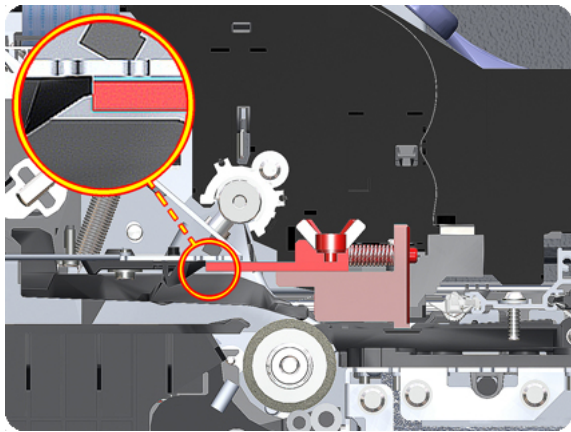
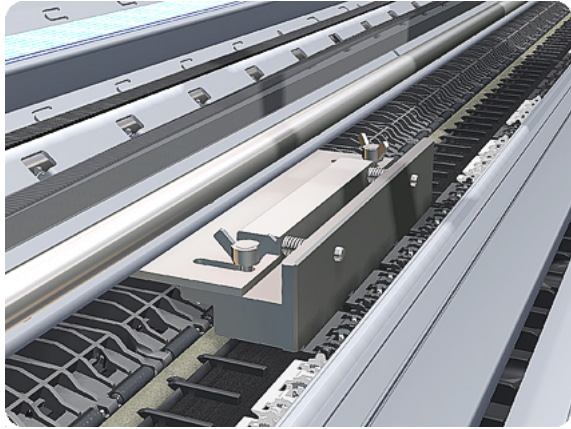
8. Set the Pinchwheel Alignment Tool on the print platen. The tool should fit as shown below.



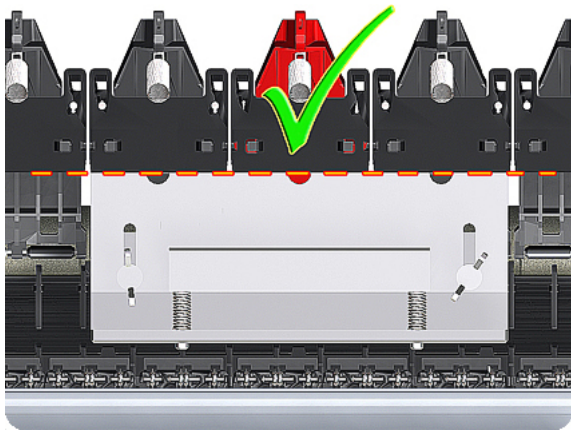
9. Loosen the wing nuts on the Pinchwheel Alignment Tool.



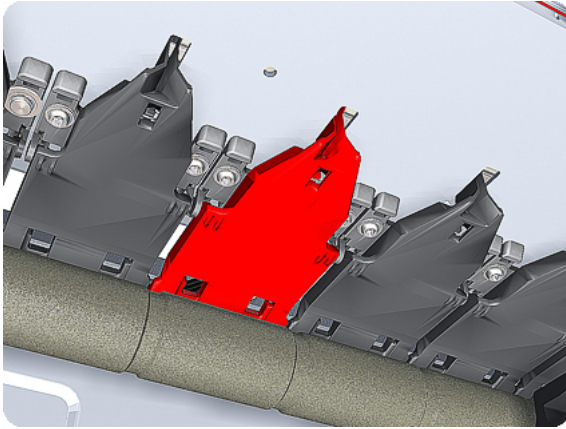
10. Allow the Pinchwheel Alignment Tool to expand. Make sure that the tool is fully expanded.



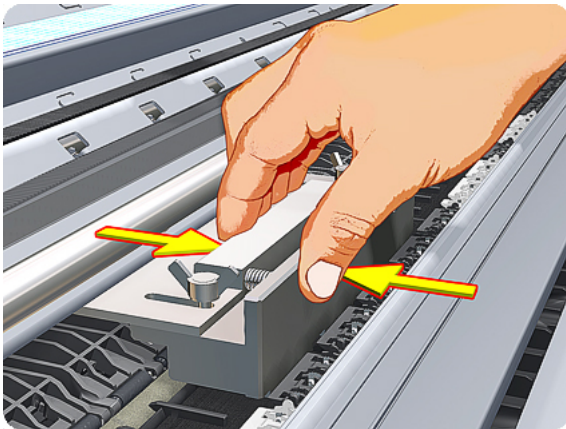
11. When the Pinchwheel Alignment Tool is fully expanded, the Pinchwheel is properly aligned.



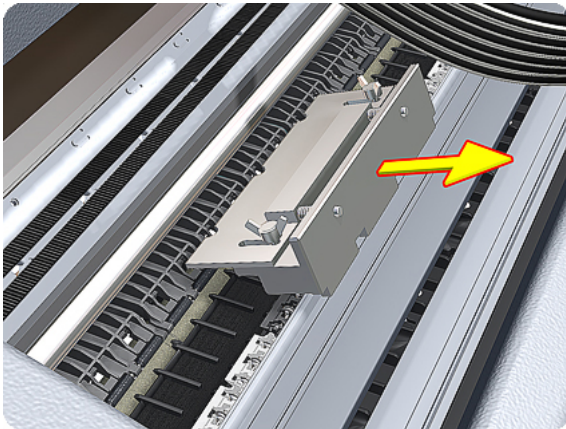
12. Fully tighten the two T-15 attachment screws that secure the Pinchwheel to the product.




13. Collapse the Pinchwheel Alignment Tool to remove it.



14. Remove the Pinchwheel Alignment Tool from the product.



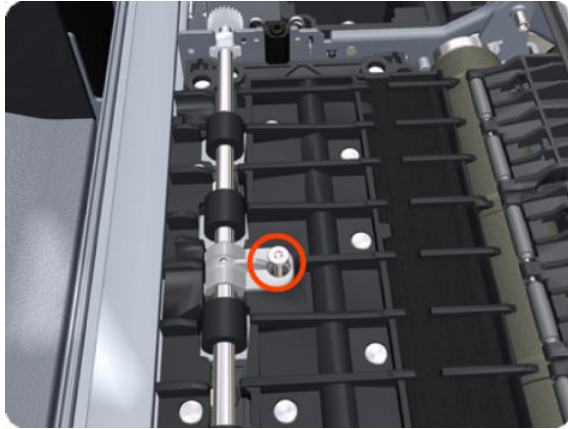
 **NOTE:** When you finish installing or replacing this component, you must perform the necessary Service Calibrations. To find which calibrations you must perform, see [Service Calibration Guide to Removal and Installation on page 260](#).

Print zone overdrive

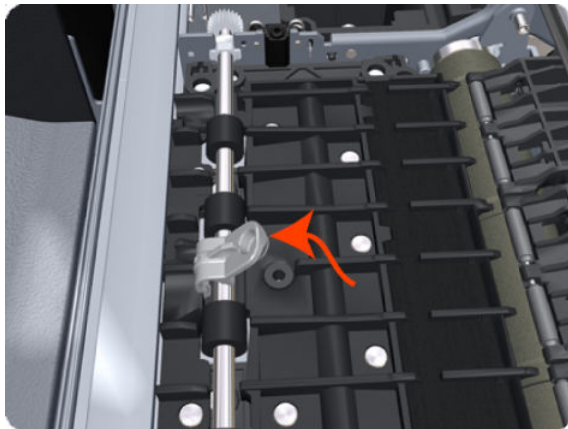
Removal

The Print Zone Overdrive is in two sections (left and right). This procedure describes the removal of both sections. If you want to remove only one of the sections, skip the steps for the other section.

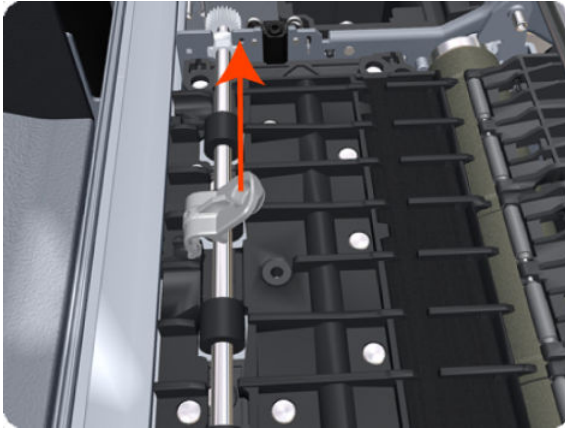
1. Switch off the printer and remove the power cable.
2. Remove the [Starwheel assembly on page 455](#).
3. Remove one T-8 screw that secures the left clamp of the Print Zone Overdrive to the Platen.



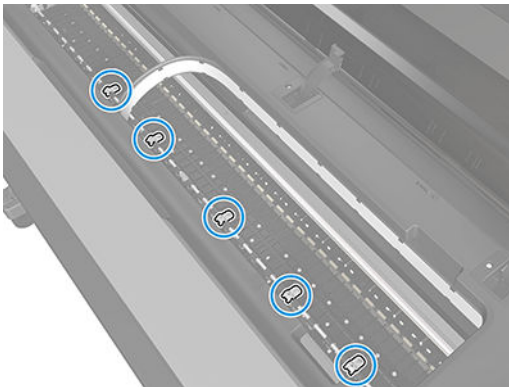
4. Lift attachment clamp vertically to release it from the Platen.



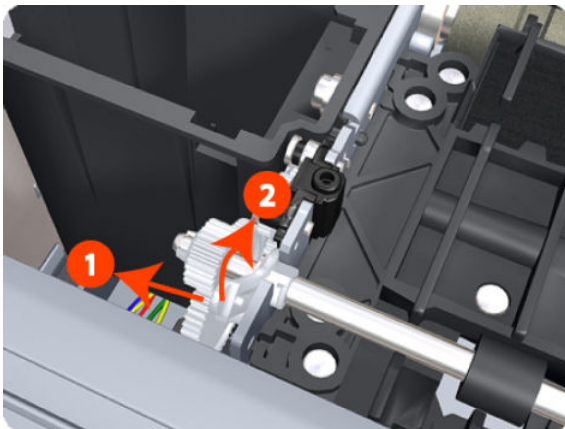
5. Remove the clamp.



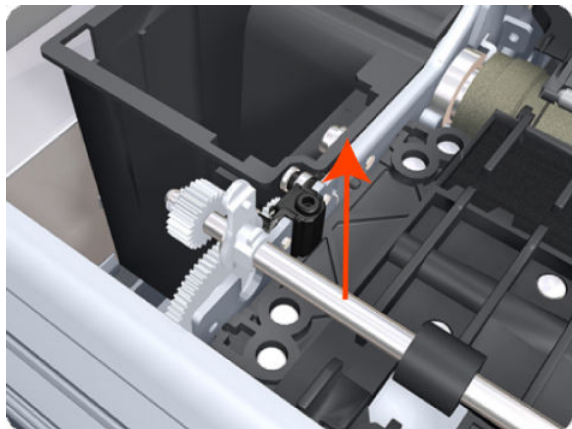
6. Repeat the three preceding steps to remove the remaining five attachment clamps.



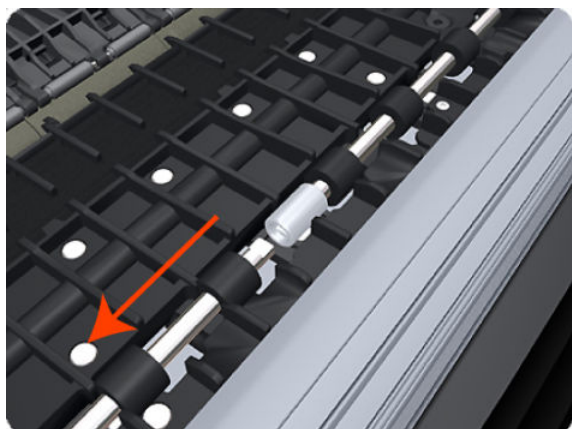
7. Use a flat-bladed screwdriver to unclip the left Print Zone Overdrive retaining clip and rotate the clip vertically.



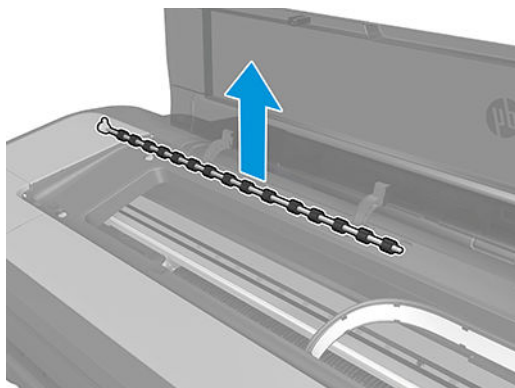
- Carefully lift the left Print Zone Overdrive enough (10 mm) so you can slide it to the left.



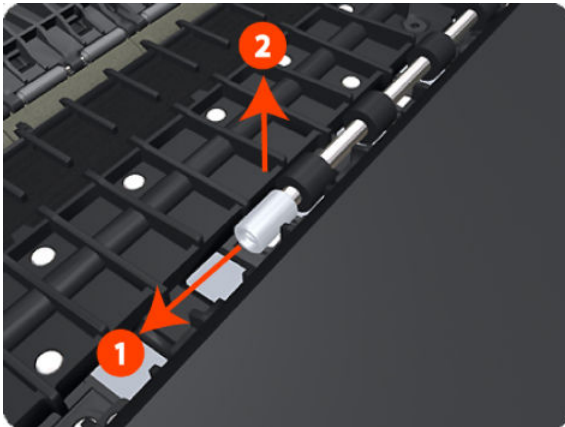
- Slide the left Print Zone Overdrive to the left disengage the center coupling.



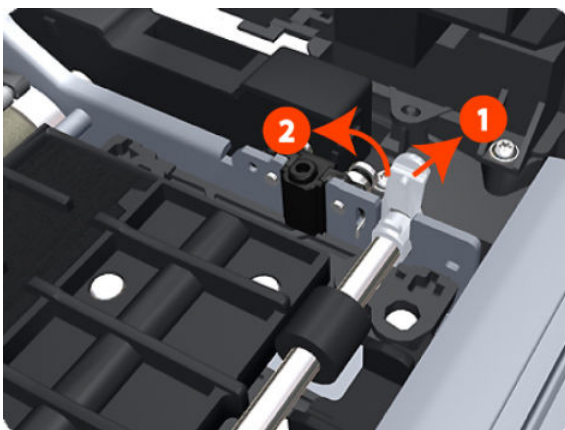
- Carefully lift the left Print Zone Overdrive out of the printer.



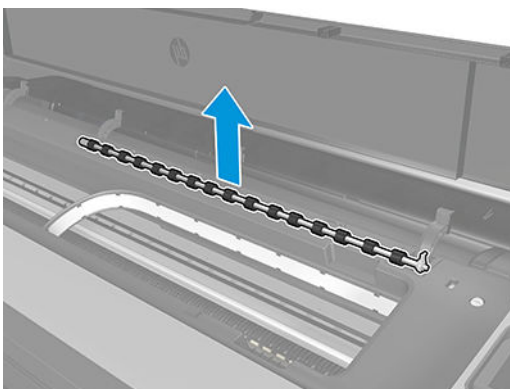
11. Remove the center coupling.




12. Use a flat-bladed screwdriver to unclip the left Print Zone Overdrive retaining clip and rotate the clip vertically.



13. Carefully lift the right Print Zone Overdrive out of the printer.

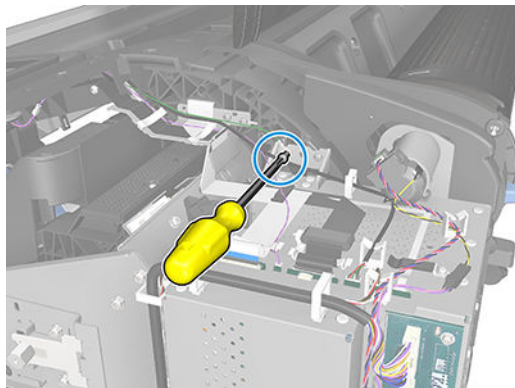


 **NOTE:** When you finish installing or replacing this component, you must perform the necessary Service Calibrations. To find which calibrations you must perform, see [Service Calibration Guide to Removal and Installation on page 260](#).

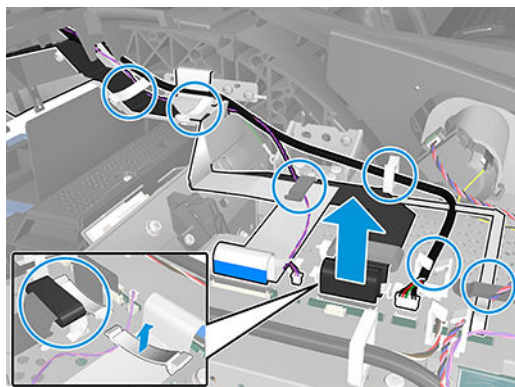
Power button

Removal

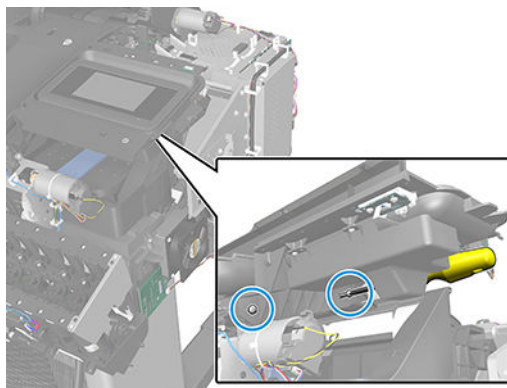
1. Switch off the printer and remove the power cable.
2. Remove the Right cover. See [Right cover on page 407](#).
3. Remove the screw as shown.



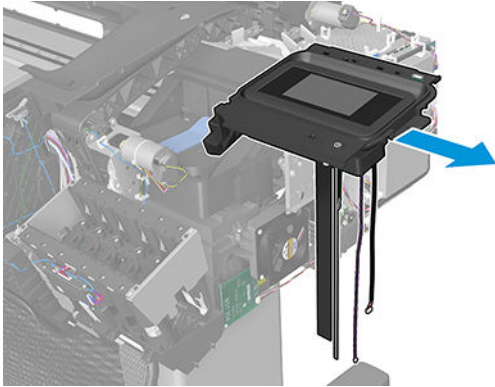
4. Disconnect the cables and unroute.



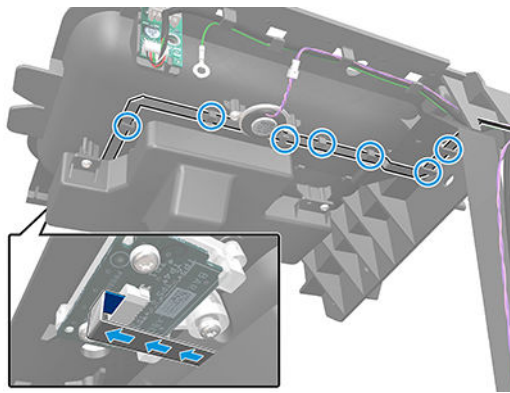
5. Remove the two screws as shown.



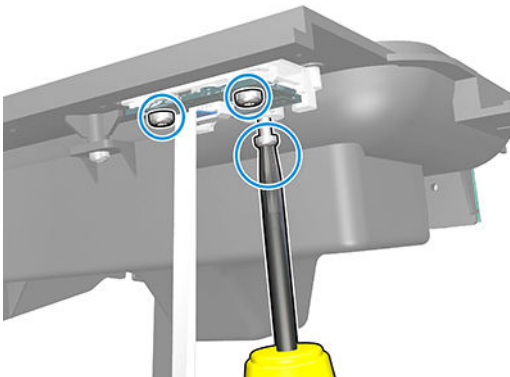
6. Remove the assembly as shown.



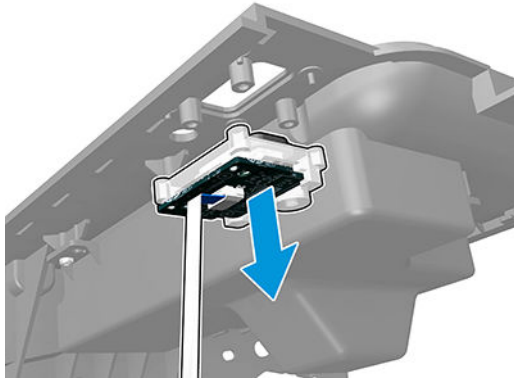
7. Unroute the cable.



8. Remove the 3 screws.



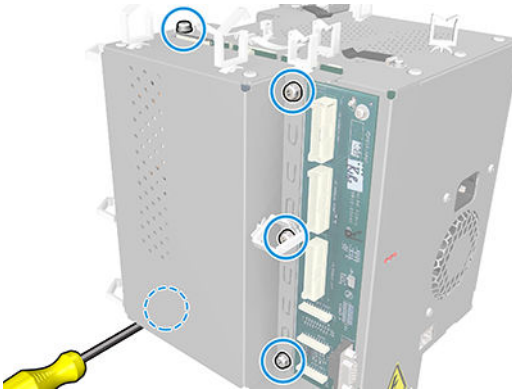
9. Remove the Power button assembly.



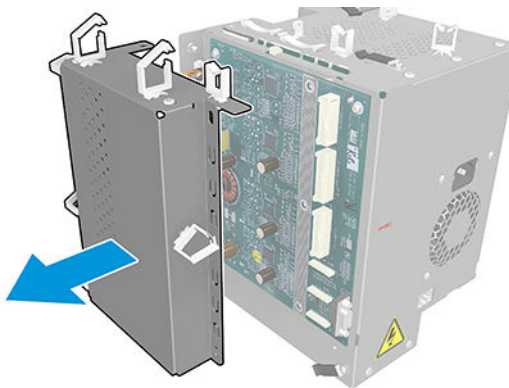
Power supply unit

Removal

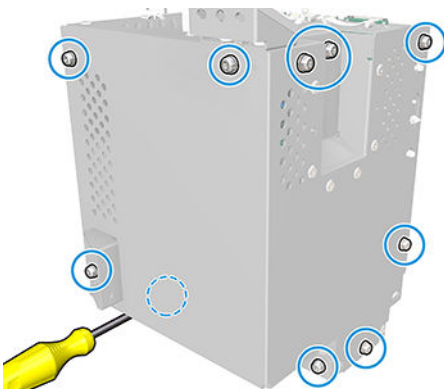
1. Switch off the printer and remove the power cable.
2. Remove the Right cover. See [Right cover on page 407](#).
3. Remove the E-box. See [E-box on page 316](#).
4. Remove 5 screws.



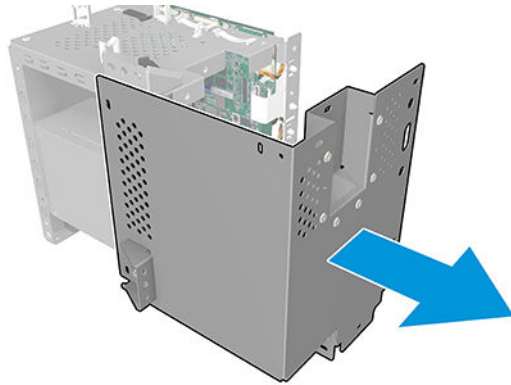
5. Remove the cover as shown.



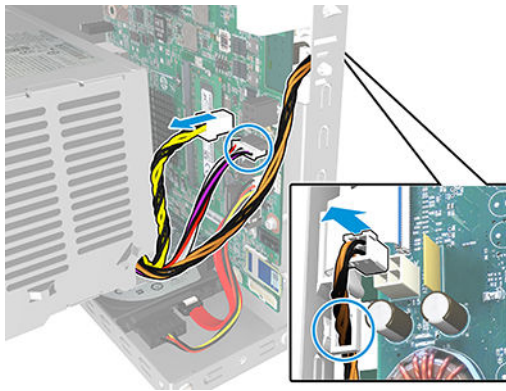
6. Remove 10 screws.



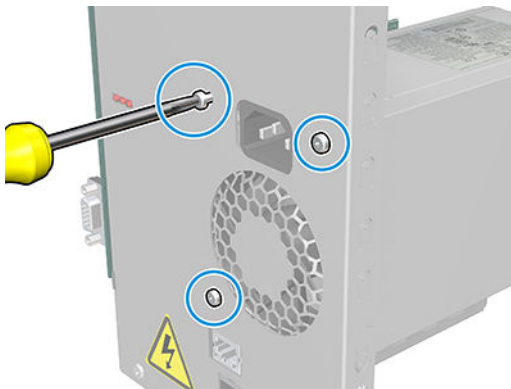
7. Remove the cover.



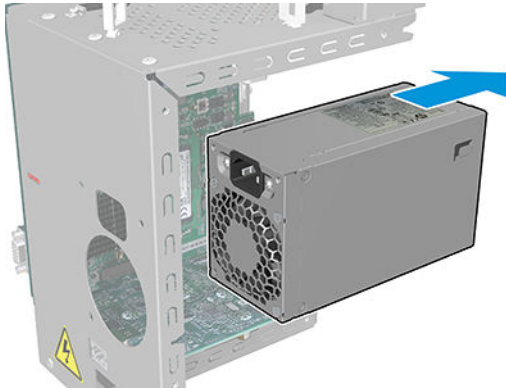
8. Disconnect and unroute the cable as shown.



9. Remove 3 screws.



10. Remove the Power supply unit.

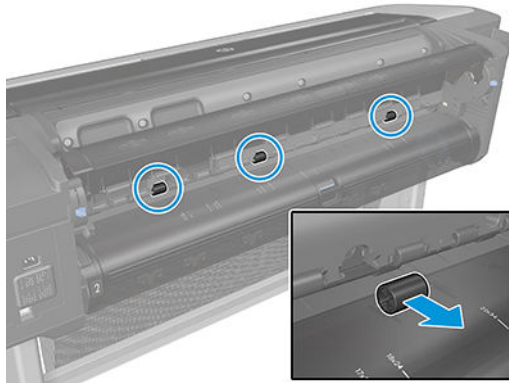


11. Remove the CryptoAsic PCA. See [CryptoAsic PCA on page 313](#).
12. Remove the Formatter PCA. See [Formatter PCA on page 325](#).

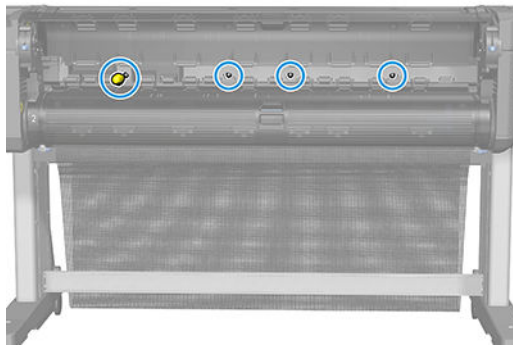
Rear cover

Removal

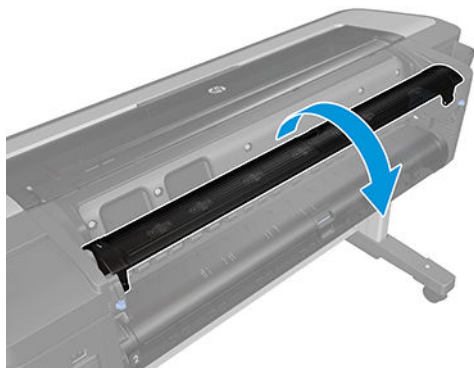
1. Remove the converger. See [Converger on page 311](#).
2. Remove the 4 rear cover freewheels.



3. Unscrew the 4 bottom cosmetic screws.

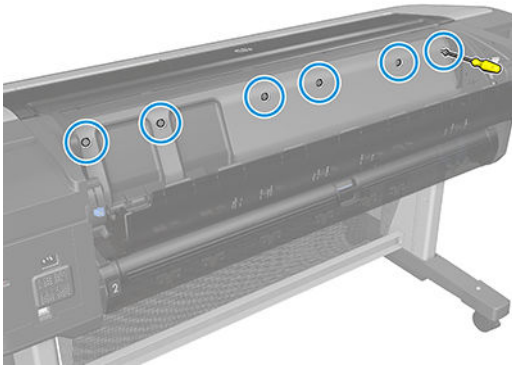


4. Open the upper roll cover.

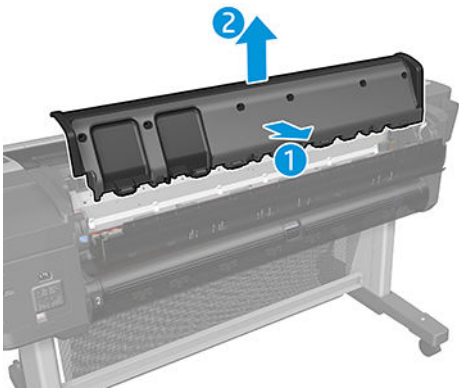


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5. Unscrew the 6 top cosmetic screws.



6. Remove the back cover.



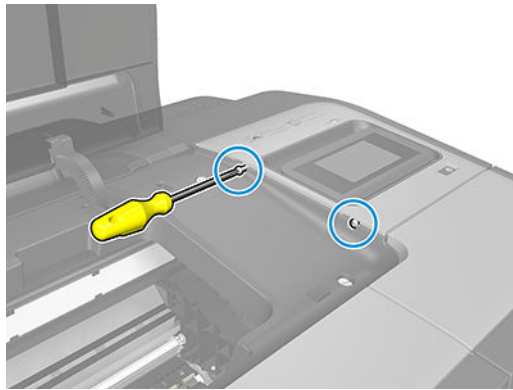
Right cover

Removal

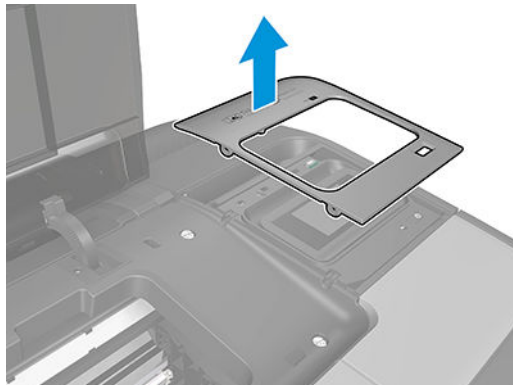
1. Remove the Front cover. See [Front cover on page 330](#).
2. Open the window.



3. Unscrew 2 screws.

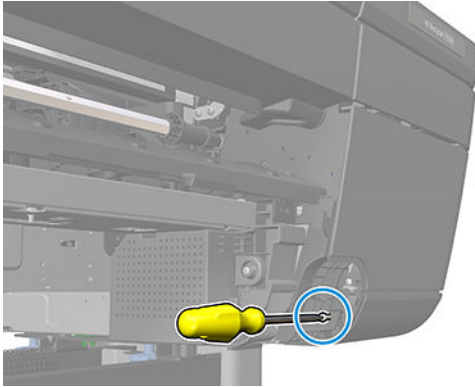


4. Remove the right trim cover.

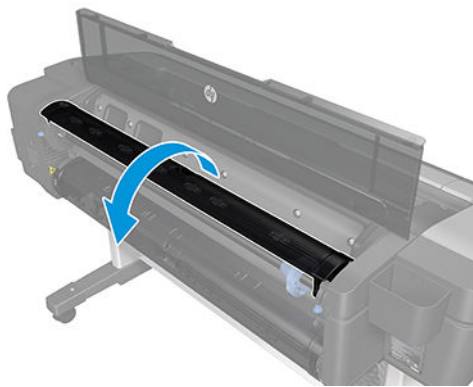


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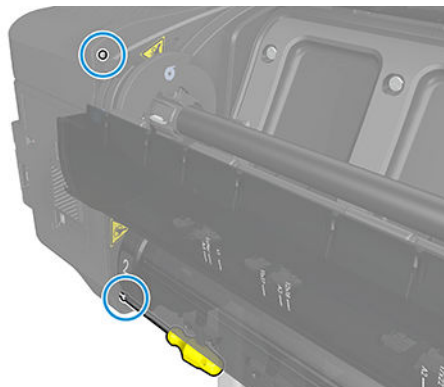
5. Unscrew the bottom front screw.



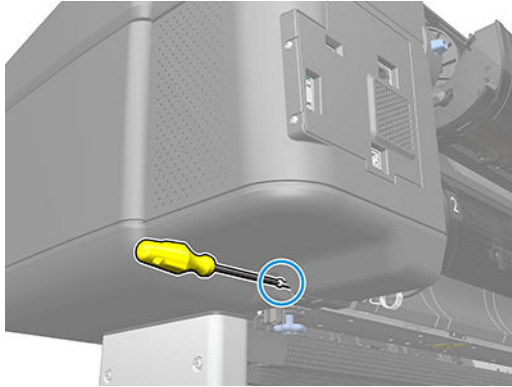
6. Open the Roll cover.



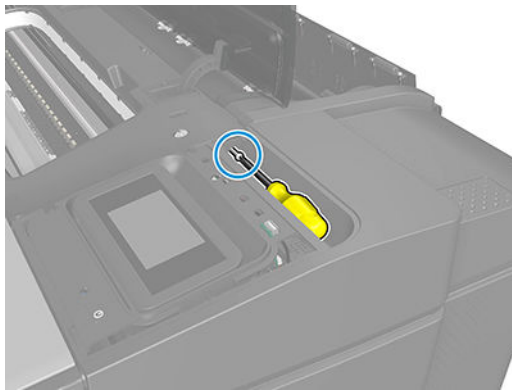
7. Unscrew 2 screws.



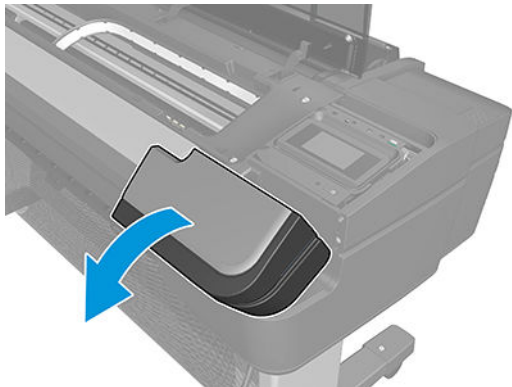
8. Unscrew the bottom screw.



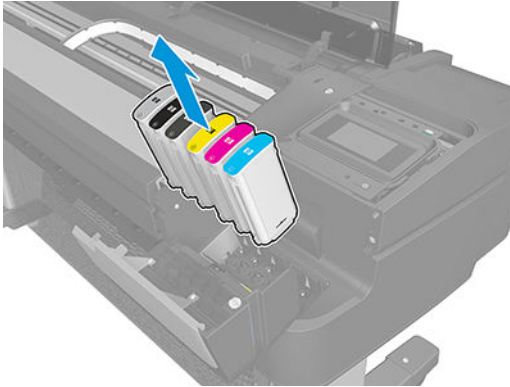
9. Unscrew the panel screw.



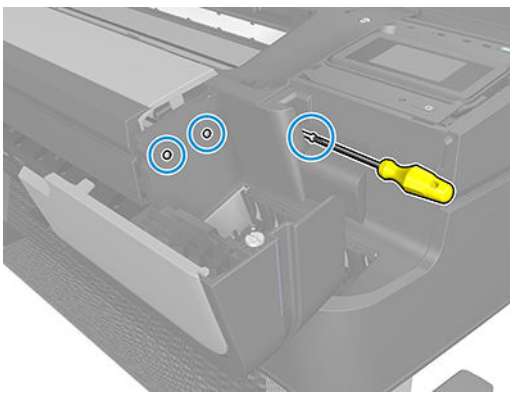
10. Open the ink cover.



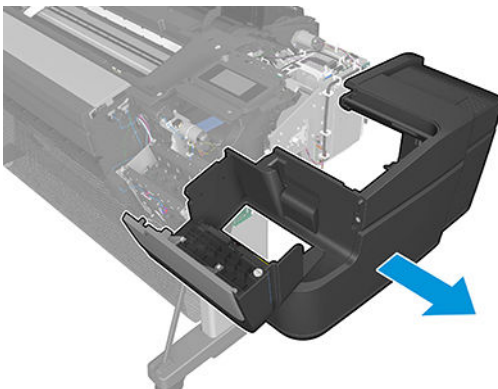
11. Remove the cartridges.



12. Unscrew 3 screws.



13. Remove the Right cover.

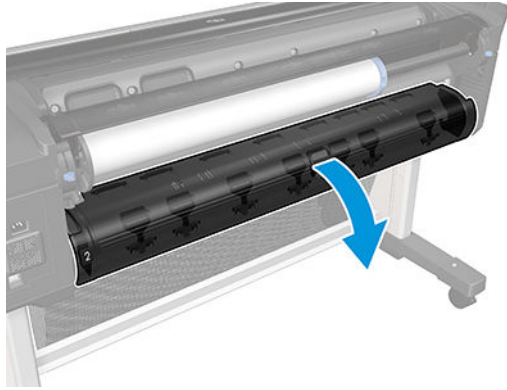


14. Remove the Right ink cartridge door. See [Ink cartridge door, Right on page 344](#).

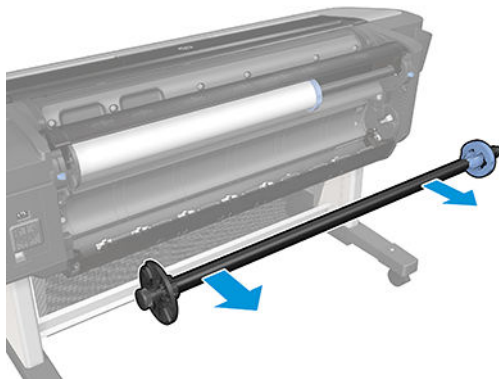
Roll cover, Lower

Removal

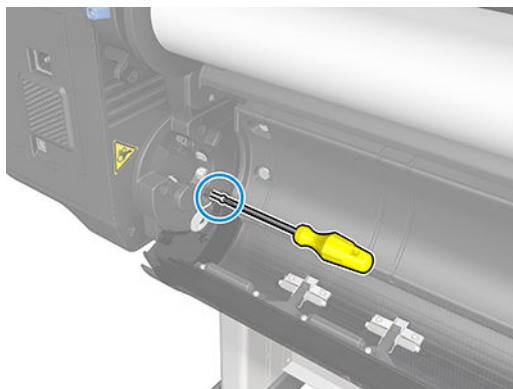
1. Open the lower roll cover.



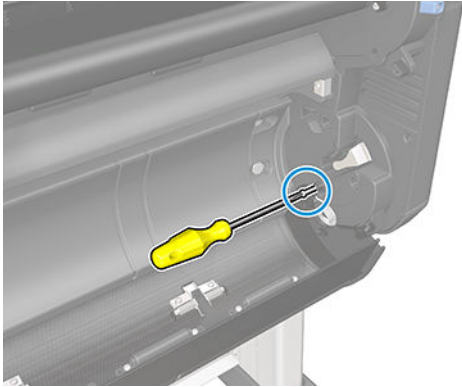
2. Remove the spindle.



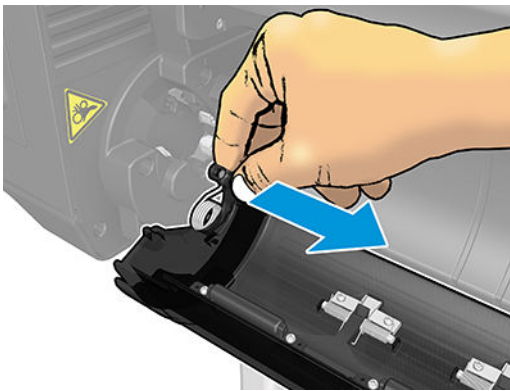
3. Remove the screw connecting the roll cover to the printer on the left.



4. Remove the screw connecting the roll cover to the printer on the right.



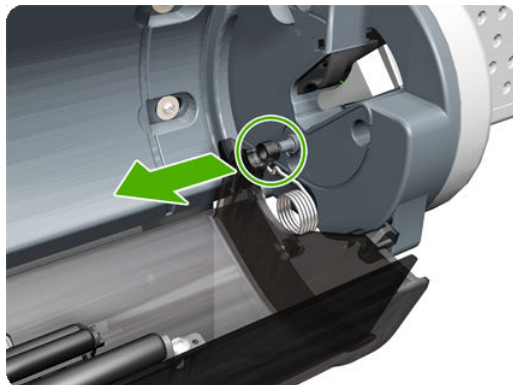
5. Detach the roll cover from the printer on the left-hand side.



6. Leave the roll cover hanging from the bi-stable spring.



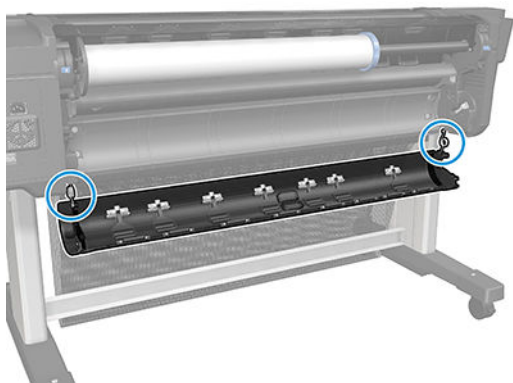
7. Detach the roll cover from the printer on the right-hand side.



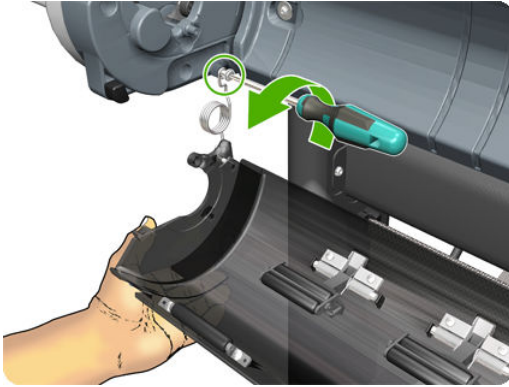
8. Leave the roll cover hanging from the bi-stable spring.



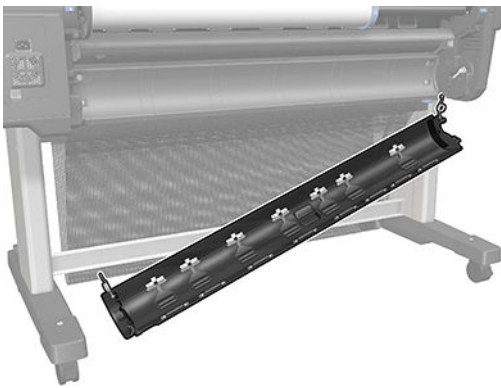
9. Both ends of the roll cover are now connected to the printer only by the bi-stable springs.



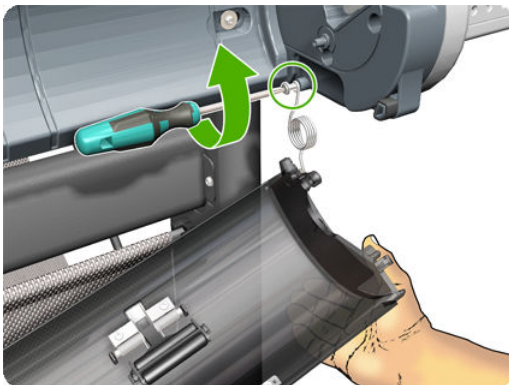
10. Hold the roll cover with one hand while unscrewing the bi-stable spring from the printer.



11. Leave one end of the roll cover resting on the floor.



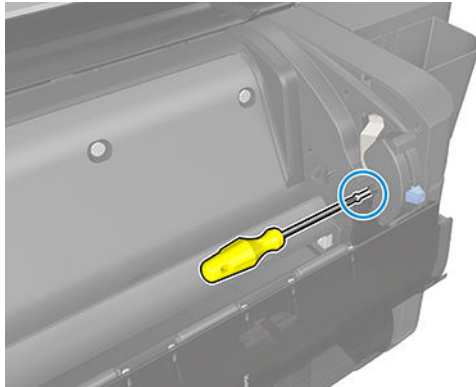
12. Hold the roll cover with one hand while unscrewing the other bi-stable spring from the printer.



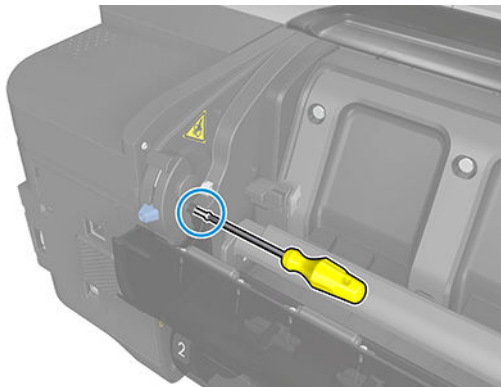
Roll cover, Upper

Removal

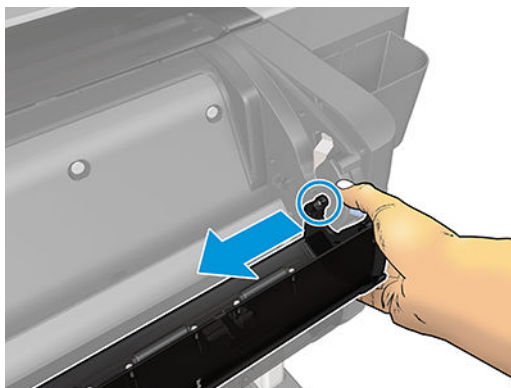
1. Remove the spindle. See [Spindle on page 446](#).
2. Open the Upper Roll Cover.
3. Remove the screw on the Roll Cover's left side that attaches to the Upper Left Roll Support.



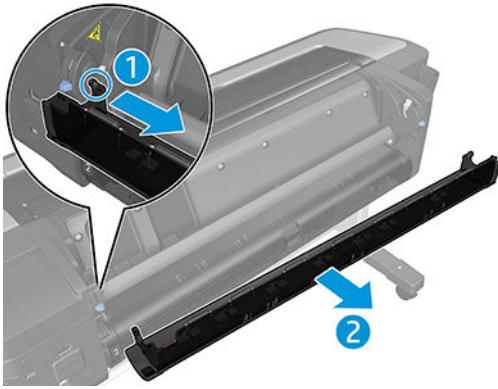
4. Remove the screw on the Roll Cover's right side that attaches to the Upper Right Roll Support.



5. Remove the Roll Cover hinge from the Roll Left Support Pin.



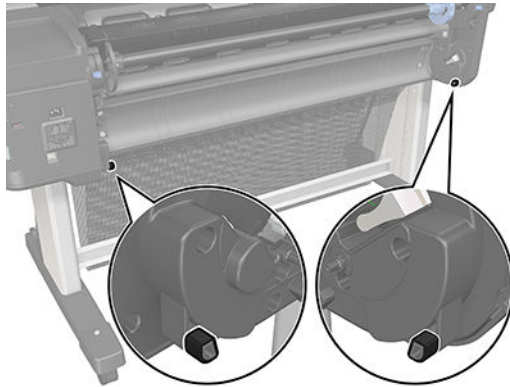
6. Remove the Roll Cover hinge from the Roll Right Support Pin.



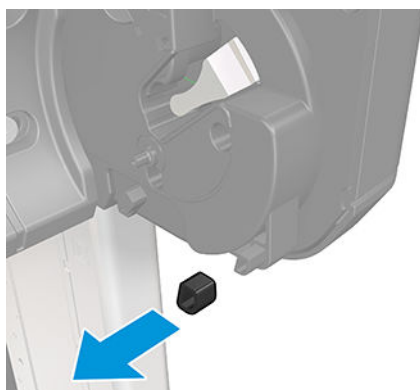
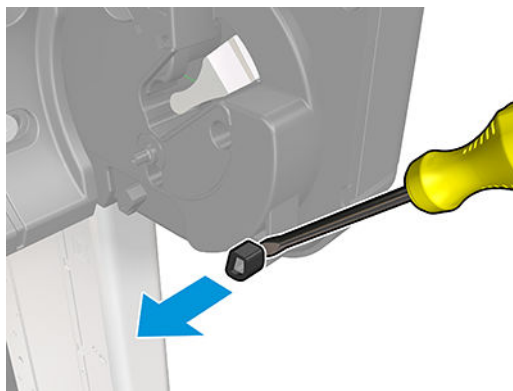
Roll cover lower bumpers

Removal and installation

1. Remove the lower roll cover.
2. Identify the bumpers at the rear of the printer.

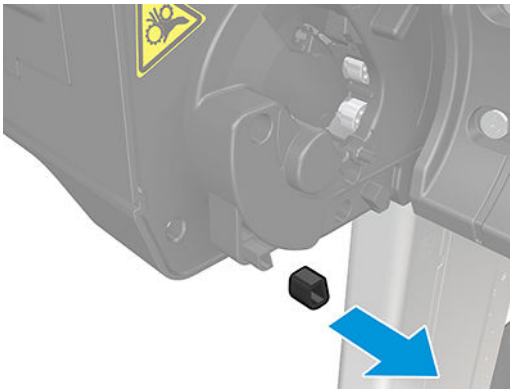
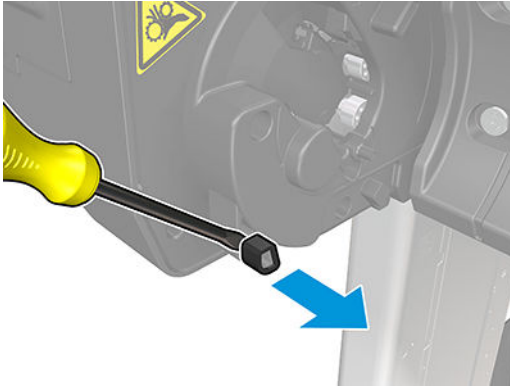


3. Use a screwdriver to lever off the bumper.

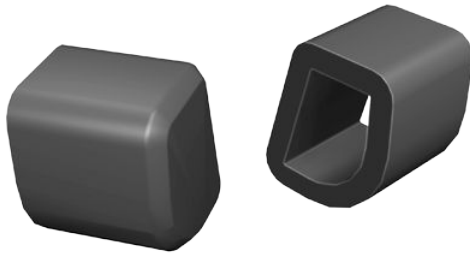


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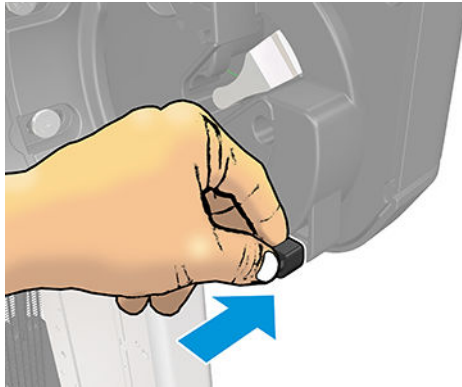
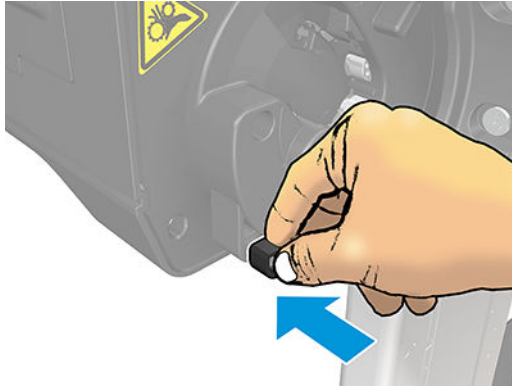
4. Remove the other bumper in the same way.



5. Locate the new bumpers.



6. Fit the new bumpers into place.

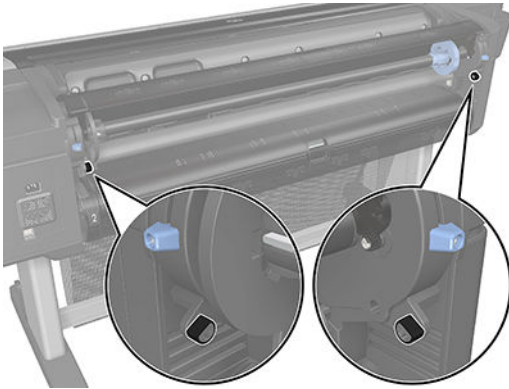


7. Place back the lower roll cover.

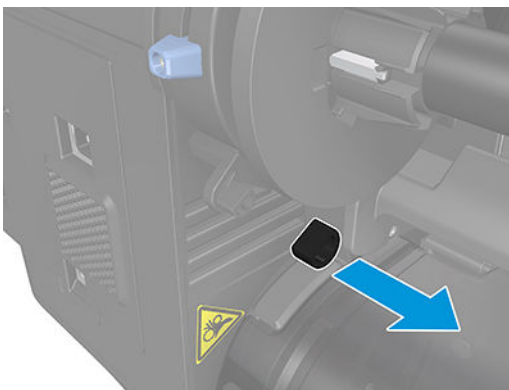
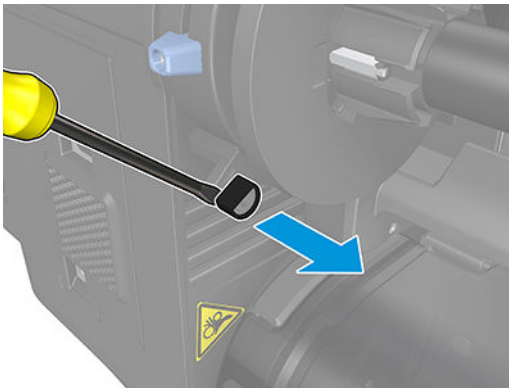
Roll cover upper bumpers

Removal

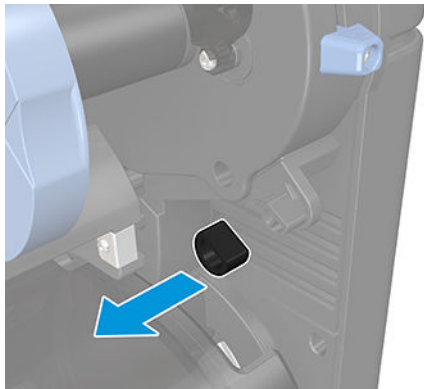
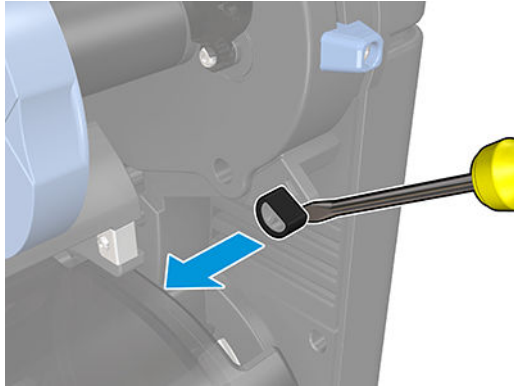
1. Switch off the product and remove the power cable.
2. Identify the bumpers at the rear of the printer.



3. Use a screwdriver to lever off the bumper.



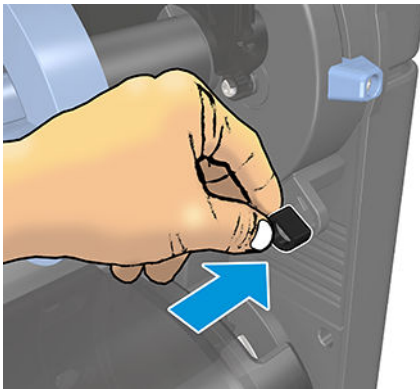
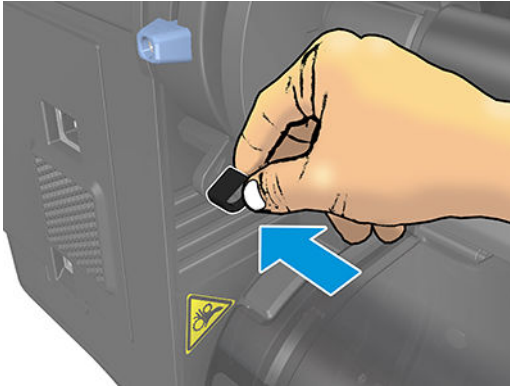
4. Remove the other bumper in the same way.



5. Locate the new bumpers.



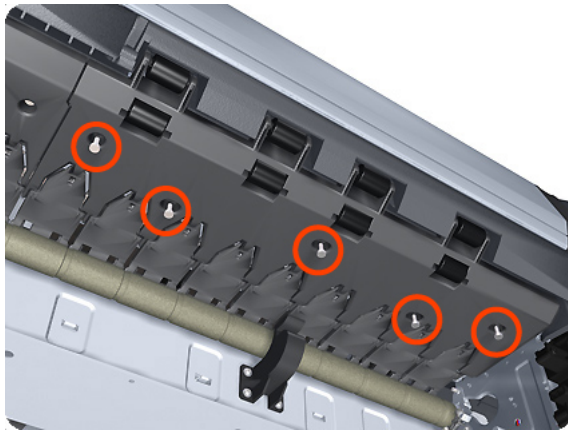
6. Fit the new bumpers into place.



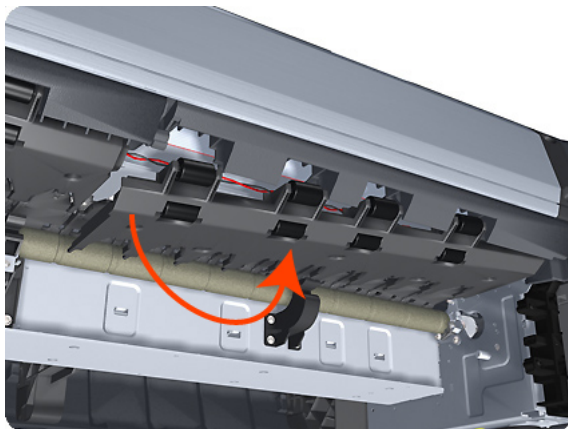
Left roll guide


Removal

1. Switch off the printer and remove the power cable.
2. Remove the [Spindle on page 446](#).
3. Remove the [Roll cover, Lower on page 411](#).
4. Remove the [Converger on page 311](#).
5. Remove the [Cleanout on page 308](#).
6. Remove five T-20 screws that secure the Left Roll Guide to the printer.



7. Lower the left end and remove the Left Roll Guide from the printer.

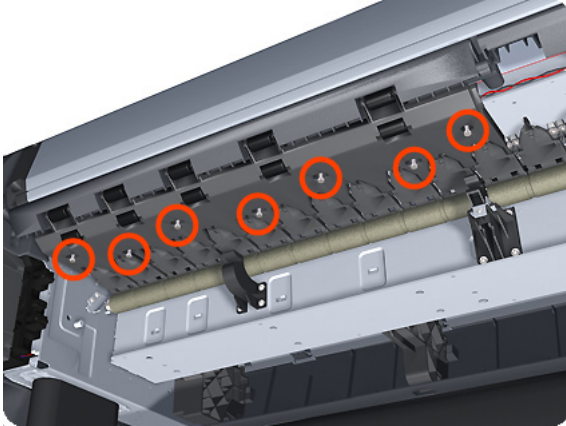


 **NOTE:** When you finish installing or replacing this component, you must perform the necessary Service Calibrations. To find which calibrations you must perform, see [Service Calibration Guide to Removal and Installation on page 260](#).

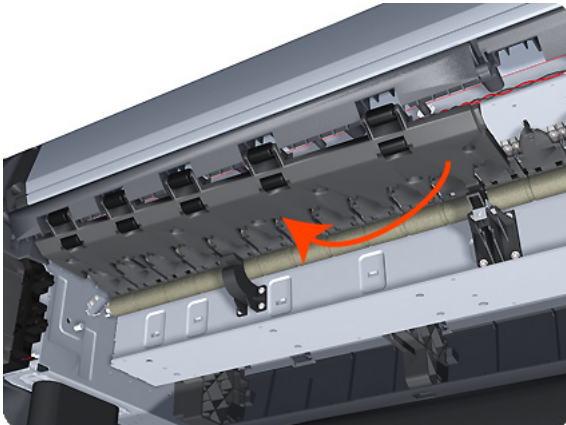
Right roll guide


Removal

1. Switch off the printer and remove the power cable.
2. Remove the [Left roll guide on page 423](#).
3. Remove seven T-20 screws that secure the Right Roll Guide to the printer.



4. Lower the right end and remove the Right Roll Guide from the printer.

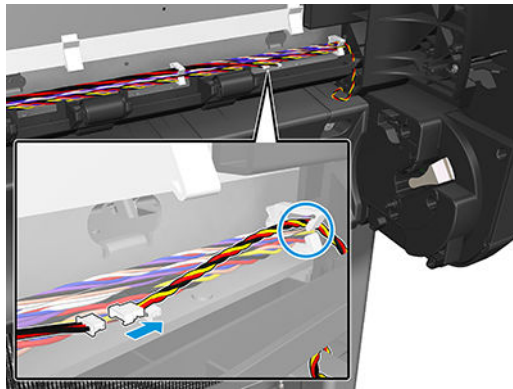


 **NOTE:** When you finish installing or replacing this component, you must perform the necessary Service Calibrations. To find which calibrations you must perform, see [Service Calibration Guide to Removal and Installation on page 260](#).

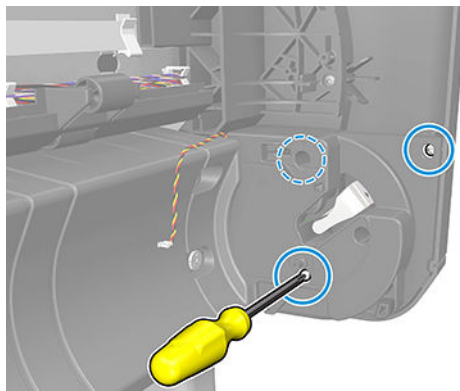
Roll support, Lower left

Removal

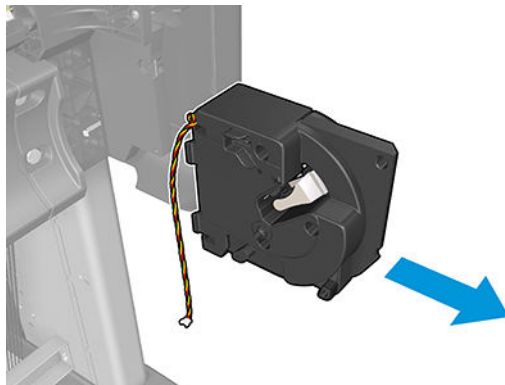
1. Remove the [Converger on page 311](#).
2. Remove the [Roll cover, Lower on page 411](#).
3. Remove the [Rear cover on page 405](#).
4. Remove the [Roll support, Upper left on page 428](#).
5. Disconnect the cable connector as shown.



6. Remove screws as shown.



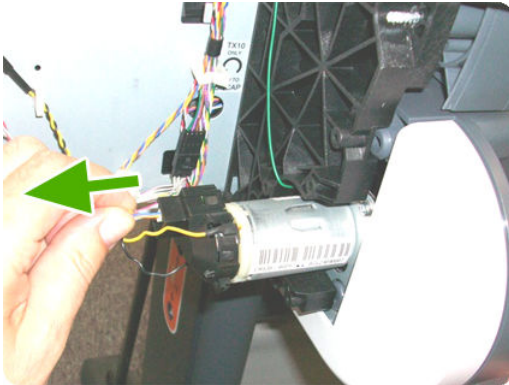
7. Remove the Lower Left Roll Support, taking care not to damage the cables.



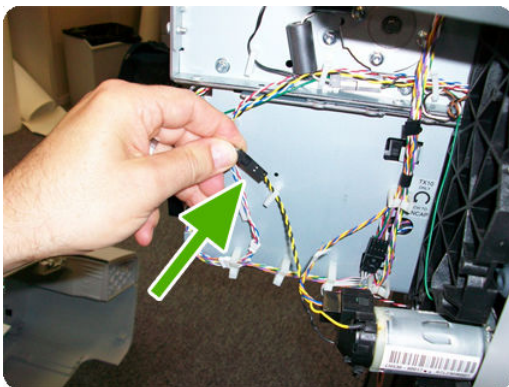
Roll support, Lower right

Removal

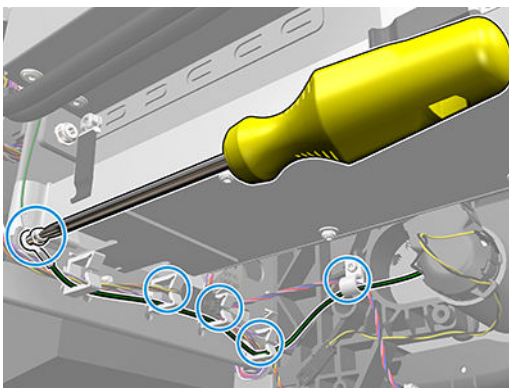
1. Remove the [Right cover on page 407](#).
2. Remove the [Roll cover, Lower on page 411](#).
3. Unplug the motor encoder cable.



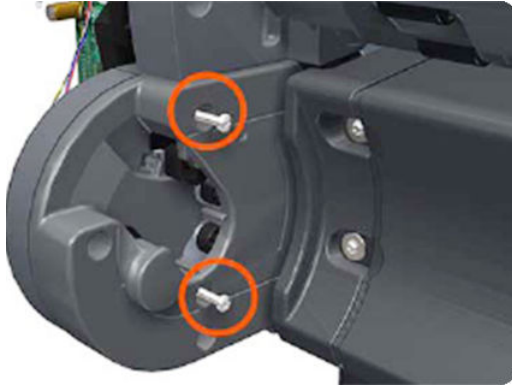
4. Unplug the motor cable.



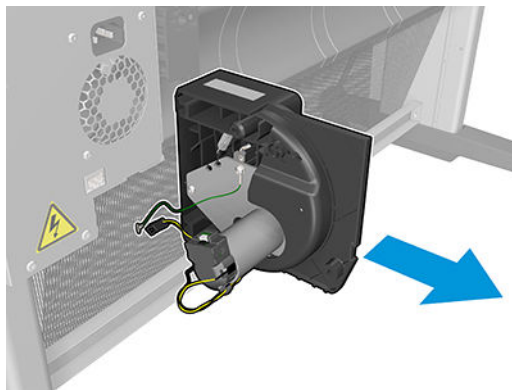
5. Remove the T-15 screw of the grounding cable and unroute the cable.



6. Remove two T-15 screws as shown.



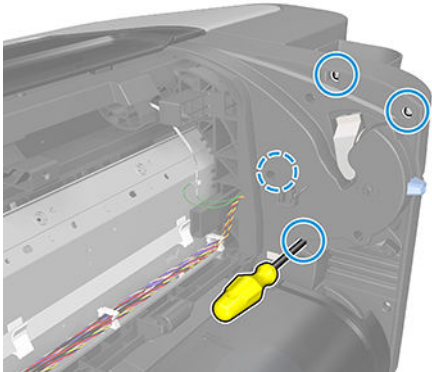
7. Remove the Lower Right Roll Support.



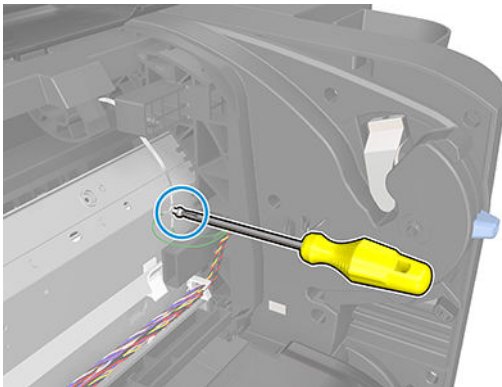
Roll support, Upper left

Removal

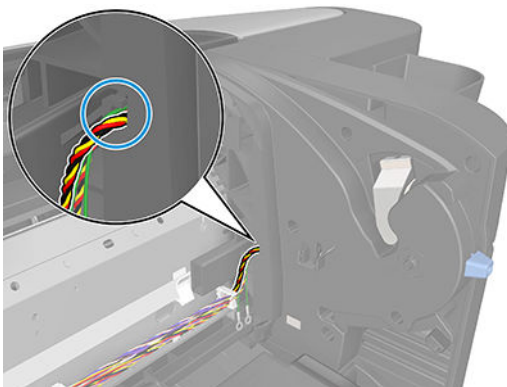
1. Remove the [Roll cover, Upper](#) on page 415.
2. Remove the [Converger](#) on page 311.
3. Remove the [Rear cover](#) on page 405.
4. Remove the four T-15 screws as shown.



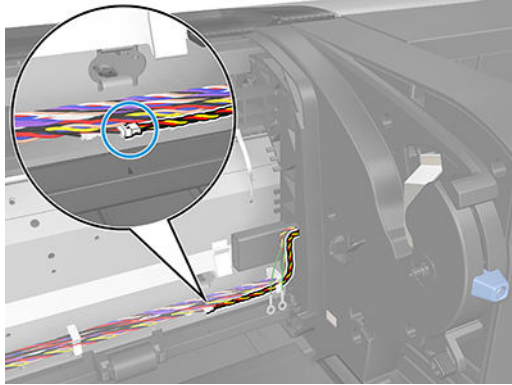
5. Remove the T-20 screw as shown.



6. Unplug the Upper Left Roll Support, taking care not to damage the cables. Detach all cables from the Roll Support.



7. Disconnect the cable connector as shown.



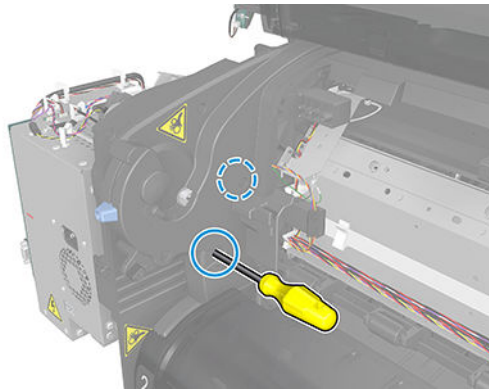
8. Remove the Upper Left Roll Support.



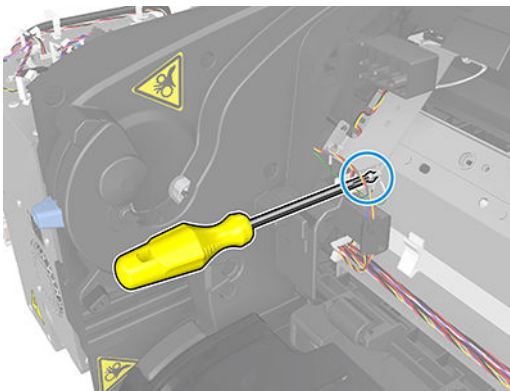
Roll support, Upper right

Removal

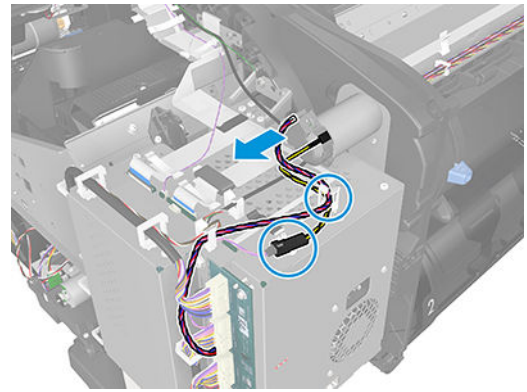
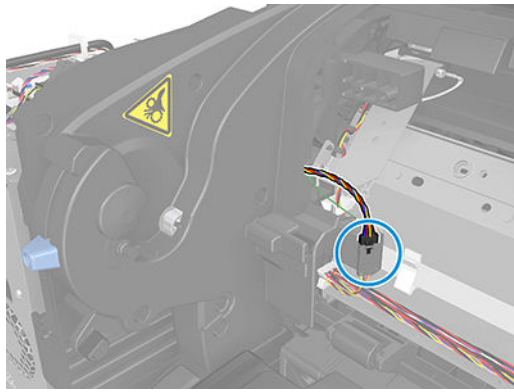
1. Remove the [Converger on page 311](#).
2. Remove the [Roll cover, Upper on page 415](#).
3. Remove the [Rear cover on page 405](#).
4. Remove the [Right cover on page 407](#).
5. Remove two T-15 screws.



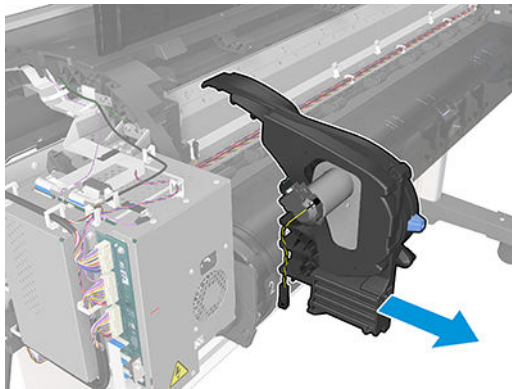
6. Remove one T-20 screws.



7. Disconnect three connectors.



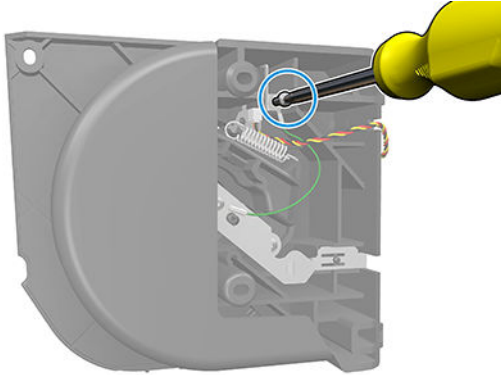
8. Remove the Upper Right Roll Support.



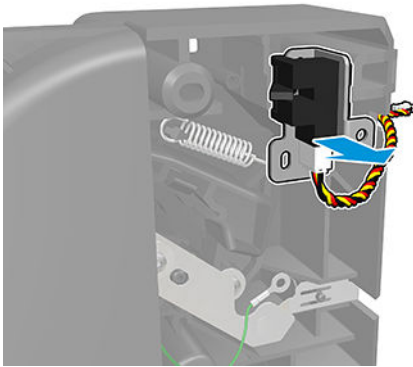
Roll support sensor, Lower left

Removal

1. Remove the [Roll support, Lower left on page 425](#).
2. Unscrew the screw as shown.



3. Remove the cable.



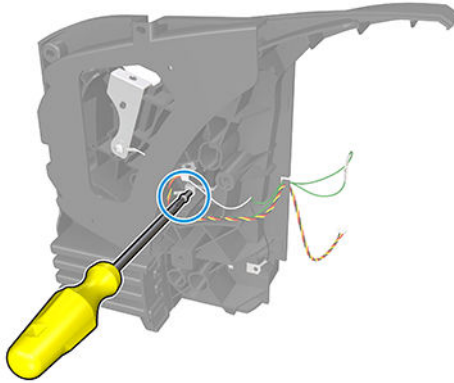
4. The sensor has been removed.



Roll support sensor, Upper left

Removal

1. Remove the [Roll support, Upper left on page 428](#).
2. Unscrew the screw as shown.



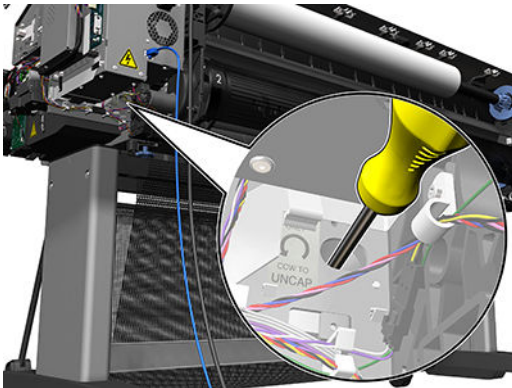
3. Remove the sensor.



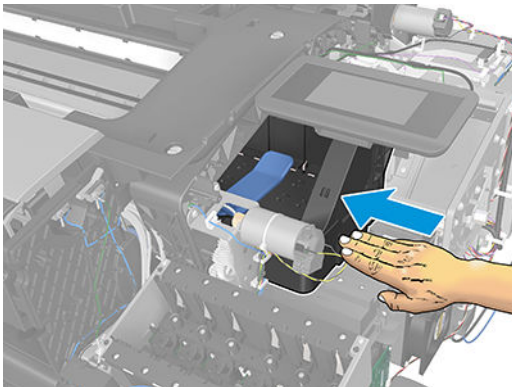
Scan-axis motor

Removal

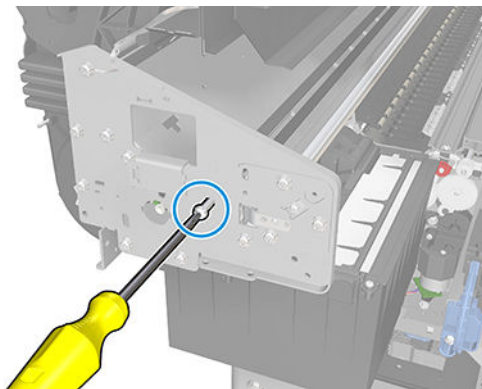
1. Switch off the printer and remove the power cable.
2. Remove the [Right cover on page 407](#).
3. Remove the [Left cover on page 359](#).
4. Loosen the T-10 uncapping screw sufficiently so you can move the Carriage Assembly manually.



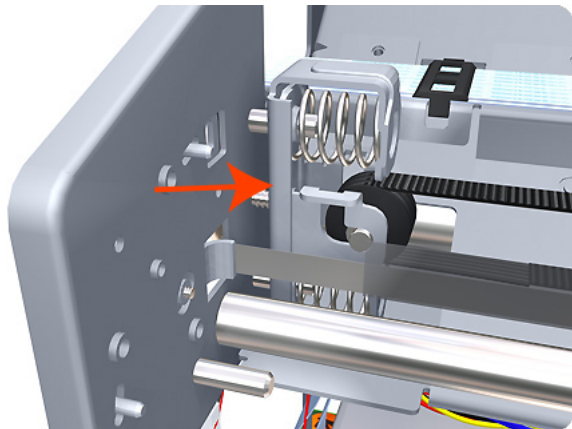
5. Push the Carriage Assembly into the print path.



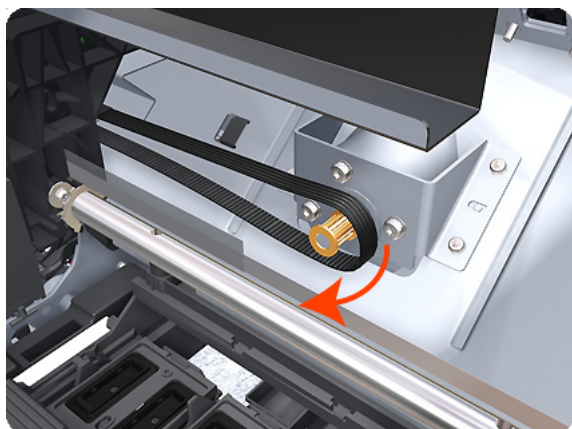
6. Loosen the T-20 screw Belt Tensioner to the printer to remove the tension from the belt.



7. Leave the Belt Tensioner in place.



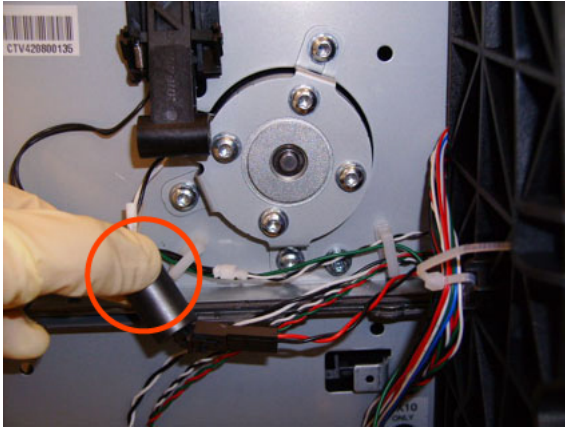
8. Remove the Belt Assembly from the drive wheel of the Scan-Axis Motor.



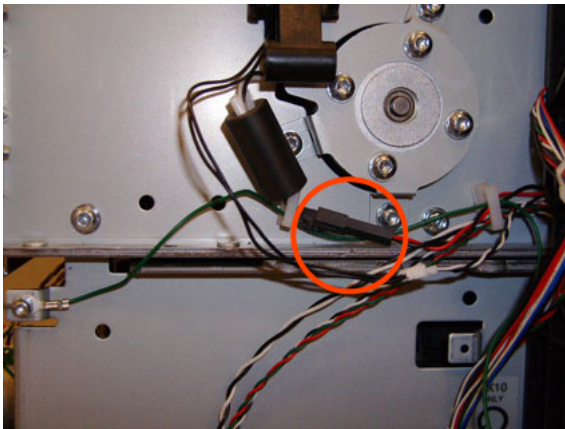
9. Remove three T-20 screws that secure the Scan-Axis Motor to the printer.



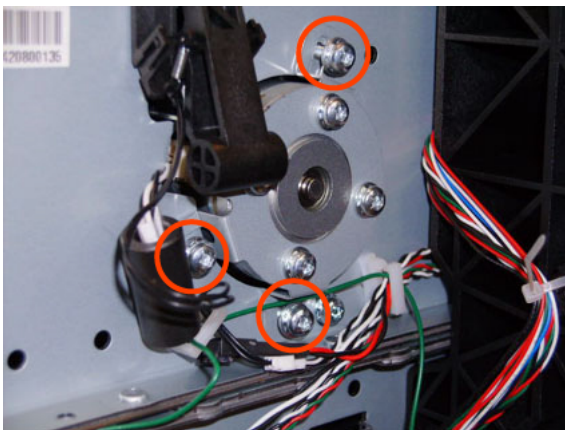
10. Unroute the Scan-Axis Motor supply cable from the cable clamp.



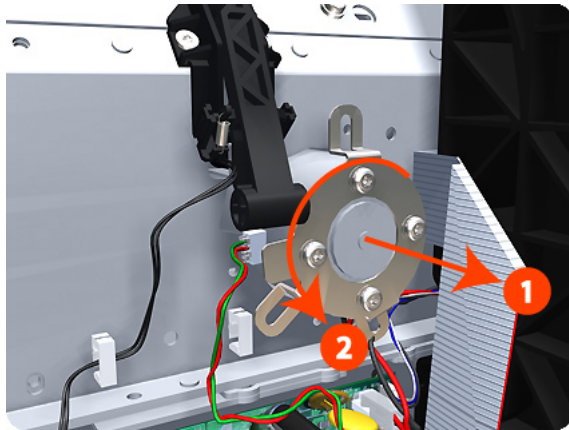
11. Disconnect the Scan-Axis Motor supply connector from the L1 Harness.



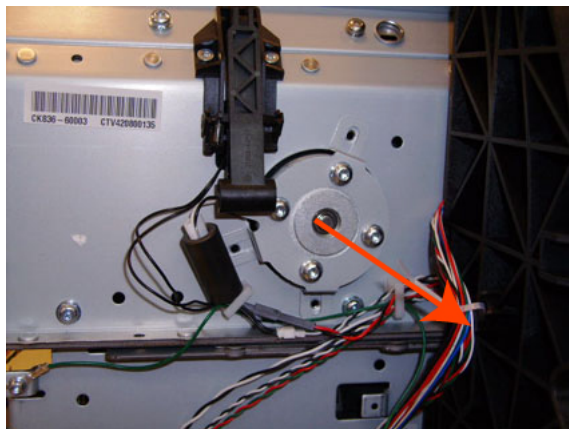
12. Remove three T-20 screws that secure the Scan-Axis Motor to the printer.




- Carefully pull the Scan-Axis Motor out of the printer (10 mm) until you can rotate it approximately 30 degrees counterclockwise.



- Remove the Scan-Axis Motor from the printer.

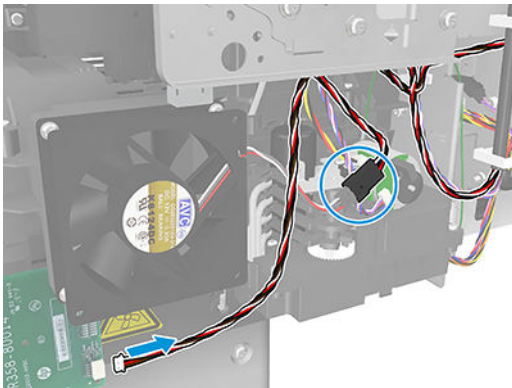


 **NOTE:** When you finish installing or replacing this component, you must perform the necessary Service Calibrations. To find which calibrations you must perform, see [Service Calibration Guide to Removal and Installation on page 260](#).

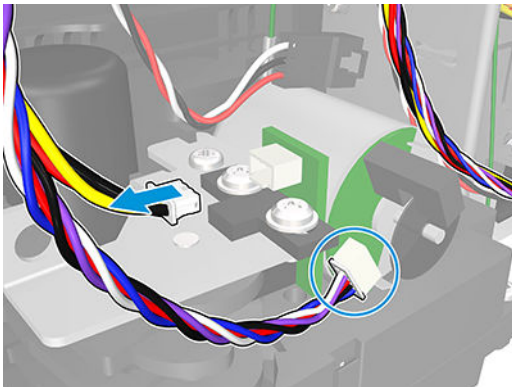
Service station

Removal

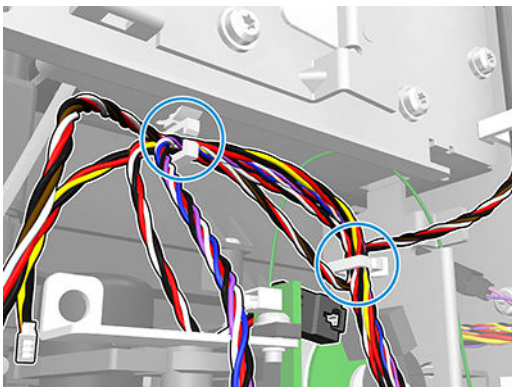
1. Switch off the printer and remove the power cable.
2. Remove the Front cover. See [Front cover on page 330](#).
3. Remove the Right cover. See [Right cover on page 407](#).
4. Disconnect the two lower connectors.



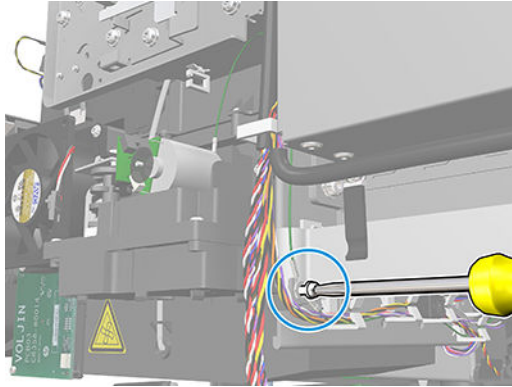
5. Disconnect the two connector from the Primer motor and Primer sensor.



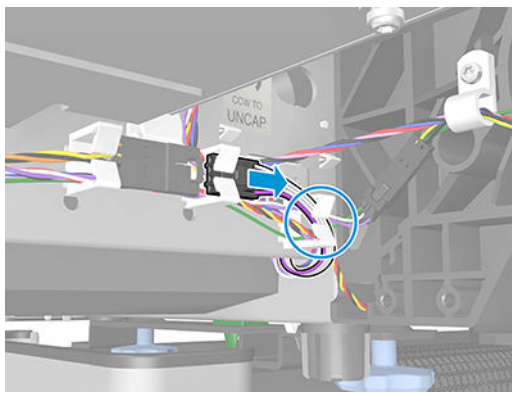
6. Unroute the cables disconnected in the previous two steps from the two cable clamps.



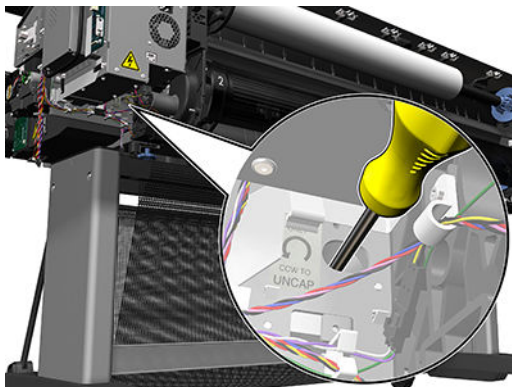
7. Remove the grounding cable attachment T-10 screw from the metal sideplate.



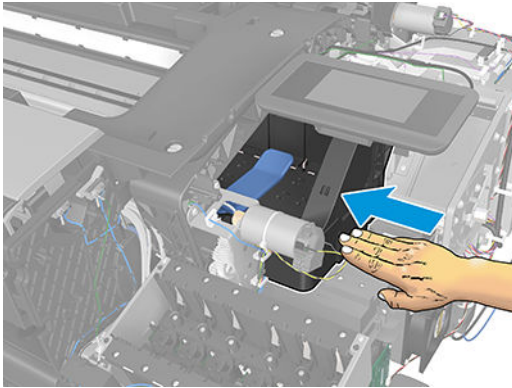
8. Disconnect the lower connectors.



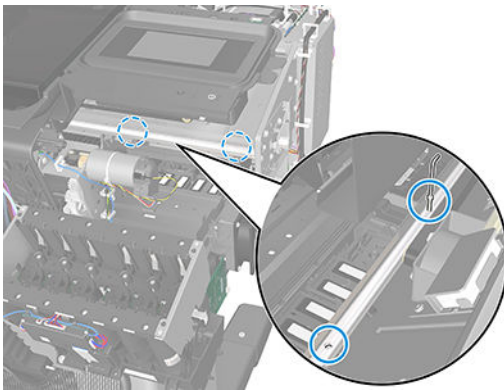
9. Loosen the T-10 uncapping screw enough to move the Carriage assembly manually.



10. Push the Carriage assembly into the print path to gain access to two T-10 screws that secure the Service station to the Carriage rail.



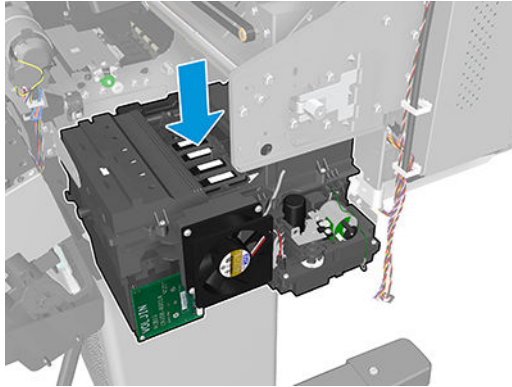
11. Remove the two Allen T-8 screws that secure the Service station to the Carriage rail. To avoid damaging the Encoder strip, you can use a standard screwdriver.



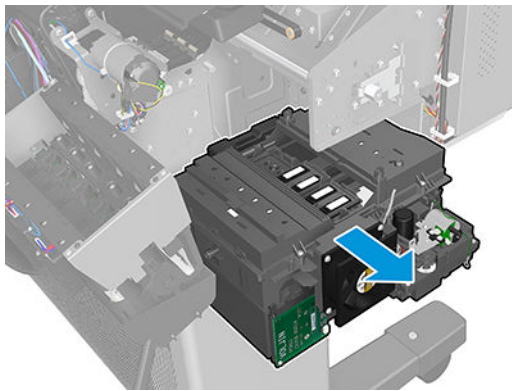
12. Unclip the clip to release the Service station from the printer.



13. Lower the Service station until you can slide it carefully from the printer.



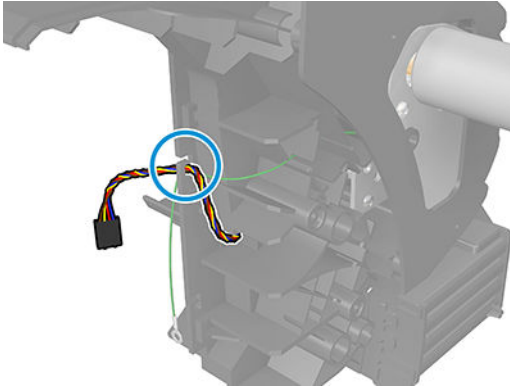
14. Carefully slide the Service station from the printer.



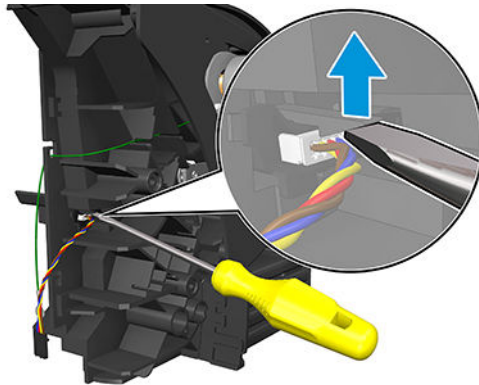
Single-sheet sensor

Removal

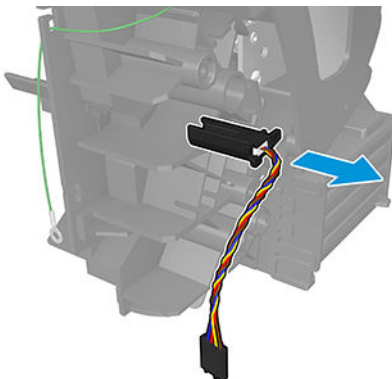
1. Remove the [Roll support, Upper right on page 430](#).
2. Disengage the cable.



3. Push down the clip that holds the Single Sheet sensor (you can use a screwdriver).



4. Pull out the sensor.



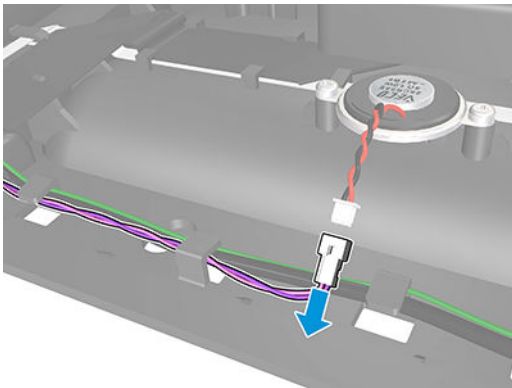
5. The sensor has been removed.



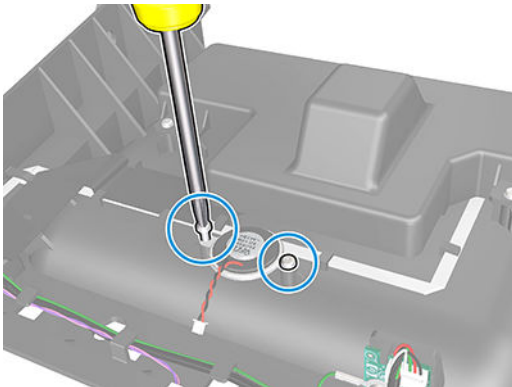
Speaker and USB host

Speaker – Removal

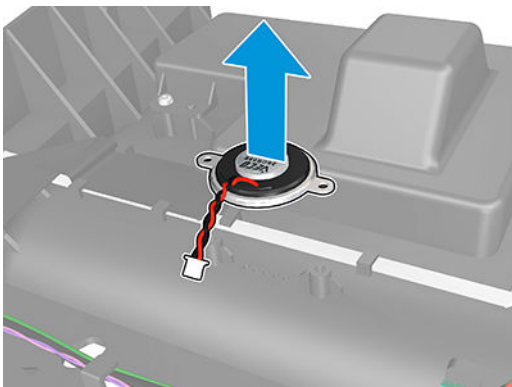
1. Switch off the printer and remove the power cable.
2. Remove the Right cover. See [Right cover on page 407](#).
3. Remove the Touch control panel. See [Touch control panel on page 468](#).
4. Disconnect the cable.



5. Remove two screws.

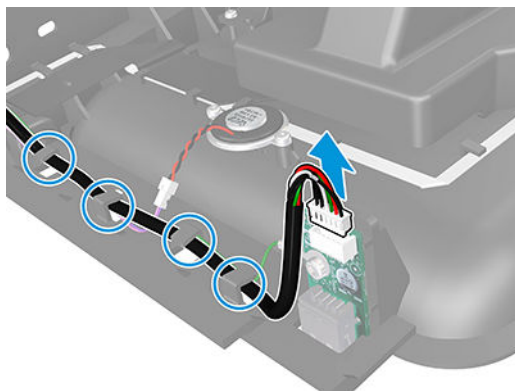


6. Remove the Speaker.

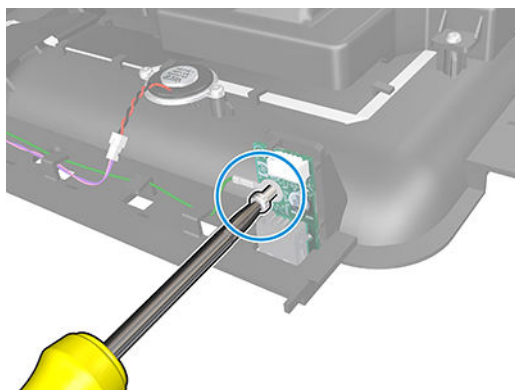


USB host – Removal

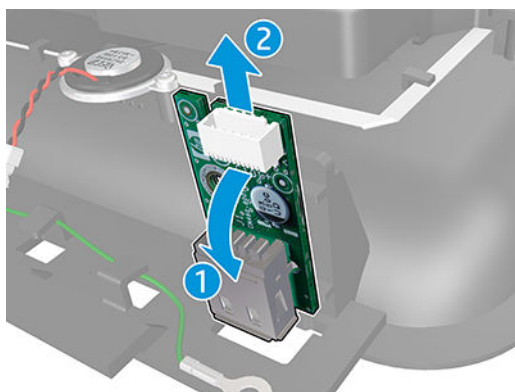
1. Switch off the printer and remove the power cable.
2. Remove the Right cover. See [Right cover on page 407](#).
3. Remove the Touch control panel. See [Touch control panel on page 468](#).
4. Disconnect and unroute the cable.



5. Remove the screw.



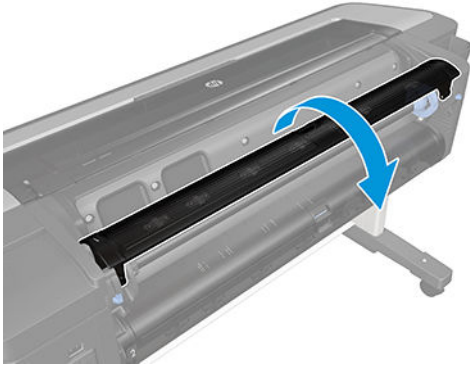
6. Remove the USB host.



Spindle

Removal

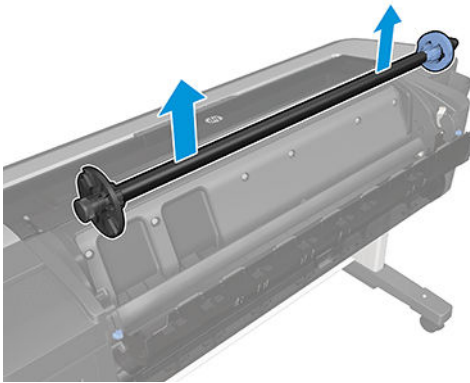
1. Open the upper roll cover.



2. Remove the spindle.

⚠ CAUTION: Be sure to remove the black end first. Removing the blue end first could damage the black end.

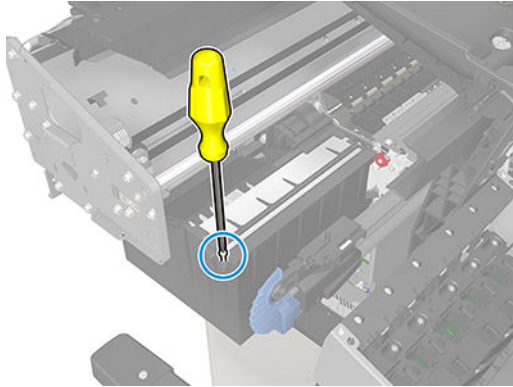
CAUTION: Do not insert your fingers into the spindle supports during the removal process.



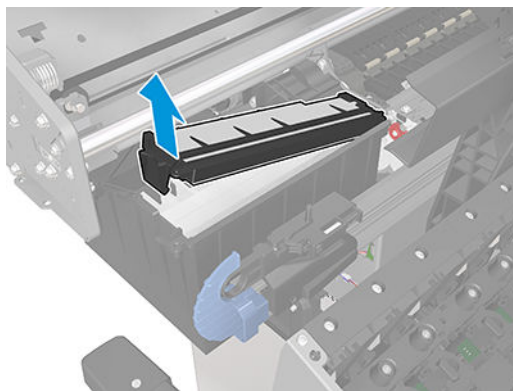
Spittoon, Left

Removal

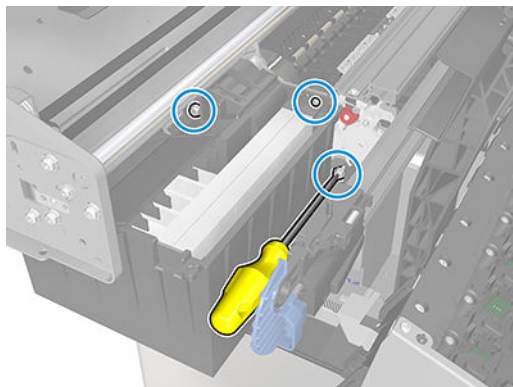
1. Remove the Left cover. See [Left cover on page 359](#).
2. Unscrew the Left spittoon foam retainer screw.



3. Remove the Left spittoon foam retainer.

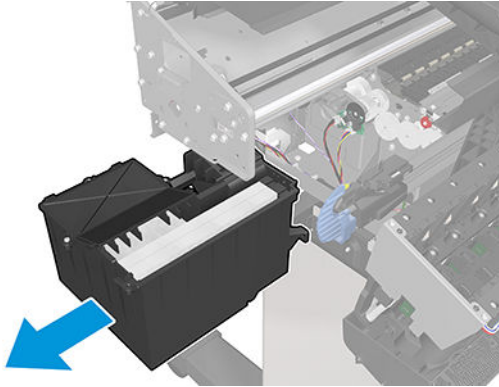


4. Unscrew three screws.



For HP authorized personnel only

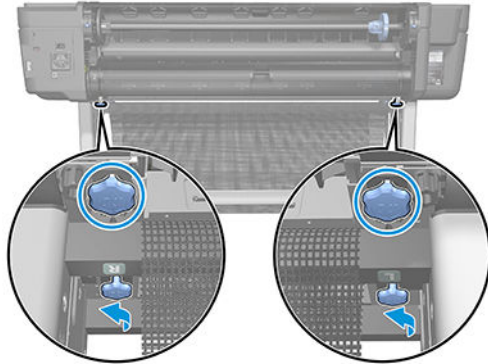
5. Remove the Left spittoon.



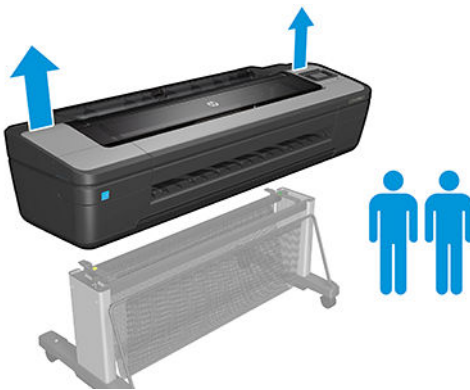
Stand (T1700 & T1708)

Removal

1. Switch off the printer and remove the power cable.
2. Remove the 4 knob screws from the stand.



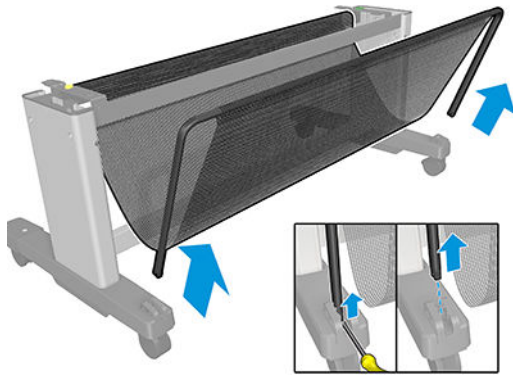
3. Remove the printer.



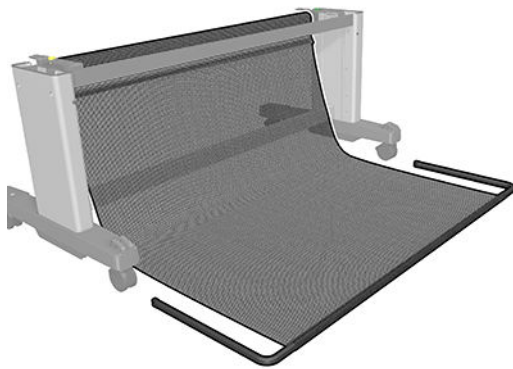
4. Put the printer on the floor.



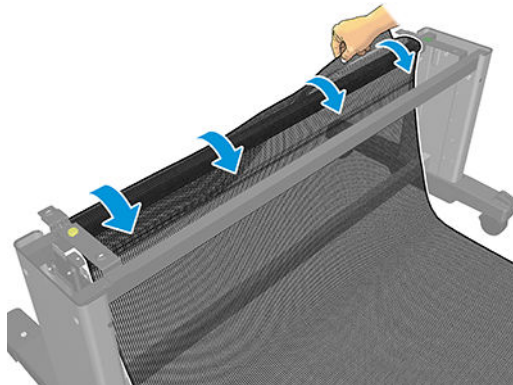
5. Unclip the basket frame from the feet.



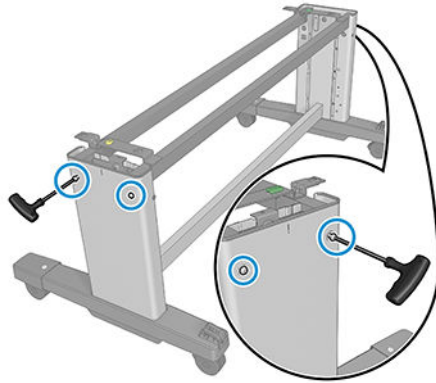
6. Put the structure on the floor.



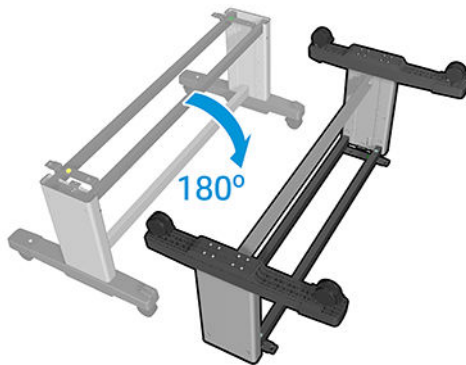
7. Remove the basket.



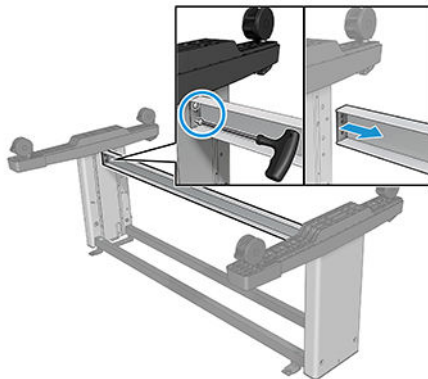
8. Remove the 4 screws from the stand.



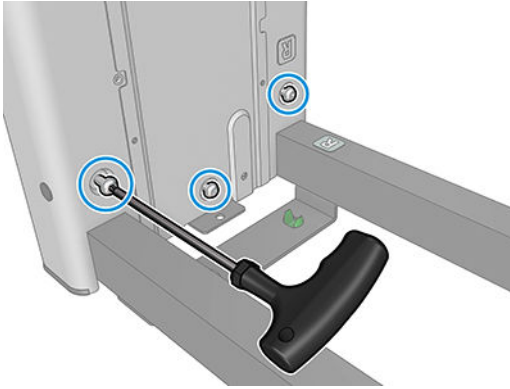
9. Turn the stand 180°.



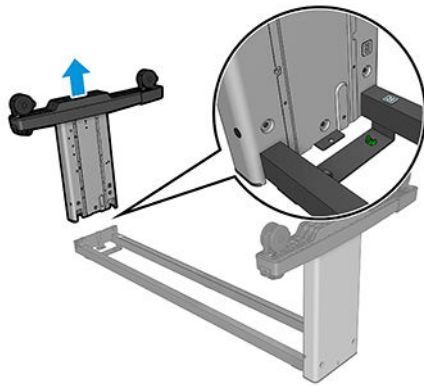
10. Remove the 2 screws of the cross-brace.



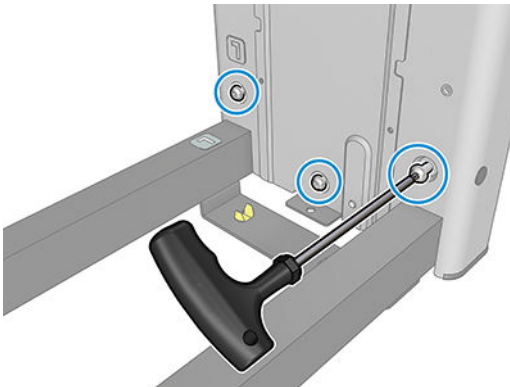
11. Remove the 3 screws as shown.



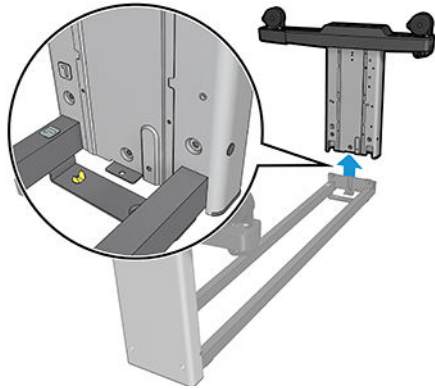
12. Remove the left leg.



13. Remove the 3 screws as shown.



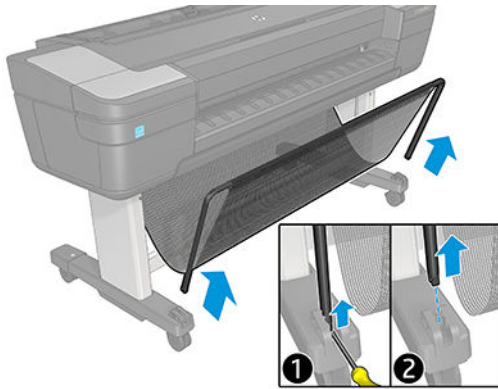
14. Remove the right leg.



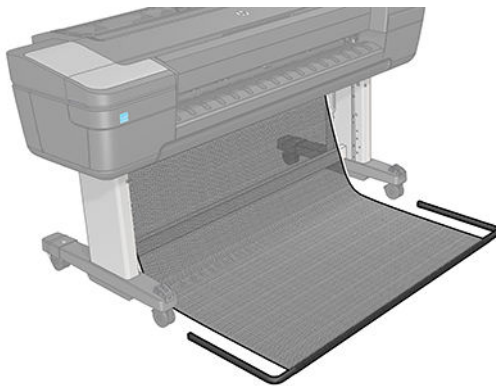
Stand basket

Removal

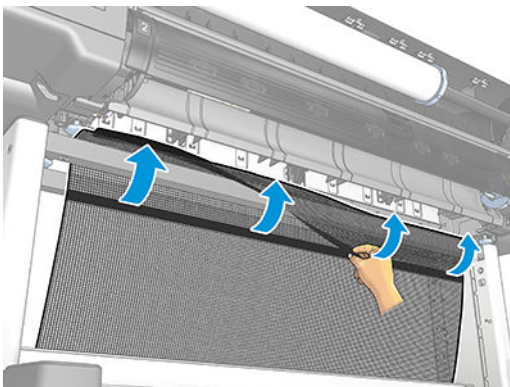
1. Switch off the printer and remove the power cable.
2. Unclip the basket frame from the feet.



3. Put the structure on the floor.



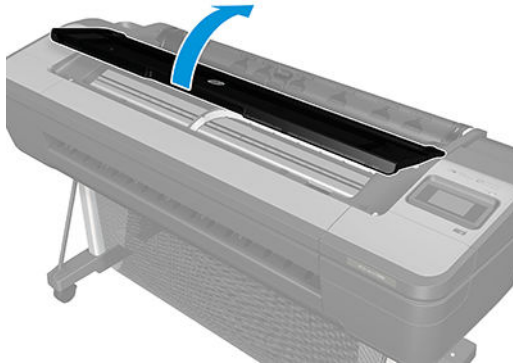
4. Remove the basket.



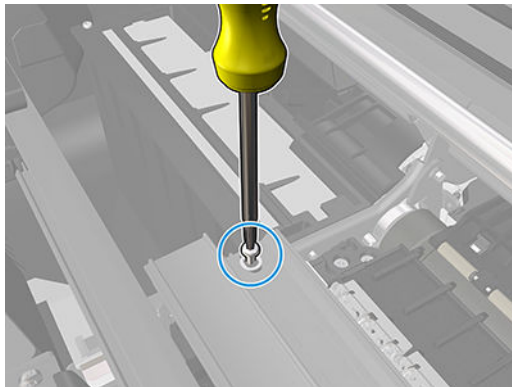
Starwheel assembly

Removal

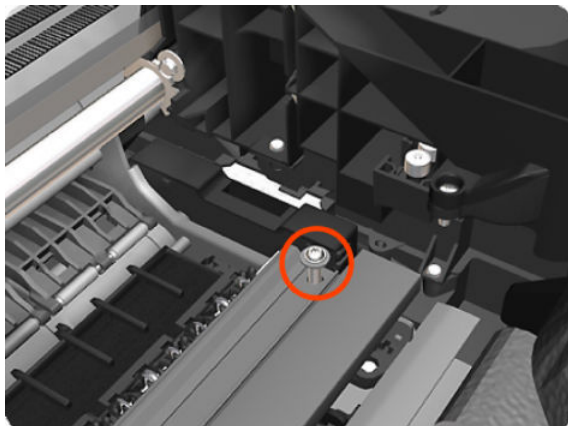
1. Switch off the printer and remove the power cable.
2. Open the Window.



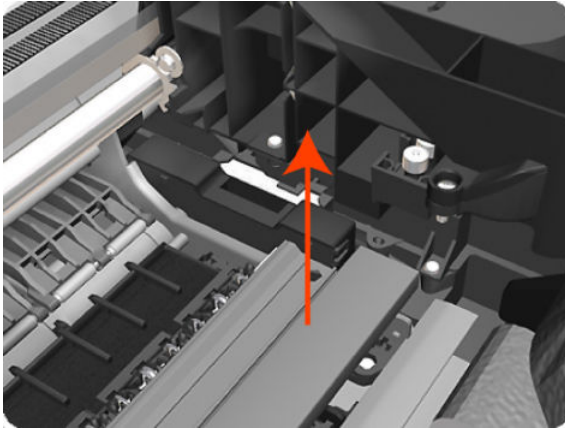
3. Remove one T-10 screw that secures the Starwheel Assembly to the printer. Use a short screw driver as this will allow the best access.




4. Remove another T-10 screw that secures the Starwheel Assembly to the printer.



5. Carefully lift the Starwheel Assembly out of the printer.

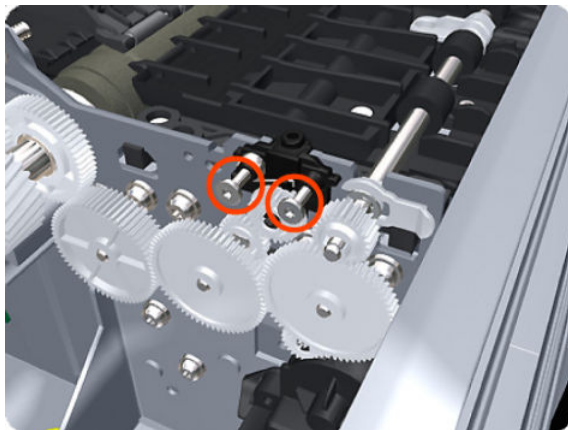


 **NOTE:** When you finish installing or replacing this component, you must perform the necessary Service Calibrations. To find which calibrations you must perform, see [Service Calibration Guide to Removal and Installation on page 260](#).

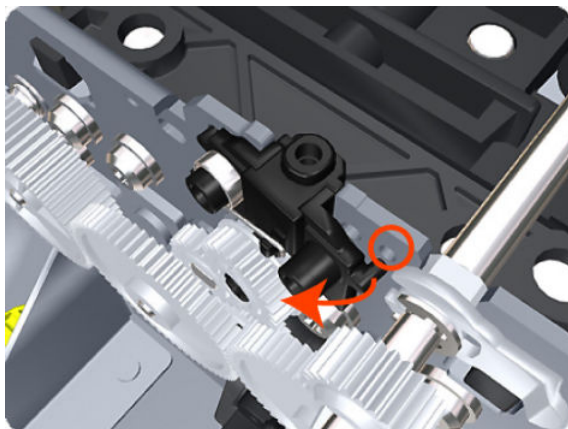
Starwheel lifter, Left

Removal

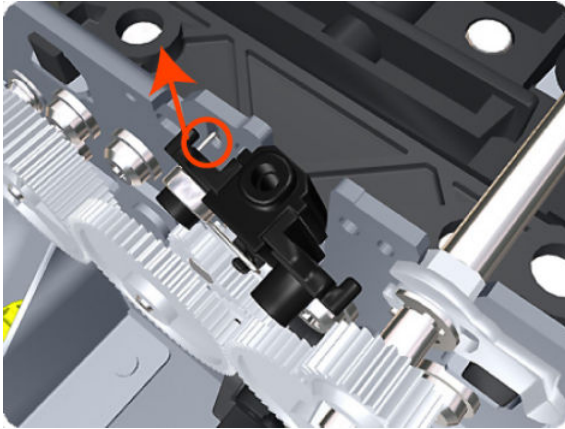
1. Switch off the printer and remove the power cable.
2. Remove the [Front cover on page 330](#).
3. Remove the [Left cover on page 359](#).
4. Remove the [E-box on page 316](#).
5. Remove the [Spittoon, Left on page 447](#).
6. Remove the [Starwheel assembly on page 455](#).
7. Remove two T-8 screws that secure the Left Starwheel Lifter to the printer.



8. Rotate the Left Starwheel Lifter sufficiently to disengage the right attachment lug.

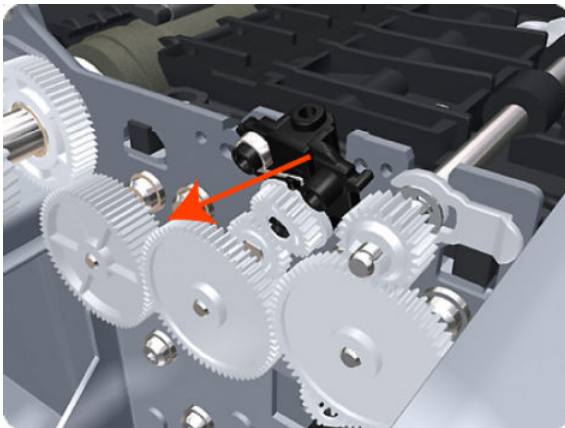



9. Tilt the Left Starwheel Lifter sufficiently to disengage the left attachment lug.



10. Remove the Left Starwheel Lifter from the printer.

 **NOTE:** Do **not** remove the spring from the Left Starwheel Lifter, because it is difficult to reattach.

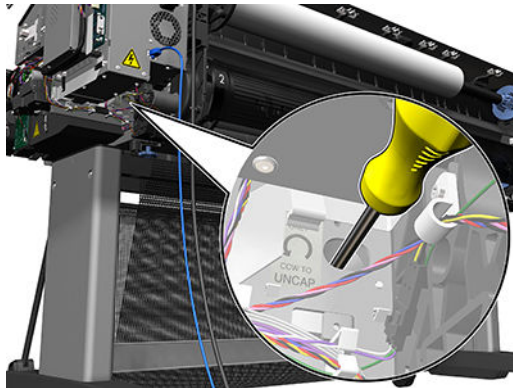


 **NOTE:** When you finish installing or replacing this component, you must perform the necessary Service Calibrations. To find which calibrations you must perform, see [Service Calibration Guide to Removal and Installation on page 260](#).

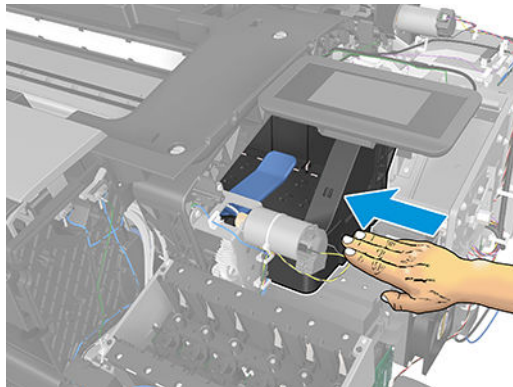
Starwheel lifter, Right

Removal

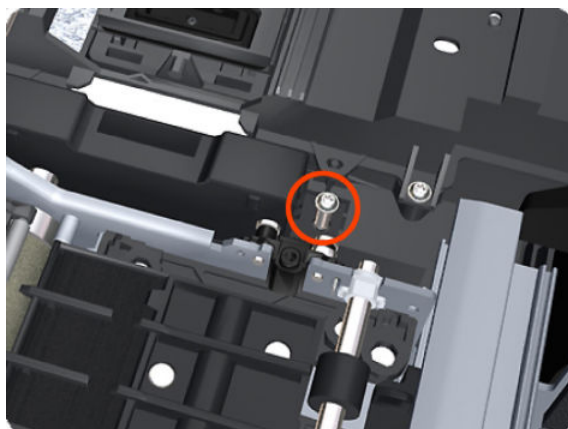
1. Switch off the printer and remove the power cable.
2. Remove the [Right cover on page 407](#).
3. Remove the [Starwheel assembly on page 455](#).
4. Loosen the T-10 uncapping screw sufficiently so you can manually move the Carriage Assembly in step 8.



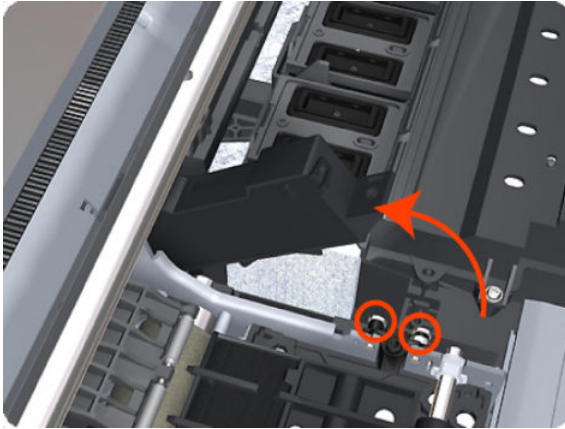
5. Push the Carriage Assembly into the print path.



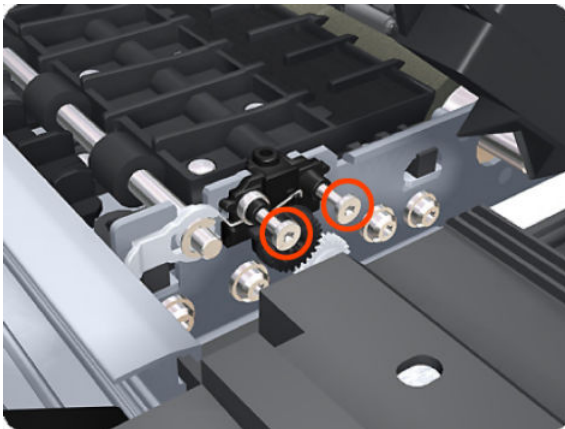
6. Remove one T-10 screw that secures the Drop Detector to the Service Station.



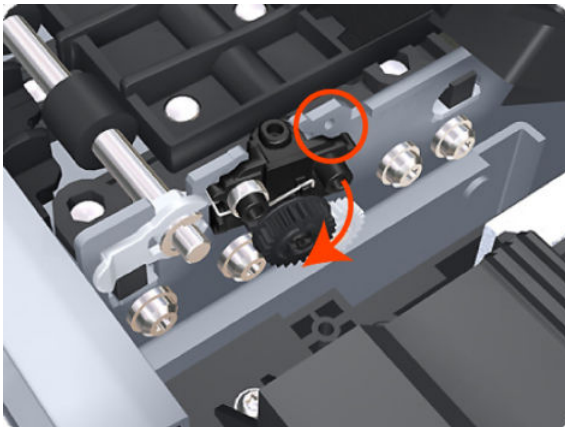
7. Rotate the Drop Detector vertically to gain access to the two screws that secure the Right Starwheel Lifter.



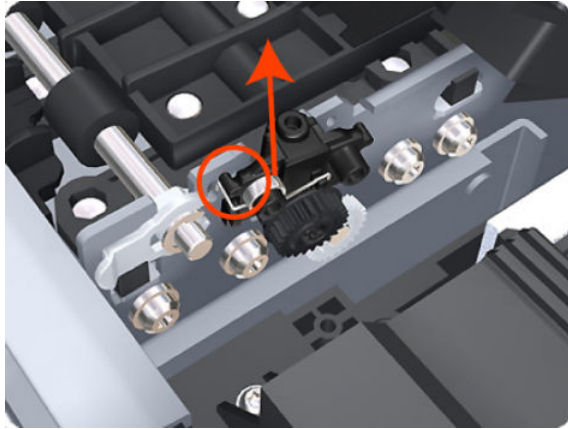
8. Remove two T-8 screws that secure the Right Starwheel Lifter to the printer.



9. Rotate the Right Starwheel Lifter sufficiently to disengage the right attachment lug.

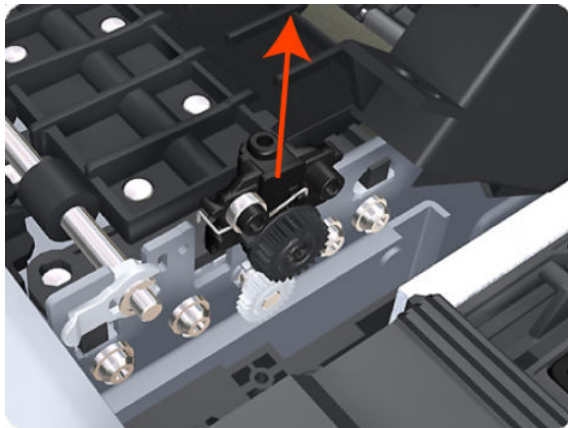



10. Tilt the Right Starwheel Lifter sufficiently to disengage the left attachment lug.



11. Remove the Right Starwheel Lifter from the printer.

 **NOTE:** Do **not** remove the spring from the Right Starwheel Lifter, because it is difficult to reattach.

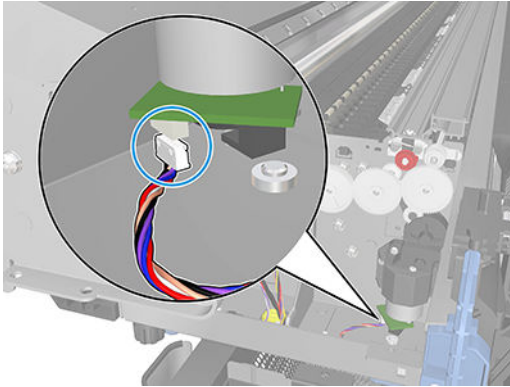


 **NOTE:** When you finish installing or replacing this component, you must perform the necessary Service Calibrations. To find which calibrations you must perform, see [Service Calibration Guide to Removal and Installation on page 260](#).

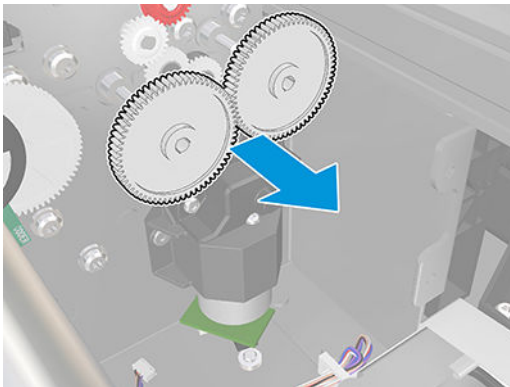
Starwheel motor

Removal

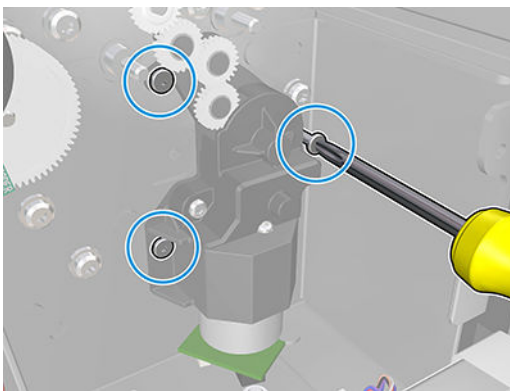
1. Remove the Left spittoon. See [Spittoon, Left on page 447](#).
2. Disconnect the Starwheel motor electrical connector.



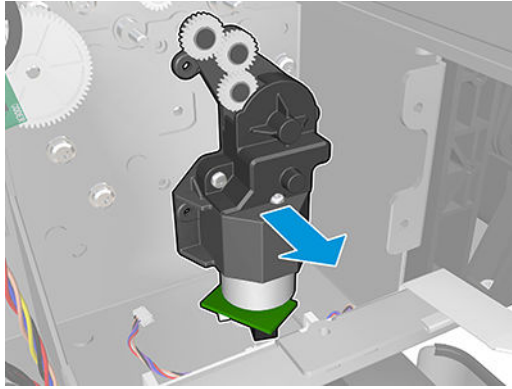
3. Carefully pull the two gear wheels off their shafts to gain access to the Starwheel motor attachment screws.



4. Remove the three T-8 screws that secure the Starwheel motor to the printer.



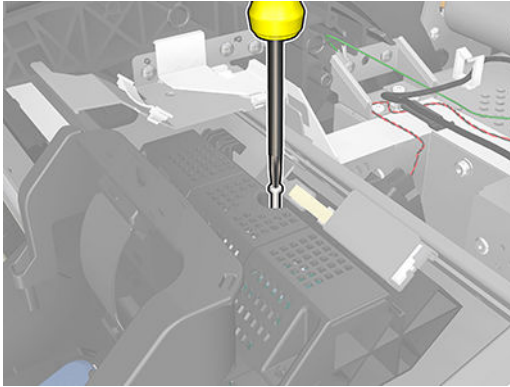
5. Lift the Starwheel motor out of the printer.



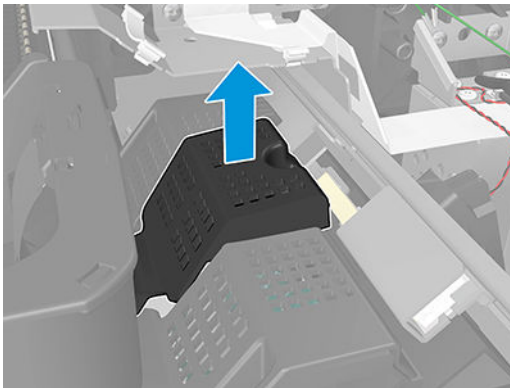
Trailing cable

Removal

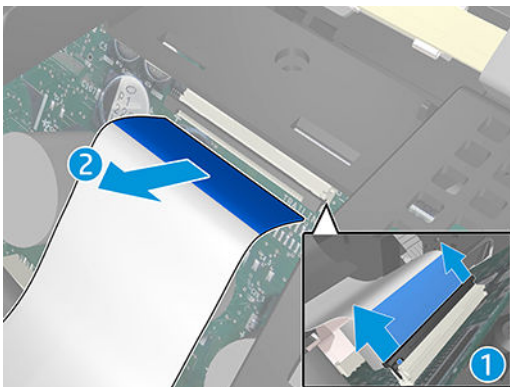
1. Switch off the printer and remove the power cable.
2. Unscrew the small cover of the Carriage PCA.



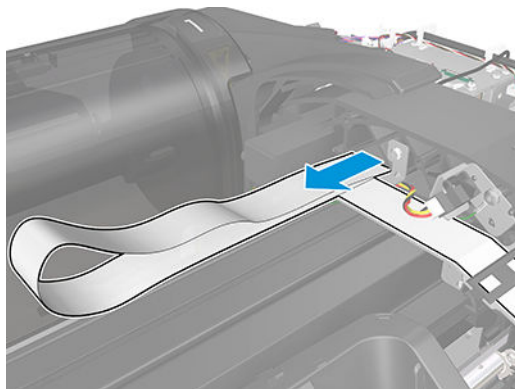
3. Remove the small cover of the Carriage PCA.



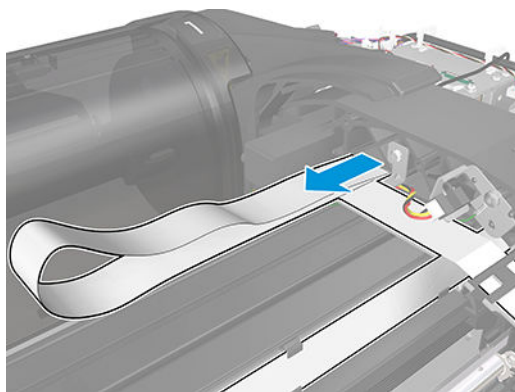
4. Disconnect the ribbon trailing cable from the Carriage PCA.



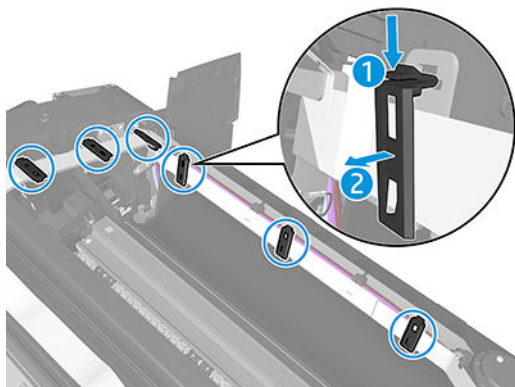
5. Disconnect the ribbon trailing cable from the E-box.



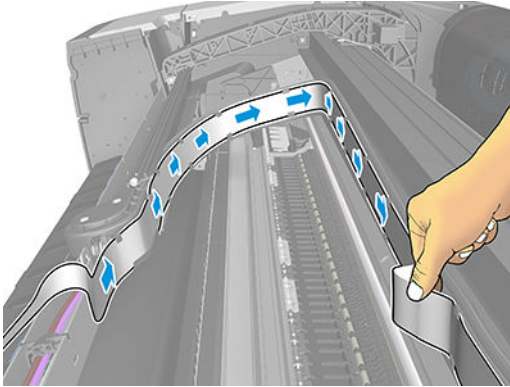
6. Unroute the Trailing Cable as shown.



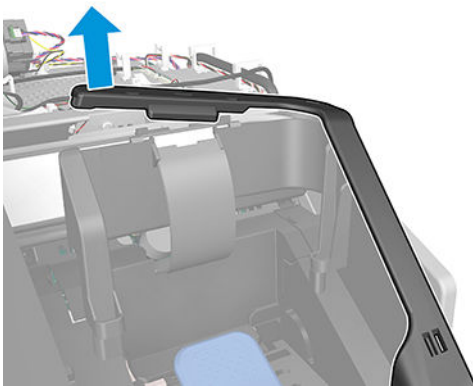
7. Remove all the trailing cable clips.



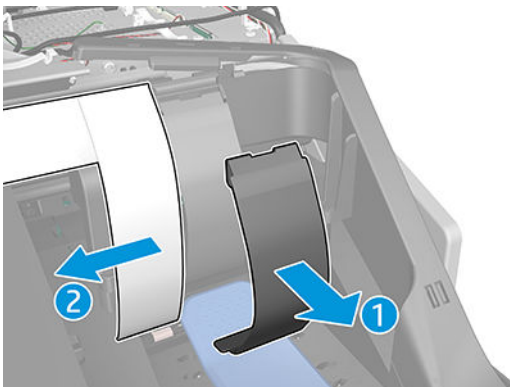
8. Slide and remove the cable as shown.



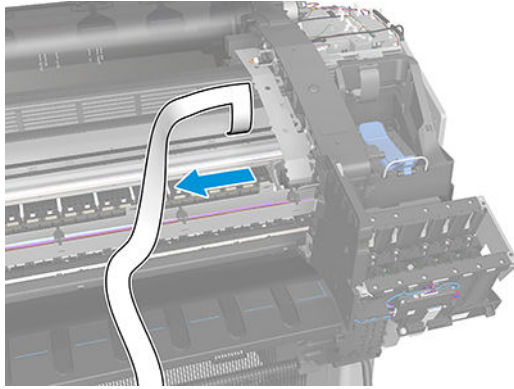
9. Unclip the top of the sarcophagus.



10. Remove the mylar and the trailing cable from the carriage.



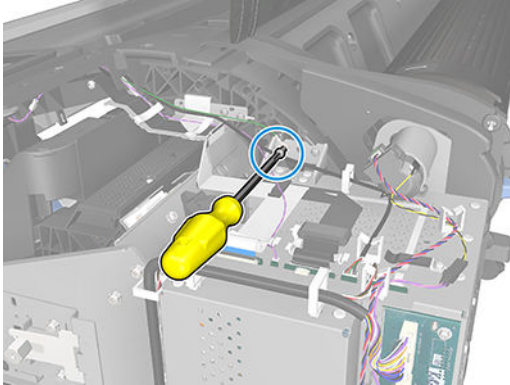
11. Remove the Trailing cable.



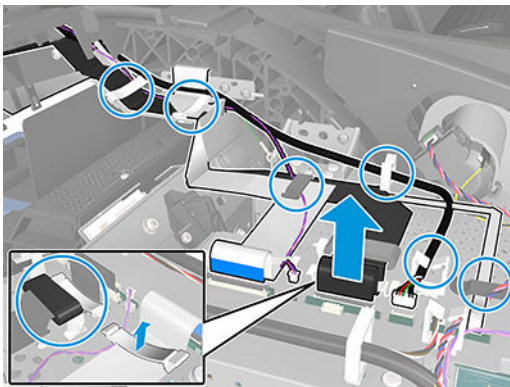
Touch control panel

Removal

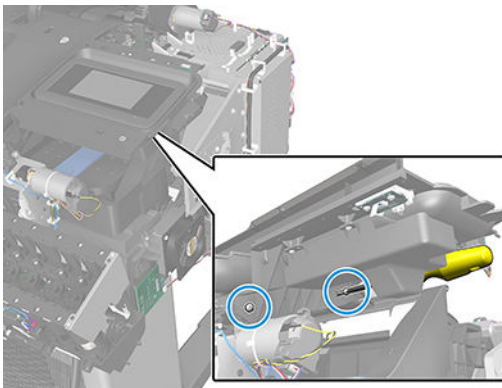
1. Switch off the printer and remove the power cable.
2. Remove the Right cover. See [Right cover on page 407](#).
3. Remove the screw as shown.



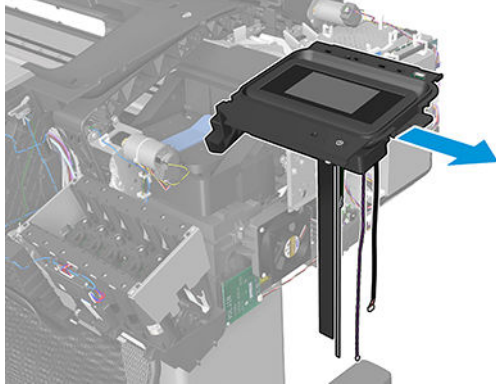
4. Disconnect the cables and unrout.



5. Remove the two screws as shown.



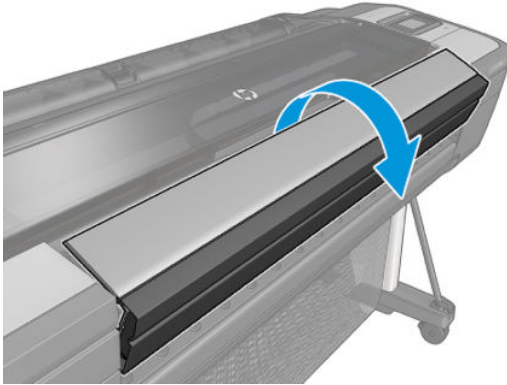
6. Remove the touch control panel.



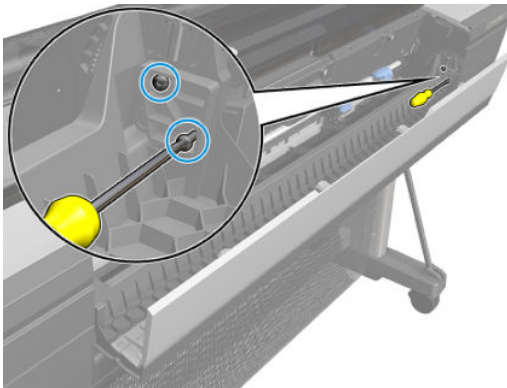
V-Trimmer cover

Removal

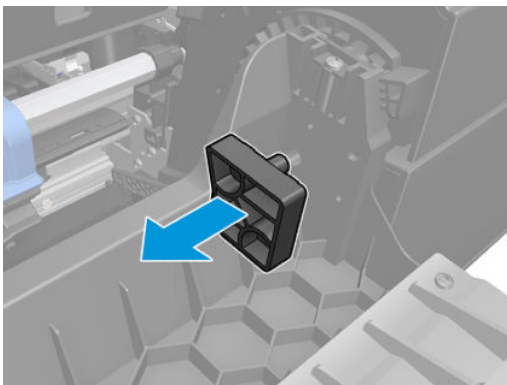
1. Switch off the printer and remove the power cable.
2. Open the V-Trimmer cover.



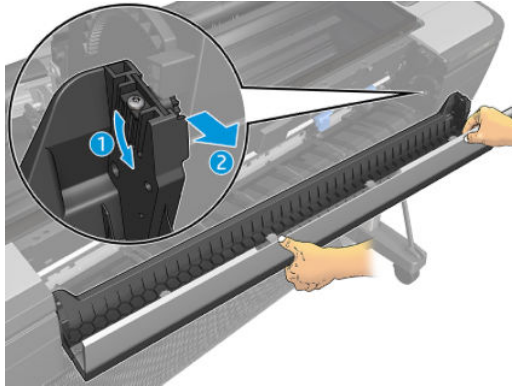
3. Remove two screws.



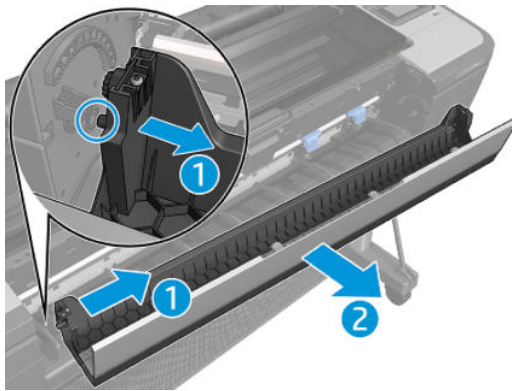
4. Remove the axis.



5. Remove carefully the right side of the V-Trimmer cover.



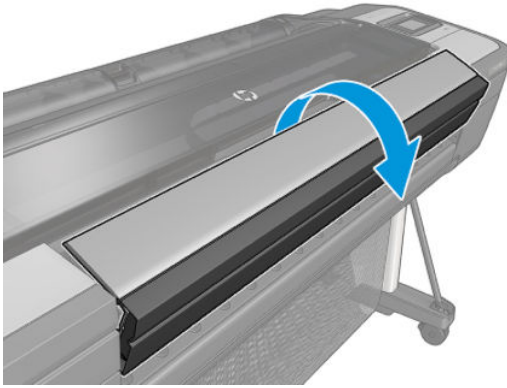
6. Slide the V-Trimmer cover to the right and remove it.



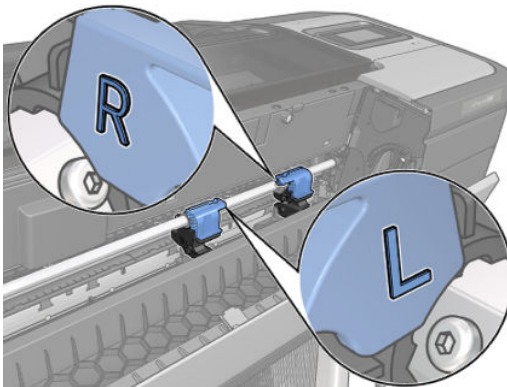
V-Trimmer modules

Removal

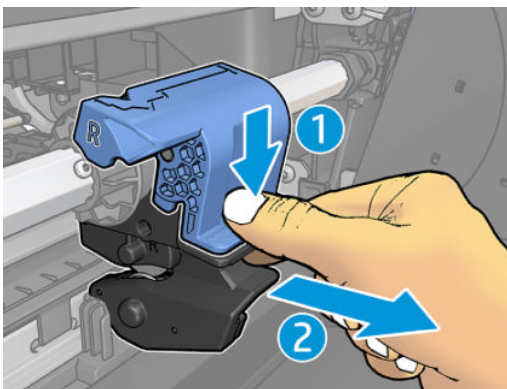
1. Open the V-Trimmer cover.



2. Locate the V-Trimmer modules.



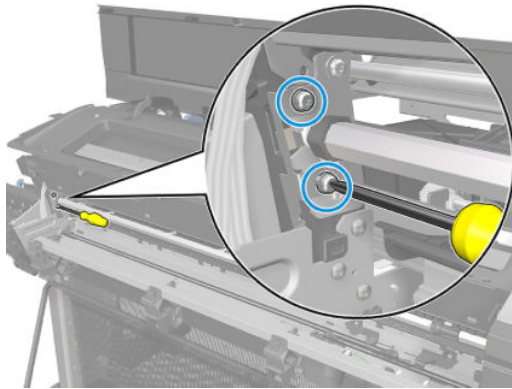
3. Remove the right and left V-Trimmer modules.



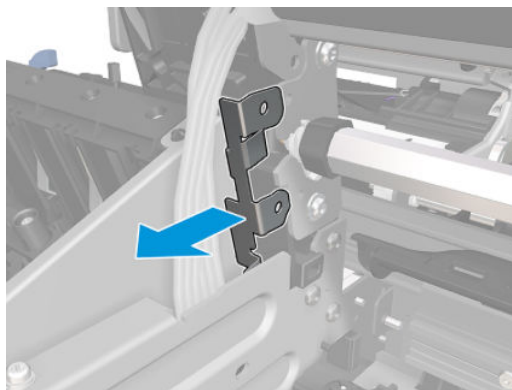
V-Trimmer Drive shaft assembly

Removal

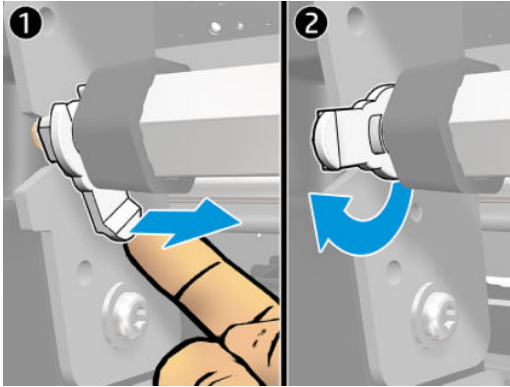
1. Switch off the printer and remove the power cable.
2. Remove the Front cover. See [Front cover on page 330](#).
3. Remove the Left cover. See [Left cover on page 359](#).
4. Remove the Media Output Assembly. See [Media output assembly on page 379](#).
5. Remove the V-Trimmer Cover. See [V-Trimmer cover on page 470](#).
6. Remove the Left Trim (T8W18-67004). See [Front trims \(T1700 & T1708\) on page 333](#).
7. Remove the V-Trimmer modules. See [V-Trimmer modules on page 472](#).
8. Remove two screws.



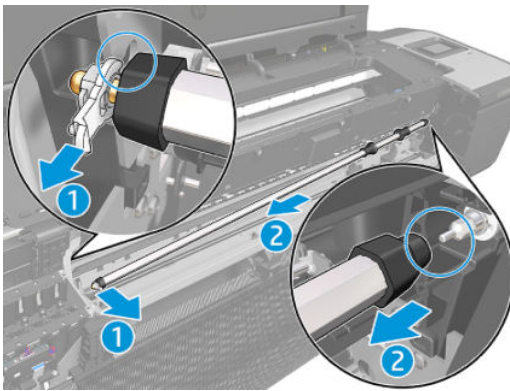
9. Remove the Shaft Datum Plate.



10. Unclip and rotate the Bearing Overdrive.



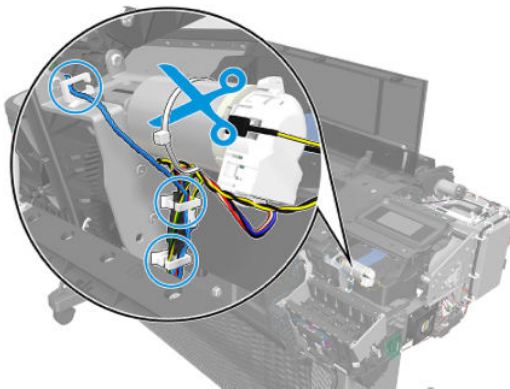
11. Remove the V-Trimmer Drive shaft assembly



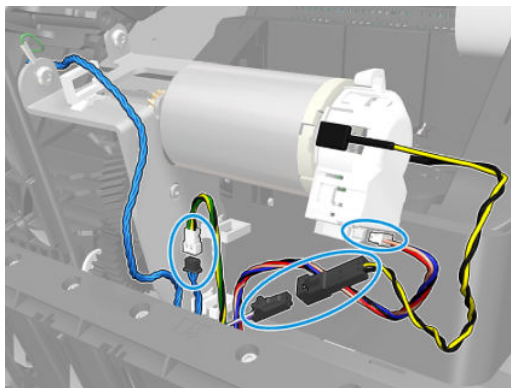
V-Trimmer transmission

Removal

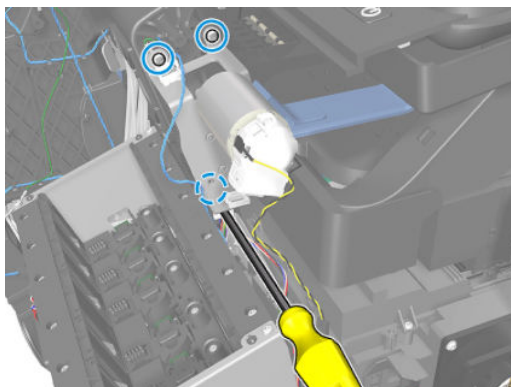
1. Switch off the printer and remove the power cable.
2. Remove the Front cover. See [Front cover on page 330](#).
3. Remove the Right cover. See [Right cover on page 407](#).
4. Remove the Media Output Assembly. See [Media output assembly on page 379](#).
5. Cut the cable tie and unroute the cables from the 3 cable clamps.



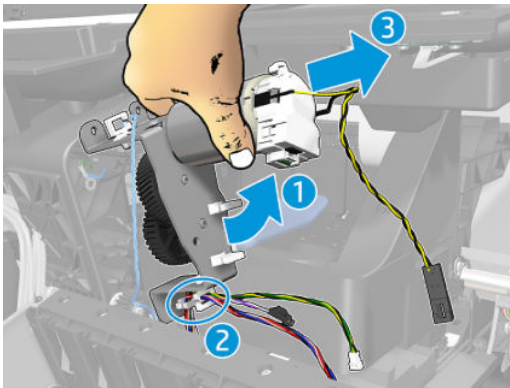
6. Disconnect the 3 cables.



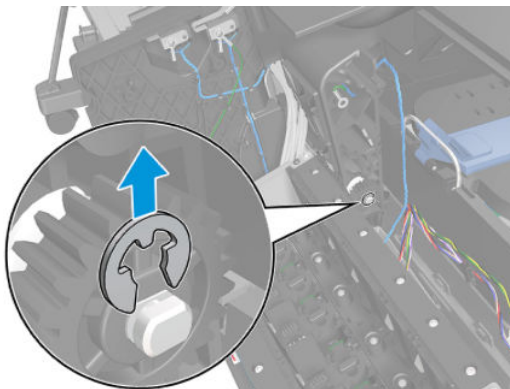
7. Remove three screws.



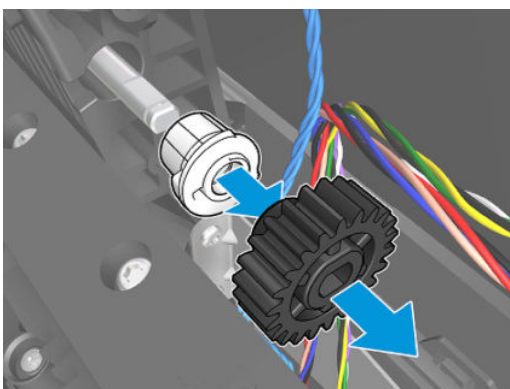
- Carefully rotate the V-Trimmer transmission until getting enough access to unroute the cables from the 2 cable clamps and then remove it.



- Remove the circlip.

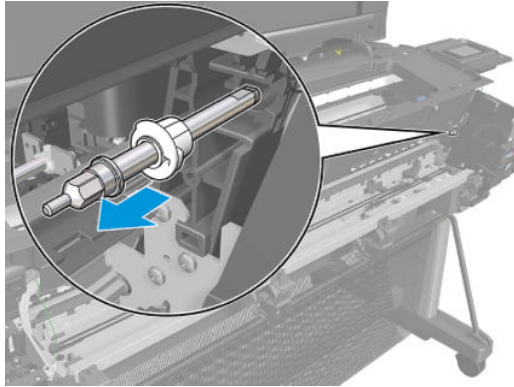


- Remove the Gear Stage and the Bushing Arch Shaft.



- Remove the V-Trimmer Drive shaft assy. See [V-Trimmer Drive shaft assembly on page 473](#)

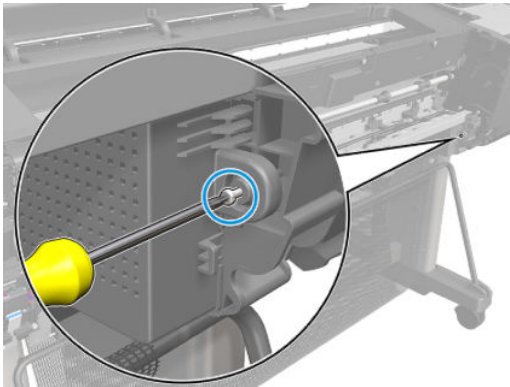
12. Remove the Right Arch shaft and the Bushing Arch Shaft.



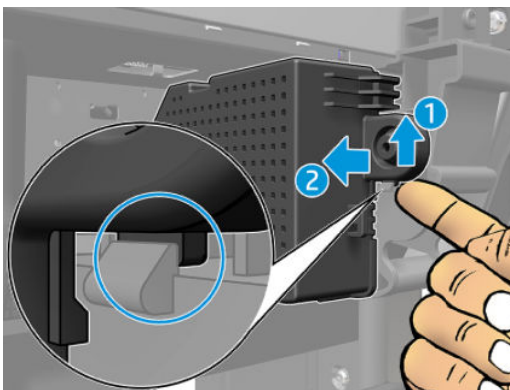
V-Trimmer structure assembly

Removal

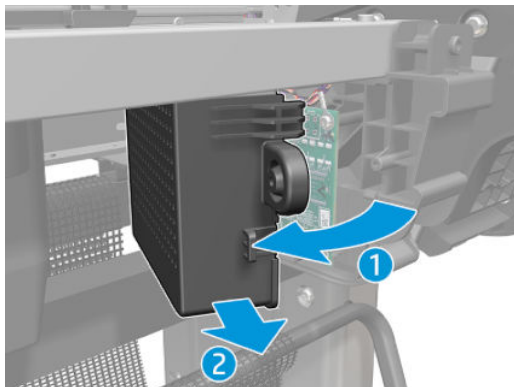
1. Switch off the printer and remove the power cable.
2. Remove the Front cover. See [Front cover on page 330](#).
3. Remove the Left cover. See [Left cover on page 359](#).
4. Remove the Media Output Assembly. See [Media output assembly on page 379](#).
5. Remove the V-Trimmer Cover. See [V-Trimmer cover on page 470](#).
6. Remove the Left Trim (T8W18-67004). See [Front trims \(T1700 & T1708\) on page 333](#).
7. Remove the V-Trimmer modules. See [V-Trimmer modules on page 472](#).
8. Remove the screw.



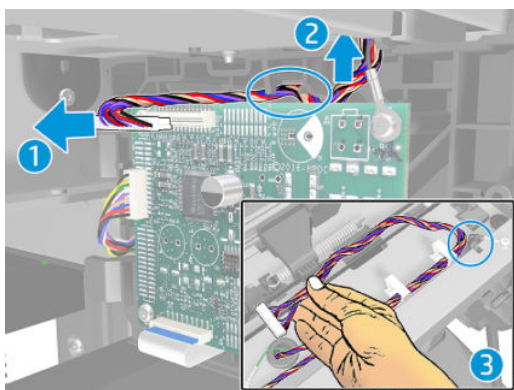
9. Unclip the Y-cutter PCA Cover.



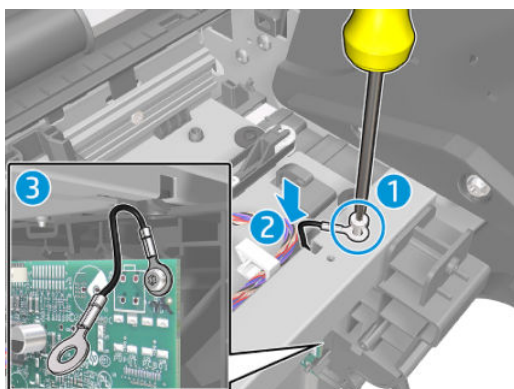
10. Rotate the Y-cutter PCA Cover to remove it from the two hooks.



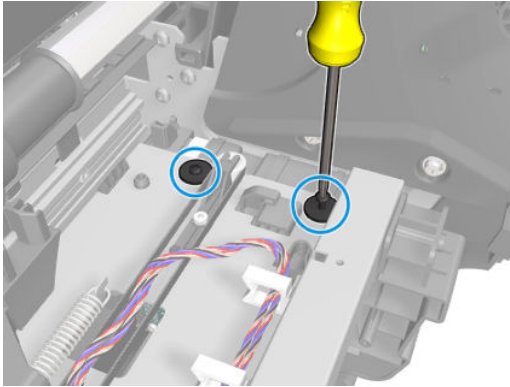
11. Disconnect the cable and pass it through the hole to leave it over the V-Trimmer structure.



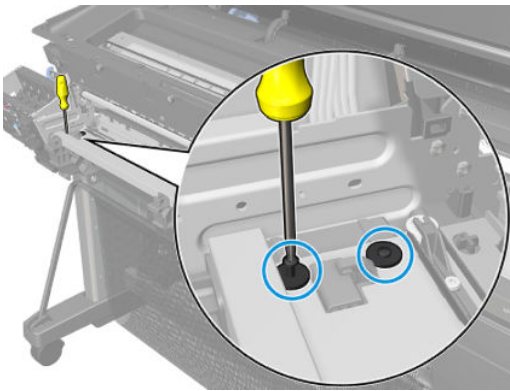
12. Remove the screw and pass the grounding cable through the hole to leave it under the V-Trimmer structure.



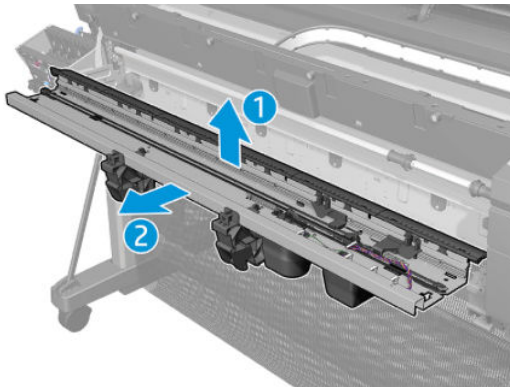
13. Remove the 2 screws from the right side.



14. Now remove the 2 screws from the left side.

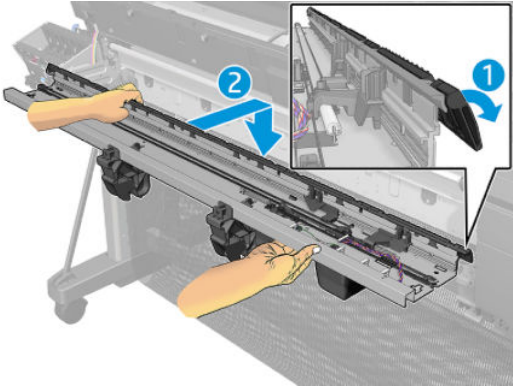


15. Remove the V-Trimmer structure assembly.



Installation

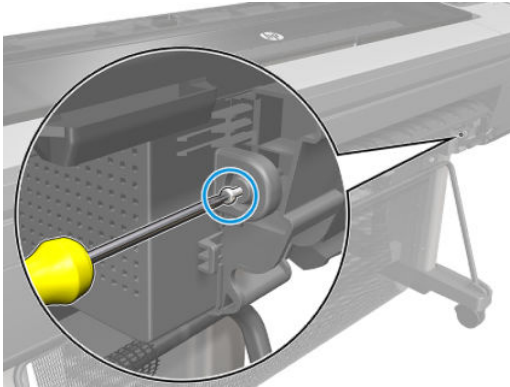
- ▲ Fold the End cut door modules while mounting the V-Trimmer Structure assembly.



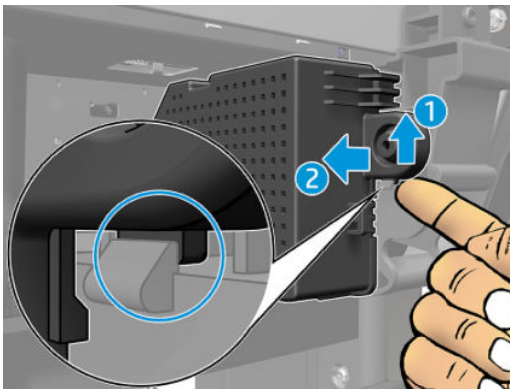
V-Trimmer PCA

Removal

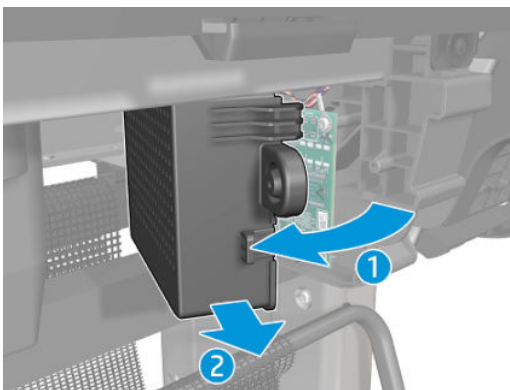
1. Switch off the printer and remove the power cable.
2. Remove the Front cover. See [Front cover on page 330](#).
3. Remove the screw.



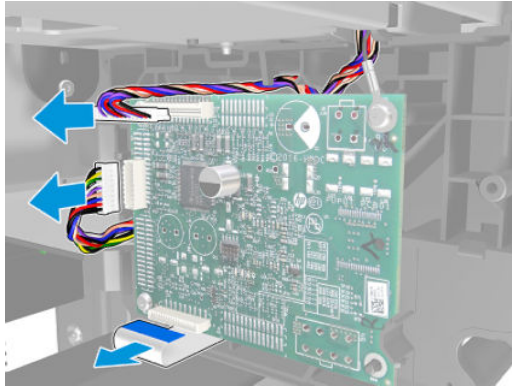
4. Unclip the Y-cutter PCA Cover.



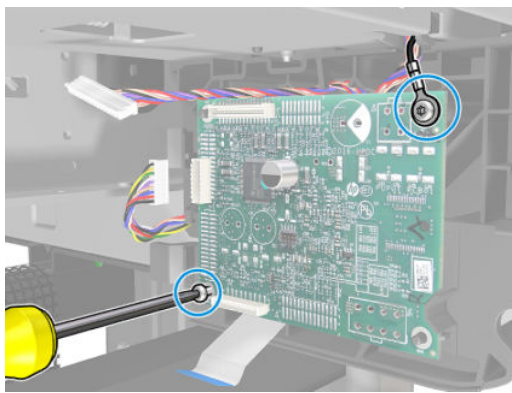
5. Rotate the Y-cutter PCA Cover to remove it from the two hooks.



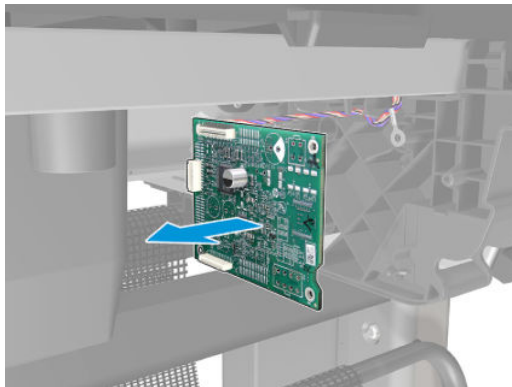
6. Disconnect the 3 cables.




7. Remove the 2 screws.



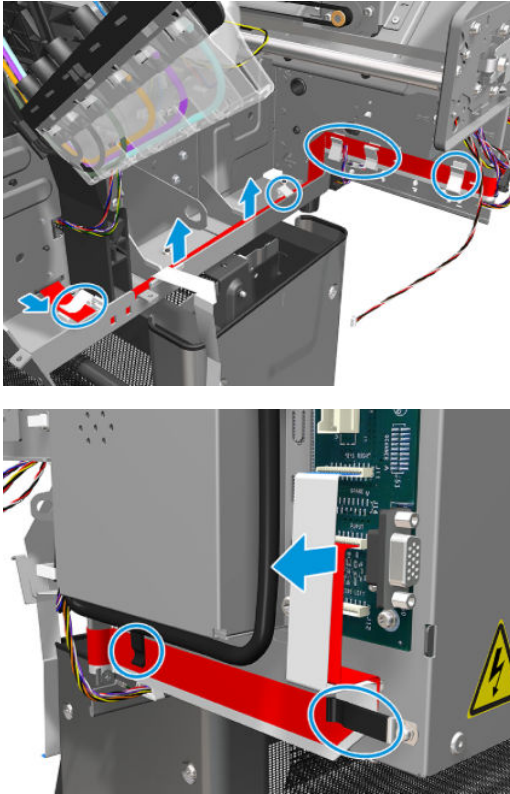
8. Remove the Y-cutter PCA.




 **NOTE:** Follow the next steps to remove the Y-cutter Puput Cable.

9. Remove the Service station. See [Service station on page 438](#)
10. Remove the Right ink supply station. See [Right ink supply station on page 345](#)

11. Unroute the Y-Cutter Puput Cable.



 **NOTE:** The cable is showed in red color in the screenshots, but this is not the real color.

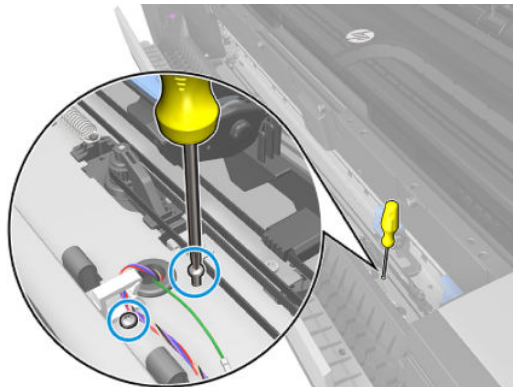
V-Trimmer Motor Cover

Removal

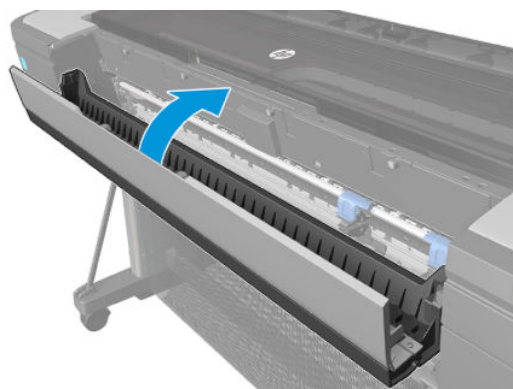
1. Switch off the printer and remove the power cable.
2. Remove the Front cover. See [Front cover on page 330](#).
3. Remove the Media Output Assembly. See [Media output assembly on page 379](#).
4. Open the V-Trimmer cover.



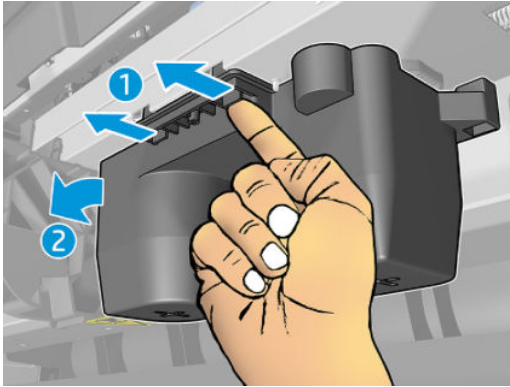
5. Remove 2 screws.



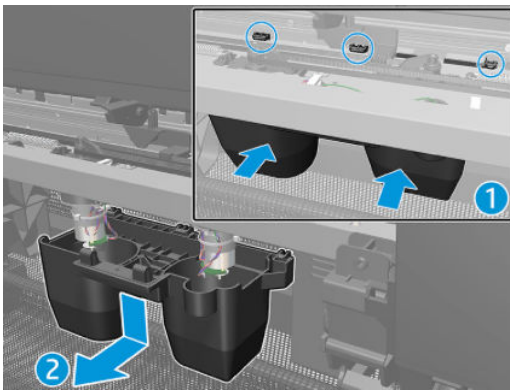
6. Close the V-Trim cover.



7. Unclip the V-Trimmer motor cover and rotate it a little bit.



8. Unhook the V-Trimmer motor cover and remove it.



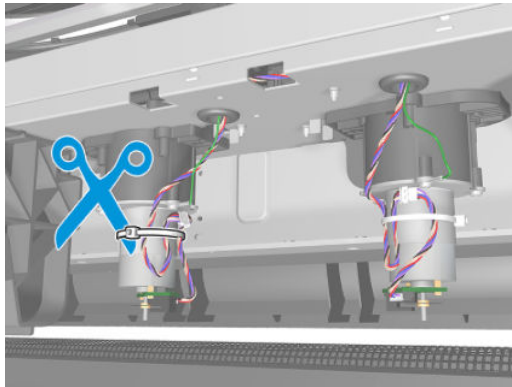
V-Trimmer Modules Positioner Motor

First steps

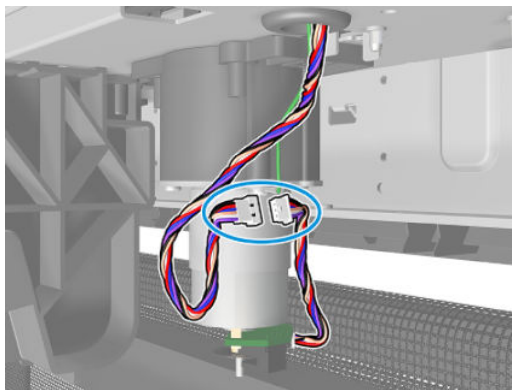
1. Switch off the printer and remove the power cable.
2. Remove the Front cover. See [Front cover on page 330](#).
3. Remove the Media Output Assembly. See [Media output assembly on page 379](#).
4. Remove the V-Trimmer Cover. See [V-Trimmer cover on page 470](#).

To remove the Left module Positioner Motor & belt

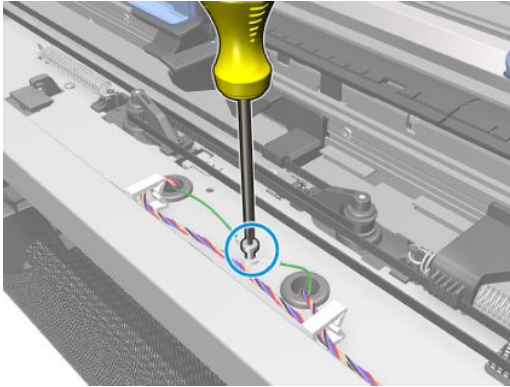
1. Carefully cut the cable tie.



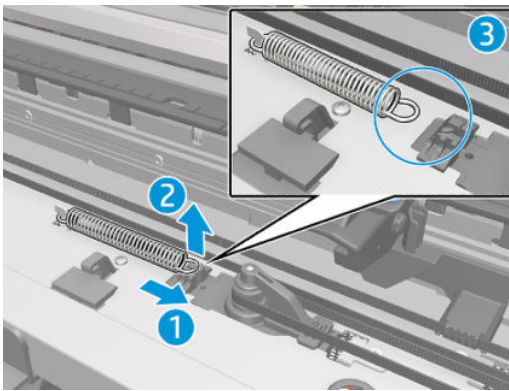
2. Disconnect the cable.



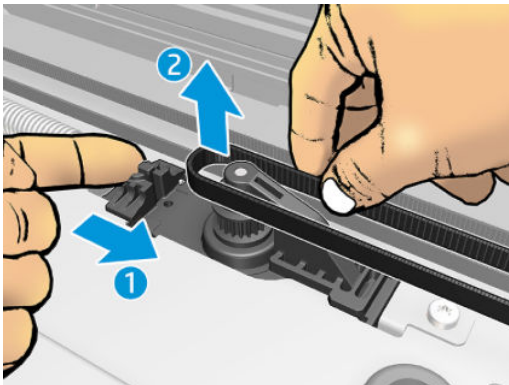
3. Remove one screw.



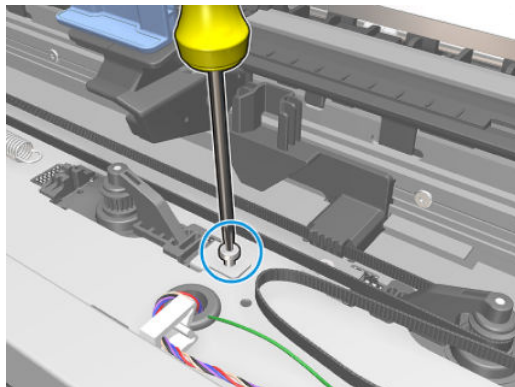
4. Unhook the Spring.



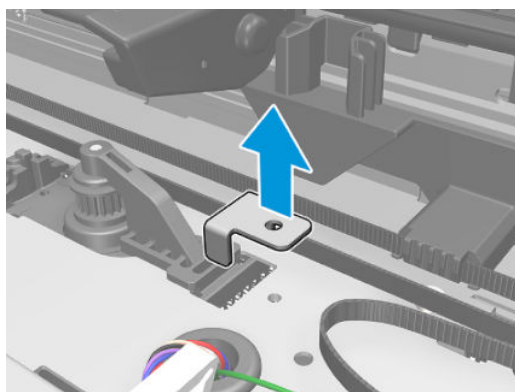
5. Slide the Left module Positioner Motor to the right and release the belt from the pulley.



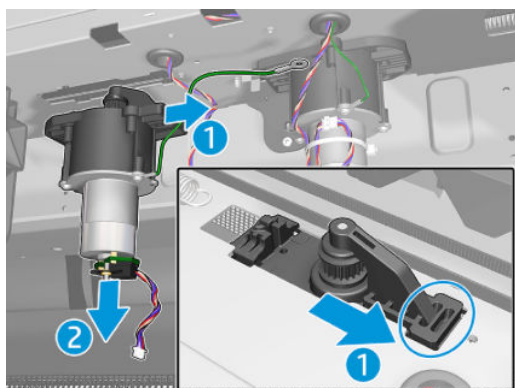
6. Remove one screw.



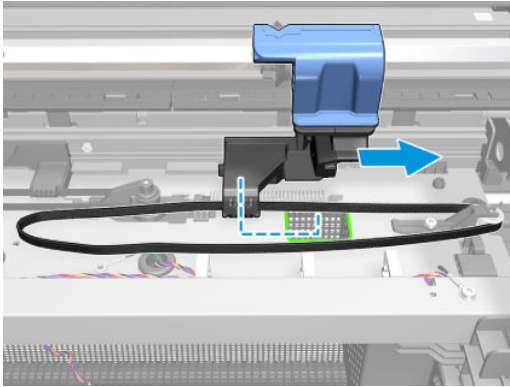
7. Remove the Sled Lock Carriage.



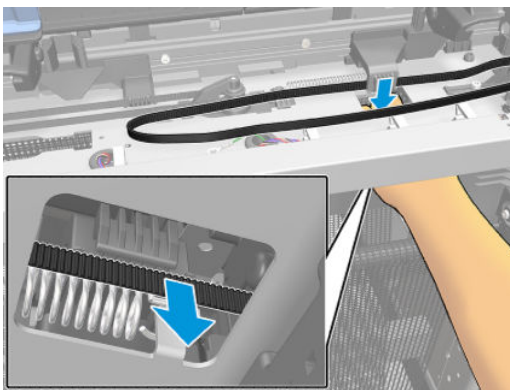
8. Slide the Left module Positioner Motor to the right and remove it.



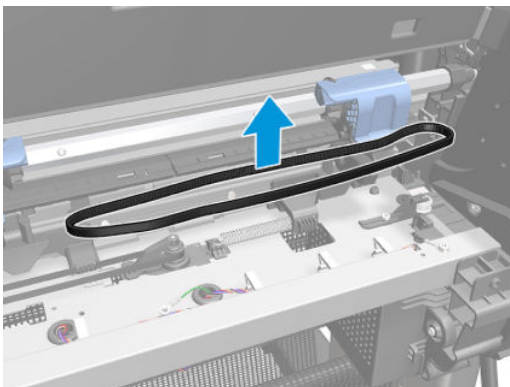
9. Move the Right Trimmer Module and the Positioner to the right until aligned with the hole in the plate.



10. Unhook the belt from the Positioner.

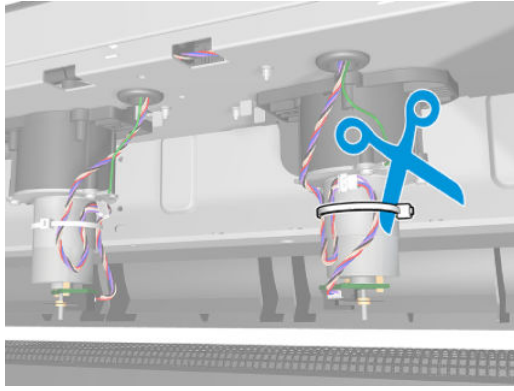


11. Remove the belt.

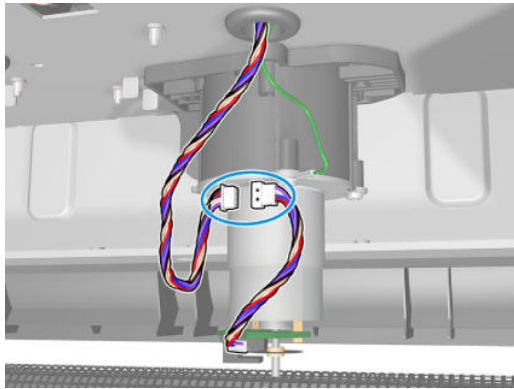


To remove the Right module Positioner Motor & belt

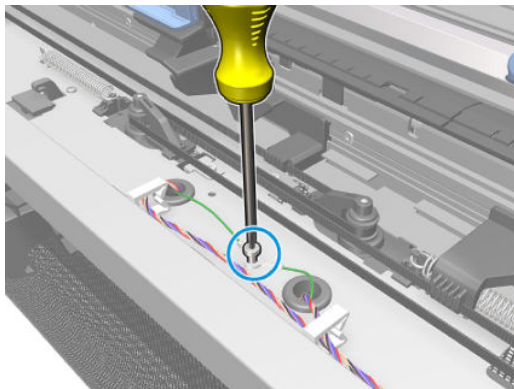
1. Carefully cut the cable tie.



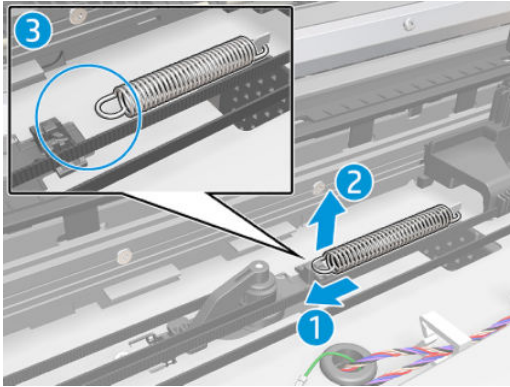
2. Disconnect the cable.



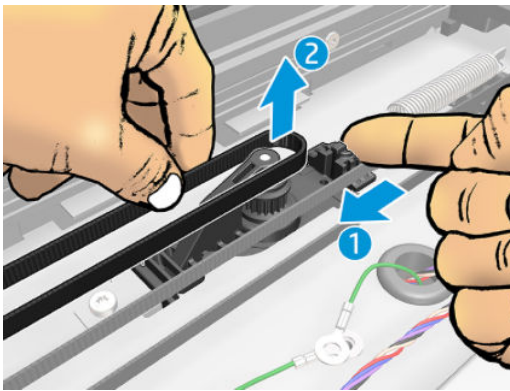
3. Remove one screw.



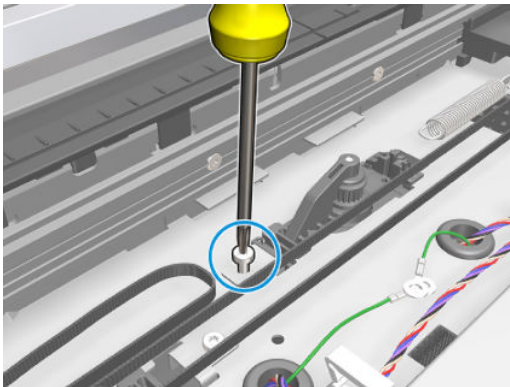
4. Unhook the Spring.



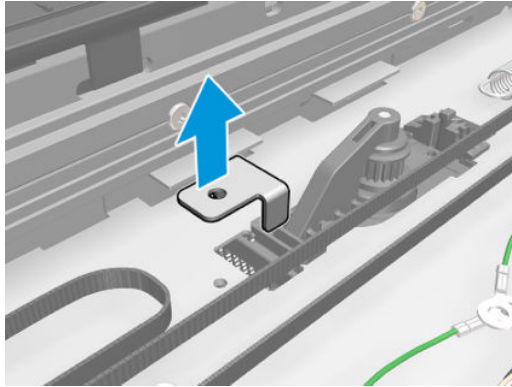
5. Slide the Right module Positioner Motor to the left and release the belt from the pulley.



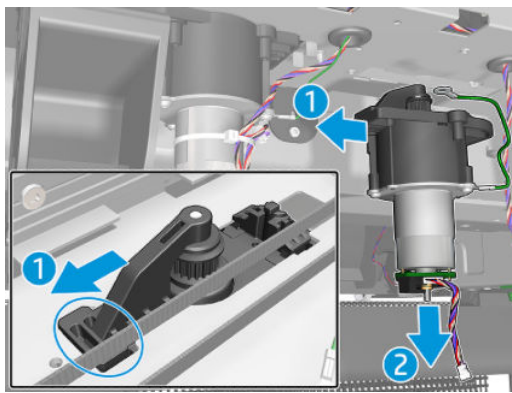
6. Remove one screw.



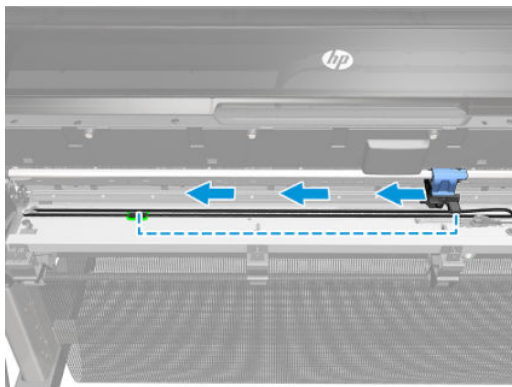
7. Remove the Sled Lock Carriage.



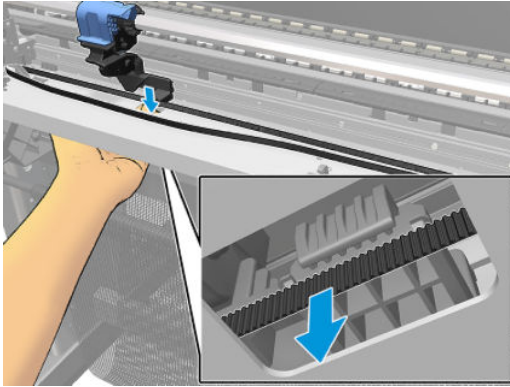
8. Slide the Right module Positioner Motor to the left and remove it.



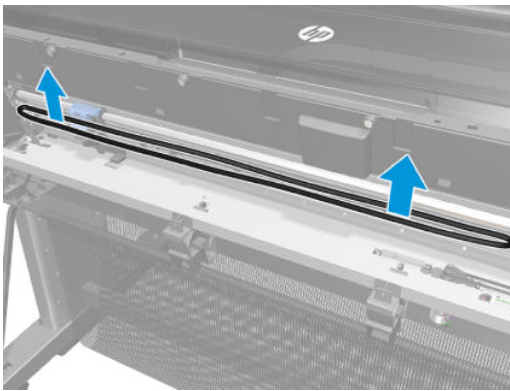
9. Move the Left Trimmer Module and the Positioner to the left until aligned with the hole in the plate.



10. Unhook the belt from the Positioner.



11. Remove the belt.



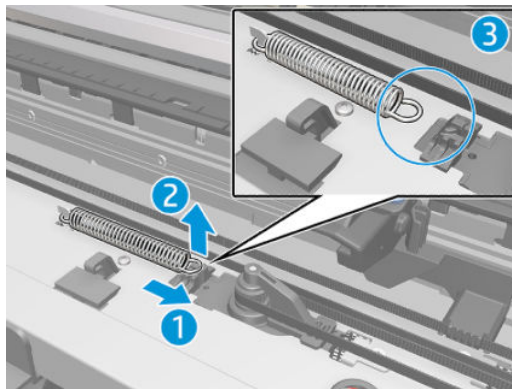
V-Trimmer Belt with Support

First steps

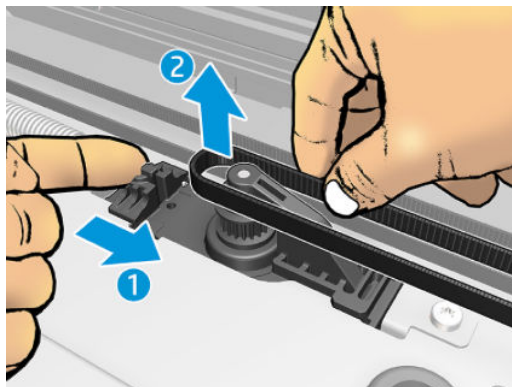
1. Switch off the printer and remove the power cable.
2. Remove the Front cover. See [Front cover on page 330](#).
3. Remove the Media Output Assembly. See [Media output assembly on page 379](#).
4. Remove the V-Trimmer Cover. See [V-Trimmer cover on page 470](#).

To remove the Right belt

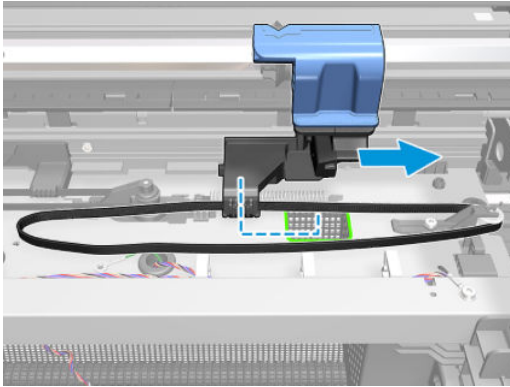
1. Unhook the Spring.



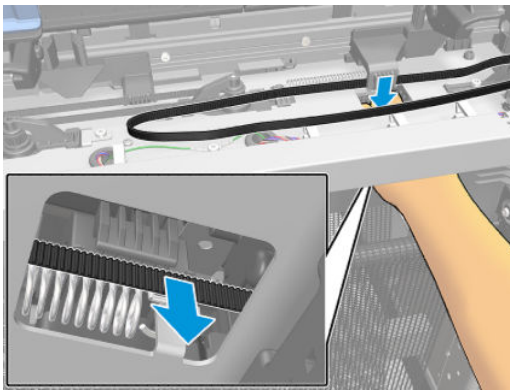
2. Slide the Left module Positioner Motor to the right and release the belt from the pulley.



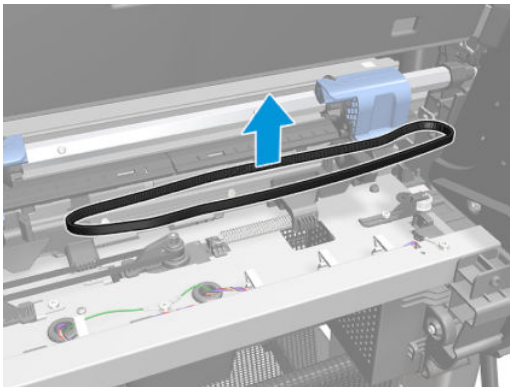
3. Move the Right Trimmer Module and the Positioner to the right until aligned with the hole of the plate.



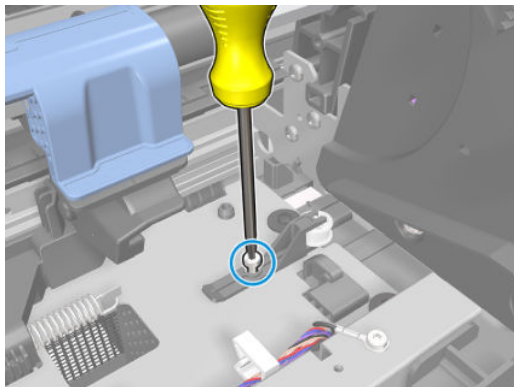
4. Unhook the belt from the Positioner.



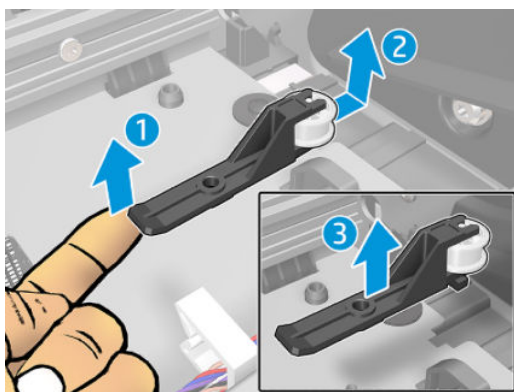
5. Remove the Belt.



6. Remove one screw

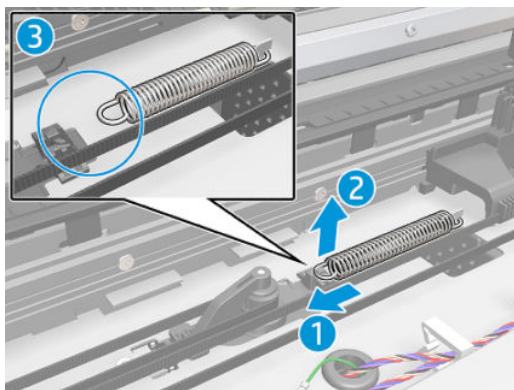


7. Remove the pulley.

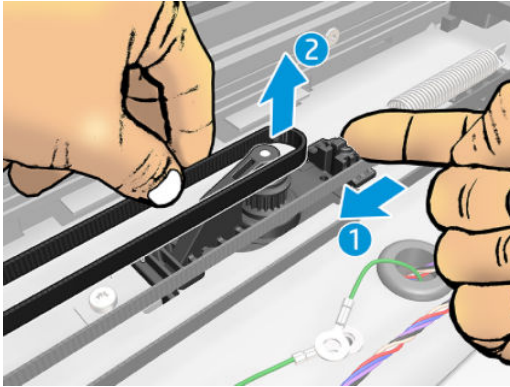


To remove the Left belt

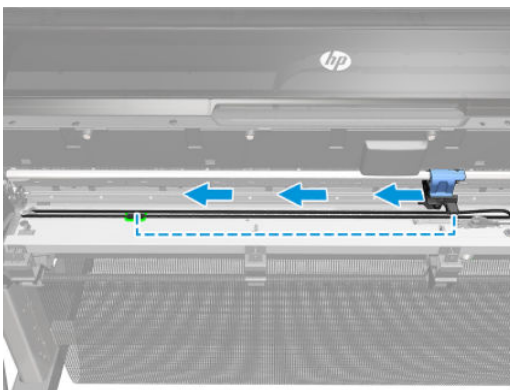
1. Unhook the Spring.



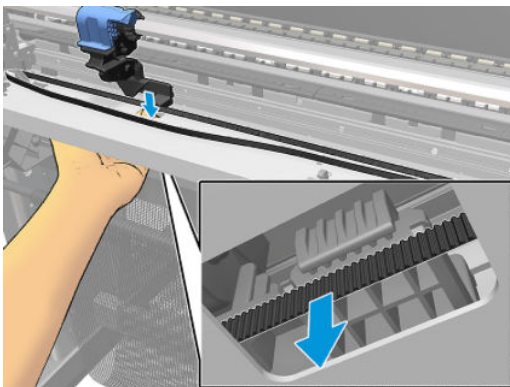
2. Slide the Right module Positioner Motor to the left and release the belt from the pulley.



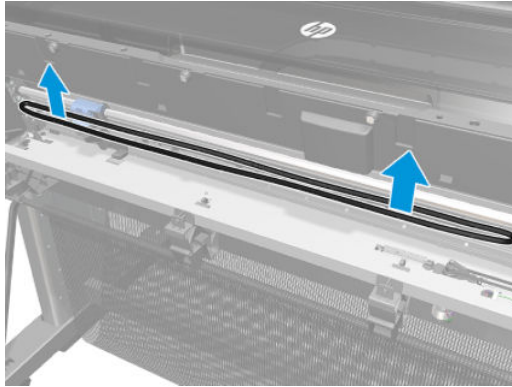
3. Move the Left Trimmer Module and the Positioner to the left until aligned with the hole in the plate.



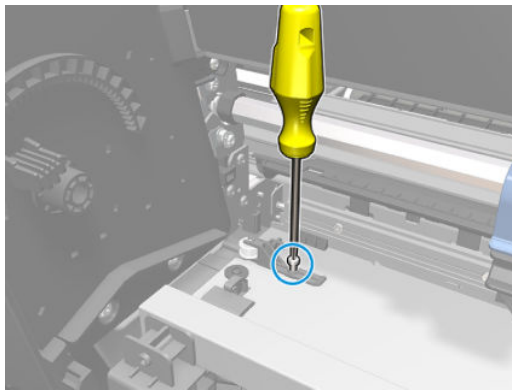
4. Unhook the belt from the Positioner.



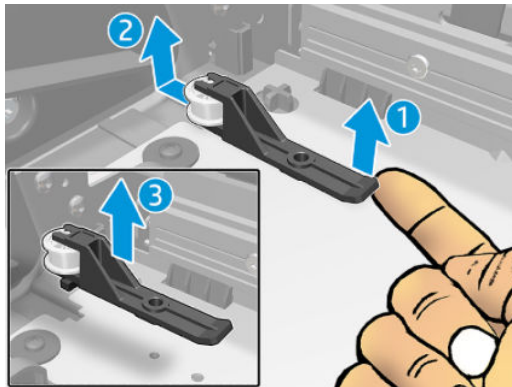
5. Remove the belt.



6. Remove one screw.



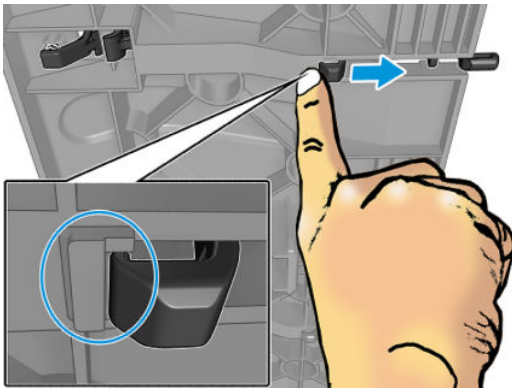
7. Remove the pulley.



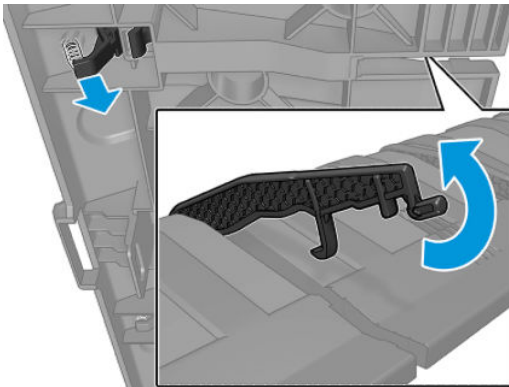
Retractable Media Output Rib

Removal

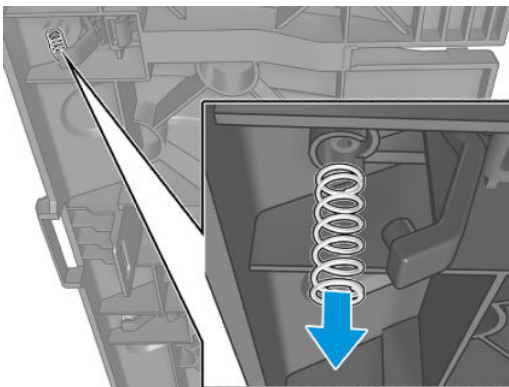
1. Switch off the printer and remove the power cable.
2. Remove the Front cover. See [Front cover on page 330](#).
3. Remove the Media Output Assembly. See [Media output assembly on page 379](#).
4. Push to unclip the rib.



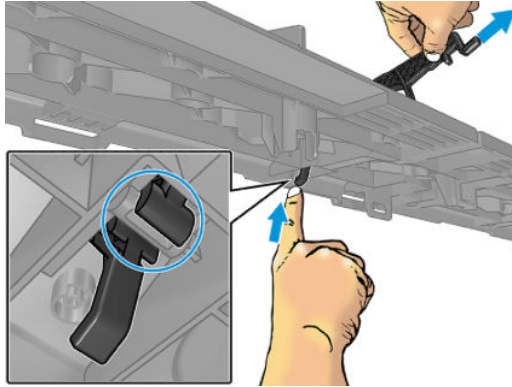
5. Rotate the rib until get access to remove the spring.



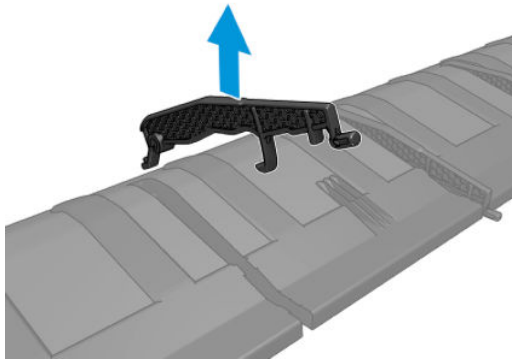
6. Remove the spring.



7. Push the rib from the bottom and pull at the same time from the top.



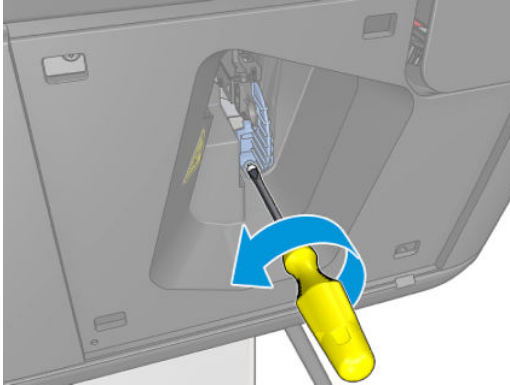
8. Remove the rib.



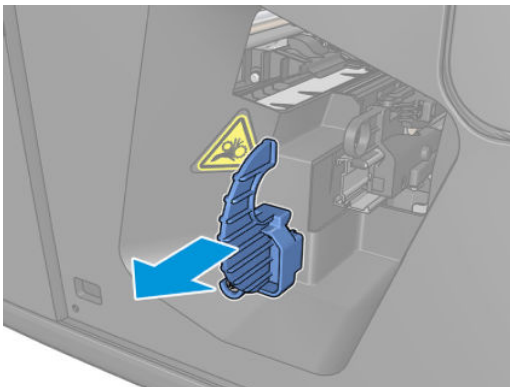
Cutter Assembly with pinion

Removal

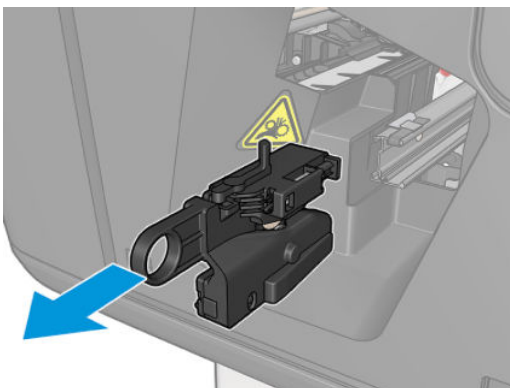
1. Switch off the printer and remove the power cable.
2. Remove the Horizontal cutter cover. See [Horizontal cutter cover on page 340](#).
3. Unscrew the captive screw.



4. Remove the left rack stopper.

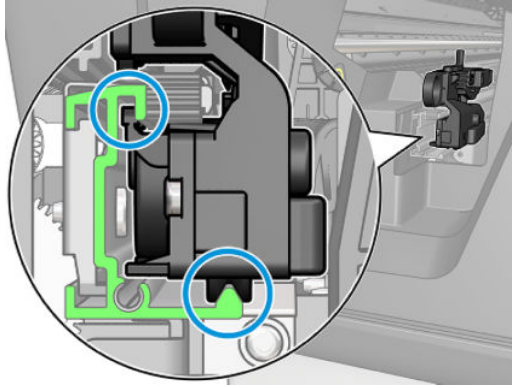


5. Remove the cutter.



Installation

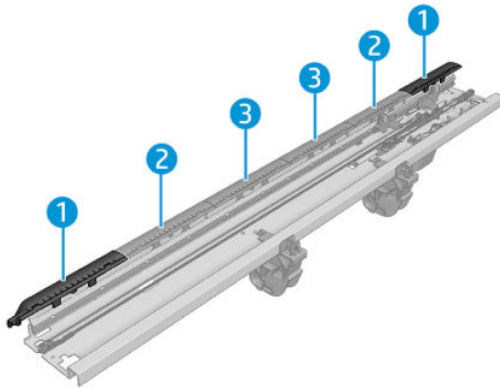
- ▲ Check the cutter is mounted correctly in the rail.



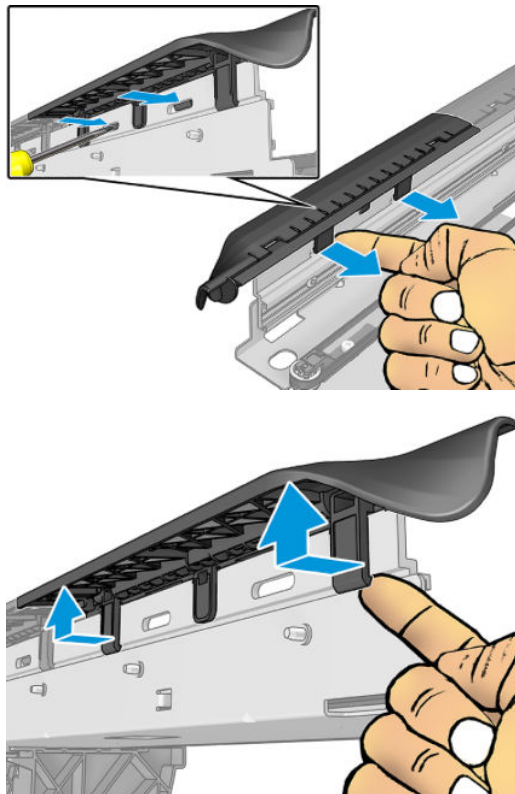
V-Trimmer Trenches

Removal

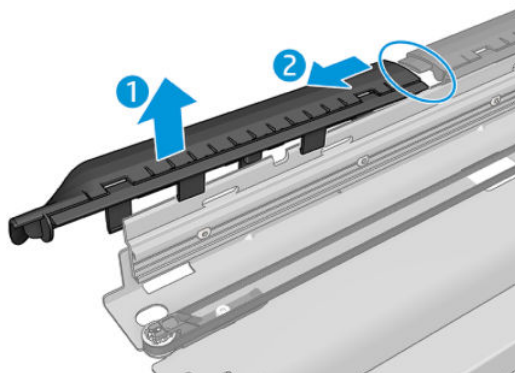
1. Switch off the printer and remove the power cable.
2. Remove the Front cover. See [Front cover on page 330](#).
3. Remove the Left cover. See [Left cover on page 359](#).
4. Remove the Media Output Assembly. See [Media output assembly on page 379](#).
5. Remove the V-Trimmer Cover. See [V-Trimmer cover on page 470](#).
6. Remove the Left Trim (T8W18-67004). See [Front trims \(T1700 & T1708\) on page 333](#).
7. Remove the V-Trimmer modules. See [V-Trimmer modules on page 472](#).
8. Remove the V-Trimmer structure assembly. See [V-Trimmer structure assembly on page 478](#).
9. You must remove the V-Trimmer trenches from the left or right side, never from the middle.



10. Unclip the two front and rear clips.



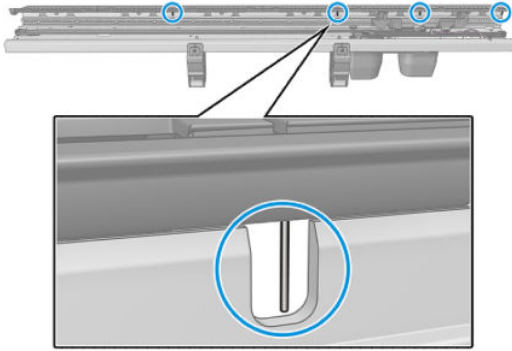
11. Move up a little bit the V-Trimmer trenches and slide them to the left.



Installation

- ▲ Check that the 4 springs are in the same position as shown in the graphic.

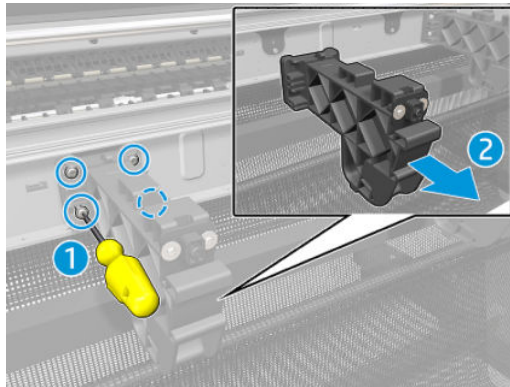
For HP authorized personnel only



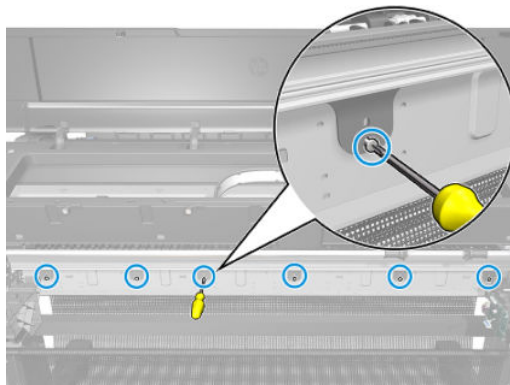
Rack Rail 44 Cutter with support

Removal

1. Switch off the printer and remove the power cable.
2. Remove the Front cover. See [Front cover on page 330](#).
3. Remove the Left cover. See [Left cover on page 359](#).
4. Remove the Media Output Assembly. See [Media output assembly on page 379](#).
5. Remove the V-Trimmer Cover. See [V-Trimmer cover on page 470](#).
6. Remove the Left Trim (T8W18-67004). See [Front trims \(T1700 & T1708\) on page 333](#).
7. Remove the V-Trimmer modules. See [V-Trimmer modules on page 472](#).
8. Remove the V-Trimmer structure assembly. See [V-Trimmer structure assembly on page 478](#).
9. Remove the Starwheel assembly. See [Starwheel assembly on page 455](#).
10. (Only If the printer hasn't Vertical Trimmer) Remove 4 screws and the support output platen to get access to the back screw of the Rack Rail cutter.

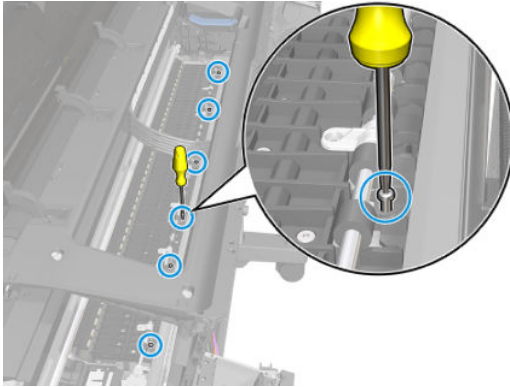


11. Remove 6 screws.

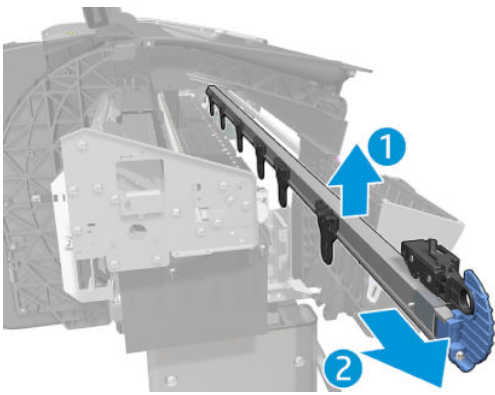


For HP authorized personnel only

12. Remove 6 screws.



13. Remove the Rack Rail Cutter.



Wall spacers

Left wall spacer – Removal

1. Remove the Left cover. See [Left cover on page 359](#).
2. Unscrew the screw as shown.
3. Open the top roll cover.
4. Unscrew the screw as shown.
5. Remove the Upper roll cover support.
6. Unscrew the screw as shown.
7. Remove the Wall spacers.

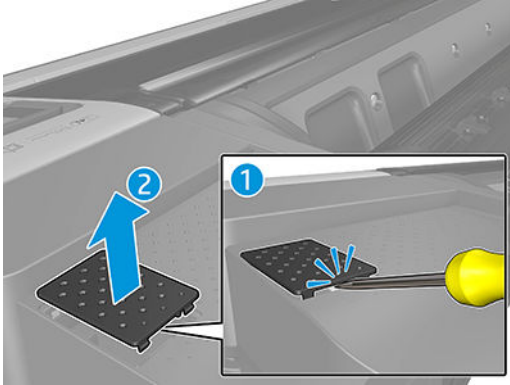
Right wall spacer – Removal

1. Remove the Upper right roll support.
2. Unscrew the screw as shown.
3. Remove the Upper roll cover support.
4. Unscrew the screw as shown.
5. Remove the Wall spacers.

WiFi cover

Removal

1. Switch off the printer and remove the power cable.
2. Remove the Right cover. See [Right cover on page 407](#).
3. Unclip and remove the WiFi cover.



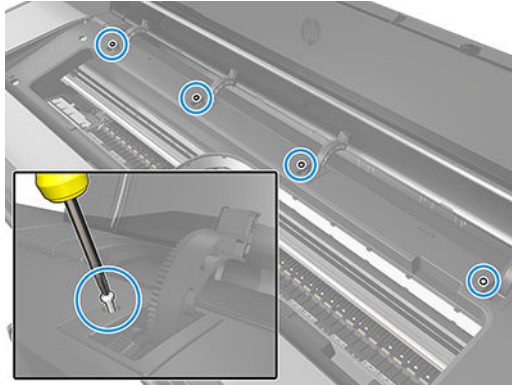
Window, Opaque

Removal

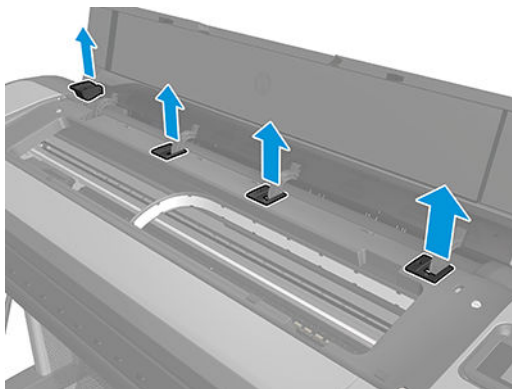
1. Open the window.



2. Unscrew the damper cover screws.

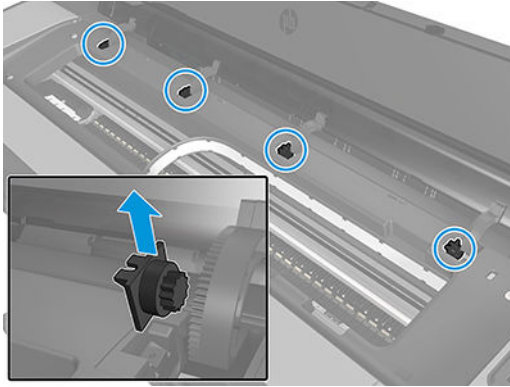


3. Remove the four damper covers.

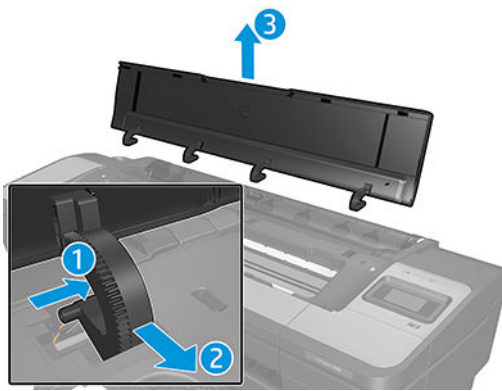


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4. Remove the four window's rotators.



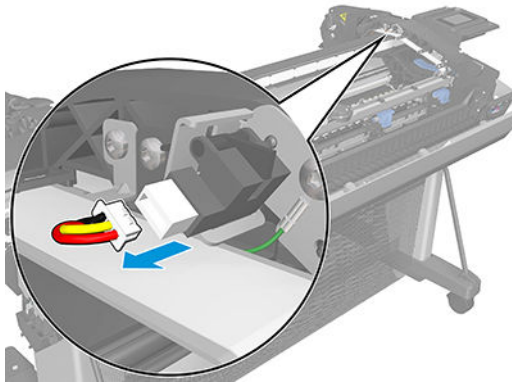
5. Remove the window.



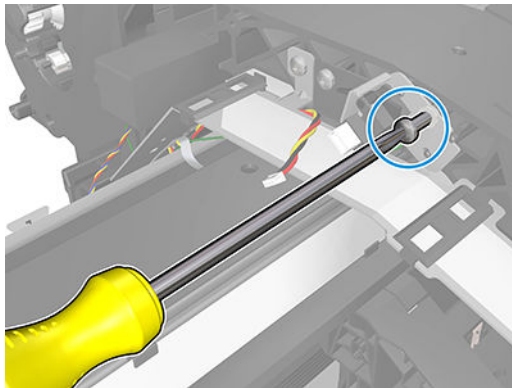
Window position sensor

Removal

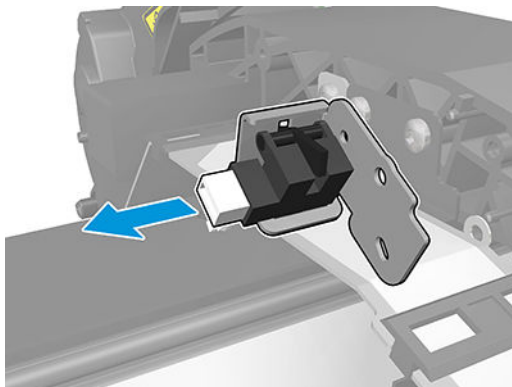
1. Remove the Front top cover. See [Front top cover on page 331](#).
2. Disconnect the Window position sensor cable.



3. Unscrew the sensor screw.



4. Remove the Window position sensor.



Installation

- ▲ Correctly install the Window position sensor.

For HP authorized personnel only

8 Preventive Maintenance

- [Preventive Maintenance \(T1700 & T1708\)](#)
- [Preventive Maintenance \(Z6 & Z9+\)](#)
- [Preventive Maintenance Kits](#)


Preventive Maintenance (T1700 & T1708)

Cleaning the Printer

To maintain the printer in good operating condition, keep it free of accumulated dust, ink, and other contamination. Cleaning intervals are determined by the printer environment and by the types of printer supplies used.


General Cleaning

Proper general cleaning should include the following:

 **NOTE:** To prevent an electric shock, make sure that the printer is switched OFF and unplugged before any cleaning is performed. Do **not** let any water get inside the printer.

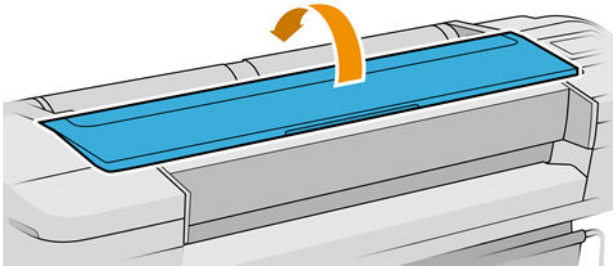
1. Blow away dust accumulation with compressed air if available.
2. Clean the outer surface of the printer with a damp sponge or cloth. Use a mild soap and water solution if necessary. Do not use abrasive cleaners.
3. Wipe the printer dry with a soft lint-free cloth.

Cleaning the Drive Roller and Overdrive

 **NOTE:** If ink is spilled on the Overdrive, remove the ink. Due to the ink's reflectance, ink on the Overdrive can disrupt the printer's edge-sensing function. To remove any ink from the Overdrive, perform the following procedure: Prevent water or other liquids from running onto electrical components or circuits, or through openings in the Electronics Module.

1. Perform the Turn Drive Roller Utility. See [Turn drive roller on page 221](#).

2. Open the Window.



3. Apply any common household cleaning solution (water based only) to a soft, lint-free rag and apply it to the Drive Roller and Overdrive surface while it is rotating. Make sure that you thoroughly clean the Drive Roller and Overdrive surface.
4. Press **Enter** when you have completed the cleaning procedure.
5. Allow the Drive Roller to dry before loading paper in to the printer.

Carriage Assembly Lubrication

To ensure correct operation of the printer you must lubricate the Carriage Assembly whenever any of the following are encountered if:

- The Front Panel displays "Maintenance #1 required".
- There is excessive noise when moving the Carriage Assembly.
- A shut down of the carriage PWM error message appears.
- There are IQ (vertical banding problems).

You should also lubricate the Carriage Assembly whenever you change any of the following service parts:

- The Carriage Rear Bushing.
- The Carriage Assembly.
- The Carriage Rail Oiler.

To lubricate the Carriage Assembly you will require the Lubrication Kit (Q5669-60692). Use the following procedure to lubricate the Carriage Assembly:

1. Use the IPA alcohol (Q6675-60070) and the cleaning cloth to clean the Carriage Rail and the Carriage Slider Rod. Do not use IPA alcohol in California or other areas that restrict the volatile organic compound (VOC) content of cleaning solvents. A regulatory compliant alternate should be used.
2. Use an Oil Dispenser (Q6675-60062) to lubricate the Carriage Rail and the Carriage Slider Rod.
3. Replace the [Carriage rail oiler on page 303](#) with the new one contained in the kit and add 2 or 3 drops of oil to the foam of the Carriage Rail Oiler.
4. Use an Oil Dispenser (Q6675-60062) to lubricate the Carriage Rear Bushing.

Moisture on the printer

Users should use the printer in an environment between 20% and 80% relative humidity. To recover from moisture condensation, turn the printer Off, and, using the main roller as a reference, wait until the printer is completely dry before using it again.

Noisy Carriage Bushing

To prevent noisy movement of the carriage, remove aluminum or dust particles from the bushing at the back of the carriage, and from the slider path along which the bushing moves. Lubricate the slider path using the Lubrication Kit (Q5669-60692).

Belt Swelling

To prevent new belts from swelling incorrectly, keep them in their bags with desiccant until you need to install them.

Level of Printer Usage

Preventive maintenance kits are designed to replace high-usage parts before they fail, avoiding printer downtime. Under normal usage conditions, it will be approximately 5 years before the printer needs maintenance. If the printer is used more than the normal usage conditions, then it will need maintenance service much more frequently.

Each PMK have assigned an internal counter to count the number of cycles:

Service Part	Life Value	Maintenance Advice
Scan-axis distance covered (km)	5,000	PMK1
Scan-axis motor cycles	5,300,000	PMK1
Belt cycles	5,300,000	PMK1
Bushings cycles	5,300,000	PMK1
Trailing cable cycles	5,300,000	PMK1
Tubes cycles	5,300,000	PMK1
Right spittoon volume (cc)	4,500	PMK2
SVS motor cycles	350,000	PMK2
Left spittoon volume (cc)	6,000	PMK2
X-cutter module cycles	36,000	PMK3

When these components of the printer exceed this amount, the Front Panel displays the following message:



“HP Maintenance Kit PMKITX for HP Designjet printer is required”

Once one of the maintenance advised messages is displayed, the relevant preventive maintenance kit must be used to replace the most worn parts of the printer.

Preventive Maintenance (Z6 & Z9+)

Level of Product Usage

Preventive maintenance kits are designed to replace high-usage parts before they fail, avoiding printer downtime. Under normal usage conditions, it will be approximately 5 years before the printer needs maintenance. If the printer is used more than the normal usage conditions, then it will need maintenance service much more frequently.

Each PMK have assigned an internal counter to count the number of cycles:

Service Part	Life Value	Maintenance Advice
Scan-axis distance covered (km)	5,000	PMK1
Scan-axis motor cycles	5,300,000	PMK1
Belt cycles	5,300,000	PMK1
Bushings cycles	5,300,000	PMK1
Trailing cable cycles	5,300,000	PMK1
Tubes cycles	5,300,000	PMK1
Right spittoon volume (cc)	3,800	PMK2
SVS motor cycles	350,000	PMK2
Left spittoon volume (cc)	6,000	PMK2
H-cutter module cycles	36,000	PMK3
V-cutter module cycles	22,500	PMK4
V-cutter module distance covered [km]	9	PMK4

When these components of the printer exceed this amount, the Front Panel displays the following message:



“HP Maintenance Kit PMKITX for HP Designjet printer is required”

Once one of the maintenance advised messages is displayed, the relevant preventive maintenance kit must be used to replace the most worn parts of the product.

Preventive Maintenance Kits

Preventive Maintenance Kit #1 Scan-axis

Part Number	Description
W6B55-67006	44 in, 6 inks technical
T8W16-67016	44 in, 6 inks graphics
W3Z72-67005	44 in, 9 inks graphics

Part Number	Description
T8W15-67023	24 in, 6 inks graphics
W3Z71-67009	24 in, 9inks graphics

Parts affected

- Scan Axis Motor
- Carriage
- Carriage PCA
- Belt
- Trailing cable
- Ink tubes
- Encoder strip
- Cutter

Trigger

- 5.3 million Scan-axis cycles or 5.000 km distance covered by Scan-axis

Usage counters

- SRV-MOTOR-NUMBER-OF-SCAN-AXIS-CYCLES
- SRV-BELT-NUMBER-OF-SCAN-AXIS-CYCLES
- SRV-BUSHINGS-NUMBER-OF-SCAN-AXIS-CYCLES
- SRV-CABLE-NUMBER-OF-SCAN-AXIS-CYCLES
- SRV-TUBES-NUMBER-OF-SCAN-AXIS-CYCLES
- SRV-SCAN-AXIS-COVERED-DISTANCE

Preventive Maintenance Kit #2 SVS

Part Number	Description
T8W18-67024	6 inks graphics
W3Z72-67009	9 inks graphics
W6B55-67016	6 inks technical

For HP authorized personnel only

Parts affected

- SVS
- Line sensor
- Left spittoon

Trigger

- 3.8 liters o 350,000 SVS cycles
- 6 liters Left spittoon

Usage counters

- SRV-RIGHT-SPITTOON-INK-VOLUME
- SRV-NUMBER-OF-SVS-CYCLES
- SRV-LEFT_SPITTOON-INK-VOLUME

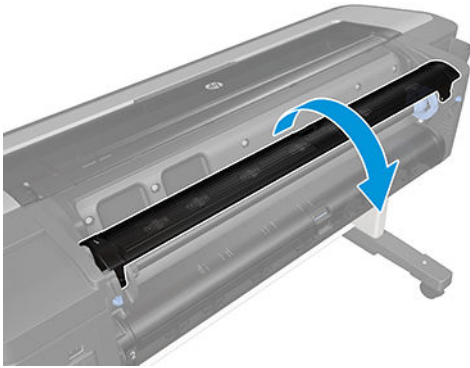
A CSR Installation Flyers

This appendix reproduces the flyers that illustrate how to install CSR parts.

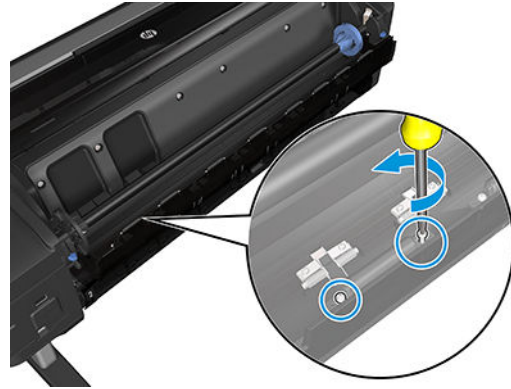
- [Freewheel assembly](#)
- [Pinch arm assembly](#)
- [Roll cover upper bumpers](#)
- [Vertical trimmer installation](#)
- [HP DesignJet Z6 & Z9+ Printer Series Vertical Trimmer](#)

Freewheel assembly

1.



2.



3.



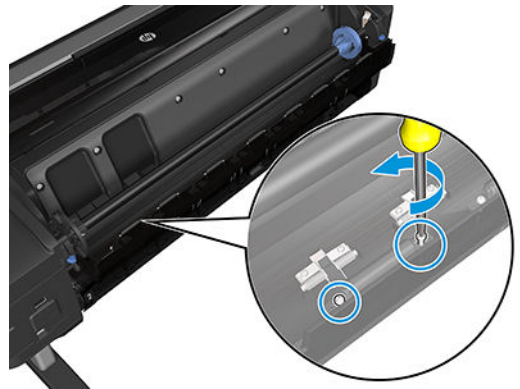
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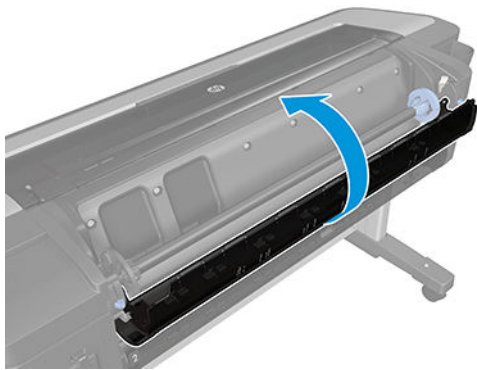
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6.

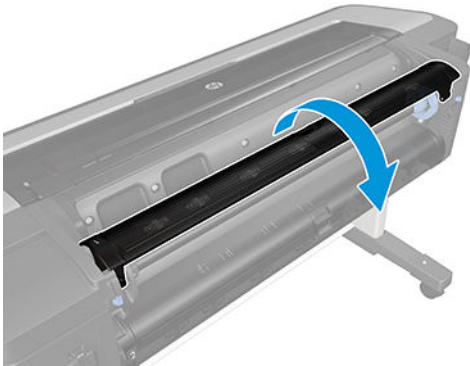


7.

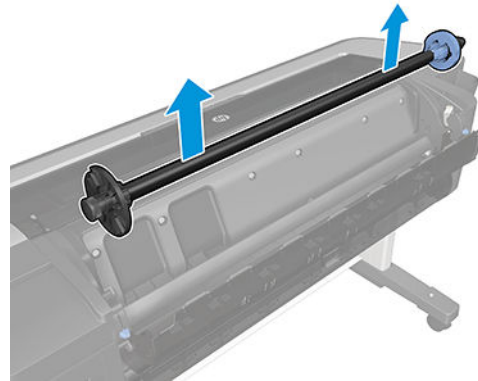


Pinch arm assembly

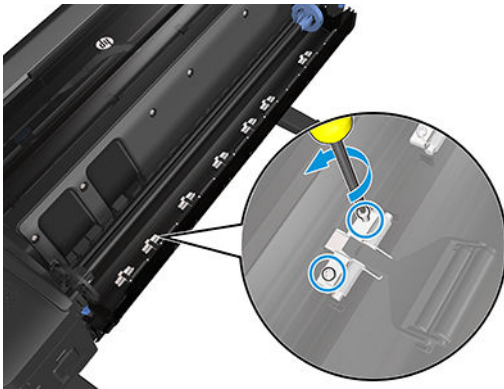
1.



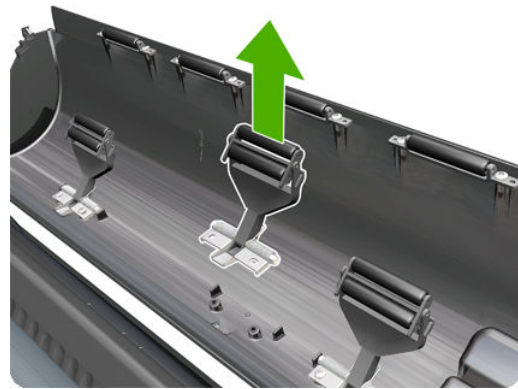
2.



3.



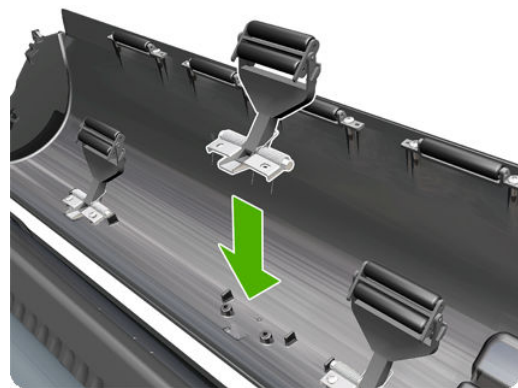
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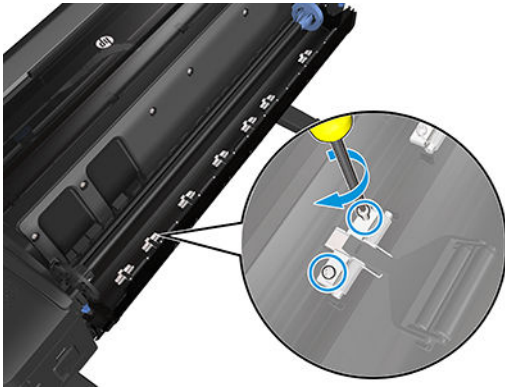
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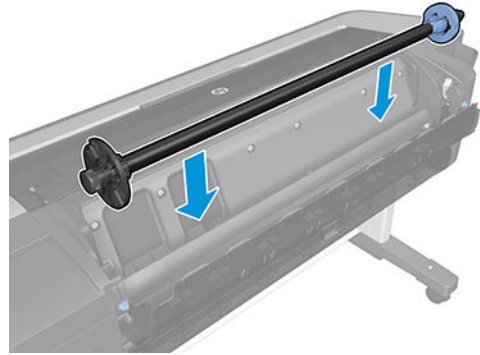
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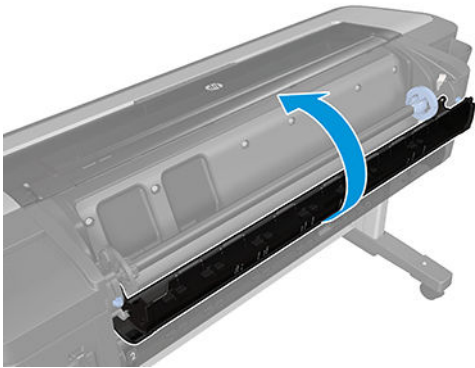
7.



8.

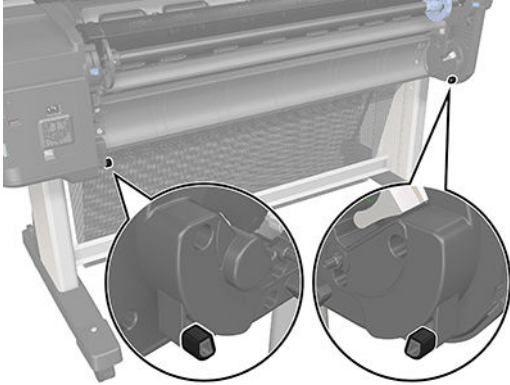


9.

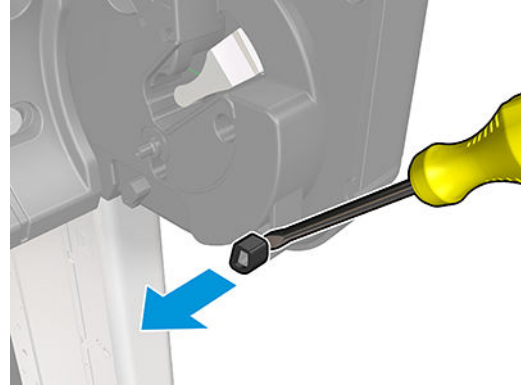


Roll cover upper bumpers

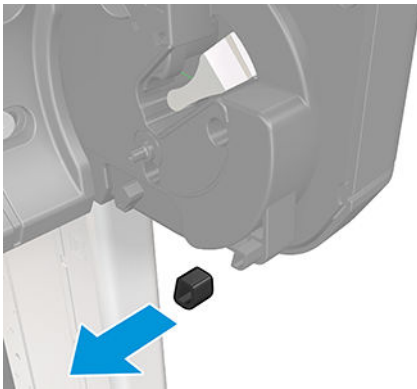
1.



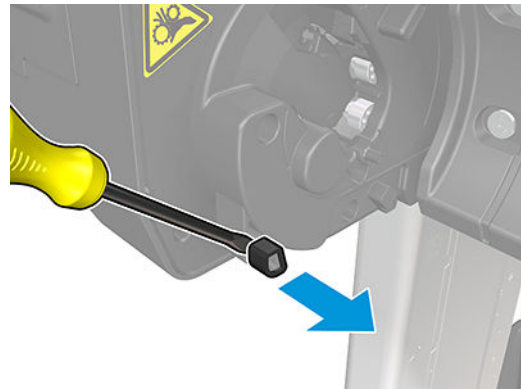
2a.



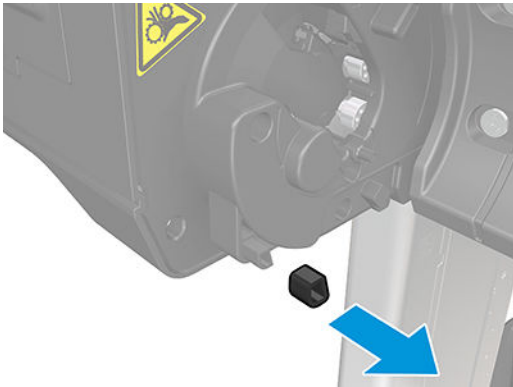
2b.



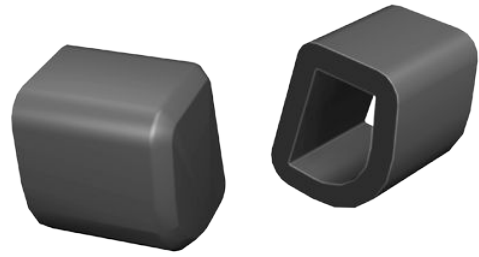
3a.



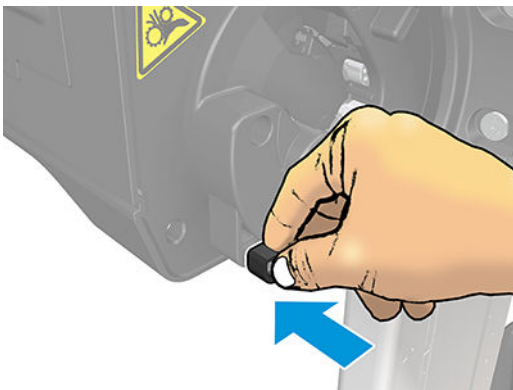
3b.



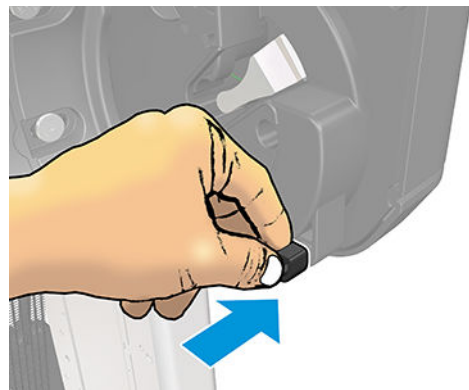
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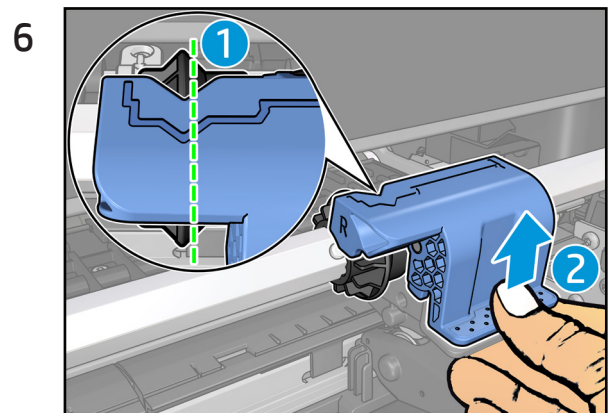
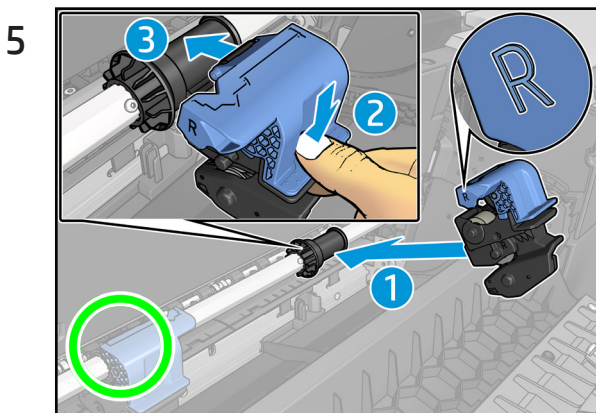
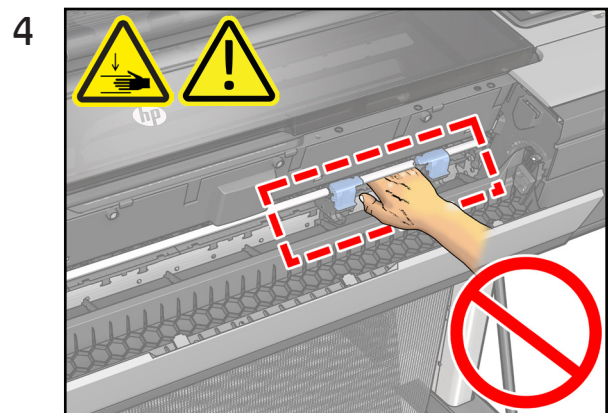
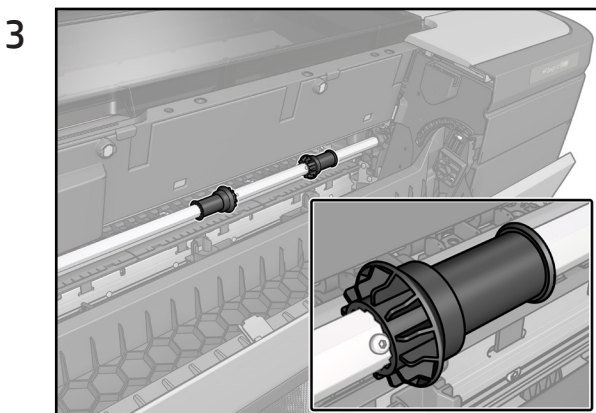
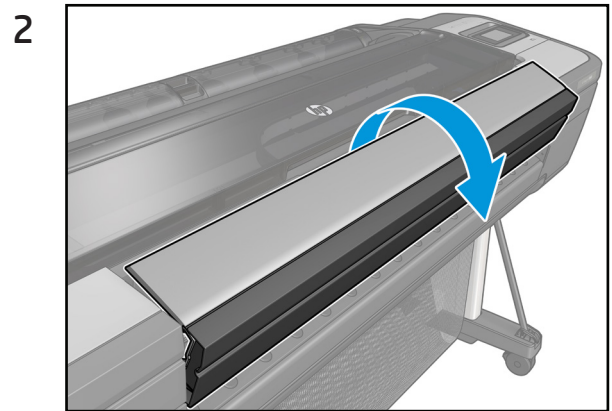
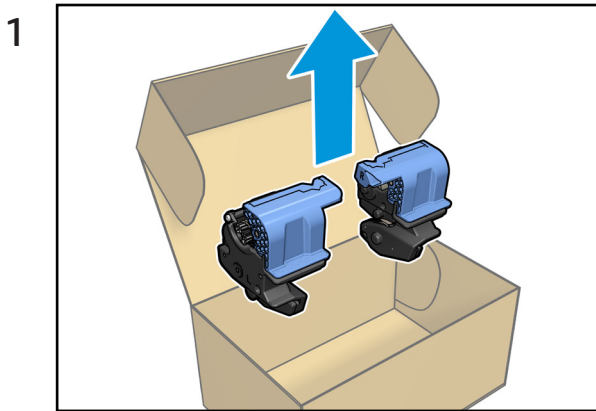
5a.



5b.



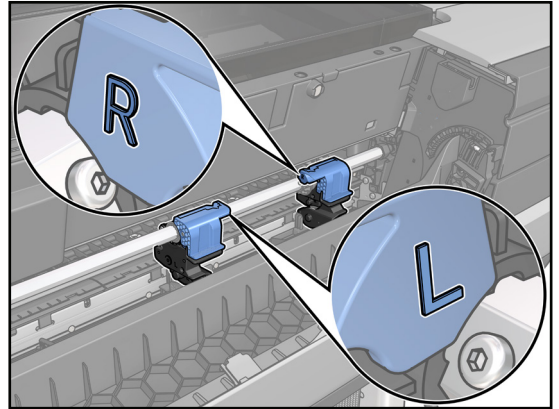
Vertical trimmer installation



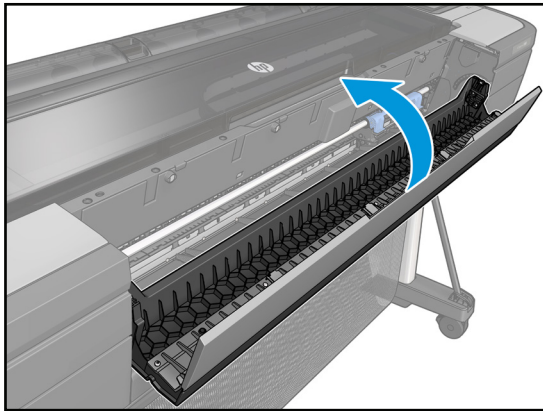
7

- Repeat the steps 5-6 for the left cutter.
- 对于左侧裁纸刀，请重复第 5 步到第 6 步的操作。
- 對左側裁紙器重複步驟 5 至 6。
- Herhaal de stappen 5 t/m 6 voor de linker snijder.
- Répétez les étapes 5 à 6 pour le couteau gauche.
- Wiederholen Sie die Schritte 5 bis 6 für die linke Schnittvorrichtung.
- Ripetere i passaggi da 5 a 6 per la taglierina sinistra.
- 左側カッターに対して手順 5~6 を繰り返します。
- 왼쪽 절단기에 대해 5단계부터 6단계까지 반복합니다.
- Powtórz kroki 5-6 w przypadku lewej gilotyny.
- Repita as etapas 5 a 6 para o cortador esquerdo.
- Повторите действия 5-6 для левого резака.
- Repita los pasos 5 a 6 con el cortador izquierdo.

8



9

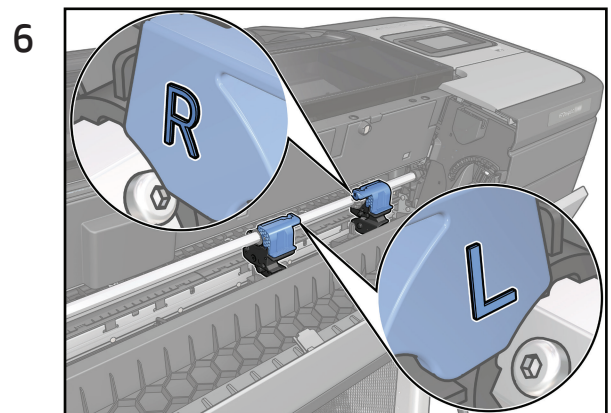
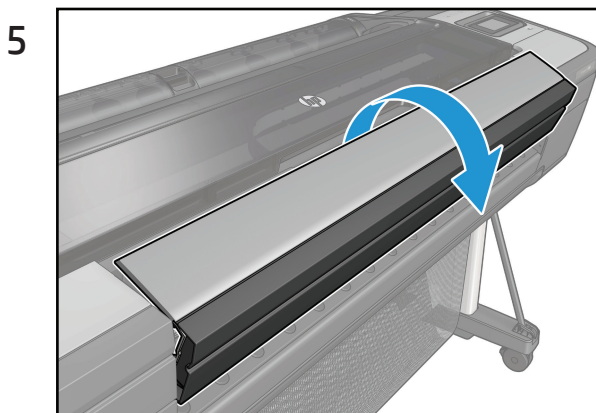
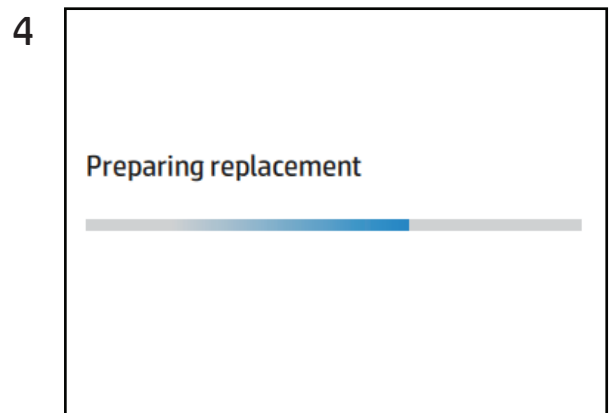
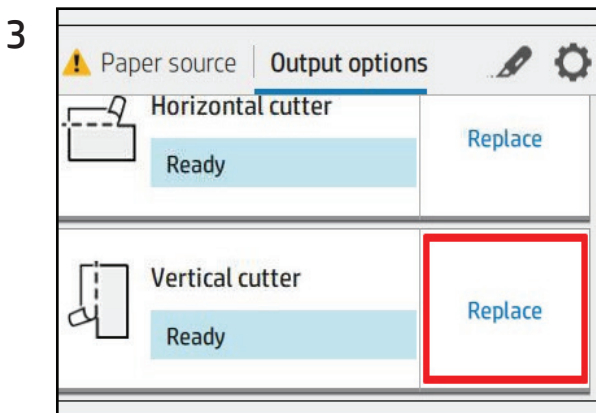
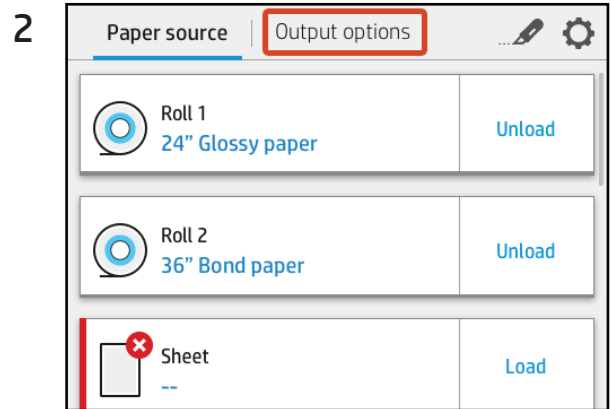
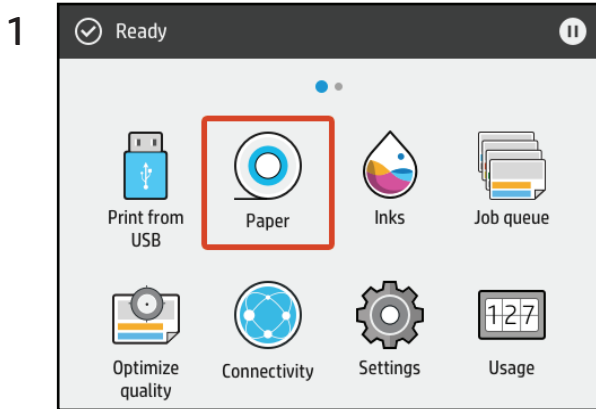


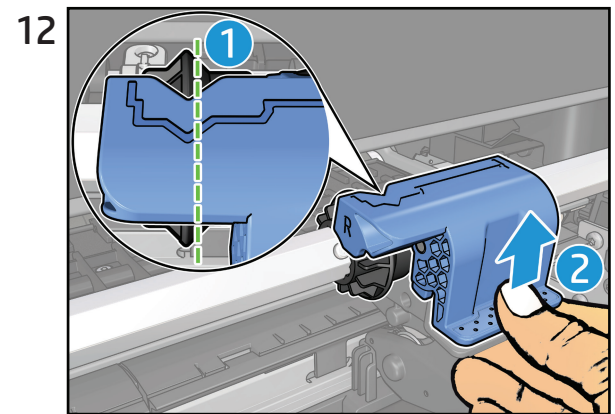
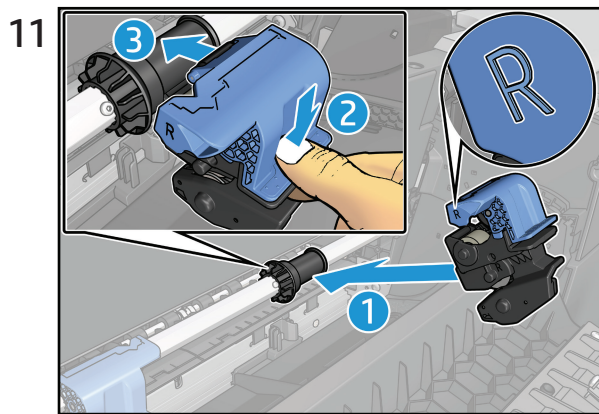
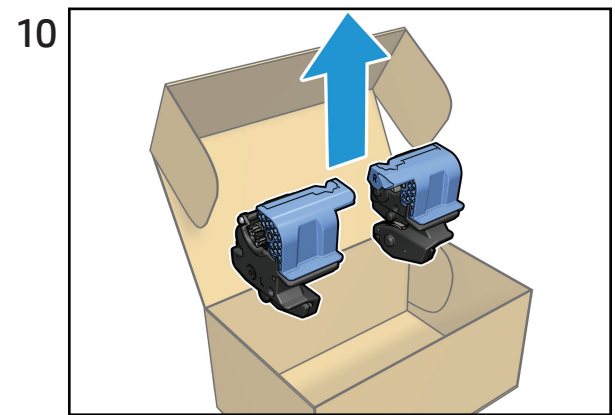
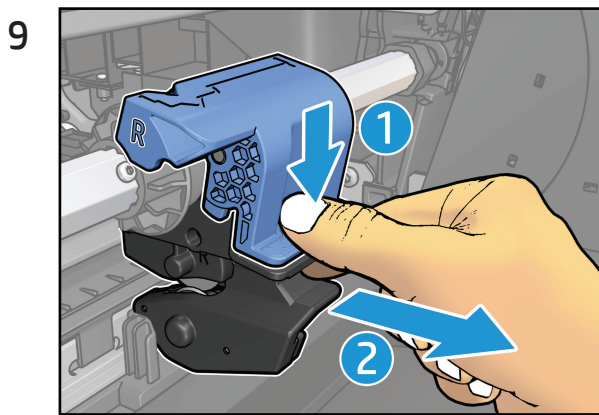
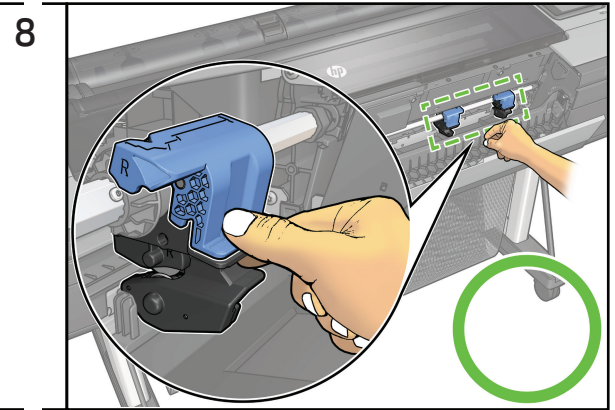
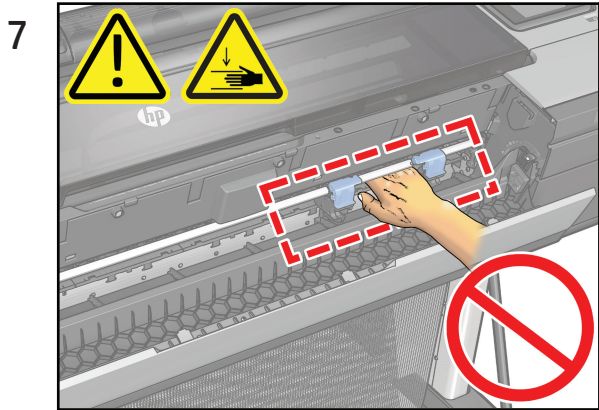
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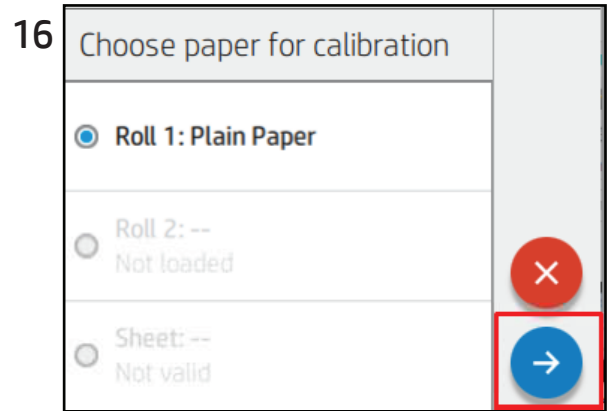
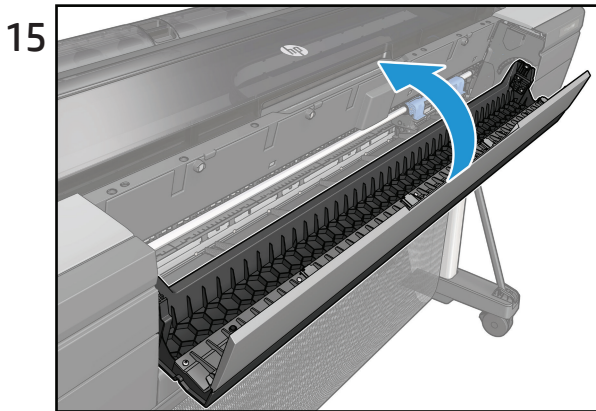
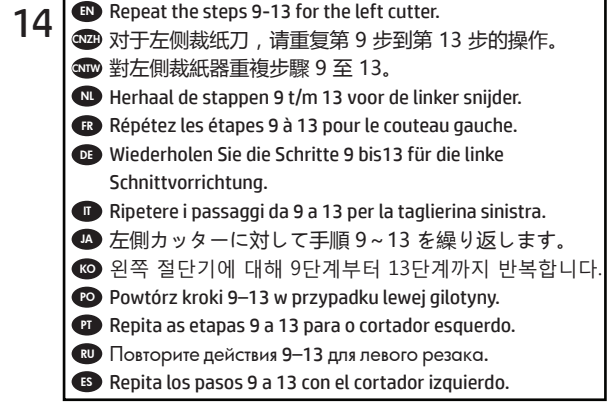
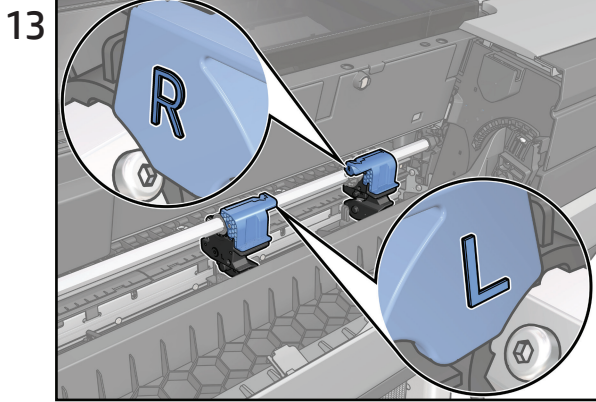


T8W18-80024

HP DesignJet Z6 & Z9+ Printer Series Vertical Trimmer







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B HP Gloss Enhancer Upgrade Kit

This Gloss Enhancer Upgrade Kit has been designed to be used with an HP DesignJet Z9+ series printer only.

Contents of the kit

- USB dongle
- Setup printhead
- Printhead
- Gloss enhancer cartridge

Installation

 **IMPORTANT:** If you perform this upgrade the first time you turn on your printer, you will need only the USB dongle and the gloss enhancer cartridge. You can discard the setup printhead and keep the printhead provided in this kit in a save place to use in the future. See [Upgrade at the time of printer initialization on page 533](#).


If you are not performing the upgrade during the initialization of your printer, you will need all the components of this kit. See [Upgrade after printer initialization on page 534](#).

Upgrade at the time of printer initialization

1. When prompted by the front panel about the gloss enhancer upgrade, insert the USB dongle into the USB port on the upper side of the front panel, marked with the USB symbol.
2. The front panel displays **This USB drive will upgrade the printer to support gloss enhancing ink. This action is not reversible.** Tap **Install** to continue or **Cancel** to abort.
3. Wait while the printer restarts.
4. When prompted by the front panel to insert the ink cartridges, open the left and right ink cartridge covers.
5. On the last position of the right-hand side cartridge slot (marked with E), remove the cartridge slot protector.
6. Insert the gloss enhancer cartridge provided in this kit.
7. Insert the other cartridges provided with the printer, then close the ink cartridge covers.
8. Proceed by following the instructions of the front panel and the assembly instructions of your printer.

Upgrade after printer initialization

1. Ensure that the printer is turned on and idle.
2. Ensure that the gray cartridge is not empty, because up to 15 ml of gray ink will be consumed during the upgrade.
3. Insert the USB dongle into the USB port on the upper side of the front panel, marked with the USB symbol.
4. When prompted by the front panel, open the right cartridge cover and remove the cartridge slot protector from the last slot (marked with E).
5. Insert the gloss enhancer cartridge provided in this kit, then close the cartridge cover.
6. When prompted by the front panel, open the printer's window, then open the printhead cover.

 **TIP:** If you are unsure how to open the printhead cover, see the chapter "Handling ink cartridges and printheads" in your printer's user guide.

7. Remove and discard the printhead indicated by the front panel.
8. Insert the setup printhead provided on this kit into the vacant slot.
9. Close the printhead carriage cover and then the printer window, and follow the instructions on the front panel.
10. When the ink system is ready, the front panel prompts you to open the window and printhead cover.
11. Confirm that the setup printhead contains ink.
12. Remove the setup printhead.
13. Insert the universal printhead provided in this kit.
14. Close the printhead cover and the window. The printer proceeds to calibrate and align the printheads.

C HP Limited Warranty Statement

HP product	Limited Warranty Period
HP hardware product	1 year
HP software product	90 days
Printhead	Until the "end of warranty" date printed on the product is reached, or 1200 ml of HP ink have been cycled through the printhead, whichever occurs first.
Print or ink cartridge	Until the HP ink is depleted or the "end of warranty" date printed on the cartridge is reached, whichever occurs first. This warranty does not cover HP ink products that have been refilled, remanufactured, refurbished, misused, or tampered with.

A. Extent of HP Limited Warranty

1. HP warrants to you, the end-user customer, that the HP hardware products will be free from defects in materials and workmanship under normal usage during the Limited Warranty Period specified above. The Limited Warranty Period starts on the date of purchase by you. Your dated sales or delivery receipt, showing the date of purchase of the product, is your proof of purchase date. You may be required to provide proof of purchase as a condition of receiving warranty service.
2. For software products, HP's Limited Warranty applies only to a failure to execute programming instructions for the Limited Warranty Period specified above, due to defects in materials and workmanship, when properly installed and used on the device designated by HP. HP further warrants that HP-owned standard software will substantially conform to specifications. HP does not warrant that software will operate in hardware and software combinations selected by you, or meet requirements specified by you.
3. HP does not warrant that the operation of any product will be uninterrupted or error-free.
4. HP's Limited Warranty covers only those defects that arise as a result of normal use of the HP products, and does not cover any other problems, including those that arise as a result of:
 - a. Improper or inadequate maintenance or calibration
 - b. Accessories, software, interfacing, paper, parts, ink or supplies not provided or supported by HP
 - c. Operation outside the product's specifications
 - d. Improper site preparation or maintenance
 - e. Unauthorized modification or misuse
5. If HP or an HP-authorized service provider receives, during the applicable warranty period, notice of a defect in any product covered by this HP Limited Warranty, HP shall, at its option, either repair or replace the product that proved to be defective.

6. **Customer self-repair warranty service.** HP products are designed with many Customer Self-Repair (CSR) parts to minimize repair time and allow for greater flexibility in performing defective parts replacement. If, during the diagnosis period, HP identifies that the repair can be accomplished by the use of a CSR part, HP will ship that part directly to you for replacement. There are two categories of CSR parts:

- Parts for which customer self-repair is mandatory. If you request HP to replace these parts, you will be charged for the travel and labor costs of this service.
- Parts for which customer self-repair is optional. These parts are also designed for Customer Self-Repair. If, however, you require that HP replace them for you, this may be done at no additional charge under the type of warranty service designated for your product.

Based on availability and where geography permits, CSR parts will be shipped for nextbusiness-day delivery. Same-day or four-hour delivery may be offered at an additional charge where geography permits. If assistance is required, you can call the HP Technical Support Center and a technician will help you over the phone. HP specifies in the materials shipped with a replacement CSR part whether a defective part must be returned to HP. In cases where it is required to return the defective part to HP, you must ship the defective part back to HP within a defined period of time, normally five (5) business days. The defective part must be returned with the associated documentation in the provided shipping material. Failure to return the defective part may result in HP billing you for the replacement. With a customer self-repair, HP will pay all shipping and part return costs and determine the courier/carrier to be used.

7. Should HP elect to replace or repair the defective product or part onsite, such products will be serviced at the end-user customer's facility at no charge only within designated local service travel areas. Outside designated local service travel areas, warranty services will be performed at the end-user customer's facility only upon prior agreement; you may be required to pay travel expenses and other applicable expenses for such services. Contact your local HP-authorized service provider for details on local travel areas.
8. You will make all reasonable efforts to support and cooperate with HP or an HP-authorized service provider in resolving the problem remotely, for example, starting and executing self-tests or diagnostic programs, providing all necessary information, or performing basic remedial activities upon request from HP or an HP-authorized service provider.
9. If HP is unable to repair or replace, as applicable, a defective product that is covered by this Limited Warranty, HP shall, within a reasonable time after being notified of the defect, refund the residual value of the product. The residual value will be the purchase price paid to HP or to an HP Authorized Reseller minus depreciation and amortization.
10. HP shall have no obligation to replace or refund until you return the defective components, parts, supplies, or hardware product to HP, including its associated documentation. All components, parts, supplies, or hardware products removed under this Limited Warranty become the property of HP. Notwithstanding the above mentioned, HP may waive the requirement for you to return the defective product.
11. Unless otherwise stated, and to the extent permitted by local law, HP products may be manufactured using new materials or new and used materials equivalent to new in performance and reliability. HP may repair or replace products (i) with equivalent products to the products being repaired or replaced but which may have been subject to prior use; or (ii) with an equivalent product to an original product that has been discontinued.
12. This Limited Warranty is valid in any country/region where HP or its authorized service providers offer warranty services and HP has marketed the HP product covered by this Limited Warranty. However, warranty service availability and response time may vary from country/region to country/region. HP will not alter form, fit, or function of the product to make it operate in a country in which it was never intended to function for legal or regulatory reasons. This HP Limited Warranty is subject to all applicable laws and regulations including US and other national export and import laws and regulations.

13. Contracts for additional services may be available from any authorized HP service facility where the listed HP product is distributed by HP or an authorized importer.
14. You are responsible for the security of your proprietary and confidential information and for maintaining a procedure external to the HP product for reconstruction of lost or altered files, data, or programs. HP IS NOT RESPONSIBLE FOR DAMAGE TO OR LOSS OF ANY FILES STORED BY YOU ON THE HP PRODUCT'S HARD DISK OR OTHER STORAGE DEVICES. HP IS NOT RESPONSIBLE FOR THE RECOVERY OF LOST FILES OR DATA.

B. Limitations of warranty

TO THE EXTENT ALLOWED BY LOCAL LAW, NEITHER HP NOR ITS THIRD PARTY SUPPLIERS MAKE ANY OTHER WARRANTY OR CONDITION OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AND SPECIFICALLY DISCLAIM THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY, AND FITNESS FOR A PARTICULAR PURPOSE.

C. Limitations of liability

TO THE EXTENT ALLOWED BY LOCAL LAW, THE REMEDIES IN THIS LIMITED WARRANTY ARE YOUR SOLE AND EXCLUSIVE REMEDIES. EXCEPT AS INDICATED ABOVE, IN NO EVENT WILL HP OR ITS THIRD PARTY SUPPLIERS BE LIABLE FOR LOSS OF DATA, DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES (INCLUDING ANY LOSS OF PROFITS OR SAVINGS), WHETHER BASED ON CONTRACT, TORT, OR ANY OTHER LEGAL THEORY, AND WHETHER ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

D. Local law

1. This Limited Warranty gives you specific legal rights. You may also have other rights which vary from state to state in the United States, from province to province in Canada and from country to country elsewhere in the world. You are advised to consult applicable state, province, or national laws for full determination of your rights.
2. To the extent that this Warranty Statement is inconsistent with local law, this Warranty Statement shall be deemed modified to be consistent with such local law. THE WARRANTY TERMS CONTAINED IN THIS LIMITED WARRANTY, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT, OR MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

Rev. 05/09

Regulatory notices

Refer to the printer's documentation and HP's websites (<http://www.hp.com/go/certificates/> and <http://www.hp.com/go/environment/>) to find relevant safety notices and regulatory and environmental information for your product.

For HP authorized personnel only